E03 BIOS 1.01.09 Documentation

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1 Main

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1.66 System Date	Set the Date. Use Tab to switch between Date elements. Default Ranges: Year: 1998-9999 Months: 1-12 Days: Dependent on month Range of Years may vary.	
1.67 System Time	This is the help for the hour, minute, second field. Valid range is from 0 to 23, 0 to 59, 0	

	to 59. INCREASE/REDUCE : +/-.	

2 Advanced

Setting	Help	Defaults
2.1 RC ACPI Settings		
2.1.1 PTID Support	PTID Support will be loaded if enabled.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.2 PECI Access Method	PECI Access Method is Direct I/O or ACPI	Possible Choices: • Direct I/O • ACPI Default Value: • Direct I/O
2.1.3 Native PCIE Enable	Bit - PCIe Native * control 0 - ~ Hot Plug 1 - SHPC Native Hot Plug control 2 - ~ Power Management Events 3 - PCIe Advanced Error Reporting control 4 - PCIe Capability Structure control 5 - Latency Tolerance Reporting control	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.4 Native ASPM	Enabled - OS Controlled ASPM, Disabled - BIOS Controlled ASPM	Possible Choices: • Auto • Enabled • Disabled Default Value: • Auto
2.1.5 BDAT ACPI Table Support	Enables support for the BDAT ACPI table.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.1.6 Wake system from S5	Enable or disable System wake on alarm event.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.7 ACPI Debug	Open a memory buffer for storing debug strings. Reenter SETUP after enabling to see the buffer address. Use method ADBG to write strings to buffer.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.8 Acpi Memory Buffer Address	Acpi Memory Buffer Address	
2.1.9 D3 Setting for Storage	RTD3 support for Storage. PCIE storage PEP constraint needs to be set as D0/F1 (Intel Advanced -> ACPI Settings -> PEP PCIe Storage) when this setup is disabled/D3Hot	Possible Choices: • Disabled • D3Hot • D3Cold Default Value: • D3Cold
2.1.10 Low Power S0 Idle Capability	This variable determines if we enable ACPI Lower Power S0 Idle Capability (Mutually exclusive with Smart connect). While this is enabled, it also disable 8254 timer for SLP_S0 support.	Possible Choices: • Disabled Default Value: • Disabled
2.1.11 PUIS Enable	Enable/Disable Power-Up In Standby (PUIS) feature set allows devices to be powered-up into the Standby power management state to minimize inrush current at power-up and to allow the host to sequence the spin-up of devices.	Possible Choices: • Enabled • Disabled Default Value: • Disabled

2.1.12 EC Notification	Sends EC notification of Low Power S0 Idle State	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.13 EC CS Debug Light	When EC enters Low Power S0 Idle State, the CAPS LOCK light will be turned on	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.14 EC Low Power Mode	This option controls whether EC will go to Low power mode during Low Power S0 Idle State	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.15 Sensor Standby	Enable/Disable Sensor standby mode	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.16 CS PL1 Limit	Limit PL1 (Power Limit 1) while in Connected Standby	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.17 CS PL1 Value	PL1 value is in milliwatts with 125 step value	Default Value: • 4500

		Numeric Range: Minimum Value: 3000 Maximum Value: 20000
2.1.18 PEP Constraints Configuration		
2.1.18.1 PEP CPU	Add CPU in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.2 PEP Graphics	Add Gfx in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.3 PEP IPU	Add IPU in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.4 PEP GNA	Add GNA in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.5 PEP SATA	Add Storage device in PEP mitigation list	Possible Choices: • No Constraint • Adapter D0/F1 • Raid Volume0 • Adapter D3

		Default Value: • Adapter D3
2.1.18.6 PEP enumerated SATA ports	Add enumerated SATA ports in PEP Constraint list	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.18.7 PEP PCIe Storage	Add PCIe root ports (storage) in PEP mitigation list	Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • D3
2.1.18.8 PEP PCIe LAN	Add PCIe root ports (LAN) in PEP mitigation list	Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • D0/F1
2.1.18.9 PEP PCIe WLAN		Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • D0/F1
2.1.18.10 PEP PCIe GFX		Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • D0/F1

2.1.18.11 PEP PCIe Other		Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • No Constraint
2.1.18.12 PEP PCIe DG	Add PCIe DG PEP Constraint	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.13 PEP UART	Add UART in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.14 PEP I2C0	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.15 PEP I2C1	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.16 PEP I2C2	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.1.18.17 PEP I2C3	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.18 PEP I2C4	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.19 PEP I2C5	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.20 PEP I2C6	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.21 PEP I2C7	Adds I2C in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.22 PEP SPI	Add SPI in PEP mitigation list	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
2.1.18.23 PEP XHCI	Add XHCI in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.24 PEP Audio	Add Audio in PEP mitigation list	Possible Choices: • No Constraint • D0/F1 • D3 Default Value: • D0/F1
2.1.18.25 PEP CSME	Add CSME in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.26 PEP HECI3	Add HECI3 in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.27 PEP LAN(GBE)	Add LAN(GBE) in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.1.18.28 PEP THC0	Add THC in PEP mitigation list. Applies only if THCx has assigned port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.29 PEP THC1	Add THC in PEP mitigation list. Applies only if THCx has assigned port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.30 PEP UFS0	Add UFS0 IPs in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.31 PEP UFS1	Add UFS1 IPs in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.32 PEP TCSS	Add TCSS IPs in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.18.33 PEP VMD	Add VMD in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
2.1.18.34 PEP EMMC	Add EMMC in PEP mitigation list	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.1.19 LPIT Residency Counter	Select Residency Counter	Possible Choices: • C10 • SLP S0 • ATX Shutdown (PS_ON) Default Value: • SLP S0
2.1.20 PCI Delay Optimization	Experimental ACPI additions for FW latency optimizations	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.1.21 MSI enabled	When disabled, MSI support is disabled in FADT	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.2 Connectivity Configuration		
2.2.1 CNVi CRF Present	[Yes] means CNVi is the active Connectivity Solution, [No] means CNVi was not discovered	
2.2.2 CNVi Configuration		
2.2.3 CNVi Mode	This option configures Connectivity. [Auto Detection] means that if Discrete solution is discovered it	Possible Choices: • Disable Integrated

	will be enabled by default. Otherwise Integrated solution (CNVi) will be enabled; [Disable Integrated] disables Integrated Solution. NOTE: When CNVi is present, the GPIO pins that are used for radio interface cannot be assigned to the other native function.	• Auto Detection Default Value: • Auto Detection
2.2.4 Wi-Fi Core	This is an option intended to Enable/Disable Wi-Fi Core in CNVi	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.2.5 BT Core	This is an option intended to Enable/Disable BT Core in CNVi	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.2.6 BT RF-Kill Delay Time	This is the delay Time to switch on/off BT RF-KILL signal during S3/S4 resume. Unit is ms	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1024
2.2.7 BT Audio Offload	This is an option to Enable/Disable BT Audio Offload which enables audio input from BT device to the audio DSP and enables power efficient audio output to BT device.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.8 RFI Mitigation	This is an option intended to Enable/Disable DDR-RFIM feature for Connectivity	Possible Choices:

	This RFI mitigation feature may result in temporary slowdown of the DDR speed.	• Enabled • Disabled Default Value: • Enabled
2.2.9 DLVR RFI Mitigation	This is an option intended to Enable/Disable DLVR RFIM feature for Connectivity This option is only valid when global DLVR is enabled.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.2.10 CoExistence Manager	CoEx Manager mitigates radio coexistence issues between Intel WWAN (modem) and Intel WLAN (WiFi/BT). This should be enabled only if both WWAN and WLAN solutions are based on Intel components	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.11 Preboot BLE	This will be used to enable Preboot Bluetooth function	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.12 Discrete Bluetooth Interface	Seriallo UART0 needs to be enabled to select BT interface	Possible Choices: • Disabled • USB • UART Default Value: • USB
2.2.13 BT Interrupt Mode	Selects routing of interrupt from BT Module	Possible Choices: • GPIO Interrupt • APIC Interrupt Default Value: • GPIO Interrupt

2.2.14 BT Tile Mode	Enable/Disable Tile	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.15 Tile S0	The activity of Tile in S0. Bit0:Find My PC Bit1:Ring Notification Bit2:BT_LED# Signal	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
2.2.16 Tile S0ix	The activity of Tile in S0ix. Bit0:Find My PC Bit1:Ring Notification Bit2:BT_LED# Signal	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
2.2.17 Tile S4	The activity of Tile in S4. Bit0:Find My PC Bit1:Ring Notification Bit2:BT_LED# Signal	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
2.2.18 Tile S5	The activity of Tile in S5. Bit0:Find My PC Bit1:Ring Notification Bit2:BT_LED# Signal	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7

2.2.19 BT LED Config	BT LED Config Bit0:Define LED to Tile Ring Notification Bit1:Active High Polarity	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 3
2.2.20 BT LED Pulse Duration	LED Duration in milliseconds. Min:1ms Max:1000ms	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.21 BT LED Pulse Interval	LED Pulse interval in tens of milliseconds. Min:10ms Max:255ms	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.22 Advanced settings	Configure ACPI objects for wireless devices	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.23 Switched Antenna Diversity Selection	This allows WiFi modules which have only one antenna to use one of the 2 possible antennas with the options: 0 - Antenna1 1 - Antenna2 2 - Diversity 3 - Diversity Antenna1 4 - Diversity Antenna2	Possible Choices: • Antenna1 • Antenna2 • Diversity • Diversity Antenna1 • Diversity Antenna2 Default Value: • Diversity

2.2.24 SPLC		
2.2.25 Domain Type SPLC 1	09h: Module(M.2); 07h: WiFi/WLAN; 0Fh: WWAN; 10h WiGig; 14h: RFEM	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 20
2.2.26 Default Power Limit	Power Limit in milli watts	Default Value: • 65535 Numeric Range: Minimum Value: 1 Maximum Value: 65535
2.2.27 Default Time Window	Time Window in milli seconds	Default Value: • 30000 Numeric Range: Minimum Value: 1 Maximum Value: 100000
2.2.28 WAND		
2.2.29 TRxDelay_A	Antenna A delay possible values: 1-100 in 10ths of nano seconds resolution	Default Value: • 50 Numeric Range: Minimum Value: 1 Maximum Value: 100
2.2.30 TRxCableLength_A	Antenna A cable length possible values: 1-100cm in 1cm resolution	Default Value: • 50 Numeric Range:

		Minimum Value: 1 Maximum Value: 100
2.2.31 TRxDelay_B	Antenna B delay possible values: 1-100 in 10ths of nano seconds resolution	Default Value: • 50 Numeric Range: Minimum Value: 1 Maximum Value: 100
2.2.32 TRxCableLength_B	Antenna B cable length possible values: 1-100cm in 1cm resolution	Default Value: • 50 Numeric Range: Minimum Value: 1 Maximum Value: 100
2.2.33 WRDD Package 1		
2.2.34 Domain Type	09h: Module; 07h: WiFi/WLAN; 0Fh: WWAN; 10h WiGig; 14h: RFEM	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.2.35 Country Identifier	Country identifier as defined in ISO/IEC 3166-1 Alpha 2 code	Default Value: • 16720 Numeric Range: Minimum Value: 1 Maximum Value: 65535
2.2.36 11Ax Control		
2.2.37 11Ax Setting for Ukraine	11Ax Setting for Ukraine Bit 0 - Apply changes to country Ukraine. 11Ax Setting within	Possible Choices: • Disabled

	module certification 00 - None. Work with Wi-Fi FW/OTP definitions [Default] 01 - Apply changes	• Enabled Default Value: • Disabled
2.2.38 11Ax Mode for Ukraine	11Ax Mode for Ukraine Bit 1 - 11Ax Mode. Effective only if Bit 0 set to 1 00 â€" Disable 11Ax on country Ukraine [Default] 01 â€" Enable 11Ax on country Ukraine	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.39 11Ax Setting for Russia	11Ax Setting for Russia Bit 2 - Apply changes to country Russia. 11Ax Setting within module certification 00 - None. Work with Wi-Fi FW/OTP definitions [Default] 01 - Apply changes	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.40 11Ax Mode for Russia	11Ax Mode for Russia Bit 3 - 11Ax Mode. Effective only if Bit 2 set to 1 00 â€" Disable 11Ax on country Russia [Default] 01 â€" Enable 11Ax on country Russia	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.41 WRDS Package		
2.2.42 WiFi SAR	Enable/Disable WiFi SAR Tx Power Limit; DISABLE - Device ignores WiFi SAR Configuration Table; ENABLE - Device uses WiFi SAR Configuration Table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.43 SAR 2400 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.44 SAR 5180-5320 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.45 SAR 5340-5440 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.46 SAR 5460-5700 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.47 SAR 5720-5825 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.48 SAR 5845-6135 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.49 SAR 6155-6375 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.50 SAR 6395-6495 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.51 SAR 6515-6675 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.52 SAR 6695-6835 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.53 SAR 6855-7095 MHz Set1 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.54 SAR 2400 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.55 SAR 5180-5320 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.56 SAR 5340-5440 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.57 SAR 5460-5700 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.58 SAR 5720-5825 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.59 SAR 5845-6135 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.60 SAR 6155-6375 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.61 SAR 6395-6495 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.62 SAR 6515-6675 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.63 SAR 6695-6835 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.64 SAR 6855-7095 MHz Set1 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.65 SAR CDB 2400 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.66 SAR CDB 5180-5320 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.67 SAR CDB 5340-5440 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.68 SAR CDB 5460-5700 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.69 SAR CDB 5720-5825 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.70 SAR CDB 5845-6135 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.71 SAR CDB 6155-6375 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.72 SAR CDB 6395-6495 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.73 SAR CDB 6515-6675 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.74 SAR CDB 6695-6835 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.75 SAR CDB 6855-7095 MHz Set1 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.76 SAR CDB 2400 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.77 SAR CDB 5180-5320 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.78 SAR CDB 5340-5440 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.79 SAR CDB 5460-5700 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.80 SAR CDB 5720-5825 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.81 SAR CDB 5845-6135 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.82 SAR CDB 6155-6375 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.83 SAR CDB 6395-6495 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.2.84 SAR CDB 6515-6675 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.85 SAR CDB 6695-6835 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.86 SAR CDB 6855-7095 MHz Set1 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.87 EWRD Package		
2.2.88 WiFi Dynamic SAR	Enable/Disable WiFi Dynamic SAR Tx Power Limit which shell be set dynamically accorting to the Proximity Sensor	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.89 Extended SAR Range Sets	Defines the WiFi SAR Sets that can be used to set the power limts dynamically based on the Proximity Sensor,Set 1 is always present if WiFi SAR enabled and Set 2-3 are additinoal sets	Possible Choices: • No Additional sets • Set 2 • Set 3 • Set 4

		Default Value: • No Additional sets
2.2.90 SAR 2400 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.91 SAR 5180-5320 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.92 SAR 5340-5440 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.93 SAR 5460-5700 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.94 SAR 5720-5825 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.95 SAR 5845-6135 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.96 SAR 6155-6375 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.97 SAR 6395-6495 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.98 SAR 6515-6675 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.99 SAR 6695-6835 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.100 SAR 6855-7095 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.101 SAR 2400 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.102 SAR 5180-5320 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.103 SAR 5340-5440 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.104 SAR 5460-5700 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.105 SAR 5720-5825 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.106 SAR 5845-6135 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.107 SAR 6155-6375 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.108 SAR 6395-6495 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.109 SAR 6515-6675 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.110 SAR 6695-6835 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.111 SAR 6855-7095 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.112 SAR 2400 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.113 SAR 5180-5320 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.114 SAR 5340-5440 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.115 SAR 5460-5700 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.116 SAR 5720-5825 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.117 SAR 5845-6135 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.118 SAR 6155-6375 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.119 SAR 6395-6495 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.120 SAR 6515-6675 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.121 SAR 6695-6835 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.122 SAR 6855-7095 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.123 SAR 2400 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.124 SAR 5180-5320 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.125 SAR 5340-5440 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.126 SAR 5460-5700 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.127 SAR 5720-5825 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.128 SAR 5845-6135 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.129 SAR 6155-6375 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.130 SAR 6395-6495 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.131 SAR 6515-6675 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.132 SAR 6695-6835 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.133 SAR 6855-7095 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.134 SAR 2400 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.135 SAR 5180-5320 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.136 SAR 5340-5440 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.137 SAR 5460-5700 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.138 SAR 5720-5825 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.139 SAR 5845-6135 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.140 SAR 6155-6375 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.141 SAR 6395-6495 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.142 SAR 6515-6675 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.143 SAR 6695-6835 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.144 SAR 6855-7095 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.145 SAR 2400 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.146 SAR 5180-5320 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.147 SAR 5340-5440 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.148 SAR 5460-5700 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.149 SAR 5720-5825 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.150 SAR 5845-6135 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.151 SAR 6155-6375 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.152 SAR 6395-6495 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.153 SAR 6515-6675 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.154 SAR 6695-6835 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.155 SAR 6855-7095 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.156 SAR CDB 2400 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.157 SAR CDB 5180-5320 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.158 SAR CDB 5340-5440 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.159 SAR CDB 5460-5700 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.160 SAR CDB 5720-5825 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.161 SAR CDB 5845-6135 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.162 SAR CDB 6155-6375 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.163 SAR CDB 6395-6495 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.164 SAR CDB 6515-6675 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.165 SAR CDB 6695-6835 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.166 SAR CDB 6855-7095 MHz Set2 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.167 SAR CDB 2400 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.168 SAR CDB 5180-5320 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.169 SAR CDB 5340-5440 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.170 SAR CDB 5460-5700 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.171 SAR CDB 5720-5825 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.172 SAR CDB 5845-6135 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.173 SAR CDB 6155-6375 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.174 SAR CDB 6395-6495 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.175 SAR CDB 6515-6675 MHz Set2 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.176 SAR CDB 6695-6835 MHz Set2 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.177 SAR CDB 6855-7095 MHz Set2 Chain B	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.178 SAR CDB 2400 MHz Set3 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.179 SAR CDB 5180-5320 MHz Set3 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.180 SAR CDB 5340-5440 MHz Set3 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.181 SAR CDB 5460-5700 MHz Set3 Chain A	Defines the WiFi CDB SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.182 SAR CDB 5720-5825 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.183 SAR CDB 5845-6135 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.184 SAR CDB 6155-6375 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.185 SAR CDB 6395-6495 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.186 SAR CDB 6515-6675 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.187 SAR CDB 6695-6835 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.188 SAR CDB 6855-7095 MHz Set3 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.189 SAR CDB 2400 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.190 SAR CDB 5180-5320 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.191 SAR CDB 5340-5440 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.192 SAR CDB 5460-5700 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.193 SAR CDB 5720-5825 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.194 SAR CDB 5845-6135 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.195 SAR CDB 6155-6375 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.196 SAR CDB 6395-6495 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.197 SAR CDB 6515-6675 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.198 SAR CDB 6695-6835 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.199 SAR CDB 6855-7095 MHz Set3 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.200 SAR CDB 2400 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.201 SAR CDB 5180-5320 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.202 SAR CDB 5340-5440 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.203 SAR CDB 5460-5700 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.204 SAR CDB 5720-5825 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.205 SAR CDB 5845-6135 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.206 SAR CDB 6155-6375 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.207 SAR CDB 6395-6495 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.208 SAR CDB 6515-6675 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.209 SAR CDB 6695-6835 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.210 SAR CDB 6855-7095 MHz Set4 Chain A	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.211 SAR CDB 2400 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.212 SAR CDB 5180-5320 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.213 SAR CDB 5340-5440 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.214 SAR CDB 5460-5700 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.215 SAR CDB 5720-5825 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.216 SAR CDB 5845-6135 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.217 SAR CDB 6155-6375 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.218 SAR CDB 6395-6495 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.219 SAR CDB 6515-6675 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.2.220 SAR CDB 6695-6835 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.221 SAR CDB 6855-7095 MHz Set4 Chain B	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.222 Antenna A Current Set	Current Set to be used 0 :Default OTP table 1-3 SAR Sets	Possible Choices: • Default OTP table • Set 1 • Set 2 • Set 3 • Set 4 Default Value: • Default OTP table
2.2.223 Antenna B Current Set	Current Set to be used 0 :Default OTP table 1-3 SAR Sets	Possible Choices: • Default OTP table • Set 1 • Set 2 • Set 3 • Set 4 Default Value: • Default OTP table
2.2.224 WGDS Package		
2.2.225 Number of Groups	The Number of Group that supported. The first 3	

	Mandatory. 4-7 OEMs customizations.	Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 8
2.2.226 SAR 2400 MHz Max Allowed for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.227 SAR 2400 MHz Chain A Offset for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.228 SAR 2400 MHz Chain B Offset for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.229 SAR 5200 MHz Max Allowed for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.230 SAR 5200 MHz Chain A Offset for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.231 SAR 5200 MHz Chain B Offset for Group 1 (FCC)	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.232 SAR 6000-7000 MHz Max Allowed for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.233 SAR 6000-7000 MHz Chain A Offset for Group 1 (FCC)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.234 SAR 6000-7000 MHz Chain B Offset for Group 1 (FCC)	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.235 SAR 2400 MHz Max Allowed for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.236 SAR 2400 MHz Chain A Offset for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.237 SAR 2400 MHz Chain B Offset for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.238 SAR 5200 MHz Max Allowed for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.239 SAR 5200 MHz Chain A Offset for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.240 SAR 5200 MHz Chain B Offset for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.241 SAR 6000-7000 MHz Max Allowed for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.242 SAR 6000-7000 MHz Chain A Offset for Group 2 (EU Japan)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.243 SAR 6000-7000 MHz Chain B Offset for Group 2 (EU Japan)	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.244 SAR 2400 MHz Max Allowed for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.245 SAR 2400 MHz Chain A Offset for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.246 SAR 2400 MHz Chain B Offset for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.247 SAR 5200 MHz Max Allowed for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.248 SAR 5200 MHz Chain A Offset for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.249 SAR 5200 MHz Chain B Offset for Group 3 (ROW)	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.250 SAR 6000-7000 MHz Max Allowed for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.251 SAR 6000-7000 MHz Chain A Offset for Group 3 (ROW)	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.252 SAR 6000-7000 MHz Chain B Offset for Group 3 (ROW)	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.253 SAR 2400 MHz Max Allowed for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.254 SAR 2400 MHz Chain A Offset for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.255 SAR 2400 MHz Chain B Offset for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.256 SAR 5200 MHz Max Allowed for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.257 SAR 5200 MHz Chain A Offset for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.258 SAR 5200 MHz Chain B Offset for Group 4	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.259 SAR 6000-7000 MHz Max Allowed for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.260 SAR 6000-7000 MHz Chain A Offset for Group 4	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.261 SAR 6000-7000 MHz Chain B Offset for Group 4	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.262 SAR 2400 MHz Max Allowed for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.263 SAR 2400 MHz Chain A Offset for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.264 SAR 2400 MHz Chain B Offset for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.265 SAR 5200 MHz Max Allowed for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.266 SAR 5200 MHz Chain A Offset for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.267 SAR 5200 MHz Chain B Offset for Group 5	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.268 SAR 6000-7000 MHz Max Allowed for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.269 SAR 6000-7000 MHz Chain A Offset for Group 5	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.270 SAR 6000-7000 MHz Chain B Offset for Group 5	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit	

	integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.271 SAR 2400 MHz Max Allowed for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.272 SAR 2400 MHz Chain A Offset for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.273 SAR 2400 MHz Chain B Offset for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.274 SAR 5200 MHz Max Allowed for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.275 SAR 5200 MHz Chain A Offset for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.276 SAR 5200 MHz Chain B Offset for Group 6	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.277 SAR 6000-7000 MHz Max Allowed for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.278 SAR 6000-7000 MHz Chain A Offset for Group 6	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.279 SAR 6000-7000 MHz Chain B Offset for Group 6	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.280 SAR 2400 MHz Max Allowed for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.281 SAR 2400 MHz Chain A Offset for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.282 SAR 2400 MHz Chain B Offset for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.283 SAR 5200 MHz Max Allowed for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.284 SAR 5200 MHz Chain A Offset for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.285 SAR 5200 MHz Chain B Offset for Group 7	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit	

	integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.286 SAR 6000-7000 MHz Max Allowed for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.287 SAR 6000-7000 MHz Chain A Offset for Group 7	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.288 SAR 6000-7000 MHz Chain B Offset for Group 7	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.289 SAR 2400 MHz Max Allowed for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.290 SAR 2400 MHz Chain A Offset for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.291 SAR 2400 MHz Chain B Offset for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.292 SAR 5200 MHz Max Allowed for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.293 SAR 5200 MHz Chain A Offset for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.294 SAR 5200 MHz Chain B Offset for Group 8	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.295 SAR 6000-7000 MHz Max Allowed for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit	

	unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.296 SAR 6000-7000 MHz Chain A Offset for Group 8	Defines the WiFi SAR Delta Value to be applied - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.297 SAR 6000-7000 MHz Chain B Offset for Group 8	Defines the WiFi SAR Tx Power Limit - 8bit unsigned with 5bit integer and 3bit fractional. 0x00 = 0b00000000 = 0.125dB; 0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.298 External 32kHz Clock	This will be used to specify that platform does have valid External 32kHz clock or not..	Possible Choices: • Not Valid • Valid Default Value: • Not Valid
2.2.299 PPAG Package		
2.2.300 WiFi ANT Gain control	Enable / Disable WiFi Antenna Gain control.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.301 ANT Gain 2400 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement	

	0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 24 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.302 ANT Gain 5180-5320 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.303 Ant Gain 5340-5440 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.304 Ant Gain 5460-5700 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.305 Ant Gain 5720-5825 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.306 Ant Gain 5845-6135 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement	

	0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.307 Ant Gain 6155-6375 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.308 Ant Gain 6395-6495 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.309 Ant Gain 6515-6675 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.310 Ant Gain 6695-6835 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.311 Ant Gain 6855-7095 MHz Chain A	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement	

	0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.312 Ant Gain 2400 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 24 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.313 Ant Gain 5180-5320 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.314 Ant Gain 5340-5440 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.315 Ant Gain 5460-5700 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.316 Ant Gain 5720-5825 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement	

	0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.317 Ant Gain 5845-6135 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.318 Ant Gain 6155-6375 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.319 Ant Gain 6395-6495 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.320 Ant Gain 6515-6675 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.321 Ant Gain 6695-6835 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement	

	0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.322 Ant Gain 6855-7095 MHz Chain B	Defines the WiFi ANT gain Delta Value to be applied - 8bit signed Two's complement 0.125dB. 0x80 = 0b10000000 = -16dB; 0x7F = 0b01111111 = 15.875dB. Each step is equivalent to 0.125dB	Default Value: • 40 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.323 External 32kHz Clock	This will be used to specify that platform does have valid External 32kHz clock or not..	Possible Choices: • Not Valid • Valid Default Value: • Not Valid
2.2.324 Bluetooth SAR	Define the mode of SAR control to be used. Disabled: Tx power shall be mandated by device NVM Enabled: Tx power shall be the minimum between BIOS SAR table and BT Device NVM (either Module or Platform)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.325 Bluetooth Increased Power Mode	Defines Bluetooth Increased Power Mode. SAR Limitation feature enablement/disablement	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.2.326 Bluetooth SAR Power Limit 2400 Chain A	Bluetooth SAR power restriction for the Lower Band (LB) - 2400MHz frequency Chain A. 0x00 = 0b00000000 = 0.125dB;	Default Value: • 0

	0xFF = 0b11111111 = 31.875dB. Each step is equivalent to 0.125dB	Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.327 Bluetooth SAR BR	Defines the SAR power restriction for BR Modulation	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.328 Bluetooth SAR EDR2	Defines the SAR power restriction for EDR2 Modulation	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.329 Bluetooth SAR EDR3	Defines the SAR power restriction for EDR3 Modulation	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.330 Bluetooth SAR LE	Defines the SAR power restriction for LE Modulation	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.331 Bluetooth SAR LE 2Mhz	Defines the SAR power restriction for LE 2Mhz Modulation	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.332 Bluetooth SAR LE LR	Defines the SAR power restriction for LE LR Modulation	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.2.333 Disable SRD Active Channels	Enable/Disable SRD Active Channels 00 - ETSI 5.8 GHz SRD Active Scan Enable 01 - ETSI 5.8 GHz SRD Passive Scan Enable 02 - ETSI 5.8 GHz SRD Disabled	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.2.334 Supported Indonesia 5.15-5.35 GHz Band	Enable/Disable Indonesia 5.15-5.35 GHz 00 - Set 5.15-5.35 GHz to Disable in Indonesia 01 - Set 5.15-5.35 GHz to Enable (Passive) in Indonesia 02 - Reserved	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.2.335 Ultra High Band Support	Please input HEX value. Bit0 '0' No override [Default] '1' Only allow countries enabled in the following bits Bit1 - USA '0' USA 6GHz disable '1' 6GHz allowed in USA Bit2 - Rest of World Bit3 - EU countries Bit4 - South Korea Bit5 - Brazil Bit6 - Chile Bit7 - Japan	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295

	Bit8 - Canada Bit31:9 - Reserved	
2.2.336 Ultra High Band Support	Please input HEX value. Bit0 '0' No override [Default] '1' Only allow countries enabled in the following bits Bit1 - USA '0' USA 6GHz disable '1' 6GHz allowed in USA Bit2 - Rest of World Bit3 - EU countries Bit4 - South Korea Bit5 - Brazil Bit6 - Chile Bit7 - Japan Bit8 - Canada Bit9 - Morocco Bit10 - Mongolia Bit11 - Malaysia Bit31:12 - Reserved	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.2.337 Regulatory Configurations	Enabling DRS for China Location	Possible Choices: • Disable DRS for China Location • Enable DRS for China Location Default Value: • Disable DRS for China Location
2.2.338 UART Configurations	TBD	Possible Choices: • Default Default Value: • Default
2.2.339 UNII-4	Control Enablement UNII-4 over certificate modules Please input HEX value. FCC Bit0 - Apply changes over FCC,	Default Value: • 0 Numeric Range:

	UNII-4 setting within module certification (Default Intel module definitions) '0' Work with WiFi FW/OTP definitions '1' Apply changes Bit1 - UNII-4 mode on FCC '0' Disable UNII-4 '1' Enable UNII-4 ETSI Bit2 - Apply changes over ETSI, UNII-4 setting within module certification (Default Intel module definitions) Bit3 - UNII-4 mode on ETSI Bit31:4 - Reserved shall set to zeros	Minimum Value: 0 Maximum Value: 4294967295
2.2.340 Indoor Control	Device for Indoor Use Only (Solar Family onwards) Please input HEX value. Bit0 - EU Bit1 - Japan Bit2 - China, applied only in case of China BIOS or DRS in China Enabled Bit3 - USA Bit31:4 - Reserved shall set to zeros	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.2.341 Wi-Fi Band Selection	Give the ability to selectively enable/disable Wi-Fi bands on platform. Please input HEX value. Bit value '0' Band selection Controlled by NIC [Default] '1' Force disable the band Bit0 - 2.4 GHz Bit1 - 5.2 GHz Bit2 - 5.3 GHz Bit3 - 5.5 GHz Bit4 - 5.8 GHz Bit5 - 5.9 GHz Bit6 - 6.2 GHz	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295

	Bit7 - 6.5 GHz Bit8 - 6.6 GHz Bit9 - 6.8 GHz Bit10 - 7.0 GHz Bit31:11 - Reserved	
2.2.342 Wi-Fi Energy Detection Threshold	Please input HEX value. Bit value '0' Use default EDT method '1' Use new EDT method Bit0:1 - Reserved Bit2 - For ETSI Bit3:4 - Reserved Bit5 - For FCC Bit6:8 - Reserved Bit9 - For HB 5150-5350 Bit10 - For HB 5350-5470 Bit11 - For HB 5470-5725 Bit12 - For HB 5725-5945 Bit13 - For UHB 5945-6165 Bit14 - For UHB 6165-6405 Bit15 - For UHB 6405-6525 Bit16 - For UHB 6525-6705 Bit17 - For UHB 6705-6865 Bit18 - For UHB 6865-7105 Bit31:19 - Reserved	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.2.343 Wi-Fi 7 enablement/disablement	Please input HEX value. Bit0 '0' No override [Default] '1' Force disable all countries that are not defined in the following bits Bit1 - USA '0' USA Wi-Fi disable '1' Wi-Fi 7 allowed in the USA Bit31:2 - Reserved	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.2.344 WiFi Time Average SAR - WTAS		
2.2.345 WTAS Selection	Please input HEX value. Bit0 - Enable TAS feature. '0' TAS Disabled [Default] '1' TAS Enabled Bit1 - IEC Optimization, override NIC configuration (BIOSoverideTASrIEC),Allow	Default Value: • 0 Numeric Range: Minimum Value: 0

	override NIC defaults. '0' No override, use device settings. '1' Override IEC Optimization, effected over certified NIC. The Value will set by Bit #2. Bit2 - IEC Optimization Control Valve (BIOCenTrIC).This bit impact only incase that Bit #1 set to â€˜1â€™ and the NIC is certified to support TAS over IEC. '0' Disabled TAS IEC optimization regulatory averaging time '1' Enabled TAS IEC optimization regulatory averaging time Bit31:3 - Reserved	Maximum Value: 4294967295
2.2.346 WTAS List Entries	No. of blocked countries not approved by OEM to support this feature.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.2.347 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.348 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

2.2.349 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.350 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.351 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.352 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.353 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

2.2.354 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.355 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.356 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.357 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.358 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

2.2.359 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.360 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.361 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.362 ISO country code to block	The decimal equivalent of country code (a two-ASCII-character) as specified in ISO_3166-1. Ex. for JP - 19024	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.363 WLAN/WWAN Antenna Isolation		
2.2.364 WLAN/WWAN Low Band Isolation	Isolation between WLAN and WWAN in WiFi Low Band (2.4 GHz). Range: 15 - 40 dB	Default Value: • 15 Numeric Range: Minimum Value: 15

		Maximum Value: 40
2.2.365 WLAN/WWAN High Band Isolation	Isolation between WLAN and WWAN in WiFi High Band (5.2-7 GHz). Range: 15 - 40 dB	Default Value: • 15 Numeric Range: Minimum Value: 15 Maximum Value: 40
2.2.366 WWAN Configuration		
2.2.366.1 WWAN Device	Select the M.2 WWAN Device options to enable 4G - 7360/7560 (Intel), 5G - M80 (MediaTek) Modems	Possible Choices: • Disabled • 4G - 7360/7560 • 5G - M80 Default Value: • Disabled
2.2.366.2 Firmware Flash Device	Enable or Disable WWAN Firmware Flash Device	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.2.366.3 Wireless CNV Config Device	Enable or Disable WCCD ACPI device node	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.2.366.4 WWAN Reset Workaround	Enabling this workardound will result in BIOS asserting FULL_CARD_POWER_OFF#, PERST# and RESET# WWAN signals before the WWAN Device Power-On Sequence is executed. Disabling it has no impact.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.2.366.5 WA - WWAN OEM SVID	WWAN OEM Sub-Vendor ID	Default Value: • 7416 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.2.366.6 WA - WWAN SVID Detect Timeout	The timeout value (ms) for detecting WWAN OEM SVID. Please notice it's workaround for OEM only.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.3 CPU Configuration		
2.3.1 Efficient-core Information		
2.3.1.1 L1 Data Cache	Displays the Efficient-core L1 Data Cache size.	
2.3.1.2 L1 Instruction Cache	Displays the Efficient-core L1 Instruction Cache size.	
2.3.1.3 L2 Cache	Displays the Efficient-core L2 Cache size.	
2.3.1.4 L3 Cache	Displays the Efficient-core L3 Cache size.	
2.3.2 Performance-core Information		
2.3.2.1 L1 Data Cache	Displays the Performance-core L1 Data Cache size.	
2.3.2.2 L1 Instruction Cache	Displays the Performance-core L1 Instruction Cache size.	
2.3.2.3 L2 Cache	Displays the Performance-core L2 Cache size.	
2.3.2.4 L3 Cache	Displays the Performance-core L3 Cache size.	
2.3.3 ID	Displays the Processor ID.	

2.3.4 Brand String	Brand String of the Performance Processor	
2.3.5 VMX	VMX Supported or Not	
2.3.6 SMX/TXT	SMX/TXT Supported or Not	
2.3.7 TXT Crash Code	TXT Crash Code Register value	
2.3.8 TXT SPAD	TXT SPAD Register value	
2.3.9 Boot Guard Status	Boot Guard Status Register value	
2.3.10 Boot Guard ACM Policy Status	Boot Guard ACM Policy Status value	
2.3.11 Boot Guard SACM Information	Boot Guard SACM Info MSR value	
2.3.12 C6DRAM	Enable/Disable moving of DRAM contents to PRM memory when CPU is in C6 state	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.13 CPU Flex Ratio Override	Enable/Disable CPU Flex Ratio Programming	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.3.14 CPU Flex Ratio Settings	This value must be between Max Efficiency Ratio (LFM) and Maximum non-turbo ratio set by Hardware (HFM).	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 63
2.3.15 Hardware Prefetcher	To turn on/off the MLC streamer prefetcher.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
2.3.16 Adjacent Cache Line Prefetch	To turn on/off prefetching of adjacent cache lines.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.17 Intel (VMX) Virtualization Technology	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.18 PECI	Enable/Disable PECI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.19 AVX	Enable/Disable the Avx 2 Instructions. This is applicable for Performance-core only	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.3.20 Active Performance-cores	Number of P-cores to enable in each processor package. Note: Number of Cores and E-cores are looked at together. When both are {0,0}, Pcode will enable all cores.	Possible Choices: • All • 7 • 6 • 5 • 4 • 3 • 2 • 1

		Default Value: • All
2.3.21 Active Efficient-cores	Number of E-cores to enable in each processor package. Note: Number of Cores and E-cores are looked at together. When both are {0,0}, Pcode will enable all cores.	Possible Choices: • All • 15 • 14 • 13 • 12 • 11 • 10 • 9 • 8 • 7 • 6 • 5 • 4 • 3 • 2 • 1 • 0 Default Value: • All
2.3.22 Limit CPUID Maximum	Disabled for Windows XP	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.3.23 Hyper-Threading	Enable or Disable Hyper-Threading Technology.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.24 BIST	Enable/Disable BIST (Built-In Self Test) on reset	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.3.25 AP threads Idle Manner	AP threads Idle Manner for waiting signal to run	Possible Choices: • HALT Loop • MWAIT Loop • RUN Loop Default Value: • MWAIT Loop
2.3.26 AES	Enable/Disable AES (Advanced Encryption Standard)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.27 MachineCheck	Enable/Disable Machine Check	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.28 MonitorMWait	Enable/Disable MonitorMWait, if Disable MonitorMwait, the AP threads Idle Manner should not set in MWAIT Loop	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.29 Intel Trusted Execution Technology	Enables utilization of additional hardware capabilities provided by Intel (R) Trusted Execution Technology. Changes require a full power cycle to take effect.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.3.30 Alias Check Request	Enables Txt Alias Checking capability	Possible Choices:

	Changes require full Txt capability before it will take effect. It is a one time only change, next reboot will be reset.	• Disabled • Enabled Default Value: • Disabled
2.3.31 DPR Memory Size (MB)	Reserve DPR memory size (0-255) MB	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.3.32 Reset AUX Content	Reset TPM Aux content. Txt may not functional after AUX content gets reset.	Possible Choices: • yes • no Default Value: • no
2.3.33 BIOS Guard		
2.3.33.1 Enable Tools Interface	Configure Tools Interface. Options are: DISABLE - Disable Tools Interface; ENABLE - Enable Tools Interface.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.34 CPU SMM Enhancement		
2.3.34.1 SMM MSR Save State Enable	Enable/Disable support for MSR Save State	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.3.34.2 SMM Use Delay Indication	Enable/Disable usage of SMM_DELAYED MSR for MP	

	sync in SMI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.34.3 SMM Use Block Indication	Enable/Disable usage of SMM_BLOCKED MSR for MP sync in SMI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.34.4 SMM Use SMM en-US Indication	Enable/Disable usage of SMM_ENABLE MSR for MP sync in SMI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.3.35 FCLK Frequency for Early Power On	FCLK frequency can take values of 400MHz, 800MHz and 1GHz (1GHz not supported for ULT/ULX SKUs)	Possible Choices: • Normal (800Mhz) • 1GHz • 400MHz • Auto Default Value: • Auto
2.3.36 Total Memory Encryption	Configure Total Memory Encryption (TME) to protect DRAM data from physical attacks.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4 Power & Performance		
2.4.1 CPU - Power Management Control		
2.4.1.1 P0 Fused Max Core Ratio	Displays Fused Max Core Ratio for P0	

2.4.1.2 P1 Fused Max Core Ratio	Displays Fused Max Core Ratio for P1	
2.4.1.3 P2 Fused Max Core Ratio	Displays Fused Max Core Ratio for P2	
2.4.1.4 P3 Fused Max Core Ratio	Displays Fused Max Core Ratio for P3	
2.4.1.5 P4 Fused Max Core Ratio	Displays Fused Max Core Ratio for P4	
2.4.1.6 P5 Fused Max Core Ratio	Displays Fused Max Core Ratio for P5	
2.4.1.7 P6 Fused Max Core Ratio	Displays Fused Max Core Ratio for P6	
2.4.1.8 P7 Fused Max Core Ratio	Displays Fused Max Core Ratio for P7	
2.4.1.9 Boot performance mode	Select the performance state that the BIOS will set starting from reset vector.	Possible Choices: • Max Battery • Max Non-Turbo Performance • Turbo Performance Default Value: • Turbo Performance
2.4.1.10 Intel(R) SpeedStep(tm)	Allows more than two frequency ranges to be supported.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.11 Race To Halt (RTH)	Enable/Disable Race To Halt feature. RTH will dynamically increase CPU frequency in order to enter pkg C-State faster to reduce overall power. (RTH is controlled through MSR 1FC bit 20)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.12 Intel(R) Speed Shift Technology	Enable/Disable Intel(R) Speed Shift Technology support.	

	Enabling will expose the CPPC v2 interface to allow for hardware controlled P-states.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.13 Intel(R) Turbo Boost Max Technology 3.0	Enable/Disable Intel(R) Turbo Boost Max Technology 3.0 support. Disabling will report the maximum ratio of the slowest core in _CPC object.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.14 Per Core P State OS control mode	Enable/Disable Per Core P state OS control mode. Disabling will set Bit 31 = 1 command 0x06. When set, the highest core request is used for all other core requests.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.15 HwP Autonomous Per Core P State	Disable Autonomous PCPS (Bit 30 = 1, command 0x11) Autonomous will request the same value for all cores all the time. Enable PCPS (default Bit 30 = 0, command 0x11)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.16 HwP Autonomous EPP Grouping	Enable EPP grouping (default Bit 29 =0, command 0x11) Autonomous will request the same values for all cores with same EPP. Disable EPP grouping (Bit 29 =1 , command 0x11) autonomous will not necessarily request same values for all cores with same EPP.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.17 EPB override over PECI	Enable/Disable EPB override over PECI. Enable by sending pcode command 0x2b , subcommand 0x3 to 1. This will allow OOB EPB PECI override control	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.4.1.18 HwP Fast MSR Support	Enable/Disable HwP Fast MSR Support for IA32_HWP_REQUEST MSR.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.19 HwP Lock	Enable/Disable HWP Lock support in Misc Power Management MSR.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.20 HDC Control	This option allows HDC configuration. Disabled: Disable HDC Enabled: Can be enabled by OS if OS native support is available.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.21 Turbo Mode	Enable/Disable processor Turbo Mode (requires EMTTM enabled too). AUTO means enabled.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.22 View/Configure Turbo Options		
2.4.1.22.1 Current Turbo Settings		
2.4.1.22.2 Max Turbo Power Limit		
2.4.1.22.3 Min Turbo Power Limit		
2.4.1.22.4 Package TDP Limit	Package Processor Base Power (TDP) Limit	
2.4.1.22.5 Power Limit 1	Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no	

	custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit. If value is 0, BIOS will program Processor Base Power (TDP) value.	
2.4.1.22.6 Power Limit 2	Power Limit 2 value in Milli Watts. BIOS will round to the nearest 1/8W when programming. If the value is 0, BIOS will program this value as 1.25*Processor Base Power (TDP). For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this limit.	
2.4.1.22.7 Turbo Ratio Limit Options		
2.4.1.22.7.1 Current Turbo Ratio Limit Settings		
2.4.1.22.7.2 P-core Turbo Ratio Limit Numcore0	Performance-core Turbo Ratio Limit Numcore0 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio0. If value is zero, this entry is ignored.	
2.4.1.22.7.3 P-core Turbo Ratio Limit Numcore1	Performance-core Turbo Ratio Limit Numcore1 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio1. If value is zero, this entry is ignored.	
2.4.1.22.7.4 P-core Turbo Ratio Limit Numcore2	Performance-core Turbo Ratio Limit Numcore2 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio2. If value is zero, this entry	

	is ignored.	
2.4.1.22.7.5 P-core Turbo Ratio Limit Numcore3	Performance-core Turbo Ratio Limit Numcore3 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio3. If value is zero, this entry is ignored.	
2.4.1.22.7.6 P-core Turbo Ratio Limit Numcore4	Performance-core Turbo Ratio Limit Numcore4 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio4. If value is zero, this entry is ignored.	
2.4.1.22.7.7 P-core Turbo Ratio Limit Numcore5	Performance-core Turbo Ratio Limit Numcore5 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio5. If value is zero, this entry is ignored.	
2.4.1.22.7.8 P-core Turbo Ratio Limit Numcore6	Performance-core Turbo Ratio Limit Numcore6 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio6. If value is zero, this entry is ignored.	
2.4.1.22.7.9 P-core Turbo Ratio Limit Numcore7	Performance-core Turbo Ratio Limit Numcore7 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio7. If value is zero, this entry is ignored.	
2.4.1.22.7.10 P-core Turbo Ratio Limit Ratio0	Performance-core Turbo Ratio Limit Ratio0 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore0.	
2.4.1.22.7.11 P-core Turbo Ratio Limit Ratio1	Performance-core Turbo Ratio Limit Ratio1 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore1.	
2.4.1.22.7.12 P-core Turbo Ratio Limit Ratio2	Performance-core Turbo Ratio Limit Ratio2 defines the turbo ratio, the core range is defined	

	in Turbo Ratio Limit Numcore2.	
2.4.1.22.7.13 P-core Turbo Ratio Limit Ratio3	Performance-core Turbo Ratio Limit Ratio3 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore3.	
2.4.1.22.7.14 P-core Turbo Ratio Limit Ratio4	Performance-core Turbo Ratio Limit Ratio4 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore4.	
2.4.1.22.7.15 P-core Turbo Ratio Limit Ratio5	Performance-core Turbo Ratio Limit Ratio5 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore5.	
2.4.1.22.7.16 P-core Turbo Ratio Limit Ratio6	Performance-core Turbo Ratio Limit Ratio6 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore6.	
2.4.1.22.7.17 P-core Turbo Ratio Limit Ratio7	Performance-core Turbo Ratio Limit Ratio7 defines the turbo ratio, the core range is defined in Turbo Ratio Limit Numcore7.	
2.4.1.22.7.18 E-core Turbo Ratio Limit Numcore0	Efficient-core Turbo Ratio Limit Numcore0 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio0. If value is zero, this entry is ignored.	
2.4.1.22.7.19 E-core Turbo Ratio Limit Numcore1	Efficient-core Turbo Ratio Limit Numcore1 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio1. If value is zero, this entry is ignored.	
2.4.1.22.7.20 E-core Turbo Ratio Limit Numcore2	Efficient-core Turbo Ratio Limit Numcore2 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio2. If value is zero, this entry is ignored.	
2.4.1.22.7.21 E-core Turbo Ratio Limit Numcore3	Efficient-core Turbo Ratio Limit Numcore3 defines the core range, the turbo ratio is defined	

	in E-core Turbo Ratio Limit Ratio3. If value is zero, this entry is ignored.	
2.4.1.22.7.22 E-core Turbo Ratio Limit Numcore4	Efficient-core Turbo Ratio Limit Numcore4 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio4. If value is zero, this entry is ignored.	
2.4.1.22.7.23 E-core Turbo Ratio Limit Numcore5	Efficient-core Turbo Ratio Limit Numcore5 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio5. If value is zero, this entry is ignored.	
2.4.1.22.7.24 E-core Turbo Ratio Limit Numcore6	Efficient-core Turbo Ratio Limit Numcore6 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio6. If value is zero, this entry is ignored.	
2.4.1.22.7.25 E-core Turbo Ratio Limit Numcore7	Efficient-core Turbo Ratio Limit Numcore7 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio7. If value is zero, this entry is ignored.	
2.4.1.22.7.26 E-core Turbo Ratio Limit Ratio0	Efficient-core Turbo Ratio Limit Ratio0 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore0.	
2.4.1.22.7.27 E-core Turbo Ratio Limit Ratio1	Efficient-core Turbo Ratio Limit Ratio1 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore1.	
2.4.1.22.7.28 E-core Turbo Ratio Limit Ratio2	Efficient-core Turbo Ratio Limit Ratio2 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore2.	

2.4.1.22.7.29 E-core Turbo Ratio Limit Ratio3	Efficient-core Turbo Ratio Limit Ratio3 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore3.	
2.4.1.22.7.30 E-core Turbo Ratio Limit Ratio4	Efficient-core Turbo Ratio Limit Ratio4 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore4.	
2.4.1.22.7.31 E-core Turbo Ratio Limit Ratio5	Efficient-core Turbo Ratio Limit Ratio5 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore5.	
2.4.1.22.7.32 E-core Turbo Ratio Limit Ratio6	Efficient-core Turbo Ratio Limit Ratio6 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore6.	
2.4.1.22.7.33 E-core Turbo Ratio Limit Ratio7	Efficient-core Turbo Ratio Limit Ratio7 defines the turbo ratio, the core range is defined in E-core Turbo Ratio Limit Numcore7.	
2.4.1.22.7.34 P-core Turbo Ratio Limit Numcore0	Performance-core Turbo Ratio Limit Numcore0 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio0. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.35 P-core Turbo Ratio Limit Numcore1	Performance-core Turbo Ratio Limit Numcore1 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio1. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.4.1.22.7.36 P-core Turbo Ratio Limit Numcore2	Performance-core Turbo Ratio Limit Numcore2 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio2. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.37 P-core Turbo Ratio Limit Numcore3	Performance-core Turbo Ratio Limit Numcore3 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio3. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.38 P-core Turbo Ratio Limit Numcore4	Performance-core Turbo Ratio Limit Numcore4 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio4. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.39 P-core Turbo Ratio Limit Numcore5	Performance-core Turbo Ratio Limit Numcore5 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio5. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.40 P-core Turbo Ratio Limit Numcore6	Performance-core Turbo Ratio Limit Numcore6 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio6. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.4.1.22.7.41 P-core Turbo Ratio Limit Numcore7	Performance-core Turbo Ratio Limit Numcore7 defines the core range, the turbo ratio is defined in Turbo Ratio Limit Ratio7. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.42 P-core Turbo Ratio Limit Ratio0	Performance-core Turbo Ratio Limit Ratio0 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore0.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.43 P-core Turbo Ratio Limit Ratio1	Performance-core Turbo Ratio Limit Ratio1 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore1.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.44 P-core Turbo Ratio Limit Ratio2	Performance-core Turbo Ratio Limit Ratio2 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.45 P-core Turbo Ratio Limit Ratio3	Performance-core Turbo Ratio Limit Ratio3 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore3.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120

2.4.1.22.7.46 P-core Turbo Ratio Limit Ratio4	Performance-core Turbo Ratio Limit Ratio4 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.47 P-core Turbo Ratio Limit Ratio5	Performance-core Turbo Ratio Limit Ratio5 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore5.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.48 P-core Turbo Ratio Limit Ratio6	Performance-core Turbo Ratio Limit Ratio6 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore6.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.49 P-core Turbo Ratio Limit Ratio7	Performance-core Turbo Ratio Limit Ratio7 defines the turbo ratio (max is 85 in normal mode and 120 in core extension mode), the core range is defined in Turbo Ratio Limit Numcore7.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.4.1.22.7.50 E-core Turbo Ratio Limit Numcore0	Efficient-core Turbo Ratio Limit Numcore0 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio0. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.4.1.22.7.51 E-core Turbo Ratio Limit Numcore1	Efficient-core Turbo Ratio Limit Numcore1 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio1. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.52 E-core Turbo Ratio Limit Numcore2	Efficient-core Turbo Ratio Limit Numcore2 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio2. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.53 E-core Turbo Ratio Limit Numcore3	Efficient-core Turbo Ratio Limit Numcore3 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio3. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.54 E-core Turbo Ratio Limit Numcore4	Efficient-core Turbo Ratio Limit Numcore4 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio4. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.55 E-core Turbo Ratio Limit Numcore5	Efficient-core Turbo Ratio Limit Numcore5 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio5. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.4.1.22.7.56 E-core Turbo Ratio Limit Numcore6	Efficient-core Turbo Ratio Limit Numcore6 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio6. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.57 E-core Turbo Ratio Limit Numcore7	Efficient-core Turbo Ratio Limit Numcore7 defines the core range, the turbo ratio is defined in E-core Turbo Ratio Limit Ratio7. If value is zero, this entry is ignored.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.22.7.58 E-core Turbo Ratio Limit Ratio0	Efficient-core Turbo Ratio Limit Ratio0 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore0.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.59 E-core Turbo Ratio Limit Ratio1	Efficient-core Turbo Ratio Limit Ratio1 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore1.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.60 E-core Turbo Ratio Limit Ratio2	Efficient-core Turbo Ratio Limit Ratio2 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85

2.4.1.22.7.61 E-core Turbo Ratio Limit Ratio3	Efficient-core Turbo Ratio Limit Ratio3 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore3.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.62 E-core Turbo Ratio Limit Ratio4	Efficient-core Turbo Ratio Limit Ratio4 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.63 E-core Turbo Ratio Limit Ratio5	Efficient-core Turbo Ratio Limit Ratio5 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore5.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.64 E-core Turbo Ratio Limit Ratio6	Efficient-core Turbo Ratio Limit Ratio6 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore6.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.4.1.22.7.65 E-core Turbo Ratio Limit Ratio7	Efficient-core Turbo Ratio Limit Ratio7 defines the turbo ratio (max is 85 irrespective of the core extension mode), the core range is defined in E-core Turbo Ratio Limit Numcore7.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85

2.4.1.22.8 Energy Efficient P-state	Enable/Disable Energy Efficient P-state feature. When set to 0, will disable access to ENERGY_PERFORMANCE_BIAS MSR and CPUID Function 6 ECX[3] will read 0 indicating no support for Energy Efficient policy setting. When set to 1 will enable access to ENERGY_PERFORMANCE_BIAS MSR 1B0h and CPUID Function 6 ECX[3] will read 1 indicating Energy Efficient policy setting is supported.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.22.9 Package Power Limit MSR Lock	Enable/Disable locking of Package Power Limit settings. When enabled, PACKAGE_POWER_LIMIT MSR will be locked and a reset will be required to unlock the register.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.22.10 Power Limit 1 Override	Enable/Disable Power Limit 1 override. If this option is disabled, BIOS will program the default values for Power Limit 1 and Power Limit 1 Time Window.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.22.11 Power Limit 1	Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit. If value is 0, BIOS will program Processor Base Power (TDP) value.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875

2.4.1.22.12 Power Limit 1 Time Window	Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value. Defines time window which Processor Base Power (TDP) value should be maintained.	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 • 80 • 96 • 112 • 128 Default Value: • 0
2.4.1.22.13 Power Limit 2 Override	Enable/Disable Power Limit 2 override. If this option is disabled, BIOS will program the default values for Power Limit 2.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.22.14 Power Limit 2	Power Limit 2 value in Milli Watts. BIOS will round to the nearest 1/8W when programming. If the value is 0, BIOS will program this value as 1.25*Processor Base Power (TDP). For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875

	limit.	
2.4.1.22.15 Energy Efficient Turbo	Enable/Disable Energy Efficient Turbo Feature. This feature will opportunistically lower the turbo frequency to increase efficiency. Recommended only to disable in overclocking situations where turbo frequency must remain constant. Otherwise, leave enabled.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.23 Config TDP Configurations		
2.4.1.23.1 Config TDP Configurations		
2.4.1.23.2 Enable Configurable TDP	Applies Configurable Processor Base Power (cTDP) initialization settings based on non-cTDP or cTDP. Default is 1: Applies to cTDP; if 0 then applies non-cTDP and BIOS will bypass cTDP initialzation flow	Possible Choices: • Applies to non-cTDP • Applies to cTDP Default Value: • Applies to cTDP
2.4.1.23.3 Configurable TDP Boot Mode	Configurable Processor Base Power (cTDP) Mode as Nominal/Level/Leve2/Deactivat e TDP selection. Deactivate option will set MSR to Nominal and MMIO to Zero.	Possible Choices: • Nominal • Level1 • Level2 • Deactivate Default Value: • Nominal
2.4.1.23.4 Configurable TDP Lock	Configurable Processor Base Power (cTDP) Mode Lock sets the Lock bits on TURBO_ACTIVATION_RATIO and CONFIG_TDP_CONTROL. Note: When CTDP Lock is enabled Custom ConfigTDP Count will be forced to 1 and Custom ConfigTDP Boot Index will be forced to 0.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.4.1.23.5 CTDP BIOS control	Enables Configurable Processor Base Power (cTDP) control via runtime ACPI BIOS methods.	Possible Choices:

	This "BIOS only" feature does not require EC or driver support.	• Enabled • Disabled Default Value: • Disabled
2.4.1.23.6 ConfigTDP Levels	Configurable Processor Base Power (cTDP) Levels Supported from MSR	
2.4.1.23.7 ConfigTDP Turbo Activation Ratio	Configurable Processor Base Power (cTDP) Turbo Activation Ratio values from MSR	
2.4.1.23.8 Power Limit 1	Power Limit 1 values from MMIO	
2.4.1.23.9 Power Limit 2	Power Limit 2 values from MMIO	
2.4.1.23.10 Custom Settings Nominal		
2.4.1.23.11 ConfigTDP Nominal	Configurable Processor Base Power (cTDP) Nominal Ratio and Processor Base Power (TDP) from MSR	
2.4.1.23.12 Power Limit 1	Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.23.13 Power Limit 2	Power Limit 2 value in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875

2.4.1.23.14 Power Limit 1 Time Window	Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value. Defines time window which Processor Base Power (TDP) value should be maintained.	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 • 80 • 96 • 112 • 128 Default Value: • 0
2.4.1.23.15 ConfigTDP Turbo Activation Ratio	Custom value for Turbo Activation Ratio. Needs to be configured with valid values from LFM to Max Turbo. 0 means don't use custom value.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.23.16 Custom Settings Level1		
2.4.1.23.17 ConfigTDP Level1	Configurable Processor Base Power (cTDP) Level1 Ratio and Processor Base Power (TDP) from MSR	
2.4.1.23.18 Power Limit 1	Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no	

	custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.23.19 Power Limit 2	Power Limit 2 value in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.23.20 Power Limit 1 Time Window	Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value. Defines time window which Processor Base Power (TDP) value should be maintained.	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 • 80 • 96 • 112 • 128 Default Value: • 0

2.4.1.23.21 ConfigTDP Turbo Activation Ratio	Custom value for Turbo Activation Ratio. Needs to be configured with valid values from LFM to Max Turbo. 0 means don't use custom value.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.23.22 Custom Settings Level2		
2.4.1.23.23 ConfigTDP Level2	Configurable Processor Base Power (cTDP) Level2 Ratio and Processor Base Power (TDP) from MSR	
2.4.1.23.24 Power Limit 1	Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.23.25 Power Limit 2	Power Limit 2 value in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this limit.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.23.26 Power Limit 1 Time Window	Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value. Defines time window which Processor Base Power (TDP) value should be maintained.	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5

		• 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 • 80 • 96 • 112 • 128 Default Value: • 0
2.4.1.23.27 ConfigTDP Turbo Activation Ratio	Custom value for Turbo Activation Ratio. Needs to be configured with valid values from LFM to Max Turbo. 0 means don't use custom value.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24 CPU VR Settings		
2.4.1.24.1 Current VccIn Aux Icc Max		
2.4.1.24.2 PSYS Slope	PSYS Slope defined in 1/100 increments. Range is 0-200. For a 1.25 slope, enter 125. 0 = AUTO. Uses BIOS VR mailbox command 0x9.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.4.1.24.3 PSYS Offset	PSYS Offset defined in 1/1000 increments. Range is 0-63999. For an offset of 25.348, enter 25348. PSYS Uses BIOS VR mailbox command 0x4.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 63999
2.4.1.24.4 PSYS Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.4.1.24.5 PSYS PMax Power	Psys Pmax power, defined in 1/8 Watt or 1/8 Percent increments. For Watts, range is 0-8191 (ex. For 125W, enter 1000). For ATX12VO Percent, Range is 0-1600 (ex. For recommended value of 200%, enter 1600). Uses BIOS VR mailbox command 0xB.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 8191
2.4.1.24.6 Min Voltage Override	Min Voltage Override. Enable to override minimum voltage for runtime and for C8.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.7 Min Voltage Runtime	Min Voltage for Runtime. Range is 0 - 1999mV in 1/128 volt increments. Input is in mVolts.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1999
2.4.1.24.8 Min Voltage C8	Min Voltage for Package C8. Range is 0 - 1999mV in 1/128 volt increments. Input is in mVolts.	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 1999
2.4.1.24.9 VccIn Aux Icc Max	Sets the Max Icc VccIn Aux value defined in 1/4A increments. Range is 0-512. For an IccMax 32A, enter 128(32*4).	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.10 VccIn Aux IMON Slope	VccIN Aux IMON Slope defined in 1/100 increments. Range is 0-200. For a 1.25 slope, enter 125. 0 = AUTO. Uses BIOS VR mailbox command 0x18.	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.4.1.24.11 VccIN Aux IMON Offset	VccIN Aux IMON Offset defined in 1/1000 increments. Range is 0-63999. For an offset of 25.348, enter 25348. IMON Uses BIOS VR mailbox command 0x18.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63999
2.4.1.24.12 VccIN Aux IMON Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.4.1.24.13 Vsys/Psys Critical	Vsys/Psys Critical Enable or disable	Possible Choices: • Disabled • Psys Critical • Vsys Critical Default Value: • Disabled

2.4.1.24.14 Vsys/Psys Full Scale	Input Vsys or Psys Full-Scale and Critical Threshold to program Vsys/Psys Critical (0x4A) register. Critical Limit Trigger = (Critical Threshold/Full-Scale) * 0xFF. Input for Vsys is in Milli-Volts. For Psys either in Milli-Watts or Milli-Percent. For ATX12VO systems, recommended value is 200000.	Default Value: • 200000 Numeric Range: Minimum Value: 0 Maximum Value: 255000
2.4.1.24.15 Vsys/Psys Critical Threshold	Input Vsys or Psys Full-Scale and Critical Threshold to program Vsys/Psys Critical (0x4A) register. Critical Limit Trigger = (Critical Threshold/Full-Scale) * 0xFF. Input for Vsys is in Milli-Volts. For Psys either in Milli-Watts or Milli-Percent. For ATX12VO systems, recommended value is 120000.	Default Value: • 130000 Numeric Range: Minimum Value: 0 Maximum Value: 255000
2.4.1.24.16 Vsys/Psys Full Scale	Input Vsys or Psys Full-Scale and Critical Threshold to program Vsys/Psys Critical (0x4A) register. Critical Limit Trigger = (Critical Threshold/Full-Scale) * 0xFF. Input for Vsys is in Milli-Volts. For Psys either in Milli-Watts or Milli-Percent. For ATX12VO systems, recommended value is 200000.	Default Value: • 24000 Numeric Range: Minimum Value: 0 Maximum Value: 255000
2.4.1.24.17 Vsys/Psys Critical Threshold	Input Vsys or Psys Full-Scale and Critical Threshold to program Vsys/Psys Critical (0x4A) register. Critical Limit Trigger = (Critical Threshold/Full-Scale) * 0xFF. Input for Vsys is in Milli-Volts. For Psys either in Milli-Watts or Milli-Percent. For ATX12VO systems, recommended value is 120000.	Default Value: • 6000 Numeric Range: Minimum Value: 0 Maximum Value: 255000
2.4.1.24.18 Assertion Deglitch Mantissa	Assertion Deglitch Mantissa 0x4F[7-3]. Assertion Deglitch = 2Âµs * Mantissa * 2^(Exponent)	Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.19 Assertion Deglitch Exponent	Assertion Deglitch Exponent 0x4F[3-0]. Assertion Deglitch = 2Âµs * Mantissa * 2^(Exponent)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.20 De assertion Deglitch Mantissa	De Assertion Deglitch Mantissa 0x49[7-3]. Assertion Deglitch = 2Âµs * Mantissa * 2^(Exponent)	Default Value: • 13 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.21 De assertion Deglitch Exponent	De Assertion Deglitch Exponent 0x49[3-0]. Assertion Deglitch = 2Âµs * Mantissa * 2^(Exponent)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.22 VR Power Delivery Design	Specifies the ADL Desktop board design used for the VR settings override values. By default, BIOS will override the default Desktop VR settings based on the board design. A value of AUTO(0) will use the board ID to determine the board design. Any other value will override the board id logic to provide a custom VR Power Delivery Design value. This is intended primarily for validation.	Possible Choices: • AUTO • ADL S 881 35W • ADL S 881 65W • ADL S 881 125W • ADL S 841 35W • ADL S 841 65W • ADL S 841 125W • ADL S 641 35W • ADL S 641 65W • ADL S 641 125W • ADL S 681 35W • ADL S 801 35W • ADL S 801 65W

		• ADL S 401 35W • ADL S 401 65W • ADL S 601 35W • ADL S 601 65W • ADL S 201 35W • ADL S 201 46W • ADL S 201 65W • ADL S 401 58W • ADL S 401 60W • ADL S 401 63W • ADL S BGA 881 65W • ADL S BGA 841 65W • ADL S BGA 441 65W • ADL S BGA 601 65W • ADL S BGA 681 65W • ADL S BGA 401 65W • ADL S Mobile BGA 881 55W • ADL S Mobile BGA 681 55W • ADL S Mobile BGA 481 55W • ADL S Mobile BGA 441 55W • ADL P 282 15W • ADL P 482 28W • ADL P 682 28W • ADL P 682 45W • ADL P 142 15W • ADL P 242 15W • ADL P 482 45W • ADL P 442 45W • ADL P 442 28W • ADL P 282 28W • ADL P 242 28W • ADL P 142 28W • ADL P 242 45W • ADL P 182 28W • ADL P 662 28W • ADL P 642 28W • ADL P 642 45W • RPL P 282 15W • RPL P 482 28W • RPL H 482 45W • RPL P 682 28W • RPL H 682 45W • RPL H 442 45W • RPL P 142 15W • RPL P 242 15W • RPL P 442 28W • RPL P 282 28W • RPL P 642 28W • RPL H 642 45W

		• RPL PX 282 15W • RPL PX 482 28W • RPL PX 482 45W • RPL PX 682 28W • RPL PX 682 45W • RPL PX 442 45W • ADL M 18 7W PMIC • ADL M 18 5W PMIC • ADL M 14 5W PMIC • ADL M 14 7W PMIC • ADL M 24 7W Discrete/Hybrid • ADL M 28 7W Discrete/Hybrid • ADL M 18 7W Discrete/Hybrid • ADL M 28 9W Discrete/Hybrid • ADL M 14 9W Discrete/Hybrid • ADL M 24 9W Discrete/Hybrid • ADL M 14 12W Discrete/Hybrid • ADL M 24 12W Discrete/Hybrid • ADL M 18 12W Discrete/Hybrid • ADL M 28 12W Discrete/Hybrid Default Value: • AUTO
2.4.1.24.23 Acoustic Noise Settings		
2.4.1.24.23.1 Acoustic Noise Mitigation	Enabling this option will help mitigate acoustic noise on certain SKUs when the CPU is in deeper C state	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.23.2 Pre Wake Time	Set the maximum Pre Wake randomization time in micro ticks. Range is 0-255. This is for acoustic noise mitigation Dynamic Perodicity Alteration (DPA) tuning.	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.4.1.24.23.3 Ramp Up Time	Set the maximum Ramp Up randomization time in micro ticks. Range is 0-255. This is for acoustic noise mitigation Dynamic Perodicity Alteration (DPA) tuning.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.23.4 Ramp Down Time	Set the maximum Ramp Down randomization time in micro ticks. Range is 0-255. This is for acoustic noise mitigation Dynamic Perodicity Alteration (DPA) tuning.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.4.1.24.23.5 IA VR Domain		
2.4.1.24.23.6 Disable Fast PKG C State Ramp for IA Domain	This option needs to be configured to reduce acoustic noise during deeper C states. False: Don't disable Fast ramp during deeper C states; True: Disable Fast ramp during deeper C state	Possible Choices: • FALSE • TRUE Default Value: • FALSE
2.4.1.24.23.7 Slow Slew Rate for IA Domain	Set VR IA Slow Slew Rate for Deep Package C State ramp time; Slow slew rate equals to Fast divided by number, the number is 2, 4, 8, 16 to slow down the slew rate to help minimize acoustic noise	Possible Choices: • Fast/2 • Fast/4 • Fast/8 • Fast/16 Default Value: • Fast/2
2.4.1.24.23.8 GT VR Domain		
2.4.1.24.23.9 Disable Fast PKG C State Ramp for GT Domain	This option needs to be configured to reduce acoustic noise during deeper C states. False: Don't disable Fast ramp during deeper C states; True:	Possible Choices: • FALSE • TRUE

	Disable Fast ramp during deeper C state	Default Value: • FALSE
2.4.1.24.23.10 Slow Slew Rate for GT Domain	Set VR GT Slow Slew Rate for Deep Package C State ramp time; Slow slew rate equals to Fast divided by number, the number is 2, 4, 8 to slow down the slew rate to help minimize acoustic noise; divide by 16 is disabled	Possible Choices: • Fast/2 • Fast/4 • Fast/8 Default Value: • Fast/2
2.4.1.24.23.11 SA VR Domain		
2.4.1.24.23.12 Disable Fast PKG C State Ramp for SA Domain	This option needs to be configured to reduce acoustic noise during deeper C states. False: Don't disable Fast ramp during deeper C states; True: Disable Fast ramp during deeper C state	Possible Choices: • FALSE • TRUE Default Value: • FALSE
2.4.1.24.24 Core/IA VR Settings		
2.4.1.24.24.1 Core/IA VR Domain		
2.4.1.24.24.2 VR Config Enable		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.24.3 Current AC Loadline		
2.4.1.24.24.4 Current DC Loadline		
2.4.1.24.24.5 Current Psi1 Threshold		
2.4.1.24.24.6 Current Psi2 Threshold		
2.4.1.24.24.7 Current Psi3 Threshold		
2.4.1.24.24.8 Current Imon Slope		
2.4.1.24.24.9 Current Imon Offset		

	2.4.1.24.24.10 Current VR Current Limit	Current VR Current Limit (Current IccMax Value)	
	2.4.1.24.24.11 Current Tdc Current Limit		
	2.4.1.24.24.12 Current Voltage Limit		
	2.4.1.24.24.13 AC Loadline	AC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500
	2.4.1.24.24.14 DC Loadline	DC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500
	2.4.1.24.24.15 PS Current Threshold1	PS Current Threshold1, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 512
	2.4.1.24.24.16 PS Current Threshold2	PS Current Threshold2, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 512
	2.4.1.24.24.17 PS Current Threshold3	PS Current Threshold3, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which	

	translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.24.18 PS3 Enable	PS3 Enable/Disable. 0 - Disabled, 1 - Enabled.Uses BIOS VR mailbox command 0x3.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.24.19 PS4 Enable	PS4 Enable/Disable. 0 - Disabled, 1 - Enabled. Uses BIOS VR mailbox command 0x3	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.24.20 IMON Slope	IMON Slope defined in 1/100 increments. Range is 0-200. For a 1.25 slope, enter 125. 0 = AUTO. Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.4.1.24.24.21 IMON Offset	IMON Offset defined in 1/1000 increments. Range is 0-63999. For an offset of 25.348, enter 25348. IMON Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63999
2.4.1.24.24.22 IMON Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • -

		Default Value: • +
2.4.1.24.24.23 VR Current Limit	Voltage Regulator Current Limit (IccMax). This value represents the Maximum instantaneous current allowed at any given time. The value is represented in 1/4 A increments. A value of 400 = 100A. 0 means AUTO. Uses BIOS VR mailbox command 0x6.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2048
2.4.1.24.24.24 Core VR Fast Vmode	Core VR Fast Vmode. Use to control Core Fast Vmode Enable/Disable. The value will only be effective by enabling the corresponding CEP..	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.24.25 Fast Vmode Itrip ICC Limit	Voltage Regulator Fast Vmode Itrip ICC Limit. A value of 400 = 100A. A value of 0 corresponds to feature disabled (no reactive protection). This value represents the current threshold where the VR would initiate reactive protection if Fast Vmode is enabled. The value is represented in 1/4 A increments. Uses BIOS VR mailbox command 0x25.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2040
2.4.1.24.24.26 VR Voltage Limit	Voltage Limit (VMAX). This value represents the Maximum instantaneous voltage allowed at any given time. Range is 0 - 7999mV. Uses BIOS VR mailbox command 0x8.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7999
2.4.1.24.24.27 TDC Enable	TDC Enable. 0- Disable, 1 - Enable	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.4.1.24.24.28 TDC Current Limit	TDC Current Limit, defined in 1/8A increments. Range 0-32767. For a TDC Current Limit of 125A, enter 1000. 0 = 0 Amps. Uses BIOS VR mailbox command 0x1A.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 32767
2.4.1.24.24.29 TDC Time Window	VR TDC Time Window, value in seconds. 1s is default. Range from 1s to 448s.	Possible Choices: • 1 sec • 2 sec • 3 sec • 4 sec • 5 sec • 6 sec • 7 sec • 8 sec • 10 sec • 12 sec • 14 sec • 16 sec • 20 sec • 24 sec • 28 sec • 32 sec • 40 sec • 48 sec • 56 sec • 64 sec • 80 sec • 96 sec • 112 sec • 128 sec • 160 sec • 192 sec • 224 sec • 256 sec • 320 sec • 384 sec • 448 sec Default Value: • 1 sec

2.4.1.24.24.30 TDC Lock		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.24.31 IRMS	Enable/Disable IRMS - Current root mean square	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.25 GT VR Settings		
2.4.1.24.25.1 GT Domain		
2.4.1.24.25.2 VR Config Enable		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.25.3 Current AC Loadline		
2.4.1.24.25.4 Current DC Loadline		
2.4.1.24.25.5 Current Psi1 Threshold		
2.4.1.24.25.6 Current Psi2 Threshold		
2.4.1.24.25.7 Current Psi3 Threshold		
2.4.1.24.25.8 Current Imon Slope		
2.4.1.24.25.9 Current Imon Offset		
2.4.1.24.25.10 Current VR Current Limit	Current VR Current Limit (Current IccMax Value)	
2.4.1.24.25.11 Current Tdc Current Limit		
2.4.1.24.25.12 Current Voltage Limit		

2.4.1.24.25.13 AC Loadline	AC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500
2.4.1.24.25.14 DC Loadline	DC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500
2.4.1.24.25.15 PS Current Threshold1	PS Current Threshold1, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.25.16 PS Current Threshold2	PS Current Threshold2, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.25.17 PS Current Threshold3	PS Current Threshold3, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 512

2.4.1.24.25.18 PS3 Enable	PS3 Enable/Disable. 0 - Disabled, 1 - Enabled.Uses BIOS VR mailbox command 0x3.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.25.19 PS4 Enable	PS4 Enable/Disable. 0 - Disabled, 1 - Enabled. Uses BIOS VR mailbox command 0x3	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.25.20 IMON Slope	IMON Slope defined in 1/100 increments. Range is 0-200. For a 1.25 slope, enter 125. 0 = AUTO. Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.4.1.24.25.21 IMON Offset	IMON Offset defined in 1/1000 increments. Range is 0-63999. For an offset of 25.348, enter 25348. IMON Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63999
2.4.1.24.25.22 IMON Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.4.1.24.25.23 VR Current Limit	Voltage Regulator Current Limit (IccMax). This value represents the Maximum instantaneous current allowed at any given	Default Value:

	time. The value is represented in 1/4 A increments. A value of 400 = 100A. 0 means AUTO. Uses BIOS VR mailbox command 0x6.	• 0 Numeric Range: Minimum Value: 0 Maximum Value: 2048
2.4.1.24.25.24 GT VR Fast Vmode	GT VR Fast Vmode. Use to control GT Fast Vmode Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.25.25 Fast Vmode Itrip ICC Limit	Voltage Regulator Fast Vmode Itrip ICC Limit. A value of 400 = 100A. A value of 0 corresponds to feature disabled (no reactive protection). This value represents the current threshold where the VR would initiate reactive protection if Fast Vmode is enabled. The value is represented in 1/4 A increments. Uses BIOS VR mailbox command 0x25.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2040
2.4.1.24.25.26 VR Voltage Limit	Voltage Limit (VMAX). This value represents the Maximum instantaneous voltage allowed at any given time. Range is 0 - 7999mV. Uses BIOS VR mailbox command 0x8.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7999
2.4.1.24.25.27 TDC Enable	TDC Enable. 0- Disable, 1 - Enable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.25.28 TDC Current Limit	TDC Current Limit, defined in 1/8A increments. Range 0-32767. For a TDC Current Limit	

	of 125A, enter 1000. 0 = 0 Amps. Uses BIOS VR mailbox command 0x1A.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 32767
2.4.1.24.25.29 TDC Time Window	VR TDC Time Window, value in seconds. 1s is default. Range from 1s to 448s.	Possible Choices: • 1 sec • 2 sec • 3 sec • 4 sec • 5 sec • 6 sec • 7 sec • 8 sec • 10 sec • 12 sec • 14 sec • 16 sec • 20 sec • 24 sec • 28 sec • 32 sec • 40 sec • 48 sec • 56 sec • 64 sec • 80 sec • 96 sec • 112 sec • 128 sec • 160 sec • 192 sec • 224 sec • 256 sec • 320 sec • 384 sec • 448 sec Default Value: • 1 sec
2.4.1.24.25.30 TDC Lock		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.4.1.24.26 SA VR Settings		
2.4.1.24.26.1 SA Domain		
2.4.1.24.26.2 VR Config Enable		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.26.3 Current AC Loadline		
2.4.1.24.26.4 Current DC Loadline		
2.4.1.24.26.5 Current Psi1 Threshold		
2.4.1.24.26.6 Current Psi2 Threshold		
2.4.1.24.26.7 Current Psi3 Threshold		
2.4.1.24.26.8 Current Imon Slope		
2.4.1.24.26.9 Current Imon Offset		
2.4.1.24.26.10 Current VR Current Limit	Current VR Current Limit (Current IccMax Value)	
2.4.1.24.26.11 Current Voltage Limit		
2.4.1.24.26.12 AC Loadline	AC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500
2.4.1.24.26.13 DC Loadline	DC Loadline defined in 1/100 mOhms. A value of 100 = 1.00 mOhm, and 1255 = 12.55 mOhm. Range is 0-6249 (0-62.49 mOhms). 0 = AUTO/HW default. Uses BIOS mailbox command 0x2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 62500

2.4.1.24.26.14 PS Current Threshold1	PS Current Threshold1, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.26.15 PS Current Threshold2	PS Current Threshold2, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.26.16 PS Current Threshold3	PS Current Threshold3, defined in 1/4 A increments. A value of 400 = 100A. Range 0-512, which translates to 0-128A. 0 = AUTO. Uses BIOS VR mailbox command 0x3.	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 512
2.4.1.24.26.17 PS3 Enable	PS3 Enable/Disable. 0 - Disabled, 1 - Enabled.Uses BIOS VR mailbox command 0x3.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.26.18 PS4 Enable	PS4 Enable/Disable. 0 - Disabled, 1 - Enabled. Uses BIOS VR mailbox command 0x3	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.26.19 IMON Slope	IMON Slope defined in 1/100 increments. Range is 0-200. For	

	a 1.25 slope, enter 125. 0 = AUTO. Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.4.1.24.26.20 IMON Offset	IMON Offset defined in 1/1000 increments. Range is 0-63999. For an offset of 25.348, enter 25348. IMON Uses BIOS VR mailbox command 0x4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63999
2.4.1.24.26.21 IMON Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.4.1.24.26.22 VR Current Limit	Voltage Regulator Current Limit (IccMax). This value represents the Maximum instantaneous current allowed at any given time. The value is represented in 1/4 A increments. A value of 400 = 100A. 0 means AUTO. Uses BIOS VR mailbox command 0x6.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2048
2.4.1.24.26.23 SA VR Fast Vmode	SA VR Fast Vmode. Use to control SA Fast Vmode Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.24.26.24 Fast Vmode Itrip ICC Limit	Voltage Regulator Fast Vmode Itrip ICC Limit. A value of 400 = 100A. A value of 0 corresponds to feature disabled (no reactive	Default Value: • 0

	protection). This value represents the current threshold where the VR would initiate reactive protection if Fast Vmode is enabled. The value is represented in 1/4 A increments. Uses BIOS VR mailbox command 0x25.	Numeric Range: Minimum Value: 0 Maximum Value: 2040
2.4.1.24.26.25 VR Voltage Limit	Voltage Limit (VMAX). This value represents the Maximum instantaneous voltage allowed at any given time. Range is 0 - 7999mV. Uses BIOS VR mailbox command 0x8.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7999
2.4.1.24.26.26 TDC Enable	TDC Enable. 0- Disable, 1 - Enable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.26.27 TDC Time Window	TDC Time Window 1, value in milliseconds. 1ms is default. Range from 1ms to 10ms, except for 9ms. 9ms has no valid encoding in the MSR definition.	Possible Choices: • 1 ms • 2 ms • 3 ms • 4 ms • 5 ms • 6 ms • 7 ms • 8 ms • 10 ms Default Value: • 1 ms
2.4.1.24.26.28 TDC Lock		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.4.1.24.27 RFI Settings		
2.4.1.24.27.1 RFI Domain		
2.4.1.24.27.2 RFI Current Frequency		
2.4.1.24.27.3 RFI Frequency	Set desired RFI frequency, in increments of 100KHz. (For a frequency of 100.6MHz, enter 1006.)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1918
2.4.1.24.27.4 FIVR Spread Spectrum	Enable or Disable the FIVR Spread Spectrum	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.24.27.5 RFI Spread Spectrum	Set the Spread Spectrum	Possible Choices: • 0.5% • 1% • 1.5% • 2% • 3% • 4% • 5% • 6% Default Value: • 1.5%
2.4.1.25 Platform PL1 Enable	Enable/Disable Platform Power Limit 1 programming. If this option is enabled, it activates the PL1 value to be used by the processor to limit the average power of given time window.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.4.1.26 Platform PL1 Power	Platform Power Limit 1 Power in Milli Watts/Percent. BIOS will round to the nearest 1/8W when programming. Any value can be programmed between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). For example, if 12.50W, enter 12500, if 12%, enter 12000, if 50%, enter 50000. This setting will act as the new PL1 value for the Package RAPL algorithm.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.27 Platform PL1 Time Window	Platform Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default values. Indicates the time window over which Platform Processor Base Power (TDP) value should be maintained.	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 • 80 • 96 • 112 • 128 Default Value: • 0
2.4.1.28 Platform PL2 Enable	Enable/Disable Platform Power Limit 2 programming. If this option is disabled, BIOS will program the default values for Platform Power Limit 2.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.4.1.29 Platform PL2 Power	Platform Power Limit 2 Power in Milli Watts / Milli Percent. BIOS will round to the nearest 1/8W or 1/8% when programming. Any value can be programmed between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR) or PMAX value in %. For example if 12%, enter 12000, if 50%, enter 50000. If the value is '0', will default to PACKAGE_POWER_SKU_MSR if Psys is in Watts. Recommended value is 97000 if Psys is in %. This setting will act as the new PL2 value for the Package RAPL algorithm.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.30 Power Limit 4 Override	Enable/Disable Power Limit 4 override. If this option is disabled, BIOS will leave the default values for Power Limit 4.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.31 Power Limit 4	Power Limit 4 in Milli Watts. BIOS will round to the nearest 1/8W when programming. For 12.50W, enter 12500. If the value is 0, BIOS leaves default value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.32 Power Limit 4 Lock	Power Limit 4 MSR 601h Lock. When enabled PL4 configurations are locked during OS. When disabled PL4 configuration can be changed during OS.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.4.1.33 C states	Enable/Disable CPU Power Management. Allows CPU to go to C states when it's not 100% utilized.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.34 Enhanced C-states	Enable/Disable C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.35 C-State Auto Demotion	Configure C-State Auto Demotion	Possible Choices: • Disabled • C1 Default Value: • C1
2.4.1.36 C-State Un-demotion	Configure C-State Un-demotion	Possible Choices: • Disabled • C1 Default Value: • C1
2.4.1.37 Package C-State Demotion		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.38 Package C-State Un-demotion		Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
2.4.1.39 CState Pre-Wake	Disable - Sets bit 30 of POWER_CTL MSR(0x1FC) to 1 to disable the Cstate Pre-Wake	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.40 IO MWAIT Redirection	When set, will map IO_read instructions sent to IO registers PMG_IO_BASE_ADDRBASE+offset to MWAIT(offset)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.41 Package C State Limit	Maximum Package C State Limit Setting. Cpu Default: Leaves to Factory default value.Auto: Initializes to deepest available Package C State Limit.	Possible Choices: • C0/C1 • C2 • C3 • C6 • C7 • C7S • C8 • C9 • C10 • Cpu Default • Auto Default Value: • Auto
2.4.1.42 C6/C7 Short Latency Control(MSR 0x60B)		
2.4.1.43 Time Unit	Unit of measurement for IRTL value - bits [12:10]	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value:

		• 1024 ns
2.4.1.44 Latency	Interrupt Response Time Limit value- bits [9:0], Enter 0-1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1023
2.4.1.45 C6/C7 Long Latency Control(MSR 0x60C)		
2.4.1.46 Time Unit	Unit of measurement for IRTL value - bits [12:10]	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
2.4.1.47 Latency	Interrupt Response Time Limit value- bits [9:0], Enter 0-1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1023
2.4.1.48 C8 Latency Control(MSR 0x633)		
2.4.1.49 Time Unit	Unit of measurement for IRTL value - bits [12:10]	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

2.4.1.50 Latency	Interrupt Response Time Limit value- bits [9:0], Enter 0-1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1023
2.4.1.51 C9 Latency Control(MSR 0x634)		
2.4.1.52 Time Unit	Unit of measurement for IRTL value - bits [12:10]	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
2.4.1.53 Latency	Interrupt Response Time Limit value- bits [9:0], Enter 0-1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1023
2.4.1.54 C10 Latency Control(MSR 0x635)		
2.4.1.55 Time Unit	Unit of measurement for IRTL value - bits [12:10]	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

2.4.1.56 Latency	Interrupt Response Time Limit value- bits [9:0], Enter 0-1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1023
2.4.1.57 Thermal Monitor	Enable/Disable Thermal Monitor	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.58 Interrupt Redirection Mode Selection	Interrupt Redirection Mode Select for Logical Interrupts	Possible Choices: • Fixed Priority • Round robin • Hash Vector • No Change Default Value: • Fixed Priority
2.4.1.59 Timed MWAIT	Enable/Disable Timed MWAIT Support	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.60 Custom P-state Table		
2.4.1.60.1 Number of P states	Sets the number of custom P-states. At least 2 states must be present.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 40

2.4.1.60.2 Max P-State Ratio	Maximum P-state ratio to use in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.3 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.4 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.5 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.6 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.7 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.8 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.9 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.10 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.11 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.12 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.13 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.14 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.15 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.16 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.17 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.18 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.19 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.20 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.21 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.22 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.23 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.24 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.25 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.26 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.27 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.28 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.29 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.30 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.31 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.32 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.33 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.34 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.35 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.36 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.37 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.38 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.39 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.40 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.41 P-State Ratio	P-state ratio for the given state in the custom P-state table.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127

2.4.1.60.42 Max 16 custom P-state Table		
2.4.1.60.43 Max P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.44 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.45 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.46 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.47 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.48 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.49 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.50 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.51 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.52 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.53 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.54 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.55 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.56 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.57 P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.60.58 Min P-State Ratio (Max 16 table)	P-state ratio for the given state in the Max 16 P-state table. Used if OS only supports 16 P-states	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
2.4.1.61 EC Turbo Control Mode	Enable/Disable EC Turbo Control mode	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.62 AC Brick Capacity	Specify the AC Brick capacity	Possible Choices: • 90W AC Brick • 65W AC Brick • 75W AC Brick Default Value: • 90W AC Brick
2.4.1.63 EC Polling Period	Count 1 to 255 for a range of 10ms to 2.55 seconds (1 count = 10ms)	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 255
2.4.1.64 EC Guard Band Value	Count 1 to 20 for a range of 1 watt to 20 watts	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 20
2.4.1.65 EC Algorithm Selection	Count 1 to 10 for Algorithm Selection	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 10
2.4.1.66 Energy Performance Gain	Enable/disable Energy Performance Gain.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.67 EPG DIMM Idd3N	Active standby current (Idd3N) in milliamps from datasheet. Must be calculated on a per DIMM basis.	Default Value: • 26 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.4.1.68 EPG DIMM Idd3P	Active power-down current (Idd3P) in milliamps from datasheet. Must be calculated on a per DIMM basis.	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.4.1.69 Power Limit 3 Settings		
2.4.1.69.1 Power Limit 3 Override	Enable/DisablePower Limit 3 override. If this option is disabled, BIOS will leave the hardware default values for Power Limit 3 and Power Limit 3 Time Window.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.4.1.69.2 Power Limit 3	Platform Power Limit 3 Power in Milli Watts / Milli Percent. BIOS will round to the nearest 1/8W or 1/8% when programming. For example if 12%, enter 12000, if 50%, enter 50000. For all SKUs, limit must be less than Psys Pmax value (either in Watts or %). XE SKU: Any value up through Psys Pmax can be programmed. Overclocking SKU: value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR). Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP). If the value is '0', will default to hardware default value. Recommended value is 100000 if Psys is in %.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4095875
2.4.1.69.3 Power Limit 3 Time Window	Power Limit 3 Time Window value in Milli seconds. The value may vary from 3 to 64(max). Indicates the time window over which Power Limit 3 value should be maintained. If the value is 0, BIOS leaves the hardware default value. For ATX12VO PSU systems, recommended value is 40.	Possible Choices: • 0 • 3 • 4 • 5 • 6 • 7 • 8 • 10 • 12 • 14 • 16 • 20 • 24 • 28 • 32 • 40 • 48 • 56 • 64 Default Value: • 0

2.4.1.69.4 Power Limit 3 Duty Cycle	Specify the duty cycle in percentage that the CPU is required to maintain over the configured time window. Range is 0-100. For ATX12VO PSU systems, recommended value is 25.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.4.1.69.5 Power Limit 3 Lock	Power Limit 3 MSR 615h Lock. When enabled PL3 configurations are locked during OS. When disabled PL3 configuration can be changed during OS.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.1.70 View/Configure CPU Lock Options		
2.4.1.70.1 CFG Lock	Configure MSR 0xE2[15], CFG Lock bit	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.70.2 Overclocking Lock	Enable/Disable Overclocking Lock (BIT 20) in FLEX_RATIO(194) MSR	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.1.71 Dual Tau Boost	Enable Dual Tau Boost feature. This is only applicable for Desktop 35W/65W/125W sku. When DPTF is enabled this feature is ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.4.2 GT - Power Management Control		

2.4.2.1 RC6(Render Standby)	Check to enable render standby support.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.4.2.2 Maximum GT frequency	Auto Updated	Possible Choices: • Default Max Frequency • 100Mhz • 150Mhz • 200Mhz • 250Mhz • 300Mhz • 350Mhz • 400Mhz • 450Mhz • 500Mhz • 550Mhz • 600Mhz • 650Mhz • 700Mhz • 750Mhz • 800Mhz • 850Mhz • 900Mhz • 950Mhz • 1000Mhz • 1050Mhz • 1100Mhz • 1150Mhz • 1200Mhz Default Value: • Default Max Frequency
2.4.2.3 Disable Turbo GT frequency	Enabled: Disables Turbo GT frequency. Disabled: GT frequency is not limited	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.4.3 Intel(R) Speed Shift Technology Interrupt Control	Enable/Disable Intel(R) Speed Shift Technology Interrupts	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
2.5 PCH-FW Configuration		
2.5.1 None		
2.5.2 ME Firmware Version		
2.5.3 ME Firmware Mode		
2.5.4 ME Firmware Mode		
2.5.5 ME Firmware Mode		
2.5.6 ME Firmware Mode		
2.5.7 ME Firmware Mode		
2.5.8 ME Firmware Mode		
2.5.9 ME Firmware SKU		
2.5.10 ME Firmware Status 1		
2.5.11 ME Firmware Status 2		
2.5.12 ME Firmware Status 3		
2.5.13 ME Firmware Status 4		
2.5.14 ME Firmware Status 5		
2.5.15 ME Firmware Status 6		
2.5.16 ME State	When Disabled ME will be put into ME Temporarily Disabled Mode.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.17 Manageability Features State	Enable/Disable Intel(R) Manageability features. NOTE: This option disables/enables Manageability Features support in FW.	Possible Choices: • Disabled • Enabled Default Value:

	To disable support platform must be in an unprovisioned state first.	• Enabled
2.5.18 AMT BIOS Features	When disabled AMT BIOS Features are no longer supported and user is no longer able to access MEBx Setup. Note: This option does not disable Manageability Features in FW.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19 AMT Configuration		
2.5.19.1 None		
2.5.19.2 USB Provisioning of AMT	Enable/Disable of AMT USB Provisioning.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.3 MAC Pass Through	Enable/Disable MAC Pass Through function.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.4 Dynamic Lan Switch	Allow switching AMT support from Integrated LAN to Discrete LAN.	Possible Choices: • As defined in FIT • Integrated LAN • Discrete LAN Default Value: • As defined in FIT
2.5.19.5 Activate Remote Assistance Process	Trigger CIRA boot Note: Network Access must be activated first from MEBx	Possible Choices: • Disabled • Enabled Default Value:

	Setup.	• Disabled
2.5.19.6 Unconfigure ME	Unconfigure ME with resetting MEBx password to default on next boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.7 ASF Configuration		
2.5.19.7.1 PET Progress	Enable/Disable PET Events Progress to receive PET Events.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19.7.2 WatchDog	Enable/Disable WatchDog Timer.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.7.3 OS Timer	Set OS watchdog timer.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.5.19.7.4 BIOS Timer	Set BIOS watchdog timer.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

2.5.19.7.5 ASF Sensors Table	Adds ASF Sensor Table into ASF! ACPI Table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.8 Secure Erase Configuration		
2.5.19.8.1 Secure Erase mode	Change Secure Erase module behavior: Simulated: Performs SE flow without erasing SSD Real: Erase SSD. *** If SATA device is used, OEM could use SECURE_ERASE_HOOK_PROTOCOL to remove SATA power to skip G3 cycle. ***	Possible Choices: • Simulated • Real Default Value: • Simulated
2.5.19.8.2 Force Secure Erase	Force Secure Erase on next boot	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.19.9 One Click Recovery(OCR) Configuration		
2.5.19.9.1 OCR Https Boot	Enable/Disable One Click Recovery Https Boot	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19.9.2 OCR PBA Boot	Enable/Disable One Click Recovery PBA Boot	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.5.19.9.3 OCR Windows Recovery Boot	Enable/Disable One Click Recovery Windows Recovery Boot	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19.9.4 OCR Disable Secure Boot	Allows CSME to request SecureBoot to be disabled for One Click Recovery	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19.10 Remote Platform Erase Configuration		
2.5.19.10.1 Enable Remote Platform Erase Feature	Enable/Disable Remote Platform Erase Feature	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.19.10.2 SSD Erase Mode	Change RPE SSD Erase Action behavior: Simulated: Performs RPE SSD Erase flow without erasing SSD Real: Erase SSD. *** If SATA device is used, OEM could use SECURE_ERASE_HOOK_PROTOCOL to remove SATA power to skip G3 cycle. ***	Possible Choices: • Simulated • Real Default Value: • Simulated
2.5.20 Local Platform Erase Configuration		
2.5.20.1 Perform Platform Erase Operations	Enabling this Feature will trigger Platform Erase Operations on the Next Boot	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.5.20.2 Erase All	Performs SSD Erase, TPM Clear, Reload BIOS golden config, Clear NVME and OEM Custom actions	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.20.3 Storage Device Erase	Perform SSD/Nvme Erase	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.20.4 SSD Erase Mode	Change LPE SSD Erase Action behavior: Simulated: Performs LPE SSD Erase flow without erasing SSD Real: Erase SSD. *** If SATA device is used, OEM could use SECURE_ERASE_HOOK_PROTOCOL to remove SATA power to skip G3 cycle. ***	Possible Choices: • Simulated • Real Default Value: • Simulated
2.5.20.5 Storage Erase Verification	Perform storage erase verification	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.5.20.6 TPM CLEAR	Perform SSD/Nvme Erase	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.20.7 OEM Custom Actions	OEM Custom Actions	

		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.20.8 Clear NVM Variable	Clears NVM Varibles	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.20.9 BIOS Reload Golden Config	Load BIOS default config	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.20.10 Unconfigure CSME	This option Unconfigure CSME Firmware and Unprovision AMT.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.21 ME Unconfig on RTC Clear	When Disabled ME will not be unconfigured on RTC Clear	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.22 Comms Hub Support	Enables/Disables support for Comms Hub.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.5.23 JHI Support	Enable/Disable Intel(R) DAL Host Interface Service (JHI)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.24 Core Bios Done Message	Enable/Disable Core Bios Done message sent to ME	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.25 CSE Data Resilience Support	Enable/Disable CSE Data Resilience Support	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.26 Firmware Update Configuration		
2.5.26.1 Me FW Image Re-Flash	Enable/Disable Me FW Image Re-Flash function.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.26.2 FW Update	Enable/Disable ME FW Update function.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.27 PTT Configuration		
2.5.27.1 None		

2.5.27.2 PTT Capability / State	Platform Trust Technology Capability / Enablement State	
2.5.27.3 TPM Device Selection	Selects TPM device: PTT or dTPM. PTT - Enables PTT in SkuMgr dTPM 1.2 - Disables PTT in SkuMgr Warning ! PTT/dTPM will be disabled and all data saved on it will be lost.	Possible Choices: • dTPM • PTT Default Value: • PTT
2.5.27.4 TPM 1.2 Deactivate	Enabling this option will invoke the TPM 1.2 De-activate flow	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.28 FIPS Mode		
2.5.28.1 FIPS Mode Select	FIPS Mode configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.28.2 Current FIPS mode	N/A	
2.5.28.3 Crypto driver FIPS version	N/A	
2.5.29 Unique Platform Id Configuration		
2.5.29.1 OEM Platform Id		
2.5.29.2 CSME Platform Id		
2.5.29.3 Upid State	Enable/Disable Upid Feature	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.29.4 Upid OS Control State	Allows OS to enable/disable the	

	Upid feature state	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30 ME Debug Configuration		
2.5.30.1 HECI Timeouts	Enable/Disable HECI Send/Receive Timeouts.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.30.2 Force ME DID Init Status	Forces the DID Initialization Status value.	Possible Choices: • Disabled • 0 - Success • 1 - No Memory in Channels • 2 - Memory Init Error Default Value: • Disabled
2.5.30.3 CPU Replaced Polling Disable	Setting this option disables CPU replacement polling loop	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.4 HECI Message check Disable	Setting this option disables message check for Bios Boot Path when sending	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.5 MBP HOB Skip	Setting this option will skip MBP HOB	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.5.30.6 HECI2 Interface Communication	Adds and Removes HECI2 Device from PCI space.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.7 KT Device	Enable/Disable KT Device	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.30.8 End Of Post Message	Enable/Disable End of Post message sent to ME	Possible Choices: • Disabled • Send in DXE Default Value: • Send in DXE
2.5.30.9 D0I3 Setting for HECI Disable	Setting this option disables setting D0I3 bit for all HECI devices	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.10 MCTP Broadcast Cycle	Enable/Disable Management Component Transport Protocol Broadcast Cycle and Set PMT as Bus Owner	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.11 SMBIOS type 130 OEM		

capabilities		
2.5.30.11.1 BIOS Reflash Capability State	Change BIOS Reflash Capability State	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.30.11.2 BIOS Boot to Setup Capability State	Change BIOS Boot to Setup Capability State	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.30.11.3 BIOS Pause Before Booting Capability State	Change BIOS Pause Before Booting Capability State	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.30.11.4 BIOS Secure Boot Capability Exposure to FW State	Change BIOS Secure Capability Exposure State to FW. This does not affect SecureBoot as such	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.30.11.5 vPro TBT Dock Support	Enable/Disable vPro TBT Dock Support. Note: for the change to take effect, need to put system into G3 state then resume.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.5.31 Anti-Rollback SVN Configuration		
2.5.31.1 Minimal Allowed Anti-Rollback SVN	Minimum ARB-SVN allowed on this platform. ME FW with lower	

	ARB-SVN will not boot.	
2.5.31.2 Executing Anti-Rollback SVN	ARB-SVN of executing ME FW	
2.5.31.3 Automatic HW-Enforced Anti-Rollback SVN	When enabled, hardware-enforced Anti-Rollback mechanism is automatically activated: once ME FW was successfully run on a platform, FW with lower ARB-SVN will be blocked from execution	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.31.4 Set HW-Enforced Anti-Rollback for Current SVN	Enable hardware-enforced Anti-Rollback mechanism for current ARB-SVN value. FW with lower ARB-SVN will be blocked from execution. The value will be restored to disable after the command is sent.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.32 OEM Key Revocation Configuration		
2.5.32.1 Automatic OEM Key Revocation	When enabled, BIOS will automatically send HECI command to revoke OEM keys.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.32.2 Invoke OEM Key Revocation	A Heci command will be send to revoke OEM key.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.5.33 Extend CSME Measurement to TPM-PCR	Enable/Disable Extend CSME Measurement to TPM-PCR[0] and AMT Config to TPM-PCR[1]	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.6 Thermal Configuration		
2.6.1 Enable All Thermal Functions	Enable All Thermal Functions" is Enabled it Enables 'Memory Thermal Management','Active Trip Points', 'Critical Trip Points'.Set to disabled for Manual Configuration	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.2 Cpu Thermal Configuration		
2.6.2.1 Current Tcc Activation Offset	Offset from factory set Tcc activation temprature at which the Thermal Control Circuit must be activated. Tcc will be activated at: Tcc Activation Temp - Tcc Activation Offset. Tcc Activation Offset range is 0 to 63.	
2.6.2.2 Tcc Activation Offset	Offset from factory set Tcc activation temprature at which the Thermal Control Circuit must be activated. Tcc will be activated at: Tcc Activation Temp - Tcc Activation Offset. Tcc Activation Offset range is 0 to 63.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
2.6.2.3 Tcc Offset Time Window	Tcc Offset Time Window for Running Average Temperature Limit(RATL) feature. The Tcc offset time window can range from 5ms to 448s.	Possible Choices: • Disabled • 5 ms • 10 ms • 55 ms • 156 ms • 375 ms • 500 ms • 750 ms • 1 sec • 2 sec • 3 sec • 4 sec • 5 sec • 6 sec • 7 sec • 8 sec • 10 sec

		• 12 sec • 14 sec • 16 sec • 20 sec • 24 sec • 28 sec • 32 sec • 40 sec • 48 sec • 56 sec • 64 sec • 80 sec • 96 sec • 112 sec • 128 sec • 160 sec • 192 sec • 224 sec • 256 sec • 320 sec • 384 sec • 448 sec Default Value: • Disabled
2.6.2.4 Tcc Offset Clamp Enable	Tcc Offset Clamp bit Enable for Running Average Temperature Limit(RATL) feature to allow CPU to throttle below P1.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.2.5 Tcc Offset Lock Enable	Lock Enable for Running Average Temperature Limit(RATL) feature to lock Temperature Target MSR.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.2.6 Bi-directional PROCHOT#	When a processor thermal sensor trips (either core), the PROCHOT# will be driven. If bi-direction is enabled, external agents can drive PROCHOT# to throttle the processor.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.6.2.7 Disable PROCHOT# Output	Enable/Disable PROCHOT# Output	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.2.8 Disable VR Thermal Alert	Enable/Disable VR Thermal Alert	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.2.9 PROCHOT Response	Enable/Disable PROCHOT Response	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.2.10 PROCHOT Lock	Enable/Disable PROCHOT Lock	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.2.11 ACPI T-States	Enable/Disable ACPI T-States.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.3 Platform Thermal Configuration		
2.6.3.1 Critical Trip Point	This value controls the temperature of the ACPI Critical Trip Point - the point in	Possible Choices: • 15 C

	which the OS will shut the system off. NOTE: 119C is the Plan Of Record (POR) for all Intel mobile processors.	• 23 C • 31 C • 39 C • 47 C • 55 C • 63 C • 71 C • 79 C • 87 C • 95 C • 100 C • 103 C • 111 C • 119 C (POR) • 127 C • 130 C Default Value: • 119 C (POR)
2.6.3.2 Active Trip Point 0	This value controls the temperature of the ACPI Active Trip Point 0 - the point in which the OS will turn the processor fan on Active Trip Point 0 Fan Speed.	Possible Choices: • Disabled • 15 C • 23 C • 31 C • 39 C • 47 C • 55 C • 63 C • 71 C • 79 C • 87 C • 95 C • 103 C • 111 C • 119 C (POR) Default Value: • 71 C
2.6.3.3 Active Trip Point 0 Fan Speed	Active Trip Point 0 Fan Speed in percentage. Value must be between 0 (Fan off) - 100 (Max fan speed). This is the speed at which fan will run when Active Trip Point 0 is crossed.	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 100

2.6.3.4 Active Trip Point 1	This value controls the temperature of the ACPI Active Trip Point 1 - the point in which the OS will turn the processor fan on Active Trip Point 1 Fan Speed.	Possible Choices: • Disabled • 15 C • 23 C • 31 C • 39 C • 47 C • 55 C • 63 C • 71 C • 79 C • 87 C • 95 C • 103 C • 111 C • 119 C (POR) Default Value: • 55 C
2.6.3.5 Active Trip Point 1 Fan Speed	Active Trip Point 1 Fan Speed in percentage. Value must be between 0 (Fan off) - 100 (Max fan speed). This value must be less than Active Trip Point 0 Fan speed. This is the speed at which fan will run when Active Trip 1 is crossed.	Default Value: • 75 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.6.3.6 Passive Trip Point	This value controls the temperature of the ACPI Passive Trip Point - the point in which the OS will begin throttling the processor.	Possible Choices: • Disabled • 15 C • 23 C • 31 C • 39 C • 47 C • 55 C • 63 C • 71 C • 79 C • 87 C • 95 C • 103 C • 111 C • 119 C (POR) Default Value:

		• 95 C
2.6.3.7 Passive TC1 Value	This value sets the TC1 value for the ACPI Passive Cooling Formula. Range 1 - 16	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 16
2.6.3.8 Passive TC2 Value	This value sets the TC2 value for the ACPI Passive Cooling Formula. Range 1 - 16	Default Value: • 5 Numeric Range: Minimum Value: 1 Maximum Value: 16
2.6.3.9 Passive TSP Value	This item sets the TSP value for the ACPI Passive Cooling Formula. It represents in tenths of a second how often the OS will read the temperature when passive cooling is enabled. Range 2 - 32	Default Value: • 10 Numeric Range: Minimum Value: 2 Maximum Value: 32
2.6.3.10 Active Trip Points	Disable Active Trip Points	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.3.11 Passive Trip Points	Disable Passive Trip Points	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.6.3.12 Critical Trip Points	Disable Critical Trip Points	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.3.13 PCH Temp Read	PCH Temperature Read Enable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.3.14 CPU Energy Read	CPU Energy Read Enable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.3.15 CPU Temp Read	CPU Temperature Read Enable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.3.16 Alert Enable Lock	Lock all Alert Enable settings	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.3.17 PCH Alert	PCH Alert pin enable	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.6.3.18 DIMM Alert	DIMM Alert pin enable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.3.19 CPU Temp	Fail Safe temp that EC will use if OS is hung	Default Value: • 72 Numeric Range: Minimum Value: 1 Maximum Value: 110
2.6.3.20 CPU Fan Speed	Fan speed that EC will use if OS is hung	Default Value: • 65 Numeric Range: Minimum Value: 1 Maximum Value: 100
2.6.3.21 Boot DTS Read	Read PCH, CPU DTS Temperature and publish via SMBIOS table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4 Intel(R) Dynamic Tuning Technology Configuration		
2.6.4.1 Intel(R) Dynamic Tuning Technology	Enable/Disable Intel Dynamic Platform Thermal Framework	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.6.4.2 INT3400 Device	Enable/Disable the INT3400 Device.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.3 Processor Thermal Device	Enable/Disable Processor Thermal Device.	Possible Choices: • Disabled • SA Thermal Device Default Value: • SA Thermal Device
2.6.4.4 PPCC Step Size	Step size for Turbo power limit (RAPL) control	Possible Choices: • 0.5 Watts • 1.0 Watts • 1.5 Watts • 2.0 Watts Default Value: • 0.5 Watts
2.6.4.5 FAN1 Device	Enable the Fan1 device.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.6 FAN2 Device	Enable the Fan2 device.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.7 FAN3 Device	Enable the Fan3 device.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.6.4.8 Charger participant	Enable/Disable Charger device	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.9 Power participant	Enable/Disable the Power participant.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.10 Battery Participant	Enable/Disable the Battery Participant.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.11 Intel(R) Dynamic Tuning Technology Battery Sampling Period	This battery sampling period for the Battery Participant Object.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.6.4.12 PCH FIVR Participant	Enable/Disable PCH FIVR Participant	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.6.4.13 Sensor Device 1	Enable/Disable Memory Thermal Device	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.14 Sensor Device 2	Enable/Disable VR Hotspot Q50 sensor	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.15 Sensor Device 3	Enable/Disable Skin Hotspot U50 sensor	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.16 Sensor Device 4	Enable/Disable PMIC-MCP Hotspot Q16 sensor	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.17 Sensor Device 5	Enable/Disable C-Skin Chassis U50 IR sensor	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.6.4.18 Discret Graphics Sensor Device	Enable/Disable DGPU Thermal Sensor	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.6.4.19 OEM variable and Object		
2.6.4.19.1 Design Variable 0	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on platform changes.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.6.4.19.2 Design Variable 1	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on platform changes.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.6.4.19.3 Design Variable 2	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on platform changes.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.6.4.19.4 Design Variable 3	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on platform changes.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.6.4.19.5 Design Variable 4	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on	Default Value: • 0 Numeric Range:

	platform changes.	Minimum Value: 0 Maximum Value: 255
2.6.4.19.6 Design Variable 5	OEM Design Variable: an integer between 0-255. This allows OEM's to customize Intel(R) Dynamic Tuning Technology behavior based on platform changes.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.6.4.19.7 PPCC Object	Enable/Disable PPCC object for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.8 ARTG Object	Enable/Disable ARTG object for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.9 PMAX Object	Enable/Disable PMAX object for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.10 PMAX Device	Enable/Disable PMAX device for validation.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.6.4.19.11 PMAX Audio codec	Enable/Disable PMAX Audio	

	codec for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.12 PMAX WF Camera	Enable/Disable PMAX WF Camera for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.13 PMAX UF Camera	Enable/Disable PMAX UF Camera for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.14 PMAX Flash device	Enable/Disable PMAX Flash device for validation.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.6.4.19.15 Processor Thermal Device	Intel(R) Dynamic Tuning Technology Configuration options	
2.6.4.19.16 Optional Objects	Enable/Disable PIPR/PAPR for processor participant.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7 Platform Settings		
2.7.1 Charging Method	Select charging method as Normal Charging or Fast	Possible Choices:

	Charging.	• Normal Charging • Fast Charging Default Value: • Normal Charging
2.7.2 Pseudo G3	Enable/Disable Pseudo G3	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.3 RP08 D3 cold Support	Enable - RP08 D3cold entry is disabled .Disabled -RP08 D3Cold entry is enabled	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.4 Rp08 Wake Rework Support	Enable - Wake Enabled on RP08.Disabled - Wake Enabled on PEG10	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.5 Firmware Configuration	Firmware Configuration options. NOTE:Ignore Policy Update(STR_FW_CONFIG_DEFAULT_VALUE) is to skip policy update and will ONLY WORK ON A PLATFORM.	Possible Choices: • Ignore Policy Update • Production • Test Default Value: • Test
2.7.6 KeemBay Port	dVPU device KeemBay Port support. Disable - KeemBay is not supported on CPU and PCH port. CPU port - KeemBay is supported on CPU SSD M.2 Port1 (Need related rework).	Possible Choices: • Disabled • CPU port • PCH port Default Value: • Disabled

	PCH port - KeemBay is supported on PCH SSD M.2 Port1 (Need related rework).	
2.7.7 Scan Matrix Keyboard Support	Enable Scan Matrix Keyboard Support	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.7.8 EC PECI Mode	Switch eSPI PECI Mode or Legacy PECI mode	Possible Choices: • Legacy PECI mode • PECI over eSPI mode Default Value: • Legacy PECI mode
2.7.9 Power Loss Notification Feature	Enable/Disable Power Loss Notification Feature	Possible Choices: • Disabled • Enabled • Default Default Value: • Default
2.7.10 Device password support	Support device password feature	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.11 Pmic Vcc IO Level	Select the Pmic Vcc IO Voltage Level	Possible Choices: • Disabled • 1.05V • 1.071V • 1.023V • 0.997V • 0.850V • 0.900V

		• 0.950V Default Value: • Disabled
2.7.12 Pmic Vddq Level	Select the Pmic Vddq Voltage Level	Possible Choices: • Disabled • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 Default Value: • Disabled
2.7.13 CSC Pmic NVM Update Support	Enable/Disable CastroCove Pmic Nvm Update	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.14 CSC Pmic Customization Nvm Update Support	Enable/Disable CastroCove Pmic Customization Nvm Update	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.15 Pmic NVM Write Lock Support	Enable/Disable WarrenCove/CastroCove Pmic Nvm Write Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.16 HEBC value	HEBC value 32bit	Default Value:

		• 144371 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.17 Pmic SlpS0 VM Support	Support to auto check Primium PMIC and disable SlpS0 voltage.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.18 Power Sharing Manager	Configure the PSM ACPI objects.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.19 Domain Type SPLC 1	09h: Module(M.2); 07h: WiFi/WLAN; 0Fh: WWAN; 10h WiGig; 14h: RFEM	Default Value: • 9 Numeric Range: Minimum Value: 1 Maximum Value: 50
2.7.20 Default Power Limit 1 SPLC	Power Limit in milli watts	Default Value: • 4000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
2.7.21 Default Time Window 1 SPLC	Time Window in milli seconds	Default Value: • 30000 Numeric Range:

		Minimum Value: 1 Maximum Value: 100000
2.7.22 Domain Type DPLC 1	09h: Module(M.2); 07h: WiFi/WLAN; 0Fh: WWAN; 10h WiGig; 14h: RFEM	Default Value: • 9 Numeric Range: Minimum Value: 1 Maximum Value: 50
2.7.23 Domain Preference DPLC 1	09h: Module(M.2); 07h: WiFi/WLAN; 0Fh: WWAN; 10h WiGig; 14h: RFEM	Default Value: • 9 Numeric Range: Minimum Value: 1 Maximum Value: 50
2.7.24 Power Limit Index 1 DPLC	Index of the specific power limit range information	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.7.25 Default Power Limit 1 DPLC	Power Limit in milli watts	Default Value: • 1200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
2.7.26 Default Time Window 1 DPLC	Time Window in milli seconds	Default Value: • 30000 Numeric Range:

		Minimum Value: 1 Maximum Value: 100000
2.7.27 Minimum Power Limit 1 DPLC	Power Limit in milli watts	Default Value: • 1200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
2.7.28 Maximum Power Limit 1 DPLC	Power Limit in milli watts	Default Value: • 1200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
2.7.29 Maximum Time Window 1 DPLC	Time Window in milli seconds	Default Value: • 1000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
2.7.30 Enable FFU Support	Enable/Disable FFU Support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.31 HID Event Filter Driver	Enables/Disables HID Event Filter Driver interface to OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.7.32 Delay to wait for WWAN device to be ready before SAR reset.	Value between 0-255 seconds. Default is 8. Will result in Responsiveness impact.	Default Value: • 8 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.33 System Time and Alarm Source	Select source of system time and alarm functions. ACPI Time and Alarm (default, legacy RTC disabled) or Legacy RTC support only	Possible Choices: • ACPI Time and Alarm Device • Legacy RTC Default Value: • ACPI Time and Alarm Device
2.7.34 Enable xdpclock	Enable xdpclock routing on slot1 CMU_ONE_DWORD0 bits muxsel_itpxdp	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.35 DG Platform Support	DG is supported as MotherBoard Down OR Add In Card	Possible Choices: • Add In Card • MB Down Default Value: • Add In Card
2.7.36 Enable PowerMeter		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.37 Intel Trusted Device Setup Boot	Enables/Disables a Intel Trusted Device Setup Boot on the next boot	Possible Choices: • Enabled

		• Disabled Default Value: • Disabled
2.7.38 PMC Fast Boot	Configure PMC for Fast boot Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.39 MPDT Support	Enable(Sensor_BOM1,Sensor_BOM2 and Sensor_BOM1 with Companion Chip)/Disable MPDT Support in BIOS	Possible Choices: • Disabled • Sensor_BOM1 • Sensor_BOM2 • Sensor_BOM1 with Companion Chip Default Value: • Disabled
2.7.40 Closed Lid WoV LED Lighting Support	Disables/Enables Closed Lid WoV LED Lighting Support.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
2.7.41 Aux Rail Budget (Watt)	Total aux rail budget avaiable per RVP. Value must be between 0 (Min Watt) - 10 (Max Watt)	Default Value: • 6 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.7.42 VTIO		
2.7.42.1 Enable VTIO Support	Enable/Disable VTIO Support.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.7.42.2 Expose CIO2 SDEV Entry	CIO2 Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.42.3 Expose ISP SDEV Entry	ISP Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.42.4 Number of Sensor Entries	An array of Sensors Entries	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.7.42.5 Flags	Enter HEX value BIT[0] - Allow handoff to non-secure OS	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
2.7.42.6 Sensor Entry 1	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 65535

	present	
2.7.42.7 Sensor Entry 2	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor present	Default Value: • 261 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.8 Expose HECI SDEV Entry	HECI Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.42.9 Number of Sensor Entries	An array of Sensors Entries	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.7.42.10 Flags	Enter HEX value BIT[0] - Allow handoff to non-secure OS	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
2.7.42.11 Sensor Entry 1	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present	Default Value: • 0 Numeric Range: Minimum Value: 0

	BIT[0] - Embedded Sensor present	Maximum Value: 65535
2.7.42.12 Sensor Entry 2	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor present	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.13 Expose SPI1 Dev 1E Fun 2 SDEV Entry	SPI1 Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.42.14 Number of Sensor Entries	An array of Sensors Entries	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.7.42.15 Flags	Enter HEX value BIT[0] - Allow handoff to non-secure OS	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
2.7.42.16 Sensor Entry 1	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor	Default Value: • 1 Numeric Range:

	present BIT[0] - Embedded Sensor present	Minimum Value: 0 Maximum Value: 65535
2.7.42.17 Sensor Entry 2	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor present	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.18 Expose SPI2 Dev 1E Fun 3 SDEV Entry	SPI2 Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.42.19 Number of Sensor Entries	An array of Sensors Entries	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 2
2.7.42.20 Flags	Enter HEX value BIT[0] - Allow handoff to non-secure OS	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
2.7.42.21 Sensor Entry 1	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID	Default Value: • 1

	BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor present	Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.22 Sensor Entry 2	Enter HEX value BIT[8:7] - Camera type BIT[6] - Plug-N-Play supported BIT[5:2] - Port ID BIT[1] - Privacy Enabled Sensor present BIT[0] - Embedded Sensor present	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.23 Expose XHCI SDEV Entry	XHCI Entry in SDEV table will be exposed based on this option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.42.24 Number of USB Devices	Number of USB Devices	Default Value: • 2 Numeric Range: Minimum Value: 1 Maximum Value: 2
2.7.42.25 Flags	Enter HEX value BIT[0] - Allow handoff to non-secure OS	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
2.7.42.26 USB Device 1		
2.7.42.27 Attributes	Enter HEX value BIT[7:1] - Reserved.	

	BIT[0] - USB Composite Device 0x0 - A single interface USB device 0x1 - A function on a USB composite device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.28 Root Port Number	Root port number on which the secure device is attached to the root hub.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.29 VID	Vendor ID	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.30 PID	Product ID	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.31 Revision	Revision	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.32 Interface Number	Interface number (0-based) of the interface on the device that this entry corresponds to. This	

	field is considered valid only if the Attributes indicates that the device is a composite device.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.33 Class	Class Number of the secure device	Default Value: • 14 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.34 Subclass	Subclass Number of the secure device	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.35 Protocol	Protocol Number of the secure device	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.36 ACPI Path String Offset	Offset for fully qualified ACPI path name of the secure device from the beginning of this table	Default Value: • 52 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.37 ACPI Path String Length	Length of fully qualified, null terminated ACPI path name of the secure device, The length	

	includes the NULL terminator.	Default Value: • 29 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.38 Firmware Hash [255:192]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.39 Firmware Hash [191:128]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.40 Firmware Hash [127:64]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.41 Firmware Hash [63:0]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.42 ACPI Path Name	ACPI Path Name. The default value is: _SB.PC00.XHCI.RHUB.HS00.CR	

	GB	
2.7.42.43 USB Device 2		
2.7.42.44 Attributes	Enter HEX value BIT[7:1] - Reserved. BIT[0] - USB Composite Device 0x0 - A single interface USB device 0x1 - A function on a USB composite device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.45 Root Port Number	Root port number on which the secure device is attached to the root hub.	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.46 VID	Vendor ID	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.47 PID	Product ID	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.48 Revision	Revision	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 65535
2.7.42.49 Interface Number	Interface number (0-based) of the interface on the device that this entry corresponds to. This field is considered valid only if the Attributes indicates that the device is a composite device.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.50 Class	Class Number of the secure device	Default Value: • 14 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.51 Subclass	Subclass Number of the secure device	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.52 Protocol	Protocol Number of the secure device	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.42.53 ACPI Path String Offset	Offset for fully qualified ACPI path name of the secure device from the beginning of this table	Default Value: • 52 Numeric Range:

		Minimum Value: 0 Maximum Value: 65535
2.7.42.54 ACPI Path String Length	Length of fully qualified, null terminated ACPI path name of the secure device, The length includes the NULL terminator.	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 65535
2.7.42.55 Firmware Hash [255:192]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.56 Firmware Hash [191:128]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.57 Firmware Hash [127:64]		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.7.42.58 Firmware Hash [63:0]		Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 4294967295
2.7.42.59 ACPI Path Name	ACPI Path Name. The default value is: _SB.PC00.XHCI.RHUB.HS01.CIR	
2.7.43 TCSS Platform Setting		
2.7.43.1 Disable TBT PCIE Tree BME	Disable TBT PCIE RP and child device Tree BME to Enable VTD Base Security	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.2 USBC connector manager selection	Select UCSI or UCMC device in ACPI support based on configuration	Possible Choices: • Disabled • Enable UCSI Device • Enable UCMC Device Default Value: • Enable UCSI Device
2.7.43.3 Aux Ori Override		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.4 Type C retimer TX Compliance Mode	Default is disable Compliance Mode. Change to enabled for Type C retimer Tx Compliance Mode testing.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.5 Type C Port 0	Enable/Disable Compliance Mode on Type C Port 0	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.7.43.6 Type C Port 1	Enable/Disable Compliance Mode on Type C Port 1	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.7 Type C Port 2	Enable/Disable Compliance Mode on Type C Port 2	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.8 Type C Port 3	Enable/Disable Compliance Mode on Type C Port 3	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.9 BIOS-TCSS handshake	Enable/Disable BIOS TCSS handshake messages. Disabled: TCSS handshake disabled Enabled: TCSS handshake with either EC or PMC is enabled based on the board ID	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.10 Timeout for EC USB enumeration message	BIOS-EC handshake message USBC_GetUSBConnStatus timeout value in milli seconds	Default Value: • 500 Numeric Range: Minimum Value: 50 Maximum Value: 1000
2.7.43.11 Timeout for EC SxEntryWait message	BIOS-EC handshake message USBC_SxEntryWait timeout	

	value in milli seconds	Default Value: • 1500 Numeric Range: Minimum Value: 200 Maximum Value: 3000
2.7.43.12 Timeout for EC SxExitWait message	BIOS-EC handshake message USBC_SxExitWait timeout value in milli seconds	Default Value: • 1500 Numeric Range: Minimum Value: 200 Maximum Value: 3000
2.7.43.13 USBC and USBA Wake Capability		Possible Choices: • S3 • S4 Default Value: • S4
2.7.43.14 USBC DataRole Swap Platform Disable Option	Enable/Disable setting USBC DataRole Swap Platform Disable Option	Possible Choices: • TRUE • FALSE Default Value: • TRUE
2.7.43.15 Thunderbolt(TM) Configuration		
2.7.43.15.1 PCIE Tunneling over USB4	Enable or disable PCIE Tunneling over USB4	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.2 USB4 CM Mode	FW CM only - The system boots with FW CM only in both BIOS and OS phase. SW CM first - The system boots	Possible Choices: • Firmware CM Only

	with SW CM in BIOS phase all the time, then boot to OS based on OS preference for backward and forward compatible. OS dependent - The system will boot with SW CM in BIOS phase after saving this setting, then boot to OS based on OS preference the reflect to CM setting to next BIOS boot. CM debug - The system with boot without any CM in BIOS phase, then boot to OS with the CM based on OS' preference by every boot.	• Software CM first • OS Dependent • CM Debug Default Value: • OS Dependent
2.7.43.15.3 Integrated Thunderbolt(TM) Support	Enable or Disable Integrated Thunderbolt(TM) Support.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.4 Discrete Thunderbolt(TM) Support	Enable or Disable Discrete Thunderbolt(TM) Support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.5 Wake From Thunderbolt(TM) Devices	Enable or disable system wake from Thunderbolt(TM) devices.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.6 Integrated Thunderbolt(TM) Configuration		
2.7.43.15.6.1 Os Native Resource Balance		Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.7.43.15.6.2 Connect Topology Timeout value for ITBT	Connect Topology Timeout value for Integrated Thunderbolt(TM) Controller	Default Value: • 5000 Numeric Range: Minimum Value: 1 Maximum Value: 65535
2.7.43.15.6.3 Force Poweron Timeout value for ITBT	Force Poweron Timeout value for Integrated Thunderbolt(TM)	Default Value: • 500 Numeric Range: Minimum Value: 1 Maximum Value: 65535
2.7.43.15.6.4 ITBT RTD3	ITBT RTD3 Enable/Disable. Note: ITBT RTD3 Disabled is not supported when SW CM is applied for OS	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.6.5 ITBT RTD3 EXIT DELAY	ITBT RTD3 EXIT DELAY (milli seconds)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 20000
2.7.43.15.6.6 ITBT Root Port 0 Configuration		
2.7.43.15.6.6.1 ITBT Root Port 0	AUTO - Default(Platform Specific)	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
2.7.43.15.6.6.2 Root Port 0 Resource Allocation		
2.7.43.15.6.6.3 Extra Bus Reserved	Extra Bus Reserved 42. Extra Bus Reserved is required for each layer = (Extra Bus Reserved on the previous layer - 2 - the number of non-hot-plug ports in the current layer) / the number of hot-plug ports in the current layer Example: 2 non-hot-plug ports and 3 hot-plug ports per connected device have Recommend below setting 1 device = 7 2 device = 25 3 device = 79, disable one iTBT root port 4 device = 224, disable three iTBT root port, and not every hotplug port supports connecting to the next layer of devices etc ...	Default Value: • 42 Numeric Range: Minimum Value: 0 Maximum Value: 224
2.7.43.15.6.6.4 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 194 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.6.5 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 25 Numeric Range: Minimum Value: 0

		Maximum Value: 31
2.7.43.15.6.6.6 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 448 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.6.7 PMemory Alignment	PMemory Alignment (0-31 bits)	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.6.7 ITBT Root Port 1 Configuration		
2.7.43.15.6.7.1 ITBT Root Port 1	None	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.6.7.2 Root Port 1 Resource Allocation		
2.7.43.15.6.7.3 Extra Bus Reserved	Extra Bus Reserved 42. Extra Bus Reserved is required for each layer = (Extra Bus Reserved on the previous layer - 2 - the number of non-hot-plug ports in the current layer) / the number of hot-plug ports in the current layer Example: 2 non-hot-plug ports and 3 hot-plug ports per connected device have Recommend below setting	Default Value: • 42 Numeric Range: Minimum Value: 0 Maximum Value: 224

	1 device = 7 2 device = 25 3 device = 79, disable one iTBT root port 4 device = 224, disable three iTBT root port, and not every hotplug port supports connecting to the next layer of devices etc ...	
2.7.43.15.6.7.4 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 194 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.7.5 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 25 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.6.7.6 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 448 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.7.7 PMemory Alignment	PMemory Alignment (0-31 bits)	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31

2.7.43.15.6.8 ITBT Root Port 2 Configuration		
2.7.43.15.6.8.1 ITBT Root Port 2	None	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.6.8.2 Root Port 2 Resource Allocation		
2.7.43.15.6.8.3 Extra Bus Reserved	Extra Bus Reserved 42. Extra Bus Reserved is required for each layer = (Extra Bus Reserved on the previous layer - 2 - the number of non-hot-plug ports in the current layer) / the number of hot-plug ports in the current layer Example: 2 non-hot-plug ports and 3 hot-plug ports per connected device have Recommend below setting 1 device = 7 2 device = 25 3 device = 79, disable one iTBT root port 4 device = 224, disable three iTBT root port, and not every hotplug port supports connecting to the next layer of devices etc ...	Default Value: • 42 Numeric Range: Minimum Value: 0 Maximum Value: 224
2.7.43.15.6.8.4 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 194 Numeric Range: Minimum Value: 1 Maximum Value: 4096

2.7.43.15.6.8.5 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 25 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.6.8.6 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 448 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.8.7 PMemory Alignment	PMemory Alignment (0-31 bits)	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.6.9 ITBT Root Port 3 Configuration		
2.7.43.15.6.9.1 ITBT Root Port 3	None	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.6.9.2 Root Port 3 Resource Allocation		
2.7.43.15.6.9.3 Extra Bus Reserved	Extra Bus Reserved 42. Extra Bus Reserved is required for each layer = (Extra Bus Reserved on the previous layer - 2 - the number of non-hot-plug ports in the current layer) /	Default Value: • 42

	the number of hot-plug ports in the current layer Example: 2 non-hot-plug ports and 3 hot-plug ports per connected device have Recommend below setting 1 device = 7 2 device = 25 3 device = 79, disable one iTBT root port 4 device = 224, disable three iTBT root port, and not every hotplug port supports connecting to the next layer of devices etc ...	Numeric Range: Minimum Value: 0 Maximum Value: 224
2.7.43.15.6.9.4 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 194 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.9.5 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 25 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.6.9.6 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 448 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.6.9.7 PMemory Alignment	PMemory Alignment (0-31 bits)	

		Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.7 Discrete DpIn Connection Policy	Configure the Dp Mux Connection setting. Internal Only: All display ports are for internal only. External First: All display ports are for external only. Runtime switch: Dynamic one-time switch from iGFx to dGFx after boot to OS	Possible Choices: • Internal Only • External Only • Runtime Switch Default Value: • Internal Only
2.7.43.15.8 Discrete Thunderbolt(TM) Configuration		
2.7.43.15.8.1 Thunderbolt Boot Support	Enabled allows boot from Bootable devices which is present behind Thunderbolt	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.8.2 GPIO filter	GPIO filter is needed to avoid electrical noise on PCH GPIOs during hotplug of 12V USB devices	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.8.3 DTBT Go2Sx Command	Command to put DTBT into Sx state while system going into Sx	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.7.43.15.8.4 Windows 10 Thunderbolt support		Possible Choices:

		• Enable + RTD3 • Disabled Default Value: • Enable + RTD3
2.7.43.15.8.5 DTBT Controller 0 Configuration		
2.7.43.15.8.5.1 DTBT Controller 0	AUTO - Default, Enable - RVP3 PCIe Root Port1, CNL RVP5 - PCIe Root Port5, CNL SDS - PCIe Root Port5	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.8.5.2 DTbt Root Port Type	Select the TBT Root Port Type. PCH or PEG	Possible Choices: • PCH Root Port • PEG Root Port Default Value: • PCH Root Port
2.7.43.15.8.5.3 TBT Host Router	Enable the host router based on ports available.	Possible Choices: • One port • Two port Default Value: • One port
2.7.43.15.8.5.4 Extra Bus Reserved	Extra Bus Reserved 56-One port Host,106-Two port Host.	Default Value: • 56 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.43.15.8.5.5 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 356

		Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.8.5.6 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 26 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.8.5.7 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 544 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.8.5.8 PMemory Alignment	PMemory Alignment (0-31 bits)	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.8.5.9 Reserved I/O		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 60
2.7.43.15.8.6 DTBT Controller 1 Configuration		
2.7.43.15.8.6.1 DTBT Controller 1	None	

		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.7.43.15.8.6.2 DTbt Root Port Type	Select the TBT Root Port Type. PCH or PEG	Possible Choices: • PCH Root Port • PEG Root Port Default Value: • PCH Root Port
2.7.43.15.8.6.3 TBT Host Router	Enable the host router based on ports available.	Possible Choices: • One port • Two port Default Value: • One port
2.7.43.15.8.6.4 Extra Bus Reserved	Extra Bus Reserved 56-One port Host,106-Two port Host.	Default Value: • 56 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.7.43.15.8.6.5 Reserved Memory	Reserved Memory for this Root Bridge (1-4096) MB	Default Value: • 356 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.8.6.6 Memory Alignment	Memory Alignment (0-31 bits)	Default Value: • 26

		Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.8.6.7 Reserved PMemory	Reserved Prefetchable Memory for this Root Bridge (1-4096) MB	Default Value: • 544 Numeric Range: Minimum Value: 1 Maximum Value: 4096
2.7.43.15.8.6.8 PMemory Alignment	PMemory Alignment (0-31 bits)	Default Value: • 28 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.7.43.15.8.6.9 Reserved I/O		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 60
2.7.43.16 PD Information		
2.7.43.17 PD0 Application name		
2.7.43.18 PD0 External Circuit Specific Version		
2.7.43.19 PD0 Version		
2.7.43.20 PD1 Application name		
2.7.43.21 PD1 External Circuit Specific Version		
2.7.43.22 PD1 Version		
2.7.44 Espi Lpc Bridge Config		

2.7.44.1 Espi Lpc Bridge Enabled	Enabled Espi Lpc Bridge Initialization. Please make sure platform have Espi Lpc Bridge connected.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8 ACPI D3Cold settings		
2.8.1 ACPI D3Cold Support	Enable/Disable ACPI D3Cold support to be executed on D3 entry and exit Note: Disable it would affect the Storage D3 setting	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.8.2 VR Ramp up delay	Delay between subsequent VR ramp ups if they are all Turn ON at the same time	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.8.3 PCIE Slot 5 Device Power-on delay in ms	Delay between applying core power and Deasserting PERST#	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.8.4 Audio Delay	Delay after applying power to HD Audio(Realtek) codec device.	Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1000

2.8.5 SensorHub	Delay after applying power to SensorHub device.	Default Value: • 68 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.8.6 TouchPad	Delay after applying power to TouchPad device.	Default Value: • 68 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.8.7 TouchPanel	Delay in PR _ON after applying power to TouchPanel device.	Default Value: • 68 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.8.8 P-state Capping	Set _PPC and send ACPI notification	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.9 USB Port 1	USB RTD3 support. Super Speed : USB3.0 devices will be exposed as RTD3 capable. High Speed: USB2.0 devices will be exposed as RTD3 capable. Disabled : USB RTD3 support disabled. For SawtoothPeak USB Port1(Below) is Superspeed and Port2(Top) is HighSpeed. Check	Possible Choices: • High Speed • Super Speed • Disabled Default Value: • Disabled

	respective board configuration to know about USB port position.	
2.8.10 USB Port 2	USB RTD3 support. Super Speed : USB3.0 devices will be exposed as RTD3 capable. High Speed: USB2.0 devices will be exposed as RTD3 capable. Disabled : USB RTD3 support disabled. For SawtoothPeak USB Port1(Below) is Superspeed and Port2(Top) is HighSpeed. Check respective board configuration to know about USB port position.	Possible Choices: • Disabled • High Speed • Super Speed • Super Speed WWAN Default Value: • Disabled
2.8.11 ZPODD	Zero Power ODD option is applicable only for the board with ZPODD support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.12 WWAN	Enable/Disable RTD3 support for WWAN	Possible Choices: • Disabled • D0/L1.2 • D3/L2 Default Value: • D3/L2
2.8.13 Sata Port 0	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.14 Sata Port 1	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.8.15 Sata Port 2	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.16 Sata Port 3	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.17 Sata Port 4	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.18 Sata Port 5	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.19 Sata Port 6	Setup option to control the SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.20 Sata Port 7	Setup option to control the	

	SATA port RTD3 functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.21 DTBT RTD3 Enable	Enables or Disables DTBT RTD3 support	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.22 TBT Power-off delay Optimization	Enables or Disables TBT Power-off delay Optimization support	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.8.23 TBT Power-off delay in ms	Specify delay in ms necessary after removing TBT power	Default Value: • 5000 Numeric Range: Minimum Value: 0 Maximum Value: 15000
2.8.24 DTBT RTD3 CLKREQ Enable	Enables or Disables DTBT RTD3 CLKREQ mask	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.8.25 DTBT RTD3 CLKREQ Delay value	Specify delay in ms necessary after CLKREQ mask state is changed.	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 2000
2.9 OverClocking Performance Menu		
2.9.1 OverClocking Feature	Performance Menu for Processor and Memory.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.2 UnderVolt Protection	When UnderVolt Protection is enabled, user will not be able to program under voltage in OS runtime. Recommended to keep it enabled by default. Enabled: Allow BIOS undervolting, but enable UnderVolt Protection in Runtime. Disabled: No UnderVolt Protection in Runtime.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.3 Per-core HT Disable		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.9.4 WDT Enable	Enable/Disable WatchDog Timer. Note: This option is ignored on debug BIOS.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.5 BCLK Frequency		
2.9.6 CPU BCLK OC Frequency	CPU BCLK Frequency in 10kHz increments. Specifies new CPU BCLK frequency to be applied. Frequency is rounded to nearest valid value. Allowed	Default Value: • 0

	range is limited by the Max/Min supported frequencies. Changes are not applied until settings are saved and platform resets. Example: For 125.70MHz, enter 12570.	Numeric Range: Minimum Value: 0 Maximum Value: 50000
2.9.7 BCLK Aware Adaptive Voltage	BCLK Aware Adaptive Voltage enable/disable. When enabled, pcode will be aware of the BCLK frequency when calculating the CPU V/F curves. This is ideal for BCLK OC to avoid high voltage overrides. Uses OC Mailbox command 0x15.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.8 PVD Ratio Threshold	Select PVD Ratio Threshold Value from Range 1 to 40. 0 - Auto/HW default	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 40
2.9.9 FLL Overclock Mode Enable	Enable FLL Overclock Mode, Default is Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.10 FLL Overclock Mode Select	Select FLL Mode Value from Range 1 to 3. 0x0 = no overclocking, 0x1 = ratio overclocking with nominal (0.5-1x) reference clock frequency, 0x2 = BCLK overclocking with elevated (1-3x) reference clock frequency, 0x3 = BCLK overclocking with extreme elevated (3-5x) reference clock frequency and ratio limited to 63	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 3

2.9.11 SA PLL Frequency Override	Configure Sa PLL Frequency.	Possible Choices: • 3200 MHz • 1600 MHz Default Value: • 3200 MHz
2.9.12 BCLK TSC HW Fixup	BCLK TSC HW Fixup disable during TSC copy from PMA to APIC	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.9.13 Processor		
2.9.13.1 Per Core Disable Configuration	Enable/Disable Per Core Disable. When Per Core Disable Configuration is enabled, selction of Active Cores and Active Efficient-cores will be disabled.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2 Processor Disable		
2.9.13.2.1 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.2 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.3 N/A		Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
2.9.13.2.4 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.5 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.6 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.7 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.8 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.9.13.2.9 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.10 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.11 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.12 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.13 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.14 N/A		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.9.13.2.15 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.16 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.17 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.18 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.19 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.20 N/A		Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.9.13.2.21 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.22 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.23 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.24 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.25 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.26 N/A		

		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.27 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.28 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.29 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.30 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.2.31 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.9.13.2.32 N/A		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.3 Core Ratio Extension Mode	Enable / Disable Core Ratio Above 85 Extension Mode. Enable - Max Overclocking Ratio Limit as specified by OCMB 0x1 command is 120; Disable - Max Overclocking Ratio Limit as specified by OCMB 0x1 command is 85.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.4 Core Max OC Ratio	Sets the maximum OC Ratio for the CPU Core. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range non-turbo max - 85 (Previously max turbo is 83).	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.5 Per Core Ratio Override	Enable / Disable Per Core Ratio Override. Enable - Set maximum OC ratio to specific core by OCMB 0x1D command; Disable - Set maximum OC ratio to all cores by OCMB command 0x11. Reminding: It's expeced we should manual change the "Turbo Ratio Limit(TRL) MSR 0x1AD / 0x1AE" settings based on here max core ratio changed	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.13.6 Core 0 Max Ratio	Override current maximum OC Ratio for the CPU Core 0.	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 120
2.9.13.7 Core 1 Max Ratio	Override current maximum OC Ratio for the CPU Core 1.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.8 Core 2 Max Ratio	Override current maximum OC Ratio for the CPU Core 2.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.9 Core 3 Max Ratio	Override current maximum OC Ratio for the CPU Core 3.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.10 Core 4 Max Ratio	Override current maximum OC Ratio for the CPU Core 4.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.11 Core 5 Max Ratio	Override current maximum OC Ratio for the CPU Core 5.	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 120
2.9.13.12 Core 6 Max Ratio	Override current maximum OC Ratio for the CPU Core 6.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.13 Core 7 Max Ratio	Override current maximum OC Ratio for the CPU Core 7.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.14 Cluster 0 Max Ratio	Override Efficient-cores 0 - 3 Maximum OC Ratio, maximum value up to 120.Note. E-cores 0 - 3 are in the same Cluster and their max core ratio will be aligned.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.15 Cluster 1 Max Ratio	Override Efficient-cores 4 - 7 Maximum OC Ratio, maximum value up to 120.Note. E-cores 4 - 7 are in the same Cluster and their max core ratio will be aligned.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.16 Cluster 2 Max Ratio	Override Efficient-cores 8 - 11 Maximum OC Ratio, maximum value up to 120.Note. E-cores 8 - 11 are in the same Cluster and their max core ratio will be aligned.	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 120
2.9.13.17 Cluster 3 Max Ratio	Override Efficient-cores 12 - 15 Maximum OC Ratio, maximum value up to 120.Note. E-cores 12 - 15 are in the same Cluster and their max core ratio will be aligned.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 120
2.9.13.18 VF Offset Mode	Selects between Legacy and Selection modes. Need Reset System after enabling OverClocking Feature to Initialize the default value. In Legacy Mode, setting a global offset for the entire VF curve. In Selection modes, setting a selected VF point.	Possible Choices: • Legacy • Selection Default Value: • Legacy
2.9.13.19 Core Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.13.20 P-core Voltage Override	Specifies the Override Voltage applied to the Performance-core domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.13.21 P-core Voltage Target Override	Specifies the extra turbo voltage applied while Performance-core is operating in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 2000
2.9.13.22 VF Configuration Scope	Alows both all cores VF curve or per-core VF curve configuration.	Possible Choices: • All-core • Per-core Default Value: • All-core
2.9.13.23 P-core Voltage Offset	Specifies the Offset Voltage applied to the Global Performance-core domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.24 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.25 P-core 0 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 0 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.26 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.27 P-core 1 Voltage Offset	Specifies the Offset Voltage applied to the Performance-	

	core 1 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.28 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.29 P-core 2 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 2 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.30 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.31 P-core 3 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 3 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.32 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • -

		Default Value: • +
2.9.13.33 P-core 4 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 4 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.34 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.35 P-core 5 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 5 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.36 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.37 P-core 6 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 6 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000

2.9.13.38 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.39 P-core 7 Voltage Offset	Specifies the Offset Voltage applied to the Performance-core 7 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.40 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.41 Cluster 0 Voltage Offset	Specifies the Offset Voltage applied to the Efficient-core Cluster 0 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.42 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.43 Cluster 1 Voltage Offset	Specifies the Offset Voltage applied to the Efficient-core Cluster 1 domain. This voltage is	

	specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.44 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.45 Cluster 2 Voltage Offset	Specifies the Offset Voltage applied to the Efficient-core Cluster 2 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.46 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.47 Cluster 3 Voltage Offset	Specifies the Offset Voltage applied to the Efficient-core Cluster 3 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.48 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • -

		Default Value: • +
2.9.13.49 VF Point 1 Offset	Specifies the Offset Voltage applied to the Selected VF Point 1. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x1. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.50 VF Point 1 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.51 VF Point 1 Ratio		
2.9.13.52 VF Point 2 Offset	Specifies the Offset Voltage applied to the Selected VF Point 2. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x2. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.53 VF Point 2 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.54 VF Point 2 Ratio		
2.9.13.55 VF Point 3 Offset	Specifies the Offset Voltage applied to the Selected VF Point 3. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x3. Range -500	Default Value: • 0

	to 500 mV	Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.56 VF Point 3 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.57 VF Point 3 Ratio		
2.9.13.58 VF Point 4 Offset	Specifies the Offset Voltage applied to the Selected VF Point 4. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x4. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.59 VF Point 4 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.60 VF Point 4 Ratio		
2.9.13.61 VF Point 5 Offset	Specifies the Offset Voltage applied to the Selected VF Point 5. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x5. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.62 VF Point 5 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • -

		Default Value: • +
2.9.13.63 VF Point 5 Ratio		
2.9.13.64 VF Point 6 Offset	Specifies the Offset Voltage applied to the Selected VF Point 6. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x6. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.65 VF Point 6 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.66 VF Point 6 Ratio		
2.9.13.67 VF Point 7 Offset	Specifies the Offset Voltage applied to the Selected VF Point 7. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x7. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.68 VF Point 7 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.69 VF Point 7 Ratio		
2.9.13.70 VF Point 8 Offset	Specifies the Offset Voltage applied to the Selected VF Point 8. This voltage is specified in	

	millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x8. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.71 VF Point 8 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.72 VF Point 8 Ratio		
2.9.13.73 VF Point 9 Offset	Specifies the Offset Voltage applied to the Selected VF Point 9. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x9. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.74 VF Point 9 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.75 VF Point 9 Ratio		
2.9.13.76 VF Point 10 Offset	Specifies the Offset Voltage applied to the Selected VF Point 10. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xA. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.77 VF Point 10 Offset Prefix	Sets the offset value as positive	

	or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.78 VF Point 10 Ratio		
2.9.13.79 VF Point 11 Offset	Specifies the Offset Voltage applied to the Selected VF Point 11. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xB. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.80 VF Point 11 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.81 VF Point 11 Ratio		
2.9.13.82 VF Point 12 Offset	Specifies the Offset Voltage applied to the Selected VF Point 12. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xC. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.83 VF Point 12 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.84 VF Point 12 Ratio		

2.9.13.85 VF Point 13 Offset	Specifies the Offset Voltage applied to the Selected VF Point 13. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xD. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.86 VF Point 13 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.87 VF Point 13 Ratio		
2.9.13.88 VF Point 14 Offset	Specifies the Offset Voltage applied to the Selected VF Point 14. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xE. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.13.89 VF Point 14 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.90 VF Point 14 Ratio		
2.9.13.91 VF Point 15 Offset	Specifies the Offset Voltage applied to the Selected VF Point 15. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xF. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000

2.9.13.92 VF Point 15 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.13.93 VF Point 15 Ratio		
2.9.13.94 AVX2 Ratio Offset	AVX2 Ratio Offset. Specifies number of bins to decrease AVX ratio vs. Core Ratio. AVX is a more stressful workload, it is helpful to lower the AVX ratio to ensure maximum possible ratio for SSE workloads. Uses Mailbox MSR 0x150, cmd 0x1B. Range 0 - 31. 0 = No offset.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
2.9.13.95 AVX2 Voltage Guardband Scale Factor	AVX2 Voltage Guardband Scale Factor. Controls the voltage guardband applied to AVX workloads. Range 0 - 200 in 1/100 units, where 125 = 1.25 scale factor. A default value of 100 applies the default voltage guardband scale factor of 1.0. A value > 100 will increase the votlage guardband, and < 100 will decrease the voltage guardband.	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 200
2.9.13.96 TjMax Offset	TjMax Offset. Specified value here is clipped by pCode (125 - TjMax Offset) to support TjMax in the range of 62 to 115 deg Celsius. Uses Mailbox MSR 0x37, command 0x01. Range 10 - 63, set back to 0 for default if not in the range. 0 = No offset.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
2.9.13.97 Fast Throttle Threshold	Fast Throttle Threshold. Specified value for max allowed temperature when cores throttle. Support Fast Throttle Threshold in the range	Default Value: • 0

	of 63 to 115 deg Celsius, set back to 0 for default if not in the range. 0 = Hardware Default.	Numeric Range: Minimum Value: 0 Maximum Value: 115
2.9.13.98 Thermal Velocity Boost (TVB)		
2.9.13.99 Thermal Velocity Boost	This service controls Core frequency reduction caused by high package temperatures for processors that implement the Intel Thermal Velocity Boost (TVB) feature. It is required to be disabled for supporting overclocking at frequencies higher than the default max turbo frequency. Default is disabled. Uses Overclocking Mailbox command 0x18/0x19.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.13.100 Down Bins (delta) for Temperature Threshold 0	When running above Temperature Threshold 0, the ratio will be clipped to (Max_Ratio-This Down Bins value)	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.9.13.101 TVB Temperature Threshold 0 (degrees C)	Running ABOVE this temperature will clip delta Down Bins for Threshold 0 from the resolved OC Ratio	Default Value: • 70 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.9.13.102 TVB Temperature Threshold 1 (degrees C)	Running ABOVE this temperature will clip delta Down Bins for Threshold 1 from the resolved OC Ratio	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 100

2.9.13.103 Down Bins (delta) for Temperature Threshold 1	When running above Temperature Threshold 1, the ratio will be clipped to (Max_Ratio-This Down Bins value)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.9.13.104 TVB Voltage Optimizations	This service controls thermal based voltage optimizations for processors that implement the Intel Thermal Velocity Boost (TVB) feature. Default is enabled. Uses Overclocking Mailbox command 0x18/0x19.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.13.105 Enhanced Thermal Velocity Boost	If enabled the user will be clipped when the temperatures reach the default threshold on supported products. Recommended to disable for overclocking.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.13.106 Expected CPU Freq	Expected Processor frequency calculated using Bus ratio and Bus speed.	
2.9.13.107 Expected CPU Freq	Expected Processor frequency calculated using Bus ratio and Bus speed.	
2.9.14 E-core L2 Configurations		
2.9.14.1 E-core L2 Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.14.2 E-core L2 Voltage Override	Specifies the Override Voltage applied to the Efficient-core L2 domain. This voltage is	

	specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.14.3 E-core L2 Extra Turbo Voltage	Specifies the extra turbo voltage applied while Efficient-core L2 is operating in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.14.4 E-core L2 Voltage Offset	Specifies the Offset Voltage applied to the Efficient-core L2 domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.14.5 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15 Ring		
2.9.15.1 Ring Max OC Ratio	Sets the maximum OC Ratio for the CPU Ring. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range non-turbo max - 85.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.9.15.2 VF Offset Mode	Selects between Legacy and Selection modes. Need Reset	Possible Choices:

	System after enabling OverClocking Feature to Initialize the default value. In Legacy Mode, setting a global offset for the entire VF curve. In Selection modes, setting a selected VF point.	• Legacy • Selection Default Value: • Legacy
2.9.15.3 Ring Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.15.4 Ring Voltage Override	Specifies the Override Voltage applied to the Ring domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.15.5 Ring Extra Turbo Voltage	Specifies the extra turbo voltage applied while ring is operating in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.15.6 Ring Voltage Offset	Specifies the Offset Voltage applied to the Ring domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.7 Offset Prefix	Sets the offset value as positive	

	or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.8 VF Point 1 Offset	Specifies the Offset Voltage applied to the Selected VF Point 1. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x1. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.9 VF Point 1 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.10 VF Point 1 Ratio		
2.9.15.11 VF Point 2 Offset	Specifies the Offset Voltage applied to the Selected VF Point 2. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x2. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.12 VF Point 2 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.13 VF Point 2 Ratio		
2.9.15.14 VF Point 3 Offset	Specifies the Offset Voltage applied to the Selected VF Point	

	3. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x3. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.15 VF Point 3 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.16 VF Point 3 Ratio		
2.9.15.17 VF Point 4 Offset	Specifies the Offset Voltage applied to the Selected VF Point 4. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x4. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.18 VF Point 4 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.19 VF Point 4 Ratio		
2.9.15.20 VF Point 5 Offset	Specifies the Offset Voltage applied to the Selected VF Point 5. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x5. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000

2.9.15.21 VF Point 5 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.22 VF Point 5 Ratio		
2.9.15.23 VF Point 6 Offset	Specifies the Offset Voltage applied to the Selected VF Point 6. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x6. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.24 VF Point 6 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.25 VF Point 6 Ratio		
2.9.15.26 VF Point 7 Offset	Specifies the Offset Voltage applied to the Selected VF Point 7. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x7. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.27 VF Point 7 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +

2.9.15.28 VF Point 7 Ratio		
2.9.15.29 VF Point 8 Offset	Specifies the Offset Voltage applied to the Selected VF Point 8. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x8. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.30 VF Point 8 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.31 VF Point 8 Ratio		
2.9.15.32 VF Point 9 Offset	Specifies the Offset Voltage applied to the Selected VF Point 9. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0x9. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.33 VF Point 9 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.34 VF Point 9 Ratio		
2.9.15.35 VF Point 10 Offset	Specifies the Offset Voltage applied to the Selected VF Point 10. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xA. Range -500 to 500 mV	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 1000
2.9.15.36 VF Point 10 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.37 VF Point 10 Ratio		
2.9.15.38 VF Point 11 Offset	Specifies the Offset Voltage applied to the Selected VF Point 11. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xB. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.39 VF Point 11 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.40 VF Point 11 Ratio		
2.9.15.41 VF Point 12 Offset	Specifies the Offset Voltage applied to the Selected VF Point 12. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xC. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.42 VF Point 12 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • -

		Default Value: • +
2.9.15.43 VF Point 12 Ratio		
2.9.15.44 VF Point 13 Offset	Specifies the Offset Voltage applied to the Selected VF Point 13. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xD. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.45 VF Point 13 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.46 VF Point 13 Ratio		
2.9.15.47 VF Point 14 Offset	Specifies the Offset Voltage applied to the Selected VF Point 14. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xE. Range -500 to 500 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.48 VF Point 14 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.49 VF Point 14 Ratio		
2.9.15.50 VF Point 15 Offset	Specifies the Offset Voltage applied to the Selected VF Point 15. This voltage is specified in millivolts. Uses Mailbox MSR	Default Value:

	0x150, cmd 0x11, Param1 0:Core 2:Ring, Param2 0xF. Range -500 to 500 mV	• 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.15.51 VF Point 15 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.15.52 VF Point 15 Ratio		
2.9.15.53 Ring Down Bin	Enable/Disable Ring Downbin feature. Enabled - CPU will down bin the ring ratio, which means the requested max ring ratio will not be observed. Disable - CPU will not down bin the ring ratio and the requested ring ratio limit will be observed. Default for Overclocking is "Disabled" to allow for a predictable ring ratio. Uses OC mailbox command 0x19.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.9.15.54 Min Ring Ratio Limit	This sets the minimum ring ratio limit. 0 - Auto/HW default. 1-LFM are invalid ratio settings.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85
2.9.15.55 Max Ring Ratio Limit	This sets the maximum ring ratio limit. 0 - Auto/HW default. 1-LFM are invalid ratio settings.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 85

2.9.16 GT		
2.9.16.1 GT Domain		
2.9.16.2 GT OverClocking Frequency	Overclocked RP0 Frequency (MLC Clk) in multiples of 50 MHz	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 42
2.9.16.3 GT Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.16.4 GT Voltage Override	Specifies the Override Voltage applied to the GT domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.16.5 GT Extra Turbo Voltage	Specifies the extra turbo voltage applied while GT is operating in turbo mode. Unit is in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.16.6 GT Voltage Offset	Specifies the Offset Voltage applied to the GT domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -1000 to 1000 mV	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 1000
2.9.16.7 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.16.8 GT Unslice Domain		
2.9.16.9 GT OverClocking Frequency	Overclocked RP0 Frequency (MLC Clk) in multiples of 50 MHz	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 42
2.9.16.10 GT Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.16.11 GT Voltage Override	Specifies the Override Voltage applied to the GT domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.16.12 GT Extra Turbo Voltage	Specifies the extra turbo voltage applied while GT is operating in turbo mode. Unit is in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000	Default Value: • 0 Numeric Range:

	mV	Minimum Value: 0 Maximum Value: 2000
2.9.16.13 GTU Voltage Offset	Specifies the Offset Voltage applied to the GT domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -1000 to 1000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.16.14 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.17 Uncore		
2.9.17.1 Uncore Voltage Mode	Selects between Adaptive and Override Voltage modes. In Override Mode the voltage selected will be applied over all operating frequencies. In Adaptive Mode the voltage is interpolated only in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11.	Possible Choices: • Adaptive • Override Default Value: • Adaptive
2.9.17.2 Uncore Voltage Override	Specifies the Override Voltage applied to the SA Uncore domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range 0-2000 mV.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
2.9.17.3 Uncore Extra Turbo Voltage	Specifies the extra turbo voltage applied while SA Uncore is operating in turbo mode. Uses Mailbox MSR 0x150, cmd 0x10, 0x11. Range 0-	Default Value: • 0 Numeric Range:

	2000 mV	Minimum Value: 0 Maximum Value: 2000
2.9.17.4 Uncore Voltage Offset	Specifies the Offset Voltage applied to the Uncore domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -1000 to 1000 mV	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1000
2.9.17.5 Offset Prefix	Sets the offset value as positive or negative.	Possible Choices: • + • - Default Value: • +
2.9.18 Voltage PLL Trim Controls		
2.9.18.1 Core PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.9.18.2 GT PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.9.18.3 Ring PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 15
2.9.18.4 System Agent PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.9.18.5 Efficient-core PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.9.18.6 Memory Controller PLL Voltage Offset	PLL Voltage Offset, Range 0-15. Units are in 17.5mV. Default is 0. This control can be used to increase the range of this domain frequency in extreme overclocking conditions.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
2.9.19 Platform Voltage Overrides		
2.9.19.1 Vcc1p8 Override Enable	Overrides the Vcc1p8 voltage using SMBUS/PMBUS interface of VRM. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.2 Vcc1p8	Range of Vcc1p8 voltage - Default is 1800 mV	Default Value: • 1800 Numeric Range:

		Minimum Value: 800 Maximum Value: 2550
2.9.19.3 Vcc1p05 Override Enable	Overrides the Vcc1p05 voltage using SMBUS/PMBUS interface of VRM. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.4 Vcc1p05	Range of Vcc1p05 voltage - Default is 1050 mV	Default Value: • 1050 Numeric Range: Minimum Value: 800 Maximum Value: 2550
2.9.19.5 VccDD2 Override Enable	Overrides the VccDD2 voltage using SMBUS/PMBUS interface of VRM. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.6 VccDD2	Range of VccDD2 voltage - Default is 1100 mV	Default Value: • 1100 Numeric Range: Minimum Value: 800 Maximum Value: 2550
2.9.19.7 VCCIN AUX CPU Overrides Enable	VCCIN AUX CPU Voltage Overrides from SMBUS/PMBUS interface of VRM. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.9.19.8 VCCIN AUX CPU	Voltage Range of VCCIN AUX CPU from 1620mV - 1900mV; Default is 1800 mV	Default Value: • 1800 Numeric Range: Minimum Value: 1620 Maximum Value: 1900
2.9.19.9 RichTek VccIA Control Overrides	VccIA Voltage can be overrides from Richtek SMBUS/PMBUS VR. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.10 Fixed VID Mode	Fixed VID Mode Enabled for the VccIA/VccGT Voltage rail Overrides from Richtek SMBUS/PMBUS VR. When Disabled, voltage rail will use IMVP from SVID BUS.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.11 VccIA (mV)	Voltage Range of RichTek VccIA from 250mV - 2170mV; Default is 1200 mV	Default Value: • 1200 Numeric Range: Minimum Value: 250 Maximum Value: 2170
2.9.19.12 RichTek VccGT Control Overrides	VccGT Voltage can be overrides from Richtek SMBUS/PMBUS VR. Use the next option for exact voltage configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.19.13 Fixed VID Mode	Fixed VID Mode Enabled for the VccIA/VccGT Voltage rail Overrides from Richtek SMBUS/PMBUS VR. When	Possible Choices: • Disabled

	Disabled, voltage rail will use IMVP from SVID BUS.	• Enabled Default Value: • Disabled
2.9.19.14 VccGT (mV)	Voltage Range of RichTek VccGT from 250mV - 2170mV; Default is 1200 mV	Default Value: • 1200 Numeric Range: Minimum Value: 250 Maximum Value: 2170
2.9.20 CEP Disable		
2.9.20.1 IA CEP Enable	Enable/Disable IA CEP (Current Excursion Protection) Support. Uses pCode Mailbox Command 0x37, Sub-command 0x1. Set Data bit2 to 1.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.9.20.2 GT CEP Enable	Enable/Disable GT CEP (Current Excursion Protection) Support. Uses pCode Mailbox Command 0x37, Sub-command 0x1. Set Data bit3 to 1.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.9.21 VR ICCMAX Current Override		
2.9.21.1 Current IA VR Current Limit		
2.9.21.2 Current GT VR Current Limit		
2.9.21.3 IA ICC Max Current Limit Override	IA Voltage Regulator Current Limit (Icc Max). This value represents the Maximum instantaneous current allowed at any given time. The value is represented in 1/4 A increments. A value of 400 = 100A. Range is 4 to 2047. Uses OC mailbox command 0x17	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2047

2.9.21.4 IA ICC Unlimited Mode	Enable/Disable IA Unlimited ICCMAX. When Enabled, IA VR ICCMAX value is set to max ICC current 512A.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.9.21.5 GT ICC Max Current Limit Override	GT Voltage Regulator Current Limit (Icc Max). This value represents the Maximum instantaneous current allowed at any given time. The value is represented in 1/4 A increments. A value of 400 = 100A. Range is 4 to 2047. Uses OC mailbox command 0x17	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2047
2.9.21.6 GT ICC Unlimited Mode	Enable/Disable GT Unlimited ICCMAX. When Enabled, GT VR ICCMAX value is set to max ICC current 512A.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.10 BCLK Configuration		
2.10.1 BCLK Source Config	CPU BCLK is only BCLK Source for ADL.	
2.10.2 CPU - BCLK Clock Settings		
2.10.3 BCLK Frequency		
2.10.4 Current CPU Bclk Frequency		
2.10.5 Discrete CPU Bclk Frequency	Config Discrete Clock Frequency in MHz. Range from 80 MHz up to MAX 530 MHz.	Default Value: • 100 Numeric Range: Minimum Value: 80 Maximum Value: 530
2.10.6 Current Peg/Dmi Clk Frequency		

2.10.7 Discrete Peg/Dmi Clk Frequency	Config Peg/Dmi Clock Frequency in MHz. Range from 80 MHz up to MAX 200 MHz.	Default Value: • 100 Numeric Range: Minimum Value: 80 Maximum Value: 200
2.11 Functional Safety Configuration		
2.11.1 Fusa Enable	Enable/Disable all Functional Safety (FUSA) feature	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.2 Periodic Array BIST module 0	Enabling this will execute periodic array test during boot	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.3 Periodic Array BIST module 1	Enabling this will execute periodic array test during boot	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.4 Periodic Scan BIST module 0	Enabling this will execute periodic scan test during boot	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.5 Periodic Scan BIST module 1	Enabling this will execute periodic scan test during boot	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.11.6 Lock Step module 0	Enable/Disable Lockstep for Efficient-core module, which has 4 cores each	Possible Choices: • Disable lockstep • Enable lockstep for Core 0 with Core 1, Core 2 with Core 3 • Enable lockstep for Core 0 with Core 1 • Enable lockstep for Core 2 with Core 3 Default Value: • Disable lockstep
2.11.7 Lock Step module 1	Enable/Disable Lockstep for Efficient-core module, which has 4 cores each	Possible Choices: • Disable lockstep • Enable lockstep for Core 0 with Core 1, Core 2 with Core 3 • Enable lockstep for Core 0 with Core 1 • Enable lockstep for Core 2 with Core 3 Default Value: • Disable lockstep
2.11.8 Display Fusa Configuration	Enable/Disable Functional Safety (FUSA) on Display	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.9 Graphics Fusa Configuration	Enable/Disable Functional Safety (FUSA) on Graphics	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.11.10 Opio Fusa Configuration	Enable/Disable Functional Safety (FUSA) on Opio	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.11 Psf Fusa Configuration	Enable/Disable Functional Safety (FUSA) on Psf	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.12 Iop Fusa Configuration	Enable/Disable Functional Safety (FUSA) on Iop	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.13 MC Parity Control	Enable/Disable CMI/MC Parity Control	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.11.14 In-Band ECC Parity Control	Enable/Disable In-Band ECC Parity Control	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12 Debug Settings		
2.12.1 Kernel Debug Serial Port	Select Kernel Debug Port and report in ACPI DBG2 table	Possible Choices: • Legacy UART

		• SERIALIO UART0 Default Value: • Legacy UART
2.12.2 Serial Io Uart Debug Power Gating	For S0iX support with Kernel Debugger Enabled. BIOS needs to change DBG2 Port Sub Type as value of 0x14 (0x0014 Intel LPSS) Note: Requires OS support	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.3 Kernel Debug Patch	Enable/Disable Kernel Debug Patch	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.4 Debug Token is present		
2.12.5 Platform Debug Consent	Enabled(All Probes+TraceHub) supports all probes with TraceHub enabled and blocks s0ix Enabled(Low Power) Tracehub is powergated by default, s0ix is viable Manual:user needs to configure Advanced Debug Settings manually, aimed at advanced users	Possible Choices: • Disabled • Enabled (All Probes+TraceHub) • Enabled (Low Power) • Manual Default Value: • Disabled
2.12.6 VT-d Debug Settings		
2.12.6.1 IGD VTD Enable	Enable/Disable IGD VTD	Possible Choices: • Enabled • Disabled Default Value: • Enabled

2.12.6.2 IPU VTD Enable	Enable/Disable IPU VTD	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.12.6.3 IOP VTD Enable	Enable/Disable IOP VTD	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.12.7 Advanced Debug Settings		
2.12.7.1 USB3 Type-C UFP2DFP Kernel/Platform Debug Support	This BIOS option enables kernel and platform debug for USB3 interface over a UFP Type-C receptacle, select 'No Change' will do nothing to UFP2DFP setting	Possible Choices: • Disabled • Enabled • No Change Default Value: • No Change
2.12.7.2 USB DbC Enable Mode	Disabled:Clear both USB2/3DBCEN USB2:Set USB2DBCEN USB3:Set USB3DBCEN Both:Set both USB2/3DBCEN No Change:Comply with HW value	Possible Choices: • Disabled • USB2 • USB3 • Both • No Change Default Value: • No Change
2.12.7.3 DCI Enable	Determine if to enable DCI debug from host	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.12.7.4 PCH Trace Hub Enable Mode	Select 'Host Debugger' if Trace Hub is used with host debugger tool or 'Target Debugger' if Trace Hub is used by target debugger software. Note: If 'Host Debugger' is selected, Platform Debug Consent has to be ENABLED because DCI is one of the primary trace data output paths.	Possible Choices: • Disabled • Target Debugger • Host Debugger Default Value: • Disabled
2.12.7.5 PCH TH Mem Buffer Size 0	Select size of memory region 0 buffer. Choose None/OS if OS-supported memory or trace forwarding is desired Note : Limit of total buffer size (PCH + CPU) is 512MB when iTBT disabled, 256MB when iTBT enabled	Possible Choices: • None/OS • 1MB • 8MB • 64MB • 128MB • 256MB • 512MB Default Value: • None/OS
2.12.7.6 PCH TH Mem Buffer Size 1	Select size of memory region 1 buffer. Choose None/OS if OS-supported memory or trace forwarding is desired Note : Limit of total buffer size (PCH + CPU) is 512MB when iTBT disabled, 256MB when iTBT enabled	Possible Choices: • None/OS • 1MB • 8MB • 64MB • 128MB • 256MB • 512MB Default Value: • None/OS
2.12.7.7 CPU Trace Hub Enable Mode	Select 'Host Debugger' if Trace Hub is used with host debugger tool or 'Target Debugger' if Trace Hub is used by target debugger software. Note: If 'Host Debugger' is selected, Platform Debug Consent has to be ENABLED because DCI is one of the primary trace data output	Possible Choices: • Disabled • Target Debugger • Host Debugger Default Value: • Disabled

	paths.	
2.12.7.8 CPU TH Mem Buffer Size 0	Select size of memory region 0 buffer. Choose None/OS if OS-supported memory or trace forwarding is desired Note : Limit of total buffer size (PCH + CPU) is 512MB when iTBT disabled, 256MB when iTBT enabled	Possible Choices: • None/OS • 1MB • 8MB • 64MB • 128MB • 256MB • 512MB Default Value: • None/OS
2.12.7.9 CPU TH Mem Buffer Size 1	Select size of memory region 1 buffer. Choose None/OS if OS-supported memory or trace forwarding is desired Note : Limit of total buffer size (PCH + CPU) is 512MB when iTBT disabled, 256MB when iTBT enabled	Possible Choices: • None/OS • 1MB • 8MB • 64MB • 128MB • 256MB • 512MB Default Value: • None/OS
2.12.7.10 CPU Run Control	Enable/Disable CPU Run Control Support; No Change : Comply with HW value	Possible Choices: • Disabled • Enabled • No Change Default Value: • No Change
2.12.7.11 CPU Run Control Lock	Enable/Disable CPU Run Control Lock	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.12 USB Overcurrent Override for VISA	This option overrides USB Over Current enablement state that USB OC will be disabled after	Possible Choices:

	enabling this option. Enable when VISA pin is muxed with USB OC	• Disabled • Enabled Default Value: • Disabled
2.12.7.13 Processor trace memory allocation	Disable or Select Processor trace memory region Size: from 4KB ~ 128MB	Possible Choices: • Disabled • 4KB • 8KB • 16KB • 32KB • 64KB • 128KB • 256KB • 512KB • 1MB • 2MB • 4MB • 8MB • 16MB • 32MB • 64MB • 128MB Default Value: • Disabled
2.12.7.14 Processor trace	Enable/Disable processor trace feature from CPU MSR. Enabling this feature will immediately start trace collection.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.7.15 Processor Trace OutPut Scheme	Select Single Range Output scheme or ToPA table Output scheme	Possible Choices: • Single Range Output • ToPA Output Default Value: • Single Range Output
2.12.7.16 SMM Processor Trace	Enable/Disable usage of Processor Trace in SMM	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.12.7.17 JTAG C10 Power Gate	When Enabled, JTAG is power gated in C10 state. When Disabled, keeps the JTAG power up during C10 and deeper power states for debug purpose.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.18 Three Strike Counter	Enable/Disable Three Strike Counter	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.19 CrashLog Feature	The feature helps collecting crash data from PMC SSRAM	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.20 CrashLog On All Reset	Option to invoke CrashLog collection on all reset	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.7.21 CrashLog PMC Rearm	Option to invoke crashlog re-arm	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.22 CrashLog PMC Clear	Option to invoke CrashLog	

	clear	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.23 CrashLog Cdie Rearm	Option to invoke crashlog re-arm	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.12.7.24 CrashLog Cdie Clear	Option to invoke CrashLog clear	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.7.25 CrashLog GPRs	Helps collecting crash data from PMC SSRAM. Enabling this may expose personal or confidential information that may be held in the GPRs at the time of the Crash trigger	Possible Choices: • Disabled • Enabled • Gprs Enabled, Smm Gprs Disabled Default Value: • Disabled
2.12.7.26 PMC Debug Message Enable	When Enabled, PMC HW will send debug messages to trace hub; When Disabled, PMC HW will never send debug meesages to trace hub. Noted: When Enabled, may not enter S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.12.7.27 Delayed Authentication Mode	Enable/Disable Delayed Authentication Mode	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.13 Debug Configuration		
2.13.1 RAM	Debug Messages Interface	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.13.2 Legacy UART	Debug Messages Interface	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.13.3 USB3	Debug Messages Interface	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.13.4 Serial IO UART	Debug Messages Interface	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.13.5 Trace Hub	Debug Messages Interface	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.13.6 MRC Serial Debug Messages	Enable/Disable MRC Serial	

	Debug Messages	Possible Choices: • Disabled • Error Only • Error & Warnings • Load, Error, Warnings & Info • Load, Error, Warnings, Info & Event • Load, Error, Warnings, Info & Verbose Default Value: • Disabled
2.13.7 Serial Debug Messages	Enable/Disable some Platform Serial Debug Messages	Possible Choices: • Disabled • Error Only • Error & Warnings • Load, Error, Warnings & Info • Load, Error, Warnings, Info & Event • Load, Error, Warnings, Info & Verbose Default Value: • Load, Error, Warnings & Info
2.13.8 Serial Debug Message Baud Rate	Baud Rate for Serial Debug Messages	Possible Choices: • 9600 • 19200 • 57600 • 115200 Default Value: • 115200
2.13.9 Serial IO Debug Controller Configuration		
2.13.10 Controller Number	Pch Integrated UART controller number	Possible Choices: • Serial IO UART 0 • Serial IO UART 1 • Serial IO UART 2 Default Value:

		• Serial IO UART 0
2.13.11 Baud Rate	Serial IO transmission speed in baud [Bd] per second	Possible Choices: • 9600 • 19200 • 57600 • 115200 • 460800 • 921600 • 1500000 • 1843200 • 3000000 • 3686400 • 6000000 Default Value: • 115200
2.13.12 Stop Bits	Number of stop bits. This is used to select the number of stop bits per character that the peripheral transmits and receives.	Possible Choices: • Default • 1 • 1.5 • 2 Default Value: • 1
2.13.13 Parity Bits	Enable and disable parity generation and detection in transmitted and received serial character	Possible Choices: • Default • None • Even • Odd Default Value: • None
2.13.14 Flow Control	Auto or None. Used to help for flow control using external IO pins with the pairing device.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.13.15 Word Length	Select the number of data bits per character that the peripheral transmits and receives	Possible Choices: • 5 BITS • 6 BITS • 7 BITS • 8 BITS Default Value: • 8 BITS
2.13.16 Serial IO Debug Interface Disabled		
2.14 SuperIO IT8659E Hardware Monitor		
2.14.1 Temperature 1	Help on Temperature 1	
2.14.2 Temperature 1	Help on Temperature 1	
2.14.3 Temperature 2	Help on Temperature 2	
2.14.4 Temperature 2	Help on Temperature 2	
2.14.5 Temperature 3	Help on Temperature 3	
2.14.6 Temperature 3	Help on Temperature 3	
2.14.7 Fan 1 Speed	Help on Fan 1	
2.14.8 Fan 1 Speed	Help on Fan 1	
2.14.9 Fan 2 Speed	Help on Fan 2	
2.14.10 Fan 2 Speed	Help on Fan 2	
2.14.11 V3VSB Voltage	Help on V3VSB input	
2.14.12 V3VSB Voltage	Help on V3VSB input	
2.14.13 VBAT Voltage	Help on VBAT input	
2.14.14 VBAT Voltage	Help on VBAT input	
2.14.15 Voltage Input 2	Help on VIN2 input	
2.14.16 Voltage Input 2	Help on VIN2 input	
2.14.17 Voltage Input 3	Help on VIN3 input	
2.14.18 Voltage Input 3	Help on VIN3 input	
2.14.19 Smart Guardian Auto Fan	Enable Smart Guardian Auto Fan to adjust Fan Speed according to temperature.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.15 Battery Failure Manager		
2.15.1 Battery Failure Action	Recovery action when a backup battery failure occurs; can be: None: no action Restore Defaults: preserves password(s) Reset NVRAM: clears also password(s).	Possible Choices: • None • Restore Defaults • Reset NVRAM Default Value: • None
2.16 Trusted Computing		
2.16.1 Configuration		
2.16.2 Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.	Possible Choices: • Disable • Enable Default Value: • Enable
2.16.3 TPM State	Enable/Disable Security Device. NOTE: Your Computer will reboot during restart in order to change State of the Device.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.16.4 Pending operation	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.	Possible Choices: • None • TPM Clear Default Value: • None
2.16.5 Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A	Possible Choices: • Disable

	interface will not be available.	• Enable Default Value: • Enable
2.16.6 TCM State	Enable/Disable Security Device. NOTE: Your Computer will reboot during restart in order to change State of the Device.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.16.7 Pending operation	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.	Possible Choices: • None • TPM Clear Default Value: • None
2.16.8 Device Select	TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated	Possible Choices: • TPM 1.2 • TPM 2.0 • Auto Default Value: • Auto
2.16.9 Current Status Information		
2.16.10 Firmware Version:		
2.16.11 Vendor:		
2.16.12 TPM Enabled Status:	None	
2.16.13 TPM Active Status:	None	
2.16.14 TPM Owner Status:	None	
2.16.15 TCM Enabled Status:	None	
2.16.16 TCM Active Status:	None	
2.16.17 TCM Owner Status:	None	
2.17 Trusted Computing		

2.17.1 TPM 2.0 Device Found		
2.17.2 Firmware Version:		
2.17.3 Vendor:		
2.17.4 Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.	Possible Choices: • Disable • Enable Default Value: • Enable
2.17.5 Active PCR banks		
2.17.6 Available PCR banks		
2.17.7 SHA-1 PCR Bank	Enable or Disable SHA-1 PCR Bank	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.17.8 SHA256 PCR Bank	Enable or Disable SHA256 PCR Bank	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.17.9 SHA384 PCR Bank	Enable or Disable SHA384 PCR Bank	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.17.10 SHA512 PCR Bank	Enable or Disable SHA512 PCR Bank	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.17.11 SM3_256 PCR Bank	Enable or Disable SM3_256 PCR Bank	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.17.12 Pending operation	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.	Possible Choices: • None • TPM Clear Default Value: • None
2.17.13 Platform Hierarchy	Enable or Disable Platform Hierarchy	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.17.14 Storage Hierarchy	Enable or Disable Storage Hierarchy	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.17.15 Endorsement Hierarchy	Enable or Disable Endorsement Hierarchy	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.17.16 Physical Presence Spec Version	Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not	Possible Choices: • 1.2

	support 1.3.	• 1.3 Default Value: • 1.3
2.17.17 TPM 2.0 UEFI Spec Version	Select the TCG2 Spec Version Support, TCG_1_2: the Compatible mode for Win8/Win10, TCG_2: Support new TCG2 protocol and event format for Win10 or later	Possible Choices: • TCG_1_2 • TCG_2 Default Value: • TCG_2
2.17.18 TPM 2.0 InterfaceType	Select the Communication Interface to TPM 20 Device.	Possible Choices: • CRB • TIS Default Value: • CRB
2.17.19 Device Select	TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated	Possible Choices: • TPM 1.2 • TPM 2.0 • Auto Default Value: • Auto
2.18 Trusted Computing		
2.18.1 Configuration		
2.18.2 Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.	Possible Choices: • Disable • Enable Default Value: • Enable
2.18.3 NO Security Device Found		

2.19 ACPI Settings		
2.19.1 Enable ACPI Auto Configuration	Enables or Disables BIOS ACPI Auto Configuration.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.19.2 Enable Hibernation	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may not be effective with some operating systems.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.19.3 ACPI Sleep State	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.	Possible Choices: • Suspend Disabled • S3 (Suspend to RAM) Default Value: • S3 (Suspend to RAM)
2.19.4 Lock Legacy Resources	Enables or Disables Lock of Legacy Resources	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.20 S5 RTC Wake Settings		
2.20.1 Wake system from S5	Enable or disable System wake on alarm event.	Possible Choices: • Disabled • By Every Day • By Day of Month Default Value: • Disabled
2.20.2 Wake up hour	select 0-23 For example enter 3	

	for 3am and 15 for 3pm	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 23
2.20.3 Wake up minute	select 0-59 for Minute	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 59
2.20.4 Wake up second	select 0-59 for Second	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 59
2.20.5 Day of Month	This is the help for the day field. Valid range is from 1 to 31. (Error checking will be done against month/day/year combinations that are not supported. INCREASE/REDUCE : +/-.	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 31
2.20.6 Wake up minute increase	1 - 5	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 5
2.21 UEFI Variables Protection		

2.21.1 Password protection of Runtime Variables	Control the NVRAM Runtime Variable protection through System Admin Password	Possible Choices: • Enable • Disable Default Value: • Enable
2.22 Serial Port Console Redirection		
2.22.1 COM0		
2.22.2 Console Redirection		
2.22.3 Console Redirection	Console Redirection Enable or Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.4 COM0		
2.22.4.1 Console Redirection Settings		
2.22.4.2 Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.	Possible Choices: • VT100 • VT100Plus • VT-UTF8 • ANSI Default Value: • ANSI
2.22.4.3 Bits per second	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	Possible Choices: • 9600 • 19200 • 38400 • 57600 • 115200 Default Value: • 115200
2.22.4.4 Data Bits		

		Possible Choices: • 7 • 8 Default Value: • 8
2.22.4.5 Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	Possible Choices: • None • Even • Odd • Mark • Space Default Value: • None
2.22.4.6 Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	Possible Choices: • 1 • 2 Default Value: • 1
2.22.4.7 Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	Possible Choices: • None • Hardware RTS/CTS Default Value: • None
2.22.4.8 VT-UTF8 Combo Key Support	Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.22.4.9 Recorder Mode	With this mode enabled only	

	text will be sent. This is to capture Terminal data.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.4.10 Resolution 100x31	Enables or disables extended terminal resolution	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.4.11 Putty KeyPad	Select FunctionKey and KeyPad on Putty.	Possible Choices: • VT100 • LINUX • XTERMR6 • SCO • ESCN • VT400 Default Value: • VT100
2.22.5 COM1		
2.22.6 Console Redirection		
2.22.7 Console Redirection	Console Redirection Enable or Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.8 COM1		
2.22.8.1 Console Redirection Settings		
2.22.8.2 Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars	Possible Choices: • VT100 • VT100Plus • VT-UTF8

	onto 1 or more bytes.	• ANSI Default Value: • ANSI
2.22.8.3 Bits per second	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	Possible Choices: • 9600 • 19200 • 38400 • 57600 • 115200 Default Value: • 115200
2.22.8.4 Data Bits		Possible Choices: • 7 • 8 Default Value: • 8
2.22.8.5 Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	Possible Choices: • None • Even • Odd • Mark • Space Default Value: • None
2.22.8.6 Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	Possible Choices: • 1 • 2 Default Value: • 1
2.22.8.7 Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving	Possible Choices:

	buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	• None • Hardware RTS/CTS Default Value: • None
2.22.8.8 VT-UTF8 Combo Key Support	Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.22.8.9 Recorder Mode	With this mode enabled only text will be sent. This is to capture Terminal data.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.8.10 Resolution 100x31	Enables or disables extended terminal resolution	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.8.11 Putty KeyPad	Select FunctionKey and KeyPad on Putty.	Possible Choices: • VT100 • LINUX • XTERMR6 • SCO • ESCN • VT400 Default Value: • VT100
2.22.9 COM2		
2.22.10 Console Redirection		

2.22.11 Console Redirection	Console Redirection Enable or Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.12 COM2		
2.22.12.1 Console Redirection Settings		
2.22.12.2 Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.	Possible Choices: • VT100 • VT100Plus • VT-UTF8 • ANSI Default Value: • ANSI
2.22.12.3 Bits per second	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	Possible Choices: • 9600 • 19200 • 38400 • 57600 • 115200 Default Value: • 115200
2.22.12.4 Data Bits		Possible Choices: • 7 • 8 Default Value: • 8
2.22.12.5 Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is	Possible Choices: • None • Even • Odd • Mark

	always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	• Space Default Value: • None
2.22.12.6 Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	Possible Choices: • 1 • 2 Default Value: • 1
2.22.12.7 Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	Possible Choices: • None • Hardware RTS/CTS Default Value: • None
2.22.12.8 VT-UTF8 Combo Key Support	Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.22.12.9 Recorder Mode	With this mode enabled only text will be sent. This is to capture Terminal data.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.12.10 Resolution 100x31	Enables or disables extended terminal resolution	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.22.12.11 Putty KeyPad	Select FunctionKey and KeyPad on Putty.	Possible Choices: • VT100 • LINUX • XTERMR6 • SCO • ESCN • VT400 Default Value: • VT100
2.22.13 COM3		
2.22.14 Console Redirection		
2.22.15 Console Redirection	Console Redirection Enable or Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.16 COM3		
2.22.16.1 Console Redirection Settings		
2.22.16.2 Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.	Possible Choices: • VT100 • VT100Plus • VT-UTF8 • ANSI Default Value: • ANSI
2.22.16.3 Bits per second	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	Possible Choices: • 9600 • 19200 • 38400 • 57600 • 115200

		Default Value: • 115200
2.22.16.4 Data Bits		Possible Choices: • 7 • 8 Default Value: • 8
2.22.16.5 Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	Possible Choices: • None • Even • Odd • Mark • Space Default Value: • None
2.22.16.6 Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	Possible Choices: • 1 • 2 Default Value: • 1
2.22.16.7 Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	Possible Choices: • None • Hardware RTS/CTS Default Value: • None
2.22.16.8 VT-UTF8 Combo Key Support	Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.22.16.9 Recorder Mode	With this mode enabled only text will be sent. This is to capture Terminal data.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.16.10 Resolution 100x31	Enables or disables extended terminal resolution	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.16.11 Putty KeyPad	Select FunctionKey and KeyPad on Putty.	Possible Choices: • VT100 • LINUX • XTERMR6 • SCO • ESCN • VT400 Default Value: • VT100
2.22.17 Serial Port for Out-of-Band Management/		
2.22.18 Windows Emergency Management Services (EMS)		
2.22.19 Console Redirection EMS	Console Redirection Enable or Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.22.20 Console Redirection Settings		

2.22.20.1 Out-of-Band Mgmt Port	Microsoft Windows Emergency Management Services (EMS) allows for remote management of a Windows Server OS through a serial port.	Possible Choices: • COM0 • COM1 • COM2 • COM3 Default Value: • COM0
2.22.20.2 Terminal Type EMS	VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings page, for more Help with Terminal Type/Emulation.	Possible Choices: • VT100 • VT100Plus • VT-UTF8 • ANSI Default Value: • VT-UTF8
2.22.20.3 Bits per second EMS	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	Possible Choices: • 9600 • 19200 • 57600 • 115200 Default Value: • 115200
2.22.20.4 Flow Control EMS	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	Possible Choices: • None • Hardware RTS/CTS • Software Xon/Xoff Default Value: • None
2.22.20.5 Data Bits EMS	Data Bits	
2.22.20.6 Parity EMS	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit	

	is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	
2.22.20.7 Stop Bits EMS	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	
2.23 Intel TXT Information		
2.23.1 Chipset	Chipset is production or debug Fused	
2.23.2 BiosAcm	BiosAcm is production or debug Fused	
2.23.3 Chipset Txt	Chipset support Txt	
2.23.4 Cpu Txt	Cpu support Txt	
2.23.5 Error Code	This holds the Intel TXT shutdown error code.	
2.23.6 Class Code	Error code[9:4]	
2.23.7 Major Code	Error code[14:10]	
2.23.8 Minor Code	Error code[24:16]	
2.24 Switchable Graphics		
2.24.1 SG Mode Select	MUXed vs. MUX-less (nVidia-Optimus, ATI-PX4.0/PX5.0) Note!!! Either mode requires PrimaryDisplay set to 'SG'	Possible Choices: • Muxless Default Value: • Muxless
2.24.2 GPU Package Power Limit Value	ATIF function 22 to get GPU Package Power Limit Default:0x0 Minimum:0x0	Default Value: • 0

	Maximum:0xFF00	Numeric Range: Minimum Value: 0 Maximum Value: 65280
2.25 AMI Graphic Output Protocol Policy		
2.25.1 Unknown Device		
2.25.2 Unknown Driver		
2.25.3 Output Select	Output Interface	Possible Choices: • Unknown Device Default Value: • Unknown Device
2.25.4 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.5 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.6 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.7 Output Select	Output Interface	Possible Choices:

		• Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.8 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.9 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device
2.25.10 Output Select	Output Interface	Possible Choices: • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device • Unknown Device Default Value: • Unknown Device

2.25.11 Brightness Setting	Set Gop Brightness value	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
2.25.12 BIST Enable	Starts or stops the BIST on the integrated display panel.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.26 USB Configuration		
2.26.1 USB Module Version		
2.26.2 USB Controllers:		
2.26.3 N/A		
2.26.4 USB Devices:		
2.26.5 N/A		
2.26.6 USB Support	USB Support Parameters	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.26.7 Legacy USB Support	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.	Possible Choices: • Enabled • Disabled • Auto Default Value: • Enabled
2.26.8 USB 2.0 Controller Mode	Configures the USB 2.0 controller in HiSpeed	

	(480Mbps) or FullSpeed (12Mbps).	Possible Choices: • HiSpeed • FullSpeed Default Value: • HiSpeed
2.26.9 XHCI Legacy Support	Enable/Disable XHCI Controller Legacy support.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.26.10 XHCI Hand-off	This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.26.11 EHCI Hand-off	This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.26.12 USB Mass Storage Driver Support	Enable/Disable USB Mass Storage Driver Support.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.26.13 USB hardware delays and time-outs:		
2.26.14 USB transfer time-out	The time-out value for Control, Bulk, and Interrupt transfers.	Possible Choices: • 1 sec • 5 sec • 10 sec

		• 20 sec Default Value: • 20 sec
2.26.15 Device reset time-out	USB mass storage device Start Unit command time-out.	Possible Choices: • 10 sec • 20 sec • 30 sec • 40 sec Default Value: • 20 sec
2.26.16 Device power-up delay	Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.	Possible Choices: • Auto • Manual Default Value: • Auto
2.26.17 Device power-up delay in seconds	Delay range is 1..40 seconds, in one second increments	Default Value: • 5 Numeric Range: Minimum Value: 1 Maximum Value: 40
2.26.18 Mass Storage Devices:		
2.26.19 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.20 N/A	Mass storage device emulation type. 'AUTO' enumerates	Possible Choices:

	devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	• Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.21 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.22 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.23 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.24 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk

	emulated according to a drive type.	• CD-ROM Default Value: • Auto
2.26.25 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.26 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.27 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.28 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto

2.26.29 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.30 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.31 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.32 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.33 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their	Possible Choices:

	media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	• Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.34 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.35 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.36 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.37 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk

	emulated according to a drive type.	• CD-ROM Default Value: • Auto
2.26.38 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.39 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.40 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.41 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto

2.26.42 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.43 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.44 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.45 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.46 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their	Possible Choices:

	media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	• Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.47 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.48 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.49 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be emulated according to a drive type.	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk • CD-ROM Default Value: • Auto
2.26.50 N/A	Mass storage device emulation type. 'AUTO' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drives with no media will be	Possible Choices: • Auto • Floppy • Forced FDD • Hard Disk

	emulated according to a drive type.	• CD-ROM Default Value: • Auto
2.27 Network Stack Configuration		
2.27.1 Network Stack	Enable/Disable UEFI Network Stack	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.27.2 IPv4 PXE Support	Enable/Disable IPv4 PXE boot support. If disabled, IPv4 PXE boot support will not be available.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.27.3 IPv4 HTTP Support	Enable/Disable IPv4 HTTP boot support. If disabled, IPv4 HTTP boot support will not be available.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.27.4 IPv6 PXE Support	Enable/Disable IPv6 PXE boot support. If disabled, IPv6 PXE boot support will not be available.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.27.5 IPv6 HTTP Support	Enable/Disable IPv6 HTTP boot support. If disabled, IPv6 HTTP boot support will not be available.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.27.6 PXE boot wait time	Wait time in seconds to press ESC key to abort the PXE boot. Use either +/- or numeric keys to set the value.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 5
2.27.7 Media detect count	Number of times the presence of media will be checked. Use either +/- or numeric keys to set the value.	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 50
2.28 SDIO Configuration		
2.28.1 SDIO Access Mode	Auto Option: Access SD device in DMA mode if controller supports it,otherwise in PIO mode.DMA Option: Access SD device in DMA mode.PIO Option: Access SD device in PIO mode.	Possible Choices: • Auto • ADMA • SDMA • PIO Default Value: • Auto
2.28.2 Mass Storage Devices:		
2.29 Seco Embedded Features		
2.29.1 Automatic console redirection	Automatically enables console redirection when no valid video device is detected	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.2 RhProxy support	Enable RhProxy ACPI tables support on the platform	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.29.3 Linux spidev devices	Enable spidev test devices ACPI tables support on the platform. DO NOT USE IN PRODUCTION SYSTEMS	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.4 Intel Descriptor settings		
2.29.4.1 Descriptor Status:	Intel Descriptor settings. PLEASE REFER TO DOCUMENTATION BEFORE CHANGING THIS MENU OPTIONS	Possible Choices: • UNLOCKED • LOCKED Default Value: • UNLOCKED
2.29.4.2 New descriptor configuration	New descriptor configuration: PLEASE REFER TO DOCUMENTATION BEFORE CHANGING THIS!!!!	Possible Choices: • Do NOT lock descriptor • Lock descriptor PERMANENTLY Default Value: • Do NOT lock descriptor
2.29.4.3 COM-Express PCIe lanes 0-3 link(s)	To select link(s) width(s) among x1x1x1x1 (default), x2x1x1, x2x2 and x4.	Possible Choices: • x1x1x1x1 • x2x1x1 • x2x2 • x4 • Combo1 0 • Combo1 1 • Combo1 2 • Combo1 3 • Combo1 4 • Combo1 5 • Combo1 6 • Combo1 7 • Combo2 0 • Combo2 1 • Combo2 2 • Combo2 3

		• Combo2 4 • Combo2 5 • Combo2 6 • Combo2 7 • Combo4 0 • Combo4 1 • Combo4 2 • Combo4 3 • Combo4 4 • Combo4 5 • Combo4 6 • Combo4 7 Default Value: • x1x1x1x1
2.29.4.4 HSIO Lane 5	Lane Configuration	Possible Choices: • x1 • Combo1 0 • Combo1 1 • Combo1 2 • Combo1 3 • Combo1 4 • Combo1 5 • Combo1 6 • Combo1 7 Default Value: • x1
2.29.4.5 HSIO Lane 6	Lane Configuration	Possible Choices: • x1 • Combo1 0 • Combo1 1 • Combo1 2 • Combo1 3 • Combo1 4 • Combo1 5 • Combo1 6 • Combo1 7 Default Value: • x1
2.29.4.6 HSIO Lane 7	Lane Configuration	Possible Choices: • x1

		• Combo1 0 • Combo1 1 • Combo1 2 • Combo1 3 • Combo1 4 • Combo1 5 • Combo1 6 • Combo1 7 Default Value: • x1
2.29.4.7 Further option 0	Help 0	Possible Choices: • Combo 0 • Combo 1 • Combo 2 • Combo 3 • Combo 4 • Combo 5 • Combo 6 • Combo 7 Default Value: • Combo 0
2.29.4.8 Further strap 1	Manual settings enable or disable (default, automatically follow module HW options). WARNING: manually setting options different from HW implementation may cause the module to no longer boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.4.9 Further option 1	Help 1	Possible Choices: • Combo 0 • Combo 1 • Combo 2 • Combo 3 • Combo 4 • Combo 5 • Combo 6 • Combo 7 Default Value: • Combo 0

2.29.4.10 Further option 2	Help 2	Possible Choices: • Combo 0 • Combo 1 • Combo 2 • Combo 3 • Combo 4 • Combo 5 • Combo 6 • Combo 7 Default Value: • Combo 0
2.29.4.11 Further strap 3	Manual settings enable or disable (default, automatically follow module HW options). WARNING: manually setting options different from HW implementation may cause the module to no longer boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.4.12 Further option 3	Help 3	Possible Choices: • Combo 0 • Combo 1 • Combo 2 • Combo 3 • Combo 4 • Combo 5 • Combo 6 • Combo 7 Default Value: • Combo 0
2.29.4.13 Further strap 4	Manual settings enable or disable (default, automatically follow module HW options). WARNING: manually setting options different from HW implementation may cause the module to no longer boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.4.14 Further option 4	Help 4	Possible Choices: • Combo 0

		• Combo 1 • Combo 2 • Combo 3 • Combo 4 • Combo 5 • Combo 6 • Combo 7 Default Value: • Combo 0
2.29.5 Super I/O Configuration		
2.29.5.1 Winbond/Nuvoton W83627xxx (0x2E)		
2.29.5.1.1 Keyboard Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.1.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.1.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8

2.29.5.1.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 4
2.29.5.1.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.1.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.1.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11

		• 14 • 15 Default Value: • 10
2.29.5.1.8 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.1.9 Parallel Port Mode	Allows to select how the parallel port signal are used.	Possible Choices: • Parallel Port • External FDC Default Value: • Parallel Port
2.29.5.1.10 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.1.11 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.1.12 LPT Irq		Possible Choices: • Disabled • 5

		• 7 Default Value: • Disabled
2.29.5.1.13 Hardware Monitor		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.1.14 Watchdog		Possible Choices: • Disabled • 1 Minute • 2 Minutes • 3 Minutes Default Value: • Disabled
2.29.5.1.15 Clock Selection	Set Input clock rate selection to 24/48MHz.	Possible Choices: • 24MHz • 48MHz Default Value: • 48MHz
2.29.5.2 Winbond/Nuvoton W83627xxx (0x4E)		
2.29.5.2.1 Keyboard Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.2.2 Serial Port 1		Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.29.5.2.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.2.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 4
2.29.5.2.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.2.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0

		• 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.2.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 10
2.29.5.2.8 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.2.9 Parallel Port Mode	Allows to select how the parallel port signal are used.	Possible Choices: • Parallel Port • External FDC Default Value: • Parallel Port
2.29.5.2.10 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.29.5.2.11 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.2.12 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.2.13 Watchdog		Possible Choices: • Disabled • 1 Minute • 2 Minutes • 3 Minutes Default Value: • Disabled
2.29.5.2.14 Clock Selection	Set Input clock rate selection to 24/48MHz.	Possible Choices: • 24MHz • 48MHz Default Value: • 48MHz
2.29.5.3 Exar XR28V38x (0x2E)		
2.29.5.3.1 Serial Port 1		Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.29.5.3.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.3.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.3.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.3.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0

		• 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.3.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.3.7 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.3.8 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.3.9 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4

		• 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.3.10 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.3.11 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.3.12 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 7
2.29.5.4 Exar XR28V38x (0x4E)		
2.29.5.4.1 Serial Port 1		Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.29.5.4.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.4.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.4.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.4.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0

		• 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.4.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.4.7 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.4.8 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.4.9 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4

		• 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.4.10 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.4.11 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.4.12 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 7
2.29.5.5 SMSC SCH 311x (0x2E)		
2.29.5.5.1 Keyboard Controller		Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.29.5.5.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.5.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.5.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.5.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.29.5.5.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.5.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.5.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.5.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3E8
2.29.5.5.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.5.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.5.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.5.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value:

		• 7
2.29.5.5.14 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.5.15 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.5.16 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.5.17 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.6 SMSC SCH 311x (0x4E)		
2.29.5.6.1 Keyboard Controller		Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.29.5.6.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.6.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.6.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.6.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.29.5.6.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.6.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.6.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.6.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3E8
2.29.5.6.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.6.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.6.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.6.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value:

		• 7
2.29.5.6.14 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.6.15 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.6.16 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.6.17 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.7 SMSC SCH 311x (0x162E)		
2.29.5.7.1 Keyboard Controller		Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.29.5.7.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.7.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.7.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.7.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.29.5.7.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.7.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.7.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.7.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3E8
2.29.5.7.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.7.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.7.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.7.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value:

		• 7
2.29.5.7.14 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.7.15 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.7.16 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.7.17 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.8 SMSC SCH 311x (0x164E)		
2.29.5.8.1 Keyboard Controller		Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.29.5.8.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.8.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.8.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.8.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.29.5.8.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.8.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.8.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.8.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3E8
2.29.5.8.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.8.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.8.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.8.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value:

		• 7
2.29.5.8.14 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.8.15 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.8.16 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.8.17 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.9 Fintek F81214E (0x2E)		
2.29.5.9.1 Serial Port 1		Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.29.5.9.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.9.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.9.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.9.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8

		• 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.9.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.10 Fintek F81214E (0x4E)		
2.29.5.10.1 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.10.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.10.3 IRQ	Serial Port IRQ	Possible Choices: • 3

		• 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.10.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.10.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.10.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 10
2.29.5.11 Nuvoton Nct610xD (0x2E)		
2.29.5.11.1 Keyboard Controller		

		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.11.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.11.4 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 4
2.29.5.11.5 Serial Port 2		Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
2.29.5.11.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.11.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 10
2.29.5.11.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8

		• 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.11.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 5
2.29.5.11.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

2.29.5.11.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 7
2.29.5.11.14 Serial Port 5		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.15 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.11.16 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14

		• 15 Default Value: • 10
2.29.5.11.17 Serial Port 6		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.18 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.11.19 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 11
2.29.5.11.20 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.29.5.11.21 Parallel Port Mode	Allows to select how the parallel port signal are used.	Possible Choices: • Parallel Port • External FDC Default Value: • Parallel Port
2.29.5.11.22 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.11.23 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.11.24 LPT Irq		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.11.25 Hardware Monitor		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.29.5.11.26 Watchdog		Possible Choices: • Disabled • 1 Minute • 2 Minutes • 3 Minutes Default Value: • Disabled
2.29.5.12 Nuvoton Nct610xD (0x4E)		
2.29.5.12.1 Keyboard Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.2 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.12.3 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3F8
2.29.5.12.4 IRQ	Serial Port IRQ	Possible Choices:

		• 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 4
2.29.5.12.5 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.12.6 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.12.7 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15

		Default Value: • 10
2.29.5.12.8 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.9 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.12.10 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 5
2.29.5.12.11 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.29.5.12.12 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.12.13 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 7
2.29.5.12.14 Serial Port 5		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.15 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0

		• 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.12.16 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 10
2.29.5.12.17 Serial Port 6		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.18 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.12.19 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6

		• 7 • 10 • 11 • 14 • 15 Default Value: • 11
2.29.5.12.20 Floppy Disk Controller		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.21 Parallel Port Mode	Allows to select how the parallel port signal are used.	Possible Choices: • Parallel Port • External FDC Default Value: • Parallel Port
2.29.5.12.22 Lpt Port		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.23 LPT Mode	When the Parallel Port is not used for floppy connection, selects the LPT Mode.	Possible Choices: • SPP • EPP 1.9 and SPP • ECP • ECP/EPP 1.9 • Printer Mode • EPP 1.7 and SPP • ECP/EPP 1.7 Default Value: • SPP
2.29.5.12.24 LPT Irq		

		Possible Choices: • Disabled • 5 • 7 Default Value: • Disabled
2.29.5.12.25 Hardware Monitor		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.12.26 Watchdog		Possible Choices: • Disabled • 1 Minute • 2 Minutes • 3 Minutes Default Value: • Disabled
2.29.5.13 Fintek F81216E (0x2E)		
2.29.5.13.1 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.13.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3F8
2.29.5.13.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.13.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.13.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.13.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11

		Default Value: • 10
2.29.5.13.7 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.13.8 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.13.9 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.13.10 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.29.5.13.11 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.13.12 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 7
2.29.5.14 Fintek F81216E (0x4E)		
2.29.5.14.1 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.14.2 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180

		Default Value: • 0x3F8
2.29.5.14.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 4
2.29.5.14.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.29.5.14.5 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.14.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11

		Default Value: • 10
2.29.5.14.7 Serial Port 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.29.5.14.8 Address	Serial Port IO Base Address	Possible Choices: • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180 Default Value: • 0x3E8
2.29.5.14.9 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 5
2.29.5.14.10 Serial Port 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.29.5.14.11 Address	Serial Port IO Base Address	Possible Choices: • • 0x3F8 • 0x3E8 • 0x1F8 • 0x1F0 • 0x1E8 • 0x1E0 • 0x1A8 • 0x1A0 • 0x188 • 0x180
2.29.5.14.12 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 7 • 10 • 11 Default Value: • 7
2.29.6 Main Thermal Configuration		
2.29.6.1 Critical Temperature (Â°C)		Possible Choices: • • • • • • • • • Disabled
2.29.6.2 Hardware Passive Cooling Temperature (Â°C)		Possible Choices: • • • • • • •

		• • • • • • • • • •
2.30 SMBIOS Information		
2.30.1 Type 0 - BIOS Information		
2.30.2 Vendor		
2.30.3 BIOS Version		
2.30.4 BIOS Release Date		
2.30.5 BIOS Major Release		
2.30.6 BIOS Minor Release		
2.30.7 Embedded Controller Major Release		
2.30.8 Embedded Controller Minor Release		
2.30.9 Type 1 - System Information		
2.30.10 Manufacturer		
2.30.11 Product Name		
2.30.12 Version		
2.30.13 Serial Number		
2.30.14 SKU Number		
2.30.15 Family		
2.30.16 Type 2 - Module Information		
2.30.17 Manufacturer		
2.30.18 Product Name		
2.30.19 Version		
2.30.20 Serial Number		
2.30.21 Asset Tag		

2.30.22 Type 28 - Temperature Probe Information		
2.30.23 Cpu TBOOT (Â°C)		
2.30.24 Chipset TBOOT (Â°C)		
2.31 LVDS Configuration		
2.31.1 Library Version		Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.2 LVDS interface	Enables/Disabled LVDS interface	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.3 Edid Mode	Allows to select EDID: -External: loading from external source -Default: from a default list by SECO -Custom: fully customizing panel timings	Possible Choices: • External • Default • Custom Default Value: • Default
2.31.4 Active Custom Panel Configuration	Select which panel you would like to configure	Possible Choices: • Panel 00 • Panel 01 • Panel 02 • Panel 03 • Panel 04 • Panel 05 • Panel 06 • Panel 07 • Panel 08 • Panel 09 • Panel 10

		• Panel 11 • Panel 12 • Panel 13 • Panel 14 • Panel 15 Default Value: • Panel 00
2.31.5 EDID	Select a software resolution (EDID settings) to be used for the internal flat panel.	Possible Choices: • 640x480 • 800x480 • 800x600 • 1024x600 • 1024x768 • 1280x720 • 1280x800 • 1280x1024 • 1366x768 • 1400x900 • 1600x900 • 1680x1050 • 1920x1080 Default Value: • 1920x1080
2.31.6 Not Present Behaviour	Select what to do then external EDID is not detected or is not valid	Possible Choices: • Load default EDID • Disable LVDS interface Default Value: • Load default EDID
2.31.7 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • VESA 24 bpp
2.31.8 Interface		Possible Choices: • Single Channel

		• Dual Channel Default Value: • Dual Channel
2.31.9 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.10 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.11 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.12 LVDS Advanced Options		
2.31.12.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.12.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV

		• 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.12.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.12.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.12.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.12.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.12.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
2.31.12.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.12.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.12.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.12.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.13 Panel 00 Configuration		
2.31.13.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the	

	custom name	
2.31.13.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.13.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.13.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.13.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.13.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1

		Maximum Value: 4095
2.31.13.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.13.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.13.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.13.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.13.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative

2.31.13.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.13.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.13.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.13.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.13.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.13.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative

		Default Value: • Positive
2.31.13.18 LVDS Advanced Options		
2.31.13.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.13.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.13.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.13.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.31.13.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.13.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.13.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.13.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.13.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.13.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
2.31.13.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.14 Panel 01 Configuration		
2.31.14.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.14.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.14.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.14.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse	Default Value:

	Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	• 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.14.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.14.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.14.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.14.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.14.9 Vertical Offset	Vertical Front Porch in lines	Default Value:

		• 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.14.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.14.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.14.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.14.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.14.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value:

		• Single Channel
2.31.14.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.14.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.14.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.14.18 LVDS Advanced Options		
2.31.14.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.14.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV

		• 400 mV • 450 mV Default Value: • 300 mV
2.31.14.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.14.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.14.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.14.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.14.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.31.14.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.14.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.14.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.14.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.15 Panel 02 Configuration		
2.31.15.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	

2.31.15.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.15.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.15.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.15.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.15.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095

2.31.15.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.15.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.15.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.15.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.15.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.15.12 Vertical Polarity	Sync signal Polariry: Default is	

	Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.15.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.15.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.15.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.15.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.15.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value:

		• Positive
2.31.15.18 LVDS Advanced Options		
2.31.15.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.15.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.15.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.15.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.31.15.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.15.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.15.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.15.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.15.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.15.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.31.15.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.16 Panel 03 Configuration		
2.31.16.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.16.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.16.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.16.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two	Default Value: • 304

	times the data-sheet value	Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.16.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.16.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.16.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.16.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.16.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3

		Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.16.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.16.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.16.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.16.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.16.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel

2.31.16.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.16.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.16.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.16.18 LVDS Advanced Options		
2.31.16.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.16.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV

		Default Value: • 300 mV
2.31.16.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.16.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.16.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.16.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.16.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.31.16.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.16.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.16.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.16.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.17 Panel 04 Configuration		
2.31.17.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.17.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25	

	MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.17.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.17.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.17.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.17.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.17.7 Horizontal Offset	Horizontal Front Porch in pixels	

		Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.17.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.17.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.17.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.17.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.17.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive

		Default Value: • Negative
2.31.17.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.17.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.17.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.17.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.17.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.17.18 LVDS Advanced Options		

2.31.17.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.17.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.17.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.17.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.17.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value:

		• 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.17.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.17.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.17.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.17.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.17.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.31.17.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.18 Panel 05 Configuration		
2.31.18.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.18.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.18.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.18.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095

2.31.18.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.18.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.18.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.18.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.18.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63

2.31.18.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.18.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.18.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.18.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.18.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.18.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High

		• Active Low Default Value: • Active High
2.31.18.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.18.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.18.18 LVDS Advanced Options		
2.31.18.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.18.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV

2.31.18.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.18.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.18.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.18.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.18.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.18.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
2.31.18.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.18.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.18.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.19 Panel 06 Configuration		
2.31.19.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.19.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range:

		Minimum Value: 2500 Maximum Value: 22400
2.31.19.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.19.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.19.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.19.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.19.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range:

		Minimum Value: 1 Maximum Value: 1023
2.31.19.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.19.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.19.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.19.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.19.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative

2.31.19.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.19.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.19.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.19.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.19.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.19.18 LVDS Advanced Options		
2.31.19.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading

		• 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.19.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.19.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.19.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.19.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0

		Maximum Value: 255
2.31.19.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.19.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.19.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.19.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.19.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.19.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12%

		• 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.20 Panel 07 Configuration		
2.31.20.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.20.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.20.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.20.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.20.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768

		Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.20.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.20.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.20.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.20.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.20.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4

		Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.20.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.20.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.20.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.20.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.20.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High

2.31.20.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.20.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.20.18 LVDS Advanced Options		
2.31.20.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.20.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.20.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10

		Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.20.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.20.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.20.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.20.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.20.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.31.20.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.20.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.20.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.21 Panel 08 Configuration		
2.31.21.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.21.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.21.3 Horizontal Active	Horizontal Addressable Video in	

	pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.21.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.21.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.21.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.21.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.21.8 Horizontal Pulse	Horizontal Sync Pulse Width in	

	pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.21.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.21.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.21.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.21.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.21.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp

		• 18 bpp Default Value: • JEIDA 24 bpp
2.31.21.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.21.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.21.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.21.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.21.18 LVDS Advanced Options		
2.31.21.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5%

		Default Value: • 1.0%
2.31.21.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.21.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.21.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.21.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.21.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
2.31.21.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.21.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.21.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.21.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.21.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100%

		Default Value: • 6: +/- 100%
2.31.22 Panel 09 Configuration		
2.31.22.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.22.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.22.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.22.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.22.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095

2.31.22.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.22.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.22.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.22.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.22.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63

2.31.22.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.22.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.22.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.22.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.22.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.22.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative

		Default Value: • Positive
2.31.22.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.22.18 LVDS Advanced Options		
2.31.22.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.22.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.22.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.31.22.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.22.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.22.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.22.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.22.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.22.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
2.31.22.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.22.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.23 Panel 10 Configuration		
2.31.23.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.23.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.23.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024

		Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.23.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.23.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.23.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.23.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.23.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104

		Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.23.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.23.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.23.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.23.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.23.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp

2.31.23.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.23.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.23.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.23.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.23.18 LVDS Advanced Options		
2.31.23.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%

2.31.23.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.23.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.23.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.23.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.23.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
2.31.23.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.23.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.23.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.23.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.23.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%

2.31.24 Panel 11 Configuration		
2.31.24.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.24.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.24.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.24.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.24.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.24.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch +	Default Value:

	Vertical Pulse Width + Vertical Back Porch	• 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.24.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.24.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.24.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.24.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.24.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative

		• Positive Default Value: • Negative
2.31.24.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.24.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.24.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.24.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.24.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive

2.31.24.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.24.18 LVDS Advanced Options		
2.31.24.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.24.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.24.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.24.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value:

		• 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.24.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.24.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.24.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.24.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.24.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.31.24.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.24.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.25 Panel 12 Configuration		
2.31.25.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.25.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.25.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095

2.31.25.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.25.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.25.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.25.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.25.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023

2.31.25.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.25.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.25.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.25.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.25.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.25.14 Interface		Possible Choices:

		• Single Channel • Dual Channel Default Value: • Single Channel
2.31.25.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.25.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.25.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.25.18 LVDS Advanced Options		
2.31.25.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.25.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV

		• 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.25.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.25.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.25.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.25.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.25.18.7 T5 Delay	Enable T5 delay. T5 is delayed	

	by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.25.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.25.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.25.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.25.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.26 Panel 13 Configuration		
2.31.26.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char].	

	Clear this field to remove the custom name	
2.31.26.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.26.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.26.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.26.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.26.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range:

		Minimum Value: 1 Maximum Value: 4095
2.31.26.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.26.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.26.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.26.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.26.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value:

		• Negative
2.31.26.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.26.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.26.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.26.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.26.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.26.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive

		• Negative Default Value: • Positive
2.31.26.18 LVDS Advanced Options		
2.31.26.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.26.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.26.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.26.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
2.31.26.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.26.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.26.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.26.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.26.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.26.18.10 Bus Swapping	Enable for swapped odd and	

	even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.26.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.27 Panel 14 Configuration		
2.31.27.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	
2.31.27.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.27.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.27.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal	

	Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.27.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.27.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.27.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.27.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.27.9 Vertical Offset	Vertical Front Porch in lines	

		Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.27.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.27.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.27.12 Vertical Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.27.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.27.14 Interface		Possible Choices: • Single Channel • Dual Channel

		Default Value: • Single Channel
2.31.27.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.27.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.27.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.27.18 LVDS Advanced Options		
2.31.27.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.27.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV

		• 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.27.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.27.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.27.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.27.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.27.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
2.31.27.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.27.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.27.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.27.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.28 Panel 15 Configuration		
2.31.28.1 Custom Panel setup name	Select a name to identify this custom setup [Max 24 char]. Clear this field to remove the custom name	

2.31.28.2 Pixel Clock / 10000	Working Frequency in 10 kHz units, e.g. 6350 --> 63.5 MHz. Allowed range from 2500 (25 MHz) to 22400 (224 MHz). For Dual Channel devices, two times the data-sheet value	Default Value: • 6350 Numeric Range: Minimum Value: 2500 Maximum Value: 22400
2.31.28.3 Horizontal Active	Horizontal Addressable Video in pixels, a.k.a. Horizontal Resolution, e.g. 1024 on a 1024x768 LFP. For Dual Channel devices, two times the data-sheet value	Default Value: • 1024 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.28.4 Horizontal Blank	Horizontal Blanking in pixels, equals Horizontal Total - Horizontal Active and Horizontal Front Porch + Horizontal Pulse Width + Horizontal Back Porch. For Dual Channel devices, two times the data-sheet value	Default Value: • 304 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.28.5 Vertical Active	Vertical Addressable Video in lines, a.k.a. Vertical Resolution, e.g. 768 on a 1024x768 LFP	Default Value: • 768 Numeric Range: Minimum Value: 1 Maximum Value: 4095
2.31.28.6 Vertical Blank	Vertical Blanking in lines, equals Vertical Total - Vertical Active and Vertical Front Porch + Vertical Pulse Width + Vertical Back Porch	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 4095

2.31.28.7 Horizontal Offset	Horizontal Front Porch in pixels	Default Value: • 48 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.28.8 Horizontal Pulse	Horizontal Sync Pulse Width in pixels	Default Value: • 104 Numeric Range: Minimum Value: 1 Maximum Value: 1023
2.31.28.9 Vertical Offset	Vertical Front Porch in lines	Default Value: • 3 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.28.10 Vertical Pulse	Vertical Sync Pulse Width in lines	Default Value: • 4 Numeric Range: Minimum Value: 1 Maximum Value: 63
2.31.28.11 Horizontal Polarity	Sync signal Polariry: Default is Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.28.12 Vertical Polarity	Sync signal Polariry: Default is	

	Negative (Active Low)	Possible Choices: • Negative • Positive Default Value: • Negative
2.31.28.13 Color Mode		Possible Choices: • VESA 24 bpp • JEIDA 24 bpp • 18 bpp Default Value: • JEIDA 24 bpp
2.31.28.14 Interface		Possible Choices: • Single Channel • Dual Channel Default Value: • Single Channel
2.31.28.15 DE Polarity	Data Enable Polarity	Possible Choices: • Active High • Active Low Default Value: • Active High
2.31.28.16 V-Sync Polarity	Vertical Sync Polarity	Possible Choices: • Positive • Negative Default Value: • Positive
2.31.28.17 H-Sync Polarity	Horizontal Sync Polarity	Possible Choices: • Positive • Negative Default Value:

		• Positive
2.31.28.18 LVDS Advanced Options		
2.31.28.18.1 Spreading Depth	LVDS clock frequency center spreading depth	Possible Choices: • No Spreading • 0.5% • 1.0% • 1.5% • 2.0% • 2.5% Default Value: • 1.0%
2.31.28.18.2 Output Swing	LVDS differential output swing level	Possible Choices: • 150 mV • 200 mV • 250 mV • 300 mV • 350 mV • 400 mV • 450 mV Default Value: • 300 mV
2.31.28.18.3 T3 Timing	Minimum T3 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.28.18.4 T4 Timing	Minimum T4 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 255

2.31.28.18.5 T12 Timing	Minimum T12 timing of panel power sequence to enforce (expressed in units of 50ms)	Default Value: • 20 Numeric Range: Minimum Value: 0 Maximum Value: 255
2.31.28.18.6 T2 Delay	Enable T2 delay. T2 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.28.18.7 T5 Delay	Enable T5 delay. T5 is delayed by 20mS +/- 50%	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.31.28.18.8 P/N Pairs Swapping	Differential pairs (P/N) swapping	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.28.18.9 Pairs Order Swapping	Channel differential pairs order swapping. (A<->D,B<->CLK,C<->C)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.31.28.18.10 Bus Swapping	Enable for swapped odd and even busses	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.31.28.18.11 Firmware PLL	Firmware PLL range.	Possible Choices: • 0: +/- 1.56% • 1: +/- 3.12% • 2: +/- 6.25% • 3: +/- 12.5% • 4: +/- 25% • 5: +/- 50% • 6: +/- 100% Default Value: • 6: +/- 100%
2.31.29 External LVDS edid not found		
2.31.30 Invalid external LVDS edid Data		
2.31.31 External LVDS edid Data:		
2.31.32 External LVDS edid Data with EPI block:		
2.31.33 Color Mode		
2.31.34 Interface		
2.31.35 DE Polarity		
2.31.36 Pixel Clock / 10000		
2.31.37 Horizontal Active		
2.31.38 Horizontal Blank		
2.31.39 Vertical Active		
2.31.40 Vertical Blank		
2.31.41 Horizontal Offset		
2.31.42 Horizontal Pulse		
2.31.43 Vertical Offset		
2.31.44 Vertical Pulse		
2.32 Embedded Controller		

2.32.1 Hardware Flavor		
2.32.2 Firmware / Library Version		
2.32.3 Firmware Time Stamp		
2.32.4 Boot Counter		
2.32.5 Serial Number		
2.32.6 Part Number		
2.32.7 Power Fail Resume Type	Specify what state to go to when power is re-applied after a power failure (G3 state). If Batteryless Operation, the chipset always powers on after a power failure: Always OFF Resume Type or Last State when Last State was OFF will therefore require an immediate shutdown	Possible Choices: • Always ON • Always OFF • Last State Default Value: • Always ON
2.32.8 Power On Delay	Programmable delay before evaluating system state and powering on the system in case of Always On or Last State (On)	Possible Choices: • 100 ms • 500 ms • 1 s • 1.5 s • 2 s • 3 s • 4 s • 5 s • 6 s • 7 s • 8 s • 9 s • 10 s Default Value: • 100 ms
2.32.9 No C-MOS battery handling	In systems with no C-MOS battery, the chipset always powers on after a power failure: Always OFF Resume Type or Last State when Last State was OFF will therefore require an immediate shutdown	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.32.10 Deep Sleep	Enable or disable deep sleep support	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.11 LID_BTN# Configuration	Configure LID_BTN# as always open/closed, no matter the pin level, or configures the pin polarity: High=Open (Normal), Low=Open (Inverted)	Possible Choices: • Force Open • Force Closed • Normal Polarity • Inverted Polarity Default Value: • Force Open
2.32.12 LID_BTN# Wake Configuration	Configure LID_BTN# wake capability. According to the pin configuration, when the LID is open it can cause a system wake from a sleep state.	Possible Choices: • No Wake • Only From S3 • Wake From S3/S4/S5 Default Value: • No Wake
2.32.13 SMB_ALERT# wake	Enable SMBUS Alert Wake from Suspend state.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.14 OUT 80 serial redirection port	Select on which E.C. UART(s) to redirect OUT 80 (Post Codes): can be None, 1, 2 or 1+2	Possible Choices: • None • 1 • 2 • 1+2 Default Value: • None
2.32.15 OUT 80 I2C redirection type	EGPIO type and topology, one of:	

	Disabled 9535 std = 9535 compatible, HPC standard topology 2301x std = 2301x compatible, HPC standard topology 9535 lin = 9535 compatible, linear topology HT16K33 = B79 Smarc Carrier postcode driver	Possible Choices: • Disabled • 9535 std • 2301x std • 9535 lin • HT16K33 Default Value: • 9535 std
2.32.16 OUT 80 I2C redirection address	8 bit I2C address for OUT 80 redirection	Possible Choices: • 40 • 42 • 44 • 46 • 48 • 4A • 4C • 4E • E2 Default Value: • 40
2.32.17 Hardware Monitor		
2.32.17.1 Monitor hardware parameters and settings		
2.32.18 Reset Causes Handling		
2.32.18.1 Reset Button Pressed		Possible Choices: • Not Happened • Happened Default Value: • Not Happened
2.32.18.2 Clear from log	If Enabled will require system reset	Possible Choices: • Disabled • Enabled Default Value: • Disabled

2.32.18.3 WDT Timeout Expired		Possible Choices: • Not Happened • Happened Default Value: • Not Happened
2.32.18.4 Clear from log	If Enabled will require system reset	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.18.5 Power Failure		Possible Choices: • Not Happened • Happened Default Value: • Not Happened
2.32.18.6 Clear from log	If Enabled will require system reset	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.18.7 E.C. soft reset		Possible Choices: • Not Happened • Happened Default Value: • Not Happened
2.32.18.8 Clear from log	If Enabled will require system reset	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
2.32.19 Super IO Configuration		
2.32.19.1 Serial Port 1		Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.32.19.2 Address	Serial Port IO Base Address	Possible Choices: • 0x2F8 • 0x2F0 • 0x2E8 • 0x2E0 • 0x2A8 • 0x2A0 • 0x288 • 0x280 Default Value: • 0x2E8
2.32.19.3 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 11
2.32.19.4 Serial Port 2		Possible Choices: • Disabled • Enabled Default Value: • Enabled

2.32.19.5 Address	Serial Port IO Base Address	Possible Choices: • 0x2F8 • 0x2F0 • 0x2E8 • 0x2E0 • 0x2A8 • 0x2A0 • 0x288 • 0x280 Default Value: • 0x2F8
2.32.19.6 IRQ	Serial Port IRQ	Possible Choices: • 3 • 4 • 5 • 6 • 7 • 10 • 11 • 14 • 15 Default Value: • 3
2.32.20 Internal FAN Settings		
2.32.20.1 FAN Power Failure Duty Cycle (%)	Duty Cycle (%) when resuming from Power Failure (G3-->S0)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.20.2 FAN_PWMOUT device type	Specifies if FAN_PWMOUT is connected to a 3-wire or 4-wire FAN or to a generic PWM	Possible Choices: • 3-WIRE FAN • 4-WIRE FAN • Generic PWM Default Value:

		• 4-WIRE FAN
2.32.20.3 Enhanced 3 wire RPM measurement	Enabled: on each measurement phase Duty Cycle will be raised to 100% for 100 mS then restored to original value to allow a more precise measure avoiding unwanted ripple on tachometer. Disabled: periodic fan speed up will not occour, but RPM measurement will not be accurate	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.32.20.4 FAN_PWMOUT frequency	Sets the frequency of the FAN_PWMOUT signal.	Default Value: • 2200 Numeric Range: Minimum Value: 1 Maximum Value: 60000
2.32.20.5 FAN_PWMOUT duty cycle (%)	Sets the Duty Cycle of the FAN_PWMOUT signal.	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.20.6 Automatic Temperature FAN Control	Disable/Enable Thermal Feed-back FAN Control	Possible Choices: • Disabled • Enabled Default Value: • Enabled
2.32.20.7 FAN PWM Frequency	Sets the frequency of the FAN_PWMOUT signal. Typical values are 100 for a 3-wire device and 20000 for a 4-wire one. Allowed range is 1-60000.	Default Value: • 2200 Numeric Range:

		Minimum Value: 1 Maximum Value: 60000
2.32.20.8 FAN Duty Cycle (%)	Sets the Duty Cycle of the FAN_PWMOUT signal.	Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.20.9 AC0 Temperature (C)	AC0: above this temperature the FAN runs at full speed.	Possible Choices: • 70 • 75 • 80 • 85 • 90 • 95 • 100 Default Value: • 75
2.32.20.10 AC1 Temperature (C)	AC1: below this temperature the FAN is OFF; between AC1 and AC0 the FAN runs at low speed: this never happens if AC1 is not below AC0.	Possible Choices: • 5 • 10 • 15 • 20 • 25 • 30 • 35 • 40 • 45 • 50 • 55 • 60 • 65 • 70 • 75 • 80 • 85 • 90 • 95 • 100 Default Value:

		• 40
2.32.20.11 Temperature Hysteresis	Added to ACx Thresholds when temperature is growing and subtracted when it is lowering, to avoid oscillations.	Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.32.20.12 Linear Speed change	Linear FAN Duty Cycle growth between AC1 and AC0.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.20.13 FAN Duty Cycle (%) Above AC1	FAN Duty Cycle (%) between AC1 and AC0 (low speed).	Default Value: • 75 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.20.14 Speed change duration	Duration in seconds of linear FAN speed change. Allowed range: from 0 to 50.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 50
2.32.21 External FAN/PWM Settings		
2.32.21.1 FAN Power Failure Duty Cycle (%)	Duty Cycle (%) when resuming from Power Failure (G3-->S0)	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 100
2.32.21.2 FAN_PWMOUT device type	Specifies if FAN_PWMOUT is connected to a 3-wire or 4-wire FAN or to a generic PWM	Possible Choices: • 3-WIRE FAN • 4-WIRE FAN • Generic PWM Default Value: • 4-WIRE FAN
2.32.21.3 Enhanced 3 wire RPM measurement	Enabled: on each measurement phase Duty Cycle will be raised to 100% for 100 mS then restored to original value to allow a more precise measure avoiding unwanted ripple on tachometer. Disabled: periodic fan speed up will not occour, but RPM measurement will not be accurate	Possible Choices: • Enabled • Disabled Default Value: • Enabled
2.32.21.4 FAN_PWMOUT frequency	Sets the frequency of the FAN_PWMOUT signal.	Default Value: • 2200 Numeric Range: Minimum Value: 1 Maximum Value: 60000
2.32.21.5 FAN_PWMOUT duty cycle (%)	Sets the Duty Cycle of the FAN_PWMOUT signal.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.21.6 Automatic Temperature FAN Control	Disable/Enable Thermal Feed-back FAN Control	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
2.32.21.7 FAN PWM Frequency	Sets the frequency of the FAN_PWMOUT signal. Typical values are 100 for a 3-wire device and 20000 for a 4-wire one. Allowed range is 1-60000.	Default Value: • 2200 Numeric Range: Minimum Value: 1 Maximum Value: 60000
2.32.21.8 FAN Duty Cycle (%)	Sets the Duty Cycle of the FAN_PWMOUT signal.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.21.9 AC0 Temperature (C)	AC0: above this temperature the FAN runs at full speed.	Possible Choices: • 70 • 75 • 80 • 85 • 90 • 95 • 100 Default Value: • 75
2.32.21.10 AC1 Temperature (C)	AC1: below this temperature the FAN is OFF; between AC1 and AC0 the FAN runs at low speed: this never happens if AC1 is not below AC0.	Possible Choices: • 5 • 10 • 15 • 20 • 25 • 30 • 35 • 40 • 45 • 50 • 55 • 60

		• 65 • 70 • 75 • 80 • 85 • 90 • 95 • 100 Default Value: • 40
2.32.21.11 Temperature Hysteresis	Added to ACx Thresholds when temperature is growing and subtracted when it is lowering, to avoid oscillations.	Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 10
2.32.21.12 Linear Speed change	Linear FAN Duty Cycle growth between AC1 and AC0.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.21.13 FAN Duty Cycle (%) Above AC1	FAN Duty Cycle (%) between AC1 and AC0 (low speed).	Default Value: • 75 Numeric Range: Minimum Value: 0 Maximum Value: 100
2.32.21.14 Speed change duration	Duration in seconds of linear FAN speed change. Allowed range: from 0 to 50.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 50

2.32.22 Watchdog Configuration		
2.32.22.1 Watchdog Status	Disables/Enables the Watchdog Timer mechanism	Possible Choices: • Disabled • Enabled Default Value: • Disabled
2.32.22.2 Event action	Select the Watchdog action when Event time-out expires.	Possible Choices: • Raise WDT Signal • Power Button Pulse Default Value: • Raise WDT Signal
2.32.22.3 Reset action	Select the Watchdog action when Reset time-out expires.	Possible Choices: • System Reset • Power Button Override • Raise WDT Signal Default Value: • System Reset
2.32.22.4 Watchdog Delay	Minutes before watchdog normal operation starts. During delay time-out, a refresh operation will immediately trigger normal operation. Valid range is from 0 to 60	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 60
2.32.22.5 Event time-out	Minutes without refresh before triggering selected event action. Refresh will restart the time-out. Valid range is from 0 to 60	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 60

2.32.22.6 Reset time-out	Minutes without refresh before triggering selected reset action, this timer will start when event time-out is expired. Refresh will restart the event time-out. Valid range is from 1 to 60	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 60
2.32.23 GPIO Configurations		
2.32.23.1 GPIO0		
2.32.23.2 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Output Low
2.32.23.3 Input Level		
2.32.23.4 Input Level		
2.32.23.5 GPIO1		
2.32.23.6 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Output Low
2.32.23.7 Input Level		
2.32.23.8 Input Level		
2.32.23.9 GPIO2		
2.32.23.10 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with	Possible Choices:

	respect to the last boot.	• Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Output Low
2.32.23.11 Input Level		
2.32.23.12 Input Level		
2.32.23.13 GPIO3		
2.32.23.14 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Output Low
2.32.23.15 Input Level		
2.32.23.16 Input Level		
2.32.23.17 GPIO4		
2.32.23.18 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.19 Input Level		
2.32.23.20 Input Level		
2.32.23.21 GPIO5		
2.32.23.22 Configuration	Configure GPIO PIN direction and default behavior.	

	Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.23 Input Level		
2.32.23.24 Input Level		
2.32.23.25 GPIO6		
2.32.23.26 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.27 Input Level		
2.32.23.28 Input Level		
2.32.23.29 GPIO7		
2.32.23.30 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.31 Input Level		
2.32.23.32 Input Level		
2.32.23.33 GPIO8		

2.32.23.34 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.35 Input Level		
2.32.23.36 Input Level		
2.32.23.37 GPIO9		
2.32.23.38 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.39 Input Level		
2.32.23.40 Input Level		
2.32.23.41 GPIO10		
2.32.23.42 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.43 Input Level		
2.32.23.44 Input Level		

2.32.23.45 GPIO11		
2.32.23.46 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.47 Input Level		
2.32.23.48 Input Level		
2.32.23.49 GPIO12		
2.32.23.50 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.51 Input Level		
2.32.23.52 Input Level		
2.32.23.53 GPIO13		
2.32.23.54 Configuration	Configure GPIO PIN direction and default behavior. Last means no changes with respect to the last boot.	Possible Choices: • Input • Interrupt Input • Output Low • Output High • Output Last Default Value: • Input
2.32.23.55 Input Level		

2.32.23.56 Input Level		
2.32.24 USB4 PD compliance mode	Disable (default) or enable SECO CRBs compatible USB4 Power Delivery Compliance Mode	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3 Chipset

Setting	Help	Defaults
3.1 System Agent (SA) Configuration		
3.1.1 VT-d	VT-d capability	
3.1.2 Memory Configuration		
3.1.2.1 Memory Thermal Configuration		
3.1.2.1.1 Memory Power and Thermal Throttling		
3.1.2.1.1.1 DDR PowerDown and idle counter	BIOS: BIOS is in control of DDR CKE mode and idle timer value. PCODE: pcode will manage the modes.	Possible Choices: • PCODE • BIOS Default Value: • BIOS
3.1.2.1.1.2 For LPDDR Only: DDR PowerDown and idle counter	For LPDDR Only: BIOS: BIOS is in control of DDR CKE mode and idle timer value. PCODE: pcode will manage the modes.	Possible Choices: • PCODE • BIOS Default Value: • BIOS
3.1.2.1.1.3 REFRESH_2X_MODE	0- Disabled 1-iMC enables 2xRef when Warm and Hot 2-iMC enables 2xRef when Hot	Possible Choices: • Disabled • 1- Enabled for WARM or HOT • 2- Enabled HOT only Default Value: • Disabled
3.1.2.1.1.4 SelfRefresh Enable	Enable, Disable(Enable= Def)	Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
3.1.2.1.1.5 SelfRefresh IdleTimer	range [64K-1;512]in DLCK800s, (512= Def)	Default Value: • 512 Numeric Range: Minimum Value: 512 Maximum Value: 65535
3.1.2.1.1.6 Throttler CKEMin Defeature	On, Off	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.1.1.7 Throttler CKEMin Timer	Timer value for CKEMin, range[255;0]. Req'd min of SC_ROUND_T + BYTE_LENGTH (4)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.1.1.8 Allow Opp Ref Below Write Threhold	Allow opportunistic refreshes while we don't exit power down.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.1.1.9 Write Threshold	Number of writes that can be accumulated while CKE is low before CKE is asserted.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63

3.1.2.1.1.10 For LPDDR Only: Throttler CKEMin Defeature	For LPDDR Only: On, Off	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.1.1.11 For LPDDR Only: Throttler CKEMin Timer	For LPDDR Only: Timer value for CKEMin, range[255:0]. Req'd min of SC_ROUND_T + BYTE_LENGTH (4)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.1.2 Memory Thermal Management	Enable/Disable Memory Thermal Management.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.1.3 PECI Injected Temperature	Enable/Disable memory temperatures to be injected to the processor via PECI.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.1.4 EXTTS# via TS-on-Board	Enable/Disable routing TS-on-Board's ALERT# and THERM# to EXTTS# pins on the PCH.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.1.5 EXTTS# via TS-on-DIMM	Enable/Disable routing TS-on-DIMM's ALERT# to EXTTS# pin on the PCH.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.2.1.6 Virtual Temperature Sensor (VTS)	Enable/Disable Virtual Temperature Sensor (VTS).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2 Memory Training Algorithms		
3.1.2.2.1 Early Command Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.2 SenseAmp Offset Training		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.3 Early ReadMPR Timing Centering 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.4 Read MPR Training		Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.2.5 Receive Enable Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.6 Jedec Write Leveling		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.7 Early Write Time Centering 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.8 Early Read Time Centering 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.9 Write Timing Centering 1D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.10 Write Voltage Centering 1D		Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
3.1.2.2.11 Read Timing Centering 1D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.12 Dimm ODT Training*	Dimm On-Die Termination Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.13 Max RTT_WR	Caps the maximum RTT_WR in power training.	Possible Choices: • ODT Off • 120 Ohms Default Value: • ODT Off
3.1.2.2.14 DIMM RON Training*	DIMM RON Training	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.15 Write Drive Strength/Equalization 2D*		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.16 Write Slew Rate Training*	Write Slew Rate Training	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.1.2.2.17 Read ODT Training*	Read On-Die Termination Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.18 Read Equalization Training*	Read Equalization Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.19 Read Amplifier Training*	Read Amplifier Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.20 Write Timing Centering 2D	Write Dq-Dqs Timing Centering 2D	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.21 Read Timing Centering 2D	Read Dq-Dqs Timing Centering 2D	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.22 Command Voltage		

Centering		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.23 Write Voltage Centering 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.24 Read Voltage Centering 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.25 Late Command Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.26 Round Trip Latency	Round Trip Latency Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.27 Turn Around Timing Training		Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.2.28 CMD CTL CLK Slew Rate		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.29 CMD/CTL DS & E 2D	CMD/CTL Drive Strength and Equalization 2D	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.30 Read Voltage Centering 1D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.31 TxDqTCO Comp Training*		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.32 ClkTCO Comp Training*		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.33 TxDqsTCO Comp Training*		Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.1.2.2.34 VccDLL Bypass Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.35 CMD/CTL Drive Strength Up/Dn 2D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.36 DIMM CA ODT Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.37 PanicVttDnLp Training*		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.38 Read Vref Decap Training*		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.39 Vddq Training		Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.1.2.2.40 Duty Cycle Correction Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.41 Rank Margin Tool Per Bit		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.42 DIMM DFE Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.43 EARLY DIMM DFE Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.44 Tx Dqs Dcc Training	Tx Dqs duty cycle Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.45 DRAM DCA Training		

		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.46 Write Driver Strength Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.47 Rank Margin Tool	Rank Margin Tool Training	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.48 Memory Test	Memory Test Training	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.49 DQS OFFSET ADJUST Training		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.50 DRAM EMPHASIS Training		Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.2.51 DIMM SPD Alias Test	Test to determine if the SPD has been corrupted to cause memory aliasing.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.52 Receive Enable Centering 1D		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.53 Retrain Margin Check		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.2.54 Write Drive Strength Up/Dn independently		Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.2.55 Margin Check Limit	Checks Margin to Limit to see if next boot memory needs to be retrain	Possible Choices: • Disabled • L1 • L2 • Both Default Value: • Disabled
3.1.2.2.56 Margin Limit Check L2	L2 check threshold is scale of L1 check. Ex. 200 is 2 x L1 Check	Default Value:

		• 100 Numeric Range: Minimum Value: 1 Maximum Value: 300
3.1.2.3 Memory Overclocking Menu		
3.1.2.3.1 Memory Profile:		
3.1.2.3.2 tCK [MHz]		
3.1.2.3.3 tCL		
3.1.2.3.4 tRCD/tRP		
3.1.2.3.5 tRAS		
3.1.2.3.6 tCWL		
3.1.2.3.7 tFAW		
3.1.2.3.8 tREFI		
3.1.2.3.9 tRFC		
3.1.2.3.10 tRRD		
3.1.2.3.11 tRTP		
3.1.2.3.12 tWR		
3.1.2.3.13 tWTR		
3.1.2.3.14 tRFCpb		
3.1.2.3.15 tRFC2		
3.1.2.3.16 tRFC4		
3.1.2.3.17 tRRD_L		
3.1.2.3.18 tRRD_S		
3.1.2.3.19 tWTR_L		
3.1.2.3.20 tWTR_S		
3.1.2.3.21 tCCD_L		
3.1.2.3.22 NMode		
3.1.2.3.23 VDD [mV]		

3.1.2.3.24 VDDQ [mV]		
3.1.2.3.25 VPP [mV]		
3.1.2.3.26 Realtime Memory Timing	Enable/Disable realtime memory timings. When enabled, the system will allow performing realtime memory timing changes after MRC_DONE.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.3.27 Memory profile	Select DIMM timing profile. The below values start with the currently running values and don't auto populate.	Possible Choices: • Default SPD Profile • Custom Profile • XMP Profile 1 • XMP Profile 2 • XMP Profile 3 • XMP User Profile 4 • XMP User Profile 5 Default Value: • Default SPD Profile
3.1.2.3.28 ***DMB FAILED*** - Forced to Standard Profile, DMB disabled		
3.1.2.3.29 Dynamic Memory Boost	Enable/Disable Dynamic Memory Boost feature, Allows automatic switching between default SPD Profile frequency and selected XMP profile frequency. Only valid if an XMP Profile is selected.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.3.30 Realtime Memory Frequency	Enable/Disable Realtime Memory Frequency feature, Allows manual switching in runtime between default SPD Profile frequency and selected XMP profile frequency. Only valid if an XMP Profile is selected.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.3.31 OCSafeMode	OverClocking Safe Mode: When enabled, memory training uses less aggressive timing and algoes	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.2.3.32 Memory Reference Clock	100MHz, 133MHz.	Possible Choices: • 133 • 100 Default Value: • 133
3.1.2.3.33 Memory Ratio	0 = Auto, or the frequency will equal ratio times reference clock. Set to 0 (Auto) to recalculate memory timings listed below.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 128
3.1.2.3.34 tCL	CAS Latency, 0: AUTO, max: 31	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.35 tRCD/tRP	RAS to CAS delay time and Row Precharge delay time, 0: AUTO, max: 63	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.36 tRAS	RAS Active Time, 0: AUTO, max: 64	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 65535
3.1.2.3.37 tCWL	Min CAS Write Latency Delay Time, 0: AUTO, max: 20	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.38 tFAW	Min Four Activate Window Delay Time, 0: AUTO, max: 63	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.3.39 tREFI	Refresh Interval, 0: AUTO, max: 65535	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.3.40 tRFC	Min Refresh Recovery Delay Time, 0: AUTO, max: 1023	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.3.41 tRRD	Min Row Active to Row Active Delay Time, 0: AUTO, max: 31	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
3.1.2.3.42 tRTP	Min Internal Read to Precharge Command Delay Time, 0: AUTO, max: 15. DDR4 legal values: 5, 6, 7, 8, 9, 10, 12	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.43 tWR	Min Write Recovery Time, 0: AUTO	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.44 tWTR	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 28	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.45 tRFCpb	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 15000	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15000
3.1.2.3.46 tRFC2	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 15000	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 15000
3.1.2.3.47 tRFC4	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 15000	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15000
3.1.2.3.48 tRRD_L	Min Internal Write to Read Command Delay Time, 0: AUTO, max:80	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.49 tRRD_S	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 80	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.50 tWTR_L	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 127	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.51 tCCD_L	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 80	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
3.1.2.3.52 tWTR_S	Min Internal Write to Read Command Delay Time, 0: AUTO, max: 50	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.3.53 NMode	System command rate, range 0-2, 0 means auto, 1 = 1N, 2 = 2N	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2
3.1.2.3.54 Memory Voltage	Memory Voltage Override (Vdd) at DRAM Side. 0 = no override	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
3.1.2.3.55 Memory Voltage VDDQ	Memory Voltage Override (Vddq) at DRAM Side. 0 = no override	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 2000
3.1.2.3.56 Memory Voltage VPP	Memory Voltage Override (Vpp) at DRAM Side. 0 = no override	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 2300
3.1.2.3.57 VDD		
3.1.2.4 Memory RC Version		
3.1.2.5 Memory Frequency	Displays the Frequency of Memory	
3.1.2.6 tCL-tRCD-tRP-tRAS	Memory Timings	
3.1.2.7 MC 0 Ch 0 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.8 Size	Memory Size in the Slot.	
3.1.2.9 Number of Ranks	Number of Ranks in the slot	
3.1.2.10 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.11 MC 0 Ch 0 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.12 Size	Memory Size in the Slot.	
3.1.2.13 Number of Ranks	Number of Ranks in the slot	
3.1.2.14 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.15 MC 0 Ch 1 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.16 Size	Memory Size in the Slot.	
3.1.2.17 Number of Ranks	Number of Ranks in the slot	
3.1.2.18 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.19 MC 0 Ch 1 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.20 Size	Memory Size in the Slot.	
3.1.2.21 Number of Ranks	Number of Ranks in the slot	
3.1.2.22 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.23 MC 0 Ch 2 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.24 Size	Memory Size in the Slot.	
3.1.2.25 Number of Ranks	Number of Ranks in the slot	

3.1.2.26 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.27 MC 0 Ch 2 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.28 Size	Memory Size in the Slot.	
3.1.2.29 Number of Ranks	Number of Ranks in the slot	
3.1.2.30 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.31 MC 0 Ch 3 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.32 Size	Memory Size in the Slot.	
3.1.2.33 Number of Ranks	Number of Ranks in the slot	
3.1.2.34 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.35 MC 0 Ch 3 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.36 Size	Memory Size in the Slot.	
3.1.2.37 Number of Ranks	Number of Ranks in the slot	
3.1.2.38 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.39 MC 1 Ch 0 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.40 Size	Memory Size in the Slot.	
3.1.2.41 Number of Ranks	Number of Ranks in the slot	
3.1.2.42 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.43 MC 1 Ch 0 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.44 Size	Memory Size in the Slot.	
3.1.2.45 Number of Ranks	Number of Ranks in the slot	
3.1.2.46 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.47 MC 1 Ch 1 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.48 Size	Memory Size in the Slot.	
3.1.2.49 Number of Ranks	Number of Ranks in the slot	

3.1.2.50 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.51 MC 1 Ch 1 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.52 Size	Memory Size in the Slot.	
3.1.2.53 Number of Ranks	Number of Ranks in the slot	
3.1.2.54 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.55 MC 1 Ch 2 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.56 Size	Memory Size in the Slot.	
3.1.2.57 Number of Ranks	Number of Ranks in the slot	
3.1.2.58 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.59 MC 1 Ch 2 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.60 Size	Memory Size in the Slot.	
3.1.2.61 Number of Ranks	Number of Ranks in the slot	
3.1.2.62 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.63 MC 1 Ch 3 DIMM 0	Controller Channel Slot Subtitle	
3.1.2.64 Size	Memory Size in the Slot.	
3.1.2.65 Number of Ranks	Number of Ranks in the slot	
3.1.2.66 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.67 MC 1 Ch 3 DIMM 1	Controller Channel Slot Subtitle	
3.1.2.68 Size	Memory Size in the Slot.	
3.1.2.69 Number of Ranks	Number of Ranks in the slot	
3.1.2.70 Manufacturer	DIMM / DRAM Manufacturer Value	
3.1.2.71 Debug Value		Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.1.2.72 MRC ULT Safe Config	MRC ULT Safe Config for PO	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.73 LPDDR DqDqs Re-Training	Disable/Enable LPDDR DqDqs Re Training	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.74 Safe Mode Support	Safe Mode enable support. Option will be used for changes/WAs that may affect an stable MRC	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.75 Memory Test on Warm Boot	Enable Or Disable Base Memory Test Run on Warm Boot	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.76 Maximum Memory Frequency	Maximum Memory Frequency Selections in Mhz.	Possible Choices: • Auto • 1067 • 1333 • 1400 • 1600 • 1800 • 1867 • 2000 • 2133

		• 2200 • 2400 • 2600 • 2667 • 2800 • 2933 • 3000 • 3200 • 3467 • 3600 • 3733 • 4000 • 4200 • 4267 • 4400 • 4600 • 4800 • 5000 • 5200 • 5400 • 5600 • 5800 • 6000 • 6200 • 6400 • 6600 • 6800 • 7000 • 7200 • 7400 • 7600 • 7800 • 8000 • 8200 • 8400 • 8600 • 8800 • 9000 • 9200 • 9400 • 9600 • 9800 • 10000 • 12800 Default Value: • Auto
3.1.2.77 LP5 Bank Mode		Possible Choices: • Auto • LP5 8 Bank Mode

		• LP5 16 Bank Mode • LP5 BG Mode Default Value: • Auto
3.1.2.78 DDR5 DFE Gain		Possible Choices: • 0 • 1 • 2 • 3 • -1 • -2 • -3 Default Value: • 0
3.1.2.79 Frequency Limit for Mixed 2DPC DDR4	Override the reduced speed in mixed 2DPC config or non-POR 2DPC config. 0=Auto, otherwise speed in MT/s	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.80 Frequency Limit for Mixed 2DPC DDR5 1 Rank 8GB and 8GB	Override the reduced speed in mixed 2DPC config or non-POR 2DPC config. 0=Auto, otherwise speed in MT/s	Default Value: • 2000 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.81 Frequency Limit for Mixed 2DPC DDR5 1 Rank 16GB and 16GB	Override the reduced speed in mixed 2DPC config or non-POR 2DPC config. 0=Auto, otherwise speed in MT/s	Default Value: • 2000 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.1.2.82 Frequency Limit for Mixed 2DPC DDR5 1 Rank 8GB and 16GB	Override the reduced speed in mixed 2DPC config or non-POR 2DPC config. 0=Auto, otherwise speed in MT/s	Default Value: • 2000 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.83 Frequency Limit for Mixed 2DPC DDR5 2 Rank	Override the reduced speed in mixed 2DPC config or non-POR 2DPC config. 0=Auto, otherwise speed in MT/s	Default Value: • 2000 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.84 LCT Cmd Eye Width	LCT Cmd Eye Width 0= Auto	Default Value: • 96 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.85 HOB Buffer Size	Size to set HOB Buffer	Possible Choices: • Auto • 1B • 1KB • Max (assuming 63KB total HOB size) Default Value: • Auto
3.1.2.86 ECC Support	Enable/disable DDR Ecc Support	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.1.2.87 Error Injection Address Match	Address to match against for ECC error injection	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.1.2.88 Error Injection Mask	Mask to match against for ECC error injection	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.1.2.89 Error Injection Insertion Count	Number of transactions between ECC error injection	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.1.2.90 Max TOLUD	Maximum Value of TOLUD. Dynamic assignment would adjust TOLUD automatically based on largest MMIO length of installed graphic controller	Possible Choices: • Dynamic • 1 GB • 1.25 GB • 1.5 GB • 1.75 GB • 2 GB • 2.25 GB • 2.5 GB • 2.75 GB • 3 GB • 3.25 GB • 3.5 GB Default Value: • Dynamic
3.1.2.91 SA GV	System Agent Geyserville. Can disable, fix to a specific point, or	

	enable frequency switching.	Possible Choices: • Disabled • Enabled • Fixed to 1st Point • Fixed to 2nd Point • Fixed to 3rd Point • Fixed to 4th Point Default Value: • Enabled
3.1.2.92 Gear Ratio	Gear ratio when SAGV is disabled. 0-Auto, 1-G1, 2-G2, 4-G4	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4
3.1.2.93 First Point Frequency	Specify the frequency for the given point. 0 - MRC auto, Else a specific frequency as an integer: 1333	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.94 First Point Gear	Gear ratio for this SAGV point. 0-Auto, 1-G1, 2-G2, 4-G4	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4
3.1.2.95 Second Point Frequency	Specify the frequency for the given point. 0 - MRC auto, Else a specific frequency as an integer: 1333	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.1.2.96 Second Point Gear	Gear ratio for this SAGV point. 0-Auto, 1-G1, 2-G2, 4-G4	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4
3.1.2.97 Third Point Frequency	Specify the frequency for the given point. 0 - MRC auto, Else a specific frequency as an integer: 1333	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.98 Third Point Gear	Gear ratio for this SAGV point. 0-Auto, 1-G1, 2-G2, 4-G4	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4
3.1.2.99 Fourth Point Frequency	Specify the frequency for the given point. 0 - MRC auto, Else a specific frequency as an integer: 1333	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.2.100 Fourth Point Gear	Gear ratio for this SAGV point. 0-Auto, 1-G1, 2-G2, 4-G4	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4

3.1.2.101 SAGV Switch Factor IA	SAGV Switch Factor of IA Load Percentage To Trigger Switching Up And Down	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 50
3.1.2.102 SAGV Switch Factor GT	SAGV Switch Factor of GT Load Percentage To Trigger Switching Up And Down	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 50
3.1.2.103 SAGV Switch Factor IO	SAGV Switch Factor of IO Load Percentage To Trigger Switching Up And Down	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 50
3.1.2.104 SAGV Switch Factor Stall	SAGV Switch Factor of IA/GT Stall Percentage To Trigger Switching Up And Down	Default Value: • 30 Numeric Range: Minimum Value: 1 Maximum Value: 50
3.1.2.105 Threshold For Switch Up	Duration In MS Of High Activity After Which SAGV Will Switch Up	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 50

3.1.2.106 Threshold For Switch Down	Duration In MS Of Low Activity After Which SAGV Will Switch Down	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 50
3.1.2.107 Retrain on Fast Fail	Restart MRC in Cold mode if SW MemTest fails during Fast flow. Default = Enabled	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.108 DDR4_1DPC	DDR4 1DPC performance feature for 2R DIMMs. Can be enabled on DIMM0 or DIMM1 only, or on both	Possible Choices: • Disabled • Enabled on DIMM0 only • Enabled on DIMM1 only • Enabled Default Value: • Enabled
3.1.2.109 Row Hammer Mode	Row Hammer Prevention Mode. RFM will fall back to pTRR if not available	Possible Choices: • Disabled • RFM • pTRR Default Value: • RFM
3.1.2.110 RH LFSR0 Mask	LFSR0 mask for RH pTRR	Possible Choices: • 1/2^1 • 1/2^2 • 1/2^3 • 1/2^4 • 1/2^5 • 1/2^6 • 1/2^7 • 1/2^8

		• 1/2^9 • 1/2^10 • 1/2^11 • 1/2^12 • 1/2^13 • 1/2^14 • 1/2^15 Default Value: • 1/2^11
3.1.2.111 RH LFSR1 Mask	LFSR1 mask for RH pTRR	Possible Choices: • 1/2^1 • 1/2^2 • 1/2^3 • 1/2^4 • 1/2^5 • 1/2^6 • 1/2^7 • 1/2^8 • 1/2^9 • 1/2^10 • 1/2^11 • 1/2^12 • 1/2^13 • 1/2^14 • 1/2^15 Default Value: • 1/2^11
3.1.2.112 MC Refresh Rate	Select refresh rate on the MC	Possible Choices: • NORMAL Refresh • 1x Refresh • 2x Refresh • 4x Refresh Default Value: • NORMAL Refresh
3.1.2.113 Refresh Watermarks	Sets Refresh Panic Watermark and Refresh High-Priority Watermark to HIGH or LOW values	Possible Choices: • Low • High Default Value: • High

3.1.2.114 LPDDR ODT RttWr	Initial RttWr ODT override for LP4/5 in Ohms. Range 0x01 - 0xFF, default 0 = AUTO	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.115 LPDDR ODT RttCa	Initial RttCa ODT override for LP4/5 in Ohms. Range 0x01 - 0xFF, default 0 = AUTO	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.116 Exit On Failure (MRC)	Exit On Failure for MRC training steps	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.117 New Features 1 - MRC	Enabling/Disabling Generic New Features 1	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.118 New Features 2 - MRC	Enabling/Disabling Generic New Features 2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.119 Ch Hash Override	Override Channel Hash settings	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.1.2.120 Ch Hash Support	Enable/Disable Channel Hash Support. NOTE: ONLY if Memory interleaved Mode	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.121 Ch Hash Mask	Set the BIT(s) to be included in the XOR function. NOTE BIT mask corresponds to BITS [19:6}	Default Value: • 2096 Numeric Range: Minimum Value: 1 Maximum Value: 16383
3.1.2.122 Ch Hash Interleaved Bit	Select the BIT to be used for Channel Interleaved mode. NOTE: BIT7 will interlave the channels at a 2 cacheline granularity, BIT8 at 4 and BIT9 at 8	Possible Choices: • BIT6 • BIT7 • BIT8 • BIT9 • BIT10 • BIT11 • BIT12 • BIT13 Default Value: • BIT8
3.1.2.123 Extended Bank Hashing	Enable/disable Extended Bank Hashing.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.124 Per Bank Refresh	Enables and Disables the per bank refresh. This only impacts	

	memory technologies that support PBR: LPDDR4, LPDDR5 and DDR5	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.125 VC1 Read Metering	Enable/Disable VC1 Read Metering Feature (RdMeter)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.126 Strong Weak Leaker	Value for StrongWkLeaker	Default Value: • 7 Numeric Range: Minimum Value: 1 Maximum Value: 7
3.1.2.127 Power Down Mode	CKE Power Down Mode Control	Possible Choices: • Auto • No Power Down • APD • PPD-DLLoff Default Value: • Auto
3.1.2.128 Pwr Down Idle Timer	The minimum value should = to the worst case Roundtrip delay + Burst_Length. 0 means AUTO: 64 for ULX/ULT, 128 for DT/Halo	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.2.129 Page Close Idle Timeout	Page Close Idle Timeout Control	Possible Choices: • Enabled

		• Disabled Default Value: • Enabled
3.1.2.130 Memory Scrambler	Enable/Disable Memory Scrambler support.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.131 Force ColdReset	Force ColdReset OR Choose MrcColdBoot mode, when Coldboot is required during MRC execution. Note: If ME 5.0MB is present, ForceColdReset is required!	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.2.132 Controller 0, Channel 0 Control	Controller 0, Channel 0 Control - Enable or Disable Controller 0, Channel 0.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.133 Controller 0, Channel 1 Control	Controller 0, Channel 1 Control - Enable or Disable Controller 0, Channel 1.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.134 Controller 0, Channel 2 Control	Controller 0, Channel 2 Control - Enable or Disable Controller 0, Channel 2.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.135 Controller 0, Channel 3 Control	Controller 0, Channel 3 Control	

	- Enable or Disable Controller 0, Channel 3.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.136 Controller 1, Channel 0 Control	Controller 1, Channel 0 Control - Enable or Disable Controller 1, Channel 0.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.137 Controller 1, Channel 1 Control	Controller 1, Channel 1 Control - Enable or Disable Controller 1, Channel 1.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.138 Controller 1, Channel 2 Control	Controller 1, Channel 2 Control - Enable or Disable Controller 1, Channel 2.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.139 Controller 1, Channel 3 Control	Controller 1, Channel 3 Control - Enable or Disable Controller 1, Channel 3.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.2.140 Force Single Rank	When enabled, only Rank 0 will be used in each DIMM	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.141 In-Band ECC Support	Enable/Disable In-Band ECC. Will be enabled if memory has symmetric configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.142 In-Band ECC Operation Mode	0: Functional Mode protects requests based on the address range, 1: Makes all requests non protected and ignore range checks, 2:Makes all requests protected and ignore range checks	Possible Choices: • 0 • 1 • 2 Default Value: • 2
3.1.2.143 IBECC Protect Region 0	Enable/Disable In-Band ECC for Region 0	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.144 Protected Region 0 BASE	Set the base address for protected region 0 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.145 Protected Region 0 MASK	Set the mask for protected region 0	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.146 IBECC Protect Region 1	Enable/Disable In-Band ECC for	

	Region 1	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.147 Protected Region 1 BASE	Set the base address for protected region 1 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.148 Protected Region 1 MASK	Set the mask for protected region 1	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.149 IBECC Protect Region 2	Enable/Disable In-Band ECC for Region 2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.150 Protected Region 2 BASE	Set the base address for protected region 2 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.151 Protected Region 2 MASK	Set the mask for protected region 2	Default Value: • 67108832

		Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.152 IBECC Protect Region 3	Enable/Disable In-Band ECC for Region 3	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.153 Protected Region 3 BASE	Set the base address for protected region 3 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.154 Protected Region 3 MASK	Set the mask for protected region 3	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.155 IBECC Protect Region 4	Enable/Disable In-Band ECC for Region 4	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.156 Protected Region 4 BASE	Set the base address for protected region 4 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 67108863
3.1.2.157 Protected Region 4 MASK	Set the mask for protected region 4	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.158 IBECC Protect Region 5	Enable/Disable In-Band ECC for Region 5	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.159 Protected Region 5 BASE	Set the base address for protected region 5 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.160 Protected Region 5 MASK	Set the mask for protected region 5	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.161 IBECC Protect Region 6	Enable/Disable In-Band ECC for Region 6	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.162 Protected Region 6 BASE	Set the base address for protected region 6 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.163 Protected Region 6 MASK	Set the mask for protected region 6	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.164 IBECC Protect Region 7	Enable/Disable In-Band ECC for Region 7	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.165 Protected Region 7 BASE	Set the base address for protected region 7 (Per IBECC instance)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 67108863
3.1.2.166 Protected Region 7 MASK	Set the mask for protected region 7	Default Value: • 67108832 Numeric Range: Minimum Value: 1 Maximum Value: 67108863
3.1.2.167 IBECC Error Injection Control	Enables IBECC Error Injection	

		Possible Choices: • No Error Injection • Inject Correctable Error Address match • Inject Correctable Error on insertion counter • Inject Uncorrectable Error Address match • Inject Uncorrectable Error on insertion counter Default Value: • No Error Injection
3.1.2.168 Error Injection Address Match	Address to match against for ECC error injection	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967232
3.1.2.169 Error Injection Mask	Mask to match against for ECC error injection	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967232
3.1.2.170 Error Injection Insertion Count	Number of transactions between ECC error injection	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.1.2.171 Memory Remap	Enable/Disable Memory Remap above 4GB	Possible Choices: • Enabled • Disabled Default Value:

		• Enabled
3.1.2.172 Time Measure	Enable/Disable printing of the time it takes to execute MRC.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.173 CsPiStartHighinEct	Cs Pi Start With High Value in Ect.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.174 DisableFGRAndPBRWA	Disable FGR And PBR WA.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.175 Fast Boot	Enable/Disable fast path thru the MRC	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.2.176 Rank Margin Tool Per Task	Enables/Disables RMT running at every major training step	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.177 Training Tracing	Enables/Disables printing of the current trained state at every major training step.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.2.178 Lpddr Mem WL Set	Only applicable to LPDDR, Memory Write Latency Set selection (A is default, B will be used if memory devices support it)	Possible Choices: • Set A • Set B Default Value: • Set B
3.1.2.179 BDAT Memory Test Type	Indicates the type of Memory Training data to populate into the BDAT ACPI table.	Possible Choices: • Rank Margin Tool Rank • Rank Margin Tool Bit • Margin 2D Default Value: • Rank Margin Tool Rank
3.1.2.180 Rank Margin Tool Loop Count	Specifies the Loop Count to be used during Rank Margin Tool Testing. 0 - AUTO	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 32
3.1.2.181 ECC DFT	Enable/Disable ECC DFT feature	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.182 Write0	Write0 feature for LP5/DDR5	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.2.183 Periodic DCC	Enable / Disable Periodic DCC	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.2.184 LPMode	Control LPMode feature	Possible Choices: • Auto • Enabled • Disabled Default Value: • Auto
3.1.2.185 PPR Enable	PPR permanently repairs failed rows (if possible).	Possible Choices: • Disabled • Hard PPR Default Value: • Disabled
3.1.2.186 SAM Overlaoding	Enable: copy the sagv frequency point. Disable: not copy.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.3 Graphics Configuration		
3.1.3.1 Graphics Turbo IMON Current	Graphics turbo IMON current values supported (14-31)	Default Value: • 31 Numeric Range: Minimum Value: 14 Maximum Value: 31
3.1.3.2 Skip Scaning of External Gfx Card	If Enable, it will not scan for External Gfx Card on PEG and	Possible Choices:

	PCH PCIE Ports	• Disabled • Enabled Default Value: • Disabled
3.1.3.3 Primary Display	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select HG for Hybrid Gfx.	Possible Choices: • Auto • IGFX • PEG Slot • PCH PCI • HG Default Value: • Auto
3.1.3.4 HG Support	HG Support on PEG Port	Possible Choices: • PEG10 • PEG60 • PEG62 Default Value: • PEG10
3.1.3.5 Select PCIE Card	Select the card used on the platform Auto : Skip GPIO based Power Enable to dGPU Elk Creek 4: DGPU Power Enable = ActiveLow PEG Eval : DGPU Power Enable = ActiveHigh	Possible Choices: • Auto • Elk Creek 4 • PEG Eval Default Value: • Auto
3.1.3.6 HG Delay After Power Enable	Delay in milli-seconds after power enable	Default Value: • 300 Numeric Range: Minimum Value: 0 Maximum Value: 1000
3.1.3.7 HG Delay After Hold Reset	Delay in milli-seconds after hold reset	

		Default Value: • 100 Numeric Range: Minimum Value: 0 Maximum Value: 1000
3.1.3.8 Internal Graphics	Keep IGFX enabled based on the setup options.	Possible Choices: • Auto • Disabled • Enabled Default Value: • Auto
3.1.3.9 GTT Size	Select the GTT Size	Possible Choices: • 2MB • 4MB • 8MB Default Value: • 8MB
3.1.3.10 Aperture Size	Select the Aperture Size Note : Above 4GB MMIO BIOS assignment is automatically enabled when selecting > 2048MB aperture. To use this feature, please disable CSM Support.	Possible Choices: • 128MB • 256MB • 512MB • 1024MB Default Value: • 256MB
3.1.3.11 PSMI SUPPORT	PSMI Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.3.12 PSMI Region Size	Select the PSMI Region Size : Range from 32MB to 1024MB	Possible Choices: • 32MB

		• 288MB • 544MB • 800MB • 1024MB Default Value: • 32MB
3.1.3.13 DVMT Pre-Allocated	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.	Possible Choices: • 0M • 32M • 64M • 96M • 128M • 160M • 4M • 8M • 12M • 16M • 20M • 24M • 28M • 32M/F7 • 36M • 40M • 44M • 48M • 52M • 56M • 60M Default Value: • 60M
3.1.3.14 DVMT Total Gfx Mem	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.	Possible Choices: • 128M • 256M • MAX Default Value: • 256M
3.1.3.15 Intel Graphics Pei Display Peim	Enable/Disable Pei (Early) Display	Possible Choices: • Enabled • Disabled

		Default Value: • Disabled
3.1.3.16 ALS Support	Valid only for ACPI. Legacy = ALS Support through the IGFX INT10 function. ACPI = ALS support through an ACPI ALS driver.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.3.17 VDD Enable	Enable/Disable forcing of VDD in the BIOS	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.3.18 Configure GT for use	Enable/Disable GT configuration in BIOS	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.3.19 RC1p Support	Enable/Disable RC1p support. If RC1p is enabled, send a RC1p frequency request to PMA based other conditions being met	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.3.20 PAVP Enable	Enable/Disable PAVP	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.3.21 Cdynmax Clamping Enable	Enable/Disable Cdynmax Clamping	Possible Choices: • Enabled

		• Disabled Default Value: • Disabled
3.1.3.22 Cd Clock Frequency	Select the highest Cd Clock frequency supported by the platform	Possible Choices: • 192 Mhz • 312 Mhz • 324 Mhz • 552 Mhz • 648 Mhz • 192 Mhz • 307.2 Mhz • 556.8 Mhz • 652.8 Mhz • Max CdClock freq based on Reference Clk Default Value: • Max CdClock freq based on Reference Clk
3.1.3.23 VBT Select	Select VBT for GOP Driver Select Vbt to MIPI if any of the Display has MIPI	Possible Choices: • eDP • MIPI • ADLP/RPLP RVP DDR5 • ADLP RVP DDR4 • RPLP CRB Default Value: • eDP
3.1.3.24 Enable Display Audio Link in Pre-OS	Enable : Display Audio Link will be enabled in Pre-OS. Disabled : Display Audio Link will be disabled in Pre-OS.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.3.25 IUER Button Enable	Enable/Disable IUER Button Functionality	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.1.3.26 LCD Control		
3.1.3.26.1 Primary IGFX Boot Display	Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display	Possible Choices: • VBIOS Default • EFP • LFP • EFP3 • EFP2 • EFP4 Default Value: • VBIOS Default
3.1.3.26.2 Secondary IGFX Boot Display	Select Secondary Display Device	Possible Choices: • Disabled • EFP • EFP3 • EFP2 • EFP4 Default Value: • Disabled
3.1.3.26.3 LCD Panel Type	Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.	Possible Choices: • VBIOS Default • 640x480 LVDS • 800x600 LVDS • 1024x768 LVDS • 1280x1024 LVDS • 1400x1050 LVDS1 • 1400x1050 LVDS2 • 1600x1200 LVDS • 1280x768 LVDS • 1680x1050 LVDS • 1920x1200 LVDS • 1600x900 LVDS • 1280x800 LVDS • 1280x600 LVDS • 2048x1536 LVDS • 1366x768 LVDS Default Value: • VBIOS Default

3.1.3.26.4 Panel Scaling	Select the LCD panel scaling option used by the Internal Graphics Device.	Possible Choices: • Auto • Off • Force Scaling Default Value: • Auto
3.1.3.26.5 Backlight Control	Back Light Control Setting	Possible Choices: • PWM Inverted • PWM Normal Default Value: • PWM Normal
3.1.3.26.6 Active LFP	Select the Active LFP Configuration. No LVDS:VBIOS does not enable LVDS. Int-LVDS:VBIOS enables LVDS driver by Integrated encoder. SDVO LVDS:VBIOS enables LVDS driver by SDVO encoder. eDP Port-A:LFP Driven by Int-DisplayPort encoder from Port-A. eDP Port-D:LFP Driven by Int-DisplayPort encoder from Port-D(through PCH).	Possible Choices: • No eDP • eDP Port-A Default Value: • eDP Port-A
3.1.3.26.7 Panel Color Depth	Select the LFP Panel Color Depth	Possible Choices: • 18 Bit • 24 Bit Default Value: • 18 Bit
3.1.3.26.8 Backlight Brightness	Set VBIOS Brightness. Range : 0-255.	Default Value: • 255 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
3.1.3.27 Intel(R) Ultrabook Event Support		
3.1.3.27.1 IUER Slate Enable	Enable/Disable IUER Slate Functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.3.27.2 Slate Mode boot value	Choose Slate or Laptop as boot mode.	Possible Choices: • Slate Mode • Laptop Mode Default Value: • Laptop Mode
3.1.3.27.3 Slate Mode on S3 and S4 resume	Keep it the same as Sx entry or toggle it.	Possible Choices: • No change • Toggle Default Value: • No change
3.1.3.27.4 IUER Dock Enable	Enable/Disable IUER Dock Functionality	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.3.27.5 Dock Mode boot value	Choose Docked or Undocked as boot mode.	Possible Choices: • Undocked • Docked Default Value: • Undocked
3.1.3.27.6 Dock Mode upon S3 and	Keep it the same as Sx entry or	

S4 resume	toggle it.	Possible Choices: • No change • Toggle Default Value: • No change
3.1.4 DMI/OPI Configuration		
3.1.4.1 DMI	DMI Link and Speed Information	
3.1.4.2 DMI Max Link Speed	Set DMI Speed Gen1/Gen2/Gen3	Possible Choices: • Gen1 • Gen2 • Gen3 • Gen4 Default Value: • Gen4
3.1.4.3 CDR Relock for CPU DMI	Enable/Disable CDR Relock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.4.4 DMI Gen3 Eq Phase 2	Perform Gen3 Equalization Phase 2	Possible Choices: • Disabled • Enabled • Auto Default Value: • Auto
3.1.4.5 DMI Gen3 Eq Phase 3 Method	Select Method for Gen3 Equalization Phase 3	Possible Choices: • Auto • Adaptive Hardware Equalization • Adaptive Software Equalization • Static Equalization • Disabled

		Default Value: • Auto
3.1.4.6 Program Static Phase1 Eq	Program Phase1 Presets/CTLEp	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.4.7 Gen3 Root Port Preset value for each Lane		
3.1.4.7.1 Lane 0	Value for Lane 0	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.2 Lane 1	Value for Lane 1	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.3 Lane 2	Value for Lane 2	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.4 Lane 3	Value for Lane 3	Default Value: • 4

		Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.5 Lane 4	Value for Lane 4	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.6 Lane 5	Value for Lane 5	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.7 Lane 6	Value for Lane 6	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.7.8 Lane 7	Value for Lane 7	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8 Gen3 Endpoint Preset value for each Lane		
3.1.4.8.1 Lane 0	Value for Lane 0	

		Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.2 Lane 1	Value for Lane 1	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.3 Lane 2	Value for Lane 2	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.4 Lane 3	Value for Lane 3	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.5 Lane 4	Value for Lane 4	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.6 Lane 5	Value for Lane 5	

		Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.7 Lane 6	Value for Lane 6	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.8.8 Lane 7	Value for Lane 7	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 9
3.1.4.9 Gen3 Endpoint Hint value for each Lane		
3.1.4.9.1 Lane 0	Value for Lane 0	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.9.2 Lane 1	Value for Lane 1	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6

3.1.4.9.3 Lane 2	Value for Lane 2	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.9.4 Lane 3	Value for Lane 3	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.9.5 Lane 4	Value for Lane 4	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.9.6 Lane 5	Value for Lane 5	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.9.7 Lane 6	Value for Lane 6	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6

3.1.4.9.8 Lane 7	Value for Lane 7	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.4.10 Gen3 RxCTLE Control		
3.1.4.10.1 Bundle0	Gen3 RxCTLE setting for Bundle0 (Lane0, Lane1)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.4.10.2 Bundle1	Gen3 RxCTLE setting for Bundle1 (Lane2, Lane3)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.4.10.3 Bundle2	Gen3 RxCTLE setting for Bundle2 (Lane4, Lane5)	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.4.10.4 Bundle3	Gen3 RxCTLE setting for Bundle3 (Lane6, Lane7)	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 15
3.1.4.11 DMI De-emphasis Control	Configure the De-emphasis control on DMI	Possible Choices: • -6 dB • -3.5 dB Default Value: • -3.5 dB
3.1.4.12 DMI Gen3 ASPM	DMI Gen3 ASPM Support	Possible Choices: • Disabled • Auto • ASPM L0s • ASPM L1 • ASPM L0sL1 Default Value: • ASPM L1
3.1.4.13 DMI ASPM	DMI ASPM Support	Possible Choices: • Disabled • Auto • ASPM L0s • ASPM L1 • ASPM L0sL1 Default Value: • ASPM L1
3.1.4.14 DMI Gen3 L1 Exit Latency		Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.4.15 New FOM for CPU DMI	Enable/Disable New FOM	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.4.16 DMI Advanced Menu		
3.1.4.16.1 DMI Gen4 EQ Mode		Possible Choices: • Disabled • Fixed EQ • HW EQ Default Value: • HW EQ
3.1.4.16.2 DMI Gen4 RTCO Cpre Lane0	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.3 DMI Gen4 RTCO Cpost Lane0	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.4 DMI Gen4 RTCO Cpre Lane1	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 14 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.5 DMI Gen4 RTCO Cpost Lane1	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.6 DMI Gen4 RTCO Cpre Lane2	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.7 DMI Gen4 RTCO Cpost Lane2	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 6 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.8 DMI Gen4 RTCO Cpre Lane3	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.9 DMI Gen4 RTCO Cpost Lane3	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.10 DMI Gen4 RTCO Cpre Lane4	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.11 DMI Gen4 RTCO Cpost Lane4	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.12 DMI Gen4 RTCO Cpre Lane5	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.13 DMI Gen4 RTCO Cpost Lane5	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.14 DMI Gen4 RTCO Cpre Lane6	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.15 DMI Gen4 RTCO Cpost Lane6	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.16 DMI Gen4 RTCO Cpost Lane7	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.17 DMI Gen4 RTCO Cpre Lane7	DMI Gen4 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.18 DMI Gen3 RTCO Cpre Lane0	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.19 DMI Gen3 RTCO Cpost Lane0	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.20 DMI Gen3 RTCO Cpre Lane1	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.21 DMI Gen3 RTCO Cpost Lane1	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.22 DMI Gen3 RTCO Cpre Lane2	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.23 DMI Gen3 RTCO Cpost Lane2	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.24 DMI Gen3 RTCO Cpre Lane3	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.25 DMI Gen3 RTCO Cpost Lane3	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.26 DMI Gen3 RTCO Cpre Lane4	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.27 DMI Gen3 RTCO Cpost Lane4	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.28 DMI Gen3 RTCO Cpre Lane5	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.29 DMI Gen3 RTCO Cpost Lane5	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.30 DMI Gen3 RTCO Cpre Lane6	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.31 DMI Gen3 RTCO Cpost Lane6	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.32 DMI Gen3 RTCO Cpre Lane7	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.4.16.33 DMI Gen3 RTCO Cpost Lane7	DMI Gen3 Lane Transmitter Pre/Post-Cursor Coefficient values.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.1.5 TCSS setup menu		
3.1.5.1 TCSS Configuration		
3.1.5.2 IOM FW version: N/A		
3.1.5.3 PHY FW version: N/A		
3.1.5.4 TBT IMR Status: N/A		
3.1.5.5 TBT FW version: N/A		
3.1.5.6 Tc CState deepest stage: N/A		
3.1.5.7 TCSS xHCI Support	Enable/Disable TCSS xHCI	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.1.5.8 SA TCSS USB Configuration		
3.1.5.8.1 USB CONNECT OVERRIDE	Option will allow VCCSTTPC to turn off even when there is a connection for a USB3 port.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.8.2 TCSS xDCI Support	Enable/Disable TCSS xDCI	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.8.3 TCSS CPU USB PDO Programming	Select 'Enabled' if Port Disable Override functionality is used.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.8.4 TCSS CPU USB Port Disable Override	Selectively Enable/Disable the corresponding USB port from reporting a Device Connection to the controller.	Possible Choices: • Disabled • Select Per-Pin Default Value: • Disabled
3.1.5.8.5 TCSS CPU USB SS Physical Connector #0	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.1.5.8.6 TCSS CPU USB SS Physical Connector #1	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.8.7 TCSS CPU USB SS Physical Connector #2	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.8.8 TCSS CPU USB SS Physical Connector #3	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.9 ITBT PCIE0 Root Port	Enable/Disable ITBT PCIE ROOT	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.10 Type C Port 1 Conv to TypeA	Enable / Disable Type C Port 1 Convert to TypeA	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.11 ITBT PCIE1 Root Port	Enable/Disable ITBT PCIE ROOT	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.1.5.12 Type C Port 2 Conv to TypeA	Enable / Disable Type C Port 2 Convert to TypeA	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.13 ITBT PCIE2 Root Port	Enable/Disable ITBT PCIE ROOT	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.14 Type C Port 3 Conv to TypeA	Enable / Disable Type C Port 3 Convert to TypeA	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.15 ITBT PCIE3 Root Port	Enable/Disable ITBT PCIE ROOT	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.16 Type C Port 4 Conv to TypeA	Enable / Disable Type C Port 4 Convert to TypeA	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.17 ITBT DMA0	Enable/Disable ITBT DMA0	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.5.18 ITBT DMA1	Enable/Disable ITBT DMA1	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.19 VCCST status of IOM	Enables/Disables VCCST. Enable: Sends VCCST ON message to EC or PMC Disable: Sends VCCST OFF message to EC or PMC	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.20 D3 Cold Enable/Disable	Enables/Disables D3 Cold. Enable: D3 cold support for IOM is enabled Disable: D3 cold support for IOM is Disabled	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.21 D3Hot	Enables/Disables D3 Hot. Enable: D3 Hot support for IOM is enabled Disable: D3 Hot support for IOM is Disabled	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.22 Tc C-State Limit	BIOS mailbox to limit deepest TCx state	Possible Choices: • Disable • 1 • 2 • 4 • 5 • 6 • 7 • 10

		Default Value: • 10
3.1.5.23 TC Cold Power Saving Factor	TC Cold Power Saving Factor Switch	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.24 IOM before entering TC cold	Represent Y in seconds for IOM before entering TC cold	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.5.25 IOM stay in TC cold	Represent X in seconds for IOM stays in TC cold	Default Value: • 50 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.5.26 PCI Express Root Port 0		
3.1.5.26.1 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.5.26.2 SA PCIe LTR Configuration		
3.1.5.26.3 LTR	PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.1.5.26.4 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.26.5 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.26.6 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.26.7 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.26.8 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 200

		Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.26.9 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.26.10 Force LTR Override	Force LTR Override for ITBT PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.26.11 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.27 PCI Express Root Port 1		
3.1.5.27.1 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.5.27.2 SA PCIe LTR Configuration		
3.1.5.27.3 LTR	PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.5.27.4 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.27.5 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.27.6 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.27.7 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.27.8 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 200

		Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.27.9 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.27.10 Force LTR Override	Force LTR Override for ITBT PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.27.11 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.28 PCI Express Root Port 2		
3.1.5.28.1 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.5.28.2 SA PCIe LTR Configuration		
3.1.5.28.3 LTR	PCIE Latency Reporting Enable/Disable	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.1.5.28.4 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.28.5 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.28.6 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.28.7 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.28.8 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value:

		• 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.28.9 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.28.10 Force LTR Override	Force LTR Override for ITBT PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.28.11 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.29 PCI Express Root Port 3		
3.1.5.29.1 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.5.29.2 SA PCIe LTR Configuration		
3.1.5.29.3 LTR	PCIE Latency Reporting	

	Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.29.4 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.29.5 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.29.6 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.29.7 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.5.29.8 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	

		Default Value: • 200 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.5.29.9 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.5.29.10 Force LTR Override	Force LTR Override for ITBT PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.5.29.11 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6 VMD setup menu		
3.1.6.1 VMD Configuration		
3.1.6.2 Enable VMD controller	Enable/Disable to VMD controller	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.6.3 Enable VMD Global Mapping	Enable/Disable to VMD Global Mapping	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.4 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.5 Root Port BDF details	Root Port BDF	
3.1.6.6 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.7 Root Port BDF details	Root Port BDF	
3.1.6.8 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.9 Root Port BDF details	Root Port BDF	
3.1.6.10 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.6.11 Root Port BDF details	Root Port BDF	
3.1.6.12 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.13 Root Port BDF details	Root Port BDF	
3.1.6.14 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.15 Root Port BDF details	Root Port BDF	
3.1.6.16 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.17 Root Port BDF details	Root Port BDF	
3.1.6.18 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.19 Root Port BDF details	Root Port BDF	
3.1.6.20 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.6.21 Root Port BDF details	Root Port BDF	
3.1.6.22 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.23 Root Port BDF details	Root Port BDF	
3.1.6.24 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.25 Root Port BDF details	Root Port BDF	
3.1.6.26 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.27 Root Port BDF details	Root Port BDF	
3.1.6.28 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.29 Root Port BDF details	Root Port BDF	
3.1.6.30 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.1.6.31 Root Port BDF details	Root Port BDF	
3.1.6.32 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.33 Root Port BDF details	Root Port BDF	
3.1.6.34 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.35 Root Port BDF details	Root Port BDF	
3.1.6.36 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.37 Root Port BDF details	Root Port BDF	
3.1.6.38 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.39 Root Port BDF details	Root Port BDF	

3.1.6.40 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.41 Root Port BDF details	Root Port BDF	
3.1.6.42 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.43 Root Port BDF details	Root Port BDF	
3.1.6.44 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.45 Root Port BDF details	Root Port BDF	
3.1.6.46 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.47 Root Port BDF details	Root Port BDF	
3.1.6.48 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.6.49 Root Port BDF details	Root Port BDF	
3.1.6.50 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.51 Root Port BDF details	Root Port BDF	
3.1.6.52 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.53 Root Port BDF details	Root Port BDF	
3.1.6.54 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.55 Root Port BDF details	Root Port BDF	
3.1.6.56 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.57 Root Port BDF details	Root Port BDF	
3.1.6.58 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.6.59 Root Port BDF details	Root Port BDF	
3.1.6.60 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.61 Root Port BDF details	Root Port BDF	
3.1.6.62 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.63 Root Port BDF details	Root Port BDF	
3.1.6.64 Map this Root Port under VMD	Map/UnMap this Root Port to VMD	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.6.65 Root Port BDF details	Root Port BDF	
3.1.6.66 VMD Config Bar Size	Set The VMD Config Bar Size	Default Value: • 25 Numeric Range: Minimum Value: 20 Maximum Value: 27
3.1.6.67 VMD Config Bar Attributes	Set The VMD Config Bar Attributes	Possible Choices:

		• VMD 64bit prefetch • VMD 32bit non prefetch • VMD 64bit non prefetch Default Value: • VMD 64bit non prefetch
3.1.6.68 VMD Mem Bar1 Size	Set The VMD Mem Bar1 Size	Default Value: • 25 Numeric Range: Minimum Value: 20 Maximum Value: 39
3.1.6.69 VMD Mem Bar1 Attributes	Set The VMD Mem Bar1 Attributes	Possible Choices: • VMD 32bit non prefetch • VMD 64bit non prefetch • VMD 64bit prefetch Default Value: • VMD 32bit non prefetch
3.1.6.70 VMD Mem Bar2 Size	Set The VMD Mem Bar2 Size	Default Value: • 20 Numeric Range: Minimum Value: 20 Maximum Value: 39
3.1.6.71 VMD Mem Bar2 Attributes	Set The VMD Mem Bar2 Attributes	Possible Choices: • VMD 32bit non prefetch • VMD 64bit non prefetch • VMD 64bit prefetch Default Value: • VMD 64bit non prefetch
3.1.6.72 RAID0	Enable/Disable RAID0 support	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.6.73 RAID1	Enable/Disable RAID1 support	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.74 RAID5	Enable/Disable RAID5 support	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.75 RAID10	Enable/Disable RAID10 support	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.76 Intel Rapid Recovery Technology	Enable/Disable Intel Rapid Recovery Technology.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.77 RRT volumes can span internal and eSATA drives	Enable/Disable RRT volumes can span internal and eSATA drives.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.6.78 Intel(R) Optane(TM) Memory	Enable/Disable System	

	Acceleration with Intel(R) Optane(TM) Memory feature.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.7 Display setup menu		
3.1.7.1 Display Configuration		
3.1.7.2 COM-Express DDI1	Disable/Enable COM-Express DDI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.7.3 COM-Express DDI2	Disable/Enable COM-Express DDI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.7.4 COM-Express DDI3	Disable/Enable COM-Express DDI	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.7.5 DDI Port 4	Disable/Enable COM-Express DDI	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8 PCI Express Configuration		
3.1.8.1 Fia Programming	Load Fia Configuration if Enabled for each root port.	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.1.8.2 Compliance Test Mode	Enable when using Compliance Load Board	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.3 CDR Relock	Enable/Disable CDR Relock	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.4 Assertion on Link Down GPIOs	GPIO Assertion on Link Down	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.5 PCI Express Slot Selection	Select the PCIe M2 or CEMx4 slot	Possible Choices: • M2 • CEMx4 slot Default Value: • M2
3.1.8.6 PCIE Resizable BAR Support	Enable/Disable PCIE Resizable BAR Support	Possible Choices: • Enabled • Disabled Default Value: • Enabled

3.1.8.7 COM-Express PEG lanes 8-11		
3.1.8.7.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.1.8.7.2 PCI Express Clock Gating	PCI Express Clock Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.3 PCI Express Power Gating	PCI Express Power Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.4 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.1.8.7.5 L1 Substates	PCI Express L1 Substates settings.L1SS cannot be enabled when CLKREQMSG is disabled	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.1.8.7.6 Gen3 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3	

	Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware
3.1.8.7.7 Gen4 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3 Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware
3.1.8.7.8 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.9 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.10 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.11 FOM Scoreboard Control Policy	Select the FOM Scoreboard Control Policy, when set to Auto, speed is based on TLS	Possible Choices: • Auto • Gen3 • Gen4 • Gen3/Gen4 • Gen5

		Default Value: • Auto
3.1.8.7.12 Multi-VC	Enable/Disable Multi Virtual Channel	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.13 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.14 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.15 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.16 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.17 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.8.7.18 CTO	PCI Express Completion Timer TO Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.19 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.20 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.21 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.22 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.23 Hot Plug	PCI Express Hot Plug	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.24 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.25 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 • Gen4 • Gen5 Default Value: • Auto
3.1.8.7.26 Enable ClockReq Messaging	Enable or Disable ClockReq Messaging	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.27 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.28 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is	Default Value: • 0

	no device and potentially disabling the port.	Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.8.7.29 P2P Support	Program P2P Support Registers according to setup option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.30 CPU PCIE Func0 Link Disable	CPU PCIE Func0 Link Disable while Device attached into Port having Func0 and FuncN	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.31 SA PCIe LTR Configuration		
3.1.8.7.32 LTR	SA PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.7.33 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.7.34 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 60 Numeric Range:

		Minimum Value: 0 Maximum Value: 1023
3.1.8.7.35 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.8.7.36 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.7.37 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.8.7.38 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.8.7.39 Force LTR Override	Force LTR Override for SA PCIE. Disabled: LTR override values	

	will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.40 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.7.41 CPU PCIe Gen3 HWEQ Config		
3.1.8.7.42 UPTP	Upstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.7.43 DPTP	Downstream Port Transmitter Preset	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.7.44 CPU PCIe Gen4 HWEQ Config		
3.1.8.7.45 UPTP	Upstream Port Transmitter Preset	Default Value: • 8 Numeric Range: Minimum Value: 0 Maximum Value: 10

3.1.8.7.46 DPTP	Downstream Port Transmitter Preset	Default Value: • 9 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.7.47 CPU PCIe Gen5 HWEQ Config		
3.1.8.7.48 UPTP	Upstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.7.49 DPTP	Downstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8 COM-Express PEG lanes 0-7		
3.1.8.8.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.1.8.8.2 PCI Express Clock Gating	PCI Express Clock Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.1.8.8.3 PCI Express Power Gating	PCI Express Power Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.4 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.1.8.8.5 L1 Substates	PCI Express L1 Substates settings.L1SS cannot be enabled when CLKREQMSG is disabled	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.1.8.8.6 Gen3 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3 Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware
3.1.8.8.7 Gen4 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3 Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware

3.1.8.8.8 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.9 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.10 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.11 FOM Scoreboard Control Policy	Select the FOM Scoreboard Control Policy, when set to Auto, speed is based on TLS	Possible Choices: • Auto • Gen3 • Gen4 • Gen3/Gen4 • Gen5 Default Value: • Auto
3.1.8.8.12 Multi-VC	Enable/Disable Multi Virtual Channel	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.13 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.8.8.14 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.15 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.16 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.17 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.18 CTO	PCI Express Completion Timer TO Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.19 SEFE	Root PCI Express System Error	

	on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.20 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.21 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.22 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.23 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.24 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.1.8.8.25 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 • Gen4 • Gen5 Default Value: • Auto
3.1.8.8.26 Enable ClockReq Messaging	Enable or Disable ClockReq Messaging	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.27 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.28 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.8.8.29 P2P Support	Program P2P Support Registers according to setup option	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.8.8.30 CPU PCIE Func0 Link Disable	CPU PCIE Func0 Link Disable while Device attached into Port having Func0 and FuncN	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.31 SA PCIe LTR Configuration		
3.1.8.8.32 LTR	SA PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.8.33 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.8.34 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.8.8.35 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.1.8.8.36 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.8.37 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.8.8.38 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.8.8.39 Force LTR Override	Force LTR Override for SA PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.8.40 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.8.8.41 CPU PCIe Gen3 HWEQ Config		
3.1.8.8.42 UPTP	Upstream Port Transmitter Preset	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8.43 DPTP	Downstream Port Transmitter Preset	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8.44 CPU PCIe Gen4 HWEQ Config		
3.1.8.8.45 UPTP	Upstream Port Transmitter Preset	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8.46 DPTP	Downstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8.47 CPU PCIe Gen5 HWEQ Config		

3.1.8.8.48 UPTP	Upstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.8.49 DPTP	Downstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.9 COM-Express PEG lanes 12-15 / Internal nVME		
3.1.8.9.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.1.8.9.2 PCI Express Clock Gating	PCI Express Clock Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.3 PCI Express Power Gating	PCI Express Power Gating Enable/Disable for each root port.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.1.8.9.4 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.1.8.9.5 L1 Substates	PCI Express L1 Substates settings.L1SS cannot be enabled when CLKREQMSG is disabled	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.1.8.9.6 Gen3 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3 Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware
3.1.8.9.7 Gen4 Eq Phase3 Method	PCIe Gen3 Equalization Phase 3 Method	Possible Choices: • Hardware • Static Coeff. Default Value: • Hardware
3.1.8.9.8 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.9 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.8.9.10 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.11 FOM Scoreboard Control Policy	Select the FOM Scoreboard Control Policy, when set to Auto, speed is based on TLS	Possible Choices: • Auto • Gen3 • Gen4 • Gen3/Gen4 • Gen5 Default Value: • Auto
3.1.8.9.12 Multi-VC	Enable/Disable Multi Virtual Channel	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.13 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.14 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.1.8.9.15 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.16 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.17 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.18 CTO	PCI Express Completion Timer TO Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.19 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.20 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.1.8.9.21 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.22 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.23 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.24 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.1.8.9.25 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 • Gen4 • Gen5 Default Value: • Auto

3.1.8.9.26 Enable ClockReq Messaging	Enable or Disable ClockReq Messaging	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.27 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.28 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.1.8.9.29 P2P Support	Program P2P Support Registers according to setup option	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.30 CPU PCIE Func0 Link Disable	CPU PCIE Func0 Link Disable while Device attached into Port having Func0 and FuncN	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.31 SA PCIe LTR Configuration		
3.1.8.9.32 LTR	SA PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.1.8.9.33 Snoop Latency Override	Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.9.34 Snoop Latency Value	LTR Snoop Latency value of SA PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.8.9.35 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.8.9.36 Non Snoop Latency Override	Non Snoop Latency Override for SA PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.1.8.9.37 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	

		Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.1.8.9.38 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of SA PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.1.8.9.39 Force LTR Override	Force LTR Override for SA PCIE. Disabled: LTR override values will not be forced. Enable: LTR override values will be forced and LTR messages from the device will be ignored.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.40 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.8.9.41 CPU PCIe Gen3 HWEQ Config		
3.1.8.9.42 UPTP	Upstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10

3.1.8.9.43 DPTP	Downstream Port Transmitter Preset	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.9.44 CPU PCIe Gen4 HWEQ Config		
3.1.8.9.45 UPTP	Upstream Port Transmitter Preset	Default Value: • 8 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.9.46 DPTP	Downstream Port Transmitter Preset	Default Value: • 9 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.9.47 CPU PCIe Gen5 HWEQ Config		
3.1.8.9.48 UPTP	Upstream Port Transmitter Preset	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.8.9.49 DPTP	Downstream Port Transmitter Preset	Default Value: • 5

		Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.9 Stop Grant Configuration	Automatic/Manual stop grant configuration	Possible Choices: • Auto • Manual Default Value: • Auto
3.1.10 Number of Stop Grant Cycles	Selects number of Stop-Grant cycles.	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 63
3.1.11 VT-d	VT-d capability	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.12 Control Iommu Pre-boot Behavior	Enable IOMMU in Pre-boot environment (If DMAR table is installed in DXE and If VTD_INFO_PPI is installed in PEI.)	Possible Choices: • Disable IOMMU • Enable IOMMU during boot Default Value: • Enable IOMMU during boot
3.1.13 X2APIC Opt Out	Enable/Disable X2APIC_OPT_OUT bit	Possible Choices: • Enabled • Disabled Default Value:

		• Enabled
3.1.14 DMA Control Guarantee	Enable/Disable DMA_CONTROL_GUARANTEE bit	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.15 Thermal Device (B0:D4:F0)	Enable/Disable SA Thermal Device. Always enabled for ICL A0 stepping.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.16 Cpu CrashLog (Device 10)	Enable/Disable Cpu CrashLog Device.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.17 GNA Device (B0:D8:F0)	Enable/Disable SA GNA Device.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.18 CRID Support	Enable/Disable SA CRID and TCSS CRID control for Intel SIPP	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.19 WRC Feature	Enable/Disable SA WRC(Write Cache) Feature of IOP. When enabled, supports IO devices allocating onto the ring and into	Possible Choices: • Enabled • Disabled

	LLC.	Default Value: • Disabled
3.1.20 Above 4GB MMIO BIOS assignment	Enable/Disable above 4GB MemoryMappedIO BIOS assignment This is enabled automatically when Aperture Size is set to 2048MB.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.21 Program Grant Count	Enable/Disable Programming Of Grant Count	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.22 IPU Device (B0:D5:F0)	Enable/Disable SA IPU Device.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.1.23 IPU 1181 Dash Camera	Enable/Disable SA IPU 1181 Dash Camera support.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.1.24 MIPI Camera Configuration		
3.1.24.1 CVF Support	Disables/Enables CVF using either Native IOs or USB IOs Expansion.	Possible Choices: • Native IOs • Disabled • USB Bridge Default Value: • Disabled

3.1.24.2 Control Logic 1		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.3 Control Logic options		
3.1.24.3.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_UP6641 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_UP6641 • PMIC_USER0 • PMIC_USER1 Default Value: • Discrete
3.1.24.3.2 CRD Version		Possible Choices: • PTC • CRD-G • Kilshon-PPV • CRD-D • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-D
3.1.24.3.3 Input Clock		Possible Choices: • 24 MHz • 26 MHz • 20 MHz • 19.2 MHz Default Value: • 19.2 MHz
3.1.24.3.4 PCH Clock Source	This option specifies which	

	IMGCLKOUT is chosen	Possible Choices: • IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_0
3.1.24.3.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.3.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.3.7 I2C Address		Default Value: • 77 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.3.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • White Led
3.1.24.3.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.3.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.3.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • IR Led
3.1.24.3.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.3.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.3.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.3.15 Number of GPIO Pins		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.3.16 GPIO 0		
3.1.24.3.17 Group Pad Number		Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.3.18 Group Number		Possible Choices: • A • B • C • E • F • H • S • T • U • D • R

		Default Value: • R
3.1.24.3.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.3.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.22 GPIO 1		
3.1.24.3.23 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.3.24 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.3.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.3.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.3.28 GPIO 2		
3.1.24.3.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.3.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.3.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Clock_En
3.1.24.3.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.34 GPIO 3		
3.1.24.3.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.3.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.3.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.3.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.40 GPIO 4		
3.1.24.3.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.3.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R

		• S • T • U Default Value: • D
3.1.24.3.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.3.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.46 GPIO 5		
3.1.24.3.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.3.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.3.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.3.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.3.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.4 Control Logic 2		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.5 Control Logic options		
3.1.24.5.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_UP6641 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_USER0 • PMIC_USER1 Default Value: • Discrete
3.1.24.5.2 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-D
3.1.24.5.3 Input Clock		Possible Choices: • 24 MHz • 26 MHz • 20 MHz • 19.2 MHz Default Value: • 19.2 MHz
3.1.24.5.4 PCH Clock Source	This option specifies which	

	IMGCLKOUT is chosen	Possible Choices: • IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_1
3.1.24.5.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.5.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.5.7 I2C Address		Default Value: • 73 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.5.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • Disabled
3.1.24.5.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.5.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.5.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.5.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.5.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.5.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.5.15 Number of GPIO Pins		Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.5.16 GPIO 0		
3.1.24.5.17 Group Pad Number		Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.5.18 Group Number		Possible Choices: • A • B • C • D • F • R • S • T • U • E • H

		Default Value: • E
3.1.24.5.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.5.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.22 GPIO 1		
3.1.24.5.23 Group Pad Number		Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.5.24 Group Number		Possible Choices: • A • B • C • D • F • R • S • T • U • E • H Default Value: • E
3.1.24.5.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Power_En
3.1.24.5.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.5.28 GPIO 2		
3.1.24.5.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.5.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.5.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.5.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.34 GPIO 3		
3.1.24.5.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.5.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.5.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.5.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.40 GPIO 4		
3.1.24.5.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.5.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R

		• S • T • U Default Value: • D
3.1.24.5.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.5.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.46 GPIO 5		
3.1.24.5.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.5.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.5.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.5.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.5.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.6 Control Logic 3		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.7 Control Logic options		
3.1.24.7.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_UP6641 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_USER0 • PMIC_USER1 Default Value: • PMIC_TPS68470
3.1.24.7.2 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-G
3.1.24.7.3 Input Clock		Possible Choices: • 20 MHz • 24 MHz • 26 MHz • 19.2 MHz Default Value: • 20 MHz
3.1.24.7.4 PCH Clock Source	This option specifies which	

	IMGCLKOUT is chosen	Possible Choices: • IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_0
3.1.24.7.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.7.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.7.7 I2C Address		Default Value: • 73 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.7.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • Disabled
3.1.24.7.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.7.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.7.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.7.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.7.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.7.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.7.15 Number of GPIO Pins		Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.7.16 GPIO 0		
3.1.24.7.17 Group Pad Number		Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.7.18 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U

		Default Value: • D
3.1.24.7.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.7.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.22 GPIO 1		
3.1.24.7.23 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.7.24 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.7.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.7.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.7.28 GPIO 2		
3.1.24.7.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.7.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.7.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.7.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.34 GPIO 3		
3.1.24.7.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.7.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.7.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En Default Value: • Reset
3.1.24.7.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.40 GPIO 4		
3.1.24.7.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.7.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T

		• U Default Value: • D
3.1.24.7.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.7.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.46 GPIO 5		
3.1.24.7.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.7.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.7.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.7.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.7.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.8 Control Logic 4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.9 Control Logic options		
3.1.24.9.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_UP6641 • PMIC_USER0 • PMIC_USER1 Default Value: • PMIC_TPS68470
3.1.24.9.2 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-G
3.1.24.9.3 Input Clock		Possible Choices: • 20 MHz • 24 MHz • 26 MHz • 19.2 MHz Default Value: • 20 MHz
3.1.24.9.4 PCH Clock Source	This option specifies which IMGCLKOUT is chosen	Possible Choices:

		• IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_0
3.1.24.9.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.9.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.9.7 I2C Address		Default Value: • 73 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.9.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • Disabled
3.1.24.9.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.9.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.9.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.9.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.9.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.9.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.9.15 Number of GPIO Pins		Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.9.16 GPIO 0		
3.1.24.9.17 Group Pad Number		Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.9.18 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U

		Default Value: • D
3.1.24.9.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.9.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.22 GPIO 1		
3.1.24.9.23 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.9.24 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.9.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.9.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.9.28 GPIO 2		
3.1.24.9.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.9.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.9.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.9.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.34 GPIO 3		
3.1.24.9.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.9.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.9.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.9.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.40 GPIO 4		
3.1.24.9.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.9.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R

		• S • T • U Default Value: • D
3.1.24.9.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.9.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.46 GPIO 5		
3.1.24.9.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.9.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.9.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.9.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.9.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.10 Control Logic 5		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.11 Control Logic options		
3.1.24.11.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_UP6641 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_USER0 • PMIC_USER1 Default Value: • PMIC_TPS68470
3.1.24.11.2 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-G
3.1.24.11.3 Input Clock		Possible Choices: • 20 MHz • 24 MHz • 26 MHz • 19.2 MHz Default Value: • 20 MHz
3.1.24.11.4 PCH Clock Source	This option specifies which	

	IMGCLKOUT is chosen	Possible Choices: • IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_0
3.1.24.11.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.11.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.11.7 I2C Address		Default Value: • 73 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.11.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • Disabled
3.1.24.11.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.11.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.11.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.11.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.11.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.11.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.11.15 Number of GPIO Pins		Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.11.16 GPIO 0		
3.1.24.11.17 Group Pad Number		Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.11.18 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U

		Default Value: • D
3.1.24.11.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.11.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.22 GPIO 1		
3.1.24.11.23 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.11.24 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.11.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.11.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.11.28 GPIO 2		
3.1.24.11.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.11.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.11.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.11.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.34 GPIO 3		
3.1.24.11.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.11.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.11.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.11.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.40 GPIO 4		
3.1.24.11.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.11.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R

		• S • T • U Default Value: • D
3.1.24.11.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.11.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.46 GPIO 5		
3.1.24.11.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.11.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.11.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.11.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.11.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.12 Control Logic 6		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.13 Control Logic options		
3.1.24.13.1 Control Logic Type		Possible Choices: • Discrete • PMIC_TPS68470 • PMIC_UP6641 • PMIC_HDMI2MIPI_LT6911UXC • PMIC_USER0 • PMIC_USER1 Default Value: • PMIC_TPS68470
3.1.24.13.2 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 • LT6911UXC-V1 Default Value: • CRD-G
3.1.24.13.3 Input Clock		Possible Choices: • 20 MHz • 24 MHz • 26 MHz • 19.2 MHz Default Value: • 20 MHz
3.1.24.13.4 PCH Clock Source	This option specifies which	

	IMGCLKOUT is chosen	Possible Choices: • IMGCLKOUT_0 • IMGCLKOUT_1 • IMGCLKOUT_2 • IMGCLKOUT_3 • IMGCLKOUT_4 Default Value: • IMGCLKOUT_0
3.1.24.13.5 PMIC Flash Panel		Possible Choices: • Front • Back Default Value: • Back
3.1.24.13.6 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.13.7 I2C Address		Default Value: • 73 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.13.8 WLED1 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led

		Default Value: • Disabled
3.1.24.13.9 WLED1 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.13.10 WLED1 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.13.11 WLED2 Type	WLED Type	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.13.12 WLED2 Flash Max Current	WLED Flash Max Current Valid range is 0x00-0x1F 0x00 for HW default max current	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 31
3.1.24.13.13 WLED2 Torch Max Current	WLED Torch Max Current Valid range is 0x00-0x07 0x00 for HW default max current	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.1.24.13.14 SubPlatformId		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.13.15 Number of GPIO Pins		Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 6
3.1.24.13.16 GPIO 0		
3.1.24.13.17 Group Pad Number		Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.13.18 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U

		Default Value: • D
3.1.24.13.19 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.13.20 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.21 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.22 GPIO 1		
3.1.24.13.23 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.13.24 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.13.25 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.13.26 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.27 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.13.28 GPIO 2		
3.1.24.13.29 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.13.30 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.13.31 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.13.32 Active Value		Default Value: • 1

		Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.33 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.34 GPIO 3		
3.1.24.13.35 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.13.36 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.13.37 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En

		• Strobe_En • Handshake_En • READY_STAT • HDMI_DETECT Default Value: • Reset
3.1.24.13.38 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.39 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.40 GPIO 4		
3.1.24.13.41 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23
3.1.24.13.42 Group Number		Possible Choices: • A • B • C • D • E • F • H • R

		• S • T • U Default Value: • D
3.1.24.13.43 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.13.44 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.45 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.46 GPIO 5		
3.1.24.13.47 Group Pad Number		Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 23

3.1.24.13.48 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.13.49 Function		Possible Choices: • Reset • Power_En • Clock_En • pLED_En • Strobe_En • Handshake_En Default Value: • Reset
3.1.24.13.50 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.13.51 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.14 Camera1		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.15 Link0 options		
3.1.24.15.1 Camera1		
3.1.24.15.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208 • OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856 • OV16860 • IMX362 • OVTID858 • IMX488 • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • Custom Display Bridge • User Custom Default Value: • OVTID858
3.1.24.15.3 Audio HID		
3.1.24.15.4 Video HID		
3.1.24.15.5 Lanes Clock division		Possible Choices:

		• 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2
3.1.24.15.6 CRD Version		Possible Choices: • PTC • CRD-G • Kilshon-PPV • CRD-D • CRD-G2 Default Value: • CRD-D
3.1.24.15.7 GPIO control		Possible Choices: • No Control Logic • Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4 • Control Logic 5 • Control Logic 6 Default Value: • Control Logic 2
3.1.24.15.8 Camera position		Possible Choices: • Front • Back Default Value: • Back
3.1.24.15.9 Flash Support		Possible Choices: • Driver default • Disabled • Enabled

		Default Value: • Enabled
3.1.24.15.10 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA • ILEDB, 8mA • ILEDB, 16mA Default Value: • Driver default
3.1.24.15.11 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0
3.1.24.15.12 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	Possible Choices: • Position 1 • Position 2 Default Value: • Position 1
3.1.24.15.13 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value: • 3 voltage rail
3.1.24.15.14 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range:

		Minimum Value: 0 Maximum Value: 255
3.1.24.15.15 PPR Unit	PPR unit of sensor	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.15.16 Camera module name		
3.1.24.15.17 MIPI port	LinkUsed	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.24.15.18 LaneUsed		Possible Choices: • x1 • x2 • x3 • x4 • x8 Default Value: • x4
3.1.24.15.19 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 Default Value: • 2

3.1.24.15.20 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0
3.1.24.15.21 EEPROM Type	EEPROM Type 0x00: ROM_NONE 0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16 0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	Possible Choices: • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B • ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64 • ROM_EEPROM_24AA16 • ROM_NONE • ROM_EEPROM_CAT24C08 Default Value: • ROM_EEPROM_CAT24C08
3.1.24.15.22 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B 0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_AD5816 • VCM_DW9719 • VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_BU64297GWZ • VCM_DW9714

		• VCM_AK7371 Default Value: • VCM_DW9714
3.1.24.15.23 Number of I2C Components		Default Value: • 6 Numeric Range: Minimum Value: 0 Maximum Value: 12
3.1.24.15.24 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C4 • I2C3 • I2C5 • I2C6 • I2C7 Default Value: • I2C5
3.1.24.15.25 Device 0		
3.1.24.15.26 I2C Address	I2C Address	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.27 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4

		• EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.15.28 Device 1		
3.1.24.15.29 I2C Address	I2C Address	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.30 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.15.31 Device 2		
3.1.24.15.32 I2C Address	I2C Address	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.15.33 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.15.34 Device 3		
3.1.24.15.35 I2C Address	I2C Address	Default Value: • 81 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.36 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.15.37 Device 4		

3.1.24.15.38 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.39 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT2
3.1.24.15.40 Device 5		
3.1.24.15.41 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.42 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.15.43 Device 6		
3.1.24.15.44 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.45 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.15.46 Device 7		
3.1.24.15.47 I2C Address	I2C Address	Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.15.48 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.15.49 Device 8		
3.1.24.15.50 I2C Address	I2C Address	Default Value: • 86 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.51 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT6
3.1.24.15.52 Device 9		

3.1.24.15.53 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.54 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT7
3.1.24.15.55 Device 10		
3.1.24.15.56 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.57 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • IO Expander
3.1.24.15.58 Device 11		
3.1.24.15.59 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.15.60 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.15.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC Default Value: • Disabled
3.1.24.15.62 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices:

		• Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash1
3.1.24.16 Flash Options		
3.1.24.16.1 Flash1		
3.1.24.16.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • External - LM3643
3.1.24.16.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • White Led
3.1.24.16.4 Camera module name		
3.1.24.16.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C5

3.1.24.16.6 I2C Address		Default Value: • 103 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.16.7 Flash Trigger Gpio		
3.1.24.16.8 Group Pad Number		Default Value: • 18 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.16.9 Group Number		Possible Choices: • A • C • E • F • H • R • S • T • U • B • D Default Value: • B
3.1.24.16.10 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.16.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.16.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.24.17 Camera2		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.18 Link1 options		
3.1.24.18.1 Camera2		
3.1.24.18.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208 • OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856

		• OV16860 • IMX362 • IMX488 • OVTI01AF • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • OVTID858 • Custom Display Bridge • User Custom Default Value: • OVTI01AF
3.1.24.18.3 Audio HID		
3.1.24.18.4 Custom HID	Video HID	
3.1.24.18.5 Lanes Clock division		Possible Choices: • 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2
3.1.24.18.6 CRD Version		Possible Choices: • PTC • CRD-G • Kilshon-PPV • CRD-D • CRD-G2 Default Value: • CRD-D
3.1.24.18.7 GPIO control		Possible Choices: • No Control Logic • Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4

		• Control Logic 5 • Control Logic 6 Default Value: • Control Logic 1
3.1.24.18.8 Camera position		Possible Choices: • Front • Back Default Value: • Front
3.1.24.18.9 Flash Support		Possible Choices: • Driver default • Disabled • Enabled Default Value: • Enabled
3.1.24.18.10 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA • ILEDB, 8mA • ILEDB, 16mA Default Value: • Driver default
3.1.24.18.11 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0
3.1.24.18.12 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left	Possible Choices:

	side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	• Position 1 • Position 2 Default Value: • Position 1
3.1.24.18.13 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value: • 3 voltage rail
3.1.24.18.14 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.24.18.15 PPR Unit	PPR unit of sensor	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.18.16 Camera module name		
3.1.24.18.17 MIPI port	LinkUsed	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.24.18.18 LaneUsed		Possible Choices: • x1

		• x2 • x3 • x4 Default Value: • x1
3.1.24.18.19 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 Default Value: • 1
3.1.24.18.20 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0
3.1.24.18.21 EEPROM Type	EEPROM Type 0x00: ROM_NONE 0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16 0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	Possible Choices: • ROM_NONE • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_CAT24C08 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B • ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64

		• ROM_EEPROM_24AA16 Default Value: • ROM_NONE
3.1.24.18.22 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B 0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_DW9714 • VCM_AD5816 • VCM_DW9719 • VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_AK7371 • VCM_BU64297GWZ Default Value: • VCM_NONE
3.1.24.18.23 Number of I2C Components		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 12
3.1.24.18.24 I2C Channel		Possible Choices: • I2C0 • I2C2 • I2C4 • I2C5 • I2C1 • I2C3 • I2C6 • I2C7 Default Value: • I2C1

3.1.24.18.25 Device 0		
3.1.24.18.26 I2C Address	I2C Address	Default Value: • 54 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.27 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.18.28 Device 1		
3.1.24.18.29 I2C Address	I2C Address	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.30 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3

		• EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.18.31 Device 2		
3.1.24.18.32 I2C Address	I2C Address	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.33 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.18.34 Device 3		
3.1.24.18.35 I2C Address	I2C Address	Default Value: • 81 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.18.36 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.18.37 Device 4		
3.1.24.18.38 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.39 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT2

3.1.24.18.40 Device 5		
3.1.24.18.41 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.42 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.18.43 Device 6		
3.1.24.18.44 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.45 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3

		• EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.18.46 Device 7		
3.1.24.18.47 I2C Address	I2C Address	Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.48 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.18.49 Device 8		
3.1.24.18.50 I2C Address	I2C Address	Default Value: • 86 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.18.51 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT6
3.1.24.18.52 Device 9		
3.1.24.18.53 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.54 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT7

3.1.24.18.55 Device 10		
3.1.24.18.56 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.57 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • IO Expander
3.1.24.18.58 Device 11		
3.1.24.18.59 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.18.60 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3

		• EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Flash
3.1.24.18.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC Default Value: • External
3.1.24.18.62 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash2
3.1.24.19 Flash Options		
3.1.24.19.1 Flash2		
3.1.24.19.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • External - LM3643
3.1.24.19.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led • Warm Led

		• IR Led • Xeon Led Default Value: • White Led
3.1.24.19.4 Camera module name		
3.1.24.19.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 Default Value: • I2C1
3.1.24.19.6 I2C Address		Default Value: • 99 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.19.7 Flash Trigger Gpio		
3.1.24.19.8 Group Pad Number		Default Value: • 18 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.19.9 Group Number		Possible Choices: • A • C • B • D • E • F

		• H • R • S • T • U Default Value: • B
3.1.24.19.10 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.19.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.19.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.24.20 Camera3		Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.1.24.21 Link2 options		
3.1.24.21.1 Camera3		
3.1.24.21.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208 • OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856 • OV16860 • IMX362 • IMX488 • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • OVTID858 • LONTIUM • User Custom Default Value: • OVTI01AS
3.1.24.21.3 Custom HID	Video HID	
3.1.24.21.4 Lanes Clock division		Possible Choices: • 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2
3.1.24.21.5 CRD Version		

		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 Default Value: • CRD-D
3.1.24.21.6 GPIO control		Possible Choices: • No Control Logic • Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4 • Control Logic 5 • Control Logic 6 Default Value: • Control Logic 2
3.1.24.21.7 Camera position		Possible Choices: • Front • Back Default Value: • Front
3.1.24.21.8 Flash Support		Possible Choices: • Driver default • Disabled • Enabled Default Value: • Disabled
3.1.24.21.9 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA • ILEDB, 8mA • ILEDB, 16mA

		Default Value: • Driver default
3.1.24.21.10 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0
3.1.24.21.11 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	Possible Choices: • Position 1 • Position 2 Default Value: • Position 1
3.1.24.21.12 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value: • 3 voltage rail
3.1.24.21.13 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.24.21.14 PPR Unit	PPR unit of sensor	Default Value: • 10 Numeric Range: Minimum Value: 0

		Maximum Value: 15
3.1.24.21.15 Camera module name		
3.1.24.21.16 MIPI port	LinkUsed	Default Value: • 4 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.24.21.17 LaneUsed		Possible Choices: • x1 • x2 • x3 • x4 Default Value: • x2
3.1.24.21.18 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 Default Value: • 2
3.1.24.21.19 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0
3.1.24.21.20 EEPROM Type	EEPROM Type 0x00: ROM_NONE	

	0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16 0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	Possible Choices: • ROM_NONE • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_CAT24C08 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B • ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64 • ROM_EEPROM_24AA16 Default Value: • ROM_NONE
3.1.24.21.21 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B 0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_DW9714 • VCM_AD5816 • VCM_DW9719 • VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_AK7371 • VCM_BU64297GWZ Default Value: • VCM_NONE
3.1.24.21.22 Number of I2C Components		Default Value: • 1 Numeric Range:

		Minimum Value: 0 Maximum Value: 12
3.1.24.21.23 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C2
3.1.24.21.24 Device 0		
3.1.24.21.25 I2C Address	I2C Address	Default Value: • 26 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.26 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.21.27 Device 1		

3.1.24.21.28 I2C Address	I2C Address	Default Value: • 14 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.29 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.21.30 Device 2		
3.1.24.21.31 I2C Address	I2C Address	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.32 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.21.33 Device 3		
3.1.24.21.34 I2C Address	I2C Address	Default Value: • 81 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.35 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.21.36 Device 4		
3.1.24.21.37 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.21.38 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT2
3.1.24.21.39 Device 5		
3.1.24.21.40 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.41 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.21.42 Device 6		

3.1.24.21.43 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.44 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.21.45 Device 7		
3.1.24.21.46 I2C Address	I2C Address	Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.47 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.21.48 Device 8		
3.1.24.21.49 I2C Address	I2C Address	Default Value: • 86 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.50 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.21.51 Device 9		
3.1.24.21.52 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.21.53 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.21.54 Device 10		
3.1.24.21.55 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.56 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.21.57 Device 11		

3.1.24.21.58 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.21.59 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.21.60 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC Default Value: • Disabled
3.1.24.21.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash1

3.1.24.22 Flash Options		
3.1.24.22.1 Flash3		
3.1.24.22.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • External - LM3643
3.1.24.22.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • IR Led
3.1.24.22.4 Camera module name		
3.1.24.22.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C2
3.1.24.22.6 I2C Address		Default Value: • 99 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.22.7 Flash Trigger Gpio		
3.1.24.22.8 Group Pad Number		Default Value: • 18 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.22.9 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • B
3.1.24.22.10 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.22.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.22.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.24.23 Camera4		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.24 Link3 options		
3.1.24.24.1 Camera4		
3.1.24.24.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208 • OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856 • OV16860 • IMX362 • IMX488 • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • OVTID858 • LONTIUM • User Custom

		Default Value: • OV5693
3.1.24.24.3 Custom HID	Video HID	
3.1.24.24.4 Lanes Clock division		Possible Choices: • 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2
3.1.24.24.5 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 Default Value: • CRD-G
3.1.24.24.6 GPIO control		Possible Choices: • No Control Logic • Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4 • Control Logic 5 • Control Logic 6 Default Value: • No Control Logic
3.1.24.24.7 Camera position		Possible Choices: • Front • Back Default Value:

		• Back
3.1.24.24.8 Flash Support		Possible Choices: • Driver default • Disabled • Enabled Default Value: • Driver default
3.1.24.24.9 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA • ILEDB, 8mA • ILEDB, 16mA Default Value: • Driver default
3.1.24.24.10 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0
3.1.24.24.11 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	Possible Choices: • Position 1 • Position 2 Default Value: • Position 1
3.1.24.24.12 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value:

		• 3 voltage rail
3.1.24.24.13 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.24.24.14 PPR Unit	PPR unit of sensor	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.24.15 Camera module name		
3.1.24.24.16 MIPI port	LinkUsed	Default Value: • 7 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.24.24.17 LaneUsed		Possible Choices: • x1 • x2 • x3 • x4 Default Value: • x4
3.1.24.24.18 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2

		• 3 • 4 • 5 • 6 Default Value: • 2
3.1.24.24.19 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0
3.1.24.24.20 EEPROM Type	EEPROM Type 0x00: ROM_NONE 0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16 0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	Possible Choices: • ROM_NONE • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_CAT24C08 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B • ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64 • ROM_EEPROM_24AA16 Default Value: • ROM_NONE
3.1.24.24.21 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_DW9714 • VCM_AD5816 • VCM_DW9719

	0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	• VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_AK7371 • VCM_BU64297GWZ Default Value: • VCM_NONE
3.1.24.24.22 Number of I2C Components		Default Value: • 6 Numeric Range: Minimum Value: 0 Maximum Value: 12
3.1.24.24.23 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.24.24 Device 0		
3.1.24.24.25 I2C Address	I2C Address	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.26 Device Type		

		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.24.27 Device 1		
3.1.24.24.28 I2C Address	I2C Address	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.29 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.24.30 Device 2		
3.1.24.24.31 I2C Address	I2C Address	

		Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.32 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.24.33 Device 3		
3.1.24.24.34 I2C Address	I2C Address	Default Value: • 81 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.35 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7

		• IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.24.36 Device 4		
3.1.24.24.37 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.38 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT2
3.1.24.24.39 Device 5		
3.1.24.24.40 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.41 Device Type		Possible Choices:

		• Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.24.42 Device 6		
3.1.24.24.43 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.44 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.24.45 Device 7		
3.1.24.24.46 I2C Address	I2C Address	

		Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.47 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.24.48 Device 8		
3.1.24.24.49 I2C Address	I2C Address	Default Value: • 86 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.50 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander

		• Flash Default Value: • EEPROM_EXT6
3.1.24.24.51 Device 9		
3.1.24.24.52 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.53 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT7
3.1.24.24.54 Device 10		
3.1.24.24.55 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.56 Device Type		Possible Choices: • Sensor

		• VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • IO Expander
3.1.24.24.57 Device 11		
3.1.24.24.58 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.24.59 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Flash
3.1.24.24.60 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC

		Default Value: • Disabled
3.1.24.24.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash1
3.1.24.25 Flash Options		
3.1.24.25.1 Flash4		
3.1.24.25.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • PMIC - WRC
3.1.24.25.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • IR Led
3.1.24.25.4 Camera module name		
3.1.24.25.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4

		• I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.25.6 I2C Address		Default Value: • 103 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.25.7 Flash Trigger Gpio		
3.1.24.25.8 Group Pad Number		Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.25.9 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.25.10 Active Value		Default Value:

		• 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.25.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.25.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.24.26 Camera5		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.1.24.27 Link4 options		
3.1.24.27.1 Camera5		
3.1.24.27.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208

		• OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856 • OV16860 • IMX362 • IMX488 • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • OVTID858 • LONTIUM • User Custom Default Value: • OV5693
3.1.24.27.3 Custom HID	Video HID	
3.1.24.27.4 Lanes Clock division		Possible Choices: • 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2
3.1.24.27.5 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 Default Value: • CRD-G
3.1.24.27.6 GPIO control		Possible Choices: • No Control Logic

		• Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4 • Control Logic 5 • Control Logic 6 Default Value: • No Control Logic
3.1.24.27.7 Camera position		Possible Choices: • Front • Back Default Value: • Back
3.1.24.27.8 Flash Support		Possible Choices: • Driver default • Disabled • Enabled Default Value: • Driver default
3.1.24.27.9 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA • ILEDB, 8mA • ILEDB, 16mA Default Value: • Driver default
3.1.24.27.10 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0

3.1.24.27.11 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	Possible Choices: • Position 1 • Position 2 Default Value: • Position 1
3.1.24.27.12 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value: • 3 voltage rail
3.1.24.27.13 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.24.27.14 PPR Unit	PPR unit of sensor	Default Value: • 10 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.27.15 Camera module name		
3.1.24.27.16 MIPI port	LinkUsed	Default Value: • 2 Numeric Range: Minimum Value: 0 Maximum Value: 10

3.1.24.27.17 LaneUsed		Possible Choices: • x1 • x2 • x3 • x4 Default Value: • x4
3.1.24.27.18 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 Default Value: • 2
3.1.24.27.19 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0
3.1.24.27.20 EEPROM Type	EEPROM Type 0x00: ROM_NONE 0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16	Possible Choices: • ROM_NONE • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_CAT24C08 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B

	0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	• ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64 • ROM_EEPROM_24AA16 Default Value: • ROM_NONE
3.1.24.27.21 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B 0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_DW9714 • VCM_AD5816 • VCM_DW9719 • VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_AK7371 • VCM_BU64297GWZ Default Value: • VCM_NONE
3.1.24.27.22 Number of I2C Components		Default Value: • 6 Numeric Range: Minimum Value: 0 Maximum Value: 12
3.1.24.27.23 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7

		Default Value: • I2C3
3.1.24.27.24 Device 0		
3.1.24.27.25 I2C Address	I2C Address	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.26 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.27.27 Device 1		
3.1.24.27.28 I2C Address	I2C Address	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.29 Device Type		Possible Choices: • Sensor • VCM • EEPROM

		• EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.27.30 Device 2		
3.1.24.27.31 I2C Address	I2C Address	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.32 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.27.33 Device 3		
3.1.24.27.34 I2C Address	I2C Address	Default Value: • 81

		Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.35 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.27.36 Device 4		
3.1.24.27.37 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.38 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value:

		• EEPROM_EXT2
3.1.24.27.39 Device 5		
3.1.24.27.40 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.41 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.27.42 Device 6		
3.1.24.27.43 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.44 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1

		• EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.27.45 Device 7		
3.1.24.27.46 I2C Address	I2C Address	Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.47 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.27.48 Device 8		
3.1.24.27.49 I2C Address	I2C Address	Default Value: • 86 Numeric Range:

		Minimum Value: 0 Maximum Value: 127
3.1.24.27.50 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT6
3.1.24.27.51 Device 9		
3.1.24.27.52 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.53 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT7

3.1.24.27.54 Device 10		
3.1.24.27.55 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.56 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • IO Expander
3.1.24.27.57 Device 11		
3.1.24.27.58 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.27.59 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2

		• EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Flash
3.1.24.27.60 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC Default Value: • Disabled
3.1.24.27.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash1
3.1.24.28 Flash Options		
3.1.24.28.1 Flash5		
3.1.24.28.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • PMIC - WRC
3.1.24.28.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led

		• Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.28.4 Camera module name		
3.1.24.28.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.28.6 I2C Address		Default Value: • 103 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.28.7 Flash Trigger Gpio		
3.1.24.28.8 Group Pad Number		Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.28.9 Group Number		Possible Choices: • A • B • C

		• D • E • F • H • R • S • T • U Default Value: • D
3.1.24.28.10 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.28.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.28.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.24.29 Camera6		Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.1.24.30 Link5 options		
3.1.24.30.1 Camera6		
3.1.24.30.2 Sensor Model		Possible Choices: • IMX135 • OV5693 • IMX179 • OV8858 • OV2740-IVCAM • OV9728 • IMX188 • IMX208 • OV5670 • OV8865 • HM2051 • OV2742 • OV9234 • OV8856 • OV16860 • IMX362 • IMX488 • OVTI01AS • OVTI01A0 • OVTI5678 • OVTI9738 • HIMAX11B1 • OVTID858 • LONTIUM • User Custom Default Value: • OV5693
3.1.24.30.3 Custom HID	Video HID	
3.1.24.30.4 Lanes Clock division		Possible Choices: • 4 4 2 2 • 4 4 3 1 • 4 4 4 0 • 8 0 2 2 • 8 0 3 1 • 8 0 4 0 Default Value: • 4 4 2 2

3.1.24.30.5 CRD Version		Possible Choices: • PTC • CRD-D • CRD-G • Kilshon-PPV • CRD-G2 Default Value: • CRD-G
3.1.24.30.6 GPIO control		Possible Choices: • No Control Logic • Control Logic 1 • Control Logic 2 • Control Logic 3 • Control Logic 4 • Control Logic 5 • Control Logic 6 Default Value: • No Control Logic
3.1.24.30.7 Camera position		Possible Choices: • Front • Back Default Value: • Back
3.1.24.30.8 Flash Support		Possible Choices: • Driver default • Disabled • Enabled Default Value: • Driver default
3.1.24.30.9 Privacy LED		Possible Choices: • Driver default • ILEDA, 16mA • ILEDB, 2mA • ILEDB, 4mA

		• ILEDB, 8mA • ILEDB, 16mA Default Value: • Driver default
3.1.24.30.10 Rotation		Possible Choices: • 0 • 90 • 180 • 270 Default Value: • 0
3.1.24.30.11 PMIC Position	PMIC Position Position 1 indicates the current module is placed on the left side of the CRD-G2 card Position 2 indicates the current module is placed on the right side of the CRD-G2 card	Possible Choices: • Position 1 • Position 2 Default Value: • Position 1
3.1.24.30.12 Voltage Rail		Possible Choices: • 3 voltage rail • 2 voltage rail Default Value: • 3 voltage rail
3.1.24.30.13 PPR Value	PPR value of sensor	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.1.24.30.14 PPR Unit	PPR unit of sensor	Default Value: • 10

		Numeric Range: Minimum Value: 0 Maximum Value: 15
3.1.24.30.15 Camera module name		
3.1.24.30.16 MIPI port	LinkUsed	Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.1.24.30.17 LaneUsed		Possible Choices: • x1 • x2 • x3 • x4 Default Value: • x4
3.1.24.30.18 PortSpeed	PortSpeed: 0:Sensor Default, 1:<416Mbps, 2:<1.5Gbps, 3:<2Gbps, 4:<2.5Gbps, 5:<4Gbps, 6:>4Gbps	Possible Choices: • 0 • 1 • 2 • 3 • 4 • 5 • 6 Default Value: • 2
3.1.24.30.19 MCLK		Default Value: • 19200000 Numeric Range: Minimum Value: 0 Maximum Value: 0

3.1.24.30.20 EEPROM Type	EEPROM Type 0x00: ROM_NONE 0x01: ROM_OTP 0x02: ROM_EEPROM_16K_64 0x03: ROM_EEPROM_16K_16 0x04: ROM_OTP_ACPI_ACPI 0x05: ROM_ACPI 0x06: ROM_EEPROM_BRCA016GWZ 0x07: ROM_EEPROM_24AA32 0x08: ROM_EEPROM_CAT24C08 0x09: ROM_M24C64 0x0A: ROM_DW9806B 0x10: ROM_EEPROM_CAT24C16 0x11: ROM_EEPROM_CAT24C64 0x12: ROM_EEPROM_24AA16	Possible Choices: • ROM_NONE • ROM_OTP • ROM_EEPROM_16K_64 • ROM_EEPROM_16K_16 • ROM_OTP_ACPI_ACPI • ROM_ACPI • ROM_EEPROM_BRCA016GWZ • ROM_EEPROM_24AA32 • ROM_EEPROM_CAT24C08 • ROM_EEPROM_M24C64 • ROM_EEPROM_DW9806B • ROM_EEPROM_CAT24C16 • ROM_EEPROM_CAT24C64 • ROM_EEPROM_24AA16 Default Value: • ROM_NONE
3.1.24.30.21 VCM Type	VCM Type 0x00: VCM_NONE 0x01: VCM_AD5823 0x02: VCM_DW9714 0x03: VCM_AD5816 0x04: VCM_DW9719 0x05: VCM_DW9718 0x06: VCM_DW9806B 0x07: VCM_WV517S 0x08: VCM_LC898122XA 0x09: VCM_LC898212AXB 0x0F: VCM_AK7371 0x10: VCM_BU64297GWZ	Possible Choices: • VCM_NONE • VCM_AD5823 • VCM_DW9714 • VCM_AD5816 • VCM_DW9719 • VCM_DW9718 • VCM_DW9806B • VCM_WV517S • VCM_LC898122XA • VCM_LC898212AXB • VCM_RESERVED1 • VCM_RESERVED2 • VCM_AK7371 • VCM_BU64297GWZ Default Value: • VCM_NONE
3.1.24.30.22 Number of I2C Components		Default Value: • 6

		Numeric Range: Minimum Value: 0 Maximum Value: 12
3.1.24.30.23 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.30.24 Device 0		
3.1.24.30.25 I2C Address	I2C Address	Default Value: • 16 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.26 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Sensor
3.1.24.30.27 Device 1		

3.1.24.30.28 I2C Address	I2C Address	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.29 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • VCM
3.1.24.30.30 Device 2		
3.1.24.30.31 I2C Address	I2C Address	Default Value: • 80 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.32 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM
3.1.24.30.33 Device 3		
3.1.24.30.34 I2C Address	I2C Address	Default Value: • 81 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.35 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT1
3.1.24.30.36 Device 4		
3.1.24.30.37 I2C Address	I2C Address	Default Value: • 82 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.30.38 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT2
3.1.24.30.39 Device 5		
3.1.24.30.40 I2C Address	I2C Address	Default Value: • 83 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.41 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT3
3.1.24.30.42 Device 6		

3.1.24.30.43 I2C Address	I2C Address	Default Value: • 84 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.44 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT4
3.1.24.30.45 Device 7		
3.1.24.30.46 I2C Address	I2C Address	Default Value: • 85 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.47 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5

		• EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT5
3.1.24.30.48 Device 8		
3.1.24.30.49 I2C Address	I2C Address	Default Value: • 86 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.50 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT6
3.1.24.30.51 Device 9		
3.1.24.30.52 I2C Address	I2C Address	Default Value: • 87 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.30.53 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • EEPROM_EXT7
3.1.24.30.54 Device 10		
3.1.24.30.55 I2C Address	I2C Address	Default Value: • 88 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.56 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • IO Expander
3.1.24.30.57 Device 11		

3.1.24.30.58 I2C Address	I2C Address	Default Value: • 89 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.1.24.30.59 Device Type		Possible Choices: • Sensor • VCM • EEPROM • EEPROM_EXT1 • EEPROM_EXT2 • EEPROM_EXT3 • EEPROM_EXT4 • EEPROM_EXT5 • EEPROM_EXT6 • EEPROM_EXT7 • IO Expander • Flash Default Value: • Flash
3.1.24.30.60 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Disabled • External • Internal PMIC Default Value: • Disabled
3.1.24.30.61 Flash Driver Selection	Select the Flash Driver as External or Internal PMIC	Possible Choices: • Flash1 • Flash2 • Flash3 • Flash4 • Flash5 • Flash6 Default Value: • Flash1

3.1.24.31 Flash Options		
3.1.24.31.1 Flash6		
3.1.24.31.2 Flash Model		Possible Choices: • External - LM3643 • PMIC - WRC Default Value: • PMIC - WRC
3.1.24.31.3 Flash Mode	Select Flash Mode White LED/Warm LED/IR LED/Xeon LED	Possible Choices: • Disabled • White Led • Warm Led • IR Led • Xeon Led Default Value: • Disabled
3.1.24.31.4 Camera module name		
3.1.24.31.5 I2C Channel		Possible Choices: • I2C0 • I2C1 • I2C2 • I2C3 • I2C4 • I2C5 • I2C6 • I2C7 Default Value: • I2C3
3.1.24.31.6 I2C Address		Default Value: • 103 Numeric Range: Minimum Value: 0 Maximum Value: 127

3.1.24.31.7 Flash Trigger Gpio		
3.1.24.31.8 Group Pad Number		Default Value: • 3 Numeric Range: Minimum Value: 0 Maximum Value: 88
3.1.24.31.9 Group Number		Possible Choices: • A • B • C • D • E • F • H • R • S • T • U Default Value: • D
3.1.24.31.10 Active Value		Default Value: • 1 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.1.24.31.11 Initial Value		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1

3.1.24.31.12 Flash Driver Operating Mode	Select the Flash Driver Operating Mode as Disabled , Torch or Flash	Possible Choices: • Don't flash or light up • Light with ITORCH current continuously • Flash with IFLASH current when TRIGGERed Default Value: • Don't flash or light up
3.1.25 eDRAM Mode	SW Mode eDRAM On or eDRAM Off	Possible Choices: • SW Mode eDRAM Off • SW Mode eDRAM On • eDRAM HW Mode Default Value: • eDRAM HW Mode
3.2 PCH-IO Configuration		
3.2.1 PCI Express Configuration		
3.2.1.1 DMI Link ASPM Control	The control of Active State Power Management of the DMI Link.	Possible Choices: • Disabled • L0s • L1 • L0sL1 • Auto Default Value: • Auto
3.2.1.2 Port8xh Decode	PCI Express Port8xh Decode Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.3 Port8xh Decode Port#	Select PCI Express Port8xh Decode Root Port. User to ensure port availability	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 27
3.2.1.4 Compliance Test Mode	Enable when using Compliance Load Board	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.5 PCIe function swap	When Disabled, prevents PCIE rootport function swap. If any function other than 0th is enabled, 0th will become visible.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.6 PCH PCIE Clock Gating	PCH PCI Express Clock Gating Enable/Disable for all port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.7 PCH PCIE Power Gating	PCH PCI Express Power Gating Enable/Disable for all port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.8 PCIe EQ settings		
3.2.1.8.1 PCIe EQ override	Choose your own PCIe EQ settings, only for users who have a thorough understanding of equalization process	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.8.2 PCIe EQ method	Choose PCIe EQ method	Possible Choices: • PCIe hardware EQ • PCIe fixed EQ Default Value: • PCIe hardware EQ
3.2.1.8.3 PCIe EQ mode	Choose EQ mode. Preset mode - root port will use presets during EQ process, Coefficient mode - root port will use coefficients during EQ process	Possible Choices: • Use presets during EQ • Use coefficients during EQ Default Value: • Use presets during EQ
3.2.1.8.4 EQ PH1 downstream port transmitter preset	Choose the value of the preset that will be used during phase 1 of the equalization	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.2.1.8.5 EQ PH1 upstream port transmitter preset	Choose the value of the preset that will be used during phase 1 of the equalization	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.2.1.8.6 Enable EQ phase 2 local transmitter override	EQ Phase 2 local transmitter override can be used to debug issues with PCI devices equalization.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.8.7 EQ Phase 2 local transmitter override preset	Select preset which will be used during phase 2 of the PCIe EQ	

	process	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 10
3.2.1.8.8 Number of presets or coefficients used during phase 3	Select how many presets or coefficients will be used during phase 3 of EQ. Please not that you have to set all of the list entries to valid values. The interpretation of this field depends on PCIe EQ mode	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 11
3.2.1.8.9 Preset 0	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.10 Preset 1	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.11 Preset 2	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.12 Preset 3	Choose the target preset value	

		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.13 Preset 4	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.14 Preset 5	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.15 Preset 6	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.16 Preset 7	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.17 Preset 8	Choose the target preset value	

		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.18 Preset 9	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.19 Preset 10	Choose the target preset value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.20 Pre-cursor coefficient 0	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.21 Post-cursor coefficient 0	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.22 Pre-cursor coefficient 1	Choose the target pre-cursor	

	coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.23 Post-cursor coefficient 1	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.24 Pre-cursor coefficient 2	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.25 Post-cursor coefficient 2	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.26 Pre-cursor coefficient 3	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.27 Post-cursor coefficient 3	Choose the target post-curosr	

	coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.28 Pre-cursor coefficient 4	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.29 Post-cursor coefficient 4	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.30 Pre-cursor coefficient 5	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.31 Post-cursor coefficient 5	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.32 Pre-cursor coefficient 6	Choose the target pre-cursor	

	coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.33 Post-cursor coefficient 6	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.34 Pre-cursor coefficient 7	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.35 Post-cursor coefficient 7	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.36 Pre-cursor coefficient 8	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.37 Post-cursor coefficient 8	Choose the target post-curosr	

	coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.38 Pre-cursor coefficient 9	Choose the target pre-cursor coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.8.39 Post-cursor coefficient 9	Choose the target post-curosr coefficient value	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 63
3.2.1.9 PCI Express Root Port 1		
3.2.1.9.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.9.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.9.3 L1 Substates	PCI Express L1 Substates	

	settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.9.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
3.2.1.9.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.9.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto

3.2.1.9.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.9.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.9.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.9.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.9.25 PCH PCIe LTR Configuration		

3.2.1.9.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.9.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.9.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.9.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.9.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto

3.2.1.9.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.9.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.9.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.9.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10 PCI Express Root Port 2		
3.2.1.10.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot

3.2.1.10.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.10.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.10.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.10.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.13 SEFE	Root PCI Express System Error	

	on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.10.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.10.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.10.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.10.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20

3.2.1.10.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.10.25 PCH PCIe LTR Configuration		
3.2.1.10.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.10.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.10.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.10.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns

		Default Value: • 1024 ns
3.2.1.10.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.10.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.10.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.10.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.10.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.11 PCI Express Root Port 3		
3.2.1.11.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.11.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.11.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.11.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.11.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.11.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.11.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.11.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.11.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 7
3.2.1.11.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.11.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.11.25 PCH PCIe LTR Configuration		
3.2.1.11.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.11.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.11.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range:

		Minimum Value: 0 Maximum Value: 1023
3.2.1.11.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.11.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.11.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.11.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.11.33 LTR Lock	PCIE LTR Configuration Lock	

		Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.11.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12 PCI Express Root Port 4		
3.2.1.12.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.12.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.12.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.12.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.12.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.10 FER	PCI Express Device Fatal Error	

	Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.12.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.12.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled	Default Value:

	ports before assuming there is no device and potentially disabling the port.	• 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.12.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.12.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.12.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.12.25 PCH PCIe LTR Configuration		
3.2.1.12.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.12.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE.	Possible Choices:

	Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	• Disabled • Manual • Auto Default Value: • Auto
3.2.1.12.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.12.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.12.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.12.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023

3.2.1.12.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.12.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.12.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13 COM-Express PCIe lane 0		
3.2.1.13.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.13.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled

3.2.1.13.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.2.1.13.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.13.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.14 SENFE	Root PCI Express System Error on Non-Fatal Error	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3

		Default Value: • Auto
3.2.1.13.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.13.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.13.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.13.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4

		Maximum Value: 20
3.2.1.13.25 PCH PCIe LTR Configuration		
3.2.1.13.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.13.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.13.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.13.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.13.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter	Possible Choices: • Disabled • Manual

	override values. Auto (default): Maintain default BIOS flow.	• Auto Default Value: • Auto
3.2.1.13.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.13.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.13.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.13.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14 COM-Express PCIe lane 1		
3.2.1.14.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be	Possible Choices: • Built-in

	clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	• Slot Default Value: • Slot
3.2.1.14.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.2.1.14.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.2.1.14.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.14.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.14.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.14.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.14.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.14.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.14.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.1.14.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.14.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.14.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.14.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10

		Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.14.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.14.25 PCH PCIe LTR Configuration		
3.2.1.14.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.14.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.14.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.14.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns

		• 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.14.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.14.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.14.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.14.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.14.34 Peer Memory Write Enable	Peer Memory Write	

	Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15 COM-Express PCIe lane 2		
3.2.1.15.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.15.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.2.1.15.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.2.1.15.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.15.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.1.15.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.15.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.15.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.11 NFER	PCI Express Device Non-Fatal	

	Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.15.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.15.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.15.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.15.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for	

	bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.15.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.15.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.15.25 PCH PCIe LTR Configuration		
3.2.1.15.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.15.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto

3.2.1.15.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.15.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.15.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.15.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.15.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns

		• 33554432 ns Default Value: • 1024 ns
3.2.1.15.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.15.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16 COM-Express PCIe lane 3		
3.2.1.16.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.16.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • Disabled
3.2.1.16.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2

		Default Value: • Disabled
3.2.1.16.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.16.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.15 SECE	Root PCI Express System Error	

	on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.16.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.16.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.16.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.16.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.16.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.16.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.16.25 PCH PCIe LTR Configuration		
3.2.1.16.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.16.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.16.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.16.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.16.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.16.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value:

		• 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.16.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.16.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.16.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17 COM-Express PCIe lane 4 (4-7)		
3.2.1.17.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.17.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State	Possible Choices: • Disabled

	AUTO - BIOS auto configure DISABLE - Disables ASPM	• L0s • L1 • L0sL1 Default Value: • Disabled
3.2.1.17.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • Disabled
3.2.1.17.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.17.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.17.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto

		• Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.17.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.17.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.17.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.17.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4

		Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.17.25 PCH PCIe LTR Configuration		
3.2.1.17.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.17.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.17.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.17.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.2.1.17.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.17.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.17.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.17.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.17.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.18 Internal LAN controller		
3.2.1.18.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.18.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L0s • L1 • L0sL1 Default Value: • L1
3.2.1.18.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.18.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.6 PTM	Enable/Disable Precision Time	

	Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.18.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.18.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.18.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.18.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.18.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7

3.2.1.18.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.18.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.18.25 PCH PCIe LTR Configuration		
3.2.1.18.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.18.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.18.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0

		Maximum Value: 1023
3.2.1.18.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.18.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.18.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.18.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.18.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.18.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19 PCI Express Root Port 11		
3.2.1.19.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.19.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.19.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.19.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value:

		• Enabled
3.2.1.19.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.19.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.16 PME SCI	PCI Express PME SCI	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.19.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.19.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.19.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.19.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.19.25 PCH PCIe LTR Configuration		
3.2.1.19.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.19.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter	Possible Choices: • Disabled • Manual

	override values. Auto (default): Maintain default BIOS flow.	• Auto Default Value: • Auto
3.2.1.19.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.19.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.19.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.19.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.19.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices:

		• 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.19.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.19.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20 PCI Express Root Port 12		
3.2.1.20.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.20.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.20.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices:

		• Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.20.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.20.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.20.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.20.20 Transmitter Half Swing	Transmitter Half Swing	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.20.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.20.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.20.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.20.25 PCH PCIe LTR Configuration		

3.2.1.20.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.20.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.20.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.20.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.20.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto

3.2.1.20.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.20.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.20.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.20.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21 PCI Express Root Port 13		
3.2.1.21.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot

3.2.1.21.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.21.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.21.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.21.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.13 SEFE	Root PCI Express System Error	

	on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.21.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.21.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.21.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.21.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20

3.2.1.21.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.21.25 PCH PCIe LTR Configuration		
3.2.1.21.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.21.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.21.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.21.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns

		Default Value: • 1024 ns
3.2.1.21.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.21.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.21.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.21.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.21.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.22 PCI Express Root Port 14		
3.2.1.22.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.22.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.22.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.22.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.22.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.22.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.22.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.22.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.22.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range:

		Minimum Value: 0 Maximum Value: 7
3.2.1.22.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.22.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.22.25 PCH PCIe LTR Configuration		
3.2.1.22.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.22.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.22.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60

		Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.22.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.22.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.22.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.22.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.2.1.22.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.22.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23 PCI Express Root Port 15		
3.2.1.23.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.23.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.23.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.23.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.2.1.23.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.23.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.2.1.23.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.23.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.21 Detect Timeout	The number of milliseconds reference code will wait for link	

	to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.23.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.23.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.23.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.23.25 PCH PCIe LTR Configuration		
3.2.1.23.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.23.27 Snoop Latency Override	Snoop Latency Override for	

	PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.23.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.23.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.23.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.23.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023

3.2.1.23.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.23.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.23.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24 PCI Express Root Port 16		
3.2.1.24.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.24.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto

3.2.1.24.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.24.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.24.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.24.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto

3.2.1.24.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.24.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.24.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.24.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20

3.2.1.24.25 PCH PCIe LTR Configuration		
3.2.1.24.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.24.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.24.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.24.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.24.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default	Possible Choices: • Disabled • Manual • Auto

	BIOS flow.	Default Value: • Auto
3.2.1.24.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.24.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.24.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.24.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25 PCI Express Root Port 17		
3.2.1.25.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible	Possible Choices: • Built-in • Slot

	slot. SlotImplemented bit will be set.	Default Value: • Slot
3.2.1.25.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.25.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.25.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.7 DPC	Enable/Disable Downstream	

	Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.25.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.25.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.25.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.25.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.25.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1

		Maximum Value: 20
3.2.1.25.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.25.25 PCH PCIe LTR Configuration		
3.2.1.25.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.25.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.25.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.25.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns

		• 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.25.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.25.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.25.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.25.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.25.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.2.1.26 PCI Express Root Port 18		
3.2.1.26.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.26.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.26.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.26.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.26.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.26.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.17 Hot Plug	PCI Express Hot Plug	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.26.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.26.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.26.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.26.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.26.25 PCH PCIe LTR Configuration		
3.2.1.26.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.26.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.26.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value:

		• 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.26.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.26.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.26.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.26.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.2.1.26.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.26.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27 PCI Express Root Port 19		
3.2.1.27.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.27.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.27.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.27.4 L1 Low	PCI Express L1 Low Substate	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.27.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.27.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.27.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.27.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.21 Detect Timeout	The number of milliseconds	

	reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.27.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.27.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.27.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.27.25 PCH PCIe LTR Configuration		
3.2.1.27.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.27.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.27.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.27.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.27.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.27.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0

		Maximum Value: 1023
3.2.1.27.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.27.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.27.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28 PCI Express Root Port 20		
3.2.1.28.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.28.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value:

		• Auto
3.2.1.28.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.28.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.1.28.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.14 SENFE	Root PCI Express System Error	

	on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3

		Default Value: • Auto
3.2.1.28.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.28.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.28.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.28.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4

		Maximum Value: 20
3.2.1.28.25 PCH PCIe LTR Configuration		
3.2.1.28.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.28.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.28.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.28.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.28.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter	Possible Choices: • Disabled • Manual

	override values. Auto (default): Maintain default BIOS flow.	• Auto Default Value: • Auto
3.2.1.28.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.28.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.28.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.28.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29 PCI Express Root Port 21		
3.2.1.29.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be	Possible Choices: • Built-in

	clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	• Slot Default Value: • Slot
3.2.1.29.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.29.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.29.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.29.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.29.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.29.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.29.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.29.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.29.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.1.29.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.29.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.29.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.29.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10

		Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.29.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.29.25 PCH PCIe LTR Configuration		
3.2.1.29.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.29.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.29.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.29.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns

		• 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.29.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.29.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.29.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.29.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.29.34 Peer Memory Write Enable	Peer Memory Write	

	Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30 PCI Express Root Port 22		
3.2.1.30.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.30.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.30.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.30.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.30.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.30.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.30.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.30.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.11 NFER	PCI Express Device Non-Fatal	

	Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.30.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.30.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.30.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.30.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for	

	bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.30.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.30.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.30.25 PCH PCIe LTR Configuration		
3.2.1.30.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.30.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto

3.2.1.30.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.30.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.30.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.30.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.30.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns

		• 33554432 ns Default Value: • 1024 ns
3.2.1.30.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.30.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31 PCI Express Root Port 23		
3.2.1.31.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.31.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.31.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value:

		• L1.1 & L1.2
3.2.1.31.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.31.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.15 SECE	Root PCI Express System Error on Correctable Error	

	Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.31.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.31.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.31.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.31.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.31.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.31.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.31.25 PCH PCIe LTR Configuration		
3.2.1.31.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.1.31.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.31.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.31.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.31.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.31.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value:

		• 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.31.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.31.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.31.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32 PCI Express Root Port 24		
3.2.1.32.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.32.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State	Possible Choices: • Disabled

	AUTO - BIOS auto configure DISABLE - Disables ASPM	• L1 • Auto Default Value: • Auto
3.2.1.32.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.32.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.32.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.32.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto

		• Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.32.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.32.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.32.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.32.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4

		Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.32.25 PCH PCIe LTR Configuration		
3.2.1.32.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.32.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.32.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.32.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.2.1.32.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.32.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.32.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.32.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.32.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.33 PCI Express Root Port 25		
3.2.1.33.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.33.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.33.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.33.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.2.1.33.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.33.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.2.1.33.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.33.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.33.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.33.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7

3.2.1.33.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.33.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.33.25 PCH PCIe LTR Configuration		
3.2.1.33.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.33.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.33.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023

3.2.1.33.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.33.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.33.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.33.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.33.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.33.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34 PCI Express Root Port 26		
3.2.1.34.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.34.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.34.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.34.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.1.34.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.34.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.34.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.34.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.34.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.1.34.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.34.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.34.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0

		Maximum Value: 65535
3.2.1.34.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.34.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.34.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.34.25 PCH PCIe LTR Configuration		
3.2.1.34.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.34.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default	Possible Choices: • Disabled • Manual • Auto

	BIOS flow.	Default Value: • Auto
3.2.1.34.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.34.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.34.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.34.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.34.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns

		• 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.34.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.34.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35 PCI Express Root Port 27		
3.2.1.35.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.35.2 ASPM	Set the ASPM Level: Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.35.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1

		• L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.35.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.9 URR	PCI Express Unsupported	

	Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.35.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.35.19 PCIe Speed	Configure PCIe Speed	Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.35.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.35.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.35.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.35.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.35.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.35.25 PCH PCIe LTR Configuration		
3.2.1.35.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.2.1.35.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.35.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.35.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.35.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.35.31 Non Snoop Latency Value	LTR Non Snoop Latency value	

	of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.35.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.35.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.35.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36 PCI Express Root Port 28		
3.2.1.36.1 Connection Type	Built-In: a built-in device is connected to this rootport. SlotImplemented bit will be clear. Slot: this rootport connects to user-accessible slot. SlotImplemented bit will be set.	Possible Choices: • Built-in • Slot Default Value: • Slot
3.2.1.36.2 ASPM	Set the ASPM Level:	

	Force L0s - Force all links to L0s State AUTO - BIOS auto configure DISABLE - Disables ASPM	Possible Choices: • Disabled • L1 • Auto Default Value: • Auto
3.2.1.36.3 L1 Substates	PCI Express L1 Substates settings.	Possible Choices: • Disabled • L1.1 • L1.1 & L1.2 Default Value: • L1.1 & L1.2
3.2.1.36.4 L1 Low	PCI Express L1 Low Substate Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.5 ACS	Enable/Disable Access Control Services Extended Capability	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.6 PTM	Enable/Disable Precision Time Measurement	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.7 DPC	Enable/Disable Downstream Port Containment	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.1.36.8 EDPC	Enable/Disable Rootport extensions for Downstream Port Containment	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.9 URR	PCI Express Unsupported Request Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.10 FER	PCI Express Device Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.11 NFER	PCI Express Device Non-Fatal Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.12 CER	PCI Express Device Correctable Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.13 SEFE	Root PCI Express System Error on Fatal Error Enable/Disable.	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.1.36.14 SENFE	Root PCI Express System Error on Non-Fatal Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.15 SECE	Root PCI Express System Error on Correctable Error Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.16 PME SCI	PCI Express PME SCI Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.17 Hot Plug	PCI Express Hot Plug Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.18 Advanced Error Reporting	Advanced Error Reporting Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.19 PCIe Speed	Configure PCIe Speed	

		Possible Choices: • Auto • Gen1 • Gen2 • Gen3 Default Value: • Auto
3.2.1.36.20 Transmitter Half Swing	Transmitter Half Swing Enable/Disable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.21 Detect Timeout	The number of milliseconds reference code will wait for link to exit Detect state for enabled ports before assuming there is no device and potentially disabling the port.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.1.36.22 Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 7
3.2.1.36.23 Reserved Memory	Reserved Memory for this Root Bridge (1-20) MB	Default Value: • 10 Numeric Range: Minimum Value: 1 Maximum Value: 20
3.2.1.36.24 Reserved I/O	Reserved I/O (4K/8K/12K/16K/20K) Range for this Root Bridge.	

		Default Value: • 4 Numeric Range: Minimum Value: 4 Maximum Value: 20
3.2.1.36.25 PCH PCIe LTR Configuration		
3.2.1.36.26 LTR	PCH PCIE Latency Reporting Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.1.36.27 Snoop Latency Override	Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.36.28 Snoop Latency Value	LTR Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.36.29 Snoop Latency Multiplier	LTR Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns

3.2.1.36.30 Non Snoop Latency Override	Non Snoop Latency Override for PCH PCIE. Disabled: Disable override. Manual: Manually enter override values. Auto (default): Maintain default BIOS flow.	Possible Choices: • Disabled • Manual • Auto Default Value: • Auto
3.2.1.36.31 Non Snoop Latency Value	LTR Non Snoop Latency value of PCH PCIE	Default Value: • 60 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.1.36.32 Non Snoop Latency Multiplier	LTR Non Snoop Latency Multiplier of PCH PCIE	Possible Choices: • 1 ns • 32 ns • 1024 ns • 32768 ns • 1048576 ns • 33554432 ns Default Value: • 1024 ns
3.2.1.36.33 LTR Lock	PCIE LTR Configuration Lock	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.1.36.34 Peer Memory Write Enable	Peer Memory Write Enable/Disable	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.1.37 PCIE clocks		
3.2.1.37.1 Clock0 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.2 ClkReq for Clock0	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.3 Clock1 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.4 ClkReq for Clock1	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.5 Clock2 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR

3.2.1.37.6 ClkReq for Clock2	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.7 Clock3 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.8 ClkReq for Clock3	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.9 Clock4 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.10 ClkReq for Clock4	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.11 Clock5 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock	Possible Choices: • Platform-POR • Enabled

	enabledeven if unused. Disabled = Disable clock.	• Disabled Default Value: • Platform-POR
3.2.1.37.12 ClkReq for Clock5	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.13 Clock6 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.14 ClkReq for Clock6	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.15 Clock7 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.16 ClkReq for Clock7	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR

3.2.1.37.17 Clock8 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.18 ClkReq for Clock8	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.19 Clock9 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.20 ClkReq for Clock9	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.21 Clock10 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.22 ClkReq for Clock10	Platform-POR = CLKREQ signal is assigned to CLKSRC	Possible Choices:

	according to board layout. Disabled = CLKREQ will not be used.	• Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.23 Clock11 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.24 ClkReq for Clock11	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.25 Clock12 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.26 ClkReq for Clock12	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.27 Clock13 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value:

		• Platform-POR
3.2.1.37.28 ClkReq for Clock13	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.29 Clock14 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.30 ClkReq for Clock14	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.31 Clock15 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.32 ClkReq for Clock15	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.33 Clock16 assignment	Platform-POR = clock is assigned to PCIe port or LAN	Possible Choices:

	according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	• Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.34 ClkReq for Clock16	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.1.37.35 Clock17 assignment	Platform-POR = clock is assigned to PCIe port or LAN according to board layout. Enabled = keep clock enabledeven if unused. Disabled = Disable clock.	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Platform-POR
3.2.1.37.36 ClkReq for Clock17	Platform-POR = CLKREQ signal is assigned to CLKSRC according to board layout. Disabled = CLKREQ will not be used.	Possible Choices: • Platform-POR • Disabled Default Value: • Platform-POR
3.2.2 SATA Configuration		
3.2.2.1 SATA Controller(s)	Enable/Disable SATA Device.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.2.2 SATA Mode Selection	Determines how SATA controller(s) operate.	Possible Choices: • AHCI Default Value:

		• AHCI
3.2.2.3 SATA Test Mode	Test Mode Enable/Disable (Loop Back).	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.2.4 Aggressive LPM Support	Enable PCH to aggressively enter link power state.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.5 Serial ATA Port 0		
3.2.2.6 Software Preserve		
3.2.2.7 Port 0	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.8 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.9 Configured as eSATA		
3.2.2.10 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.2.11 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.12 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.13 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.14 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.15 SATA Port 0 DevSlp	Enable/Disable SATA Port 0 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.16 DITO Configuration	Enable/Disable DITO	

	Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.17 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.18 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.19 Serial ATA Port 1		
3.2.2.20 Software Preserve		
3.2.2.21 Port 1	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.22 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.23 Configured as eSATA		

3.2.2.24 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.25 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.26 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.27 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.28 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.29 SATA Port 1 DevSlp	Enable/Disable SATA Port 1 DevSlp. For DevSlp to work, both hard drive and SATA port	Possible Choices: • Disabled

	need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	• Enabled Default Value: • Disabled
3.2.2.30 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.31 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.32 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.33 Serial ATA Port 2		
3.2.2.34 Software Preserve		
3.2.2.35 Port 2	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.36 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.2.2.37 Configured as eSATA		
3.2.2.38 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.39 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.40 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.41 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.42 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2

		Default Value: • Unknown
3.2.2.43 SATA Port 2 DevSlp	Enable/Disable SATA Port 2 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.44 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.45 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.46 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.47 Serial ATA Port 3		
3.2.2.48 Software Preserve		
3.2.2.49 Port 3	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.2.50 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.51 Configured as eSATA		
3.2.2.52 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.53 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.54 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.55 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive

3.2.2.56 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.57 SATA Port 3 DevSlp	Enable/Disable SATA Port 3 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.58 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.59 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.60 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15

3.2.2.61 Serial ATA Port 4		
3.2.2.62 Software Preserve		
3.2.2.63 Port 4	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.64 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.65 Configured as eSATA		
3.2.2.66 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.67 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.68 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.2.69 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.70 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.71 SATA Port 4 DevSlp	Enable/Disable SATA Port 4 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.72 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.73 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.74 DM Value	DM Value	

		Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.75 Serial ATA Port 5		
3.2.2.76 Software Preserve		
3.2.2.77 Port 5	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.78 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.79 Configured as eSATA		
3.2.2.80 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.81 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.82 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be	

	performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.83 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.84 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.85 SATA Port 5 DevSlp	Enable/Disable SATA Port 5 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.86 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.87 DITO Value	DITO Value	Default Value: • 625

		Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.88 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.89 Serial ATA Port 6		
3.2.2.90 Software Preserve		
3.2.2.91 Port 6	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.92 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.93 Configured as eSATA		
3.2.2.94 External	Marks this port as external.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.95 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch.	Possible Choices: • Disabled

	Note: Requires hardware support.	• Enabled Default Value: • Disabled
3.2.2.96 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.97 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.98 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.99 SATA Port 6 DevSlp	Enable/Disable SATA Port 6 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.100 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.2.2.101 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.102 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.2.103 Serial ATA Port 7		
3.2.2.104 Software Preserve		
3.2.2.105 Port 7	Enable or Disable SATA Port	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.2.106 Hot Plug	Designates this port as Hot Pluggable.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.107 Configured as eSATA		
3.2.2.108 External	Marks this port as external.	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.2.109 Mechanical Presence Switch	Controls reporting if this port has an Mechanical Presence Switch. Note: Requires hardware support.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.110 Spin Up Device	If enabled for any of ports Staggerred Spin Up will be performed and only the drives which have this option enabled will spin up at boot. Otherwise all drives spin up at boot.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.111 SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive	Possible Choices: • Hard Disk Drive • Solid State Drive Default Value: • Hard Disk Drive
3.2.2.112 Topology	Identify the SATA Topology if it is Default or ISATA or Flex or DirectConnect or M2	Possible Choices: • Unknown • ISATA • Direct Connect • Flex • M2 Default Value: • Unknown
3.2.2.113 SATA Port 7 DevSlp	Enable/Disable SATA Port 7 DevSlp. For DevSlp to work, both hard drive and SATA port need to support DevSlp function, otherwise an unexpected behavior might happen. Please check board design before enabling it.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.2.114 DITO Configuration	Enable/Disable DITO Configuration	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.2.115 DITO Value	DITO Value	Default Value: • 625 Numeric Range: Minimum Value: 0 Maximum Value: 1023
3.2.2.116 DM Value	DM Value	Default Value: • 15 Numeric Range: Minimum Value: 0 Maximum Value: 15
3.2.3 USB Configuration		
3.2.3.1 xDCI Support	Enable/Disable xDCI (USB OTG Device).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.2 USB2 PHY Sus Well Power Gating	Select 'Enabled' to enable SUS Well PG for USB2 PHY. This option has no effect on PCH-H	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.3 USB PDO Programming	Select 'Enabled' if Port Disable	

	Override functionality is used.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.4 USB Overcurrent	Select 'Disabled' for pin-based debug. If pin-based debug is enabled but USB overcurrent is not disabled, USB DbC does not work.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.5 USB Overcurrent Lock	Select 'Enabled' if Overcurrent functionality is used. Enabling this will make xHCI controller consume the Overcurrent mapping data	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.6 USB Audio Offload	Enable/Disable USB Audio Offload functionality	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.7 Enable HSII on xHCI	Enable/Disable HSII feature. It may lead to increased power consumption.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.8 USB3.1 Portx Speed Selection	PortX Speed Selection: 0-> All ports in Gen2 speed(Default) 1-> Gen 1 speed for port 1 only 2-> Gen 1 speed for port 2 only 3-> Gen 1 speed for port 1 and port 2 4-> Gen 1 Speed for port 3 only	Default Value: • 0 Numeric Range: Minimum Value: 0

	5-> Gen 1 speed for port 1 and port 3 ... so on 15-> All ports 1-4 are limited to Gen 1	Maximum Value: 15
3.2.3.9 USB Port Disable Override	Selectively Enable/Disable the corresponding USB port from reporting a Device Connection to the controller.	Possible Choices: • Disabled • Select Per-Pin Default Value: • Disabled
3.2.3.10 USB SW Device Mode Port #0	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.11 USB SW Device Mode Port #1	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.12 USB SW Device Mode Port #2	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.13 USB SW Device Mode Port #3	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.3.14 USB SW Device Mode Port #4	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.15 USB SW Device Mode Port #5	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.16 USB SW Device Mode Port #6	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.17 USB SW Device Mode Port #7	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.18 USB SW Device Mode Port #8	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.19 USB SW Device Mode Port #9	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.2.3.20 USB SW Device Mode Port #10	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.21 USB SW Device Mode Port #11	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.22 USB SW Device Mode Port #12	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.23 USB SW Device Mode Port #13	Enable Connector Event for device subscription.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.3.24 USB SS Physical Connector #0	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.25 USB SS Physical Connector #1	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not	Possible Choices: • Disabled • Enabled

	be detected by BIOS or OS.	Default Value: • Enabled
3.2.3.26 USB SS Physical Connector #2	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.27 USB SS Physical Connector #3	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.28 USB SS Physical Connector #4	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.29 USB SS Physical Connector #5	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.30 USB SS Physical Connector #6	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.31 USB SS Physical Connector #7	Enable/Disable this USB Physical Connector (physical port).	

	Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.32 USB SS Physical Connector #8	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.33 USB SS Physical Connector #9	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.34 USB HS Physical Connector #0	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.35 USB HS Physical Connector #1	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.36 USB HS Physical Connector #2	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.3.37 USB HS Physical Connector #3	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.38 USB HS Physical Connector #4	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.39 USB HS Physical Connector #5	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.40 USB HS Physical Connector #6	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.41 USB HS Physical Connector #7	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.42 USB HS Physical Connector #8	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not	Possible Choices: • Disabled • Enabled

	be detected by BIOS or OS.	Default Value: • Enabled
3.2.3.43 USB HS Physical Connector #9	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.44 USB HS Physical Connector #10	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.45 USB HS Physical Connector #11	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.46 USB HS Physical Connector #12	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.47 USB HS Physical Connector #13	Enable/Disable this USB Physical Connector (physical port). Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.3.48 USB Sensor Hub	USB Sensor Hub enable/disable	Possible Choices: • Enabled

		• Disabled Default Value: • Disabled
3.2.4 Security Configuration		
3.2.4.1 RTC Memory Lock	Enable will lock bytes 38h-3Fh in the lower/upper 128-byte bank of RTC RAM	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.4.2 BIOS Lock	Enable/Disable the PCH BIOS Lock Enable feature. Required to be enabled to ensure SMM protection of flash.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.4.3 Force unlock on all GPIO pads	If Enabled BIOS will force all GPIO pads to be in unlocked state	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5 HD Audio Configuration		
3.2.5.1 HD Audio Subsystem Configuration Settings		
3.2.5.2 HD Audio	Control Detection of the HD-Audio device. Disabled = HDA will be unconditionally disabled Enabled = HDA will be unconditionally enabled.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.3 Audio DSP	Enable/Disable Audio DSP.	Possible Choices: • Disabled

		• Enabled Default Value: • Enabled
3.2.5.4 Audio DSP Compliance Mode	Specifies DSP enabled system compliance: 1. Non-UAA (IntelSST driver support only - CC_040100) 2. UAA (HD Audio Inbox or IntelSST driver support - CC_040380) Note: NHLT (DMIC/BT/I2S configuration) is published for non-UAA only.	Possible Choices: • Non-UAA (IntelSST) • UAA (HDA Inbox/IntelSST) Default Value: • UAA (HDA Inbox/IntelSST)
3.2.5.5 HDA Link	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.6 DMIC #0	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.7 Dmic Clock Source Select	N/A	Possible Choices: • Both • ClkA • ClkB Default Value: • ClkA
3.2.5.8 DMIC #1	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3	Possible Choices: • Disabled • Enabled

	CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Default Value: • Disabled
3.2.5.9 Dmic Clock Source Select	N/A	Possible Choices: • Both • ClkA • ClkB Default Value: • ClkA
3.2.5.10 SSP #0	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.11 SSP #1	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.12 SSP #2	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.13 SSP #3	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.5.14 SSP #4	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.15 SSP #5	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.16 SNDW #0	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.17 SNDW #1	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.18 SNDW #2	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3 CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.19 SNDW #3	Muxed interfaces: 1) HDA/SSP0 2) HDA[SDI1]/SSP1 3) DMIC0/SNDW4 4) DMIC1/SNDW3	Possible Choices: • Disabled • Enabled

	CNL only: 5) HDA/SNDW1 6) SSP1/SNDW2	Default Value: • Disabled
3.2.5.20 HD Audio Advanced Configuration		
3.2.5.20.1 HD Audio Subsystem Advanced Configuration Settings		
3.2.5.20.2 iDisplay Audio Disconnect	Disconnects SDI2 signal to hide/disable iDisplay Audio Codec.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.3 Codec Sx Wake Capability	Capability to detect wake initiated by a codec in Sx (eg by modem codec)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.4 PME Enable	Enables PME wake of HD Audio controller during POST.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.5 Statically Switchable BCLK Clock Frequency Configuration:		
3.2.5.20.6 HD Audio Link Frequency	Selects HD Audio Link frequency. Applicable only if HDA codec supports selected frequency.	Possible Choices: • 6 MHz • 12 MHz • 24 MHz Default Value: • 24 MHz
3.2.5.20.7 iDisplay Audio Link Frequency	Selects iDisplay Link frequency.	

		Possible Choices: • 48 MHz • 96 MHz Default Value: • 96 MHz
3.2.5.20.8 iDisplay Audio Link T-Mode	Indicates whether SDI is operating in 1T, 2T (CNL) or 2T, 4T, 8T mode (ICL).	Possible Choices: • 1T Mode • 2T Mode • 4T Mode • 8T Mode • 16T Mode Default Value: • 8T Mode
3.2.5.20.9 Autonomous Clock Stop SNDW #0	Enable/Disable Autonomous Clock Stop for SoundWire LINK0	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.10 Autonomous Clock Stop SNDW #1	Enable/Disable Autonomous Clock Stop for SoundWire LINK1	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.11 Autonomous Clock Stop SNDW #2	Enable/Disable Autonomous Clock Stop for SoundWire LINK2	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.20.12 Autonomous Clock Stop SNDW #3	Enable/Disable Autonomous Clock Stop for SoundWire LINK3	Possible Choices: • Disabled • Enabled

		Default Value: • Disabled
3.2.5.20.13 Data On Active Interval Select SNDW #0	Data On Active Interval Select: 1) 6 clock periods 2) 7 clock periods 3) 8 clock periods 4) 11 clock periods 5)	Possible Choices: • 6 clock periods • 7 clock periods • 8 clock periods • 11 clock periods Default Value: • 11 clock periods
3.2.5.20.14 Data On Active Interval Select SNDW #1	Data On Active Interval Select: 1) 6 clock periods 2) 7 clock periods 3) 8 clock periods 4) 11 clock periods 5)	Possible Choices: • 6 clock periods • 7 clock periods • 8 clock periods • 11 clock periods Default Value: • 11 clock periods
3.2.5.20.15 Data On Active Interval Select SNDW #2	Data On Active Interval Select: 1) 6 clock periods 2) 7 clock periods 3) 8 clock periods 4) 11 clock periods 5)	Possible Choices: • 6 clock periods • 7 clock periods • 8 clock periods • 11 clock periods Default Value: • 11 clock periods
3.2.5.20.16 Data On Active Interval Select SNDW #3	Data On Active Interval Select: 1) 6 clock periods 2) 7 clock periods 3) 8 clock periods 4) 11 clock periods 5)	Possible Choices: • 6 clock periods • 7 clock periods • 8 clock periods • 11 clock periods Default Value: • 11 clock periods
3.2.5.20.17 Data On Delay Select SNDW #0	Data On Delay Select: 1) 2 clock periods 2) 3 clock periods 3)	Possible Choices: • 2 clock periods • 3 clock periods

		Default Value: • 3 clock periods
3.2.5.20.18 Data On Delay Select SNDW #1	Data On Delay Select: 1) 2 clock periods 2) 3 clock periods 3)	Possible Choices: • 2 clock periods • 3 clock periods Default Value: • 3 clock periods
3.2.5.20.19 Data On Delay Select SNDW #2	Data On Delay Select: 1) 2 clock periods 2) 3 clock periods 3)	Possible Choices: • 2 clock periods • 3 clock periods Default Value: • 3 clock periods
3.2.5.20.20 Data On Delay Select SNDW #3	Data On Delay Select: 1) 2 clock periods 2) 3 clock periods 3)	Possible Choices: • 2 clock periods • 3 clock periods Default Value: • 3 clock periods
3.2.5.20.21 ACX SSID 305610EC Codecs Topology	Codecs: ALC711-VD1, ALC714-VC1, 2x ALC316	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21 HD Audio DSP Features Configuration		
3.2.5.21.1 HD Audio Subsystem Features Configuration (ACPI)		
3.2.5.21.2 Audio DSP NHLT Endpoints Configuration:		
3.2.5.21.3 Dmic Mono 38.4MHz	Enables/Disables 1 Mic Array Endpoint in NHLT ACPI table. XTAL: 38.4MHz.	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.2.5.21.4 Dmic Stereo 38.4MHz	Enables/Disables 2 Mic Array Endpoint in NHLT ACPI table. XTAL: 38.4MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.5 Dmic Quad 38.4MHz	Enables/Disables 4 Mic Array Endpoint in NHLT ACPI table. XTAL: 38.4MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.6 Dmic Mono 24MHz	Enables/Disables 1 Mic Array Endpoint in NHLT ACPI table. XTAL: 24MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.7 Dmic Stereo 24MHz	Enables/Disables 2 Mic Array Endpoint in NHLT ACPI table. XTAL: 24MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.8 Dmic Quad 24MHz	Enables/Disables 4 Mic Array Endpoint in NHLT ACPI table. XTAL: 24MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.5.21.9 Bluetooth 38.4MHz	Enables/Disables Bluetooth Endpoint in NHLT ACPI table. XTAL: 38.4MHz.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.21.10 Bluetooth 24MHz	Enables/Disables Bluetooth Endpoint in NHLT ACPI table. XTAL: 24MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.11 I2S Alc274 38.4MHz	Enables/Disables I2S Endpoint for ALC274 in NHLT ACPI table. XTAL: 38.4MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.12 I2S Alc274 24MHz	Enables/Disables I2S Endpoint for ALC274 in NHLT ACPI table. XTAL: 24MHz.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.13 LONTIUMI2S0	Enables/Disables I2S0 Endpoint for LONTIUM in NHLT ACPI table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.14 LONTIUMI2S2	Enables/Disables I2S2 Endpoint for LONTIUM in NHLT ACPI table	Possible Choices: • Disabled • Enabled Default Value:

		• Disabled
3.2.5.21.15 EVEREST8316	Enables/Disables I2S1 Endpoint for EVEREST in NHLT ACPI table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.16 Realtek ALC5682I-VD	Enables/Disables Endpoint for Realtek ALC5682I-VD in NHLT ACPI table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.17 Realtek ALC5682I-VS	Enables/Disables Endpoint for Realtek ALC5682I-VS in NHLT ACPI table	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.18 I2S Codec Select	Selects I2S Audio Codec support. Note: Seriallo UART0 must be disabled to enable external I2S codec (due to GPIO pin muxing).	Possible Choices: • Disabled • Realtek ALC274 • Realtek ALC1308 • EVEREST8316 • EVEREST8326 • EVEREST8336 • Realtek ALC5682I_VD • Realtek ALC5682I_VS Default Value: • Disabled
3.2.5.21.19 I2S Codec Bus Number	Selectcs Codec Bus from Serial IO I2C0/1/2/3/4/5	Possible Choices: • COM-Express I2C • I2C1 Controller • I2C2 Controller • I2C3 Controller • I2C4 Controller

		• I2C5 Controller Default Value: • COM-Express I2C
3.2.5.21.20 Audio DSP Feature Support:	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	
3.2.5.21.21 WoV (Wake on Voice)	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.21.22 Bluetooth Sideband	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.21.23 BT Intel HFP	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV	Possible Choices:

	[BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	• Disabled • Enabled Default Value: • Enabled
3.2.5.21.24 BT Intel A2DP	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.5.21.25 BT Intel LE Audio	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.26 ACX/SDCA	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode)	Possible Choices: • Disabled • Enabled Default Value: • Disabled

	[BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	
3.2.5.21.27 ACX/SDCA speaker aggregation	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.28 Codec based VAD	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.29 DSP based Speech Pre-Processing Disabled	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband [BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.30 Voice Activity Detection	Enables/Disables DSP Feature. Bitmask structure: [BIT0] - WoV [BIT1] - BT Sideband	Possible Choices: • Intel Wake on Voice

	[BIT2] - Codec based VAD [BIT5] - BT Intel HFP [BIT6] - BT Intel A2DP [BIT7] - DSP based speech pre-processing disabled (for Intel WoV mode) [BIT8] - WoV Mode: Intel WoV / Windows Voice Activation for Cortana	• Windows 10 Voice Activation Default Value: • Windows 10 Voice Activation
3.2.5.21.31 Discrete BT HCI Audio Offload Support	Enables/Disables Discrete Bluetooth HCI Audio Offload Support	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.32 Discrete BT HCI Audio Offload Link	Selects used SSP port for the discrete BT HCI Audio Offload	Possible Choices: • SSP #0 • SSP #1 • SSP #2 • SSP #3 • SSP #4 • SSP #5 Default Value: • SSP #0
3.2.5.21.33 Audio DSP Pre/Post-Processing Module Support:	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	
3.2.5.21.34 Waves Post-process	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.35 DTS	Enables/Disables 3rd Party Processing Module Support (identified by GUID).	Possible Choices:

	WoV must be enabled as a feature first to select relevant WoV IP.	• Disabled • Enabled Default Value: • Disabled
3.2.5.21.36 IntelSST Speech	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.37 Dolby	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.38 Waves Pre-process	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.39 Audyssey	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.40 Maxim Smart AMP	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.5.21.41 ForteMedia SAMSoft	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.42 Sound Research IP	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.43 Conexant Pre-Process	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.44 Conexant Smart Amp	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.45 Realtek Post-Process	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.46 Realtek Smart Amp	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant	Possible Choices: • Disabled • Enabled Default Value:

	WoV IP.	• Disabled
3.2.5.21.47 Icepower IP MFX sub module	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.48 Icepower IP EFX sub module	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.49 Icepower IP SFX sub module	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.50 Voice Preprocessing	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.51 Acoustic Context Awareness (ACA)	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.52 Custom Module 'Alpha'	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a	Possible Choices: • Disabled • Enabled

	feature first to select relevant WoV IP.	Default Value: • Disabled
3.2.5.21.53 'Alpha' GUID:	Input hex digit character in aabbccdd-eeff-gghh-iijj-kkllmmnnoopp format.	
3.2.5.21.54 Custom Module 'Beta'	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.55 'Beta' GUID:	Input hex digit character in aabbccdd-eeff-gghh-iijj-kkllmmnnoopp format.	
3.2.5.21.56 Custom Module 'Gamma'	Enables/Disables 3rd Party Processing Module Support (identified by GUID). WoV must be enabled as a feature first to select relevant WoV IP.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.5.21.57 'Gamma' GUID:	Input hex digit character in aabbccdd-eeff-gghh-iijj-kkllmmnnoopp format.	
3.2.5.22 HD Audio Bus Controller Subsystem Id	Selects HD Audio Bus Controller Subsystem Id	Possible Choices: • 72708086 • 300010EC • 300210EC • 300410EC • 300610EC • 300810EC • 300A10EC • 300C10EC • 300E10EC • 301010EC • 301210EC • 301610EC • 301810EC • 301A10EC • 301C10EC

		• 301E10EC • 302010EC • 302210EC • 302410EC • 302610EC • 302810EC • 302A10EC • 302C10EC • 302E10EC • 303010EC • 303810EC • 304210EC • 304A10EC • 305410EC • 305610EC • 0A321028 Default Value: • 72708086
3.2.5.23 Virtual Channel Type	Enable/Disable HD Audio to use VC0/VC1. Default is VC0.	Possible Choices: • VC0 • VC1 Default Value: • VC0
3.2.5.24 HDA Codec ALC245 Configuration	Option for configuring DMIC connection to ALC245.	Possible Choices: • No Dmic to codec • 4 Dmic to codec • 2 Dmic to codec Default Value: • No Dmic to codec
3.2.6 THC Configuration		
3.2.6.1 Touch Host Controller Configuration Settings		
3.2.6.2 THC Port Configuration	Assign Port to THC	Possible Choices: • None • THC0 Default Value: • None

3.2.6.3 Port Clock	SPI_DFX_CLK_EN BIT set to 0 or 1	Possible Choices: • Functional • DFX Default Value: • Functional
3.2.6.4 Active LTR	Expose Active LTR data through ACPI _DSM for OS driver to configure	Default Value: • 4294967295 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.5 Idle LTR	Expose Idle LTR data through ACPI _DSM for OS driver to configure	Default Value: • 4294967295 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.6 HID Over SPI Limit Packet Size	When set, limits SPI read & write packet size to 64B. Otherwise, THC uses Max Soc packet size for SPI Read and Write 0 - Max Soc Packet Size 1 - 64 Bytes	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.2.6.7 Hid Over Spi Performance Limitation	Minimum amount of delay the driver must wait between end of write operation and begin of read operation. This value shall be in 10us multiples 0-Disabled 1-65535 (0xFFFF) up to 655350us	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.6.8 Wake On Touch	Based on this setting vGPIO for given THC will be in native mode, and additional _CRS for wake will be exposed in ACPI	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.6.9 THC Mode	Switch between Intel THC protcol and Industry standard HID Over SPI protocol.	Possible Choices: • THC • HID over SPI Default Value: • THC
3.2.6.10 Connection Speed	HID Over SPI Connection Speed in Hz	Default Value: • 17000000 Numeric Range: Minimum Value: 0 Maximum Value: 40000000
3.2.6.11 Flags	HID Over SPI Flags	Possible Choices: • Single SPI Mode • Dual SPI Mode • Quad SPI Mode Default Value: • Single SPI Mode
3.2.6.12 Input Report Body Address	HID Over SPI Input Report Body Address	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.13 Input Report Header Address	HID Over SPI Input Report Header Address	

		Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.14 Output Report Address	HID Over SPI Output Report Address	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.15 Write Opcode	HID Over SPI Write Opcode	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.16 Read Opcode	HID Over SPI Read Opcode	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.17 Reset Pad Trigger	HID Over SPI Reset Pad Trigger	Possible Choices: • Low • High Default Value: • Low
3.2.6.18 THC Port Configuration	Assign Port to THC	Possible Choices: • None • THC1

		Default Value: • None
3.2.6.19 Port Clock	SPI_DFX_CLK_EN BIT set to 0 or 1	Possible Choices: • Functional • DFX Default Value: • Functional
3.2.6.20 Active LTR	Expose Active LTR data through ACPI _DSM for OS driver to configure	Default Value: • 4294967295 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.21 Idle LTR	Expose Idle LTR data through ACPI _DSM for OS driver to configure	Default Value: • 4294967295 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.22 HID Over SPI Limit Packet Size	When set, limits SPI read & write packet size to 64B. Otherwise, THC uses Max Soc packet size for SPI Read and Write 0 - Max Soc Packet Size 1 - 64 Bytes	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 1
3.2.6.23 Hid Over Spi Performance Limitation	Minimum amount of delay the driver must wait between end of write operation and begin of read operation. This value shall be in 10us multiples 0-Disabled 1-65535 (0xFFFF) up to	Default Value: • 0 Numeric Range:

	655350us	Minimum Value: 0 Maximum Value: 65535
3.2.6.24 Wake On Touch	Based on this setting vGPIO for given THC will be in native mode, and additional _CRS for wake will be exposed in ACPI	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.6.25 THC Mode	Switch between Intel THC protcol and Industry standard HID Over SPI protocol.	Possible Choices: • THC • HID over SPI Default Value: • THC
3.2.6.26 Connection Speed	HID Over SPI Connection Speed in Hz	Default Value: • 17000000 Numeric Range: Minimum Value: 0 Maximum Value: 40000000
3.2.6.27 Flags	HID Over SPI Flags	Possible Choices: • Single SPI Mode • Dual SPI Mode • Quad SPI Mode Default Value: • Single SPI Mode
3.2.6.28 Input Report Body Address	HID Over SPI Input Report Body Address	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295

3.2.6.29 Input Report Header Address	HID Over SPI Input Report Header Address	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.30 Output Report Address	HID Over SPI Output Report Address	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.31 Write Opcode	HID Over SPI Write Opcode	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.32 Read Opcode	HID Over SPI Read Opcode	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 4294967295
3.2.6.33 Reset Pad Trigger	HID Over SPI Reset Pad Trigger	Possible Choices: • Low • High Default Value: • Low
3.2.6.34 THC is not available		

3.2.7 Seriallo Configuration		
3.2.7.1 COM-Express I2C	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Post Code Only Default Value: • Enabled
3.2.7.2 I2C1 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.3 I2C2 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.4 I2C3 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.5 I2C4 Controller	Enables/Disables Seriallo Controller For I2C5 and UART2 to work this device has to be enabled	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.6 I2C5 Controller	Enables/Disables Seriallo Controller For this device to work I2C4 has to be enabled	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.7.7 I2C6 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.8 I2C7 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.9 COM-Express General Purpose SPI	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.10 SPI1 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.11 SPI2 Controller	Enables/Disables Seriallo SPI2 Controller The following device depends from: Thermal Subsystem in PCI mode Otherwise SPI2 will not appear in the OS	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.7.12 SPI3 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.13 SPI4 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.14 SPI5 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.15 SPI6 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.16 UART0 Controller	Set UART0 mode - DBG used for BIOS log print and/or Kernel OS Debug - COM - 16550 compatible serial port with Power Gating support	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.17 UART1 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded	Possible Choices: • Disabled • Enabled

	Controller driving is needed (through SECO EAPI).	• Communication port (COM) Default Value: • Disabled
3.2.7.18 UART2 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.19 UART3 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.20 UART4 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.21 UART5 Controller	Enable (default) or Disable COM-Express General Purpose I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.22 UART6 Controller	Enable (default) or Disable COM-Express General Purpose	

	I2C to be driven by PCH. Must be Disabled if Embedded Controller driving is needed (through SECO EAPI).	Possible Choices: • Disabled • Enabled • Communication port (COM) Default Value: • Disabled
3.2.7.23 UART2 Controller		
3.2.7.24 Seriallo D3 State	Enable/Disable Seriallo D3 State	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.25 GPIO IRQ Route	Route all GPIOs to one of the IRQ.	Possible Choices: • IRQ14 • IRQ15 Default Value: • IRQ14
3.2.7.26 Serial IO I2C0 Settings		
3.2.7.26.1 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.7.26.2 Serial IO Touch Pad Settings		
3.2.7.26.2.1 Touch Pad	Indicates what type of I2C Touch Pad is connected to this Seriallo controller	Possible Choices: • Disabled • Synaptics Precision Touchpad • Synaptics Forcepad • ALPS Precision Touchpad

		ClickPad • THAT Touchpad • Sensel Forcepad • Smart C Cover • Custom device Default Value: • Disabled
3.2.7.26.2.2 Touch Pad Interrupt Mode	Selects different routing for interrupts from Touch Pad	Possible Choices: • GPIO Interrupt • APIC Interrupt Default Value: • APIC Interrupt
3.2.7.26.2.3 Device's bus address	Specify parameters of custom I2C device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.2.7.26.2.4 Device's HID address	Specify parameters of custom I2C device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.2.5 Device's bus speed	Specify parameters of custom I2C device	Possible Choices: • 100kHz • 400kHz • 1MHz Default Value: • 100kHz
3.2.7.26.3 Serial IO Touch Panel Settings		

3.2.7.26.3.1 Touch Panel	Indicates what type of I2C Touch Panel is connected to this Seriallo controller	Possible Choices: • Disabled • Atmel3432 TouchPanel • Atmel2952 TouchPanel • Elan9048 TouchPanel • N-Trig/Samsung 13.3" • N-Trig/Sharp 12.5" • WACOM TouchPanel • Custom device Default Value: • Disabled
3.2.7.26.3.2 Touch Panel Interrupt Mode	Selects different routing for interrupts from Touch Panel	Possible Choices: • GPIO Interrupt • APIC Interrupt Default Value: • GPIO Interrupt
3.2.7.26.3.3 Device's bus address	Specify parameters of custom I2C device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 127
3.2.7.26.3.4 Device's HID address	Specify parameters of custom I2C device	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.3.5 Device's bus speed	Specify parameters of custom I2C device	Possible Choices: • 100kHz • 400kHz • 1MHz

		Default Value: • 400kHz
3.2.7.26.4 Set Serial IO I2C #0 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.26.5 Timing parameters		
3.2.7.26.6 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.7 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.8 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.9 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC]	Default Value: • 110

	Maximum: 65535 [DEC]	Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.10 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.11 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.12 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.13 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.14 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC]	Default Value: • 30

	Maximum: 65535 [DEC]	Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.15 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.16 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.17 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.26.18 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.26.19 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC]	Default Value: • 2000

	Maximum: 10000 [DEC]	Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.26.20 Timing parameters disabled		
3.2.7.27 Serial IO I2C1 Settings		
3.2.7.27.1 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.7.27.2 Set Serial IO I2C #1 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.27.3 Timing parameters		
3.2.7.27.4 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.5 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0

		Maximum Value: 65535
3.2.7.27.6 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.7 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.8 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.9 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.10 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0

		Maximum Value: 65535
3.2.7.27.11 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.12 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.13 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.14 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.27.15 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0

		Maximum Value: 65535
3.2.7.27.16 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.27.17 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.27.18 Timing parameters disabled		
3.2.7.28 Serial IO I2C2 Settings		
3.2.7.28.1 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.7.28.2 Set Serial IO I2C #2 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.28.3 Timing parameters		

3.2.7.28.4 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.5 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.6 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.7 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.8 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.7.28.9 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.10 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.11 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.12 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.13 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.7.28.14 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.15 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.28.16 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.28.17 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.28.18 Timing parameters disabled		
3.2.7.29 Serial IO I2C3 Settings		
3.2.7.29.1 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.7.29.2 Set Serial IO I2C #3 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.29.3 Timing parameters		
3.2.7.29.4 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.5 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.6 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.7 FastSpeed SCL High	Default: 110 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 65535 [DEC]	• 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.8 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.9 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.10 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.11 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.12 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 65535 [DEC]	• 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.13 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.14 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.15 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.29.16 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.29.17 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 10000 [DEC]	• 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.29.18 Timing parameters disabled		
3.2.7.30 Serial IO I2C4 Settings		
3.2.7.30.1 Set Serial IO I2C #4 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.30.2 Timing parameters		
3.2.7.30.3 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.4 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.5 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum:	Default Value: • 30 Numeric Range:

	65535 [DEC]	Minimum Value: 0 Maximum Value: 65535
3.2.7.30.6 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.7 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.8 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.9 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.10 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum:	Default Value: • 76 Numeric Range:

	65535 [DEC]	Minimum Value: 0 Maximum Value: 65535
3.2.7.30.11 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.12 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.13 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.14 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.30.15 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum:	Default Value: • 200 Numeric Range:

	10000 [DEC]	Minimum Value: 1 Maximum Value: 10000
3.2.7.30.16 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.30.17 Timing parameters disabled		
3.2.7.31 Serial IO I2C5 Settings		
3.2.7.31.1 Set Serial IO I2C #5 Speed	Select Serial IO I2C Speed - Bios only pass the speed value to OS driver through ACPI	Possible Choices: • Standard Mode • Fast Mode • Fast Plus Mode • High Speed Mode Default Value: • Standard Mode
3.2.7.31.2 Timing parameters		
3.2.7.31.3 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.4 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.7.31.5 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.6 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.7 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.8 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.9 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.7.31.10 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.11 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.12 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.13 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.31.14 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535

3.2.7.31.15 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.31.16 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.31.17 Timing parameters disabled		
3.2.7.32 Serial IO I2C6 Settings		
3.2.7.32.1 Timing parameters		
3.2.7.32.2 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.3 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.4 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 65535 [DEC]	• 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.5 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.6 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.7 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.8 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.9 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 65535 [DEC]	• 76 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.10 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.11 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.12 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.13 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.32.14 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum:	Default Value:

	1 [DEC] Maximum: 10000 [DEC]	• 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.32.15 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.32.16 Timing parameters disabled		
3.2.7.33 Serial IO I2C7 Settings		
3.2.7.33.1 Timing parameters		
3.2.7.33.2 StandardSpeed SCL High	Default: 612 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 706 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.3 StandardSpeed SCL Low	Default: 706 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 612 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.4 StandardSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum:	Default Value: • 30 Numeric Range: Minimum Value: 0

	65535 [DEC]	Maximum Value: 65535
3.2.7.33.5 FastSpeed SCL High	Default: 110 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 110 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.6 FastSpeed SCL Low	Default: 207 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 207 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.7 FastSpeed SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.8 FastSpeedPlus SCL High	Default: 43 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 43 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.9 FastSpeedPlus SCL Low	Default: 76 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 76 Numeric Range: Minimum Value: 0

		Maximum Value: 65535
3.2.7.33.10 FastSpeedPlus SDA Hold	Default: 30 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 30 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.11 HighSpeed SCL High	Default: 11 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 11 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.12 HighSpeed SCL Low	Default: 22 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 22 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.13 HighSpeed SDA Hold	Default: 8 [DEC] Minimum: 1 [DEC] Maximum: 65535 [DEC]	Default Value: • 5 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.7.33.14 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1

		Maximum Value: 10000
3.2.7.33.15 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.33.16 Timing parameters disabled		
3.2.7.34 Serial IO SPI0 Settings		
3.2.7.34.1 ChipSelect 0 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High
3.2.7.34.2 ChipSelect 1 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High
3.2.7.34.3 Delayed Rx Clock SPI0	Configure the SPI Delayed Rx Clock option: Default: 0 [DEC] Minimum: 1 [DEC] Maximum: 10 [DEC]	Possible Choices: • 0 • 1 • 2 • 3 Default Value: • 0
3.2.7.34.4 Chip Select 0	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI,	Possible Choices: • Disabled

	this option will grey out.	• Enabled Default Value: • Enabled
3.2.7.34.5 Chip Select 1	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI, this option will grey out.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.34.6 Timing parameters		
3.2.7.34.7 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.34.8 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.34.9 Timing parameters disabled		
3.2.7.35 Serial IO SPI1 Settings		
3.2.7.35.1 ChipSelect 0 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High

3.2.7.35.2 ChipSelect 1 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High
3.2.7.35.3 Delayed Rx Clock SPI1	Configure the SPI Delayed Rx Clock option: Default: 0 [DEC] Minimum: 1 [DEC] Maximum: 10 [DEC]	Possible Choices: • 0 • 1 • 2 • 3 Default Value: • 0
3.2.7.35.4 Chip Select 0	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI, this option will grey out.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.35.5 Chip Select 1	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI, this option will grey out.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.35.6 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255

3.2.7.35.7 Serial IO Finger Print Settings		
3.2.7.35.7.1 Finger Print Sensor	Select the HID to enable Finger Print Sensor	Possible Choices: • Disabled • FPC1011 • FPC1020 • VFSI6101 • Synaptics VFSI7500 • EGIS0300 • FPC1021 Default Value: • Disabled
3.2.7.35.7.2 Finger Print Interrupt Mode	Selects different routing for interrupts from Finger Print	Possible Choices: • GPIO Interrupt • APIC Interrupt Default Value: • APIC Interrupt
3.2.7.35.7.3 Timing parameters		
3.2.7.35.7.4 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.35.7.5 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.35.7.6 Timing parameters disabled		

3.2.7.35.7.7 Timing parameters		
3.2.7.35.7.8 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.35.7.9 D0->D3 idle timeout (screen on)	Default: 2000 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 2000 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.35.7.10 Timing parameters disabled		
3.2.7.36 Serial IO SPI2 Settings		
3.2.7.36.1 ChipSelect 0 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High
3.2.7.36.2 ChipSelect 1 polarity	Sets initial polarity for ChipSelect signal. Active low is with initial idle polarity of low and vice versa	Possible Choices: • Active Low • Active High Default Value: • Active High
3.2.7.36.3 Delayed Rx Clock SPI2	Configure the SPI Delayed Rx Clock option: Default: 0 [DEC]	Possible Choices: • 0 • 1 • 2 • 3

	Minimum: 1 [DEC] Maximum: 10 [DEC]	Default Value: • 0
3.2.7.36.4 Chip Select 0	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI, this option will grey out.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.36.5 Chip Select 1	This enabled SPI device for testing purpose. This option has dependency on WITT device. If WITT device is enabled with SPI, this option will grey out.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.36.6 Connected device	Indicates what type of device is connected to this Seriallo controller	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.7.37 Serial IO UART0 Settings		
3.2.7.37.1 Hardware Flow Control	When enabled configures additional 2 GPIO pads for use as RTS/CTS signals for UART	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.37.2 DMA Enable	Enabled: UART OS driver will use DMA when possible. Disabled: OS driver will enforce PIO mode	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.7.37.3 Power Gating	Disabled: No _PS0 _PS3 support, device is left in D0, after initialization Enabled: _PS0 _PS3 that supports getting device out of reset Auto: _PS0 and _PS3 detection through ACPI if device was initialized prior to first PG. If it was used (DBG2) PG is disabled	Possible Choices: • Disabled • Enabled • Auto Default Value: • Auto
3.2.7.37.4 Timing parameters		
3.2.7.37.5 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.37.6 D0->D3 idle timeout (screen on)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.37.7 Timing parameters disabled		
3.2.7.38 Serial IO UART1 Settings		
3.2.7.38.1 Hardware Flow Control	When enabled configures additional 2 GPIO pads for use as RTS/CTS signals for UART	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.7.38.2 DMA Enable	Enabled: UART OS driver will use DMA when possible. Disabled: OS driver will enforce PIO mode	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.38.3 Power Gating	Disabled: No _PS0 _PS3 support, device is left in D0, after initialization Enabled: _PS0 _PS3 that supports getting device out of reset Auto: _PS0 and _PS3 detection through ACPI if device was initialized prior to first PG. If it was used (DBG2) PG is disabled	Possible Choices: • Disabled • Enabled • Auto Default Value: • Auto
3.2.7.38.4 Timing parameters		
3.2.7.38.5 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.38.6 D0->D3 idle timeout (screen on)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.38.7 Timing parameters disabled		
3.2.7.39 Serial IO UART2 Settings		
3.2.7.39.1 Hardware Flow Control	When enabled configures additional 2 GPIO pads for use as RTS/CTS signals for UART	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.2.7.39.2 DMA Enable	Enabled: UART OS driver will use DMA when possible. Disabled: OS driver will enforce PIO mode	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.7.39.3 Power Gating	Disabled: No _PS0 _PS3 support, device is left in D0, after initialization Enabled: _PS0 _PS3 that supports getting device out of reset Auto: _PS0 and _PS3 detection through ACPI if device was initialized prior to first PG. If it was used (DBG2) PG is disabled	Possible Choices: • Disabled • Enabled • Auto Default Value: • Auto
3.2.7.39.4 Timing parameters		
3.2.7.39.5 D0->D3 idle timeout (screen off)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000
3.2.7.39.6 D0->D3 idle timeout (screen on)	Default: 200 [DEC] Minimum: 1 [DEC] Maximum: 10000 [DEC]	Default Value: • 200 Numeric Range: Minimum Value: 1 Maximum Value: 10000

3.2.7.39.7 Timing parameters disabled		
3.2.7.40 WITT/MITT I2C Test Device	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.41 WITT/MITT Device selection	Change WITT Device version	Possible Choices: • WITT • MITT Default Value: • MITT
3.2.7.42 I2C0	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.43 I2C1	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.44 I2C2	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.45 I2C4	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.7.46 I2C4	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.47 I2C5	Enable SIO I2C WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.48 WITT/MITT SPI Test Device	Enable SIO SPI WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.49 SPI0	Enable SIO SPI WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.50 SPI1	Enable SIO SPI WITT Device and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.51 SPI2	Enable SIO SPI WITT Device	

	and select which are all controller used it	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.52 UART Test Device	Enable SIO UART Test Device and select which are all controller used it	Possible Choices: • Disabled • Enabled - UART0 • Enabled - UART1 • Enabled - UART2 Default Value: • Disabled
3.2.7.53 Additional Serial IO devices	When enabled, ACPI will report additional devices connected to Serial IO.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.7.54 SerialIO timing parameters	Enables additional timing parameters for all SeraialIO controllers. Defaults can be changed in each controller setting. Platform restart required to apply changes	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.8 SCS Configuration		
3.2.8.1 UFS 2.0 Controller 1	Enable or Disable UFS 2.0 Controller	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9 ISH Configuration		
3.2.9.1 ISH Controller	Enables/Disables Integrated Sensor Hub (ISH) Device	Possible Choices:

		• Disabled • Enabled Default Value: • Enabled
3.2.9.2 PDT Unlock Message	Checked = Sends PDT Unlock Message to ISH. After the message is sent the field is set back to unchecked automatically.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.9.3 ISH GPIO Assignment Configuration	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	
3.2.9.4 SPI_0	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.9.5 SPI_0 CS_0	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP)	Possible Choices: • Disabled • Enabled Default Value: • Disabled

	/ I2C3(PCH-H)	
3.2.9.6 UART0	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.9.7 UART1	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.9.8 I2C0	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.9 I2C1	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled

3.2.9.10 I2C2	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.11 GP_0	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.12 GP_1	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.13 GP_2	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.14 GP_3	Checked = Pin set to ISH Native function.	

	Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.15 GP_4	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.16 GP_5	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.17 GP_6	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.9.18 GP_7	Checked = Pin set to ISH Native function. Checkbox grayed out = disable conflicting Seriallo controller to	Possible Choices: • Disabled

	set. Shared pins: 1. ISH UART0 - LPSS I2C2(PCH-H) 2. ISH UART1 - LPSS UART1 3. ISH I2C2 - LPSS I2C5(PCH-LP) / I2C3(PCH-H)	• Enabled Default Value: • Disabled
3.2.9.19 ISH is not available		
3.2.10 Pch Thermal Throttling Control		
3.2.10.1 Thermal Throttling Level	Determine if use Intel suggested setting	Possible Choices: • Suggested Setting • Manual Default Value: • Suggested Setting
3.2.10.2 Thermal Throttling	Enable/Disable the thermal throttling states control	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.3 TT State 13	PMSync state 13 will force at least T2 state	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.4 Thermal Throttling Lock	Lock the entire TL register	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.5 T0 Level	If Trip Point Temperature <= T0Level, the system is in T0 state	Default Value:

		• 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.10.6 T1 Level	If T1Level >= Trip Point Temperature > T0Level, the system is in T1 state	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.10.7 T2 Level	If T2Level >= Trip Point Temperature > T1Level, the system is in T2 state	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 65535
3.2.10.8 DMI Thermal Setting	Determine if use Intel suggested setting	Possible Choices: • Suggested Setting • Manual Default Value: • Suggested Setting
3.2.10.9 DMI Thermal Sensor Autonomous Width	Enable/Disable Thermal Sensor initiated Autonomous Width Negotiation	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.10 Thermal Sensor 0 Width	Determine the DMI Link Width when the output from the Thermal Sensor is T0	Possible Choices: • x1 • x2 • x4 • x8

		• x16 Default Value: • x8
3.2.10.11 Thermal Sensor 1 Width	Determine the DMI Link Width when the output from the Thermal Sensor is T1	Possible Choices: • x1 • x2 • x4 • x8 • x16 Default Value: • x4
3.2.10.12 Thermal Sensor 2 Width	Determine the DMI Link Width when the output from the Thermal Sensor is T2	Possible Choices: • x1 • x2 • x4 • x8 • x16 Default Value: • x2
3.2.10.13 Thermal Sensor 3 Width	Determine the DMI Link Width when the output from the Thermal Sensor is T3	Possible Choices: • x1 • x2 • x4 • x8 • x16 Default Value: • x1
3.2.10.14 SATA Thermal Setting	Determine if use Intel suggested setting	Possible Choices: • Suggested Setting • Manual Default Value: • Suggested Setting
3.2.10.15 Port 0		

3.2.10.16 T1 Multipler	Determine the value of SATA Port T1 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x1
3.2.10.17 T2 Multipler	Determine the value of SATA Port T2 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x2
3.2.10.18 T3 Multipler	Determine the value of SATA Port T3 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x4
3.2.10.19 Alternate Fast Init Tdispatch	Enable/Disable SATA Port Alternate Fast Init Tdispatch	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.20 Tdispatch	Determine the value of SATA Port Tdispatch	Possible Choices: • ~32us • ~128us • ~8us • ~32ms • ~128ms • ~8ms

		Default Value: • ~32ms
3.2.10.21 Tinactive	Determine the value of SATA Port Tinactive	Possible Choices: • ~32us • ~128us • ~8us • ~32ms • ~128ms • ~8ms Default Value: • ~32ms
3.2.10.22 Port 1		
3.2.10.23 T1 Multipler	Determine the value of SATA Port T1 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x1
3.2.10.24 T2 Multipler	Determine the value of SATA Port T2 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x2
3.2.10.25 T3 Multipler	Determine the value of SATA Port T3 Multipler	Possible Choices: • Disabled • x1 • x2 • x4 Default Value: • x4

3.2.10.26 Alternate Fast Init Tdispatch	Enable/Disable SATA Port Alternate Fast Init Tdispatch	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.10.27 Tdispatch	Determine the value of SATA Port Tdispatch	Possible Choices: • ~32us • ~128us • ~8us • ~32ms • ~128ms • ~8ms Default Value: • ~32ms
3.2.10.28 Tinactive	Determine the value of SATA Port Tinactive	Possible Choices: • ~32us • ~128us • ~8us • ~32ms • ~128ms • ~8ms Default Value: • ~32ms
3.2.11 Skip VCCIN_AUX Configuration	Skips VCCIN_AUX Configuration if enabled	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12 FIVR Configuration		
3.2.12.1 External V1P05 Rail Sx/S0ix Configuration		
3.2.12.2 Enable Rail in S0i1/S0i2	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices:

		• Disabled • Enabled Default Value: • Disabled
3.2.12.3 Enable Rail in S0i3	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.4 Enable Rail in S3	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.5 Enable Rail in S4	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.6 Enable Rail in S5	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.7 Enable Rail in S0	Enables External V1P05 Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled

3.2.12.8 External Vnn Rail Sx/S0ix Configuration		
3.2.12.9 Enable Rail in S0i1/S0i2	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.10 Enable Rail in S0i3	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.11 Enable Rail in S3	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.12 Enable Rail in S4	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.13 Enable Rail in S5	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.12.14 Enable Rail in S0	Enables External Vnn Rail in corresponding Sx/S0ix	Possible Choices: • Disabled

		• Enabled Default Value: • Disabled
3.2.12.15 External Vnn Rail Voltage Configuration at S0 and S0ix	Configures TARGET_VOLT_LEVEL for External Rail	Possible Choices: • 0.78V@Bypass - 0.78V@Bypass - 1.05V@Internal • 1.05V@Bypass - 1.05V@Bypass - 1.05V@Bypass Default Value: • 1.05V@Bypass - 1.05V@Bypass - 1.05V@Bypass
3.2.12.16 External Rails Voltage and Current settings		
3.2.12.17 External V1P05 Icc Max Value	Icc Max Value for external V1p05 rail. Expressed in mA. Accepted value are between 0 and 500 mA	Default Value: • 500 Numeric Range: Minimum Value: 0 Maximum Value: 500
3.2.12.18 External Vnn Icc Max Value	Icc Max Value for external Vnn rail. Expressed in mA. Accepted value are between 0 and 500 mA	Default Value: • 500 Numeric Range: Minimum Value: 0 Maximum Value: 500
3.2.12.19 VCCIN_AUX voltage rail timing configuration		
3.2.12.20 Retention to Low Current Mode	Transition time in microseconds from Off (0V) to High Current Mode Voltage. This field has 1us resolution.	Default Value: • 0

		Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.12.21 Retention to High Current Mode	Transition time in microseconds from Retention Mode Voltage to High Current Mode Voltage. This field has 1us resolution.	Default Value: • 0 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.12.22 Low to High Current Mode	Transition time in microseconds from Low Current Mode Voltage to High Current Mode Voltage. This field has 1us resolution.	Default Value: • 12 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.12.23 Off to High Current Mode	Transition time in microseconds from Off (0V) to High Current Mode Voltage. This field has 1us resolution. 0 = Transition to 0V is disabled. The value must be greater than or equal to VccST board FET ramp time	Default Value: • 150 Numeric Range: Minimum Value: 0 Maximum Value: 2047
3.2.12.24 FIVR Dynamic PM	Enable/Disable FIVR Dynamic Power Management	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.13 PMC Configuration		
3.2.13.1 PMC ADR Configuration		
3.2.13.1.1 ADR enable	Enable asynchronous DRAM refresh	Possible Choices: • Platform-POR

		• Enabled • Disabled Default Value: • Platform-POR
3.2.13.1.2 Host Partition Reset ADR Enable	Enables/Disables ADR on Host Partition Reset	Possible Choices: • Platform-POR • Enabled • Disabled Default Value: • Enabled
3.2.13.1.3 ADR timer 1 expire time	Type desired ADR timer expire time, valid values - <1, 256>. Entered time is scaled by ADR timer time unit.	Default Value: • 32 Numeric Range: Minimum Value: 1 Maximum Value: 255
3.2.13.1.4 ADR timer 1 time unit	Select ADR timer time unit.	Possible Choices: • 1us • 10us • 100us • 1ms • 10ms • 100ms • 1s • 10s Default Value: • 1s
3.2.14 PCH LAN Controller	Enable/Disable onboard NIC.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.15 LAN Wake From DeepSx	Wake from DeepSx by the	

	assertion of LAN_WAKE# pin	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.16 Wake on LAN Enable	Enable/Disable integrated LAN to wake the system.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.17 SLP_LAN# Low on DC Power	Enable/Disable SLP_LAN# Low on DC Power. Please notice this knob only applies to CNVd.	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.18 PCH LAN Controller		
3.2.19 Sensor Hub Type	Choose the Sensor Hub Type, 'None' will Suppress 'I2C Sensor Hub' Setup Option','I2C' Will Suppress 'ALS' Setup Option and 'USB' will Suppress Both I2C and ALS.	Possible Choices: • None • I2C Sensor Hub • USB Sensor Hub Default Value: • None
3.2.20 DeepSx Power Policies	configure the DeepSx Mode configuration.	Possible Choices: • Disabled • Enabled in S4-S5-Battery • Enabled in S5-Battery • Enabled in S4-S5 • Enabled in S5 Default Value: • Disabled
3.2.21 PS_ON Enable	Enable or disable PS_ON ()support a new C10 state from the CPU on desktop SKUs that	Possible Choices:

	enables a lower power target that will be required by the California Energy Commission (CEC).	• Enabled • Disabled Default Value: • Disabled
3.2.22 Wake on WLAN and BT Enable	Enable/Disable PCI Express Wireless LAN and Bluetooth to wake the system.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.23 DeepSx Wake on WLAN and BT Enable	Enable/Disable PCI Express Wireless LAN and Bluetooth to wake the system from DeepSx.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.24 Disable DSX ACPRESENT PullDown	Disable PCH internal ACPRESENT PullDown when DeepSx or G3 exit.	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.25 High Precision Timer	Enable or Disable the High Precision Event Timer.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.26 State After G3	Specify what state to go to when power is re-applied after a power failure (G3 state).	Possible Choices: • S0 State • S5 State Default Value: • S5 State

3.2.27 Port 80h Redirection	Control where the Port 80h cycles are sent. If set to Carrier LPC Bus, disables 180-1ff range for carrier Super I/O UARTs.	Possible Choices: • Module LPC Bus • PCIE Bus • Carrier LPC Bus Default Value: • Carrier LPC Bus
3.2.28 Enhance Port 80h LPC Decoding	Support the word/dword decoding of port 80h behind LPC	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.29 Compatible Revision ID	Enable/Disable the PCH Compatible Revision ID feature	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.30 Legacy IO Low Latency	Set to enable low latency of legacy IO. Some systems require lower IO latency irrespective of power. This is a tradeoff between power and IO latency.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.31 PCH Cross Throttling	Enable/Disable the PCH Cross Throttling feature. Only ULT support this feature.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.32 PCH Energy Reporting	Enable Energy Report. MUST set it as ENABLED. This is only for test purpose.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.33 LPM S0i2.0	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.34 LPM S0i3.0	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.35 LPM S0i2.1	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.36 LPM S0i2.2	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.37 LPM S0i3.2	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.38 LPM S0i3.3	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be	Possible Choices: • Disabled

	enabled for production.	• Enabled Default Value: • Disabled
3.2.39 LPM S0i3.4	Enable/Disable S0ix sub-state. This setting is for test purpose. S0ix sub-states should be enabled for production.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.40 C10 Dynamic threshold adjustment	Enable/Disable C10 dynamic threshold adjustment	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.41 IEH Mode	Enable/Bypass IEH Mode	Possible Choices: • Bypass Mode • Enabled Default Value: • Bypass Mode
3.2.42 Enable TCO Timer	Enable/Disable TCO timer. When disabled, it disables PCH ACPI timer, stops TCO timer, and ACPI WDAT table will not be published.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.43 Enable Timed GPIO0	Enable/Disable Timed GPIO0. When disabled, it disables cross time stamp time-synchronization as extension of Hammock Harbor time synchronization.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.44 Enable Timed GPIO1	Enable/Disable Timed GPIO1.	

	When disabled, it disables cross time stamp time-synchronization as extension of Hammock Harbor time synchronization.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.45 Pcie Pll SSC	Pcie Pll SSC percentage.AUTO - Keep hw default, no BIOS override. Range is 0.0%-2.0%.	Possible Choices: • Auto • 0.0% • 0.1% • 0.2% • 0.3% • 0.4% • 0.5% • 0.6% • 0.7% • 0.8% • 0.9% • 1.0% • 1.1% • 1.2% • 1.3% • 1.4% • 1.5% • 1.6% • 1.7% • 1.8% • 1.9% • 2.0% • Disable Default Value: • Auto
3.2.46 IOTG PLL SSCEN (CPU Side SSC)	Enable/Disable IOTG PLL SSCEN	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.47 IOAPIC 24-119 Entries	Enables/Disables IOAPIC 24-119 Entries. IRQ24-119 may be used by PCH devices. Disabling those interrupts may cause certain devices failure.	Possible Choices: • Disabled • Enabled

		Default Value: • Enabled
3.2.48 Enable 8254 Clock Gate	Enables/Disables 8254 clock gate in early phase. Set 8254CGE is necessary for SLP_S0 support. Platform is albe to disable this policy and set 8254CGE in late phase.	Possible Choices: • Disabled • Enabled • Enabled In Runtime and S3 Resume Default Value: • Enabled
3.2.49 Lock PCH Sideband Access	Lock PCH Sideband access, include SideBand interface lock and SideBand PortID mask for certain end point (e.g. PSFx). The option is invalid if POSTBOOT SAI is set.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.50 Flash Protection Range Registers (FPRR)	Enable Flash Protection Range Registers	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.51 SPD Write Disable	Enable/Disable setting SPD Write Disable. For security recommendations, SPD write disable bit must be set.	Possible Choices: • TRUE • FALSE Default Value: • TRUE
3.2.52 LGMR	64KB memory block for LGMR (LPC Memory Range Decode)	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.53 HOST_C10 reporting to Target	This option enables HOST_C10 reporting to Target via eSPI	

	Virtual Wire	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.54 OS IDLE Mode	Enable/Disable OS Idle Mode Feature	Possible Choices: • Disabled • Enabled Default Value: • Enabled
3.2.55 S0ix Auto Demotion	Enable/Disable Host Low Power Mode S0ix Auto-Demotion	Possible Choices: • Enabled • Disabled Default Value: • Enabled
3.2.56 Latch Events C10 Exit	Enable/Disable Latch Events on C10 Exit	Possible Choices: • Enabled • Disabled Default Value: • Disabled
3.2.57 Hybrid Storage Detection and Configuration Mode	Select Hybrid Storage Detection and Configuration Mode	Possible Choices: • Dynamic Configuration for Hybrid Storage Enable • Disabled Default Value: • Disabled
3.2.58 Cpu Root port used for hybrid storage	Select cpu root port used for hybrid storage value between 0 to 2	Default Value: • 255

		Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.59 Pch root port used for hybrid storage	Select pch root port used in combination with cpu root port for hybrid storage enter value between 0 to 16	Default Value: • 255 Numeric Range: Minimum Value: 0 Maximum Value: 255
3.2.60 Extended BIOS Range Decode	Enabling this will make memory cycles falling in a specific area to be redirected to SPI flash controller	Possible Choices: • Disabled • Enabled Default Value: • Disabled
3.2.61 ACPI L6D PME Handling	BIOS through ACPI code can associate specific method to a particular GPE. In this case _L6D for Level-triggered Event, BIOS-ACPI can verify PMEENABLE and PMESTATUS of each device that requires GPE related wake.	Possible Choices: • Enabled • Disabled Default Value: • Disabled

4 Security

Setting	Help	Defaults
4.1 Password Description		
4.2 If Administrator's password is set,		
4.3 then access to setup will be limited and only		
4.4 insert correct password will grant Administrator rights;		
4.5 Accessing without entering any password, or entering		
4.6 User password if defined and different from the Admin one,		
4.7 could be used to enter Setup in 'Read Only mode':		
4.8 User will be able to see current configuration but any change will be inhibited.		
4.9 Set User Password equal to Admin password to disable Read Only Access		
4.10 A valid password must be in the following length range:		
4.11 Minimum length		
4.12 Maximum length		
4.13 Administrator Password	Set Administrator Password	
4.14 User Password	Set User Password	
4.15 Secure Boot		
4.15.1 System Mode		
4.15.2 System Mode		
4.15.3 System Mode		
4.15.4 System Mode		
4.15.5 Secure Boot Mode	Secure Boot mode options: Standard or Custom. In Custom mode, Secure Boot	Possible Choices:

	Policy variables can be configured by a physically present user without full authentication	• Standard • Custom Default Value: • Custom
4.15.6 Expert Key Management		
4.15.6.1 Vendor Keys		
4.15.6.2 Vendor Keys		
4.15.6.3 Factory Key Provision	Install factory default Secure Boot keys after the platform reset and while the System is in Setup mode	Possible Choices: • Disabled • Enabled Default Value: • Enabled
4.15.6.4 Secure Boot variable | Size| Keys| Key Source		

5 Boot

Setting	Help	Defaults
5.1 Boot Configuration		
5.2 Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.	Default Value: • 1 Numeric Range: Minimum Value: 1 Maximum Value: 65535
5.3 Bootup NumLock State	Select the keyboard NumLock state	Possible Choices: • On • Off Default Value: • Off
5.4 Quiet Boot	Enables or disables Quiet Boot option	Possible Choices: • Disabled • Enabled Default Value: • Enabled
5.5 Fast Boot	Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
5.6 SATA Support	If Last Boot SATA Devices Only, Only last boot SATA device will be available in Post. If All SATA Devices, all SATA devices will be available in OS and Post.	Possible Choices: • Last Boot SATA Devices Only • All SATA Devices

		Default Value: • Last Boot SATA Devices Only
5.7 NVMe Support	If Disabled, NVMe device will be skipped.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
5.8 UFS Support	If Disabled, UFS device will be skipped.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
5.9 VGA Support	If Auto, only install Legacy OpRom with Legacy OS and logo would NOT be shown during post. Efi driver will still be installed with EFI OS.	Possible Choices: • Auto • EFI Driver Default Value: • EFI Driver
5.10 USB Support	If Disabled, all USB devices will NOT be available until after OS boot. If Partial Initial, USB Mass Storage and specific USB port/device will NOT be available before OS boot. If Enabled, all USB devices will be available in OS and Post.	Possible Choices: • Disabled • Full Initial • Partial Initial Default Value: • Full Initial
5.11 PS2 Devices Support	If Disabled, PS2 devices will be skipped.	Possible Choices: • Disabled • Enabled Default Value: • Enabled
5.12 Network Stack Driver Support	If Disabled, NetWork Stack	

	Driver will be skipped.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
5.13 Redirection Support	If disable, Redirection function will be disabled.	Possible Choices: • Disabled • Enabled Default Value: • Disabled
5.14 Driver Option Priorities		
5.15 Driver Option #%d	Sets the system driver order	Possible Choices: • •
5.16 Boot mode select	Select boot mode LEGACY/UEFI	Possible Choices: • LEGACY • UEFI Default Value: • UEFI
5.17 FIXED BOOT ORDER Priorities		
5.18 Boot Option #1	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • Hard Disk

5.19 Boot Option #2	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • NVME
5.20 Boot Option #3	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • CD/DVD
5.21 Boot Option #4	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value:

		• SD
5.22 Boot Option #5	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Hard Disk
5.23 Boot Option #6	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB CD/DVD
5.24 Boot Option #7	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled

		Default Value: • USB Key
5.25 Boot Option #8	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Floppy
5.26 Boot Option #9	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Lan
5.27 Boot Option #10	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan

		• Network • Disabled Default Value: • Network
5.28 Boot Option #1	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • Hard Disk
5.29 Boot Option #2	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • NVME
5.30 Boot Option #3	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key

		• USB Floppy • USB Lan • Network • Disabled Default Value: • CD/DVD
5.31 Boot Option #4	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • SD
5.32 Boot Option #5	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Hard Disk
5.33 Boot Option #6	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk

		• USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB CD/DVD
5.34 Boot Option #7	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Key
5.35 Boot Option #8	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Floppy
5.36 Boot Option #9	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD

		• SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • USB Lan
5.37 Boot Option #10	Sets the system boot order	Possible Choices: • Hard Disk • NVME • CD/DVD • SD • USB Hard Disk • USB CD/DVD • USB Key • USB Floppy • USB Lan • Network • Disabled Default Value: • Network

6 Save & Exit

Setting	Help	Defaults
6.1 Save Options		
6.2 Default Options		
6.3 Boot Override		