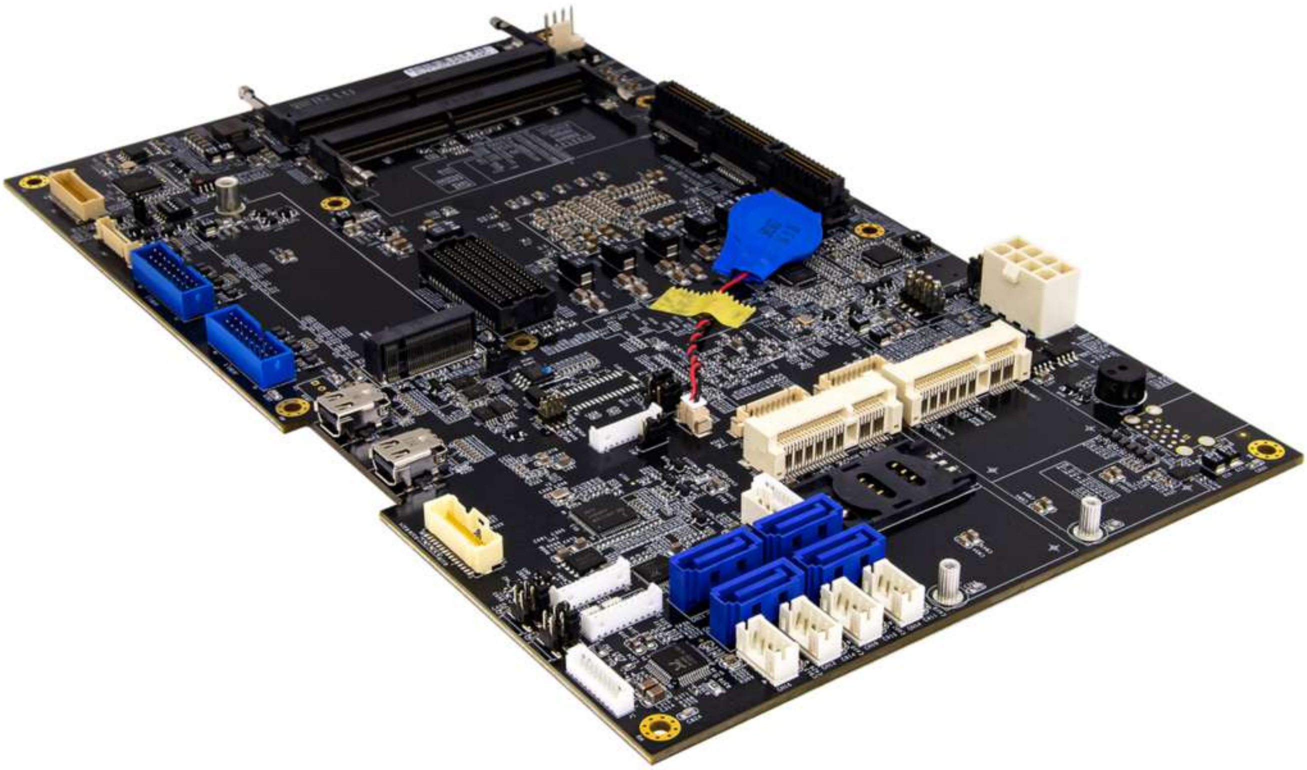
Version 1.0
Revision Date: Aug. 10. 2023

User's Manual PERFECTRON

OXY5741B

Rugged Open-Standard EBX SBC Expansion, Extend Temperture -40°C to 85°C



Safety Information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your local distributor.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter any technical problems with the product, contact your local distributor

Statement

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- All trademarks are the properties of the respective owners.
- All product specifications are subject to change without prior notice

RoHS Compliance

Perfectron RoHS Environmental Policy and Status Update

Perfectron is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

In order to meet the RoHS compliant directives, Perfectron has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard Perfectron development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which Perfectron are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant

Revision History

Revision	Date (yyyy/mm/dd)	Changes
V1.0	2023/08/10	First release

Packing List

Item	Description	Q'ty
1	OXY5741B EBX SBC	1
2	CD(Drivier + User's manual)	1

If any of the above items is damaged or missing, please contact your local distributor.

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Chapter 1 : Product Introduction

1.1 Specifications

System

CPU	Intel® Core™ i7-9850HE Processor (6 Cores/12 Threads,9M Cache,up to 4.40GHz),45W Intel® Core i7-9850HL Processor (6 Cores/12 Threads,9M Cache,up to 4.10GHz), 25W XEON® E-2276ME Processor (6 Cores/12 Threads,12M Cache,up to 4.50GHz),45W XEON® E-2276ML Processor (6 Cores/12 Threads,12M Cache,up to 4.20GHz),25W Intel® Core™ i5-8400H Processor (6 Cores/12 Threads,8M Cache,up to 4.20GHz),45W
Memory type	4 x 260 Pin DDR4 2666MHz SO-DIMM (up to 128GB, XEON® SKU support ECC)
Chipset	CM246
BIOS Code	AMI UEFI BIOS
BIOS Flash	SPI Flash
Super I/O	ITE 8786
TPM	TPM2.0(SLB9665)
iAMT	iAMT12.0
WatchDog	1-255 sec. or 1-255 min. software programmable and can be generate system reset

Display

Display Port	Resolution up to 4096 x 2304 @ 60Hz
Chipset	Intel®UHD Graphics 630
Multi-Display	Triple simultaneous display with 48-bit LVDS + 2x Mini-DP
LVDS	Dual Channel 24-bit LVDS, max resolution up to 1920 x 1080 @60Hz

Audio

Codec	ALC888S

Expansion

M.2	1 x M.2(M-key,Type: 2280, SATA/PCIe 3.0 x4 NVMe)
mPCIe	2x Full size (USB / PCIe and 1 x micro SIM Card)
PCIe/104	1x Type2
FPE	1x FPE slot

Ethernet	
Chipset	Intel® I210 & I219LM GbE LAN(10/100/1000 Mbps support)
WOL	Yes
Boot from LAN	Yes for PXE
Internal I/O Header (no edge I/O needed)	
Display Port	2x Mini DP Display Port
SATA	4xSATAIII (RAID 0,1,5)
SATA power	4
LVDS connector	1x (30 pins) or equal
LVDS Inverter	1x (10 pins) box header
8 bit GPIO	1x (4in/4out) in a (10 pins) box header
Serial	2x RS232/422/485 (10 pins) box header
SIM card holder	1x (Micro SIM) in mini-PCIe slot
LAN	2x 10/100/1000 Base (20 x 1.0 wire to Board connector)
USB 3.0	4x USB3.0 (2 x 20GU 2.0x2.0mm box header)
USB2.0	4x USB2.0 (2x10 Pins) box header
LPC	1x LPC (10 pins) box header
Front Panel	1x (2x5 pins) Power BTN/HDD LED/Reset BTN/PWR LED
Smart Fan	1x CPU Fan 1x 4 pins for CPU(PWM mode)
Audio	1x MIC-IN / LINE OUT (10 pins) box header
Battery	1x RTC battery holder
DC-IN	1x (4x2pin) horizontal type
Mechanical and Environmental	
Form Factor	EBX
Dimension	146mm x 243mm
Power Type	DC-IN 12V
Operation Temperture	-40°C to 85°C
Storage Temperture	-40°C to 85°C
Relative Humidity	10% to 90%, non-condensing

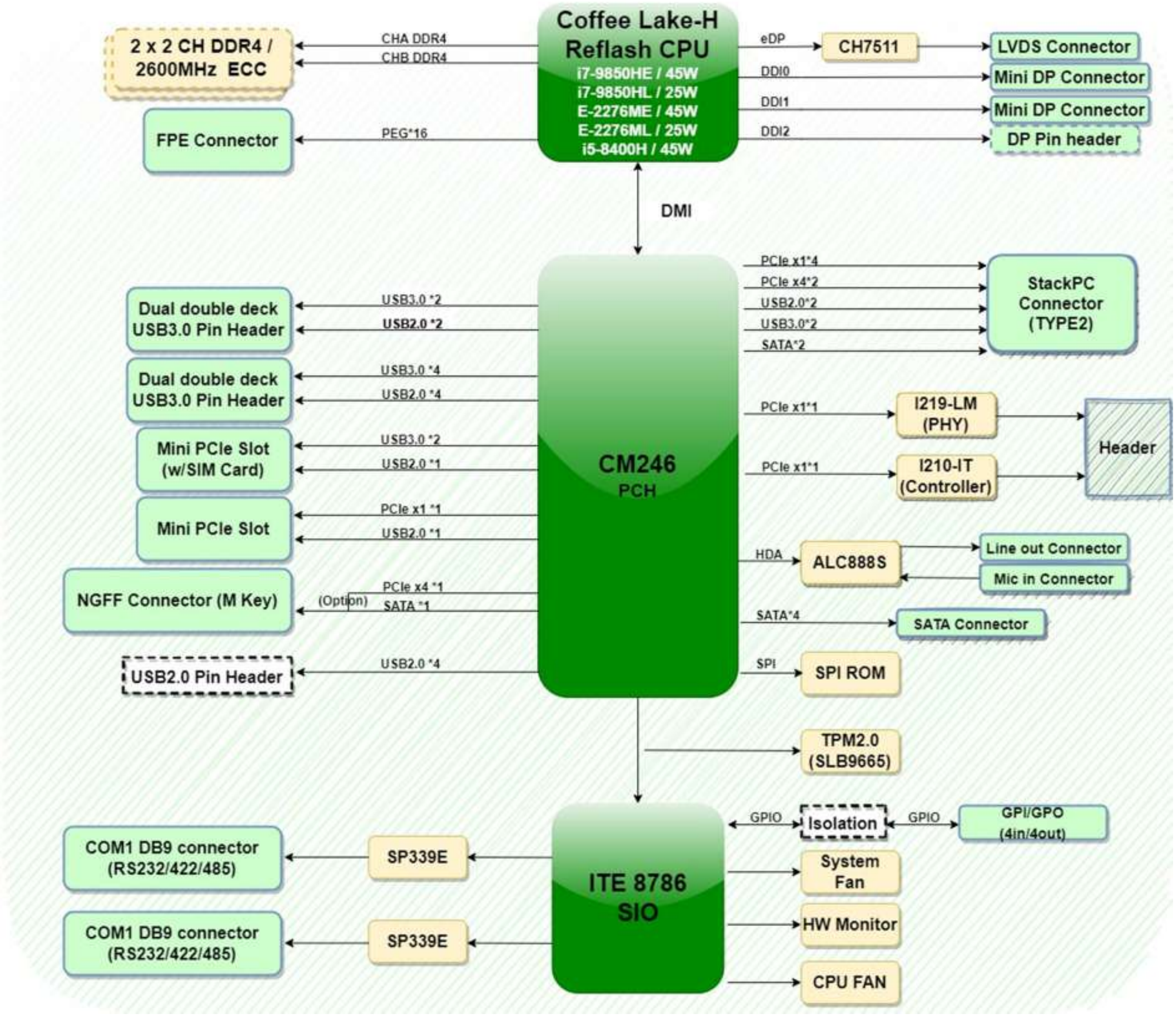
Standard Compliance

Standart Compliance	CE / FCC

OS

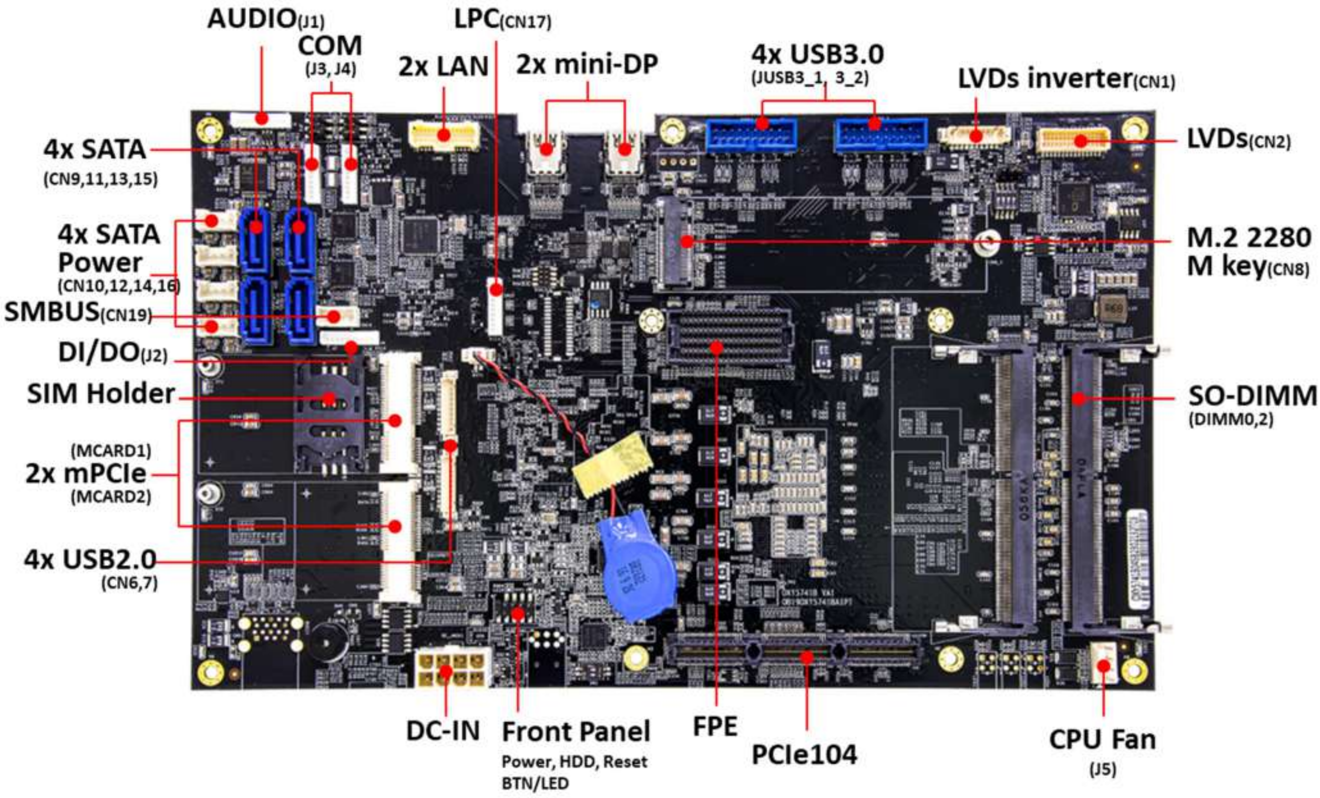
OS Support	Windows® 10 64-bit Linux(Support by request)

1.2 Block Diagram

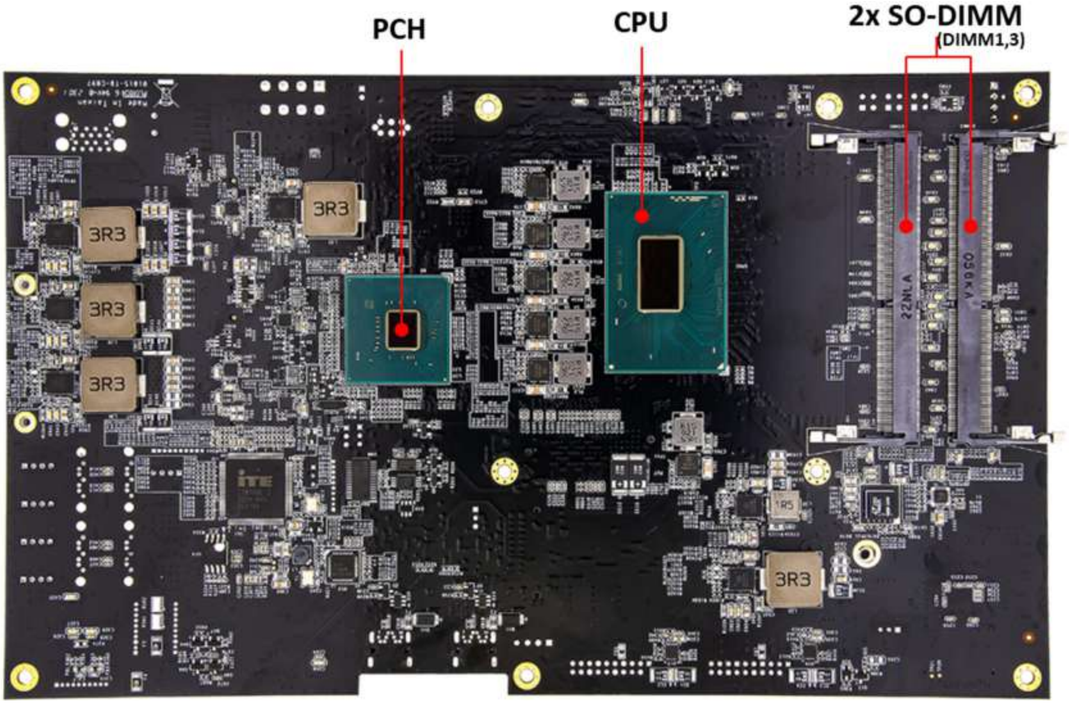


1.3 Board Placement

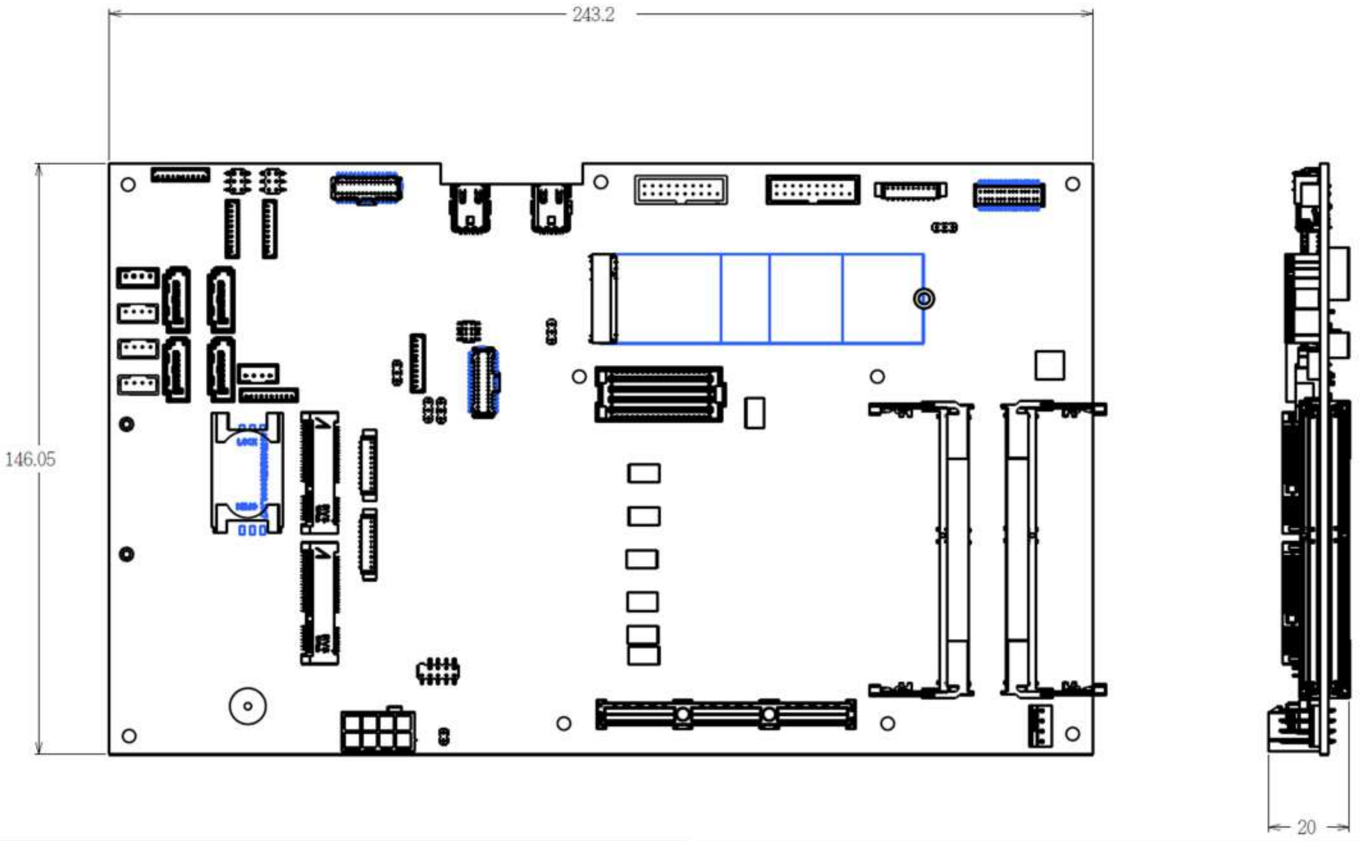
OXY5741B TOP Side



OXY5741B Bottom Side



1.4 Mechanical Dimensions



Chapter 2 : Jumpers and Connectors Location

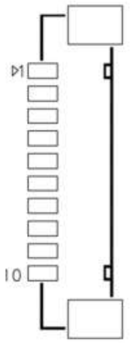
2.1 Jumpers and connectors list

Label	Function
CN1	Inverter connector
CN2	LVDS connector
JP1	LVDS_VDD select
JUSB3_1/3_2	USB3.0 x 2 (Total 4 Port)
CN6/CN7	USB2.0 (Total 4 Port)
CN8	M.2 M KEY Connector
CN9/CN11/CN13/CN15	Serial ATA Connectors
CN10/CN12/CN14/CN16	SATA Power
DC_JACK1	ATX12V DC connector
DIMM0	DDR4 SO DIMM Socket
DIMM1	DDR4 SO DIMM Socket
DIMM2	DDR4 SO DIMM Socket
DIMM3	DDR4 SO DIMM Socket
MCARD1	Mini PCIE Card Slot<Full size Co-lay mSATA>
MCARD2	Mini PCIE Card Slot<Full size Co-lay mSATA>
MDP1	Mini DISPLAY PORT
MDP2	Mini DISPLAY PORT
DP3	DISPLAY PORT HEADER
CN17	LPC connector (Update BIOS)
CN19	SMBUS
LAN1+ LAN2	INTEL I219-LM + INTEL I210-IT SD-501190 connector
J4	RS232/422/485 with 5V/12V selectable
J3	RS232/422/485 with 5V/12V selectable
J2	Digital I/O Box Head
J1	Front side MIC-In/ Line-Out Connector
JP4	COM2 +12/+5V selection
JP3	COM1 +12/+5V selection
JM2	M.2 Signal select
JCMOS1	ME Flash Security
JCMOS2	RTC Reset
BAT1	BATTERY connector
SIM_CARD1	SIM card socket
JP5	AT/ATX Mode
FPE1	FPE Top connector
STACKPC1	PCIe/104 connector

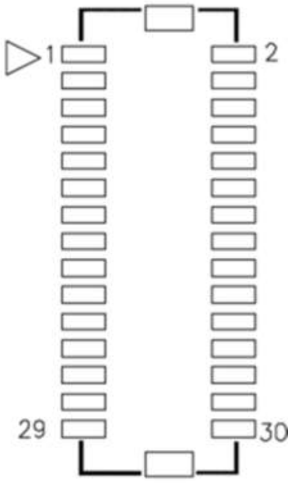
LED3	LAN2 LED STATUS
LED2	LAN1 LED STATUS
LED4	Power/HDD LED
J5	SYSTEM FAN CONNECTOR
SW1	LVDS Resolution selection
SW2	Power Button
SW3	PCIE CFG[5:6]
FP1	Front Panel

2.2 Jumper Settings

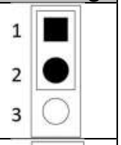
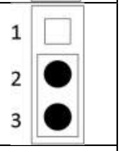
CN1: Inverter Connector

PIN	DEFINITION	
1	12V	
2	12V	
3	12V	
4	5VS	
5	5VS	
6	GND	
7	GND	
8	BL_EN	
9	LVDS0_BKL_CTRL_R	
10	GND	

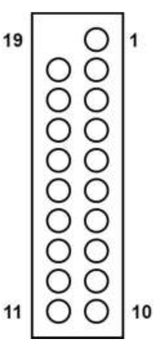
CN2: LVDS Connector

PIN	DEFINITION	PIN	DEFINITION	
1	LVDS_BCLK	2	GND	
3	LVDS_BCLK#	4	LVDS_A3	
5	GND	6	LVDS_A3#	
7	LVDS_B3	8	GND	
9	LVDS_B3#	10	LVDS_ACLK	
11	LVDS_B2	12	LVDS_ ACLK #	
13	LVDS_B2#	14	GND	
15	LVDS_B1	16	LVDS_A2	
17	LVDS_B1#	18	LVDS_A2#	
19	LVDS_B0	20	LVDS_A1	
21	LVDS_B0#	22	LVDS_A1#	
23	GND	24	LVDS_A0	
25	LVDS_DCC_SC	26	LVDS_A0#	
27	LVDS_DCC_SD	28	GND	
29	+VDD_LVDS	30	LVDS VDD	

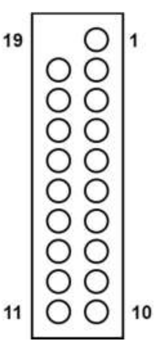
JP1: LVDS_VDD select

Jumper	Function description	Setting
1-2	3.3V	
2-3	5V	
Default setting: 2-3		

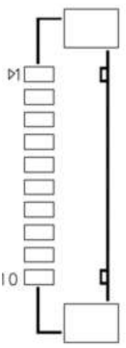
JUSB3_1(CN3): USB3.0 *2

PIN	DEFINITION	PIN	DEFINITION	
1	+USB3_VCC1	11	USB2_P2	
2	USB3_RXN1	12	USB2_N2	
3	USB3_RXP1	13	USB_GND	
4	USB_GND	14	USB3_TXP2	
5	USB3_TXN1	15	USB3_TXN2	
6	USB3_TXP1	16	USB_GND	
7	USB_GND	17	USB3_RXP2	
8	USB2_N1	18	USB3_RXN2	
9	USB2_P1	19	+USB3_VCC2	
10	NC			

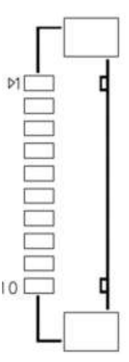
JUSB3_2(CN4): USB3.0 *2

PIN	DEFINITION	PIN	DEFINITION	
1	+USB3_VCC3	11	USB2_P4	
2	USB3_RXN3	12	USB2_N4	
3	USB3_RXP3	13	USB_GND	
4	USB_GND	14	USB3_TXP4	
5	USB3_TXN3	15	USB3_TXN4	
6	USB3_TXP3	16	USB_GND	
7	USB_GND	17	USB3_RXP4	
8	USB2_N3	18	USB3_RXN4	
9	USB2_P3	19	+USB3_VCC4	
10	NC			

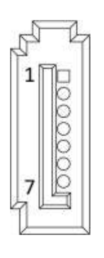
CN6: USB 2.0

PIN	DEFINITION	
1	USB2_VCC7	
2	USB2_N7_C	
3	USB2_P7_C	
4	GND	
5	GND	
6	USB2_VCC8	
7	USB2_N8_C	
8	USB2_P8_C	
9	GND	
10	GND	

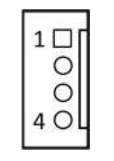
CN7: USB 2.0

PIN	DEFINITION	
1	USB2_VCC9	
2	USB2_N9_C	
3	USB2_P9_C	
4	GND	
5	GND	
6	USB2_VCC10	
7	USB2_N10_C	
8	USB2_P10_C	
9	GND	
10	GND	

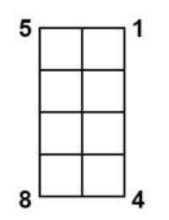
CN9/CN11/CN13/CN15: Serial ATA Connectors

PIN	DEFINITION	
1	GND	
2	TXP	
3	TXN	
4	GND	
5	RXN	
6	RXP	
7	GND	

CN10/CN12/CN14/CN16: SATA POWER Connector

PIN	DEFINITION	
1	12V	
2	GND	
3	GND	
4	5VS	

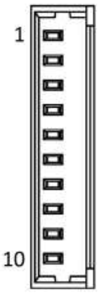
DC_JACK1: DC-IN

PIN	DEFINITION	PIN	DEFINITION	
1	GND	2	GND	
3	GND	4	GND	
5	+12VSB	6	+12VSB	
7	+12VSB	8	+12VSB	

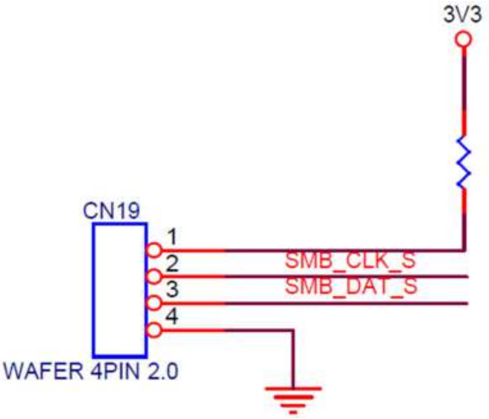
DP3: DISPLAY PORT HEADER (Removed)

PIN	DEFINITION	PIN	DEFINITION	
1	GND	2	GND	
3	DDI3_TXP0_DP-C	4	NC	
5	DDI3_TXN0_DP-C	6	NC	
7	DDI3_TXP1_DP-C	8	NC	
9	DDI3_TXN1_DP-C	10	NC	
11	DDI3_TXP2_DP-C	12	NC	
13	DDI3_TXN2_DP-C	14	NC	
15	DDI3_TXP3_DP-C	16	NC	
17	DDI3_TXN3_DP-C	18	NC	
19	DDI3_AUX_P_C	20	NC	
21	DDI3_AUX_N_C	22	NC	
23	GND	24	GND	
25	DDI3_DDC_AUX_SEL	26	NC	
27	DP3_DET	28	NC	
29	DP3_PWR	30	NC	
31	GND	32	GND	

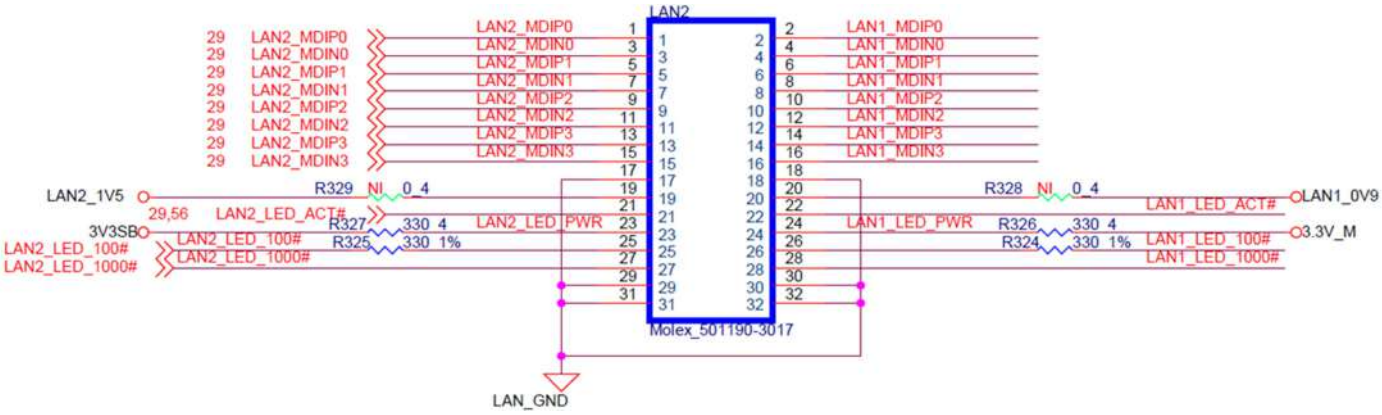
CN17: LPC

PIN	DEFINITION	
1	GND	
2	INT_SERIRQ	
3	3.3V	
4	LPC_AD0	
5	LPC_AD1	
6	LPC_AD2	
7	LPC_AD3	
8	LPC_FRAME#	
9	CHIP_PLTRST#	
10	CLK	

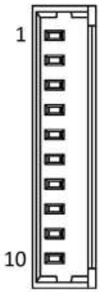
CN19 SMBUS



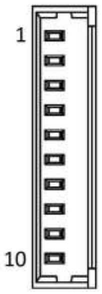
LAN1: Intel I219LM &
LAN2: Intel I210IT in SD-501190 connector



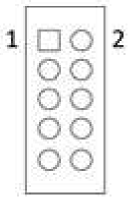
J4: RS232/422/485 with 5V/12V selectable

PIN	DEFINITION	
1	5VS	
2	GND	
3	COM2P9SEL	
4	DTR-	
5	CTS-	
6	TXD-	
7	RTS-	
8	RXD-	
9	DSR-	
10	DCD-	

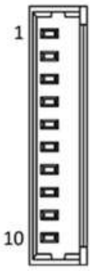
J3: RS232/422/485 with 5V/12V selectable

PIN	DEFINITION	
1	5VS	
2	GND	
3	COM1P9SEL	
4	DTR-	
5	CTS2-	
6	TXD2-	
7	RTS2-	
8	RXD-	
9	DSR-	
10	DCD-	

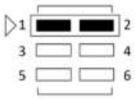
J2: Digital I/O Box Head

PIN	DEFINITION	PIN	DEFINITION	
1	VCC	2	GND	
3	DI_0	4	DI_1	
5	DI_2	6	DI_3	
7	DI_4	8	DI_5	
9	DO_0	10	DO_1	

J1: Audio Connector

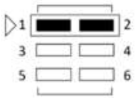
PIN	DEFFINIITION	CONNECTOR
1	GND	
2	MIC1_JD	
3	MIC1_R	
4	MIC1_L	
5	FRONT_JD	
6	FRONT_R	
7	FRONT_L	
8	NC	
9	NC	
19	NC	

JP4: COM2 5V/12V selection

PIN	DEFINITION	PIN	DEFINITION	
1	RI1#_OPTO	2	COM2P9SEL	
3	5V	4	COM2P9SEL	
5	12V	6	COM2P9SEL	

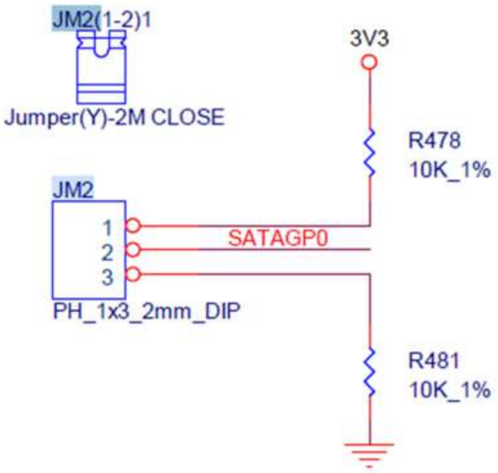
Default :1-2 short

JP3: COM1 5V/12V selection

PIN	DEFINITION	PIN	DEFINITION	
1	RI1#_OPTO	2	COM1P9SEL	
3	5V	4	COM1P9SEL	
5	12V	6	COM1P9SEL	

Default :1-2 short

JM2:M.2 Signal select



Low : SATA
NC : PCIe

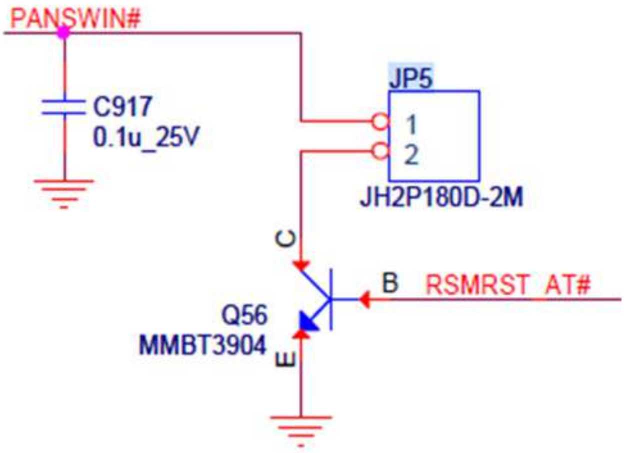
JCMOS1: ME Flash Security

Jumper	Function description	Setting
1-2	ME Lock	1 ■ 2 ● 3 ○
2-3	ME Unlock	1 □ 2 ● 3 ●
Default setting: 1-2		

JCMOS2: RTC Reset

Jumper	Function description	Setting
1-2	Default	1 ■ 2 ● 3 ○
2-3	Clear CMOS	1 □ 2 ● 3 ●
Default setting: 1-2		

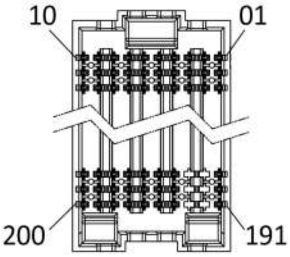
JP5 : AT/ATX Mode Selection, Default: 1-2 or OPEN TBD on VA2 Stage



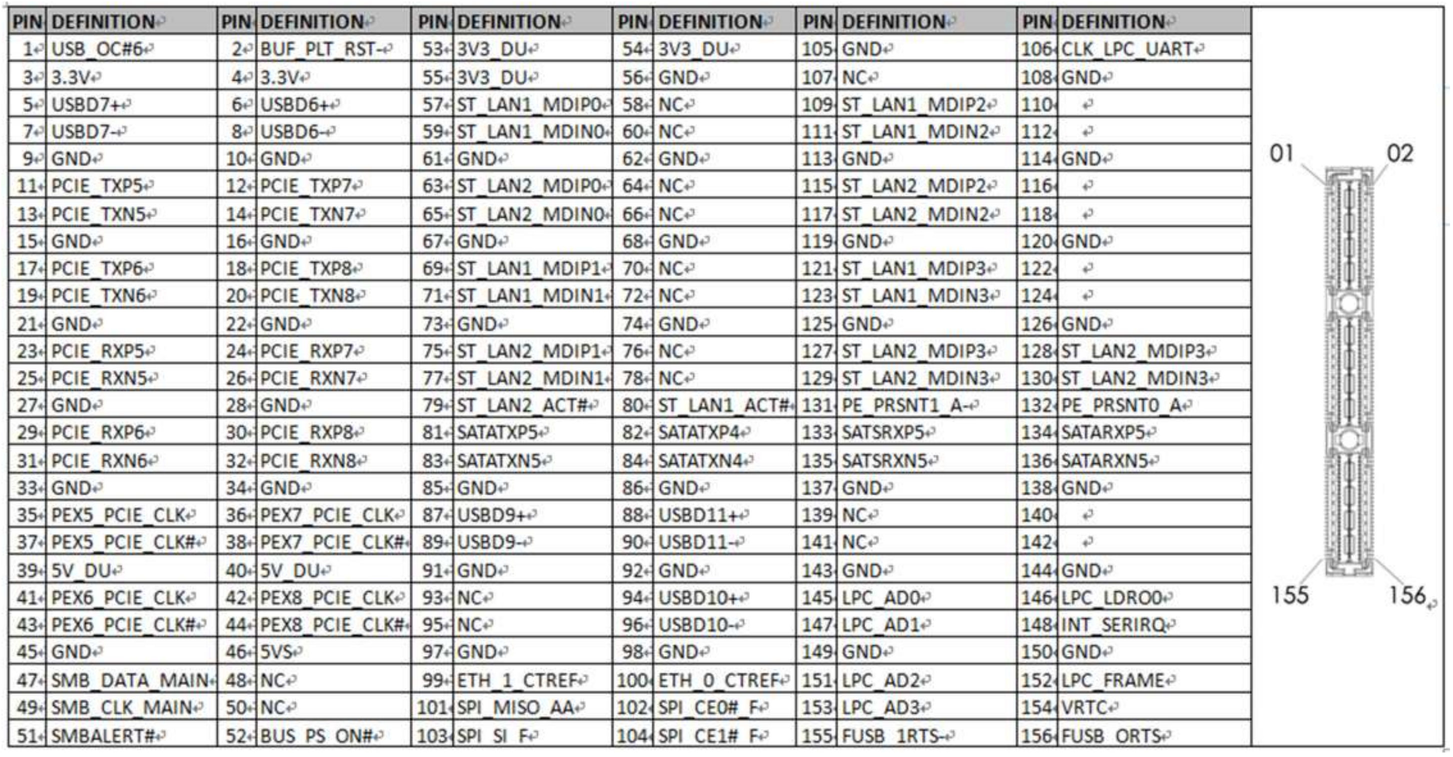
FPE1: FPE Top Connector

PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION
1	NC	2	NC	3	NC	4	NC	5	NC
11	GND	12	NC	13	GND	14	NC	15	GND
21	NC	22	NC	23	NC	24	GND	25	NC
31	NC	32	NC	33	NC	34	NC	35	NC
41	GND	42	NC	43	GND	44	NC	45	GND
51	NC	52	GND	53	NC	54	GND	55	NC
61	NC	62	NC	63	NC	64	NC	65	NC
71	GND	72	NC	73	GND	74	NC	75	GND
81	PEG_TXP0	82	NC	83	PEG_TXP2	84	GND	85	PEG_TXP4
91	PEG_TXN0	92	PEG_TXP1	93	PEG_TXN2	94	PEG_TXP3	95	PEG_TXN4
101	GND	102	PEG_TXN1	103	GND	104	PEG_TXN3	105	GND
111	PEG_RXP_0	112	GND	113	PEG_RXP_2	114	GND	115	PEG_RXP_4
121	PEG_RXN_0	122	PEG_RXP_1	123	PEG_RXN_2	124	PEG_RXP_3	125	PEG_RXN_4
131	GND	132	PEG_RXN_1	133	GND	134	PEG_RXN_3	135	GND
141	PEG_TXP8	142	GND	143	PEG_TXP10	144	GND	145	PEG_TXP12
151	PEG_TXN8	152	PEG_TXP9	153	PEG_TXN10	154	PEG_TXP11	155	PEG_TXN12
161	GND	162	PEG_TXN9	163	GND	164	PEG_TXN11	165	GND
171	PEG_RXP_8	172	GND	173	PEG_RXP_10	174	GND	175	PEG_RXP_12
181	PEG_RXN_8	182	PEG_RXP_9	183	PEG_RXN_10	184	PEG_RXP_11	185	PEG_RXN_12
191	GND	192	PEG_RXN_9	193	GND	194	PEG_RXN_11	195	GND

PIN	NAME	PIN	NAME	PIN	NAME	PIN	NAME	PIN	NAME
6	NC	7	NC	8	NC	9	NC	10	NC
16	NC	17	GND	18	NC	19	NC	20	NC
26	GND	27	NC	28	GND	29	NC	30	NC
36	NC	37	NC	38	NC	39	NC	40	NC
46	NC	47	GND	48	NC	49	GND	50	NC
56	GND	57	NC	58	GND	59	NC	60	NC
66	NC	67	NC	68	NC	69	SPKR	70	NC
76	NC	77	GND	78	NC	79	GND	80	NC
86	GND	87	PEG_TXP6	88	GND	89	NC	90	CFG5
96	PEG_TXP5	97	PEG_TXN6	98	PEG_TXP7	99	NC	100	CFG6
106	PEG_TXN5	107	GND	108	PEG_TXN7	109	GND	110	BUF_PLT_RST-
116	GND	117	PEG_RXP_6	118	GND	119	PEG_A_CLK_P	120	GND
126	PEG_RXP_5	127	PEG_RXN_6	128	PEG_RXP_7	129	PEG_A_CLK_N	130	3V3_DU
136	PEG_RXN_5	137	GND	138	PEG_RXN_7	139	GND	140	3V3_DU
146	GND	147	PEG_TXP14	148	GND	149	PEG_B_CLK_P	150	GND
156	PEG_TXP13	157	PEG_TXN14	158	PEG_TXP15	159	PEG_B_CLK_N	160	GND
166	PEG_TXN13	167	GND	168	PEG_TXN15	169	GND	170	NC
176	GND	177	PEG_RXP_14	178	GND	179	NC	180	12V
186	PEG_RXP_13	187	PEG_RXN_14	188	PEG_RXP_15	189	NC	190	12V
196	PEG_RXN_13	197	GND	198	PEG_RXN_15	199	NC	200	12V



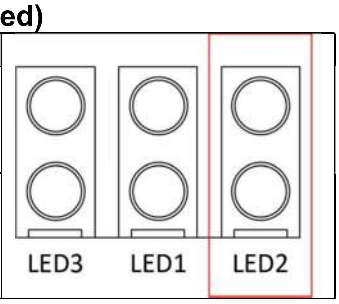
STACKPC1: CONNECTOR A TOP



PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION	PIN	DEFINITION
1	USB_OC#6	2	BUF_PLT_RST-	53	3V3_DU	54	3V3_DU	105	GND	106	CLK_LPC_UART
3	3.3V	4	3.3V	55	3V3_DU	56	GND	107	NC	108	GND
5	USBD7+	6	USBD6+	57	ST_LAN1_MDIP0	58	NC	109	ST_LAN1_MDIP2	110	
7	USBD7-	8	USBD6-	59	ST_LAN1_MDIN0	60	NC	111	ST_LAN1_MDIN2	112	
9	GND	10	GND	61	GND	62	GND	113	GND	114	GND
11	PCIE_TXP5	12	PCIE_TXP7	63	ST_LAN2_MDIP0	64	NC	115	ST_LAN2_MDIP2	116	
13	PCIE_TXN5	14	PCIE_TXN7	65	ST_LAN2_MDIN0	66	NC	117	ST_LAN2_MDIN2	118	
15	GND	16	GND	67	GND	68	GND	119	GND	120	GND
17	PCIE_TXP6	18	PCIE_TXP8	69	ST_LAN1_MDIP1	70	NC	121	ST_LAN1_MDIP3	122	
19	PCIE_TXN6	20	PCIE_TXN8	71	ST_LAN1_MDIN1	72	NC	123	ST_LAN1_MDIN3	124	
21	GND	22	GND	73	GND	74	GND	125	GND	126	GND
23	PCIE_RXP5	24	PCIE_RXP7	75	ST_LAN2_MDIP1	76	NC	127	ST_LAN2_MDIP3	128	ST_LAN2_MDIP3
25	PCIE_RXN5	26	PCIE_RXN7	77	ST_LAN2_MDIN1	78	NC	129	ST_LAN2_MDIN3	130	ST_LAN2_MDIN3
27	GND	28	GND	79	ST_LAN2_ACT#	80	ST_LAN1_ACT#	131	PE_PRSNT1_A-	132	PE_PRSNT0_A
29	PCIE_RXP6	30	PCIE_RXP8	81	SATATXP5	82	SATATXP4	133	SATSRXP5	134	SATARXP5
31	PCIE_RXN6	32	PCIE_RXN8	83	SATATXN5	84	SATATXN4	135	SATSRXN5	136	SATARXN5
33	GND	34	GND	85	GND	86	GND	137	GND	138	GND
35	PEX5_PCIE_CLK	36	PEX7_PCIE_CLK	87	USBD9+	88	USBD11+	139	NC	140	
37	PEX5_PCIE_CLK#	38	PEX7_PCIE_CLK#	89	USBD9-	90	USBD11-	141	NC	142	
39	5V_DU	40	5V_DU	91	GND	92	GND	143	GND	144	GND
41	PEX6_PCIE_CLK	42	PEX8_PCIE_CLK	93	NC	94	USBD10+	145	LPC_AD0	146	LPC_LDRO0
43	PEX6_PCIE_CLK#	44	PEX8_PCIE_CLK#	95	NC	96	USBD10-	147	LPC_AD1	148	INT_SERIRQ
45	GND	46	5VS	97	GND	98	GND	149	GND	150	GND
47	SMB_DATA_MAIN	48	NC	99	ETH_1_CTREF	100	ETH_0_CTREF	151	LPC_AD2	152	LPC_FRAME
49	SMB_CLK_MAIN	50	NC	101	SPI_MISO_AA	102	SPI_CE0#_F	153	LPC_AD3	154	VRTC
51	SMBALERT#	52	BUS_PS_ON#	103	SPI_SI_F	104	SPI_CE1#_F	155	FUSB_1RTS-	156	FUSB_ORTS

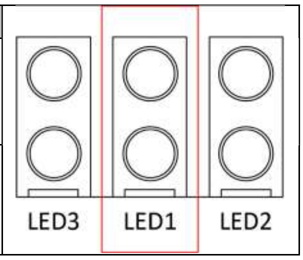
LED3: LAN2 LED STATUS (Removed)

LED2	Light	Dark	Flash
RED	1000M	100M	NA
GREEN	Link	Un-link	Activity



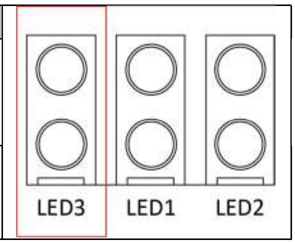
LED2: LAN1 LED STATUS (Removed)

LED1	Light	Dark	Flash
RED	1000M	100M	NA
GREEN	LINK	UNLINK	ACTIVITY

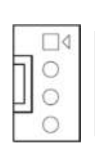


LED4: POWER/HDD LED (Removed)

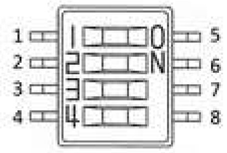
LED2	Light	Dark	Flash
RED	NA	HDD un-access	HDD access
GREEN	Power On	Power Off	NA



J5: SYSTEM FAN Connector

PIN	DEFINITION	
1	CPUFAN_PWN	
2	CPUFAN_IO	
3	CPUFAN_VCC	
4	GND	

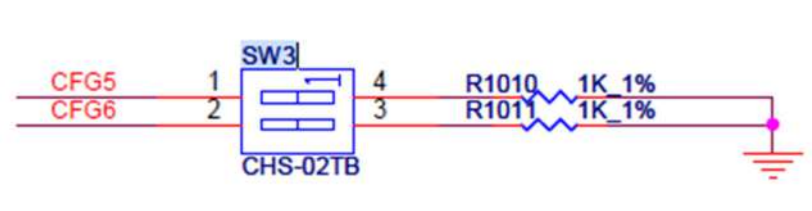
SW1: LVDS Resolution select

SW1					
1	2	3	4	DEFINITION	
off	off	off	off	800*600/18bit (single)	 1 2 3 4 1 2 3 4 O N 5 6 7 8
off	off	off	on	1024*768/18bit (single)	
off	off	on	off	1024*768/24bit (single)	
off	off	on	on	1280*800/18bit (single)	
off	on	off	off	1280*1024/24bit (dual)	
off	on	off	on	1366*768/24bit (single)	
off	on	on	off	1440*900/24bit (dual)	
off	on	on	on	1920*1080/24bit (dual)	

SW2: POWER BUTTON (Removed)

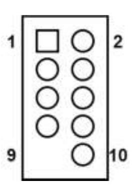
PIN	DEFINITION	
ON	NO LIGHT	
OFF	BLUE LIGHT	

SW3: CFG5/CFG6



CFG [6:5]:
00=1 x8, 2 x4 PCI Express.
01=Reserved.
10=2 x8 PCI Express.
*11=1 x16 PCI Express.

FP1: Front Panel

PIN	DEFINITION	PIN	DEFINITION	
1	HDLED+	2	PLED+	
3	HDLED-	4	GND	
5	GND	6	PANSWIN	
7	EXT_RESET#	8	GND	
9	NC	10	NC	

Chapter 3: AMI BIOS UTILITY

This chapter provides users with detailed descriptions on how to set up a basic system configuration through the AMI BIOS setup utility.

3.1 Starting

To enter the setup screens, perform the following steps:

- Turn on the computer and press the <Del> key immediately.
- After the <Del> key is pressed, the main BIOS setup menu displays. Other setup screens can be accessed from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.
Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.

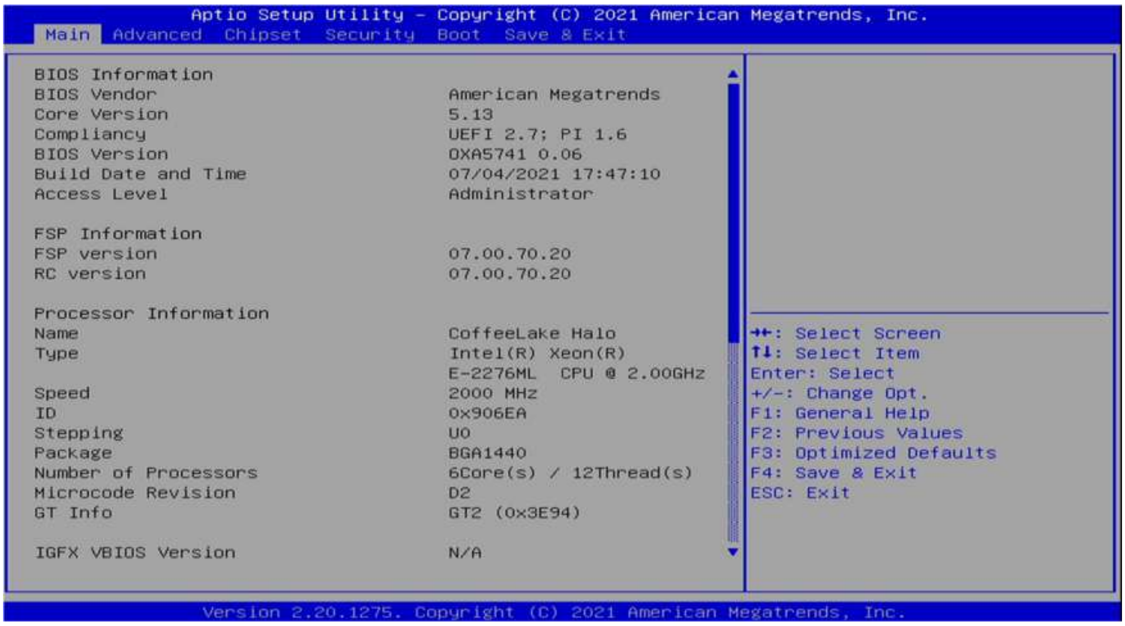
Some of the navigation keys may differ from one screen to another.

Left/Right	The Left and Right <Arrow> keys moves the cursor to select a menu.
Up/Down	The Up and Down <Arrow> keys moves the cursor to select a setup screen or sub-screen.
+− Plus/Minus	The Plus and Minus <Arrow> keys changes the field value of a particular setup setting.
Tab	The <Tab> key selects the setup fields.
F1	The <F1> key displays the General Help screen.
F10	The <F10> key saves any changes made and exits the BIOS setup utility.
Esc	The <Esc> key discards any changes made and exits the BIOS setup utility.
Enter	The <Enter> key displays a sub-screen or changes a selected or highlighted option in each menu.

3.3 Main Menu

The Main menu is the screen that first displays when BIOS Setup is entered, unless an error has occurred.

When you first enter the BIOS Setup Utility, you will encounter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



```
              Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  BIOS Information
  BIOS Vendor                          American Megatrends
  Core Version                         5.13
  Compliancy                           UEFI 2.7; PI 1.6
  BIOS Version                         OXA5741 0.06
  Build Date and Time                  07/04/2021 17:47:10
  Access Level                         Administrator

  FSP Information
  FSP version                          07.00.70.20
  RC version                           07.00.70.20

  Processor Information
  Name                                 CoffeeLake Halo         →←: Select Screen
  Type                                 Intel(R) Xeon(R)        ↑↓: Select Item
                                       E-2276ML  CPU @ 2.00GHz Enter: Select
  Speed                                2000 MHz                +/-: Change Opt.
  ID                                   0x906EA                 F1: General Help
  Stepping                             U0                      F2: Previous Values
  Package                              BGA1440                 F3: Optimized Defaults
  Number of Processors                 6Core(s) / 12Thread(s)  F4: Save & Exit
  Microcode Revision                   D2                      ESC: Exit
  GT Info                              GT2 (0x3E94)

  IGFX VBIOS Version                   N/A

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```

The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

- **System Date**

Use this function to change the system date.

Select System Date using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields. The date setting must be entered in MM/DD/YY format.

- **System Time**

Use this function to change the system time.

Select System Time using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields. The time setting is entered in HH:MM:SS format.

Note: The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

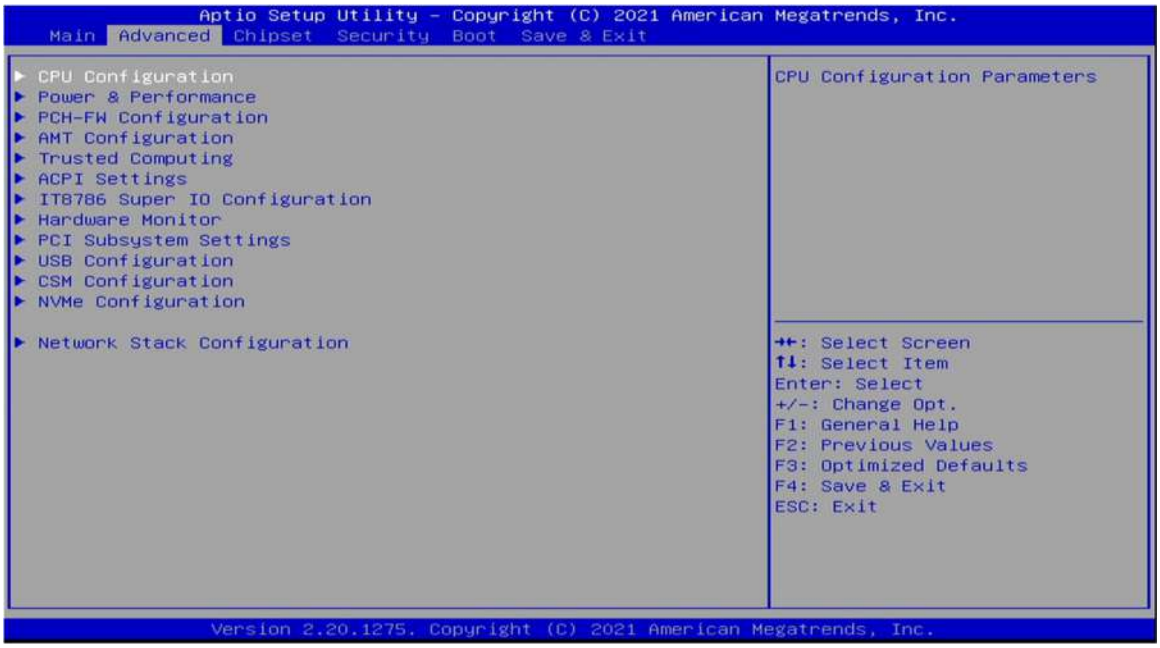
- **Access Level**

Display the access level of the current user in the BIOS.

3.4 Advanced Menu

The Advanced Menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

Setting incorrect field values may cause the system to malfunction.



```
        Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

► CPU Configuration                              CPU Configuration Parameters
► Power & Performance
► PCH-FW Configuration
► AMT Configuration
► Trusted Computing
► ACPI Settings
► IT8786 Super IO Configuration
► Hardware Monitor
► PCI Subsystem Settings
► USB Configuration
► CSM Configuration
► NVMe Configuration

► Network Stack Configuration                    →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

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```
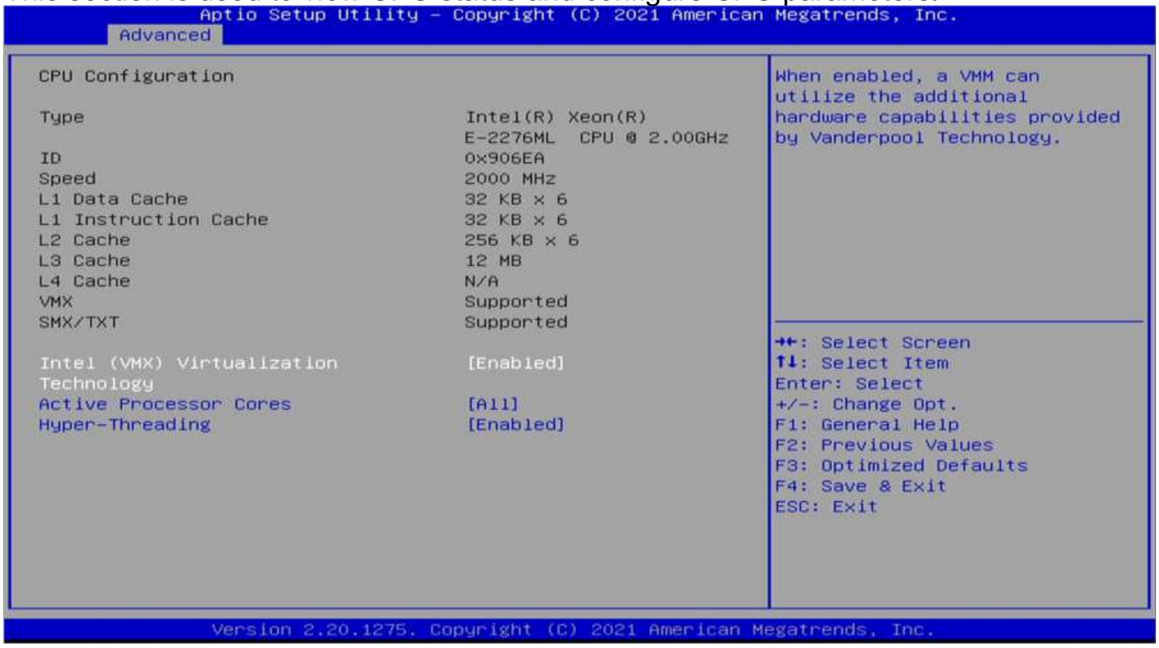

3.4.1 CPU Configuration

This section is used to view CPU status and configure CPU parameters.



```
        Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
        Advanced

  CPU Configuration                                   When enabled, a VMM can
                                                      utilize the additional
  Type                         Intel(R) Xeon(R)       hardware capabilities provided
                               E-2276ML  CPU @ 2.00GHz by Vanderpool Technology.
  ID                           0x906EA
  Speed                        2000 MHz
  L1 Data Cache                32 KB x 6
  L1 Instruction Cache         32 KB x 6
  L2 Cache                     256 KB x 6
  L3 Cache                     12 MB
  L4 Cache                     N/A
  VMX                          Supported
  SMX/TXT                      Supported
                                                      →←: Select Screen
  Intel (VMX) Virtualization   [Enabled]              ↑↓: Select Item
  Technology                                          Enter: Select
  Active Processor Cores       [All]                  +/-: Change Opt.
  Hyper-Threading              [Enabled]              F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit

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```
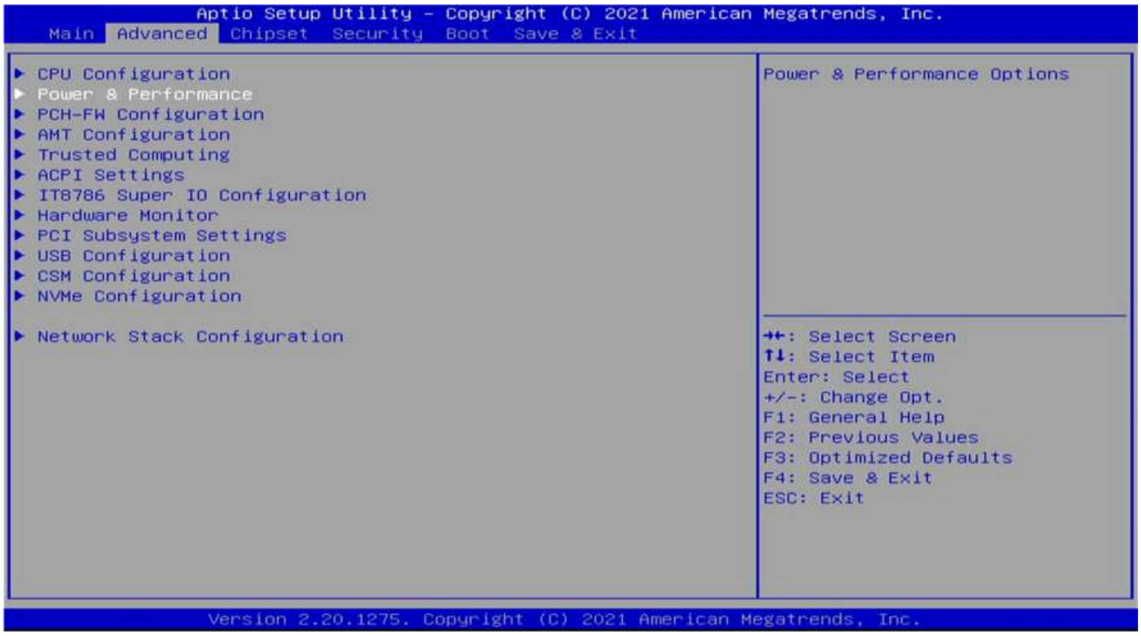

Field Name	Intel (VMX) Virtualization Technology
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Active Processor Cores
Default Value	[A11]
Possible Value	A11 1 2 3 4 5

Field Name	Hyper-Threading
Default Value	[Enabled]
Possible Value	Disabled Enabled

3.4.2 Power & Performance



```
        Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

 ▶ CPU Configuration                                    Power & Performance Options
 ▶ Power & Performance
 ▶ PCH-FW Configuration
 ▶ AMT Configuration
 ▶ Trusted Computing
 ▶ ACPI Settings
 ▶ IT8786 Super IO Configuration
 ▶ Hardware Monitor
 ▶ PCI Subsystem Settings
 ▶ USB Configuration
 ▶ CSM Configuration
 ▶ NVMe Configuration

 ▶ Network Stack Configuration                          →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

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```
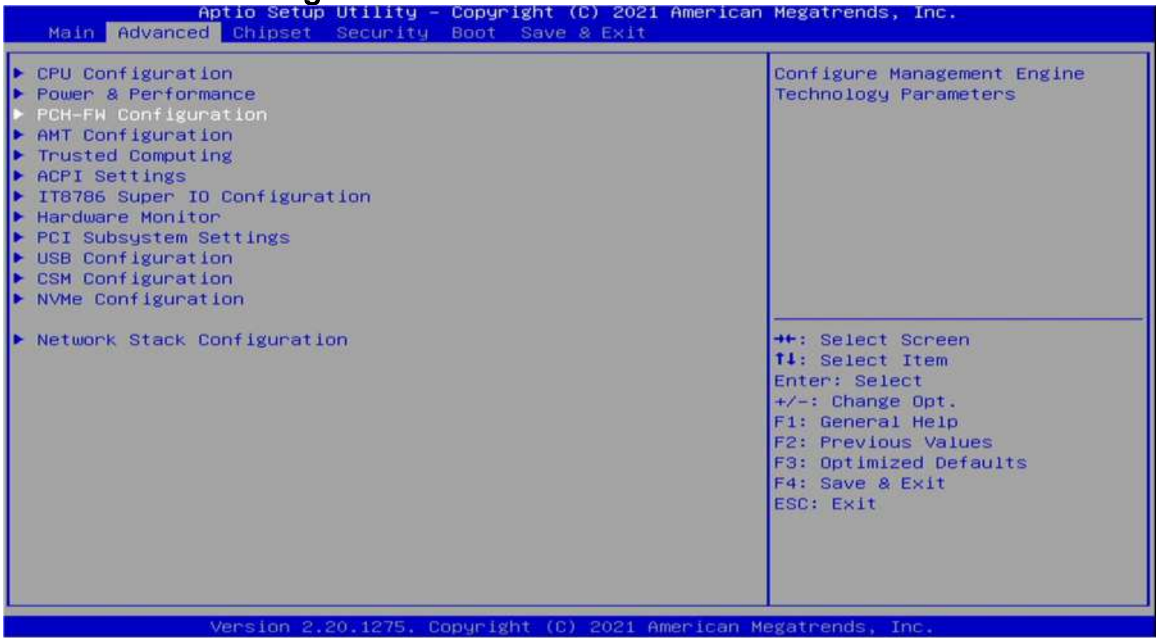

Field Name	Intel® SpeedStep™
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Turbo Mode
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	C states
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.3 PCH-FW Configuration



```
             Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

 ▶ CPU Configuration                                  Configure Management Engine
 ▶ Power & Performance                                Technology Parameters
 ▶ PCH-FW Configuration
 ▶ AMT Configuration
 ▶ Trusted Computing
 ▶ ACPI Settings
 ▶ IT8786 Super IO Configuration
 ▶ Hardware Monitor
 ▶ PCI Subsystem Settings
 ▶ USB Configuration
 ▶ CSM Configuration
 ▶ NVMe Configuration

 ▶ Network Stack Configuration                        →←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit

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```
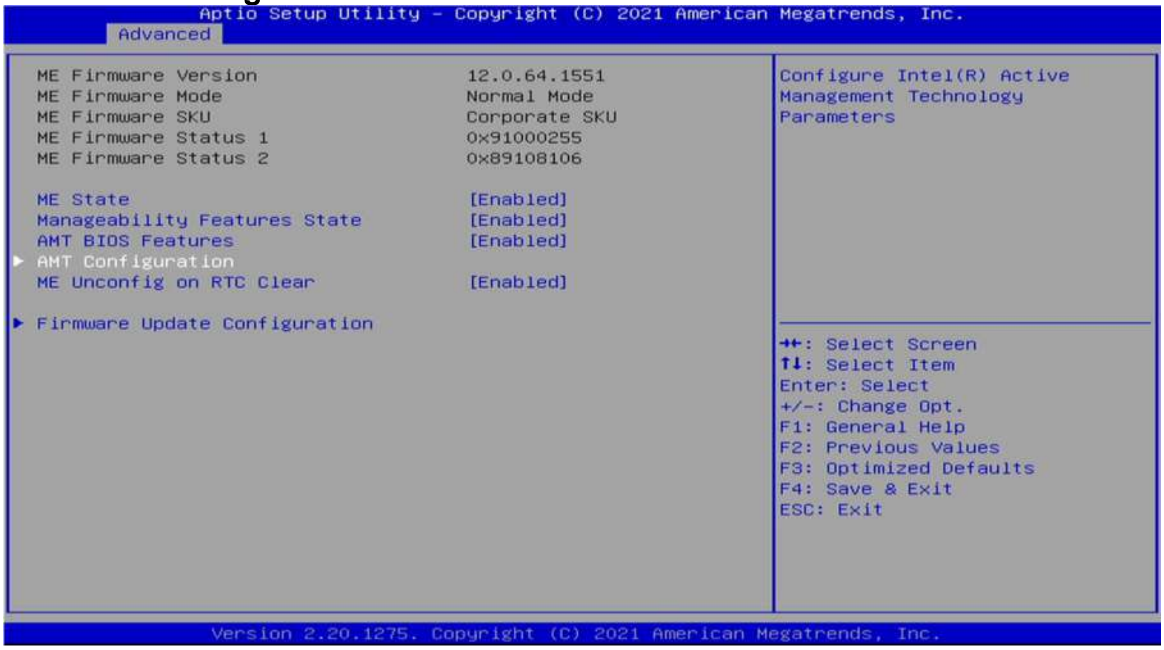

Field Name	ME State
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Manageability Features State
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	AMT BIOS Features
Default Value	[Enabled]
Possible Value	Disabled Enabled

3.4.4 AMT Configuration



```
                 Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
        Advanced

  ME Firmware Version                    12.0.64.1551        Configure Intel(R) Active
  ME Firmware Mode                       Normal Mode         Management Technology
  ME Firmware SKU                        Corporate SKU       Parameters
  ME Firmware Status 1                   0x91000255
  ME Firmware Status 2                   0x89108106

  ME State                               [Enabled]
  Manageability Features State           [Enabled]
  AMT BIOS Features                      [Enabled]
▶ AMT Configuration
  ME Unconfig on RTC Clear               [Enabled]

▶ Firmware Update Configuration
                                                             →←: Select Screen
                                                             ↑↓: Select Item
                                                             Enter: Select
                                                             +/-: Change Opt.
                                                             F1: General Help
                                                             F2: Previous Values
                                                             F3: Optimized Defaults
                                                             F4: Save & Exit
                                                             ESC: Exit

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```
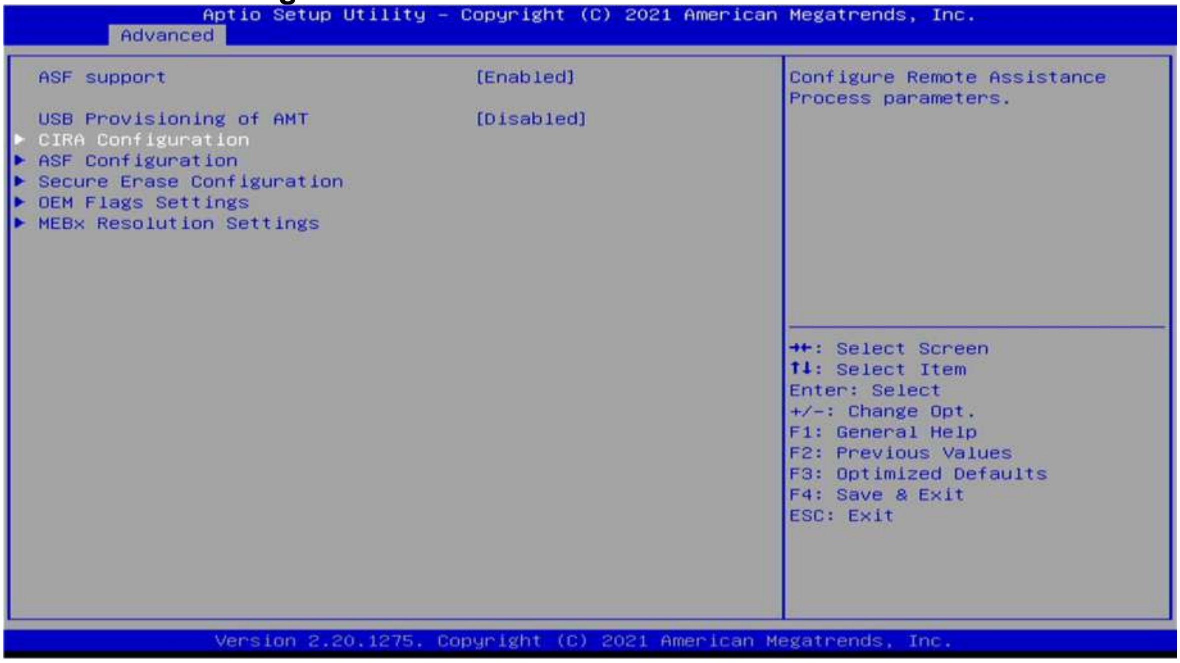

Field Name	ASF support
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	USB Provisioning of AMT
Default Value	[Disabled]
Possible Value	Disabled Enabled

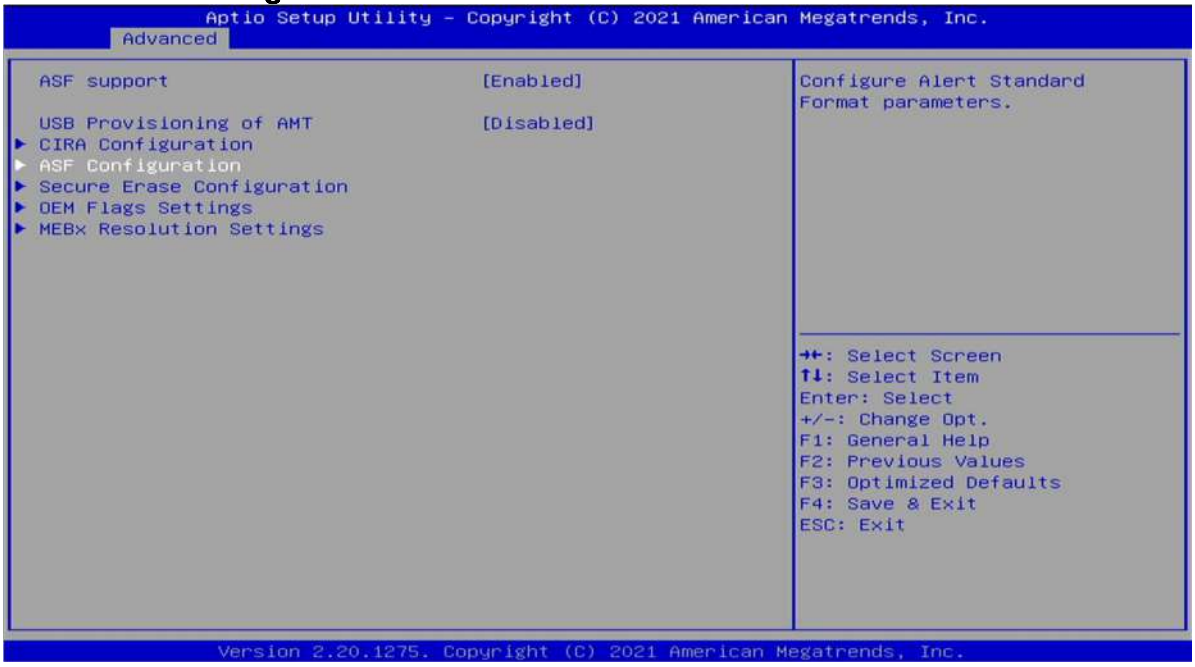
3.4.4.1 CIRA Configuration



```
                 Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
        Advanced

  ASF support                            [Enabled]           Configure Remote Assistance
                                                             Process parameters.
  USB Provisioning of AMT                [Disabled]
▶ CIRA Configuration
▶ ASF Configuration
▶ Secure Erase Configuration
▶ OEM Flags Settings
▶ MEBx Resolution Settings

                                                             →←: Select Screen
                                                             ↑↓: Select Item
                                                             Enter: Select
                                                             +/-: Change Opt.
                                                             F1: General Help
                                                             F2: Previous Values
                                                             F3: Optimized Defaults
                                                             F4: Save & Exit
                                                             ESC: Exit

                 Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Activate Remote Assistance Process
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.4.2 ASF Configuration



```
Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
Advanced

  ASF support                          [Enabled]              Configure Alert Standard
                                                              Format parameters.
  USB Provisioning of AMT              [Disabled]
▶ CIRA Configuration
▶ ASF Configuration
▶ Secure Erase Configuration
▶ OEM Flags Settings
▶ MEBx Resolution Settings

                                                              →←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

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```
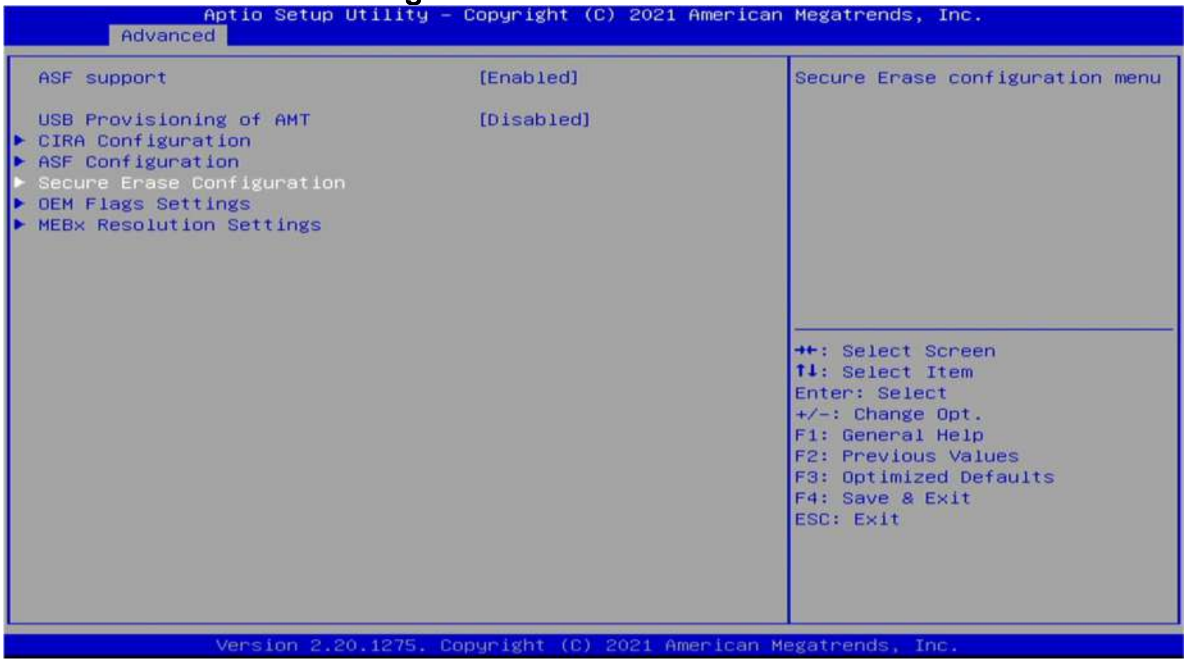

Field Name	PET Progress
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	WatchDog
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	ASF Sensors Table
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.4.3 Secure Erase Configuration

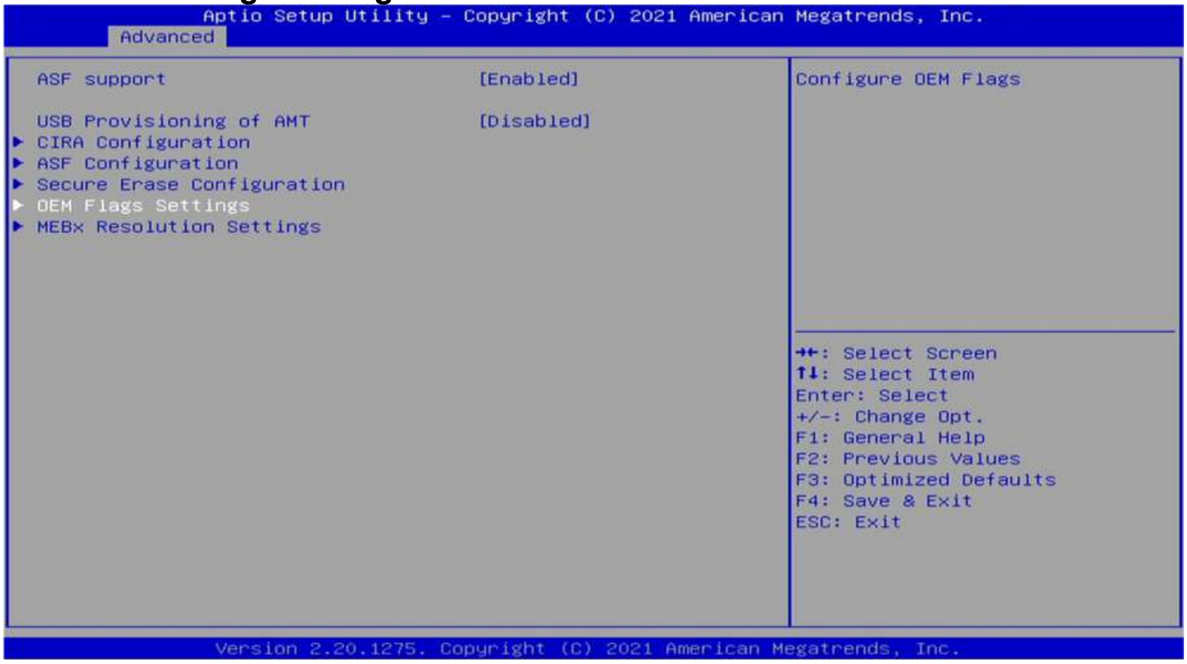


```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
      Advanced
  ASF support                          [Enabled]         Secure Erase configuration menu

  USB Provisioning of AMT              [Disabled]
► CIRA Configuration
► ASF Configuration
► Secure Erase Configuration
► OEM Flags Settings
► MEBx Resolution Settings
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

            Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Secure Erase mode
Default Value	[Simulated]
Possible Value	Simulated Real

Field Name	Force Secure Erase
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.4.4 OEM Flags Settings



```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
      Advanced
  ASF support                          [Enabled]         Configure OEM Flags

  USB Provisioning of AMT              [Disabled]
► CIRA Configuration
► ASF Configuration
► Secure Erase Configuration
► OEM Flags Settings
► MEBx Resolution Settings
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

            Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	MEBx hotkey Pressed
Default Value	[Disabled]
Possible Value	Disabled Enabled

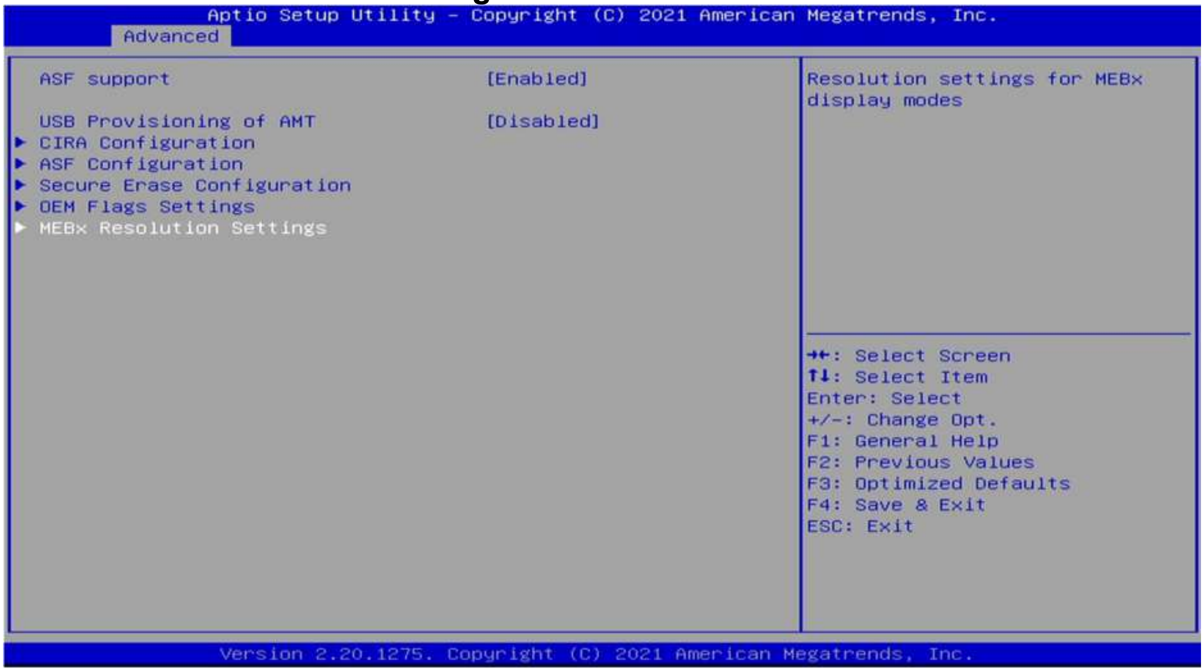
Field Name	MEBx Selection Screen
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	Hide Unconfigure ME Confirmation Prompt
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	MEBx OEM Debug Menu Enable
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	Unconfigure ME
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.4.5 MEBx Resolution Settings

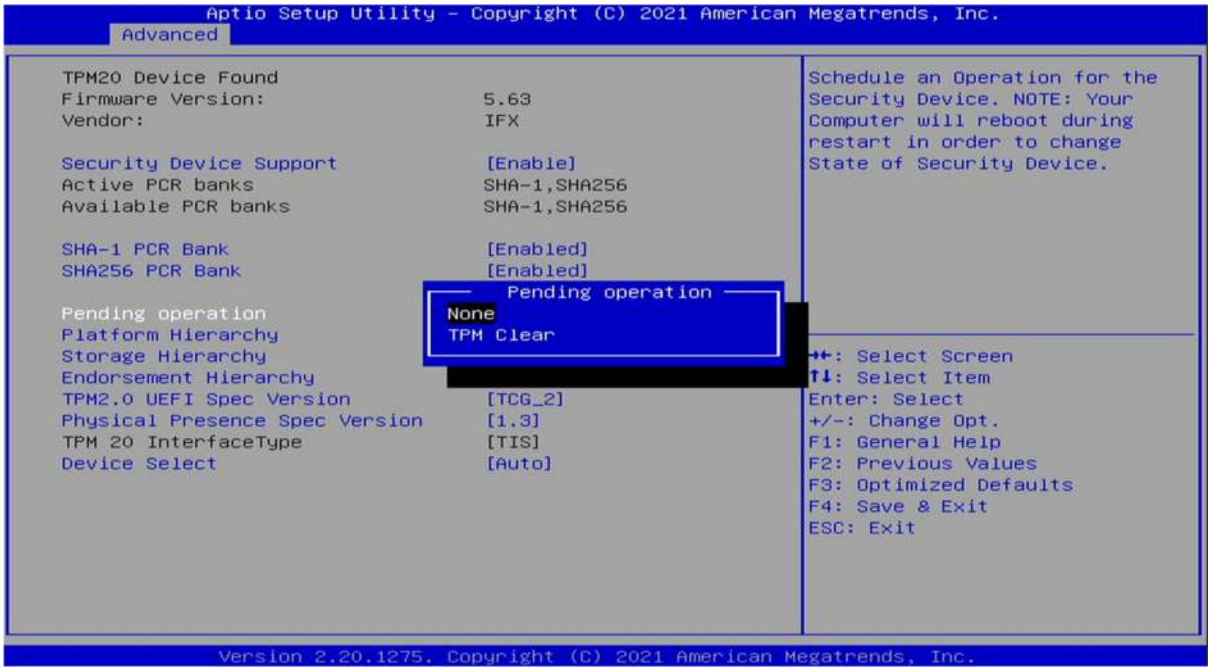


```
Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
Advanced

  ASF support                          [Enabled]           Resolution settings for MEBx
                                                           display modes
  USB Provisioning of AMT              [Disabled]
▶ CIRA Configuration
▶ ASF Configuration
▶ Secure Erase Configuration
▶ OEM Flags Settings
▶ MEBx Resolution Settings

                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Non-UI Mode Resoultion
Default Value	[Auto]
Possible Value	Auto 80x25 100x31

Field Name	UI Mode Resolution
Default Value	[Auto]
Possible Value	Auto 80x25 100x31

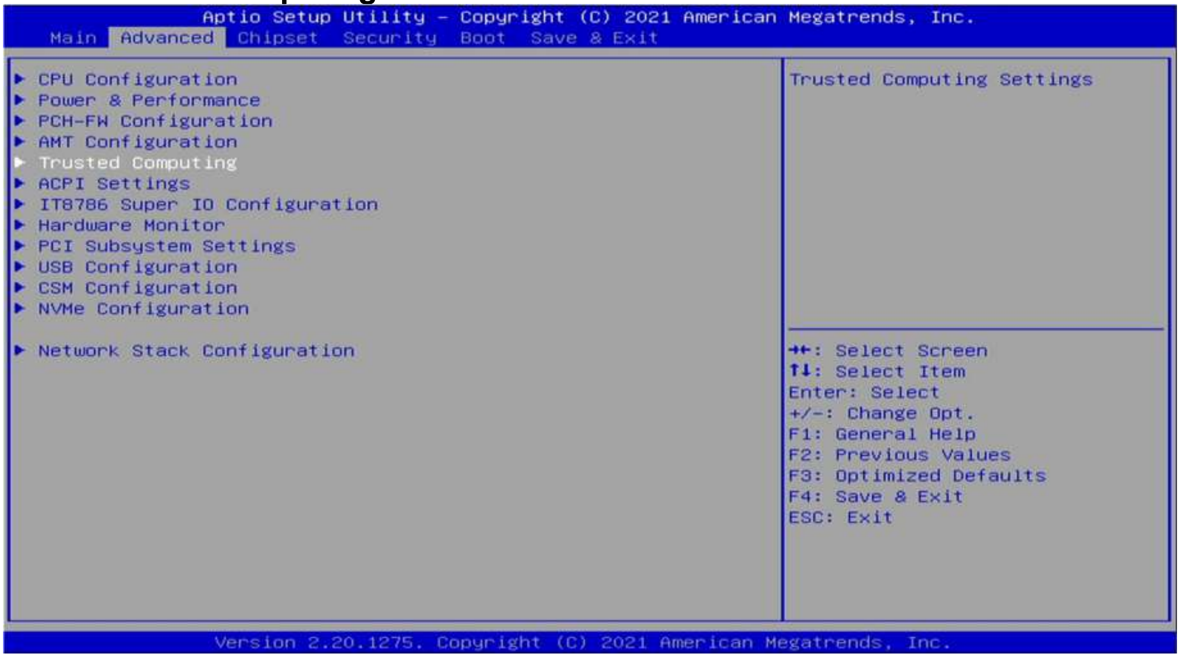
Field Name	Graphics Mode Resoultion
Default Value	[Auto]
Possible Value	Auto 640x480 800x600 1024x768



```
          Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
    Advanced

   TPM20 Device Found                                  Schedule an Operation for the
   Firmware Version:            5.63                   Security Device. NOTE: Your
   Vendor:                      IFX                    Computer will reboot during
                                                       restart in order to change
   Security Device Support      [Enable]               State of Security Device.
   Active PCR banks             SHA-1,SHA256
   Available PCR banks          SHA-1,SHA256

   SHA-1 PCR Bank               [Enabled]
   SHA256 PCR Bank              [Enabled]
                         ── Pending operation ──
   Pending operation     None
   Platform Hierarchy    TPM Clear
   Storage Hierarchy                                   →←: Select Screen
   Endorsement Hierarchy                               ↑↓: Select Item
   TPM2.0 UEFI Spec Version     [TCG_2]                Enter: Select
   Physical Presence Spec Version [1.3]                +/-: Change Opt.
   TPM 20 InterfaceType         [TIS]                  F1: General Help
   Device Select                [Auto]                 F2: Previous Values
                                                       F3: Optimized Defaults
                                                       F4: Save & Exit
                                                       ESC: Exit

            Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Pending operation
Default Value	[None]
Possible Value	None TPM Clear

3.4.5 Trusted Computing



```
             Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

 ▶ CPU Configuration                                          Trusted Computing Settings
 ▶ Power & Performance
 ▶ PCH-FW Configuration
 ▶ AMT Configuration
 ▶ Trusted Computing
 ▶ ACPI Settings
 ▶ IT8786 Super IO Configuration
 ▶ Hardware Monitor
 ▶ PCI Subsystem Settings
 ▶ USB Configuration
 ▶ CSM Configuration
 ▶ NVMe Configuration

 ▶ Network Stack Configuration                                →←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

                  Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Security Device Support
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	SHA-1 PCR Bank
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	SHA256 PCR Bank
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Pending operation
Default Value	[None]
Possible Value	None TPM Clear

Field Name	Platform Hierarchy
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Storage Hierarchy
Default Value	[Enabled]
Possible Value	Disabled Enabled

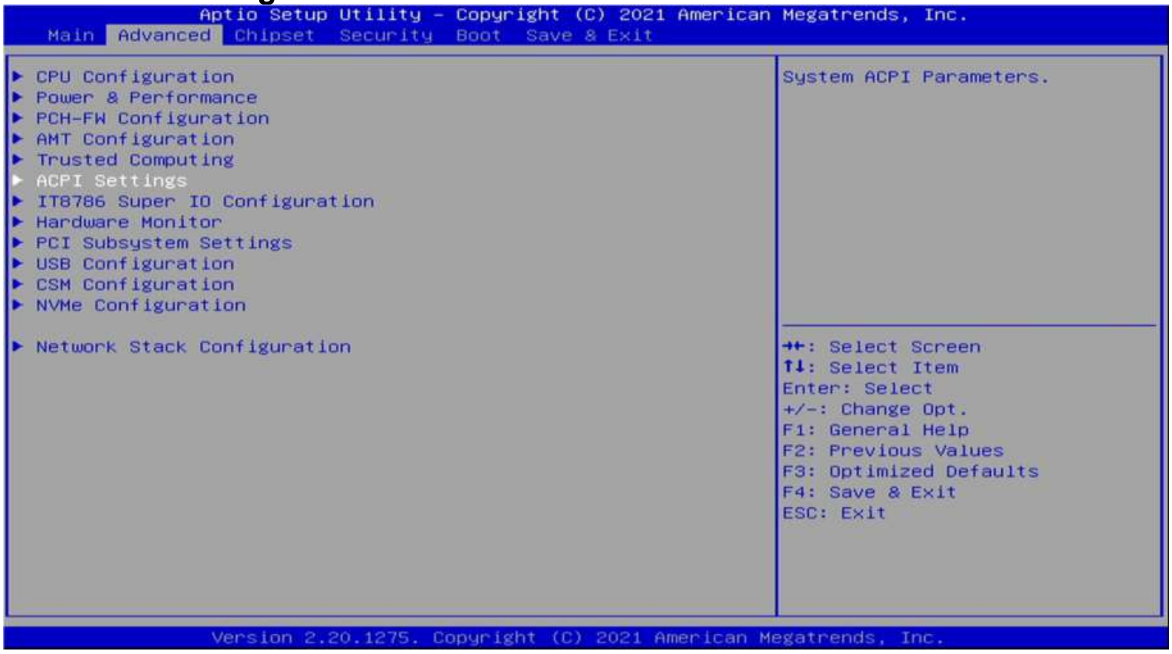
Field Name	Endorsement Hierarchy
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	TPM2.0 UEFI Spec Version
Default Value	[TCG_2]
Possible Value	TCG_1_2 TCG_2

Field Name	Physical Presence Spec Version
Default Value	[1.3]
Possible Value	1.2 1.3

Field Name	Device Select
Default Value	[Auto]
Possible Value	TPM 1.2 TPM 2.0 Auto

3.4.6 ACPI Settings



```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                              System ACPI Parameters.
▶ Power & Performance
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                    →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

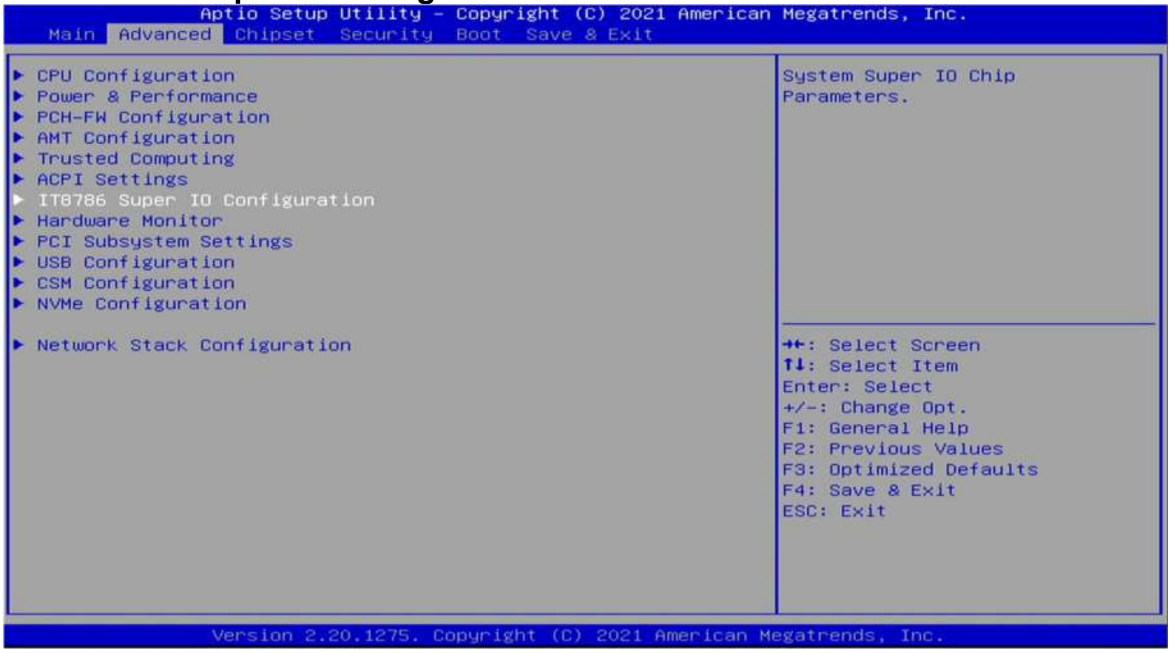
Field Name	Enable ACPI Auto Configuration
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	Enable Hibernation
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	**ACPI Sleep State**
Default Value	[S3 (Suspend to RAM)]
Possible Value	Suspend Disabled S3 (Suspend to RAM)

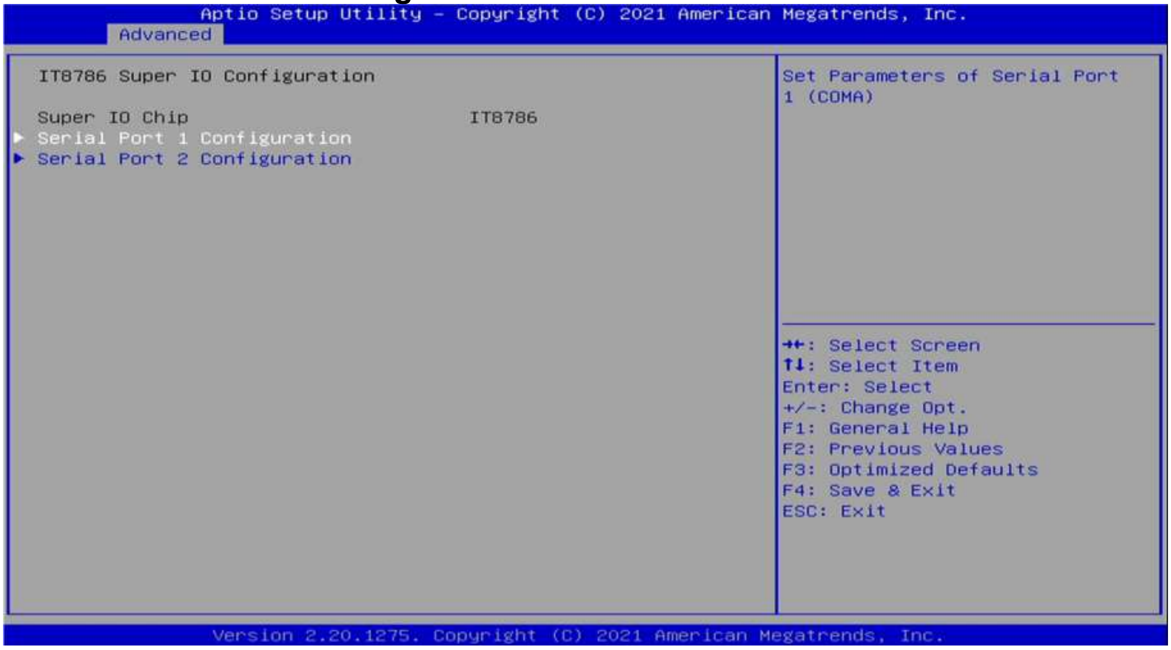
Field Name	**Lock Legacy Resources**
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.7 IT8786 Super IO Configuration



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                          System Super IO Chip
▶ Power & Performance                        Parameters.
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.4.7.1 Secial Port 1 Configuration

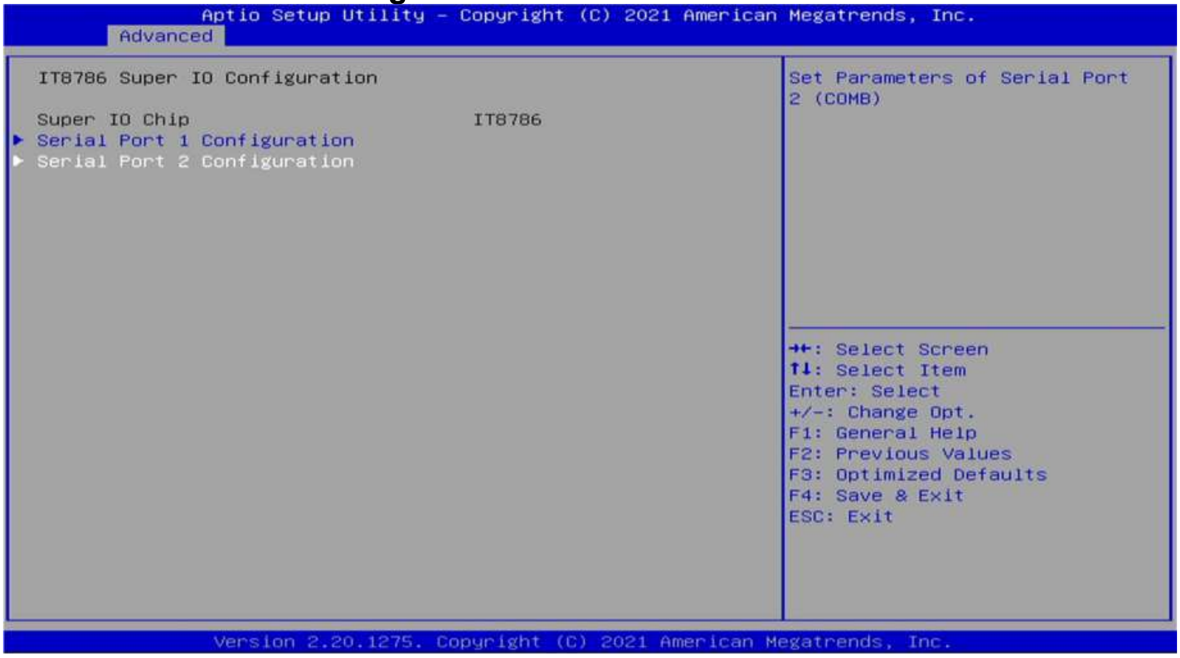


```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
          Advanced

  IT8786 Super IO Configuration              Set Parameters of Serial Port
                                             1 (COMA)
  Super IO Chip                  IT8786
▶ Serial Port 1 Configuration
▶ Serial Port 2 Configuration

                                             →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	COM1 Control
Default Value	[RS-232]
Possible Value	Loopback RS-232 RS-485 Half Duplex RS-485/422 Full Duplex

3.4.7.2 Serial Port 2 Configuration

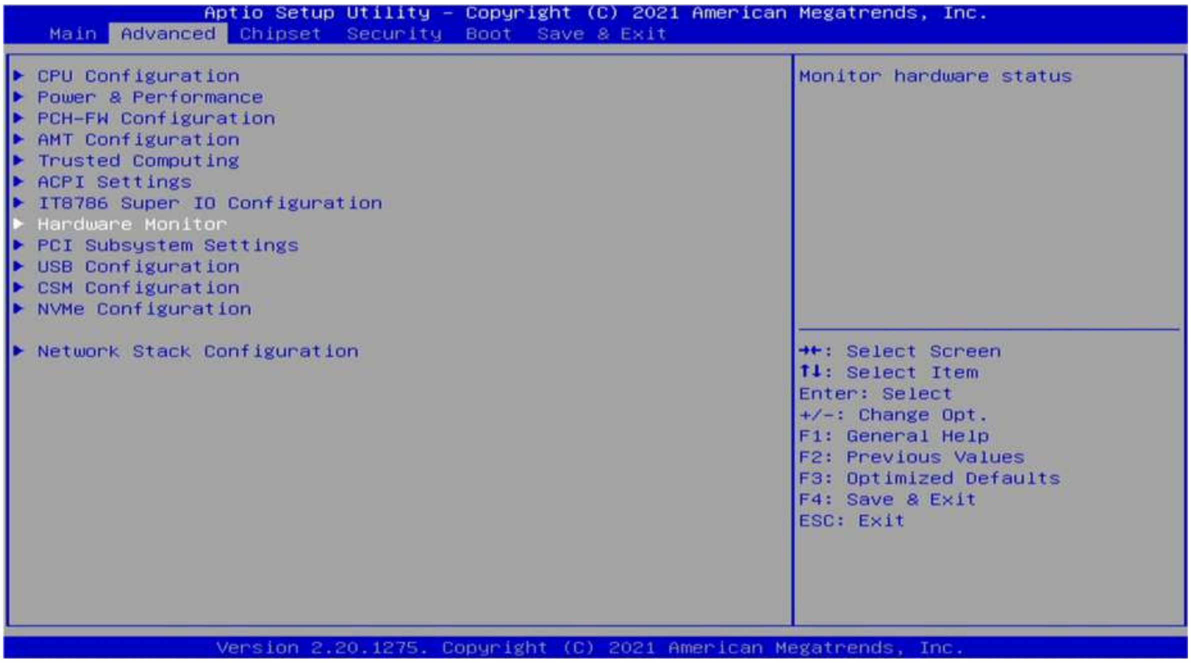


```
                Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
     Advanced

  IT8786 Super IO Configuration                         Set Parameters of Serial Port
                                                        2 (COMB)
  Super IO Chip                       IT8786
▶ Serial Port 1 Configuration
▶ Serial Port 2 Configuration
                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

             Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled

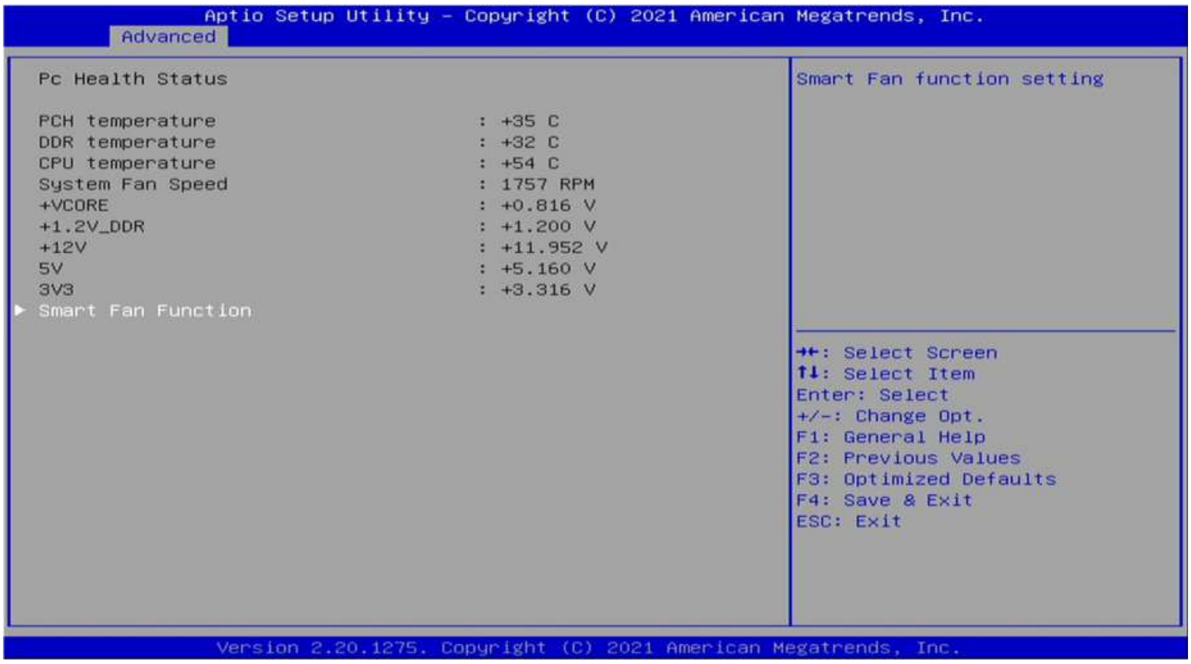
Field Name	COM1 Control
Default Value	[RS-232]
Possible Value	Loopback RS-232 RS-485 Half Duplex RS-485/422 Full Duplex

3.4.8 Hardware Monitor



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                              Monitor hardware status
▶ Power & Performance
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                    →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.4.8.1 Smart Fan Function

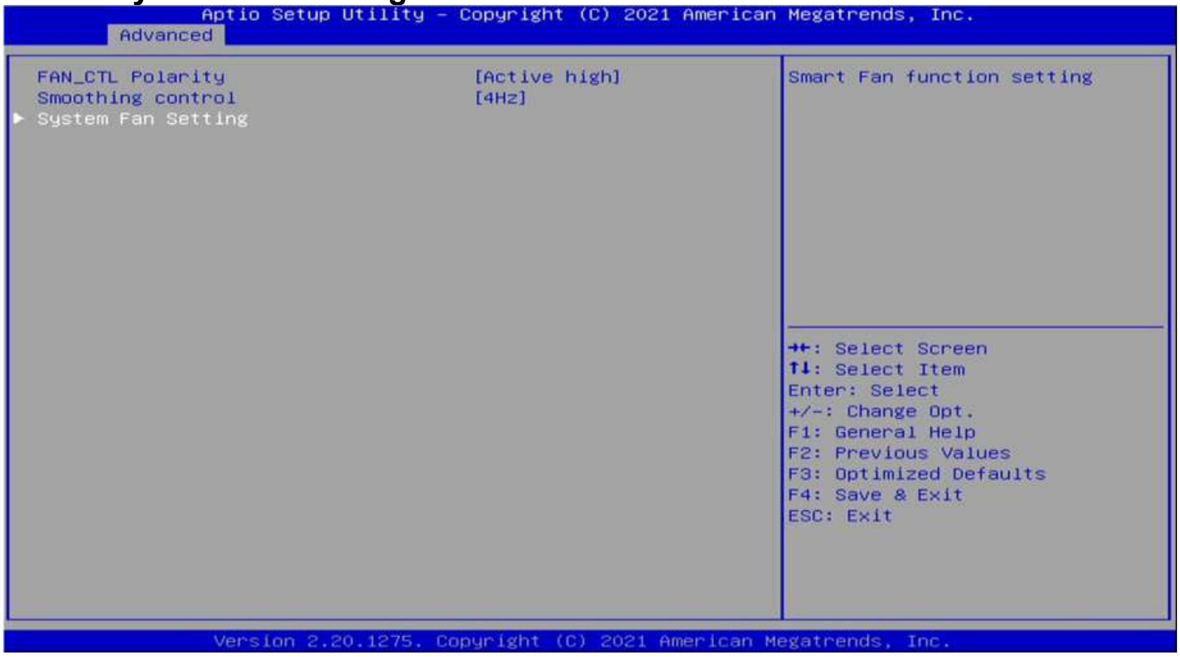


```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
Advanced

  Pc Health Status                               Smart Fan function setting

  PCH temperature              : +35 C
  DDR temperature              : +32 C
  CPU temperature              : +54 C
  System Fan Speed             : 1757 RPM
  +VCORE                       : +0.816 V
  +1.2V_DDR                    : +1.200 V
  +12V                         : +11.952 V
  5V                           : +5.160 V
  3V3                          : +3.316 V
▶ Smart Fan Function
                                                 →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	FAN_CTL Polarity
Default Value	[Active high]
Possible Value	Active low Active high

Field Name	Smoothing control
Default Value	[4Hz]
Possible Value	1Hz 16Hz 8Hz 4Hz

3.4.8.2 System Fan Setting



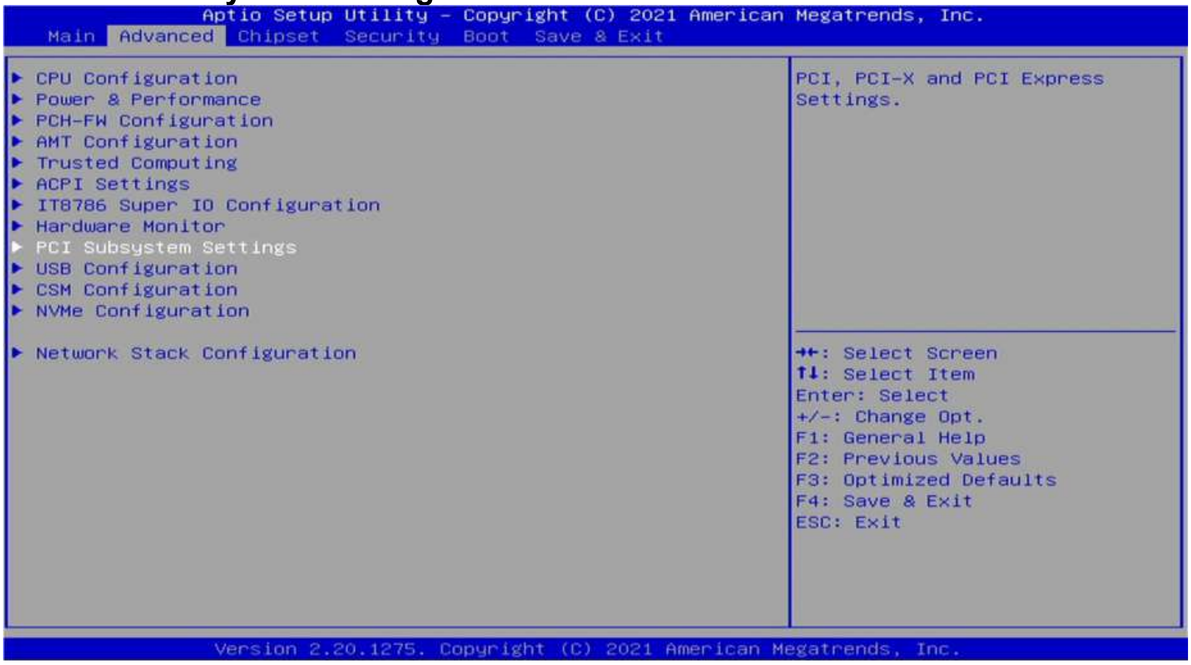
```
            Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
     Advanced

   FAN_CTL Polarity                       [Active high]    Smart Fan function setting
   Smoothing control                      [4Hz]
 ▶ System Fan Setting

                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

              Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	**Smart Fan Mode**
Default Value	[Automatic Mode]
Possible Value	Software Mode Automatic Mode

Field Name	**System Fan Type**
Default Value	[PWM]
Possible Value	PWM RPM

Field Name	**Temperature select**
Default Value	[TMP IN3]
Possible Value	TMP IN1 TMP IN2 TMP IN3

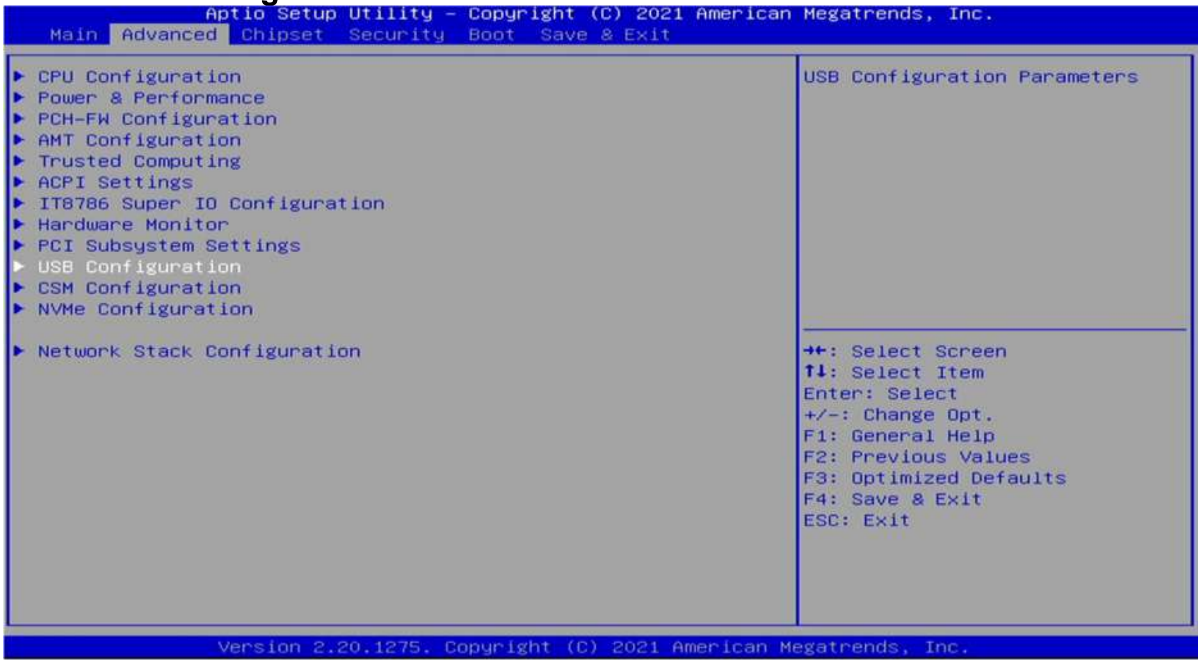
3.4.9 PCI Subsystem Settings



```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                                   PCI, PCI-X and PCI Express
▶ Power & Performance                                 Settings.
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                         →←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Above 4G Decoding
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.10 USB Configuation



```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                                   USB Configuration Parameters
▶ Power & Performance
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                         →←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Legacy USB Support
Default Value	[Enabled]
Possible Value	Enabled Disabled Auto

Field Name	XHCI Hand-off
Default Value	[Enabled]
Possible Value	Enabled Disabled

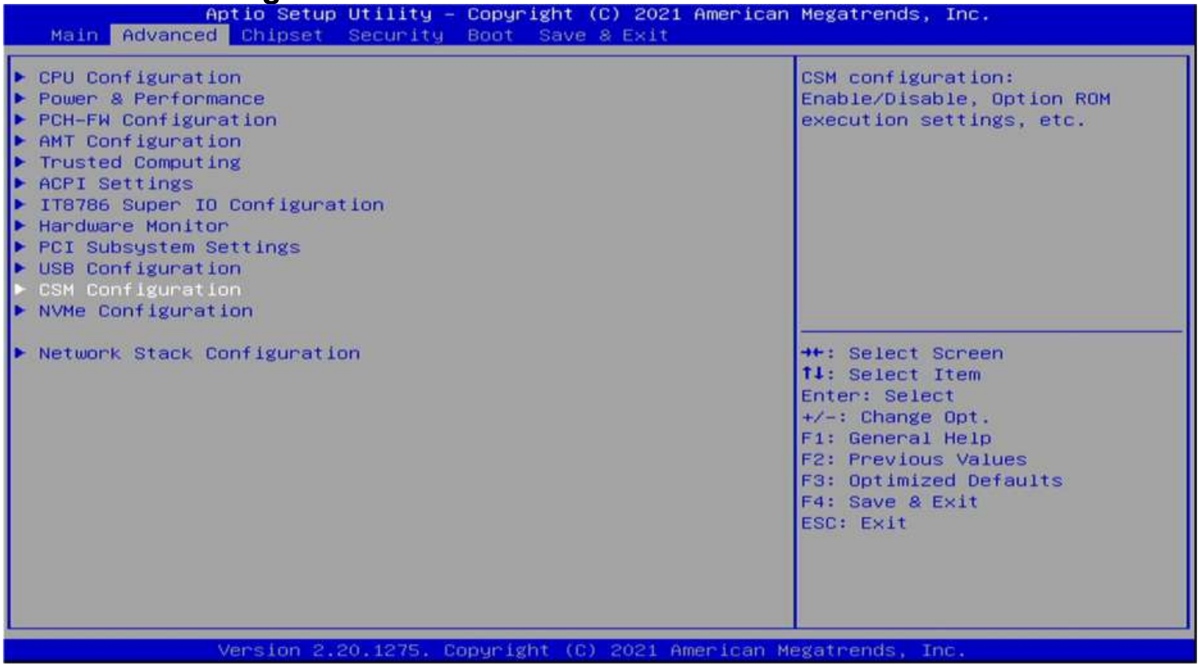
Field Name	USB Mass Storage Driver Support
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	USB transfer time-out
Default Value	[20 sec]
Possible Value	1 sec 5 sec 10 sec 20 sec

Field Name	Device reset time-out
Default Value	[20 sec]
Possible Value	1 sec 5 sec 10 sec 20 sec

Field Name	Device Power-up delay
Default Value	[Auto]
Possible Value	Auto Manual

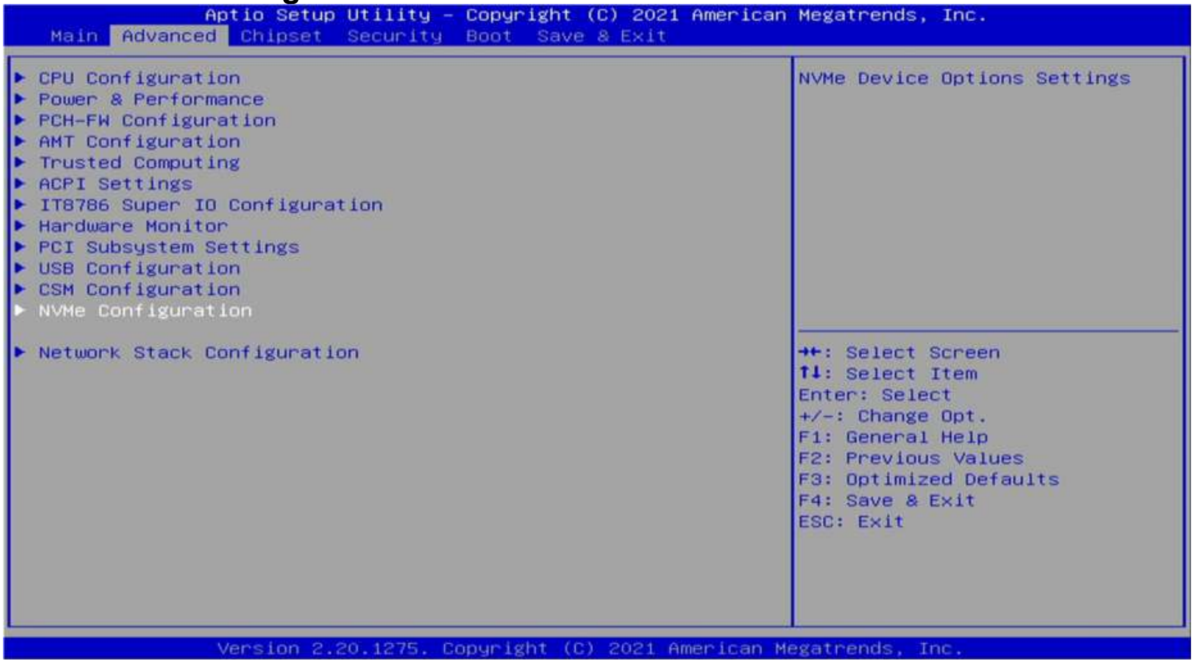
3.4.11 CSM Configuration



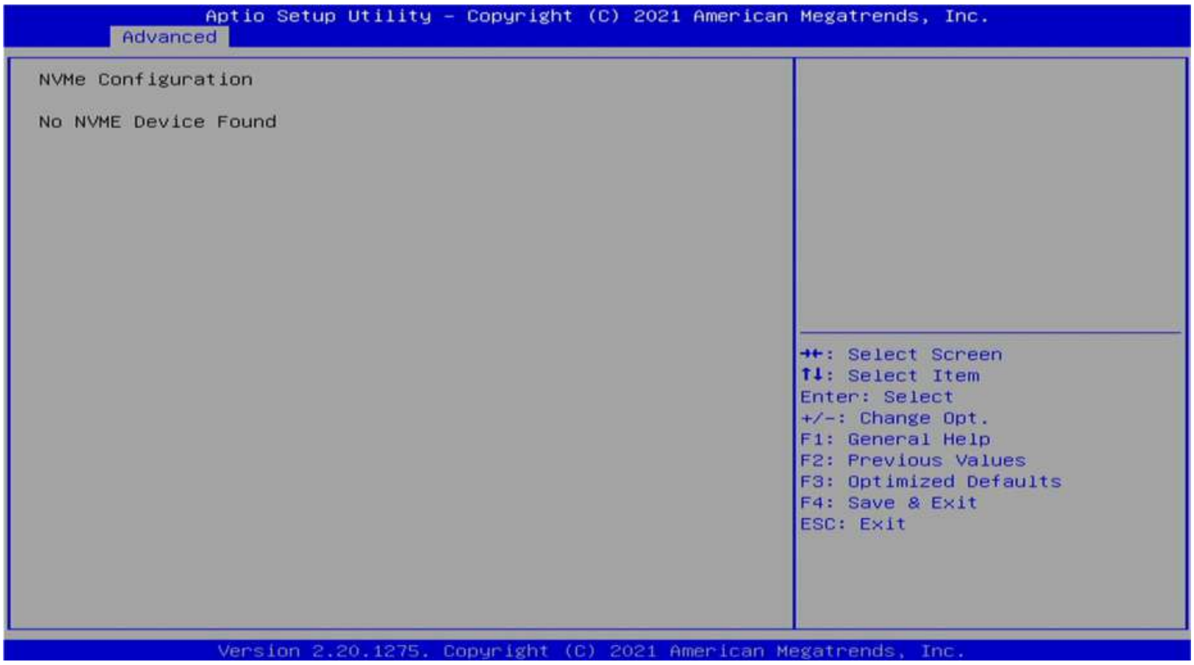
```
            Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

 ► CPU Configuration                                  CSM configuration:
 ► Power & Performance                                Enable/Disable, Option ROM
 ► PCH-FW Configuration                               execution settings, etc.
 ► AMT Configuration
 ► Trusted Computing
 ► ACPI Settings
 ► IT8786 Super IO Configuration
 ► Hardware Monitor
 ► PCI Subsystem Settings
 ► USB Configuration
 ► CSM Configuration
 ► NVMe Configuration

 ► Network Stack Configuration                        →←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit

            Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	CSM Support
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.4.12 NVMe Configuration

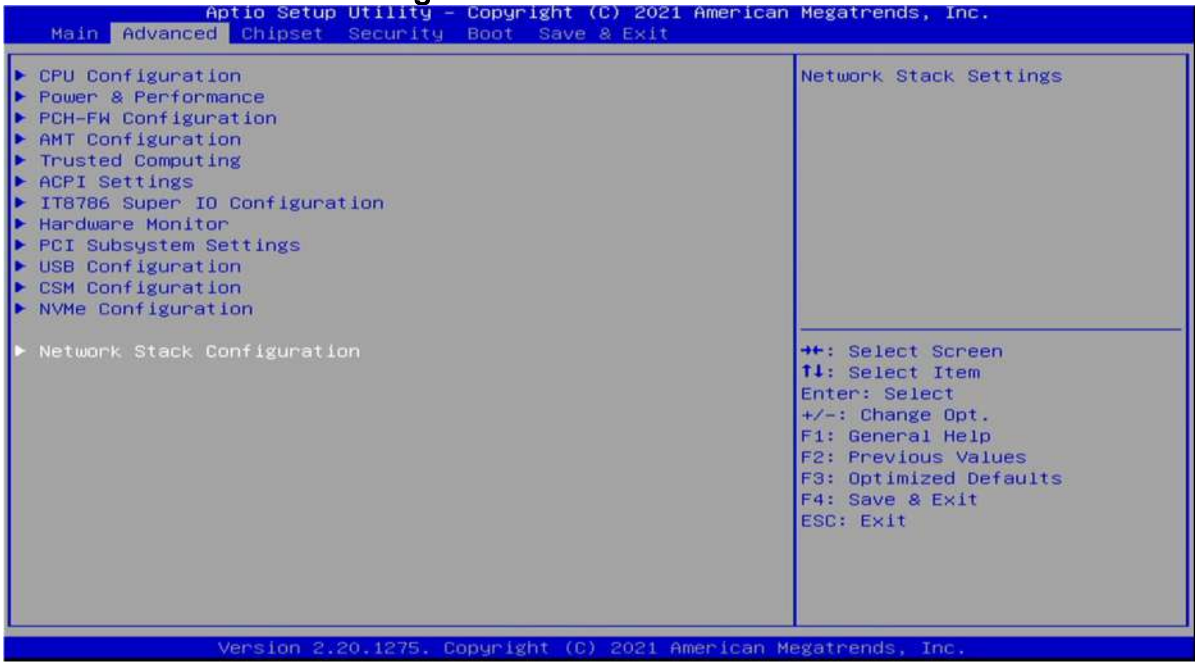


```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ CPU Configuration                          NVMe Device Options Settings
▶ Power & Performance
▶ PCH-FW Configuration
▶ AMT Configuration
▶ Trusted Computing
▶ ACPI Settings
▶ IT8786 Super IO Configuration
▶ Hardware Monitor
▶ PCI Subsystem Settings
▶ USB Configuration
▶ CSM Configuration
▶ NVMe Configuration

▶ Network Stack Configuration                →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

      Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
         Advanced

  NVMe Configuration

  No NVME Device Found




                                             →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

      Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.4.13 Network Stack Configuration



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

► CPU Configuration                              Network Stack Settings
► Power & Performance
► PCH-FW Configuration
► AMT Configuration
► Trusted Computing
► ACPI Settings
► IT8786 Super IO Configuration
► Hardware Monitor
► PCI Subsystem Settings
► USB Configuration
► CSM Configuration
► NVMe Configuration

► Network Stack Configuration                    →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

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```
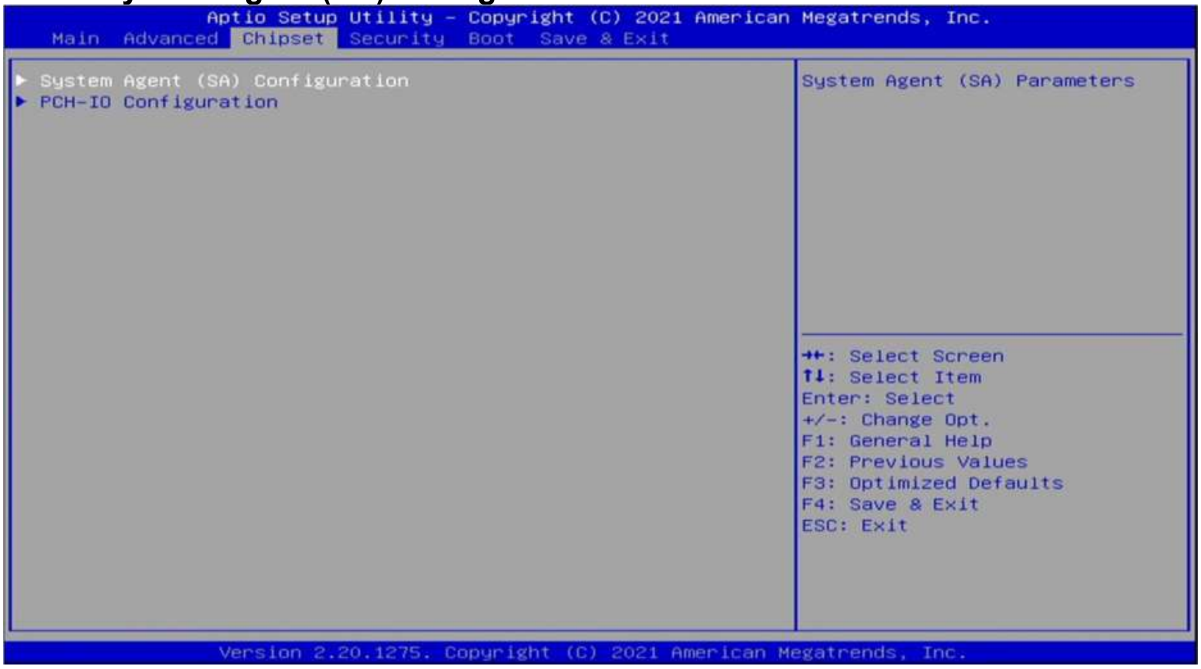
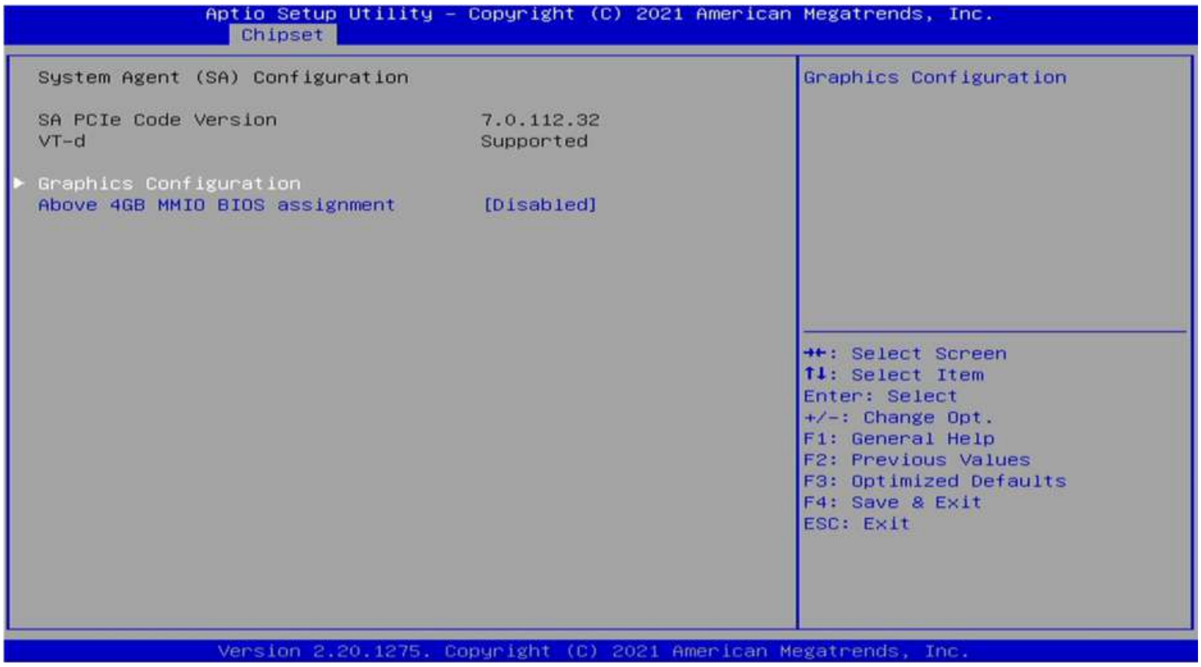

Field Name	Network Stack
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.5 Chipset

3.5.1 System Agent (SA) Configuration



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

► System Agent (SA) Configuration            System Agent (SA) Parameters
► PCH-IO Configuration

                                             →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

      Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```



```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                 Chipset

  System Agent (SA) Configuration                Graphics Configuration

  SA PCIe Code Version          7.0.112.32
  VT-d                          Supported

► Graphics Configuration
  Above 4GB MMIO BIOS assignment [Disabled]

                                             →←: Select Screen
                                             ↑↓: Select Item
                                             Enter: Select
                                             +/-: Change Opt.
                                             F1: General Help
                                             F2: Previous Values
                                             F3: Optimized Defaults
                                             F4: Save & Exit
                                             ESC: Exit

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```

Field Name	Primary Display
Default Value	[Auto]
Possible Value	Auto IGFX PEG PCI SG

Field Name	Internal Graphics
Default Value	[Auto]
Possible Value	Auto Disabled Enabled

Field Name	GTT Size
Default Value	[8MB]
Possible Value	2MB 4MB 8MB

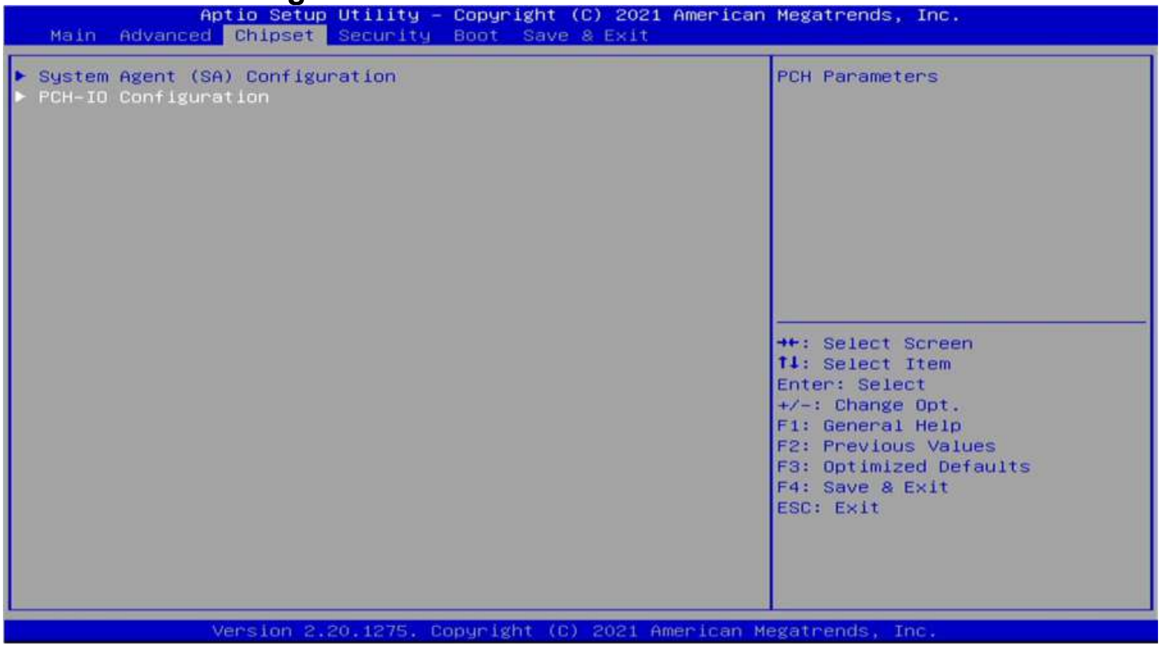
Field Name	Aperture Size
Default Value	[256MB]
Possible Value	128MB 256MB 512MB 1024MB 2048MB

Field Name	DVMT Pre-Allocated
Default Value	[32M]
Possible Value	0M 32M 64M 4M 8M 12M 16M 20M 24M 28M 32M/F7 36M 40M 44M 48M 52M 56M 60M

Field Name	DVMT Total Gfx Mem
Default Value	[128M]
Possible Value	128M 256M MAX

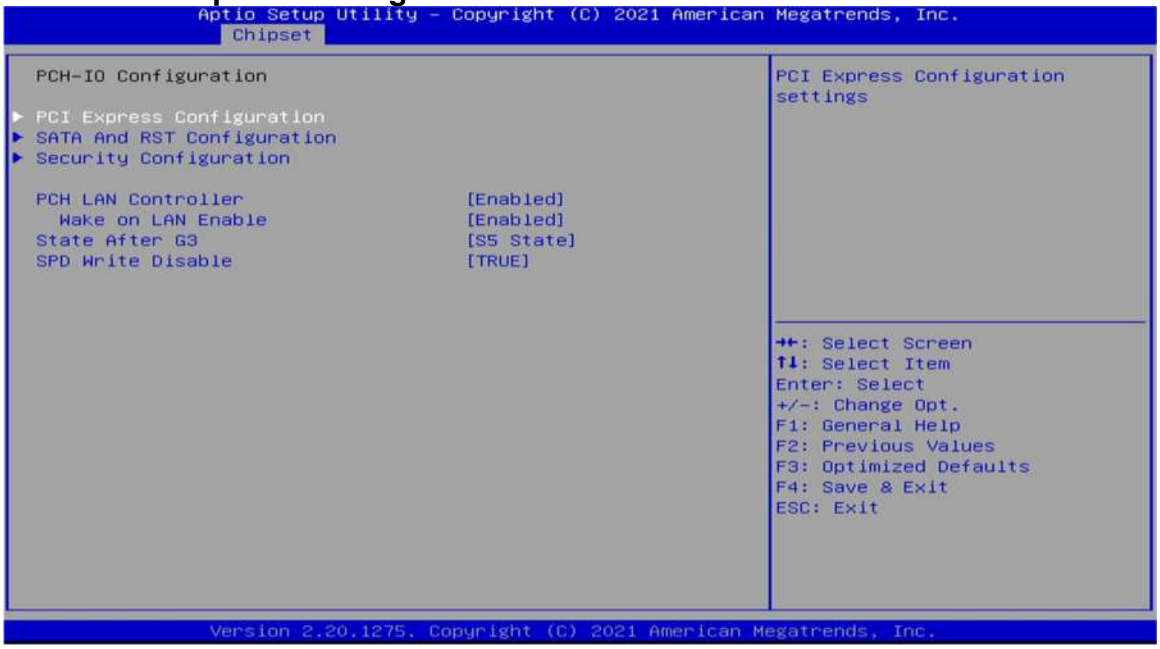
Field Name	Above 4GB MMIO BIOS assignment
Default Value	[Enabled]
Possible Value	Enabled Disabled

3.5.2 PCH-IO Configuration



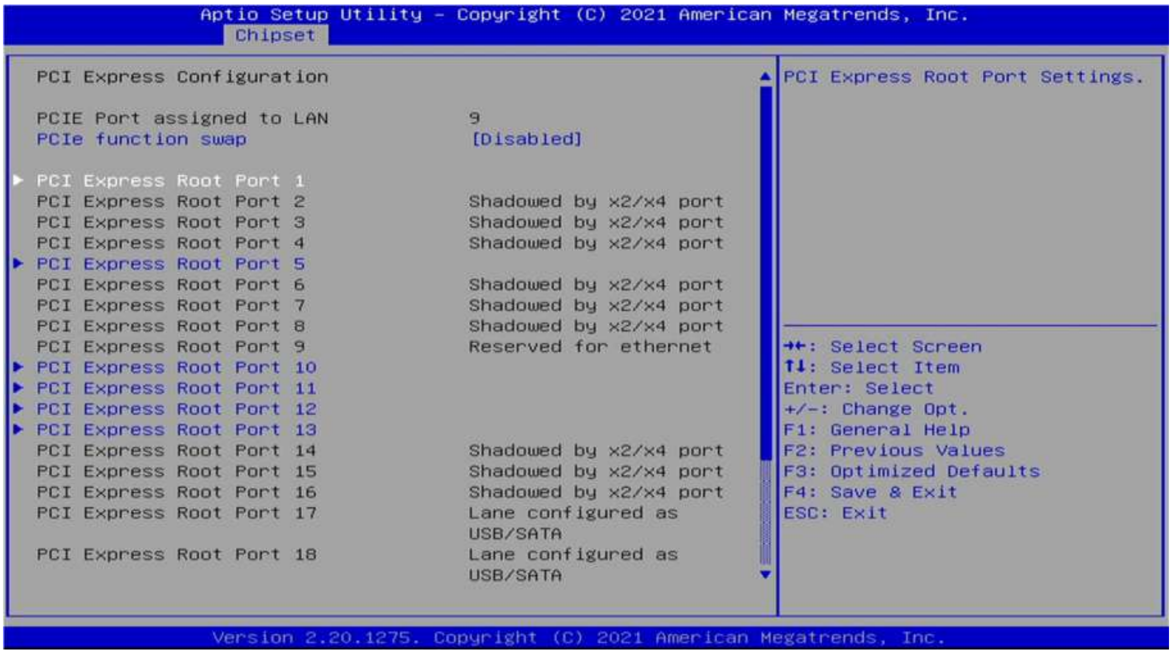
```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

▶ System Agent (SA) Configuration                          PCH Parameters
▶ PCH-IO Configuration

                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.5.2.1 PCI Express Configuration

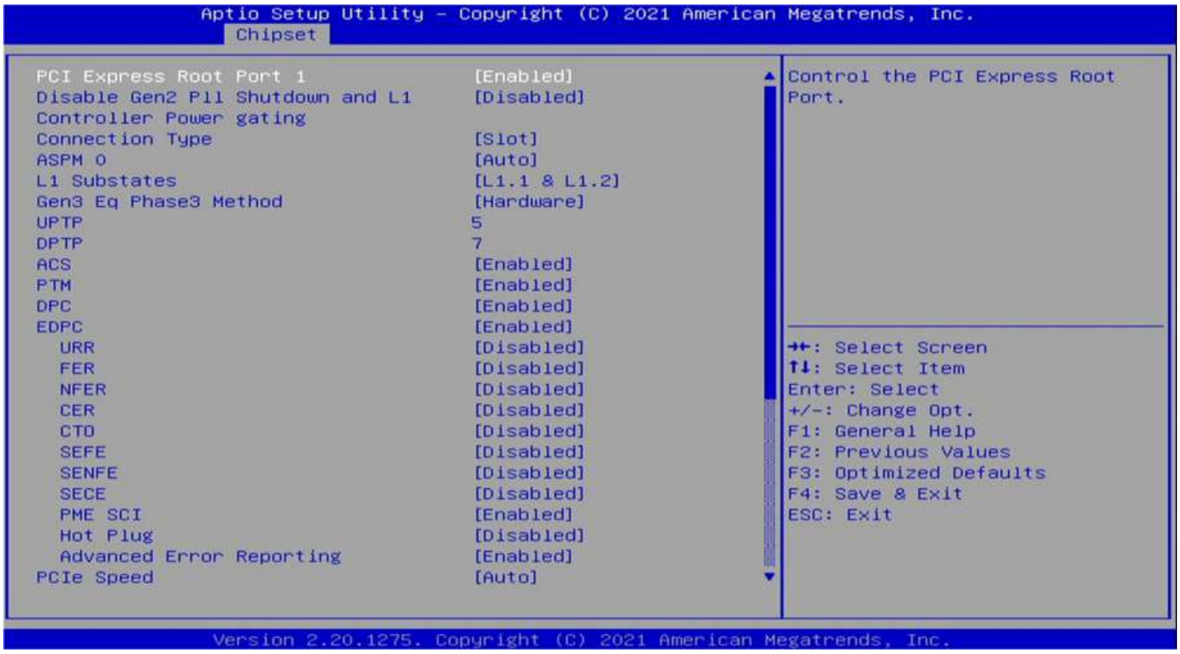


```
          Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                         Chipset

  PCH-IO Configuration                                     PCI Express Configuration
                                                           settings
▶ PCI Express Configuration
▶ SATA And RST Configuration
▶ Security Configuration

  PCH LAN Controller                  [Enabled]
    Wake on LAN Enable                [Enabled]
  State After G3                      [S5 State]
  SPD Write Disable                   [TRUE]

                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	PCIe function swap
Default Value	[Disabled]
Possible Value	Disabled Enabled



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
     Chipset
  PCI Express Configuration                                   PCI Express Root Port Settings.

  PCIE Port assigned to LAN              9
  PCIe function swap                     [Disabled]

▶ PCI Express Root Port 1
  PCI Express Root Port 2                Shadowed by x2/x4 port
  PCI Express Root Port 3                Shadowed by x2/x4 port
  PCI Express Root Port 4                Shadowed by x2/x4 port
▶ PCI Express Root Port 5
  PCI Express Root Port 6                Shadowed by x2/x4 port
  PCI Express Root Port 7                Shadowed by x2/x4 port
  PCI Express Root Port 8                Shadowed by x2/x4 port
  PCI Express Root Port 9                Reserved for ethernet        →←: Select Screen
▶ PCI Express Root Port 10                                            ↑↓: Select Item
▶ PCI Express Root Port 11                                            Enter: Select
▶ PCI Express Root Port 12                                            +/-: Change Opt.
▶ PCI Express Root Port 13                                            F1: General Help
  PCI Express Root Port 14               Shadowed by x2/x4 port       F2: Previous Values
  PCI Express Root Port 15               Shadowed by x2/x4 port       F3: Optimized Defaults
  PCI Express Root Port 16               Shadowed by x2/x4 port       F4: Save & Exit
  PCI Express Root Port 17               Lane configured as           ESC: Exit
                                         USB/SATA
  PCI Express Root Port 18               Lane configured as
                                         USB/SATA

        Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
     Chipset
  PCI Express Root Port 1                [Enabled]                    Control the PCI Express Root
  Disable Gen2 Pll Shutdown and L1       [Disabled]                   Port.
  Controller Power gating
  Connection Type                        [Slot]
  ASPM 0                                 [Auto]
  L1 Substates                           [L1.1 & L1.2]
  Gen3 Eq Phase3 Method                  [Hardware]
  UPTP                                   5
  DPTP                                   7
  ACS                                    [Enabled]
  PTM                                    [Enabled]
  DPC                                    [Enabled]
  EDPC                                   [Enabled]
    URR                                  [Disabled]                   →←: Select Screen
    FER                                  [Disabled]                   ↑↓: Select Item
    NFER                                 [Disabled]                   Enter: Select
    CER                                  [Disabled]                   +/-: Change Opt.
    CTO                                  [Disabled]                   F1: General Help
    SEFE                                 [Disabled]                   F2: Previous Values
    SENFE                                [Disabled]                   F3: Optimized Defaults
    SECE                                 [Disabled]                   F4: Save & Exit
    PME SCI                              [Enabled]                    ESC: Exit
    Hot Plug                             [Disabled]
    Advanced Error Reporting             [Enabled]
  PCIe Speed                             [Auto]

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```

Field Name	**PCI Express Root Port 1**
Default Value	[Enabled]

Field Name	**PCI Express Root Port 5**
Default Value	[Enabled]

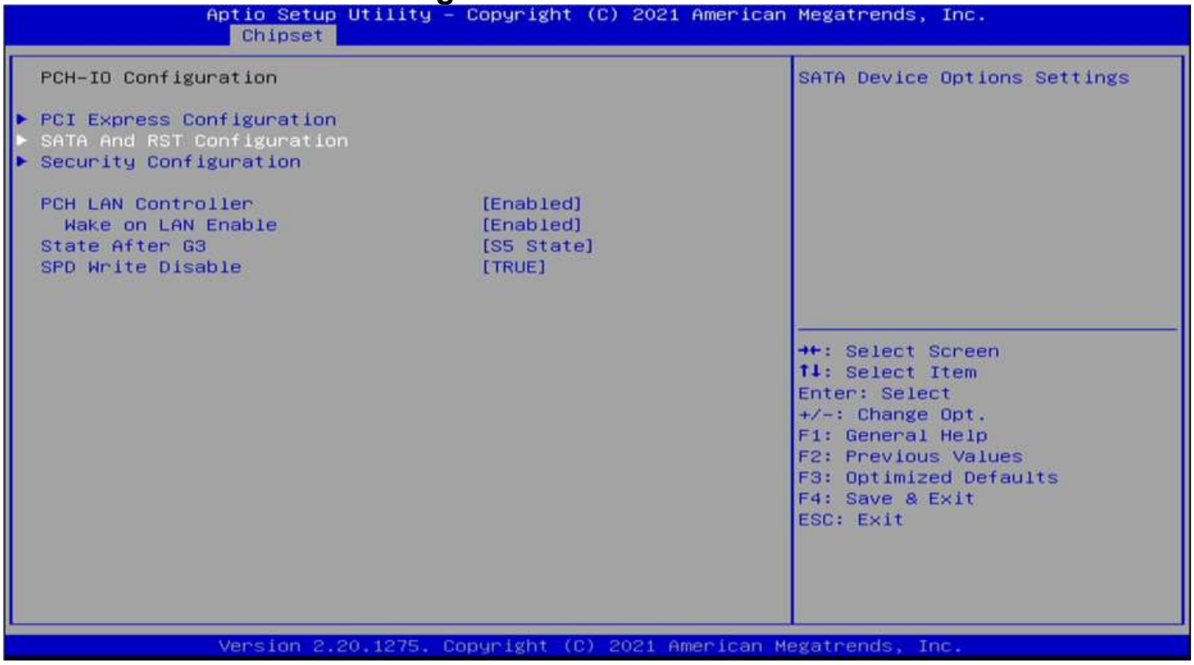
Field Name	**PCI Express Root Port 10**
Default Value	[Enabled]

Field Name	**PCI Express Root Port 11**
Default Value	[Enabled]

Field Name	PCI Express Root Port 12
Default Value	[Enabled]

Field Name	PCI Express Root Port 13
Default Value	[Enabled]

3.5.2.2 SATA And RST Configuration



```
            Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
               Chipset
  PCH-IO Configuration                                  SATA Device Options Settings

▶ PCI Express Configuration
▶ SATA And RST Configuration
▶ Security Configuration

  PCH LAN Controller                    [Enabled]
    Wake on LAN Enable                  [Enabled]
  State After G3                        [S5 State]
  SPD Write Disable                     [TRUE]
                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

            Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	SATA Controller(s)
Default Value	[Enabled]
Possible Value	Enabled Disabled

Field Name	SATA Mode Selection
Default Value	[AHCI]
Possible Value	AHCI Intel RST Premium With Intel Optane System Acceleration

Field Name	M.2 Port
Default Value	[Disabled]
Possible Value	Disabled Enabled

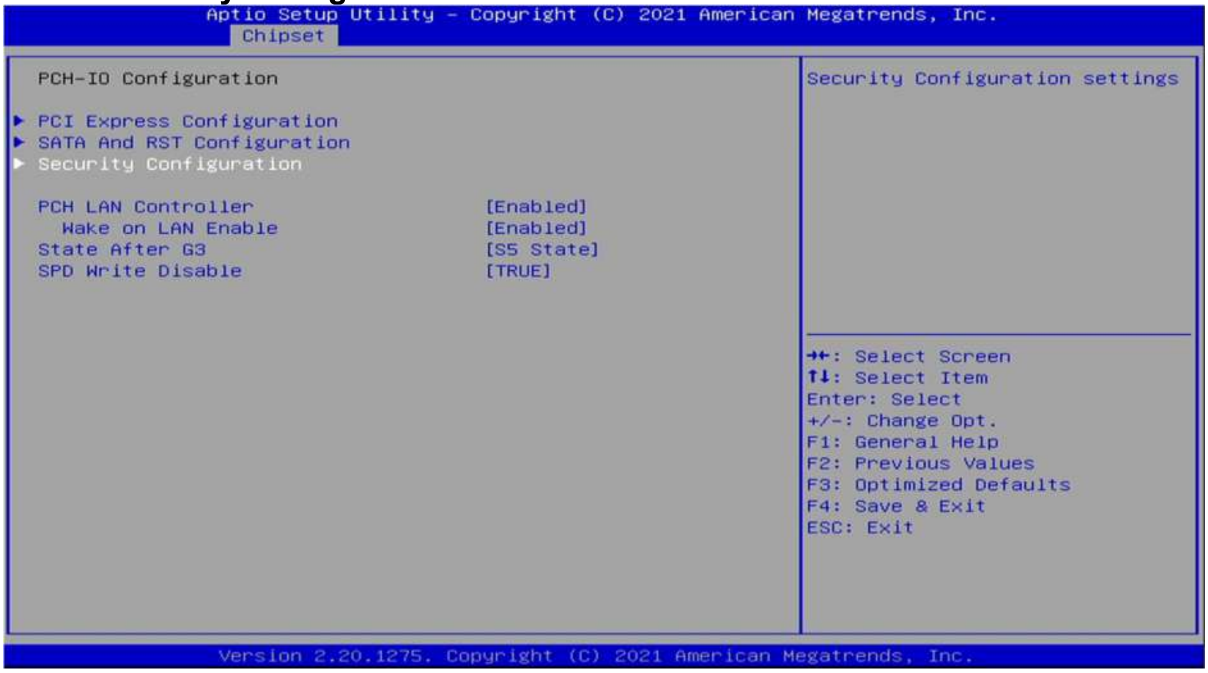
Field Name	Port 1
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	**Port 2**
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	**Port 3**
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	**Port 4**
Default Value	[Enabled]
Possible Value	Disabled Enabled

3.5.2.3 Security Configuration



```
                Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
          Chipset

  PCH-IO Configuration                                        Security Configuration settings

► PCI Express Configuration
► SATA And RST Configuration
► Security Configuration

  PCH LAN Controller                    [Enabled]
    Wake on LAN Enable                  [Enabled]
  State After G3                        [S5 State]
  SPD Write Disable                     [TRUE]

                                                              →←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

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```

Field Name	**RTC Memory Lock**
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	**BIOS Lock**
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Force unlock on all GPIO pads
Default Value	[Disabled]
Possible Value	Disabled Enabled

Field Name	PCH LAN Controller
Default Value	[Enabled]
Possible Value	Enabled Disabled

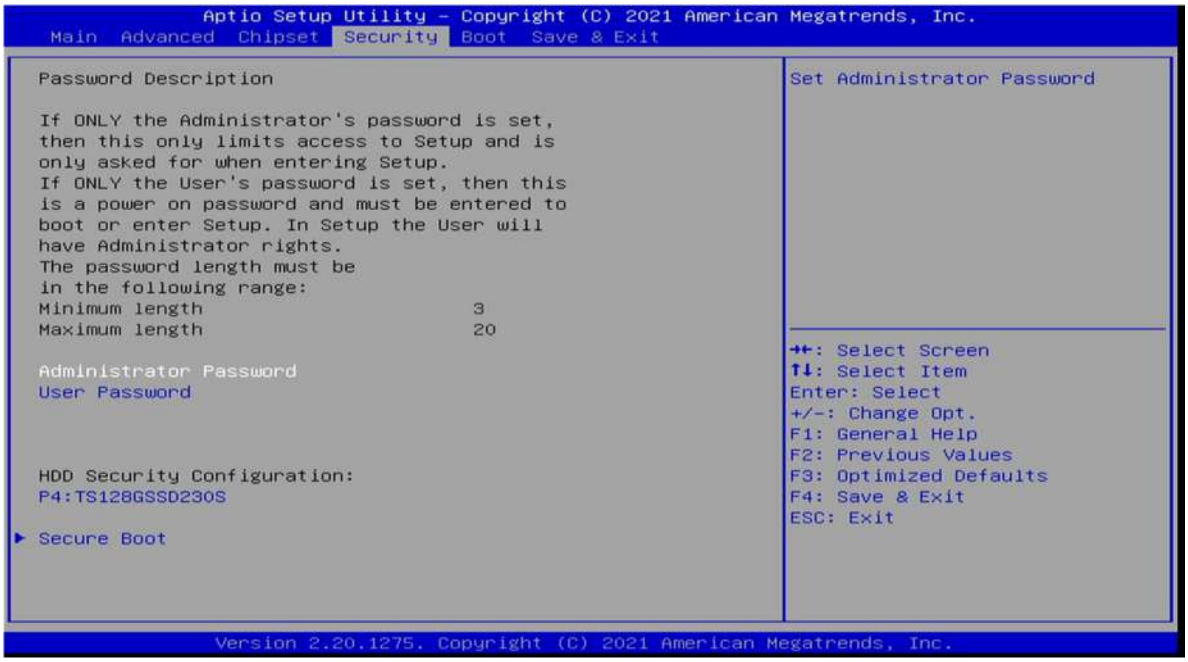
Field Name	Wake on LAN Enable
Default Value	[Enabled]
Possible Value	Enabled Disabled

Field Name	State After G3
Default Value	[S5 State]
Possible Value	S0 State S5 State

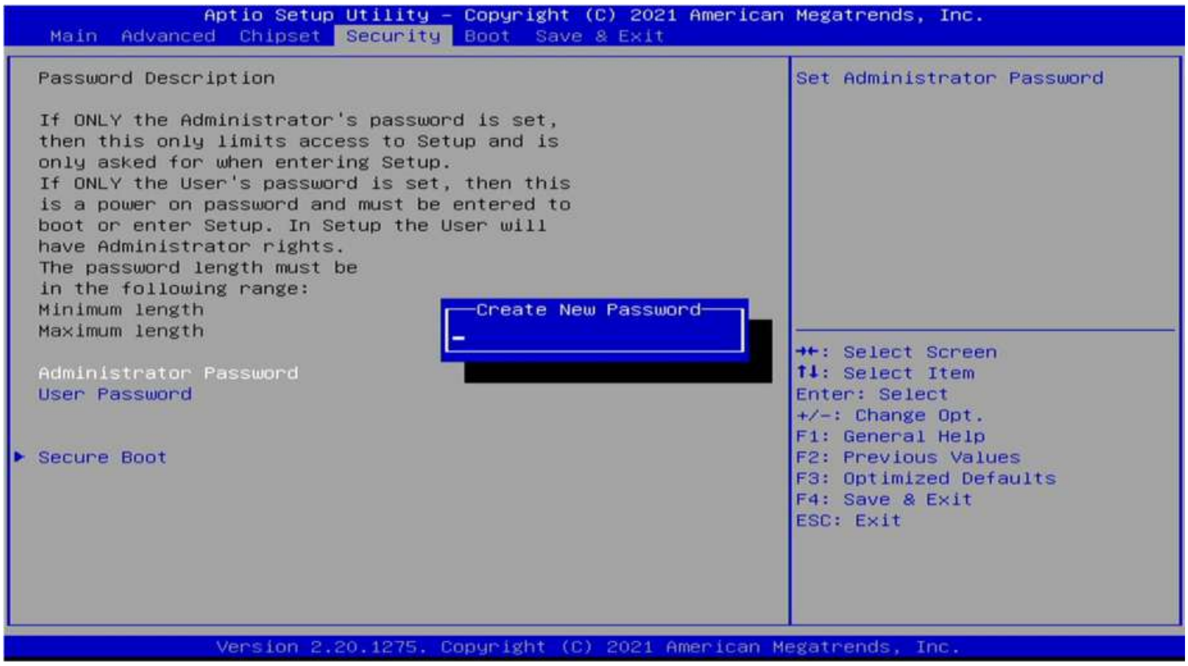
Field Name	SPD Write Disable
Default Value	[TRUE]
Possible Value	TRUE FALSE

3.6 Security

3.6.1 Administrator Password

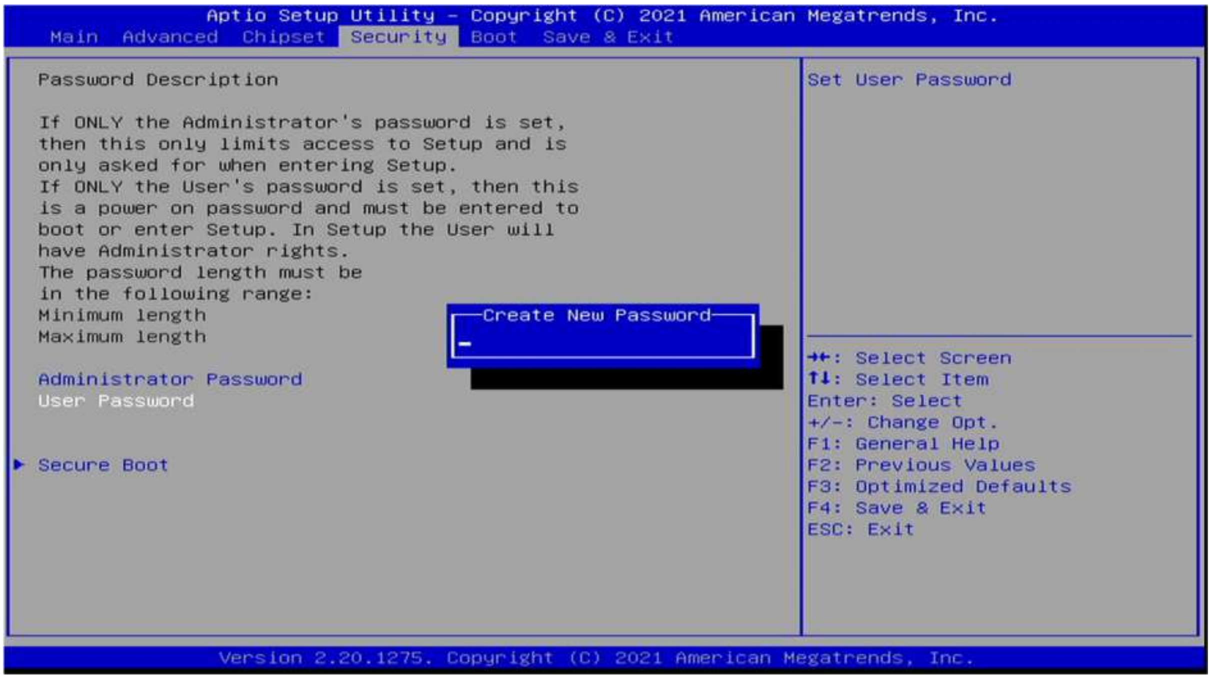


```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Password Description                           Set Administrator Password

  If ONLY the Administrator's password is set,
  then this only limits access to Setup and is
  only asked for when entering Setup.
  If ONLY the User's password is set, then this
  is a power on password and must be entered to
  boot or enter Setup. In Setup the User will
  have Administrator rights.
  The password length must be
  in the following range:
  Minimum length                     3
  Maximum length                     20
                                                 →←: Select Screen
  Administrator Password                         ↑↓: Select Item
  User Password                                  Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
  HDD Security Configuration:                    F3: Optimized Defaults
  P4:TS128GSSD230S                               F4: Save & Exit
                                                 ESC: Exit
▶ Secure Boot

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```



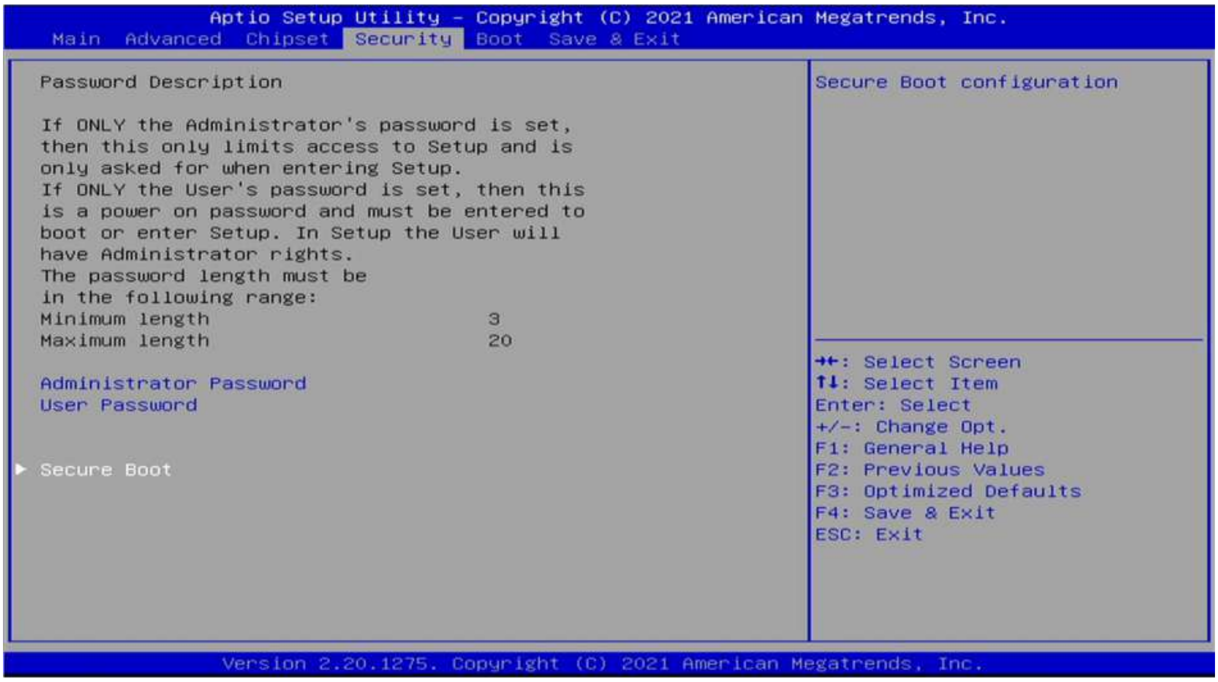
```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Password Description                           Set Administrator Password

  If ONLY the Administrator's password is set,
  then this only limits access to Setup and is
  only asked for when entering Setup.
  If ONLY the User's password is set, then this
  is a power on password and must be entered to
  boot or enter Setup. In Setup the User will
  have Administrator rights.
  The password length must be
  in the following range:
  Minimum length              ┌Create New Password┐
  Maximum length              │_                  │
                              └───────────────────┘  →←: Select Screen
  Administrator Password                         ↑↓: Select Item
  User Password                                  Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
▶ Secure Boot                                    F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.6.2 User Password



```
         Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

  Password Description                              | Set User Password
                                                    |
  If ONLY the Administrator's password is set,      |
  then this only limits access to Setup and is      |
  only asked for when entering Setup.               |
  If ONLY the User's password is set, then this     |
  is a power on password and must be entered to     |
  boot or enter Setup. In Setup the User will       |
  have Administrator rights.                        |
  The password length must be                       |
  in the following range:                           |
  Minimum length          ┌Create New Password┐     |
  Maximum length          │_                  │     | →←: Select Screen
                          └───────────────────┘     | ↑↓: Select Item
  Administrator Password                            | Enter: Select
  User Password                                     | +/-: Change Opt.
                                                    | F1: General Help
► Secure Boot                                       | F2: Previous Values
                                                    | F3: Optimized Defaults
                                                    | F4: Save & Exit
                                                    | ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.6.3 Secure Boot

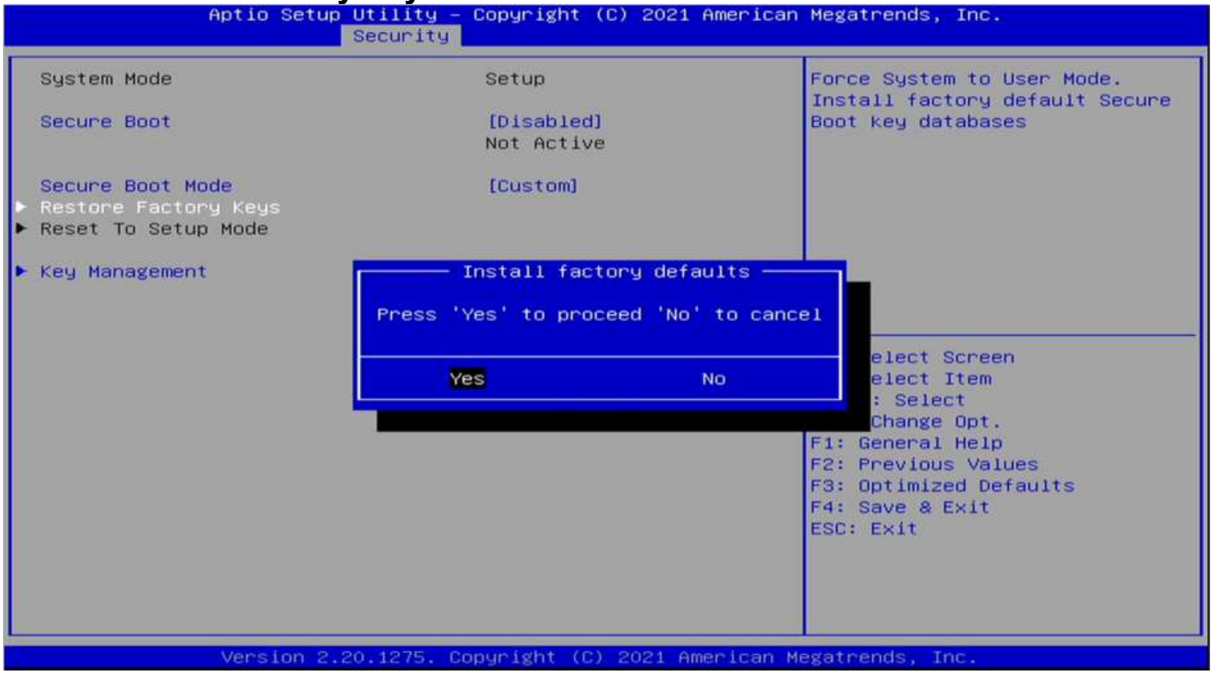


```
         Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  Save & Exit

  Password Description                              | Secure Boot configuration
                                                    |
  If ONLY the Administrator's password is set,      |
  then this only limits access to Setup and is      |
  only asked for when entering Setup.               |
  If ONLY the User's password is set, then this     |
  is a power on password and must be entered to     |
  boot or enter Setup. In Setup the User will       |
  have Administrator rights.                        |
  The password length must be                       |
  in the following range:                           |
  Minimum length                     3              |
  Maximum length                     20             | →←: Select Screen
                                                    | ↑↓: Select Item
  Administrator Password                            | Enter: Select
  User Password                                     | +/-: Change Opt.
                                                    | F1: General Help
► Secure Boot                                       | F2: Previous Values
                                                    | F3: Optimized Defaults
                                                    | F4: Save & Exit
                                                    | ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

Field Name	Secure Boot
Default Value	[Enabled]
Possible Value	Disabled Enabled

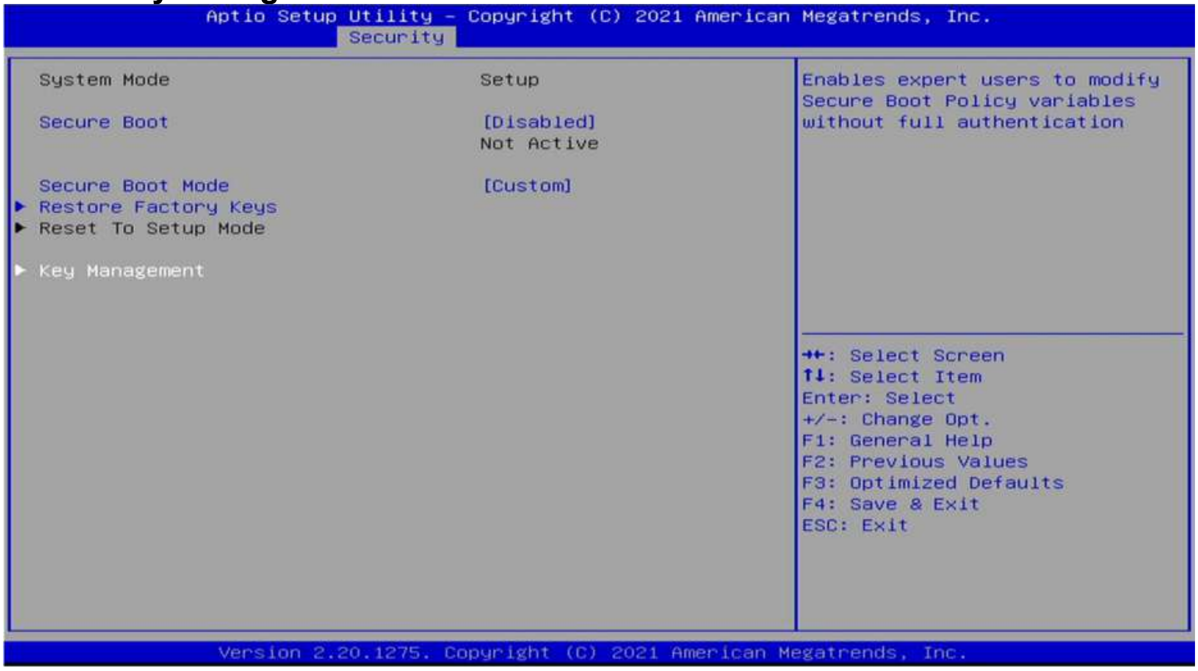
Field Name	Secure Boot Mode
Default Value	[Custom]
Possible Value	Standard Custom

3.6.3.1 Restore Factory Keys



```
      Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                      Security
  System Mode                          Setup                  Force System to User Mode.
                                                              Install factory default Secure
  Secure Boot                          [Disabled]             Boot key databases
                                       Not Active

  Secure Boot Mode                     [Custom]
► Restore Factory Keys
► Reset To Setup Mode

► Key Management            ──── Install factory defaults ────

                            Press 'Yes' to proceed 'No' to cancel

                                 Yes                  No
                                                              elect Screen
                                                              elect Item
                                                              : Select
                                                              Change Opt.
                                                              F1: General Help
                                                              F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

      Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

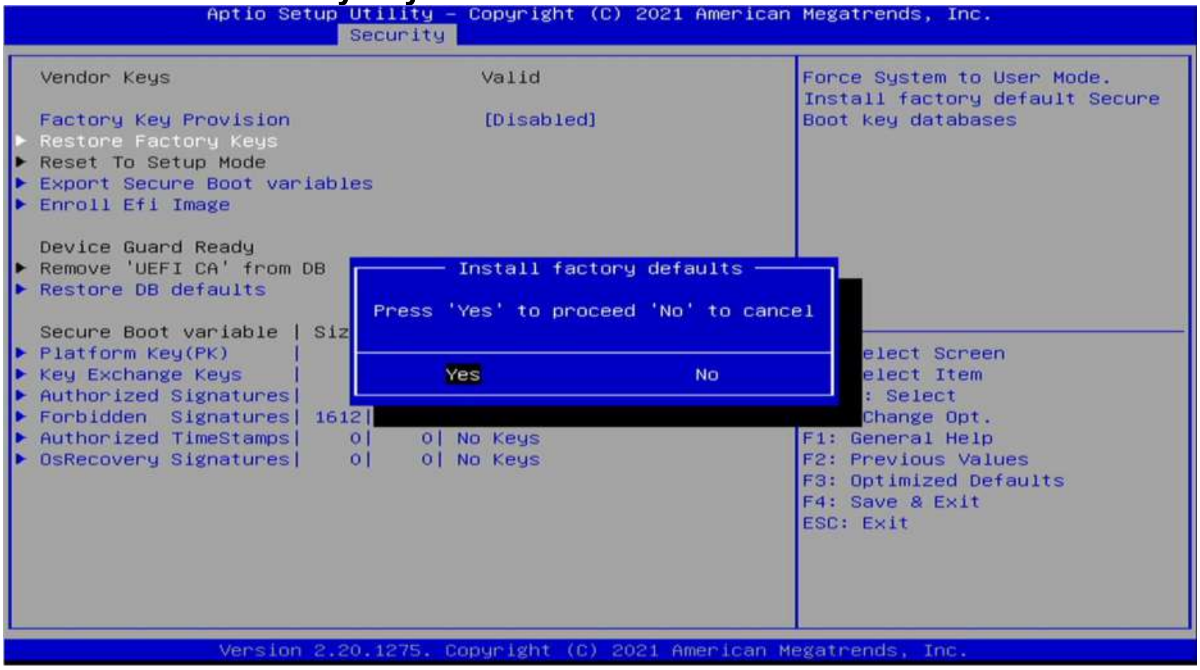
3.6.3.2 Key Management



```
      Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                      Security
  System Mode                          Setup                  Enables expert users to modify
                                                              Secure Boot Policy variables
  Secure Boot                          [Disabled]             without full authentication
                                       Not Active

  Secure Boot Mode                     [Custom]
► Restore Factory Keys
► Reset To Setup Mode

► Key Management

                                                              →←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

      Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

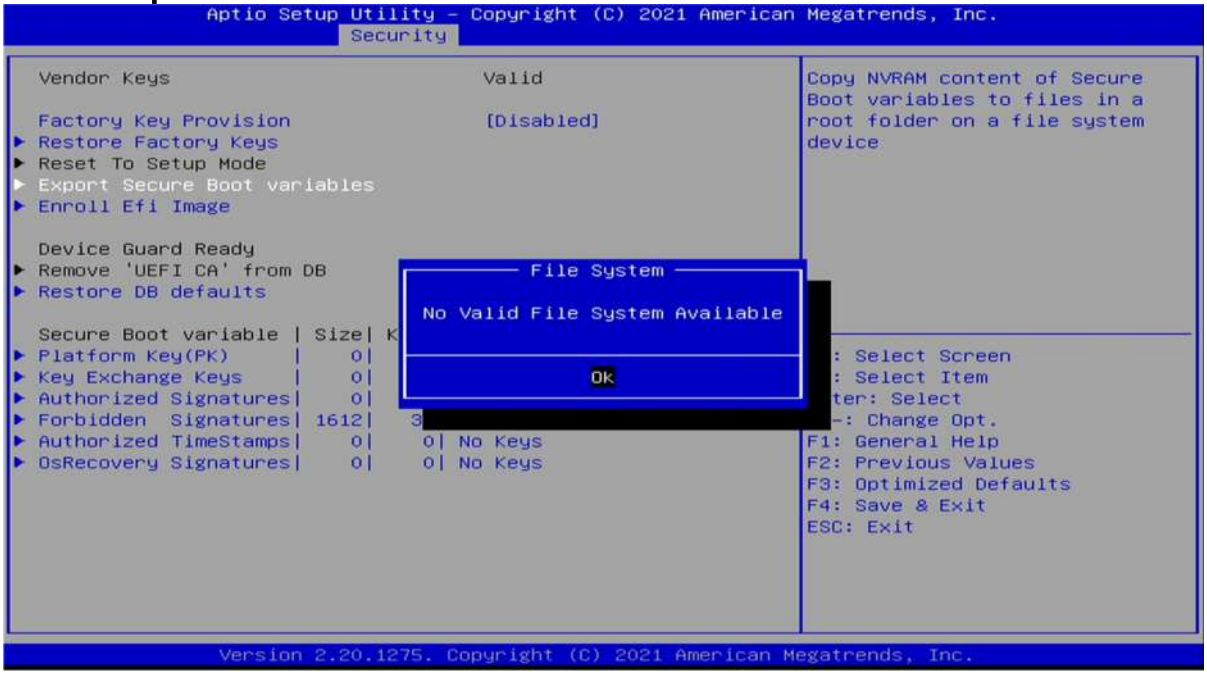
Field Name	Factory Key Provision
Default Value	[Disabled]
Possible Value	Disabled Enabled

3.6.3.3 Restore Factory Keys



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                            Security
  Vendor Keys                         Valid          | Force System to User Mode.
                                                     | Install factory default Secure
  Factory Key Provision               [Disabled]     | Boot key databases
▶ Restore Factory Keys
▶ Reset To Setup Mode
▶ Export Secure Boot variables
▶ Enroll Efi Image

  Device Guard Ready
▶ Remove 'UEFI CA' from DB  ——— Install factory defaults ———
▶ Restore DB defaults
                             Press 'Yes' to proceed 'No' to cancel
  Secure Boot variable | Siz
▶ Platform Key(PK)     |           Yes                 No         elect Screen
▶ Key Exchange Keys    |                                          elect Item
▶ Authorized Signatures|                                          : Select
▶ Forbidden  Signatures| 1612|                                    Change Opt.
▶ Authorized TimeStamps|    0|    0| No Keys         | F1: General Help
▶ OsRecovery Signatures|    0|    0| No Keys         | F2: Previous Values
                                                     | F3: Optimized Defaults
                                                     | F4: Save & Exit
                                                     | ESC: Exit

     Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.6.3.4 Export Secure Boot variables



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                            Security
  Vendor Keys                         Valid          | Copy NVRAM content of Secure
                                                     | Boot variables to files in a
  Factory Key Provision               [Disabled]     | root folder on a file system
▶ Restore Factory Keys                               | device
▶ Reset To Setup Mode
▶ Export Secure Boot variables
▶ Enroll Efi Image

  Device Guard Ready
▶ Remove 'UEFI CA' from DB       ——— File System ———
▶ Restore DB defaults
                                 No Valid File System Available
  Secure Boot variable | Size| K
▶ Platform Key(PK)     |    0|               Ok             : Select Screen
▶ Key Exchange Keys    |    0|                              : Select Item
▶ Authorized Signatures|    0|                              ter: Select
▶ Forbidden  Signatures| 1612| 3                            -: Change Opt.
▶ Authorized TimeStamps|    0|    0| No Keys         | F1: General Help
▶ OsRecovery Signatures|    0|    0| No Keys         | F2: Previous Values
                                                     | F3: Optimized Defaults
                                                     | F4: Save & Exit
                                                     | ESC: Exit

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```
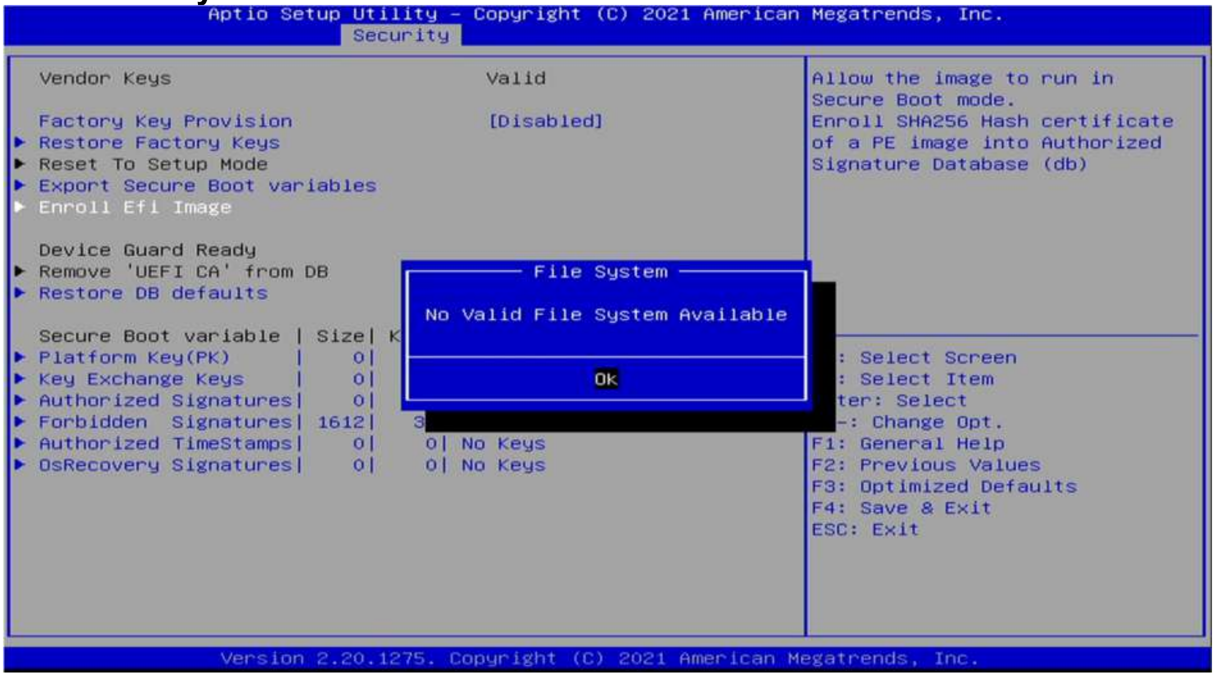

3.6.3.5 File System



```
             Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                                   Security
  Vendor Keys                          Valid                  Allow the image to run in
                                                              Secure Boot mode.
  Factory Key Provision                [Disabled]             Enroll SHA256 Hash certificate
► Restore Factory Keys                                        of a PE image into Authorized
► Reset To Setup Mode                                         Signature Database (db)
► Export Secure Boot variables
► Enroll Efi Image

  Device Guard Ready
► Remove 'UEFI CA' from DB        ──── File System ────
► Restore DB defaults
                                  No Valid File System Available
  Secure Boot variable | Size| K
► Platform Key(PK)     |    0|                                  : Select Screen
► Key Exchange Keys    |    0|              Ok                  : Select Item
► Authorized Signatures|    0|                                 ter: Select
► Forbidden  Signatures| 1612|   3                              -: Change Opt.
► Authorized TimeStamps|    0|      0| No Keys                F1: General Help
► OsRecovery Signatures|    0|      0| No Keys                F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

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```
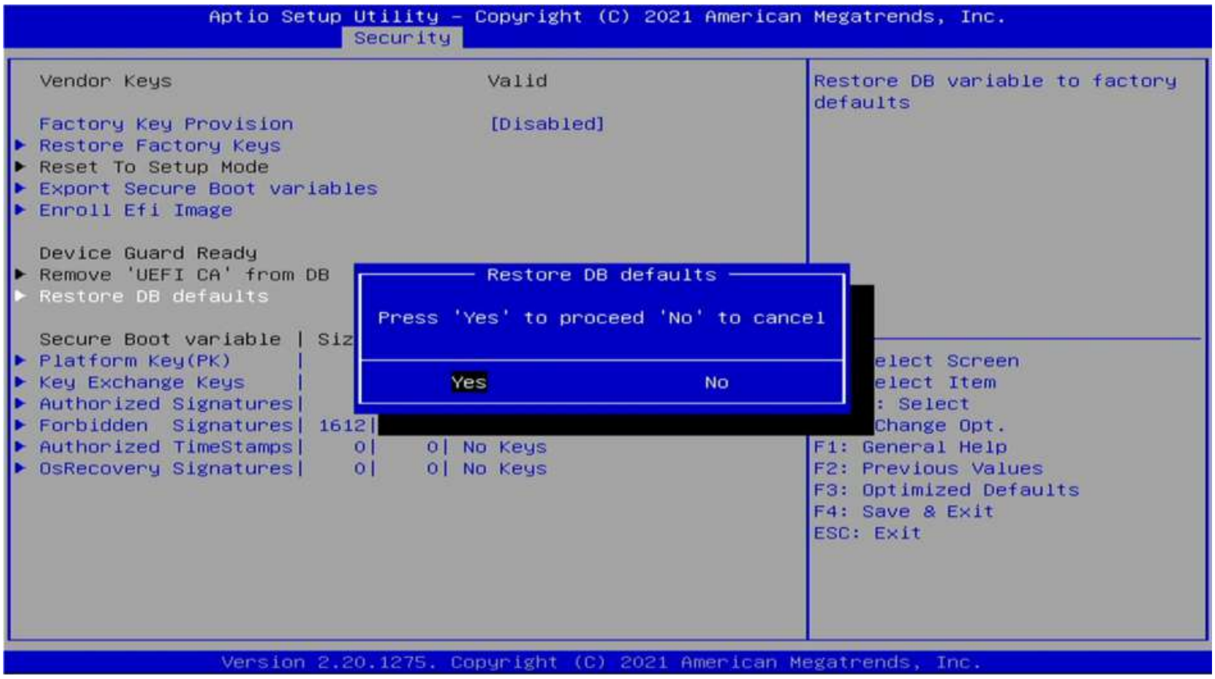

3.6.3.6 Restore DB defaults



```
             Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                                   Security
  Vendor Keys                          Valid                  Restore DB variable to factory
                                                              defaults
  Factory Key Provision                [Disabled]
► Restore Factory Keys
► Reset To Setup Mode
► Export Secure Boot variables
► Enroll Efi Image

  Device Guard Ready
► Remove 'UEFI CA' from DB    ──── Restore DB defaults ────
► Restore DB defaults
                              Press 'Yes' to proceed 'No' to cancel
  Secure Boot variable | Siz
► Platform Key(PK)     |                                           elect Screen
► Key Exchange Keys    |           Yes                 No          elect Item
► Authorized Signatures|                                           : Select
► Forbidden  Signatures| 1612|                                     Change Opt.
► Authorized TimeStamps|    0|      0| No Keys                F1: General Help
► OsRecovery Signatures|    0|      0| No Keys                F2: Previous Values
                                                              F3: Optimized Defaults
                                                              F4: Save & Exit
                                                              ESC: Exit

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```
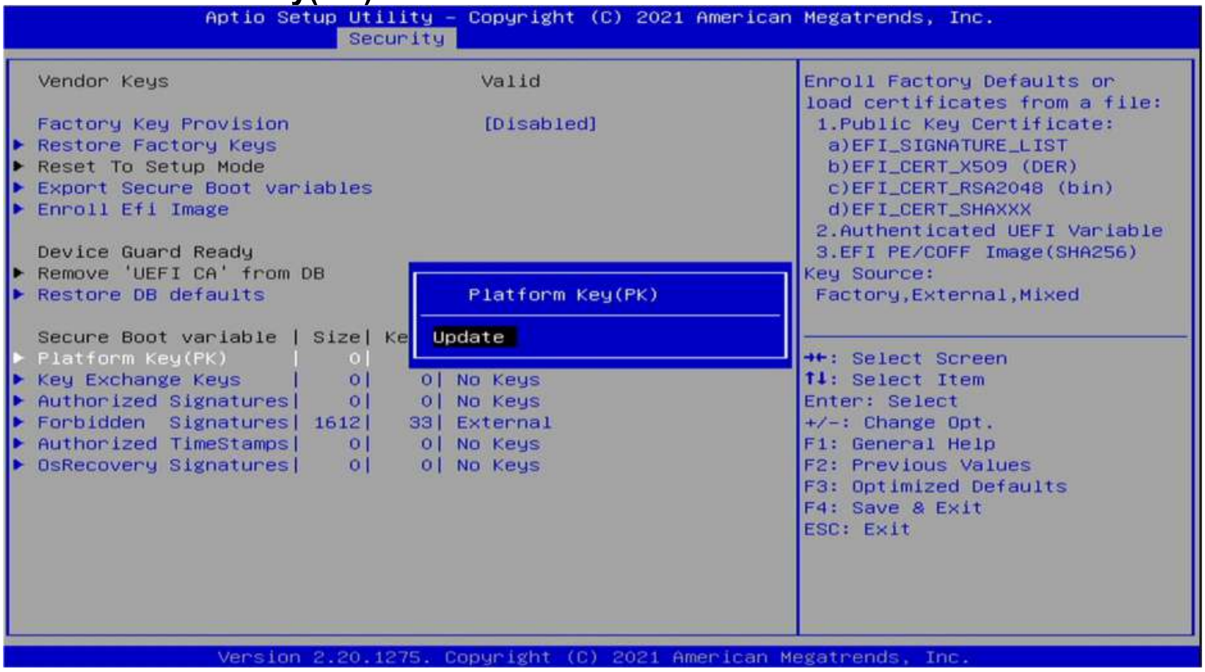

3.6.3.7 Platform Key(PK)



```
             Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                               Security

  Vendor Keys                                Valid              Enroll Factory Defaults or
                                                                load certificates from a file:
  Factory Key Provision                      [Disabled]          1.Public Key Certificate:
▶ Restore Factory Keys                                            a)EFI_SIGNATURE_LIST
▶ Reset To Setup Mode                                             b)EFI_CERT_X509 (DER)
▶ Export Secure Boot variables                                    c)EFI_CERT_RSA2048 (bin)
▶ Enroll Efi Image                                                d)EFI_CERT_SHAXXX
                                                                 2.Authenticated UEFI Variable
  Device Guard Ready                                             3.EFI PE/COFF Image(SHA256)
▶ Remove 'UEFI CA' from DB                                      Key Source:
▶ Restore DB defaults                 Platform Key(PK)           Factory,External,Mixed

  Secure Boot variable | Size| Ke   Update
▶ Platform Key(PK)     |    0|                                  →←: Select Screen
▶ Key Exchange Keys    |    0|     0| No Keys                   ↑↓: Select Item
▶ Authorized Signatures|    0|     0| No Keys                   Enter: Select
▶ Forbidden  Signatures| 1612|    33| External                  +/-: Change Opt.
▶ Authorized TimeStamps|    0|     0| No Keys                   F1: General Help
▶ OsRecovery Signatures|    0|     0| No Keys                   F2: Previous Values
                                                                F3: Optimized Defaults
                                                                F4: Save & Exit
                                                                ESC: Exit

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```
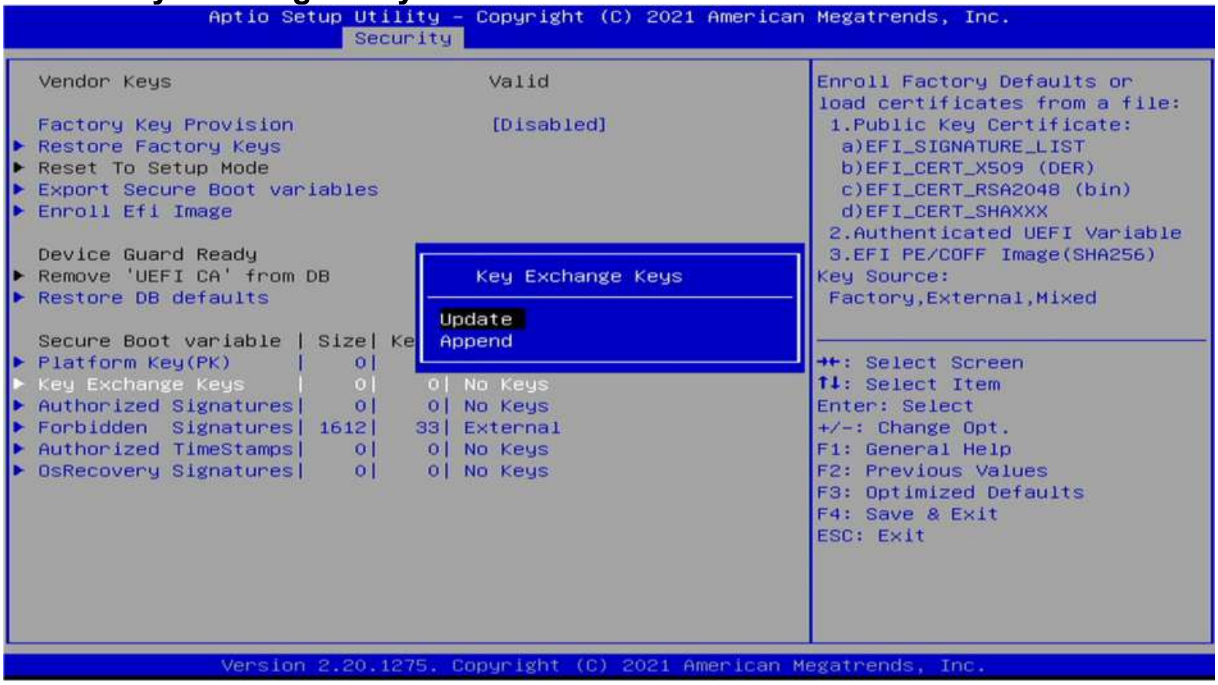

3.6.3.8 Key Exchange Kesys



```
             Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                               Security

  Vendor Keys                                Valid              Enroll Factory Defaults or
                                                                load certificates from a file:
  Factory Key Provision                      [Disabled]          1.Public Key Certificate:
▶ Restore Factory Keys                                            a)EFI_SIGNATURE_LIST
▶ Reset To Setup Mode                                             b)EFI_CERT_X509 (DER)
▶ Export Secure Boot variables                                    c)EFI_CERT_RSA2048 (bin)
▶ Enroll Efi Image                                                d)EFI_CERT_SHAXXX
                                                                 2.Authenticated UEFI Variable
  Device Guard Ready                                             3.EFI PE/COFF Image(SHA256)
▶ Remove 'UEFI CA' from DB            Key Exchange Keys         Key Source:
▶ Restore DB defaults                                            Factory,External,Mixed
                                    Update
  Secure Boot variable | Size| Ke   Append
▶ Platform Key(PK)     |    0|                                  →←: Select Screen
▶ Key Exchange Keys    |    0|     0| No Keys                   ↑↓: Select Item
▶ Authorized Signatures|    0|     0| No Keys                   Enter: Select
▶ Forbidden  Signatures| 1612|    33| External                  +/-: Change Opt.
▶ Authorized TimeStamps|    0|     0| No Keys                   F1: General Help
▶ OsRecovery Signatures|    0|     0| No Keys                   F2: Previous Values
                                                                F3: Optimized Defaults
                                                                F4: Save & Exit
                                                                ESC: Exit

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```
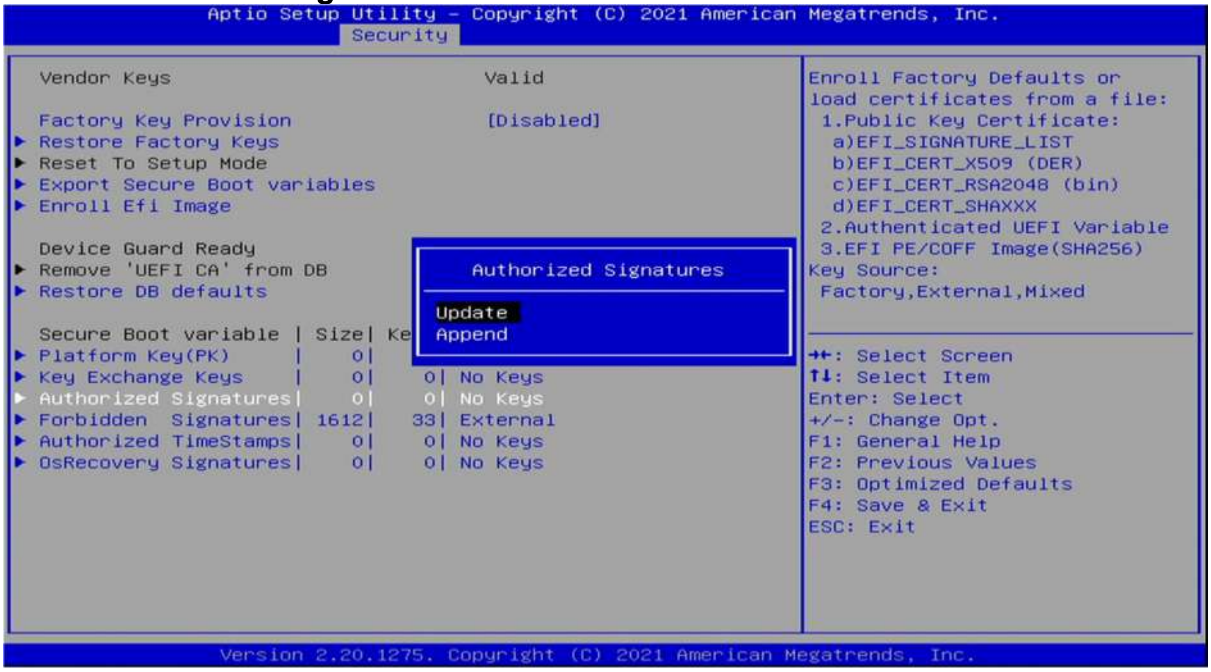

3.6.3.9 Authorized Signatures



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                          Security
  Vendor Keys                           Valid              Enroll Factory Defaults or
                                                           load certificates from a file:
  Factory Key Provision                 [Disabled]          1.Public Key Certificate:
► Restore Factory Keys                                       a)EFI_SIGNATURE_LIST
► Reset To Setup Mode                                        b)EFI_CERT_X509 (DER)
► Export Secure Boot variables                               c)EFI_CERT_RSA2048 (bin)
► Enroll Efi Image                                           d)EFI_CERT_SHAXXX
                                                            2.Authenticated UEFI Variable
  Device Guard Ready                                        3.EFI PE/COFF Image(SHA256)
► Remove 'UEFI CA' from DB         Authorized Signatures   Key Source:
► Restore DB defaults                                       Factory,External,Mixed
                                   Update
  Secure Boot variable | Size| Ke  Append
► Platform Key(PK)     |    0|                             →←: Select Screen
► Key Exchange Keys    |    0|     0| No Keys              ↑↓: Select Item
► Authorized Signatures|    0|     0| No Keys              Enter: Select
► Forbidden  Signatures| 1612|    33| External             +/-: Change Opt.
► Authorized TimeStamps|    0|     0| No Keys              F1: General Help
► OsRecovery Signatures|    0|     0| No Keys              F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

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```
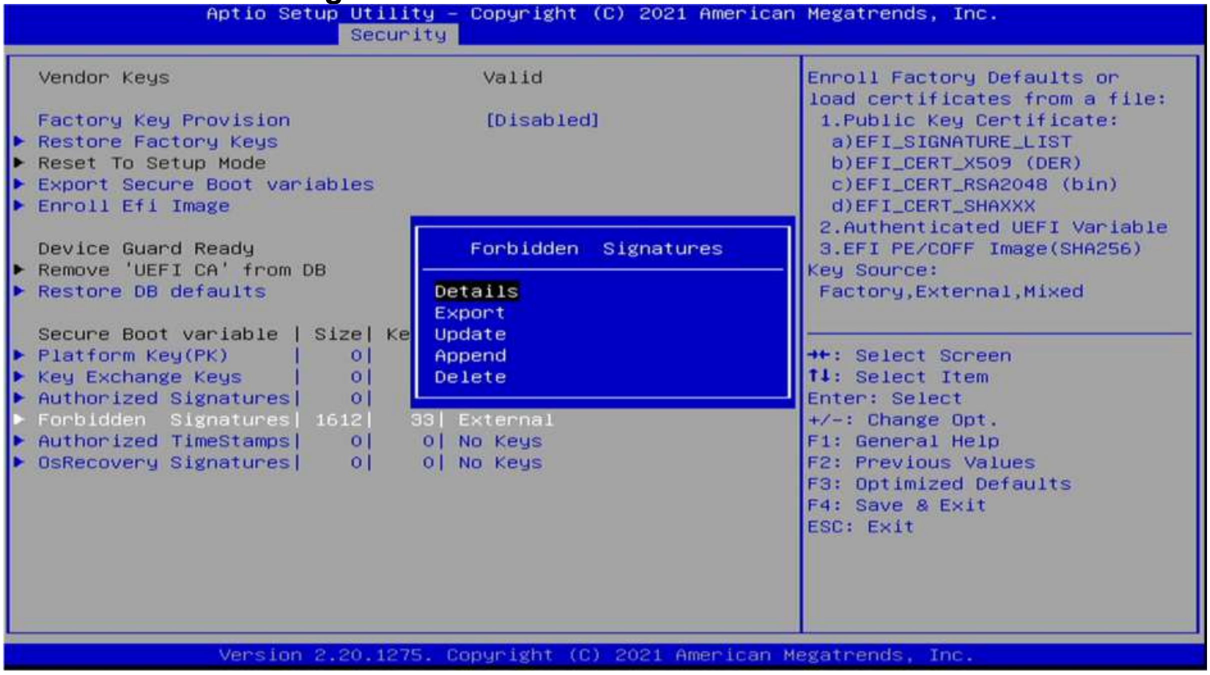

3.6.3.10 Forbidden Signatures



```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
                          Security
  Vendor Keys                           Valid              Enroll Factory Defaults or
                                                           load certificates from a file:
  Factory Key Provision                 [Disabled]          1.Public Key Certificate:
► Restore Factory Keys                                       a)EFI_SIGNATURE_LIST
► Reset To Setup Mode                                        b)EFI_CERT_X509 (DER)
► Export Secure Boot variables                               c)EFI_CERT_RSA2048 (bin)
► Enroll Efi Image                                           d)EFI_CERT_SHAXXX
                                                            2.Authenticated UEFI Variable
  Device Guard Ready               Forbidden  Signatures    3.EFI PE/COFF Image(SHA256)
► Remove 'UEFI CA' from DB                                 Key Source:
► Restore DB defaults              Details                  Factory,External,Mixed
                                   Export
  Secure Boot variable | Size| Ke  Update
► Platform Key(PK)     |    0|     Append                  →←: Select Screen
► Key Exchange Keys    |    0|     Delete                  ↑↓: Select Item
► Authorized Signatures|    0|                             Enter: Select
► Forbidden  Signatures| 1612|    33| External             +/-: Change Opt.
► Authorized TimeStamps|    0|     0| No Keys              F1: General Help
► OsRecovery Signatures|    0|     0| No Keys              F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Exit
                                                           ESC: Exit

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```
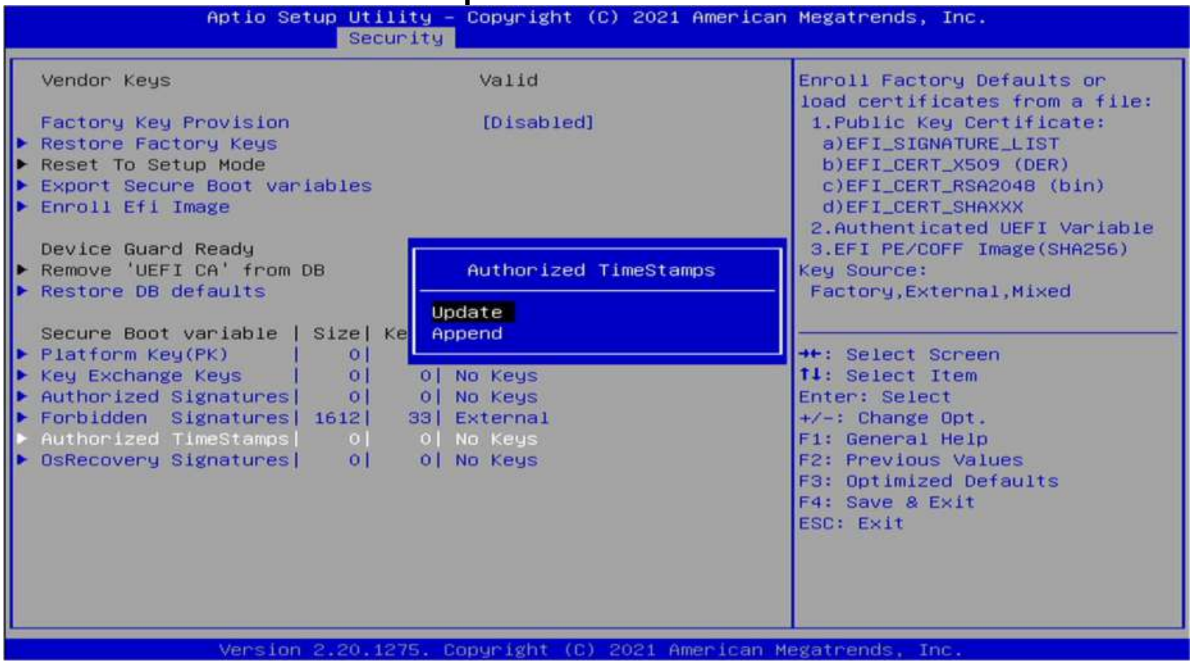

3.6.3.11 Authorized Time Stamps



```
            Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                          Security

  Vendor Keys                          Valid              Enroll Factory Defaults or
                                                          load certificates from a file:
  Factory Key Provision                [Disabled]          1.Public Key Certificate:
▶ Restore Factory Keys                                      a)EFI_SIGNATURE_LIST
▶ Reset To Setup Mode                                       b)EFI_CERT_X509 (DER)
▶ Export Secure Boot variables                              c)EFI_CERT_RSA2048 (bin)
▶ Enroll Efi Image                                          d)EFI_CERT_SHAXXX
                                                           2.Authenticated UEFI Variable
  Device Guard Ready                                       3.EFI PE/COFF Image(SHA256)
▶ Remove 'UEFI CA' from DB      Authorized TimeStamps     Key Source:
▶ Restore DB defaults                                      Factory,External,Mixed
                                Update
  Secure Boot variable | Size| Ke Append
▶ Platform Key(PK)     |    0|                            →←: Select Screen
▶ Key Exchange Keys    |    0|    0| No Keys              ↑↓: Select Item
▶ Authorized Signatures|    0|    0| No Keys              Enter: Select
▶ Forbidden  Signatures| 1612|   33| External             +/-: Change Opt.
▶ Authorized TimeStamps|    0|    0| No Keys              F1: General Help
▶ OsRecovery Signatures|    0|    0| No Keys              F2: Previous Values
                                                          F3: Optimized Defaults
                                                          F4: Save & Exit
                                                          ESC: Exit

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```
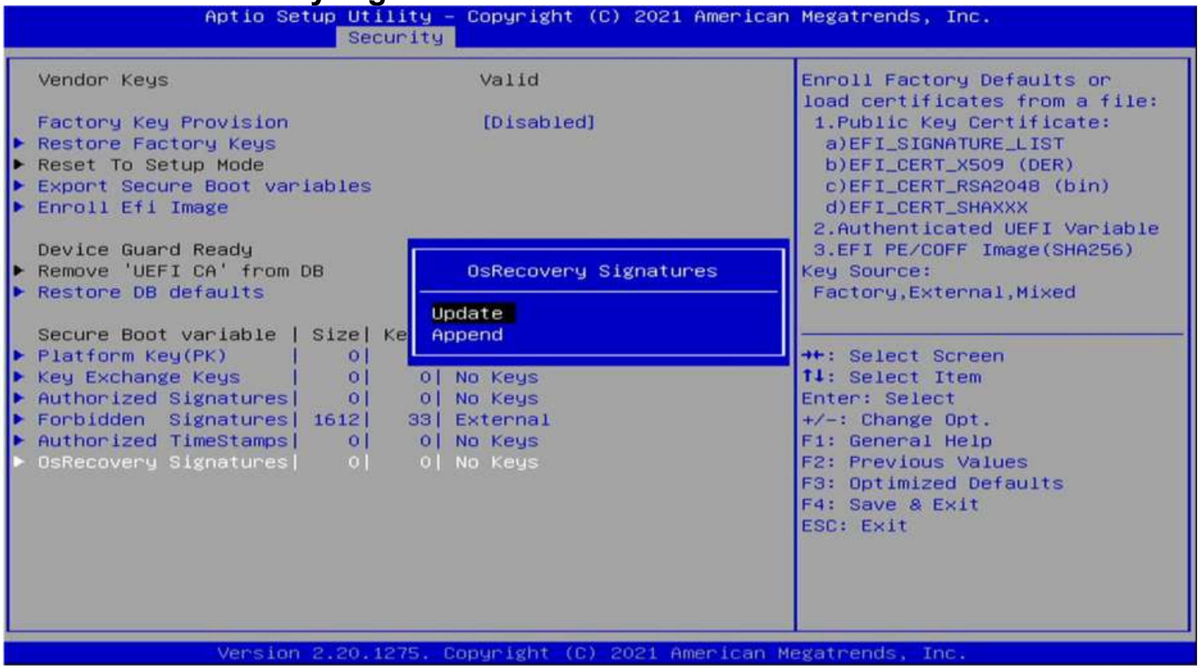
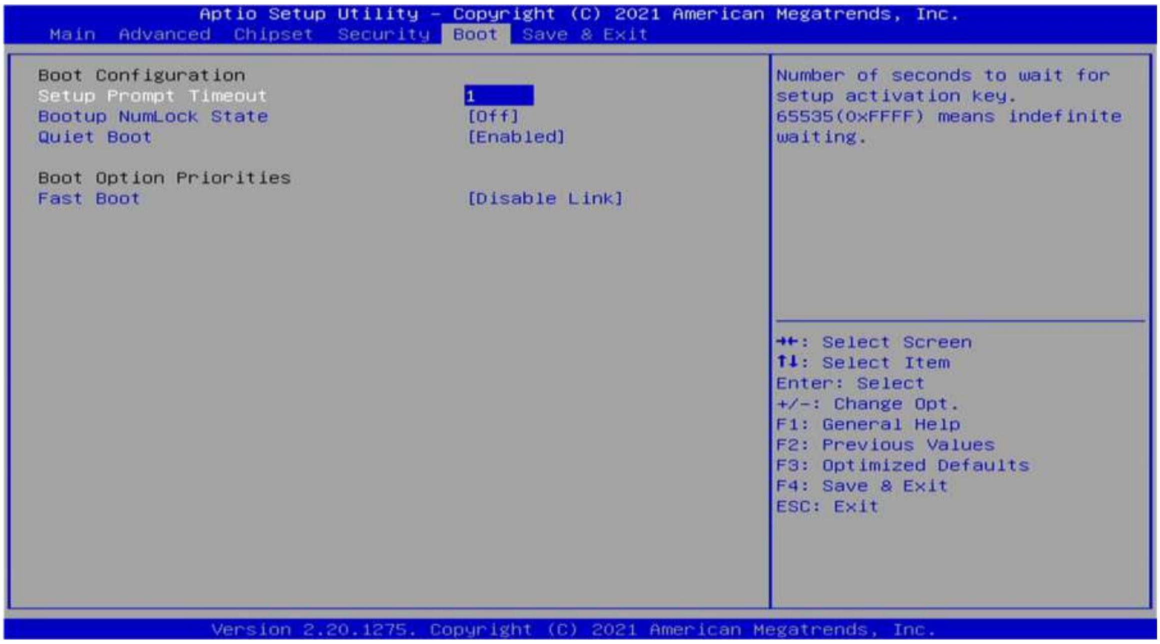

3.6.3.12 OS Recovery Signatures



```
            Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
                          Security

  Vendor Keys                          Valid              Enroll Factory Defaults or
                                                          load certificates from a file:
  Factory Key Provision                [Disabled]          1.Public Key Certificate:
▶ Restore Factory Keys                                      a)EFI_SIGNATURE_LIST
▶ Reset To Setup Mode                                       b)EFI_CERT_X509 (DER)
▶ Export Secure Boot variables                              c)EFI_CERT_RSA2048 (bin)
▶ Enroll Efi Image                                          d)EFI_CERT_SHAXXX
                                                           2.Authenticated UEFI Variable
  Device Guard Ready                                       3.EFI PE/COFF Image(SHA256)
▶ Remove 'UEFI CA' from DB      OsRecovery Signatures     Key Source:
▶ Restore DB defaults                                      Factory,External,Mixed
                                Update
  Secure Boot variable | Size| Ke Append
▶ Platform Key(PK)     |    0|                            →←: Select Screen
▶ Key Exchange Keys    |    0|    0| No Keys              ↑↓: Select Item
▶ Authorized Signatures|    0|    0| No Keys              Enter: Select
▶ Forbidden  Signatures| 1612|   33| External             +/-: Change Opt.
▶ Authorized TimeStamps|    0|    0| No Keys              F1: General Help
▶ OsRecovery Signatures|    0|    0| No Keys              F2: Previous Values
                                                          F3: Optimized Defaults
                                                          F4: Save & Exit
                                                          ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.7 Boot



```
          Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

   Boot Configuration                              Number of seconds to wait for
   Setup Prompt Timeout          1                 setup activation key.
   Bootup NumLock State          [Off]             65535(0xFFFF) means indefinite
   Quiet Boot                    [Enabled]         waiting.

   Boot Option Priorities
   Fast Boot                     [Disable Link]

                                                   →←: Select Screen
                                                   ↑↓: Select Item
                                                   Enter: Select
                                                   +/-: Change Opt.
                                                   F1: General Help
                                                   F2: Previous Values
                                                   F3: Optimized Defaults
                                                   F4: Save & Exit
                                                   ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

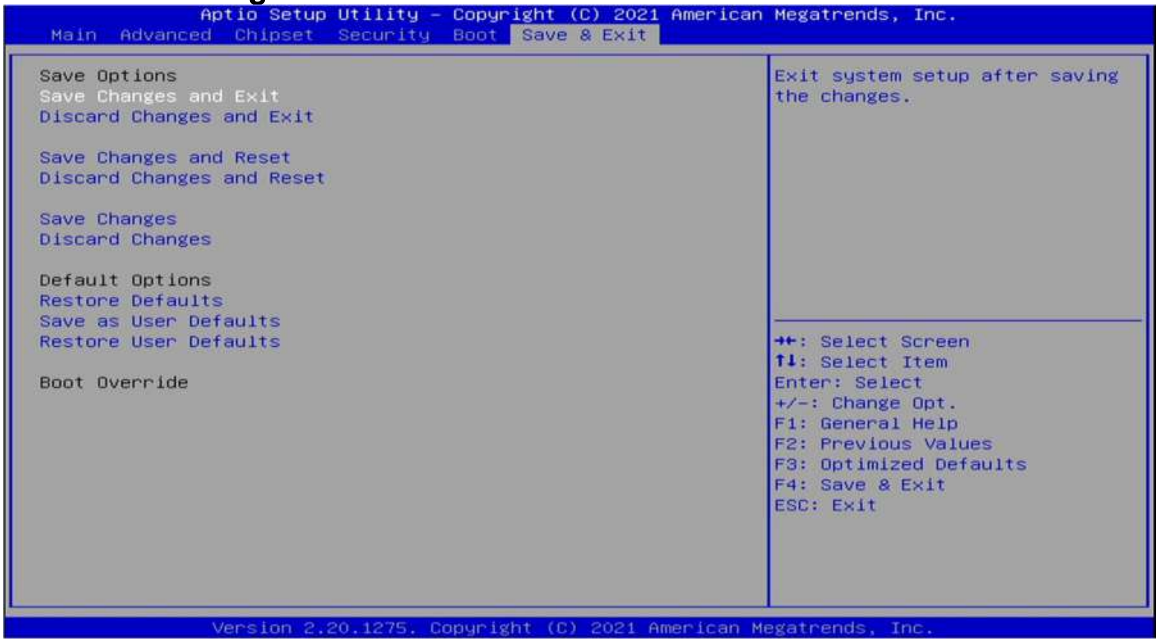
Field Name	Bootup NumLock State
Default Value	[Off]
Possible Value	On Off

Field Name	Quiet Boot
Default Value	[Enabled]
Possible Value	Disabled Enabled

Field Name	Fast Boot
Default Value	[Disable Link]
Possible Value	Disable Link Enabled

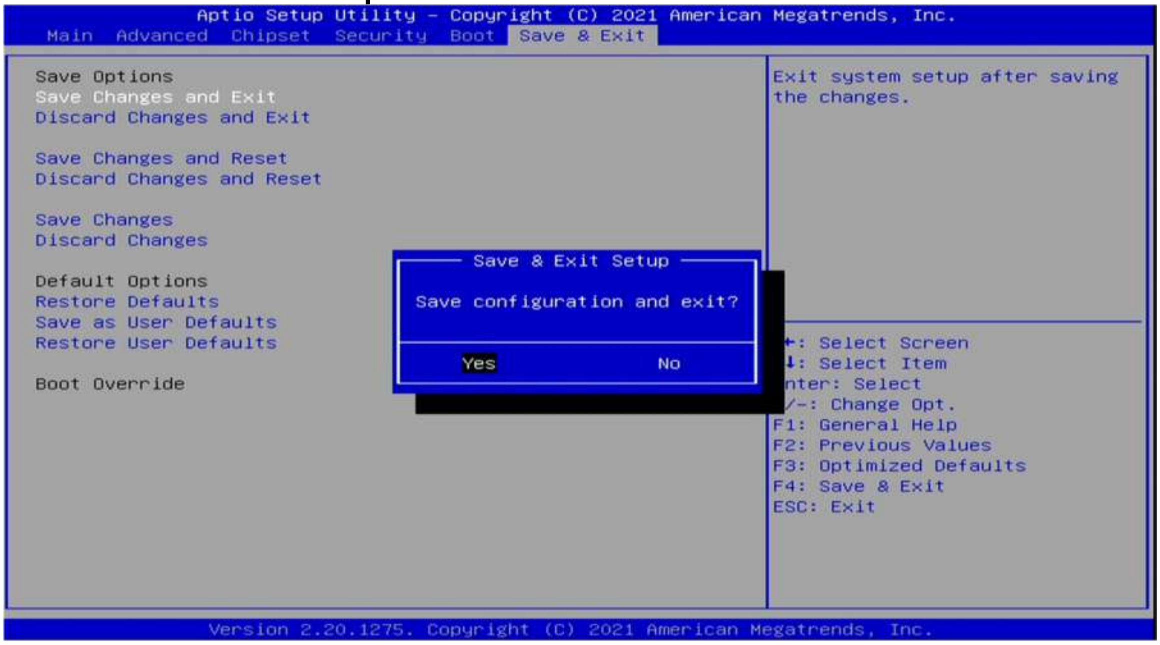
3.8 Save & Exit

3.8.1 Save Changes and Exit



```
                Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                    Exit system setup after saving
  Save Changes and Exit                           the changes.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes

  Default Options
  Restore Defaults
  Save as User Defaults                           →←: Select Screen
  Restore User Defaults                           ↑↓: Select Item
                                                  Enter: Select
  Boot Override                                   +/-: Change Opt.
                                                  F1: General Help
                                                  F2: Previous Values
                                                  F3: Optimized Defaults
                                                  F4: Save & Exit
                                                  ESC: Exit

               Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.1.1 Save & Exit Setup



```
                Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                    Exit system setup after saving
  Save Changes and Exit                           the changes.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes
                           ─── Save & Exit Setup ───
  Default Options
  Restore Defaults          Save configuration and exit?
  Save as User Defaults                                ←: Select Screen
  Restore User Defaults                                ↓: Select Item
                               Yes            No       nter: Select
  Boot Override                                        /-: Change Opt.
                                                  F1: General Help
                                                  F2: Previous Values
                                                  F3: Optimized Defaults
                                                  F4: Save & Exit
                                                  ESC: Exit

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```
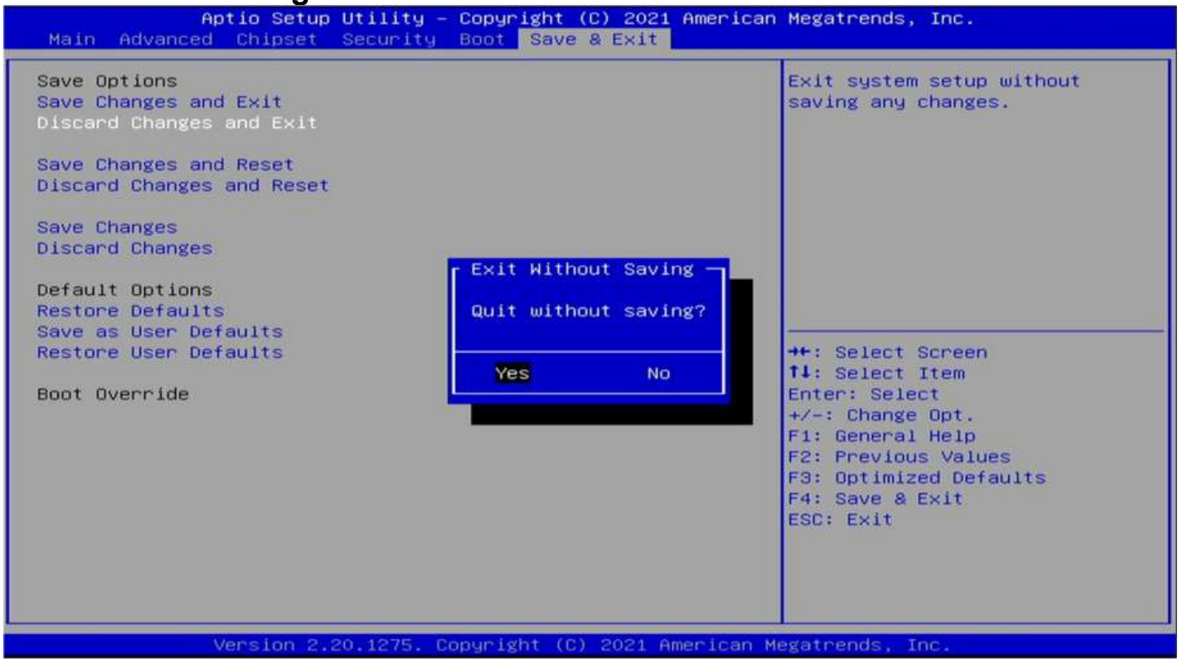
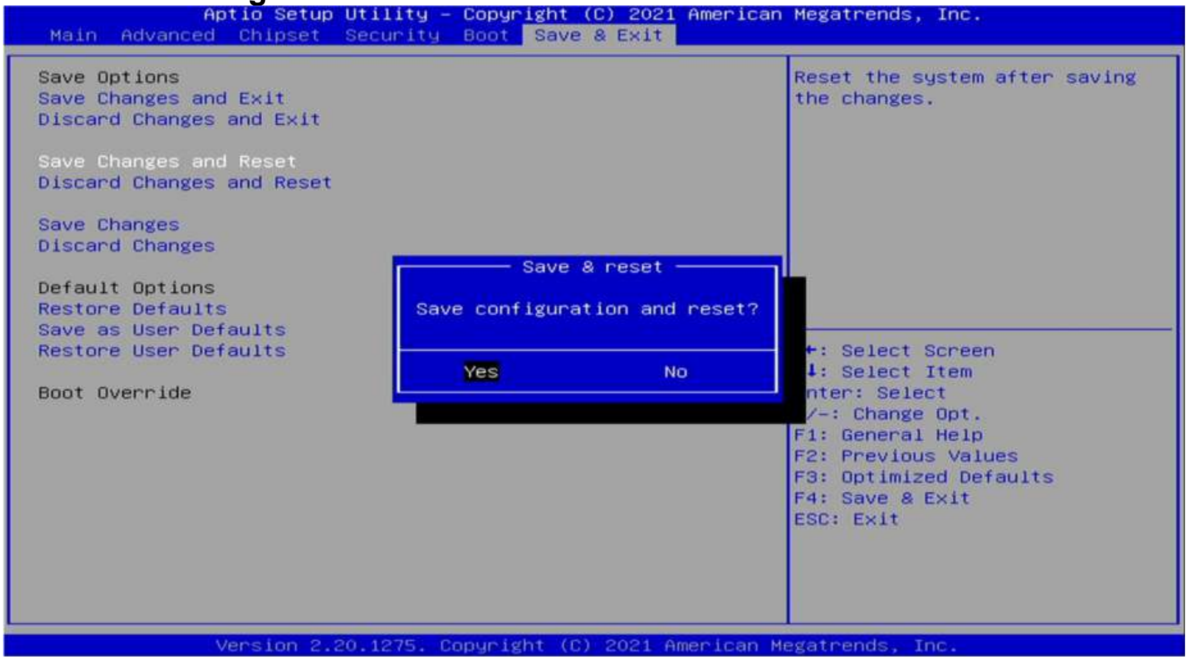

3.8.2 Discard Changes and Exit



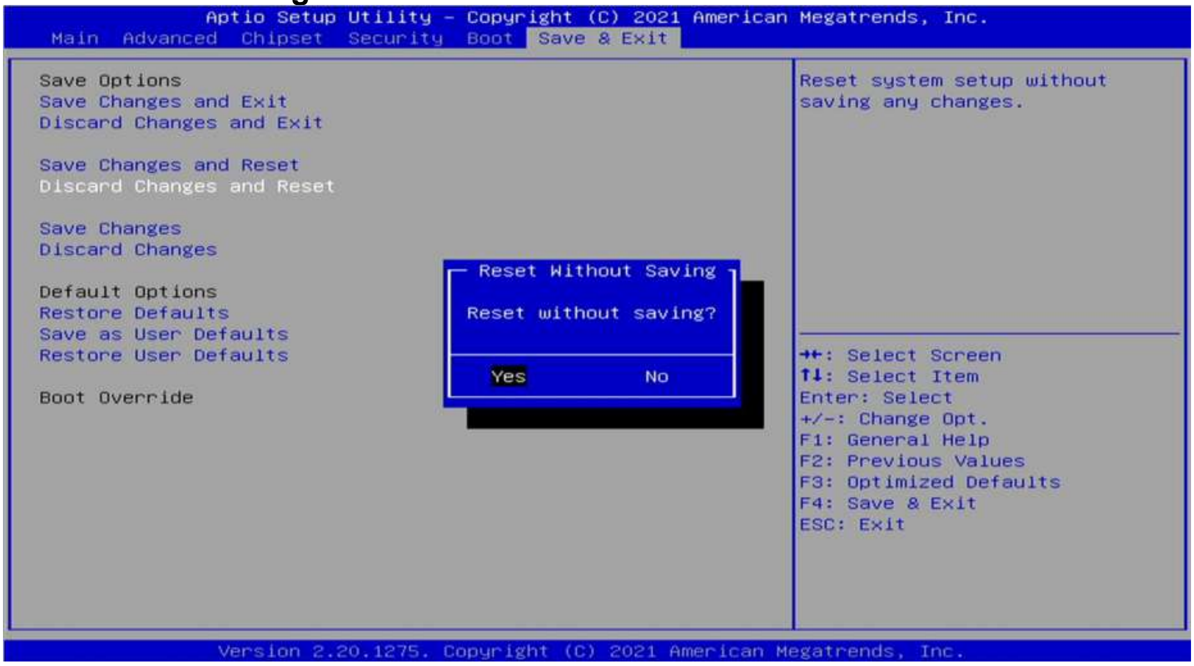
```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                      Exit system setup without
  Save Changes and Exit                             saving any changes.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes
                             Exit Without Saving
  Default Options
  Restore Defaults           Quit without saving?
  Save as User Defaults
  Restore User Defaults                             →←: Select Screen
                              Yes         No        ↑↓: Select Item
  Boot Override                                     Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F2: Previous Values
                                                    F3: Optimized Defaults
                                                    F4: Save & Exit
                                                    ESC: Exit

        Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.3 Save Changes and Reset



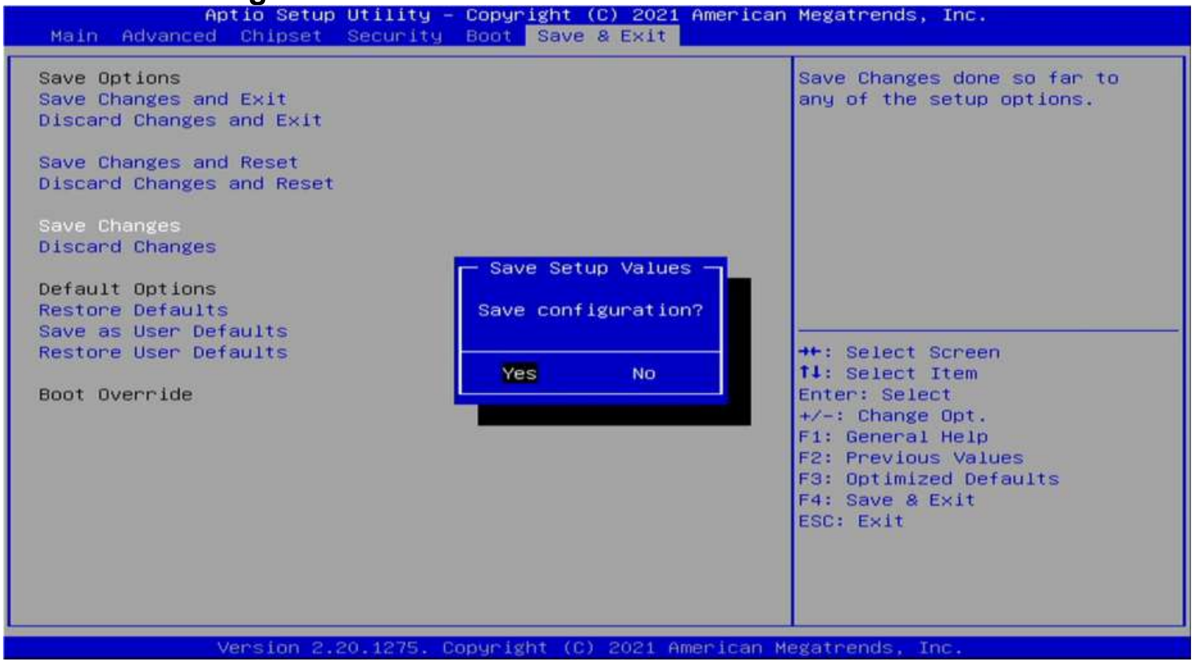
```
        Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                      Reset the system after saving
  Save Changes and Exit                             the changes.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes
                             Save & reset
  Default Options
  Restore Defaults        Save configuration and reset?
  Save as User Defaults
  Restore User Defaults                               +: Select Screen
                              Yes         No          ↓: Select Item
  Boot Override                                      nter: Select
                                                     /-: Change Opt.
                                                    F1: General Help
                                                    F2: Previous Values
                                                    F3: Optimized Defaults
                                                    F4: Save & Exit
                                                    ESC: Exit

        Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.4 Discard Changes and Reset



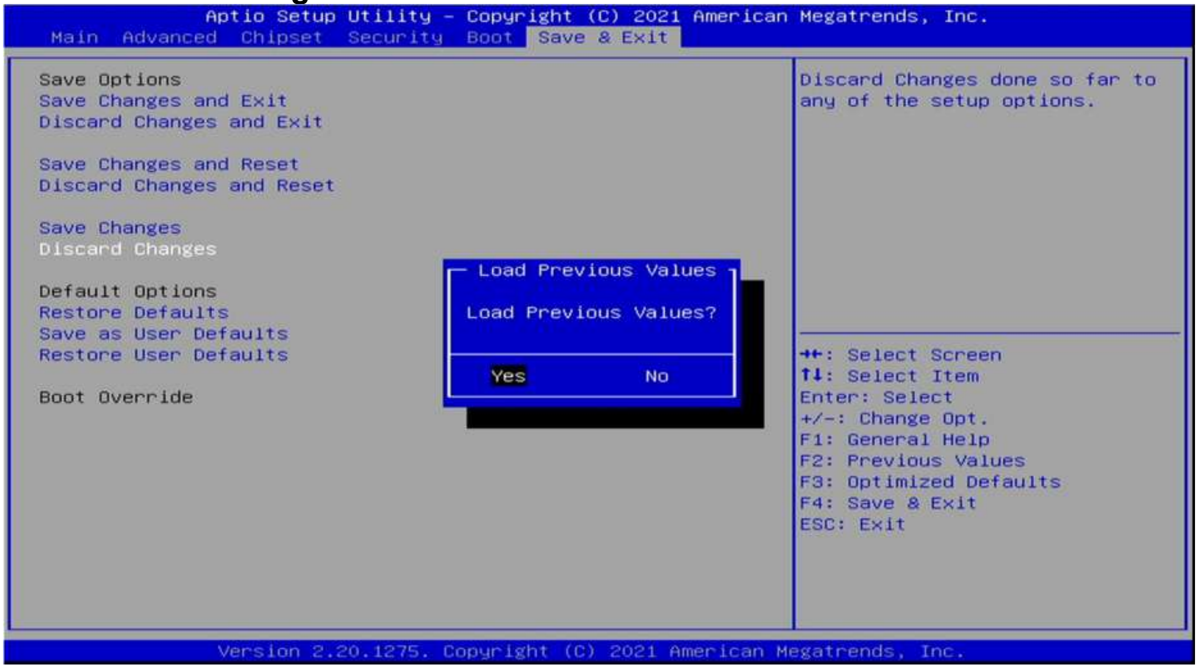
```
            Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                       Reset system setup without
  Save Changes and Exit                              saving any changes.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes
                                 ┌ Reset Without Saving ┐
  Default Options                 Reset without saving?
  Restore Defaults
  Save as User Defaults                                  
  Restore User Defaults                                  →←: Select Screen
                                    Yes           No     ↑↓: Select Item
  Boot Override                                          Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.5 Save Changes



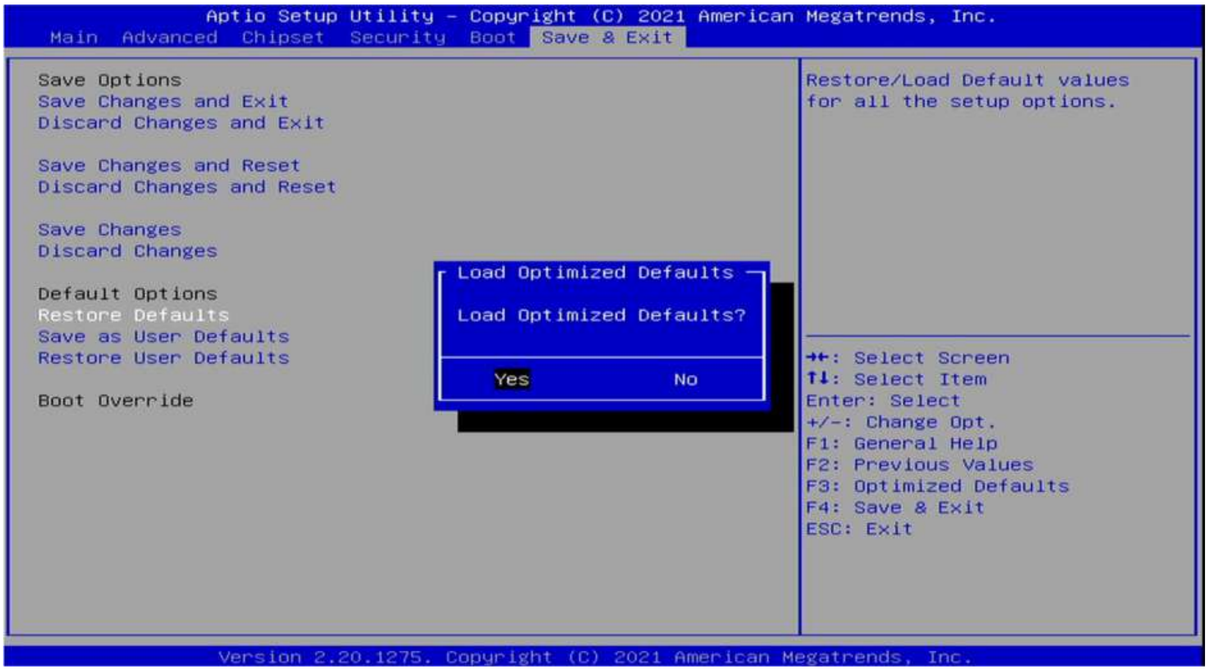
```
            Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
   Main  Advanced  Chipset  Security  Boot  Save & Exit

  Save Options                                       Save Changes done so far to
  Save Changes and Exit                              any of the setup options.
  Discard Changes and Exit

  Save Changes and Reset
  Discard Changes and Reset

  Save Changes
  Discard Changes
                                   ┌ Save Setup Values ┐
  Default Options                   Save configuration?
  Restore Defaults
  Save as User Defaults                                  
  Restore User Defaults                                  →←: Select Screen
                                     Yes          No     ↑↓: Select Item
  Boot Override                                          Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

          Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.6 Discard Changes



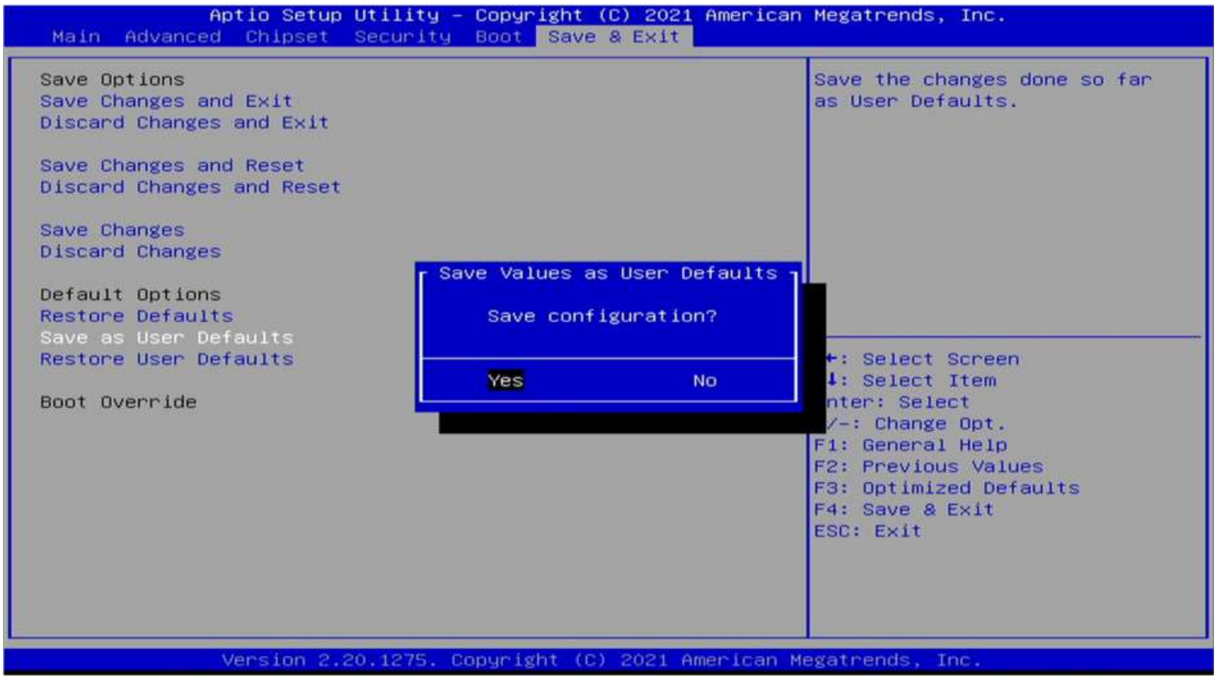
```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

Save Options                                  Discard Changes done so far to
Save Changes and Exit                         any of the setup options.
Discard Changes and Exit

Save Changes and Reset
Discard Changes and Reset

Save Changes
Discard Changes
                      Load Previous Values
Default Options
Restore Defaults      Load Previous Values?
Save as User Defaults
Restore User Defaults                         →←: Select Screen
                      Yes          No         ↑↓: Select Item
Boot Override                                 Enter: Select
                                              +/-: Change Opt.
                                              F1: General Help
                                              F2: Previous Values
                                              F3: Optimized Defaults
                                              F4: Save & Exit
                                              ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.7 Restore Defaults



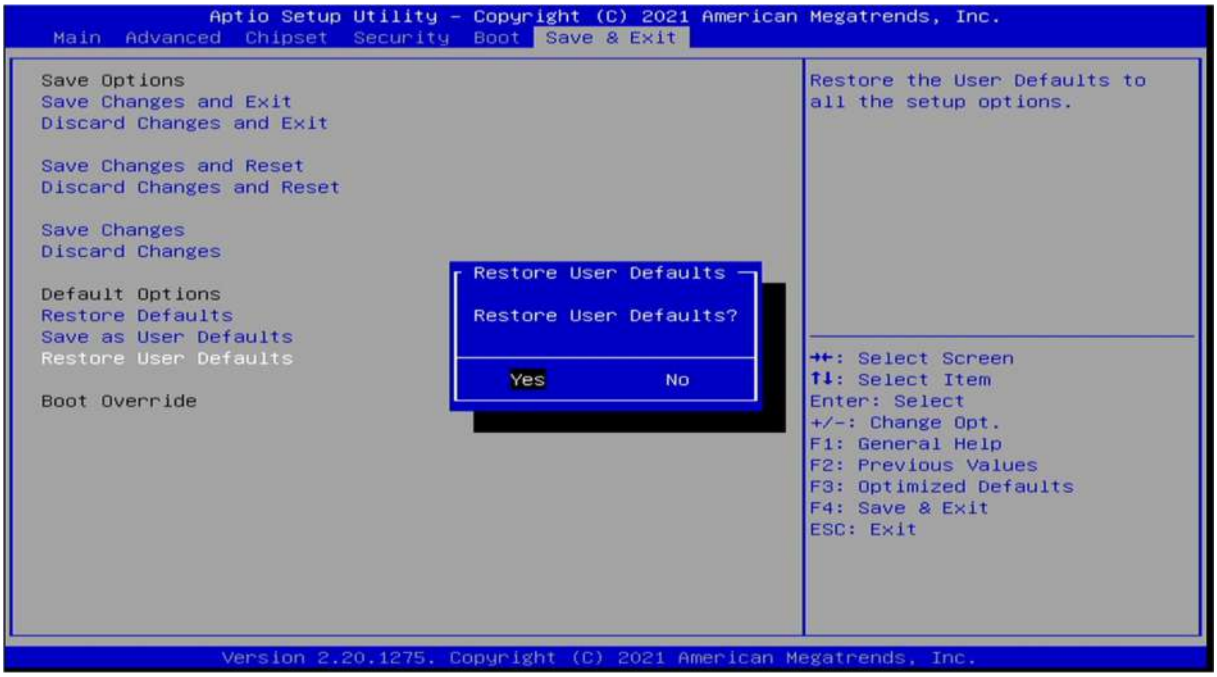
```
Aptio Setup Utility - Copyright (C) 2021 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

Save Options                                  Restore/Load Default values
Save Changes and Exit                         for all the setup options.
Discard Changes and Exit

Save Changes and Reset
Discard Changes and Reset

Save Changes
Discard Changes
                      Load Optimized Defaults
Default Options
Restore Defaults      Load Optimized Defaults?
Save as User Defaults
Restore User Defaults                         →←: Select Screen
                      Yes          No         ↑↓: Select Item
Boot Override                                 Enter: Select
                                              +/-: Change Opt.
                                              F1: General Help
                                              F2: Previous Values
                                              F3: Optimized Defaults
                                              F4: Save & Exit
                                              ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.8 Save as User Defaults



```
Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

Save Options                              Save the changes done so far
Save Changes and Exit                     as User Defaults.
Discard Changes and Exit

Save Changes and Reset
Discard Changes and Reset

Save Changes
Discard Changes
                     ┌ Save Values as User Defaults ┐
Default Options      │                              │
Restore Defaults     │      Save configuration?     │
Save as User Defaults│                              │
Restore User Defaults├──────────────────────────────┤ ←: Select Screen
                     │     Yes              No      │ ↓: Select Item
Boot Override        └──────────────────────────────┘ nter: Select
                                                      /-: Change Opt.
                                          F1: General Help
                                          F2: Previous Values
                                          F3: Optimized Defaults
                                          F4: Save & Exit
                                          ESC: Exit

Version 2.20.1275. Copyright (C) 2021 American Megatrends, Inc.
```

3.8.9 Restore User Defaults



```
Aptio Setup Utility – Copyright (C) 2021 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

Save Options                              Restore the User Defaults to
Save Changes and Exit                     all the setup options.
Discard Changes and Exit

Save Changes and Reset
Discard Changes and Reset

Save Changes
Discard Changes
                          ┌ Restore User Defaults ┐
Default Options           │                       │
Restore Defaults          │ Restore User Defaults?│
Save as User Defaults     │                       │
Restore User Defaults     ├───────────────────────┤ →←: Select Screen
                          │    Yes          No    │ ↑↓: Select Item
Boot Override             └───────────────────────┘ Enter: Select
                                          +/-: Change Opt.
                                          F1: General Help
                                          F2: Previous Values
                                          F3: Optimized Defaults
                                          F4: Save & Exit
                                          ESC: Exit

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```