MiTAC Panel PC System

P156-11TGS

Product Guide v1.0

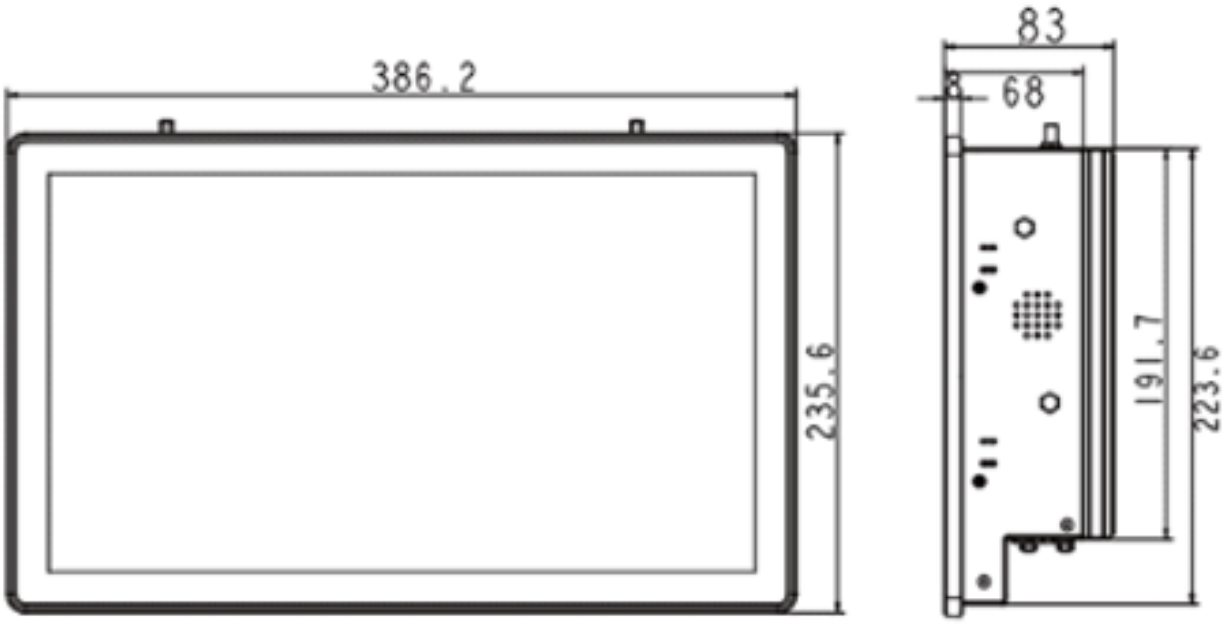
Front View

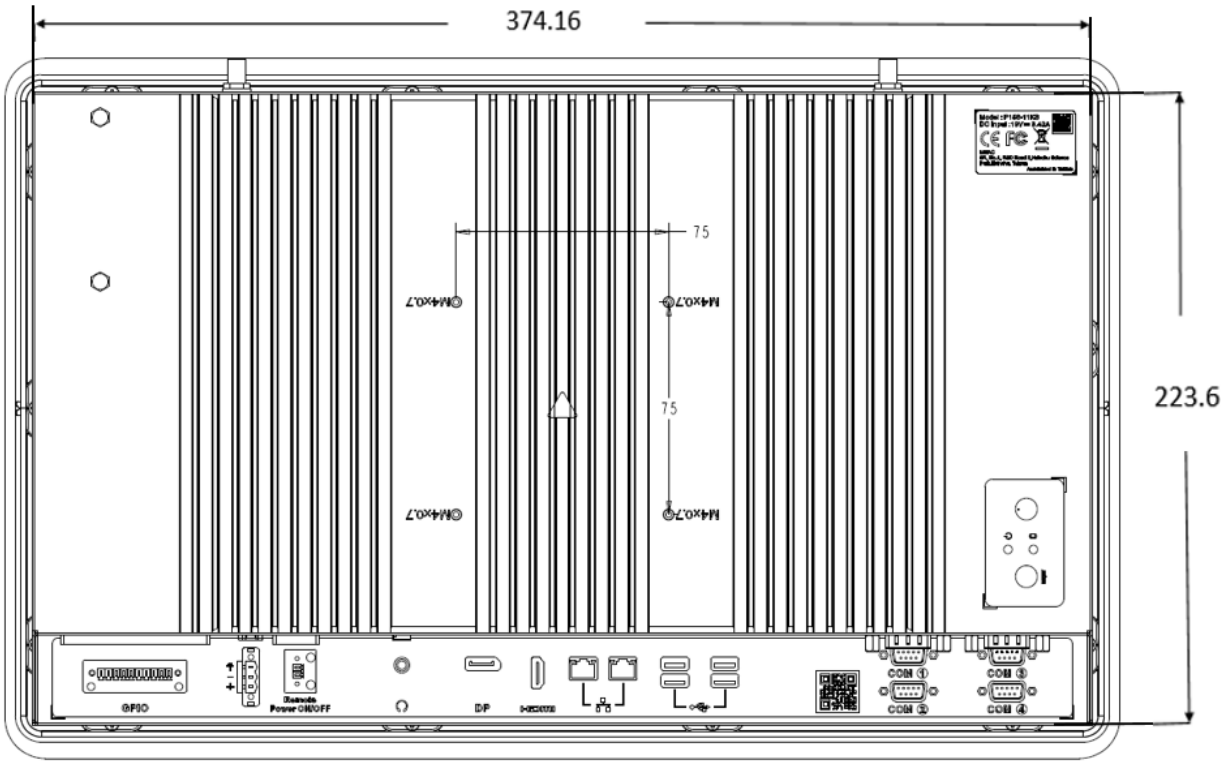
Rear View

Bottom View

Mechanical Dimension

P156-11TGS dimension: 386.2 x 235.6 x 83 mm





Product Specifications

LCD	DISPLAY TYPE	15.6" TFT-LCD
	MAX. RESOLUTION	1920 x 1080
	MAX. COLORS	16.2M (8 bit / color)
	LUMINANCE (cd/m2)	450
	VIEWING ANGLE (H/V)	170° / 170°
	LED BACKLIGHT LIFETIME (hrs)	50,000
	HIGH BRIGHTNESS	Option
TOUCH SCREEN	TYPE	P-CAP / 5 Wire Resistive(True-flat)
	TOUCH	True-flat 10 points / single point
	AR/AG/AF COATING	Option
SYSTEM	PROCESSOR	11th Gen Intel® Tiger Lake-UP3 i3-1115G4E (Dual Core, 6MB Cache, up to 3.90 GHz) / option: 11th Gen Tiger Lake-UP3 Celeron 6305E / i5-1145G7E / i7-1185G7E
	CHIPSET	Intel® SoC Integrated

	SYSTEM MEMORY	DDR4 3200 MHz / 1 x 260-pin SO-DIMM / Max. 32GB (Non-ECC)
	ETHERNET	Intel® I219-LM Giga LAN + Intel® I225-LM 2.5GbE LAN
	I/O PORT	1 x 3-pin Phoenix type terminal block DC input / 2 x RJ45 / 3 x RS232 / 1 x 2-pin remote power on/off / 1 x RS232 / 422 / 485 / 2 x HDMI 1.4 / 4 x USB 3.1 Gen 2
	EXPANSION SLOT	Wireless: 1 x M.2 2230 E key (PCIeX1, USB2.0) / Storage/LTE/5G Slot: 1 x M.2 2280/2260/2242/3042/3052 B Key (USB2.0/*PCIeX1/SATAIII) *Not support M.2 M Key NVMe SSD / **5G card support is by BOM option. Please check with sales about the M.2 B Key 3052 5G card spec if you have any request
	STORAGE	1 x SATA 2.5” HDD / SSD bay
	STEREO SPEAKER	2 x 3W
	OS SUPPORT	Windows® 10 64bit
	WATCHDOG TIMER	1~255 steps by software program
POWER REQUIREMENT	POWER INPUT	DC-in 8~24V
	POWER ADAPTER	AC to DC / DC19V / 3.4A / 65W adapter
MECHANICAL	MOUNTING	VESA 75/100mm / Panel Mount
	DIMENSIONS (W X H X D)	386.2 x 235.6 x 83 mm
	WEIGHT	5kg
ENVIRONMENTAL	OPERATING TEMPERATURE	-20~55°C (-4 ~ 131°F)
	STORAGE TEMPERATURE	-20 ~ 70°C (-4 ~158°F)
	STORAGE HUMIDITY	10% ~ 90% @40°C non-condensing
	VIBRATION RESISTANCE	Operating Random vibration Test 5-500Hz / 2Grms/3Axis @with SSD, follow IEC 60068-2-64
	SHOCK RESISTANCE	Operating 10 G peak acceleration (11 ms duration) / follow IEC 60068-2-27
	EMC	CE / FCC Class B
	FRONT PANEL PROTECTION	IP65 Compliant

Quick Installation Guide

Remove 10pcs rear cover screws.

(Torque 4.5 +/-0.5 Kgf-cm)

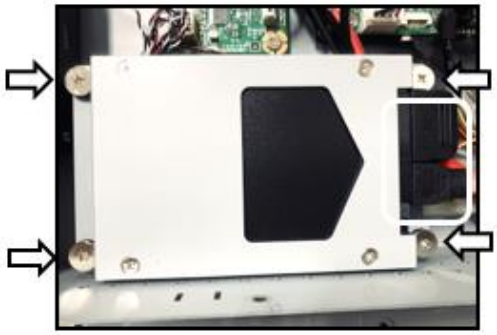
Open rear cover and pay attention to the LVDS cable, Inverter cable and TP cable.

Disassemble the SSD bracket.

(Torque 4.5 +/-0.5 Kgf-cm)

Install SSD with the screws in AK.

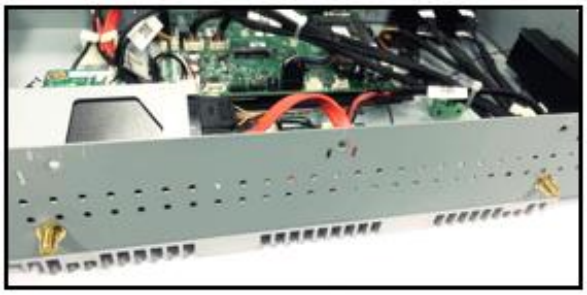
(Torque 4.5 +/-0.5 Kgf-cm)



Install SSD bracket and connect the cables.

(Torque 4.5 +/-0.5 Kgf-cm)

Install SODIMMs



Remove the rubber caps and install antennas in rear cover (option).

(Torque 4.5 +/-0.5 Kgf-cm)

Install WIFI card and connect the antennas. (option)

(Torque 4.5 +/-0.5 Kgf-cm)

Check LVDS cable Inverter cable and TP cable connection before secure the rear cover.

Secure 10pcs rear cover screws.

(Torque 4.5 +/-0.5 Kgf-cm)

Connect the DC/Adapter cable to 3P terminal block as figure.

Install panel mounts as figure.

(Total 10pcs)

[Note] need manually install drivers

Please check the latest drivers on MiTAC official website

https://www.mitacmct.com/IndustrialPanelPC_P156-11TGS_P156-11TGS

3.5” SBC M/B Components

Figure 1 shows location of the major components on the top side of MITAC 3.5” SBC M/B PD11TGS.

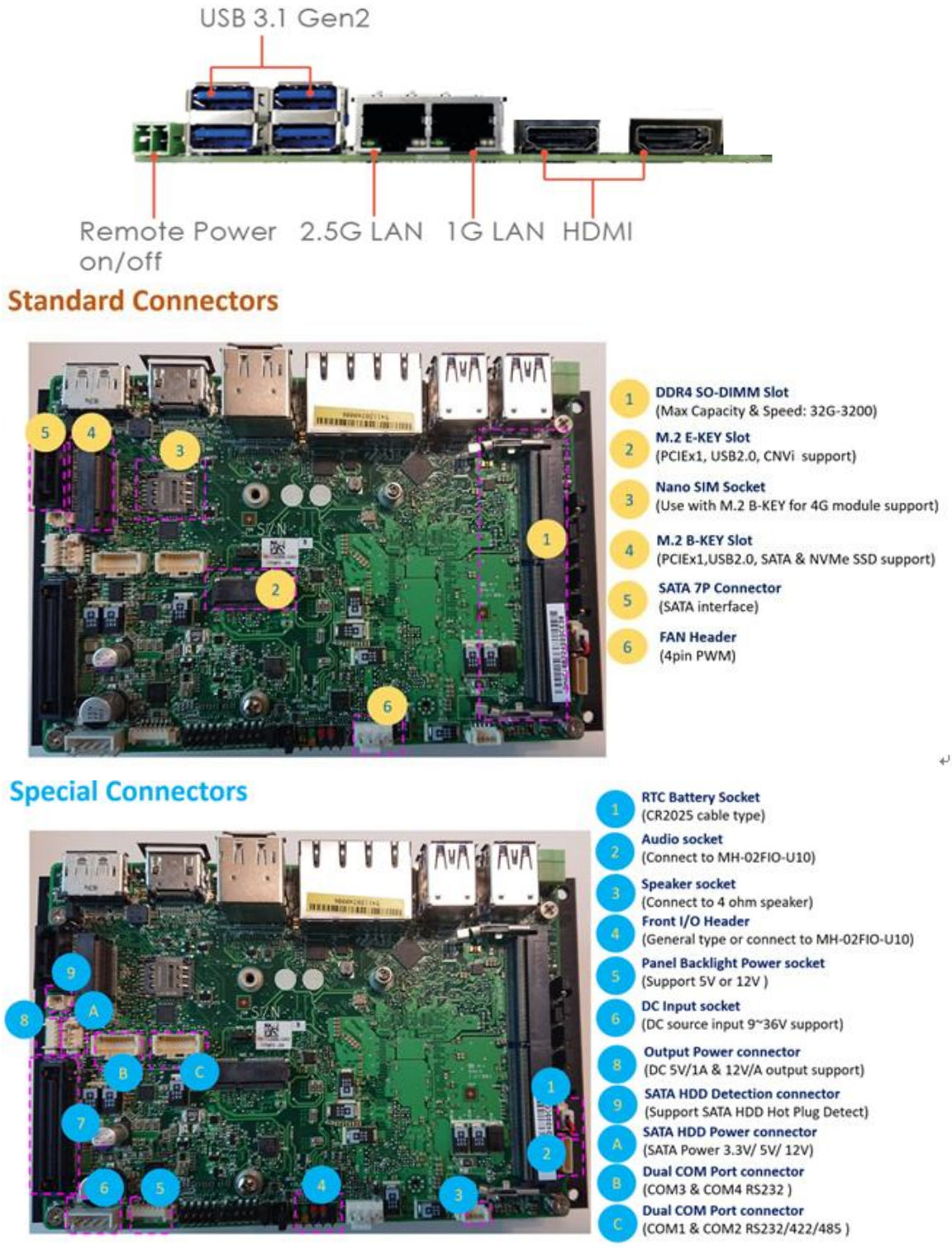
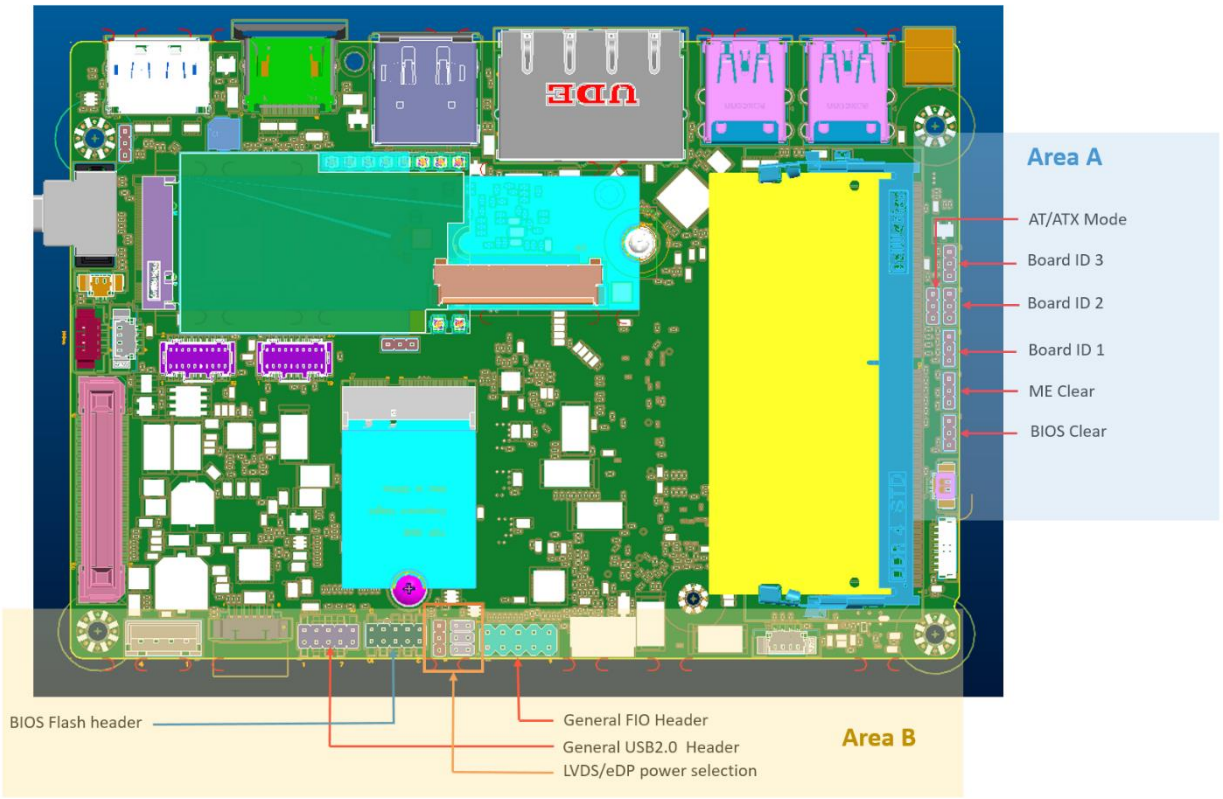
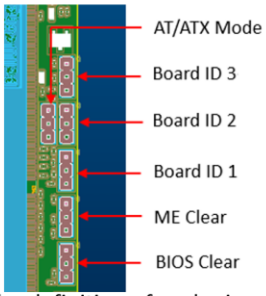


FIGURE 1. MITAC 3.5” SBC M/B COMPONENTS

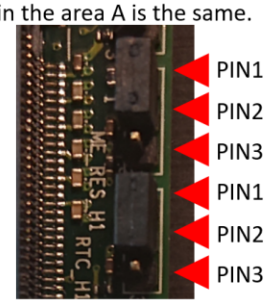
Jumper setting



Area A



The definition of each pin position of herders in the area A is the same.



- **AT/ATX Mode**

  Jumper is set to Pin2-Pin3 [ATX mode/default]
  System power on by power switch or wake up event
  Jumper is set to Pin2-Pin1
  System power on when DC power source is plug in

- **Board ID 1 ~3**

  These headers are used as MCT production identification.
  Any changes may make the system unable to boot.

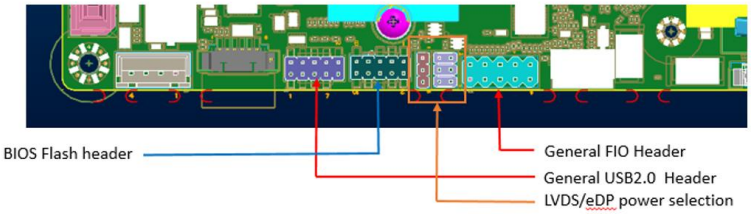
- **ME Clear**

  Jumper is set to Pin1-Pin2 [default]
  Keep current ME setting.
  Jumper is set to Pin2-Pin3
  Intel ME will be cleared to the default setting.

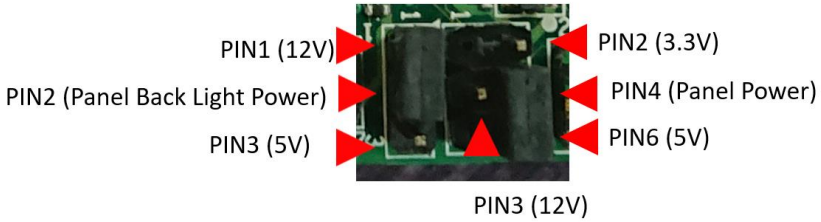
- **BIOS Clear**

  Jumper is set to Pin1-Pin2 [default]
  Keep current BIOS setting.
  Jumper is set to Pin2-Pin3
  BIOS will be cleared to the default setting.

Area B



- **LVDS/eDP Power selection Header**



- **LVDS/eDP Backlight Power selection Header**

Jumper is set to Pin1-Pin2 [default]
Backlight power 12V support.
Jumper is set to Pin2-Pin3
Backlight power 5V support.

- **LVDS/eDP Panel Power selection Header**

Jumper is set to Pin6-Pin4 [default]
Panel power 5V support.
Jumper is set to Pin2-Pin4
Panel power 3.3V support.
Jumper is set to Pin3-Pin4
Panel power 12V support.

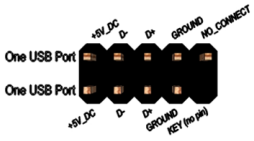
- **BIOS Flash Header**

This header is used for debugging or updating the BIOS.

PIN	Name
1	ROM_CS0
2	3VSB (3.3V)
3	ROM_MISO
4	ROM_IO3
5	ROM_IO2
6	ROM_CLK
7	X
8	ROM_MOSI
9	GND
10	NC

- **USB2.0 Header**

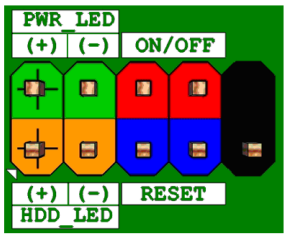
General 2.0 pitch dual USB2.0 header.
Can also be connected to MH-02FIO-U10 for expansion.



PIN	Name
1	VBUS 5V
2	VBUS 5V
3	USBP1 D-
4	USBP2 D-
5	USBP1 D+
6	USBP2 D+
7	GND
8	GND
9	KEY(no pin)
10	KEY(NC)

- **FIO Header**

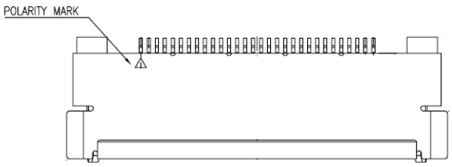
General 2.0 pitch FIO header
Can also be connected to MH-02FIO-U10 for expansion.



PIN	Name
1	HDD LED+
2	Power LED+ (S0)
3	HDD LED-
4	Power LED- (S3)
5	GND
6	PWRBT_N
7	RESET_N
8	GND
9	VCC(5V)

Internal Connector Pin Definition

- **eDP or LVDS**



PIN	LVDS Define	eDP Define
1	LVDS0_LINK3_CON_DP	NC
2	LVDS0_LINK3_CON_DN	GND
3	LVDS0_LINK2_CON_DP	eDP_TX3_DN
4	LVDS0_LINK2_CON_DN	eDP_TX3_DP
5	LVDS0_LINK1_CON_DP	GND
6	LVDS0_LINK1_CON_DN	eDP_TX2_DN
7	LVDS0_LINK0_CON_DP	eDP_TX2_DP
8	LVDS0_LINK0_CON_DN	GND
9	LVDS1_LINK3_CON_DP	eDP_TX1_DN
10	LVDS1_LINK3_CON_DN	eDP_TX1_DP
11	LVDS1_LINK2_CON_DP	GND
12	LVDS1_LINK2_CON_DN	eDP_TX0_DN
13	LVDS1_LINK1_CON_DP	eDP_TX0_DP
14	LVDS1_LINK1_CON_DN	GND
15	LVDS1_LINK0_CON_DP	eDP_AUX_DN
16	LVDS1_LINK0_CON_DN	eDP_AUX_DP
17	GND	GND
18	Panel VDD	
19	Panel VDD	
20	Panel VDD	
21	Panel VDD	
22	Panel VDD	
23	GND	
24	GND	
25	GND	
26	LVDS0_CLK_CON_DP	GND
27	LVDS0_CLK_CON_DN	Hot Plug Detect
28	GND	
29	GND	
30	GND	
31	DDC_SCL	GND
32	Backlight Enable	
33	Backlight Control	
34	LVDS1_CLK_CON_DP	NC
35	LVDS1_CLK_CON_DN	NC
36	Backlight VCC	
37	Backlight VCC	
38	Backlight VCC	
39	Backlight VCC	
40	DDC_SDA	NC

- **M.2 B-KEY Slot**

(PCIEx1,USB2.0, SATA & NVMe SSD support)

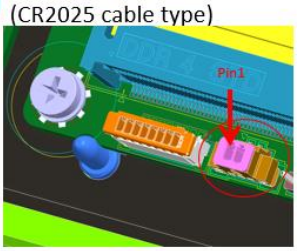
74	3.3V	CONFG_2	75
72	3.3V	GND	73
70	3.3V	GND	71
68	NC	NC	69
66	SIM_DET	GPIO(O)(1.8V)(WAN_RSET#)	67
64	NC	NC	65
62	NC	NC	63
60	NC	NC	61
58	NC	NC	59
56	NC	GND	57
54	PEWAKE#	CLOCK+	55
52	CLKREQ#	CLOCK-	53
50	PERST#	GND	51
48	NC	SATA_TXP / PCIEx1_TXP	49
46	NC	SATA_TXN / PCIEx1_TXN	47
44	NC	GND	45
42	NC	SATA_RXN / PCIEx1_RXP	43
40	NC	SATA_RXP / PCIEx1_RXN	41
38	DEVSLP	GND	39
36	UIM_PWR	NC	37
34	UIM_DAT	NC	35
32	UIM_CLK	GND	33
30	UIM_RESET#	NC	31
28	NC	NC	29
26	NC	GND	27
24	NC	GPIO (I) (O) (1.8V) (M2B_DPR_SEL)	25
22	GND	GPIO (I) (3.3V) (M2B_WAN_WAKE#)	23
20	NC	CONFG_0	21
18	Module Key	Module Key	19
16	Module Key	Module Key	17
14	Module Key	Module Key	15
12	Module Key	Module Key	13
10		GND	11
8		USB2.0 D-	9
6		USB2.0 D+	7
4		GND	5
2		GND	3
		CONFG_3	1

- Without USB3.0 inter face.

Special Connectors

1 RTC Battery Socket

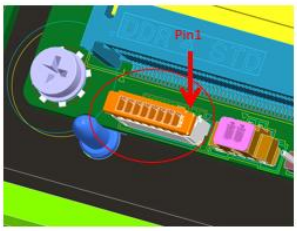
(CR2025 cable type)



PIN	Name
1	VBAT
2	GND

2 Audio socket

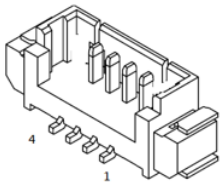
(Connect to MH-02FIO-U10)



PIN	Name
1	HPOUT_JD
2	HP_LOUT_R
3	HP_LOUT_L
4	RING2
5	
6	SLEEVE
7	AGND
8	AGND

3 Speaker socket

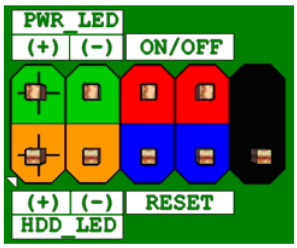
(Connect to 4 ohm speaker)



PIN	Name
1	LINE OUT L-
2	LINE OUT L+
3	LINE OUT R-
4	LINE OUT R+

4 Front I/O Header

(General type or connect to MH-02FIO-U10)



PIN	Name
1	HDD LED+
2	Power LED+ (S0)
3	HDD LED-
4	Power LED- (S3)
5	GND
6	PWRBT_N
7	RESET_N
8	GND
9	VCC(5V)

5 Panel Backlight Power socket
(Support 5V or 12V)

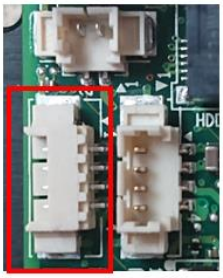
PIN	Name
1	LVDS_BKTEN
2	BKLT_CTRL
3	BKLT_PWR (5V or 12V)
4	BKLT_PWR (5V or 12V)
5	GND
6	GND

**12V maximum current 1.2A (other 12V power without loading)*
Assumed LVDS Panel power usage 60% = 0.72A
5V maximum current 2A
Assumed LVDS Panel power usage 60% = 1.2A

6 DC Input socket
(DC source input 9~36V support)

PIN	Name
1	GND
2	DC_IN(8-24V)
3	DC_IN(8-24V)
4	GND

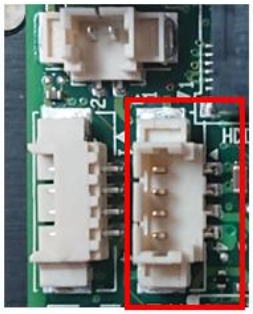
8 Output Power connector
(DC 5V/1A & 12V/A output support)



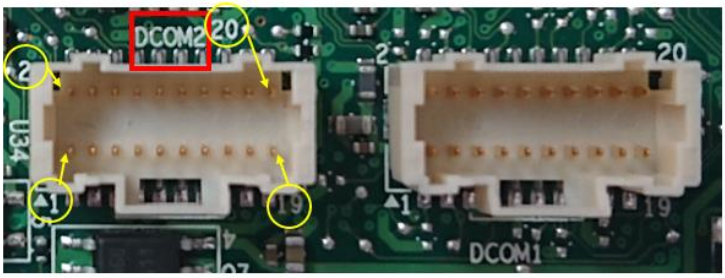
PIN	Name
1	NA
2	GND
3	5V / 1A
4	12V / 1A

A SATA HDD Power connector
(SATA Power 3.3V/ 5V/ 12V)

PIN	NAME
1	V_3P3_SATA
2	GND
3	V_5P0_SATA
4	V_12P0_SATA

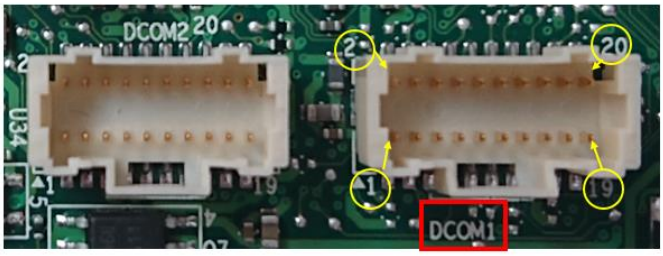


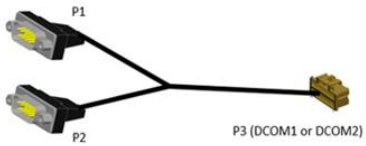
B **Dual COM Port connector DCOM2**
(RS232)



PIN	RS232
1	NDCD3
2	NRX3
3	NTX3
4	NDTR3
5	GND
6	NDSR3
7	NRTS3
8	NCTS3
9	NRI3
10	X
11	NDCD4
12	NRX4
13	NTX4
14	NDTR4
15	GND
16	NDSR4
17	NRTS4
18	NCTS4
19	NRI4
20	X

C **Dual COM Port connector DCOM1**
(RS232/422/485) (RS232)



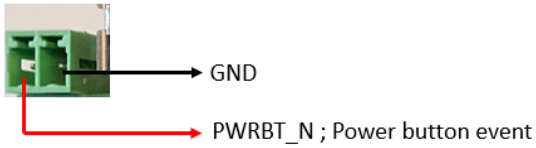


Reference cable concept drawing

PIN	RS232	RS422	RS485
1	NDCD1	TX-	D-
2	NRX1	TX+	D+
3	NTX1	RX+	X
4	NDTR1	RX-	X
5	GND	GND	GND
6	NDSR1	X	X
7	NRTS1	X	X
8	NCTS1	X	X
9	NRI1	X	X
10	X	X	X
11	NDCD2	X	X
12	NRX2	X	X
13	NTX2	X	X
14	NDTR2	X	X
15	GND	X	X
16	NDSR2	X	X
17	NRTS2	X	X
18	NCTS2	X	X
19	NRI2	X	X
20	X	X	X

External Connector Pin Definition

- **2 PIN terminal block for Power Button**



- **RJ45 Connector**

Port A
2.5G

Port B
1.0G

(Ctrl)

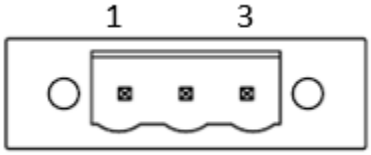
Port B 1.0G

States	Left LED for link [Green LED]	Right LED for Speed [Orange + Green LED]
LAN link is not established	OFF	OFF
10Mb/s data rate	ON/Blinking	OFF
100Mb/s data rate	ON/Blinking	Green ON
1000Mb/s data rate	ON/Blinking	Orange ON

Port A 2.5G

States	Left LED for link [Green LED]	Right LED for Speed [Orange + Green LED]
LAN link is not established	OFF	OFF
10/100Mb/s data rate	ON/Blinking	OFF
1000Mb/s data rate	ON/Blinking	Orange ON
2500Mb/s data rate	ON/Blinking	Green ON

(3-pin Phoenix type terminal block DC input)



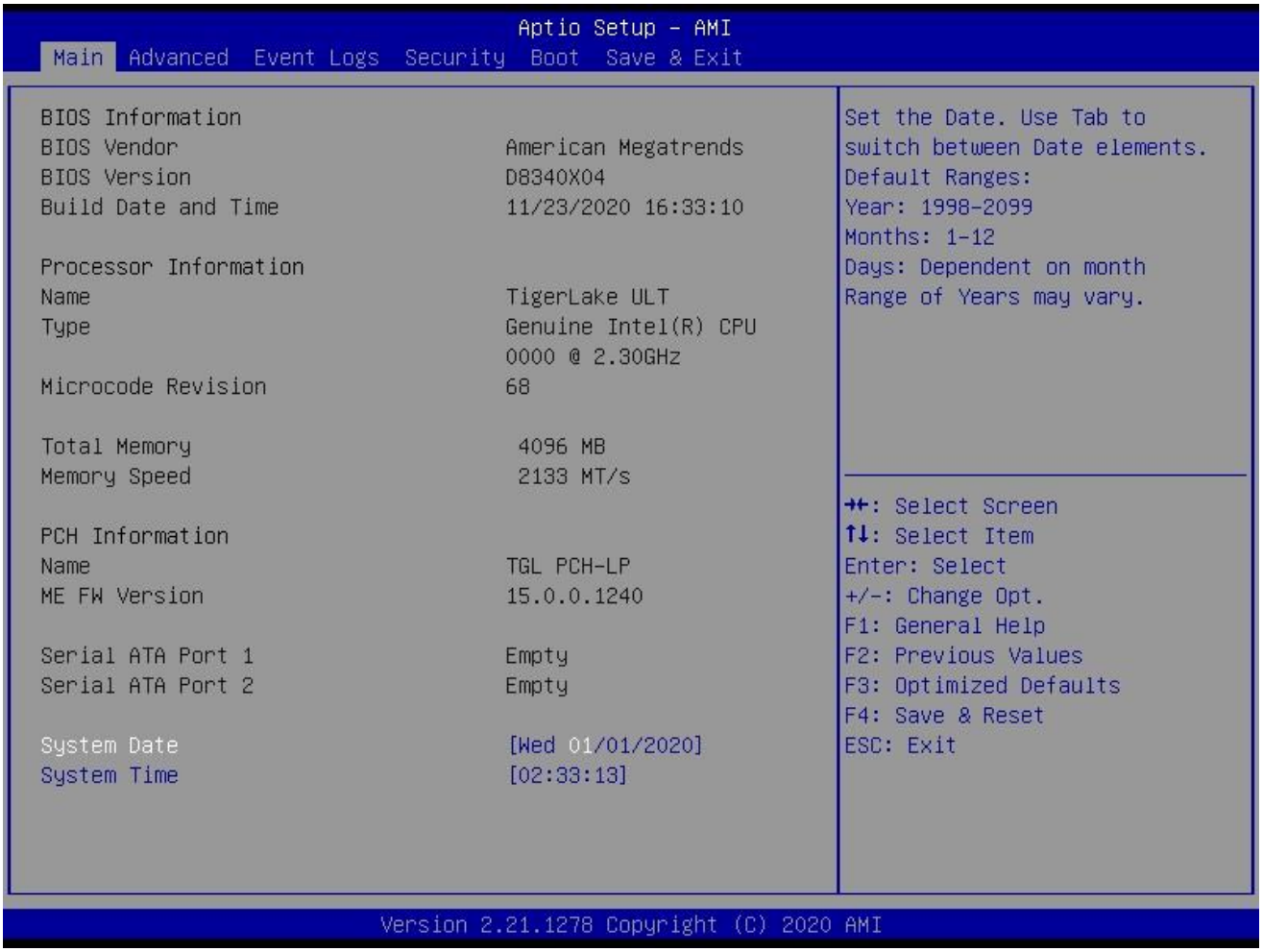
PIN	Signal Name
1	+
2	-
3	GND

(2pin terminal block)

PIN	Signal name
1	ground
2	Power switch

MITAC Panel PC System
P156-11TGS
BIOS Specifiction

1. MAIN PAGE



Field Name	**BIOS Vendr**
Default Value	American Megatrends
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**BIOS Version**
Default Value	Display the version of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Build Date and Time**
Default Value	Display build date of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Processor Information**

Value	Display the installed CPU brand.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Microcode Version**
Value	Display the CPU microcode revision.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Total Memory**
Value	Display the installed memory size.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Memory Speed**
Value	Display the installed memory Frequency
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**PCH Information**
Value	Display PCH family
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**ME FW Version**
Value	ME Firmware Version.
Comment	This field is not selectable. There is no help text associated with it.

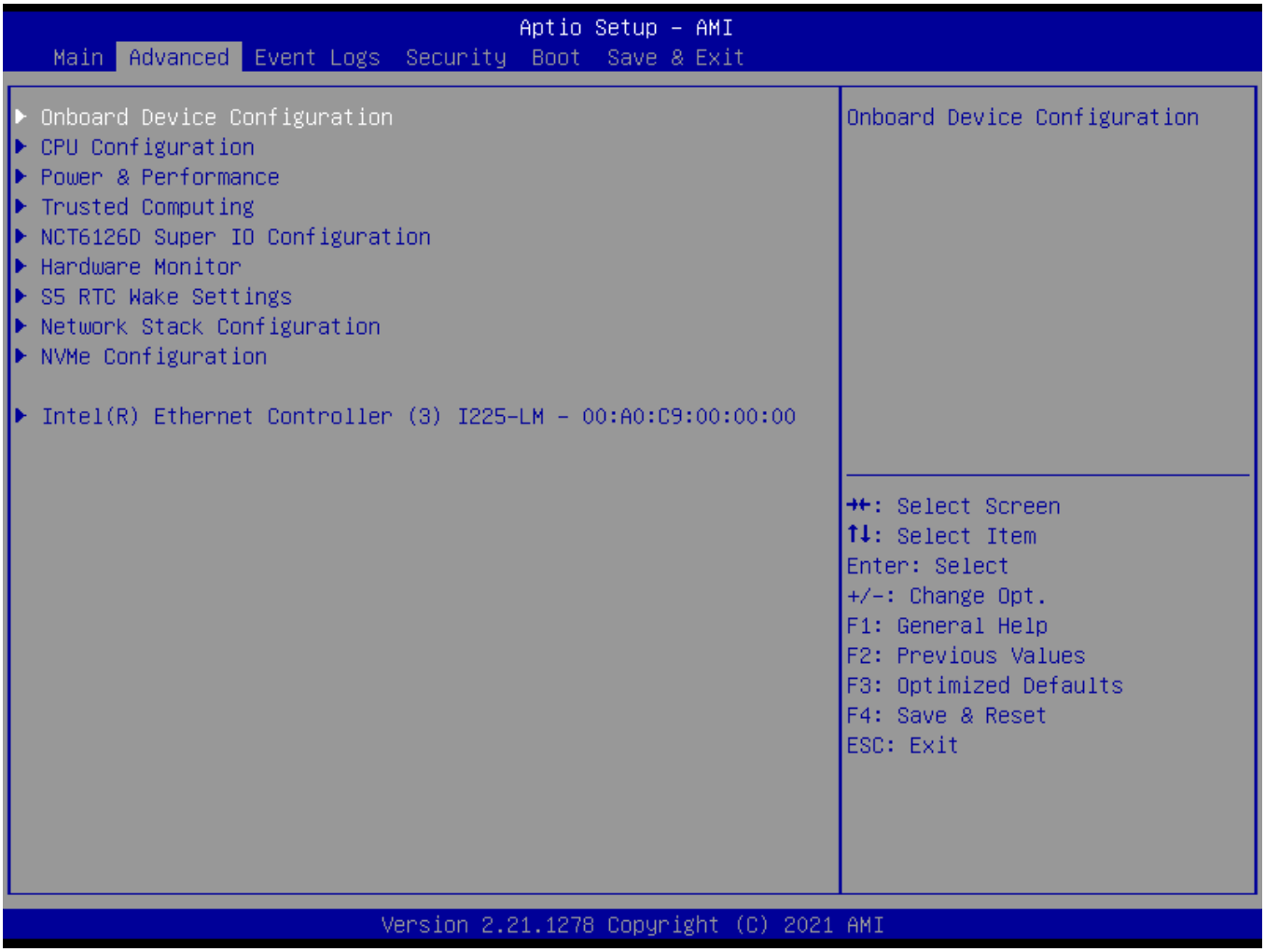
Field Name	**Serial ATA Port 1**
Value	Display the installed SATA device model/size of port 1.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Serial ATA Port 2**
Value	Display the installed SATA device model/size of port 2.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**System Date**
Default Value	[Www mm/dd/yyyy]
Possible Value	Www : Mon/Tue/Wed/Thu/Fri/Sat/Sun mm : 1-12 dd : 1-31 yyyy : 1998-2099
Help	Set the Date. Use Tab to switch between Date elements. Default Rangers: Year : 1998-2099 Months : 1-12 Days : Dependent on month Range of Years may vary.

Field Name	**System Time**
Default Value	[hh :mm :ss]
Possible Value	hh : 0-23 mm : 0-59 ss : 0-59
Help	Set the Time. Use Tab to switch between Time elements.

2. ADVANCED PAGE



Field Name	**Onboard Device**
Help	Onboard Device Configuration.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**CPU Configuration**
Help	CPU Configuration Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Power & Performance**
Help	Power & Performance Options.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Trusted Computing**
Help	Trusted Computing Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**NCT6126D Super IO Configuration**
Help	System Super IO Chip Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

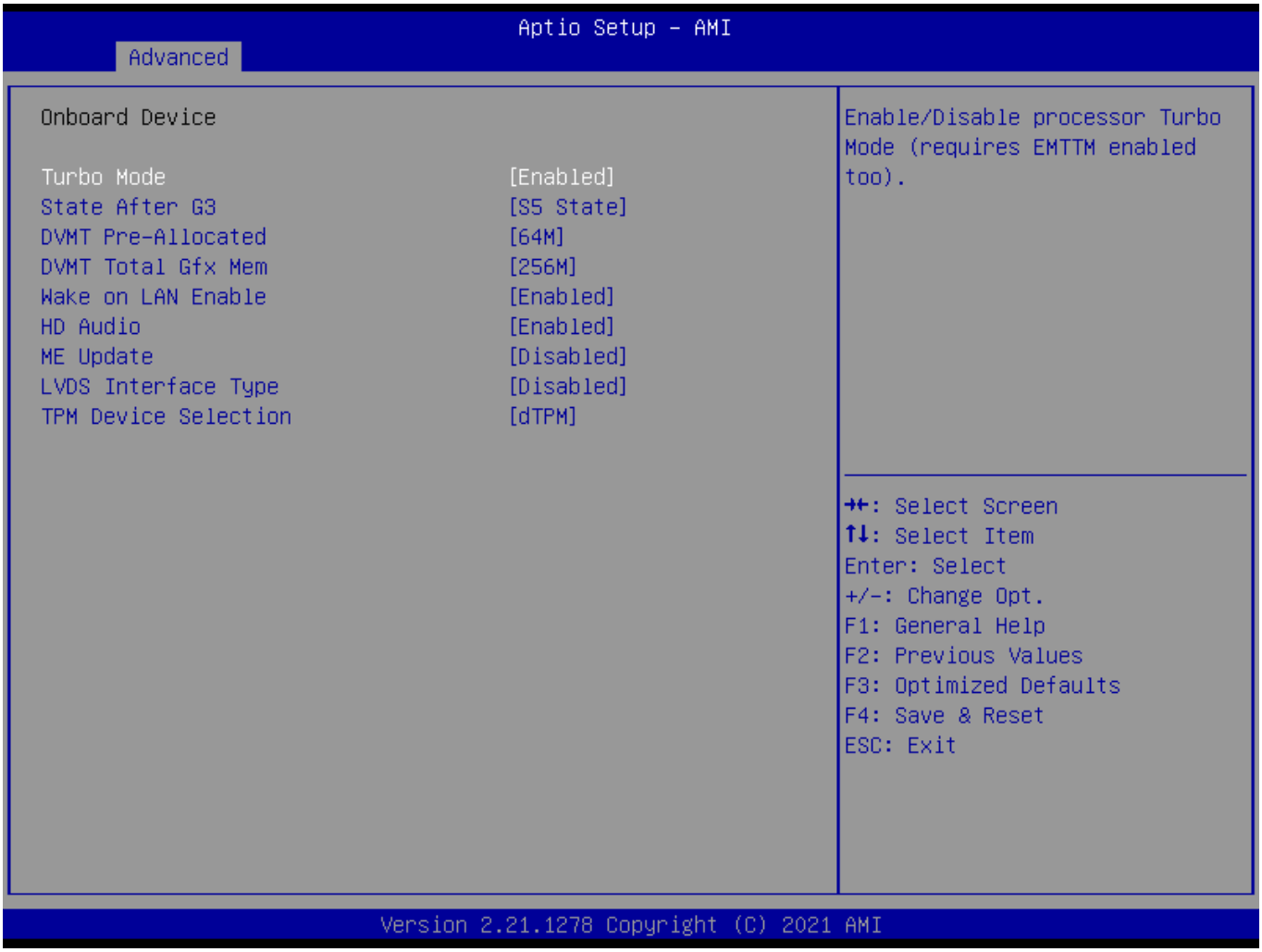
Field Name	**HW Monitor**
Help	Monitor hardware status
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**S5 RTC Wake Settings**
Help	Enable system to wake from S5 using RTC alarm
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Network Stack Configuration**
Help	Network Stack Settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**NVMe Configuration**
Help	NVMe Device Options Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

2.1 Onboard Device



Field Name	**Turbo Mode**
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable processor Turbo Mode (requires EMTTM enabled too)

Field Name	**State After G3**
Default Value	[S5 State]
Possible Value	S0 State S5 State
Help	Specify what state to go to when power is re-applied after a power failure (G3 state).

Field Name	**DVMT Pre-Allocated**
Default Value	[64M]
Possible Value	64M 32M/F7 36M 40M 44M 48M 52M 56M 60M
Help	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

Field Name	**DVMT Total Gfx Mem**
Default Value	[256M]
Possible Value	128M 256M MAX
Help	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.

Field Name	**Wake on LAN Enable**
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable integrated LAN to wake the system.

Field Name	**HD Audio**
Default Value	[Enabled]
Possible Value	Enabled Disabled

Help	Control Detection of the HD-Audio device. Disabled = HDA will be unconditionally disabled Enabled = HDA will be unconditionally enabled.

Field Name	**ME Update**
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Temporary disable Intel CSME for ME FW Update. Enabled = Intel CSME disabled after first time reboot only.

Note: Visible in LVDS SKU.

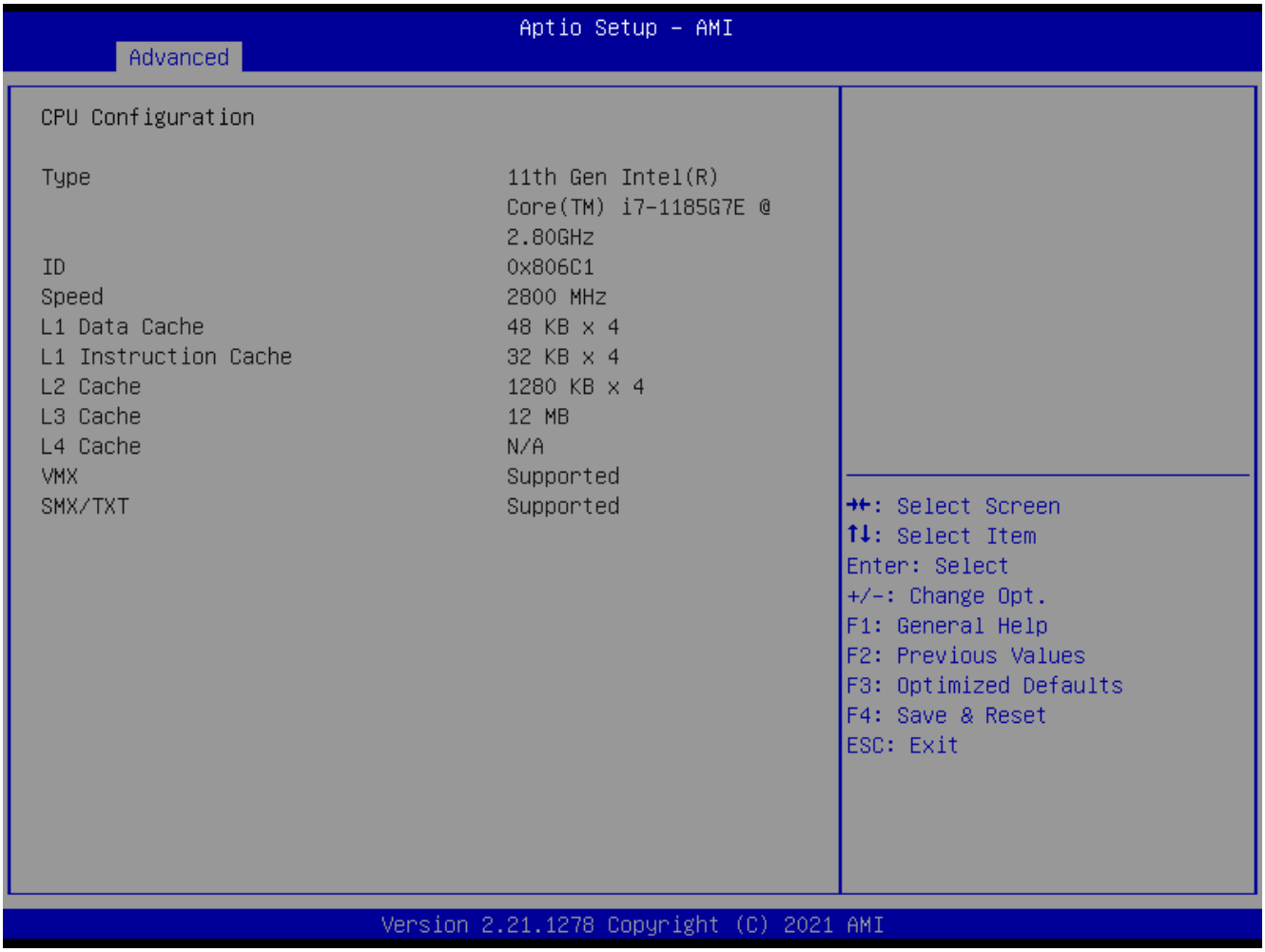
Field Name	**LVDS Interface Type**
Default Value	[Disabled]
Possible Value	8 bit-VESA Single Channel 8 bit-VESA Dual Channel 6 bit-VESA Single Channel 6 bit-VESA Dual Channel 8 bit-JEIDA Single Channel 8 bit-JEIDA Dual Channel
Help	Sets LVDS connectivity.

Note: Visible when LVDS Interface Type not set to disable

Field Name	**LVDS Panel Type**
Default Value	[1920x1080 LVDS]
Possible Value	1024x768 LVDS 1366x768 LVDS 1920x1080 LVDS
Help	Select LVDS panel used by Internal Graphics Device by selecting the appropriate setup item.

Field Name	**TPM Device Selection**
Default Value	[dTPM]
Possible Value	PTT dTPM
Help	Selects TPM device: PTT or dTPM. PTT - Enables PTT in SkuMgr dTPM 1.2 - Disables PTT in SkuMgr Warning ! PTT/dTPM will be disabled and all data saved on it will be lost

2.2 CPU Configuration



Field Name	**Type**
Default Value	[Intel CPU Brand String]
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**ID**
Default Value	Displays CPU Signature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Speed**
Default Value	Displays the CPU Speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**L1 Data Cache**
Default Value	L1 Data Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**L1 Instruction Cache**
Default Value	L1 Instruction Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**L2 Cache**
Default Value	L2 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**L3 Cache**
Default Value	L3 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**L4 Cache**
Default Value	L4 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**VMX**
Default Value	VMX Supported or Not
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**SMX/TXT**
Default Value	SMX/TXT Supported or Not
Comment	This field is not selectable. There is no help text associated with it.

2.3 Trusted Computing

Field Name	**Firmware Version**
Default Value	TPM module version.
Comment	This field is not selectable. There is no help text associated with it.

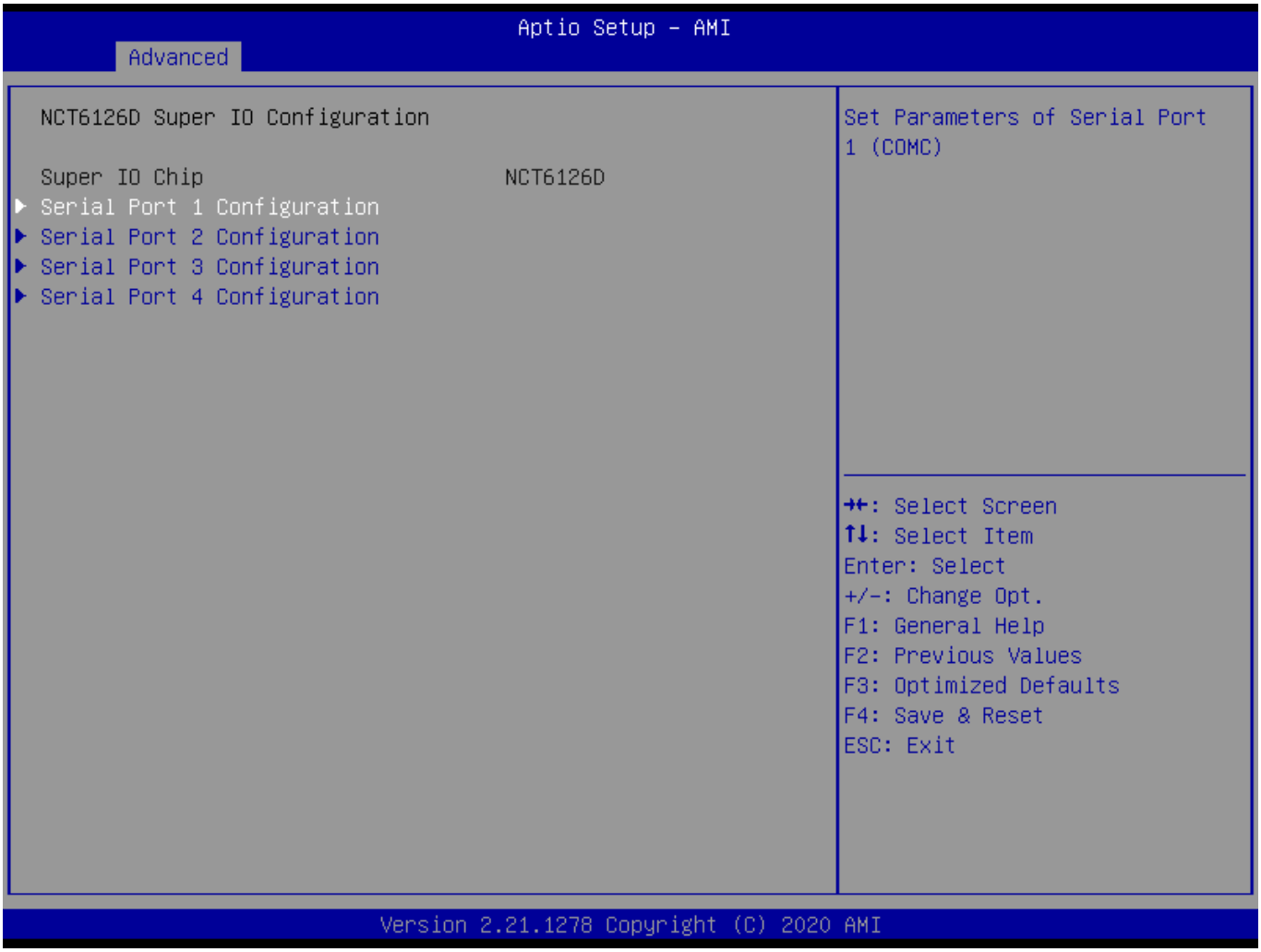
Field Name	**Vendor**
Default Value	TPM module vendor name.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Security Device Support**
Default Value	[Enable]
Possible Value	Enable Disable

Help	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

Field Name	**Pending operation**
Default Value	[None]
Possible Value	None TPM Clear
Help	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.

2.4 NCT6126D Super IO Configuration



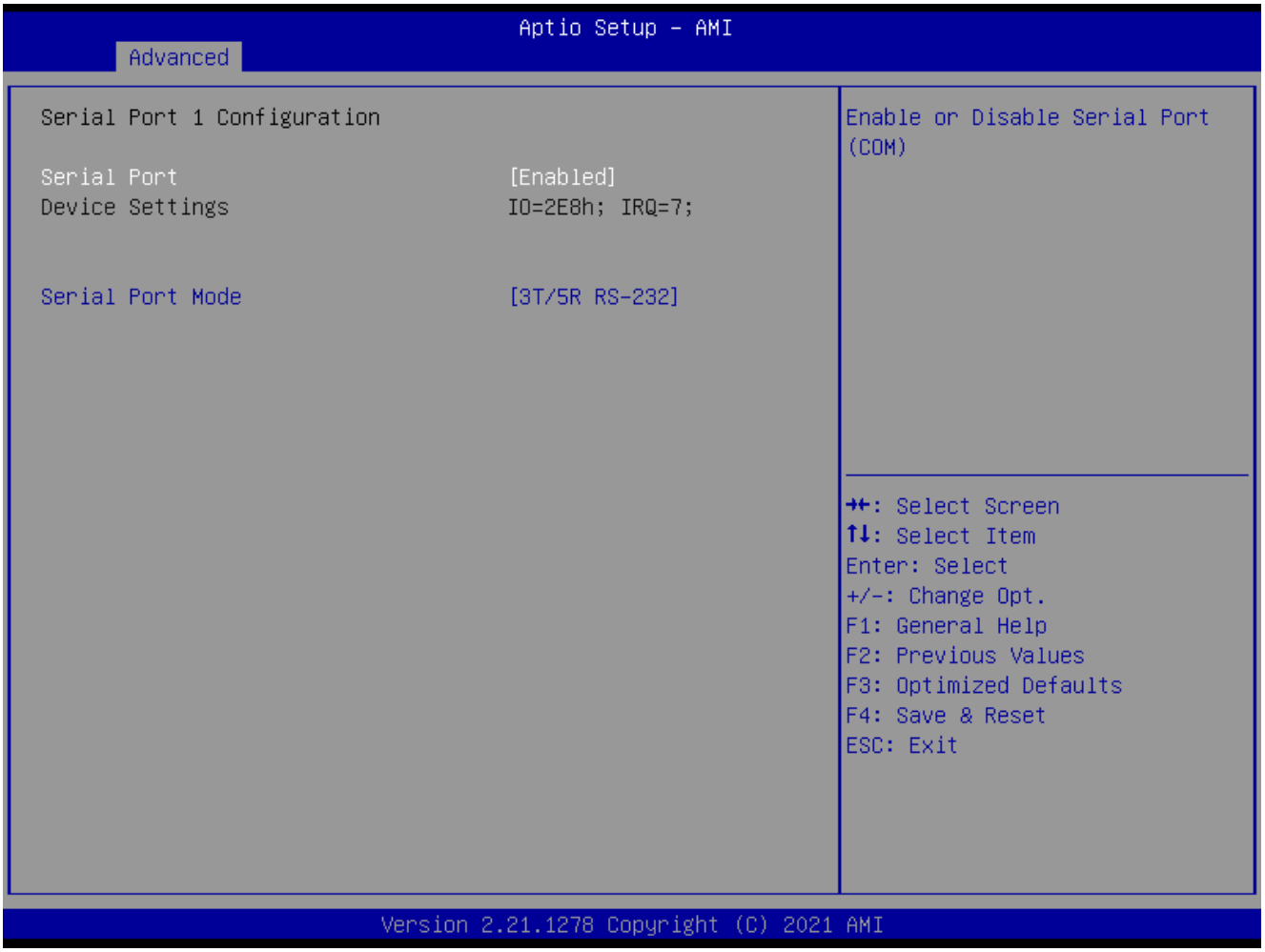
Field Name	**Serial Port 1 Configuration**
Help	Set Parameters of Serial Port 1 (COMC)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 2 Configuration**
Help	Set Parameters of Serial Port 2 (COMD)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 3 Configuration(Depend on system chassis)**
Help	Set Parameters of Serial Port 3 (COME)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 4 Configuration(Depend on system chassis)**
Help	Set Parameters of Serial Port 4 (COMA)
Comment	Press Enter when selected to go into the associated Sub-Menu.

2.4.1 Serial Port 1 Configuration



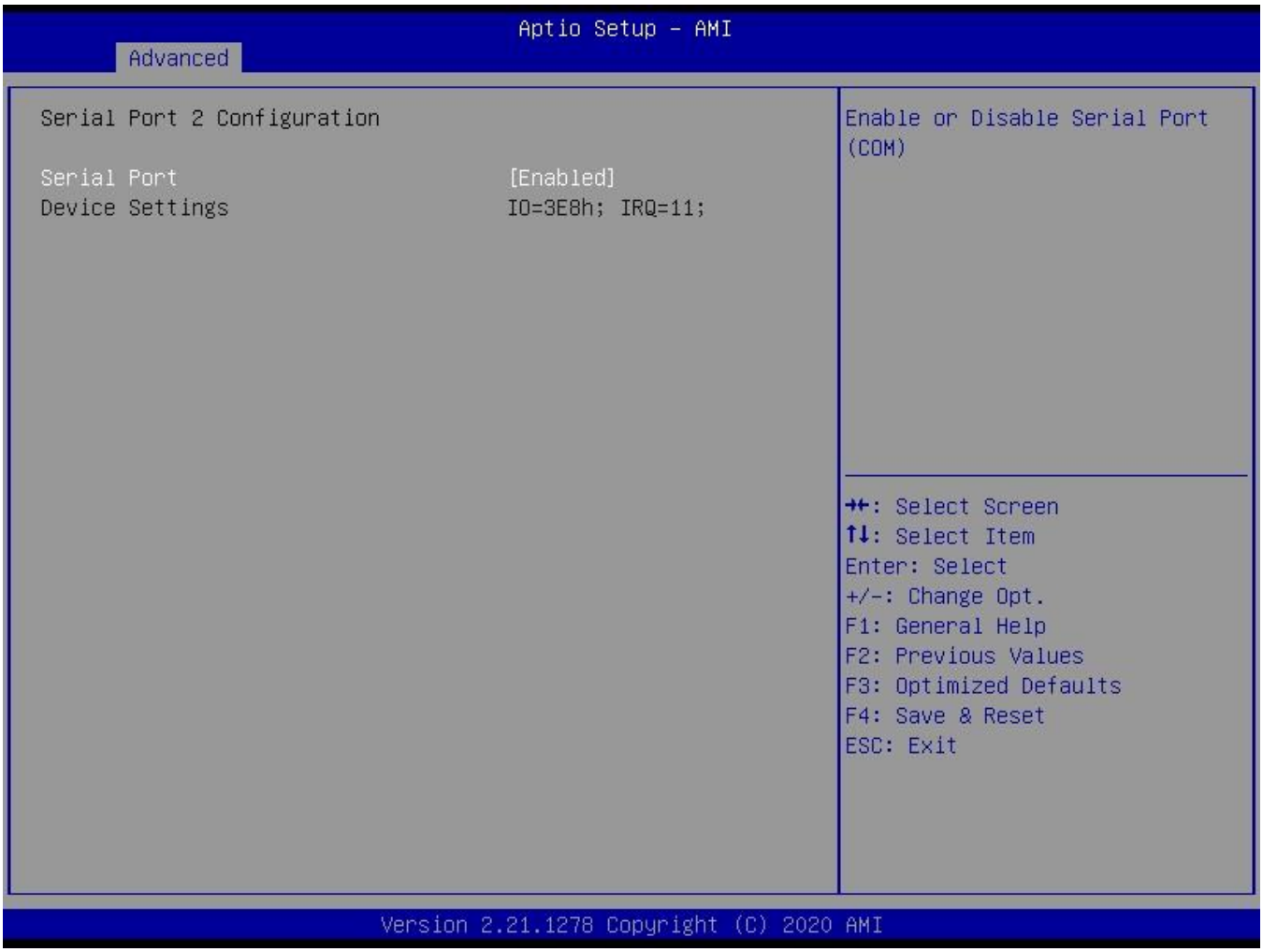
Field Name	**Serial Port**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	**Device Settings**
Default Value	Device Super IO COM1 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Serial Mode Configuration**
Default Value	[3T/5R RS232]

Possible Value	1T/1R RS422 3T/5R RS232 1T/1R RS485 TX ENABLE Low Active 1T/1R RS422 with termination resistor 1T/1R RS485 with termination resistor TX ENABLE Low Active Disabled
Help	**Select Serial Port Mode**

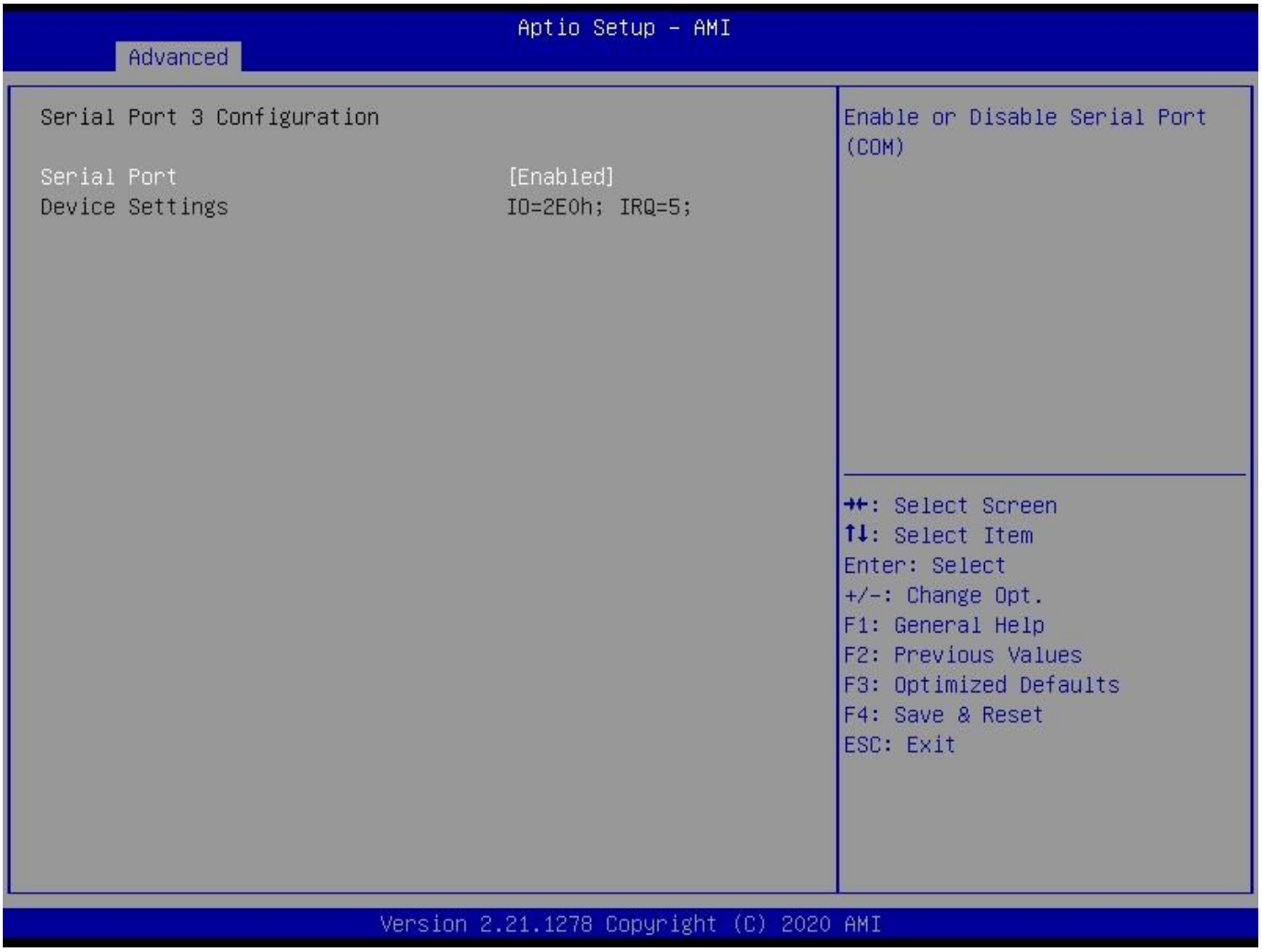
2.4.2 Serial Port 2 Configuration



Field Name	**Serial Port**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	**Device Settings**
Default Value	Device Super IO COM2 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

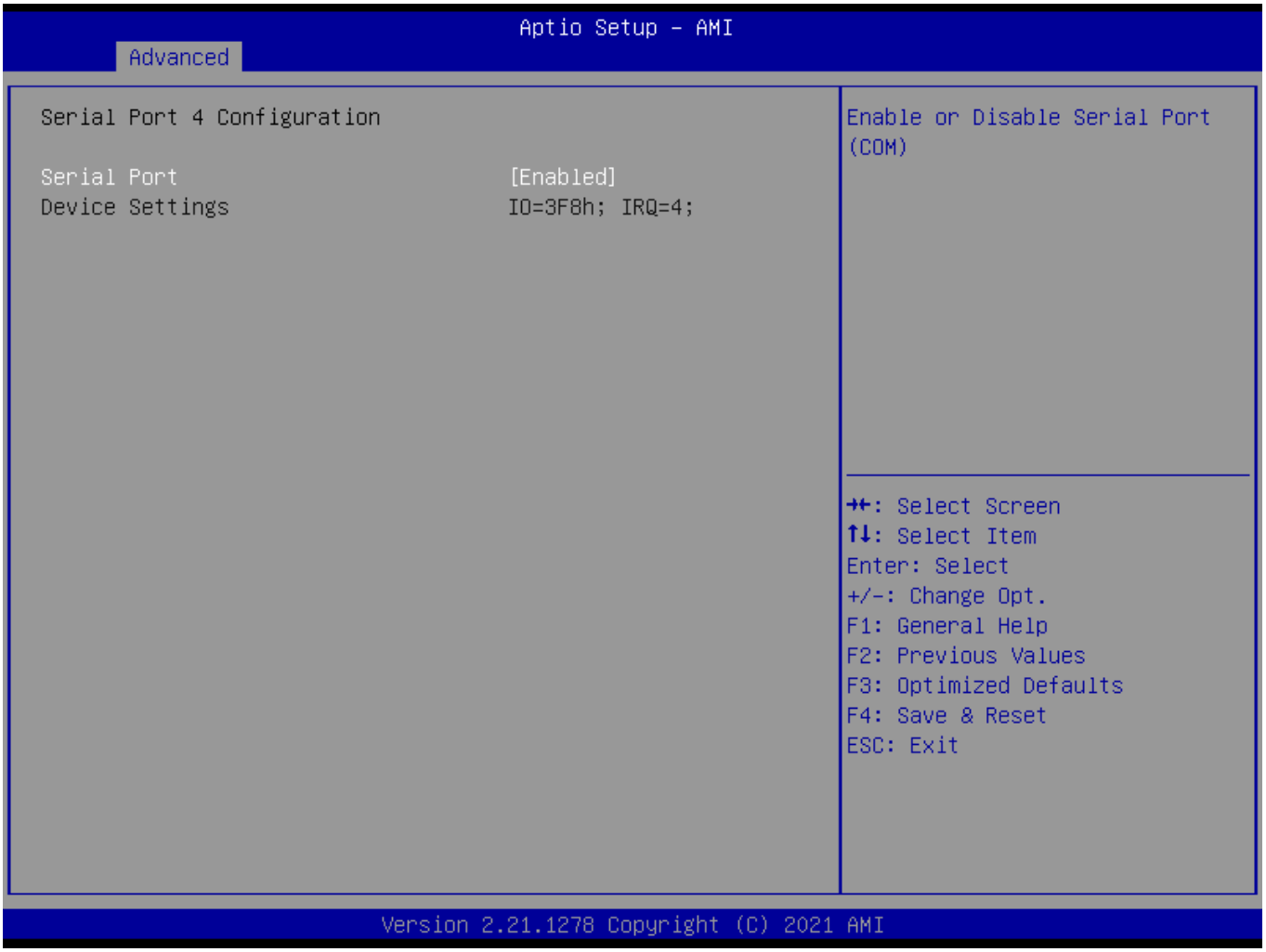
2.4.3 Serial Port 3 Configuration



Field Name	**Serial Port**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	**Device Settings**
Default Value	Device Super IO COM3 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

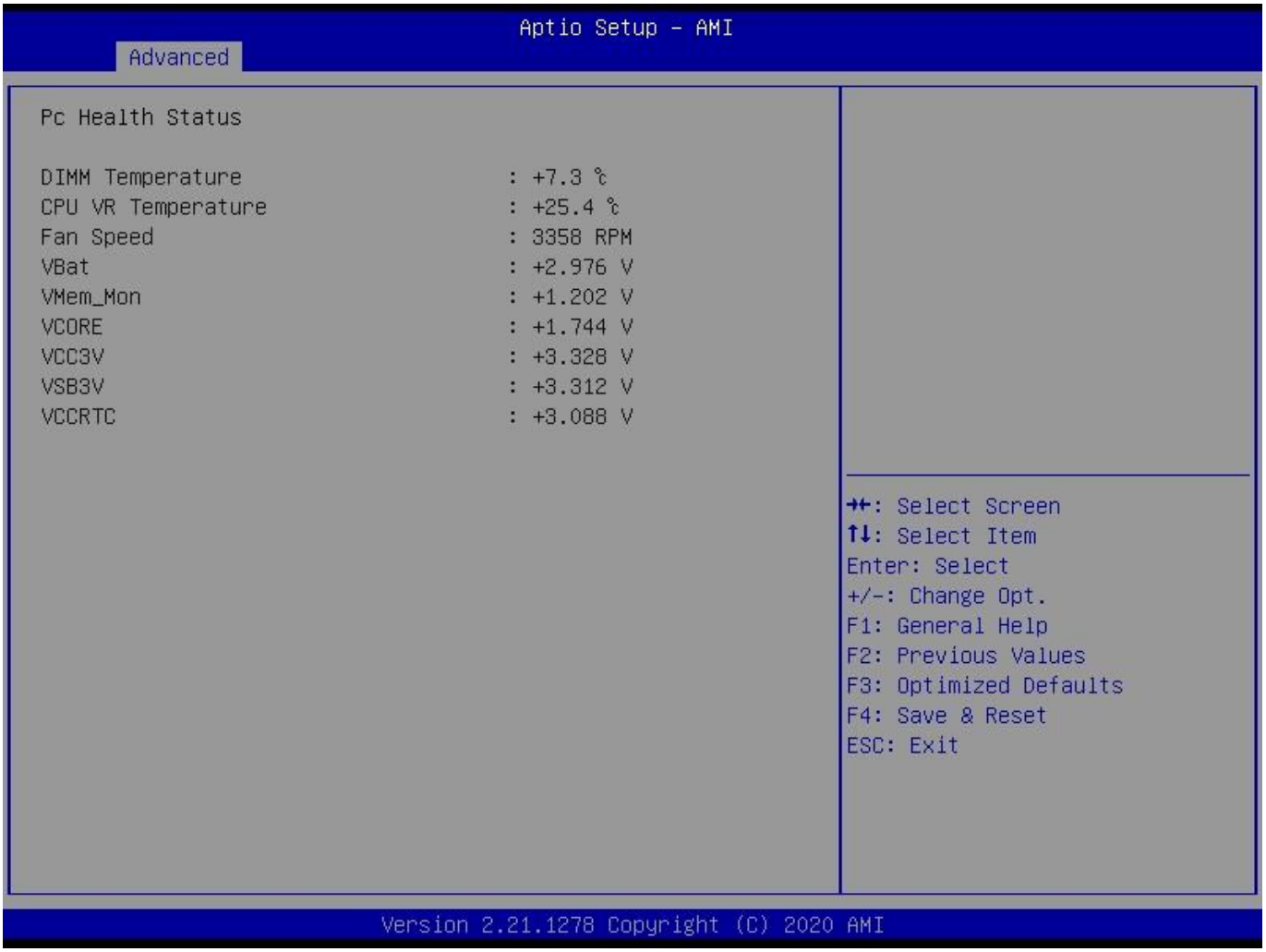
2.4.4 Serial Port 4 Configuration



Field Name	**Serial Port**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

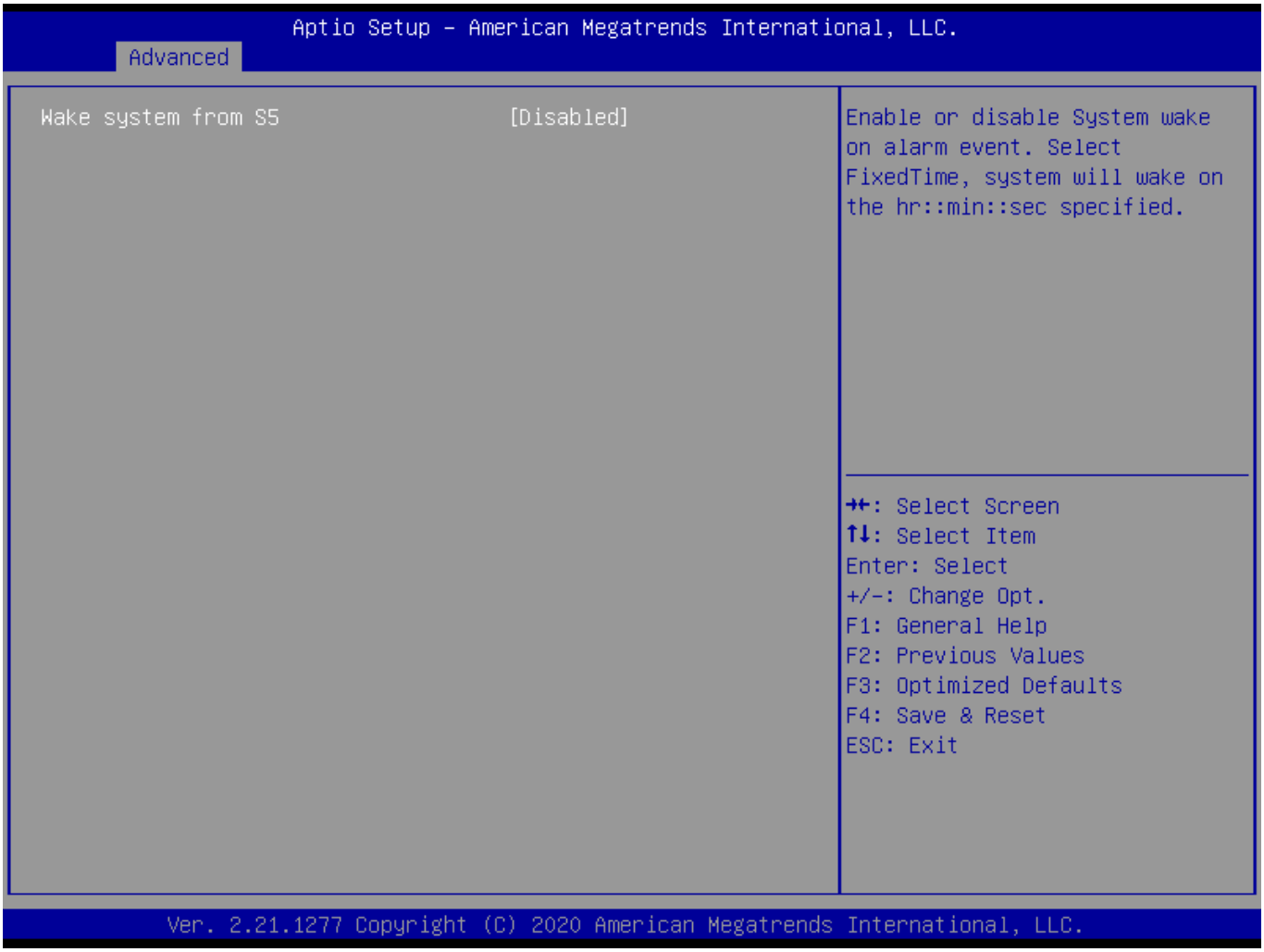
Field Name	**Device Settings**
Default Value	Device Super IO COM4 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

2.5 Hardware Monitor



Type	Range
DIMM Temperature	70~-40℃
CPU VR Temperature	70~-40℃
Fan Speed	There are many kinds of the fan could be installed into the system, so we could only set 0 RPM for the failed fan speed, and there is also no high RPM limitation.
VBat	2.0~ 3.65V
VMem_Mon	1.15 ! 1.25V
VCORE	0 ~2V
VCC3V	3.13 ~ 3.65V
VSB3V	3.13 ~ 3.65V
VCCRTC	2.0 ~ 3.2V

2.6 RTC Wake Settings



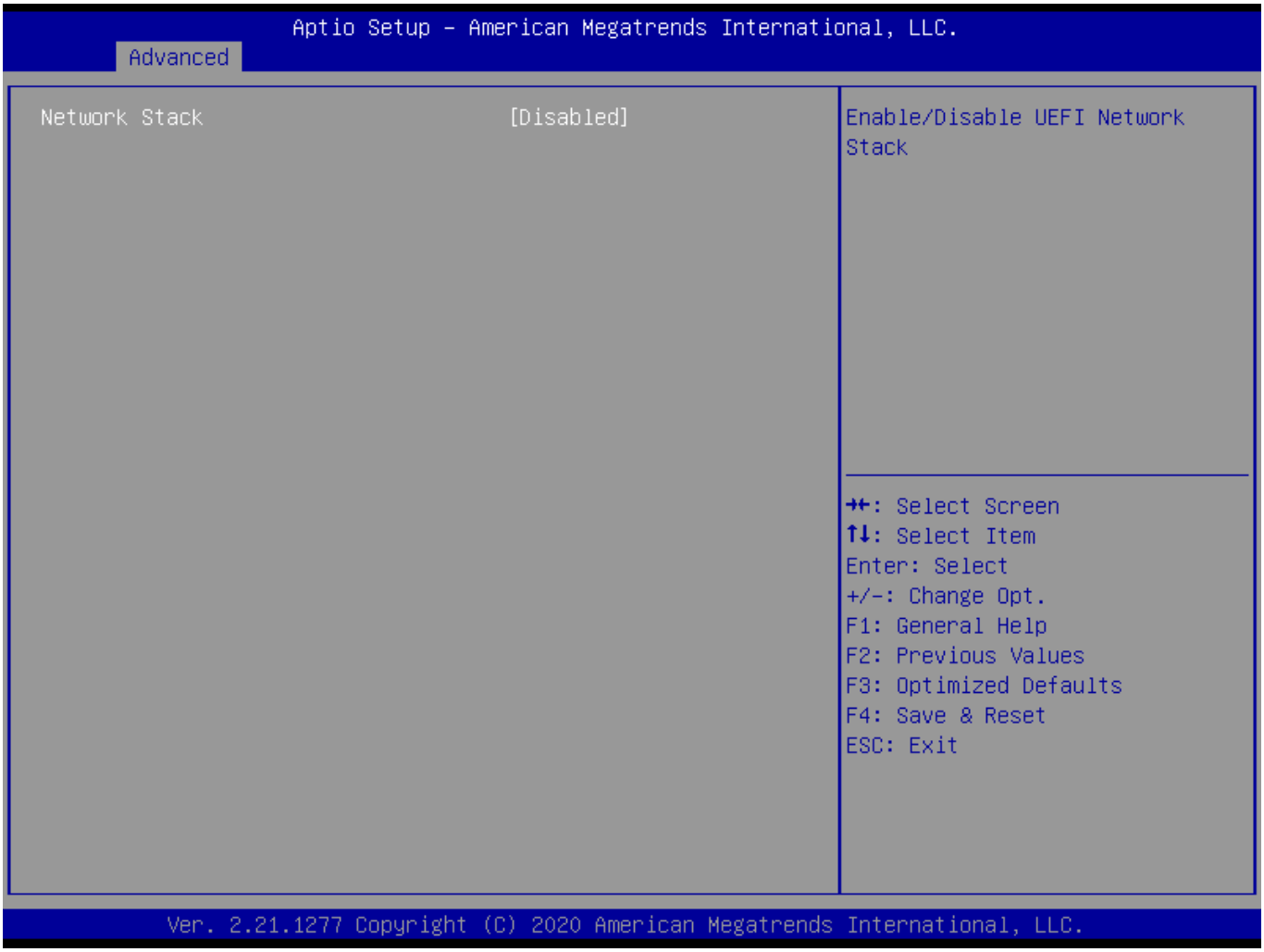
Field Name	Wake system from S5
Default Value	[Disabled]
Possible Value	Disabled Fixed Time
Help	Enable or disable System wake on alarm event, Select FixedTime, system wil wake on the hr::min::sec specified.

Field Name	Wake up hour(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0-23
Help	Select 0-23 For example enter 3 for 3am and 15 for 3pm

Field Name	Wake up minute(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0-59
Help	Select 0 – 59 for Minute

Field Name	Wake up second(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0 - 59
Help	Select 0 – 59 for Second

2.7 Network Stack Configuration

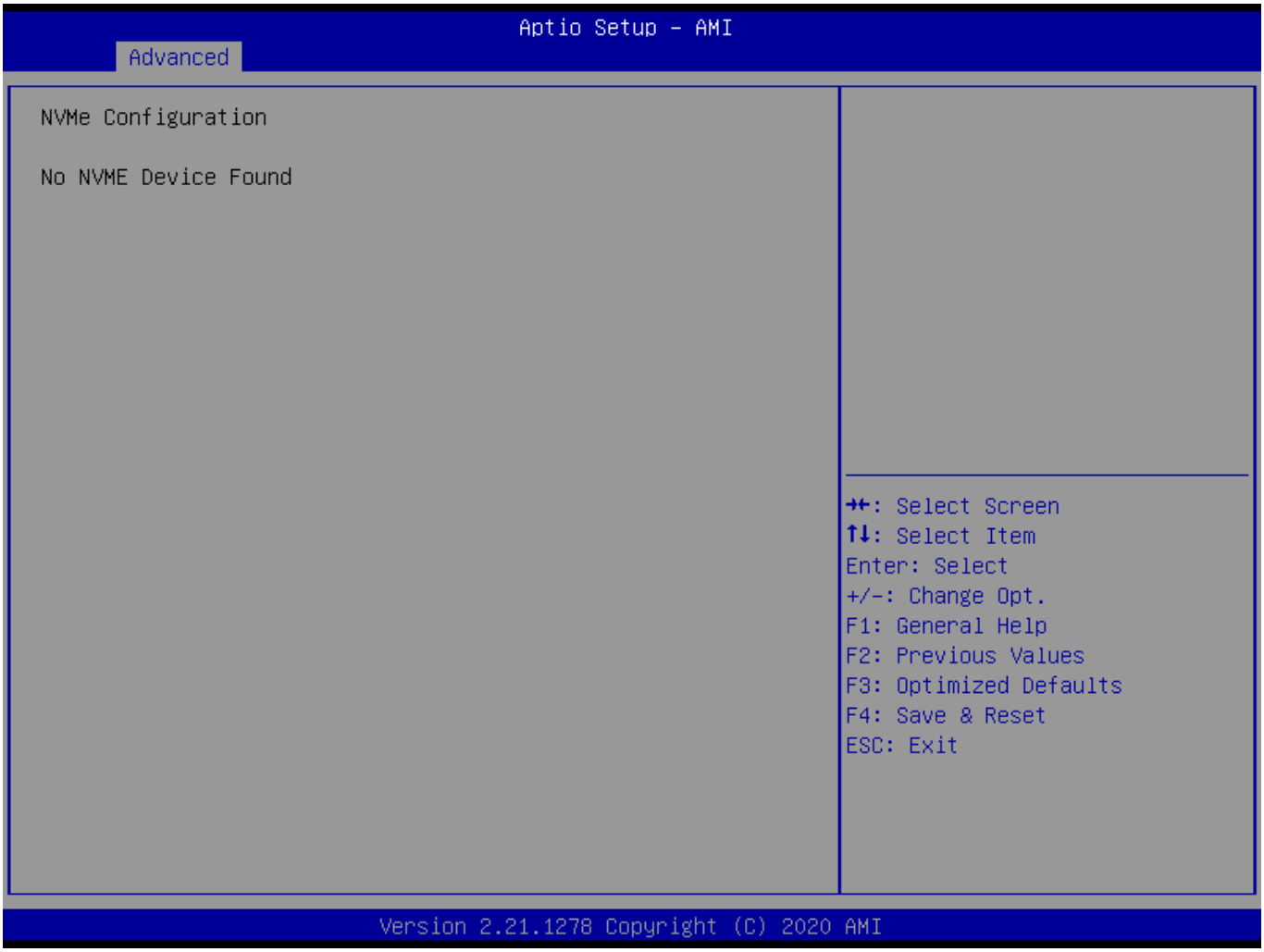


Field Name	**Network stack**
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Enable/Disable UEFI Network stack.

Field Name	**Ipv4 PXE Support** **(Available when Network stack Enabled)**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable/Disable Ipv4 PXE Boot Support. If disabled IPV4 PXE boot support will not be available.

Field Name	**Ipv6 PXE Support (Available when Network stack Enabled)**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable/Disable Ipv6 PXE Boot Support. If disabled IPV6 PXE boot support will not be available.

2.8 NVMe Configuration



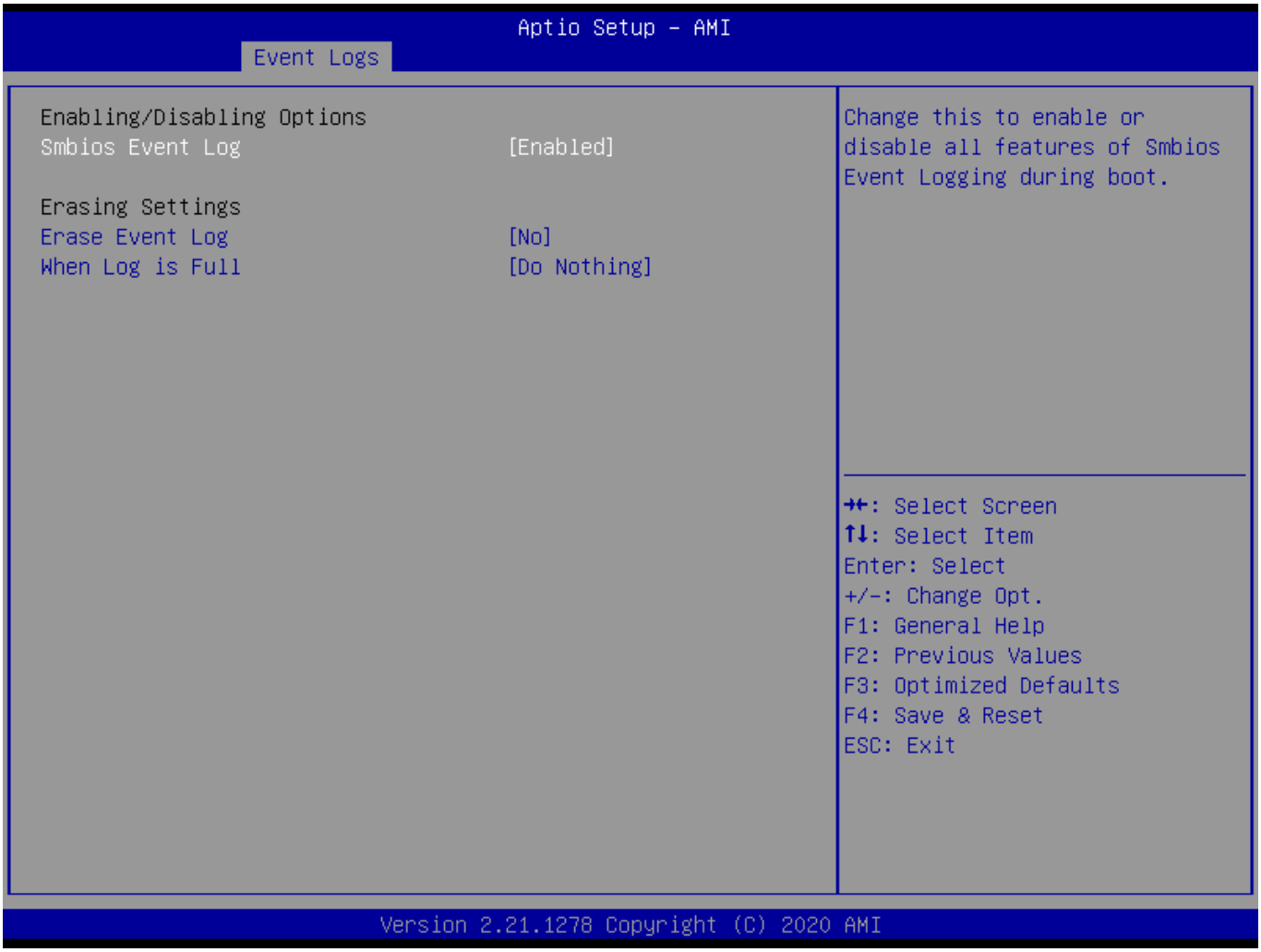
Field Name	**(Device)**
Comment	Press Enter when selected to go into the associated Sub-Menu.

3. EVENT LOGS

Field Name	Change Smbios Event Log Settings
Help	Press <Enter> to change the Smbios Event Log configuration.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	View Smbios Event Log
Help	Press <Enter> to view the Smbios Event Log records.
Comment	Press Enter when selected to go into the associated Sub-Menu.

3.1 Enabling/Disabling Options



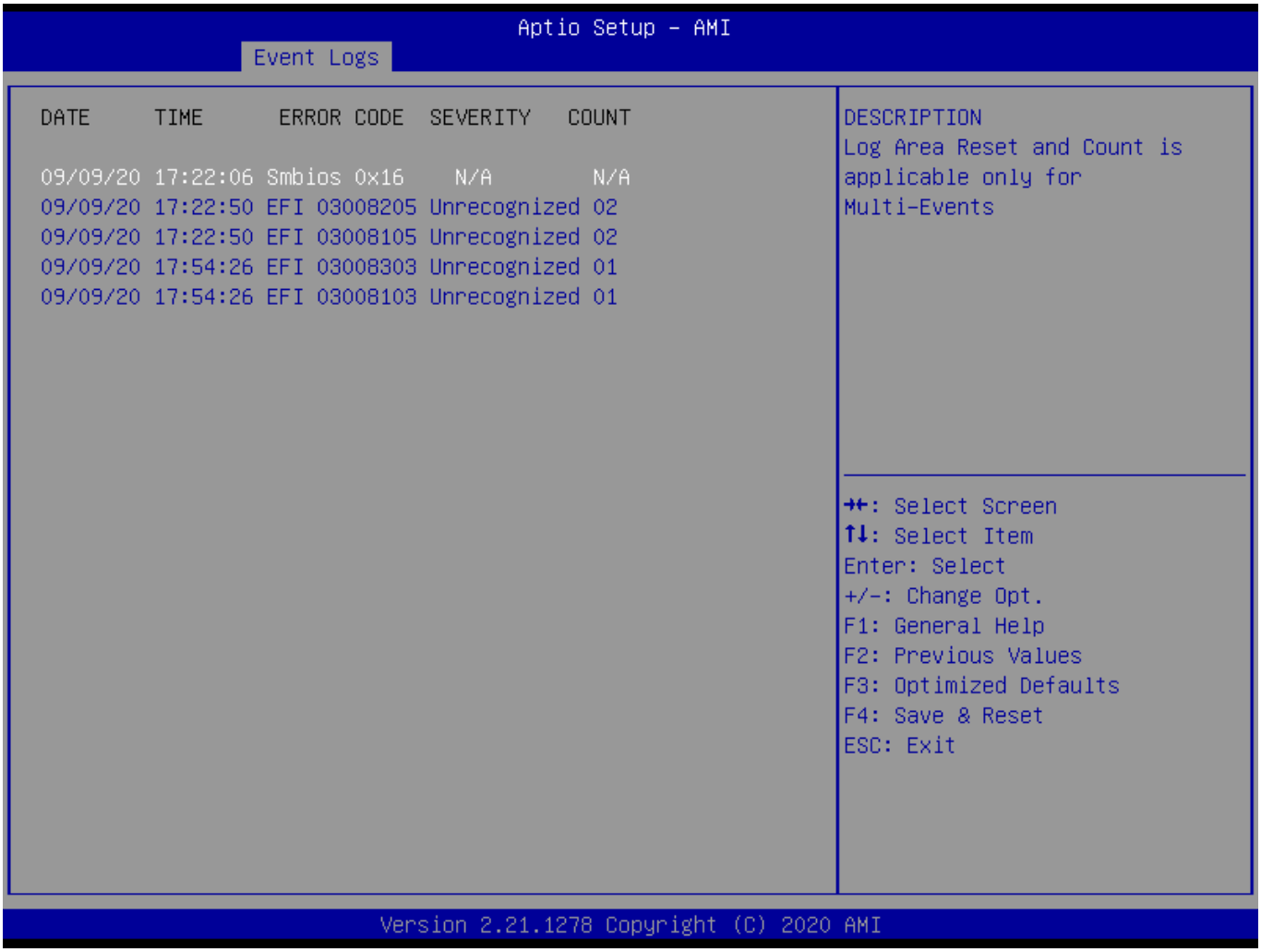
Field Name	Smbios Event Log
Default Value	[Enable]
Possible Value	Disabled Enabled
Help	Change this to enable or disable all features of Smbios Event Logging during boot.

Field Name	Erase Event Log
Default Value	[No]
Possible Value	No Yes, Next reset Yes, Every reset

Help	Choose options for erasing Smbios Event Log. Erasing is done prior t any logging activation during reset.

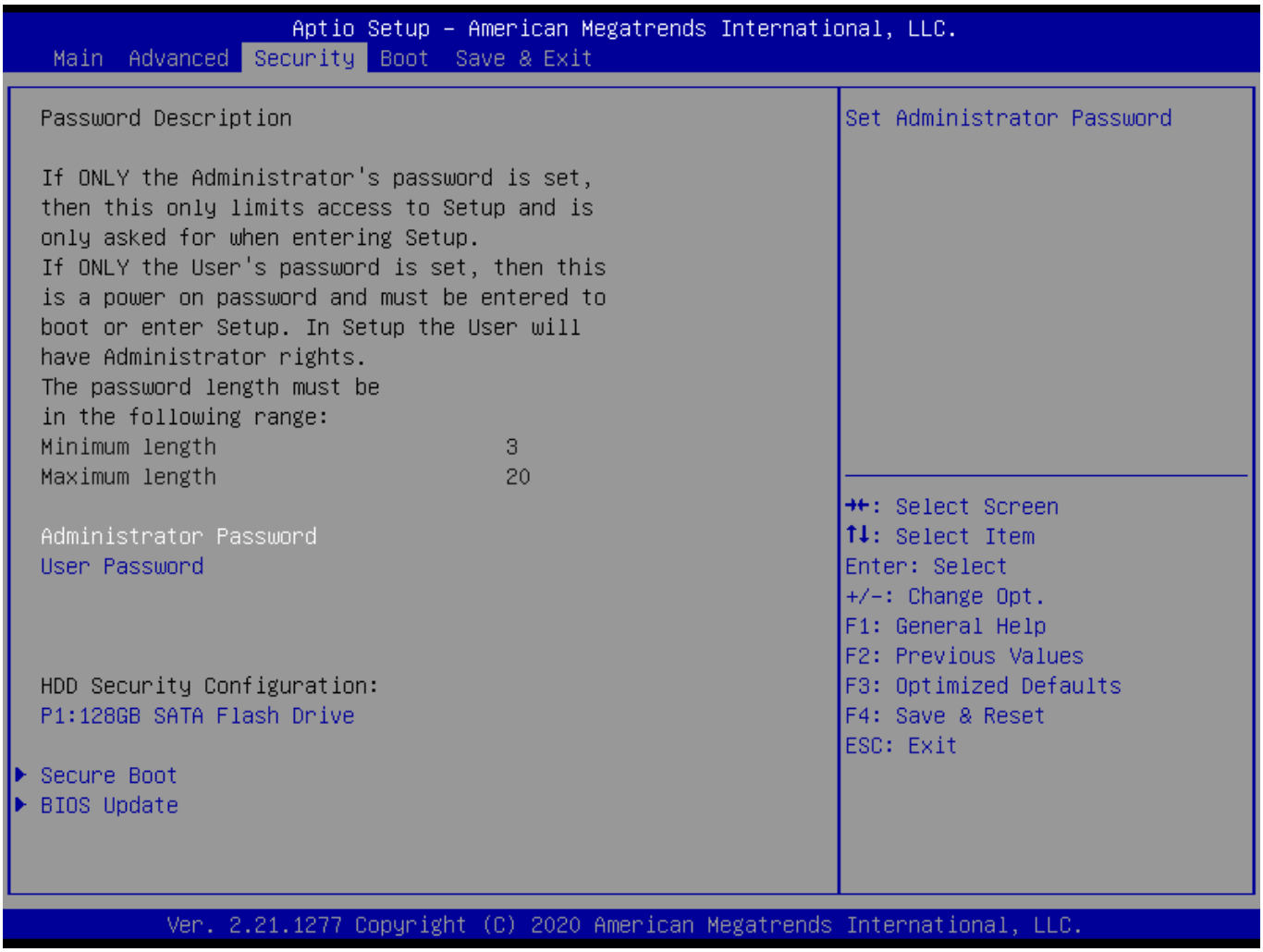
Field Name	When Log is Full
Default Value	[Do Nothing]
Possible Value	Do Nothing Erase Immediately
Help	Choose options for reactions to a full Smbios Event Log.

3.2 View Smbios Event log



Field Name	**DATE / TIME / ERROR CODE / SEVERITY / COUNT**
Default Value	MM/DD/YY HH:MM:SS Smbios 0x16 N/A N/A
Possible Value	By Events.
Help	By Events.

4. SECURITY PAGE



Field Name	**Administrator Password**
Help	Set Administrator Password

Field Name	**User Password**
Help	Set User Password.

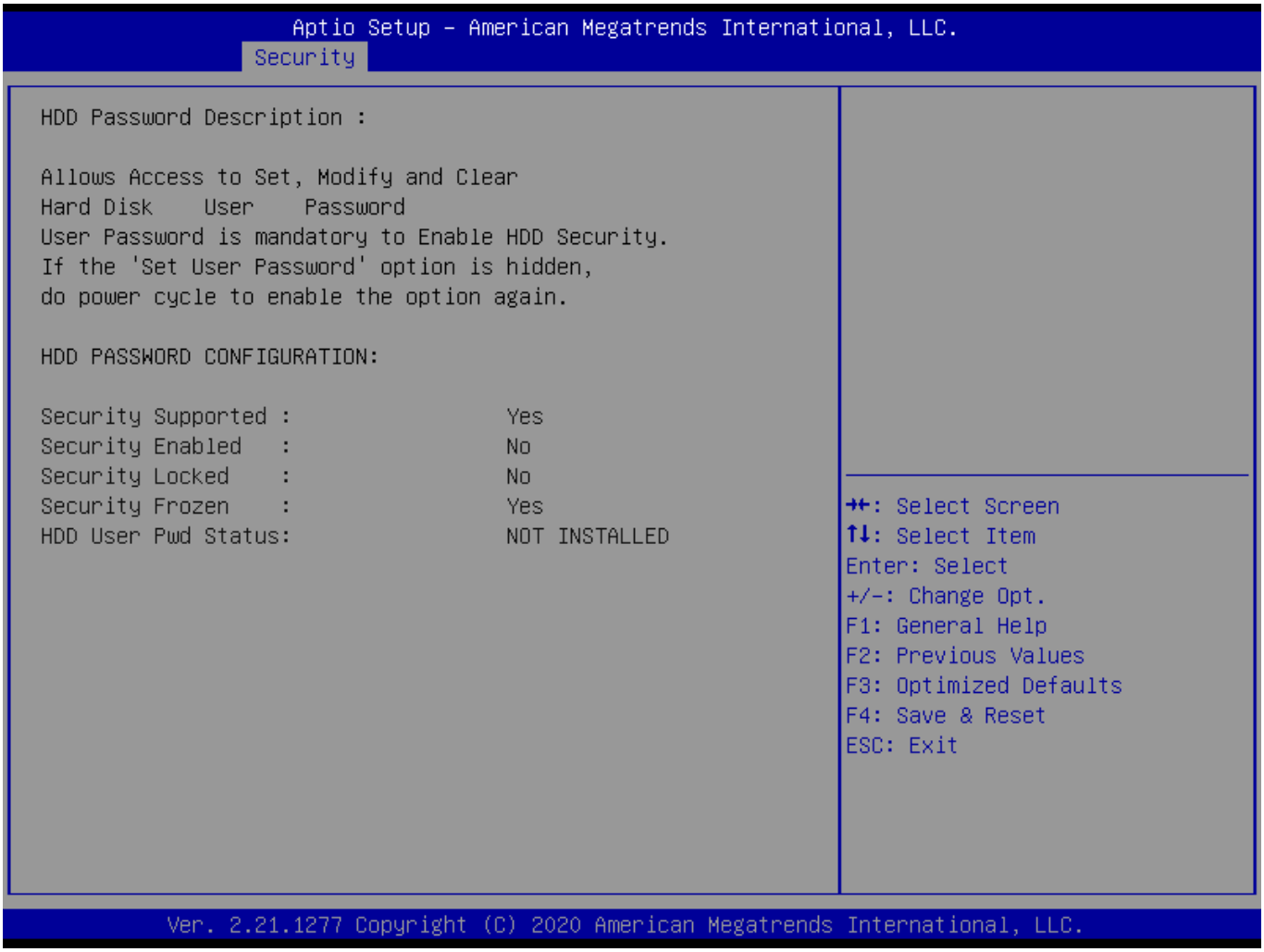
Field Name	**HDD Security drive**
Help	HDD Security Configuration for selected drive
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Secure Boot**

Help	Secure Boot Configuration
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**BIOS Update**
Help	BIOS Update support
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.1 HDD Security



Field Name	**Set User Password**
Help	Set HDD User Password. *** Advisable to Power Cycle System after Setting Hard Disk Passwords ***.Discard or Save changes option in setup does not have any impac on HDD when password is set or removed. If the 'Set HDD User Password' option is hidden, do power cycle to enable the option again

4.2 Secure Boot

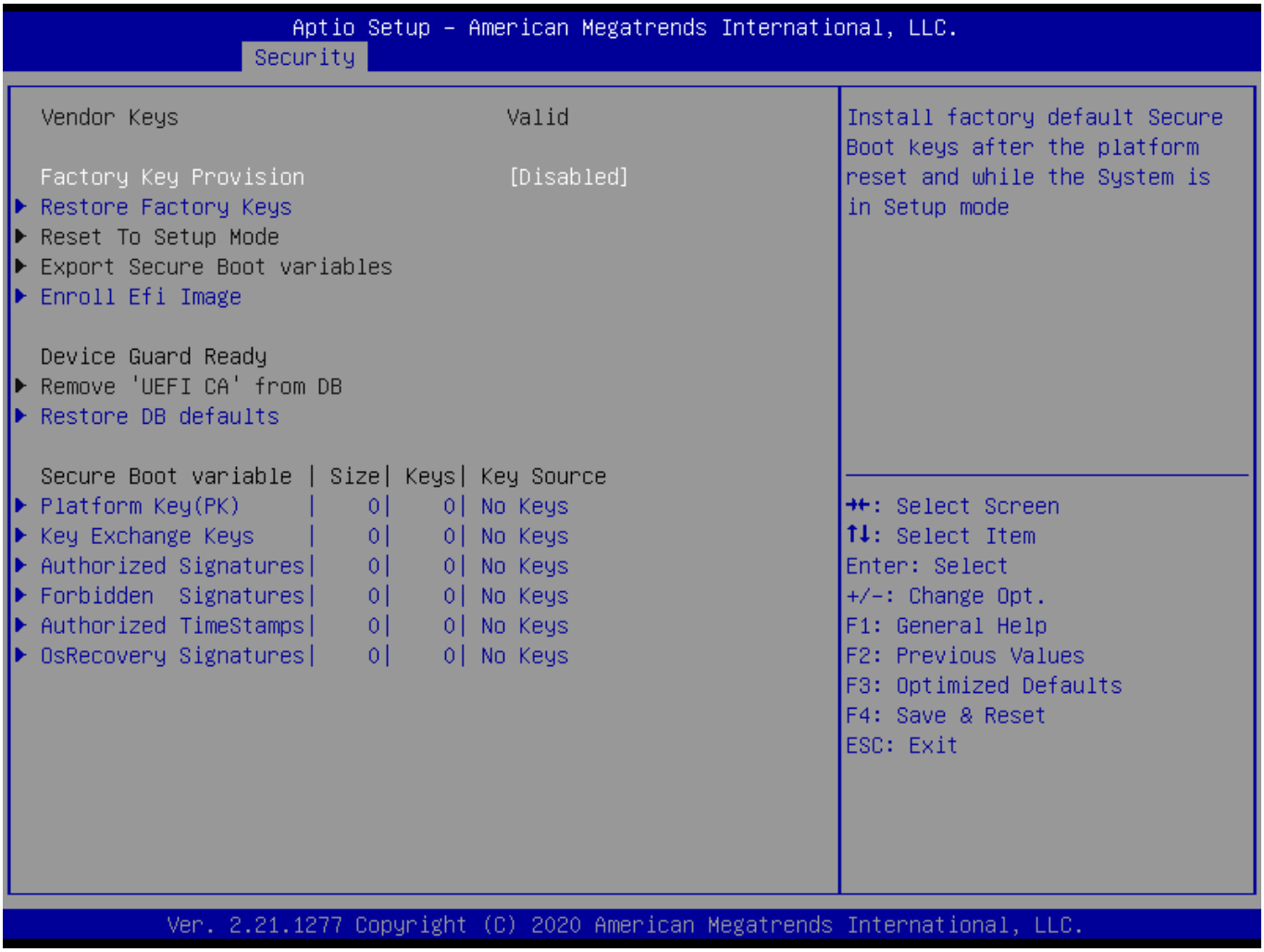
Field Name	**Secure Boot**
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Secure Boot feature is Active if Secure Boot is Enabled,Platform Key(PK) is enrolled and the System is in User mode.The mode change requires platform reset
Field Name	**Secure Boot Mode**
Default Value	[Standard]
Possible Value	Standard Custom
Help	Secure Boot mode options:Standard or Custom.In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication

Field Name	**Restore Factory Keys (Secure Boot Mode set to Custom)**
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	**Reset to Setup Mode(After Restore Factory keys Provision)**
Help	Delete all Secure Boot key databases from NVRAM

Field Name	**Key Management**
Help	Enables expert users to modify Secure Boot Policy variables without full authentication
Comment	Enables expert users to modify Secure Boot Policy variables without full authentication

4.2.1 Key Management(Secure Boot Mode set to Custom)



Field Name	**Factory Key Provision**
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Install factory default Secure Boot keys after the platform reset and while the System i in Setup mode

Field Name	**Restore Factory Keys**
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	**Reset to Setup Mode**
Help	Delete all Secure Boot key databases from NVRAM

Field Name	**Export Secure Boot variables**
Help	Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device

Field Name	**Enroll Efi Image**
Help	Allow the image to run in Secure Boot mode. Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db)

Field Name	**Remove 'UEFI CA' from DB**
Help	Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database (db)

Field Name	**Restore DB defaults**
Help	Restore DB variable to factory defaults

Field Name	**Platform Key (PK)**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu "Key Management".

Field Name	**Key Exchange Keys**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Authorized Signatures**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Forbidden Signatures**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file:

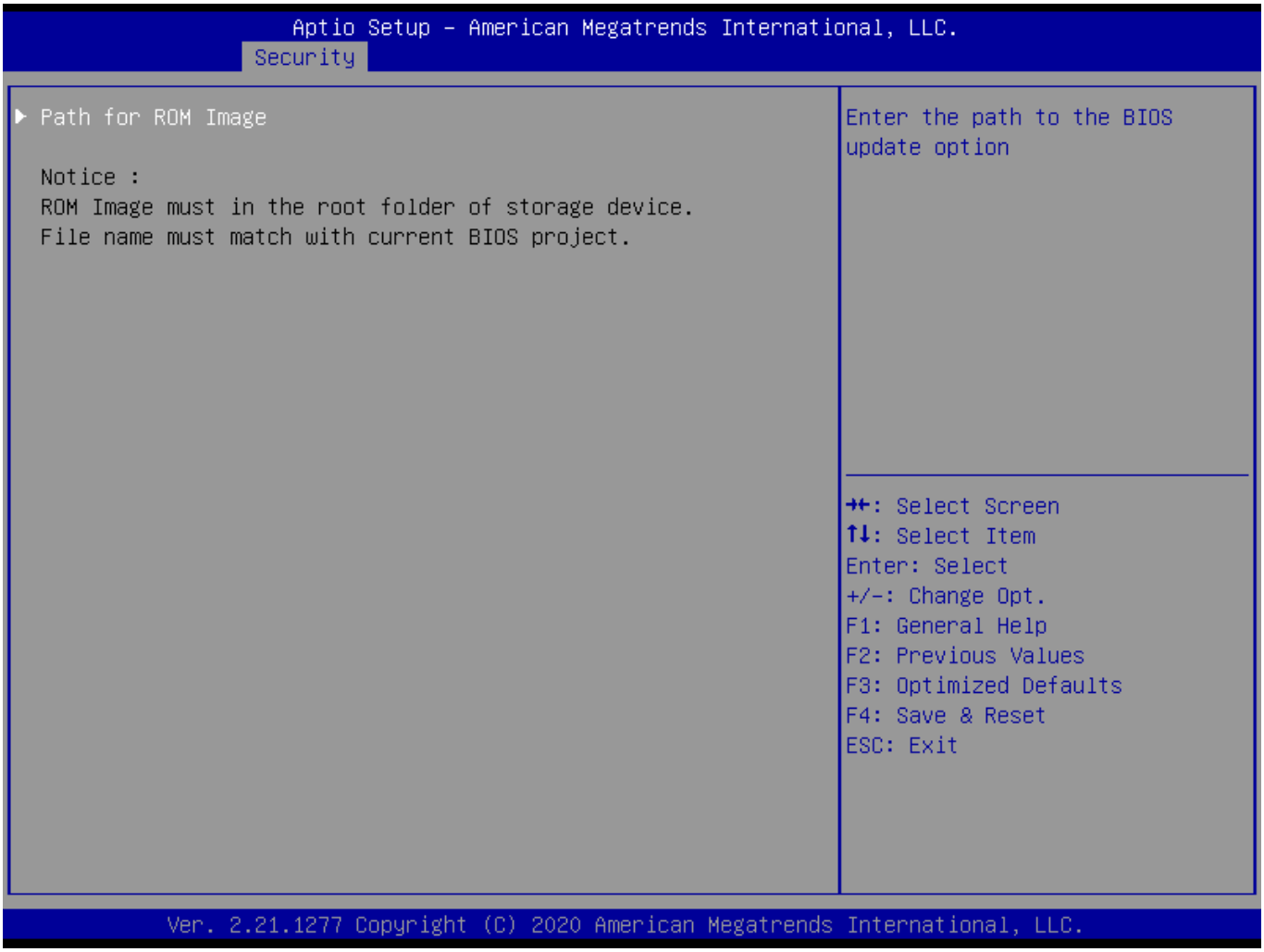
	1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Authorized TimeStamps**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**OsRecovery Signatures**
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER)

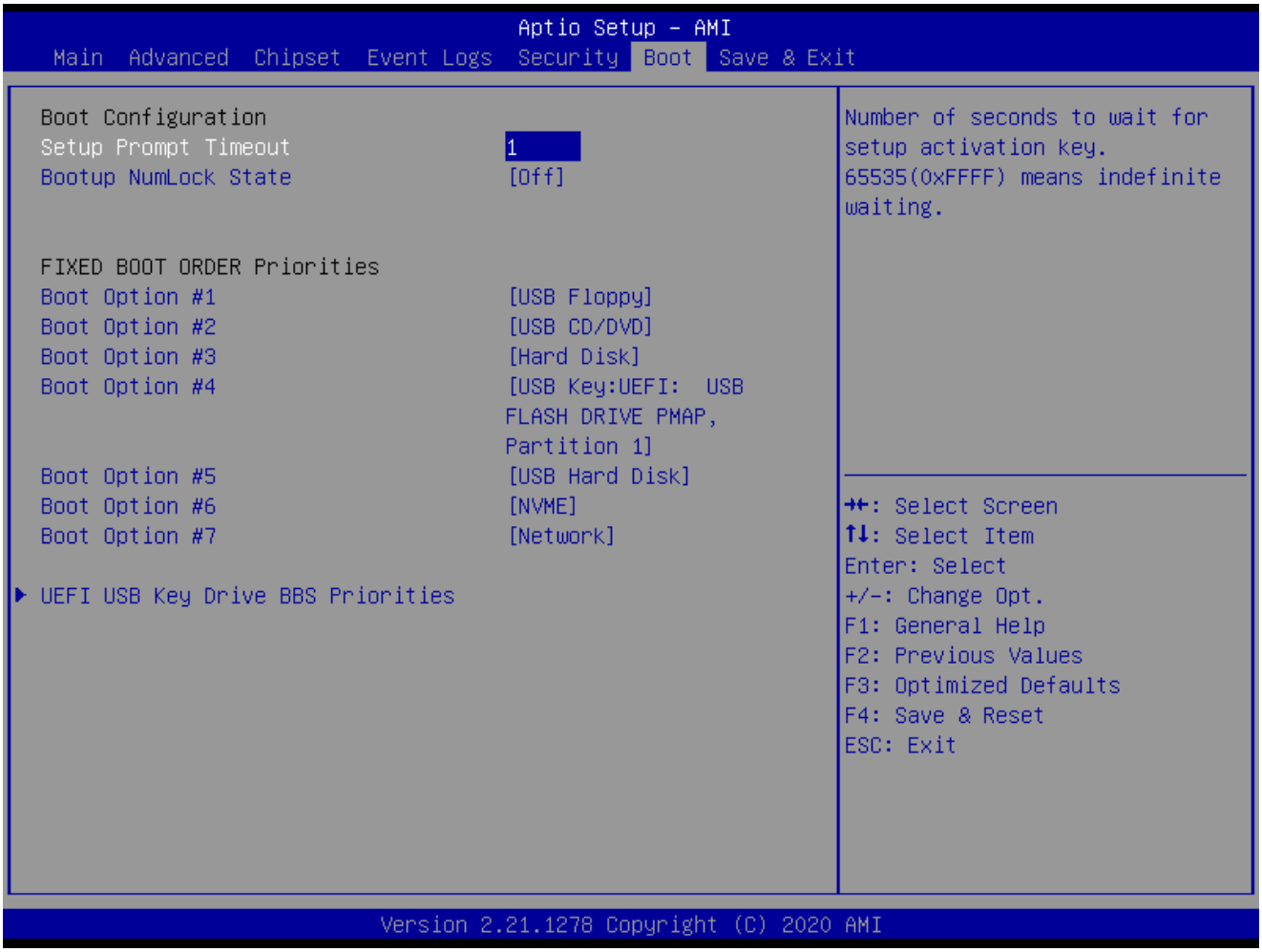
	c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

4.3 BIOS Update



Field Name	**Path for ROM Image**
Help	Enter the path to the BIOS update option

5. BOOT PAGE



Field Name	**Setup Prompt Timeout**
Default Value	1
Possible Value	1~65535
Help	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Field Name	**Bootup NumLock State**
Default Value	[Off]
Possible Value	On Off
Help	Select the keyboard NumLock state

Field Name	**Boot Option #1**
Default Value	[USB Floppy]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #2**
Default Value	[USB CD/DVD]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #3**
Default Value	[Hard Disk]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #4**
Default Value	[USB Key]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #5**
Default Value	[USB Hard Disk]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #6**
Default Value	[NVME]

Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #7**
Default Value	[Network]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , NVME, Network, Disabled
Help	Sets the system boot order

Field Name	**(UEFI) USB Floppy Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available USB Floppy Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) USB CDROM/DVD ROM Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available USB CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) Hard Disk Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

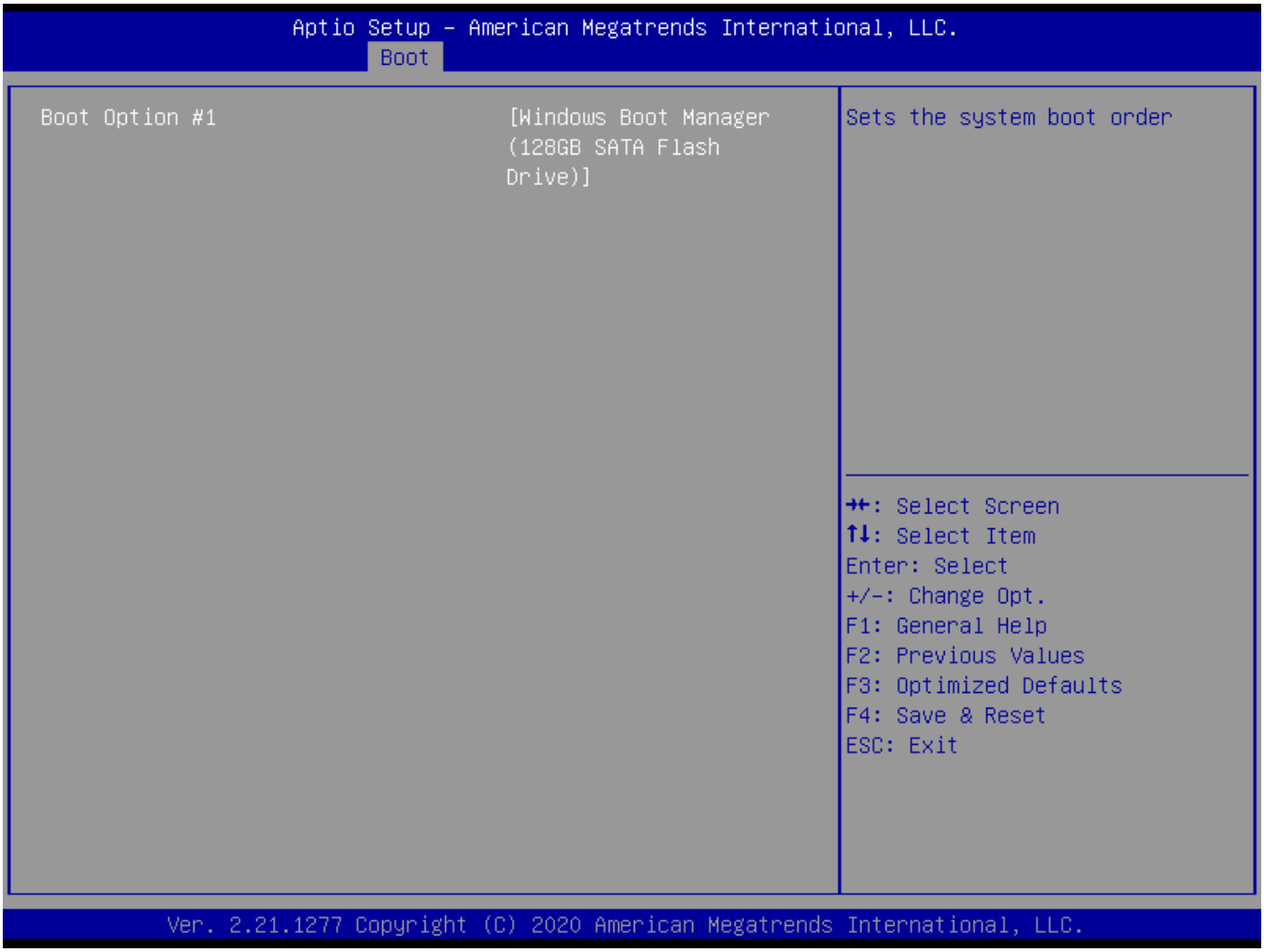
Field Name	**(UEFI) USB KEY Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available USB Key Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) USB Hard Disk Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available USB Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) NVME Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available NVME Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

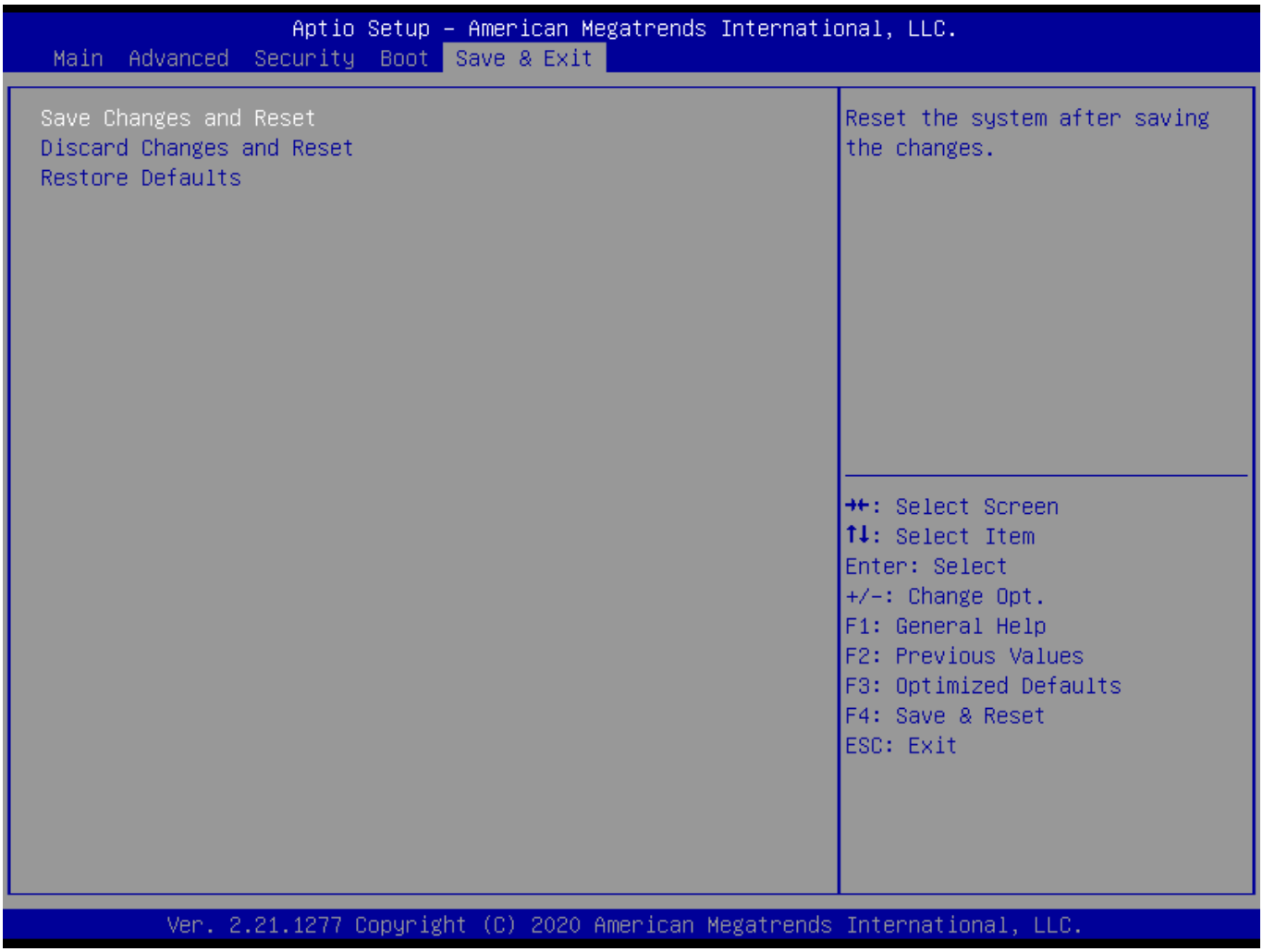
Field Name	**(UEFI) NETWORK Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available NETWORK Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

5.1 (List Boot Device Type) Drive BBS Priorities



Field Name	**Boot Option #1**
Default Value	
Possible Value	Boot Device Name 1 of this type, Disable
Help	Sets the system boot order

6. SAVE & EXIT PAGE



Field Name	**Save Changes and Reset**
Help	Reset the system after saving the changes.

Field Name	**Discard Changes and Rest**
Help	Reset system setup without saving any changes.

Field Name	**Restore Defaults**
Help	Restore/Load Default values for all the setup options.