

# MiTAC Mini-ITX Board PD14EHI

## Product Guide

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# Mini-ITX Board Features

This chapter briefly describes the features of Mini-ITX Board PD14EHI.

Below to summarizes the major features of the industrial motherboard.

## Feature Summary

**TABLE: MITAC DESKTOP BOARD PD14EHI FEATURES**

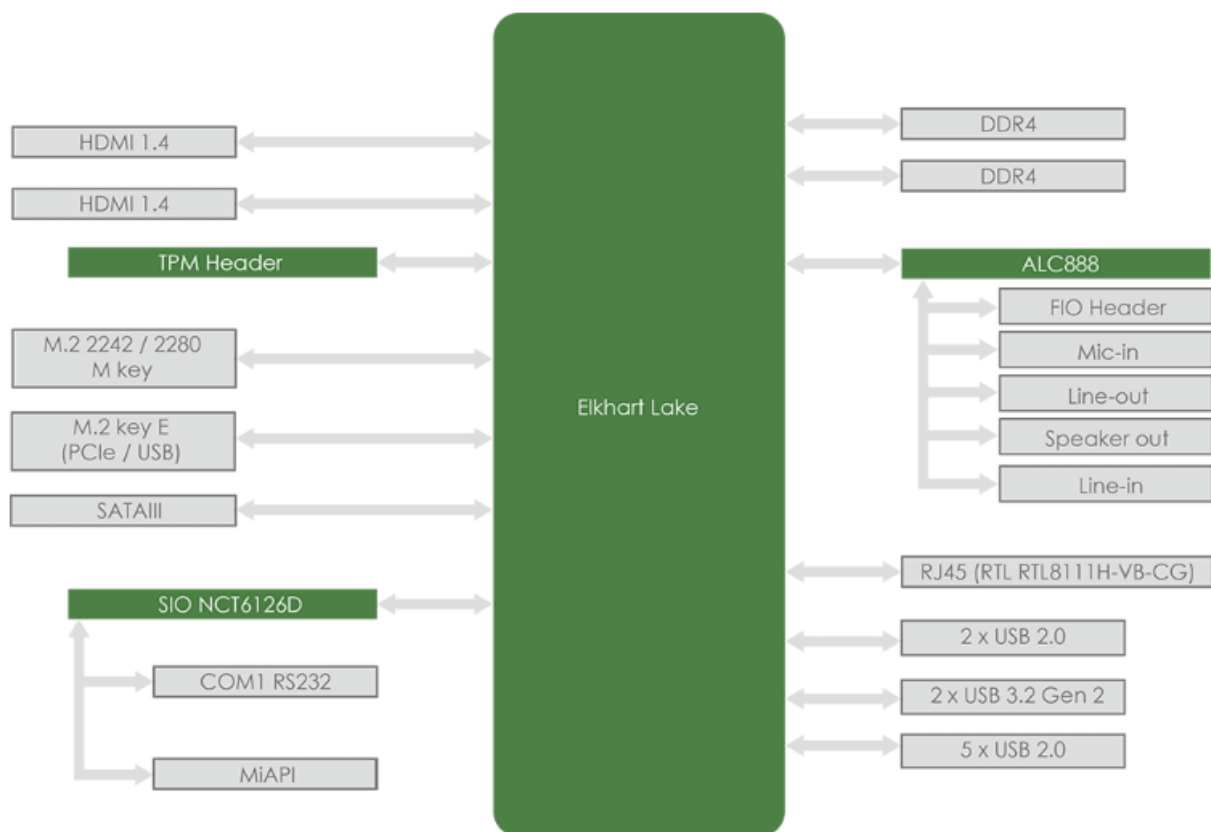
Form Factor	Mini-ITX 170.18 millimeters [6.7 inches] x 170.18 millimeters [6.7 inches]	
Processor Chipset	Intel Elkhart Lake Processor with integrated graphics	
Main Memory	• Support for dual channel DDR4 3200 SO-DIMMs	
	• Maximum support up to 32GB	
	• 260-pin DDR4 SO-DIMM	2
Audio Controller	Realtek ALC888 audio codec	
Expansion	• M.2 2242 / 2280 M key (SATAIII, PCIe X2)	1
Capability	• M.2 2230 E key (PCIeX1, USB 2.0)	1
External I/O	• HD-out	2
	• Line-in	1
	• line-out	1
	• Mic-in	1
	• USB 3.2 Gen2 back panel connectors	2
	• USB 2.0 back panel connectors	2
	• RS232	2
	• RJ45	1
Internal I/O	• USB 2.0	5
	• Stereo speaker header (w/o Amplifier)	1
	• Front Audio Header with Mic-in and Line-out	1
	• SATA 3.0 Gb/s port	1
	• MiAPI header (Option with Parallel port header)	1
	• 4-pin CPU fan header	1
	• 4-pin system fan header	1
• 24-pin ATX Power Connector	1	

S I/O Controller	NCT6126D
LAN Support	1 x Realtek® RTL8111H Giga LAN
Power Requirement	ATX 24-pin
Environment	Operating Temperature: 0°C to +60°C Storage Temperature: -40°C to +85°C Operating Humidity: 10% ~ 95% R/H (Non-condensing)
OS SUPPORT	Windows® 11 64bit, / Windows® 10 IoT LTSC 64bit (LTSC 2021) / Ubuntu 22.04 / Linux (support by request)
Certification	CE, FCC

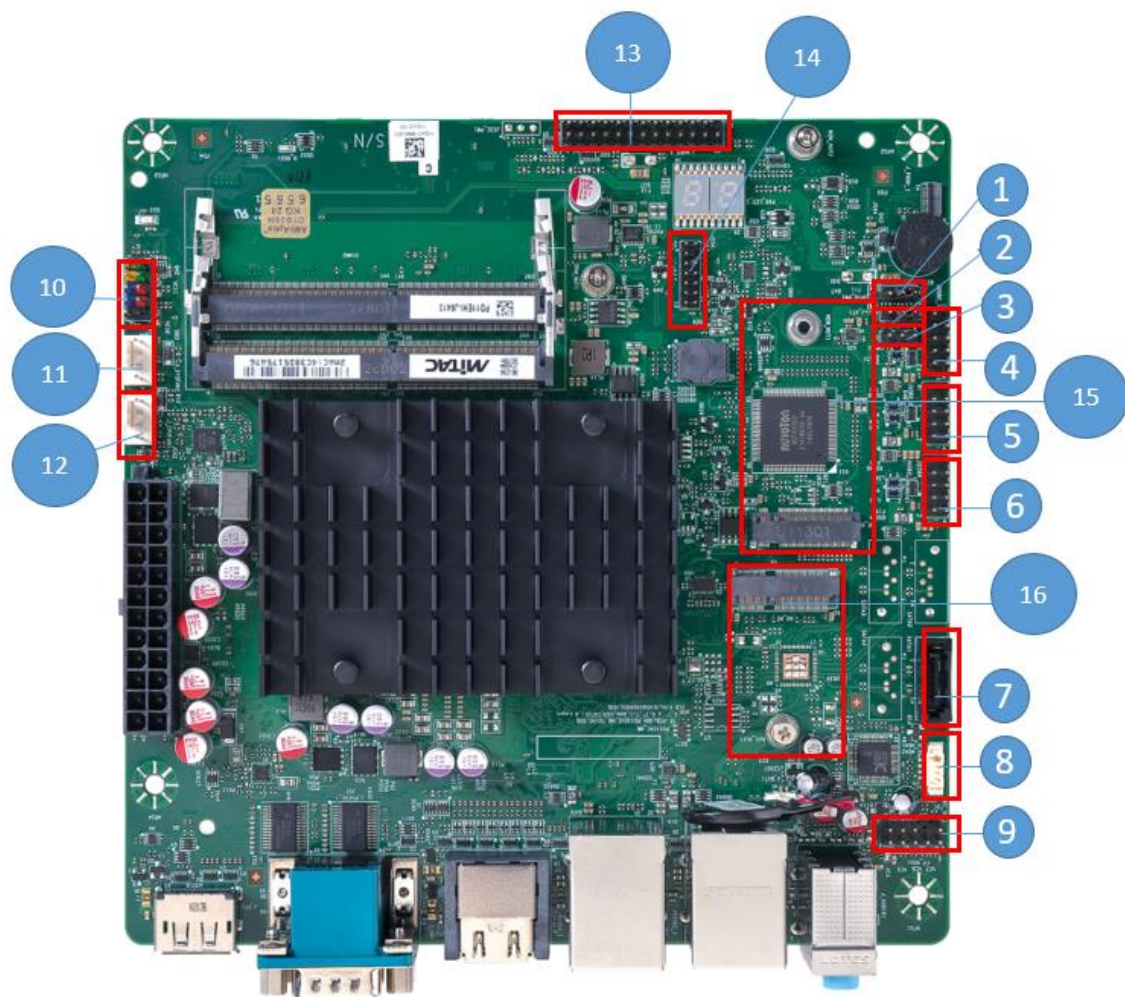
# 1. Hardware Specification

## 1.1 HW Design

### 1.1.1 Block Diagram

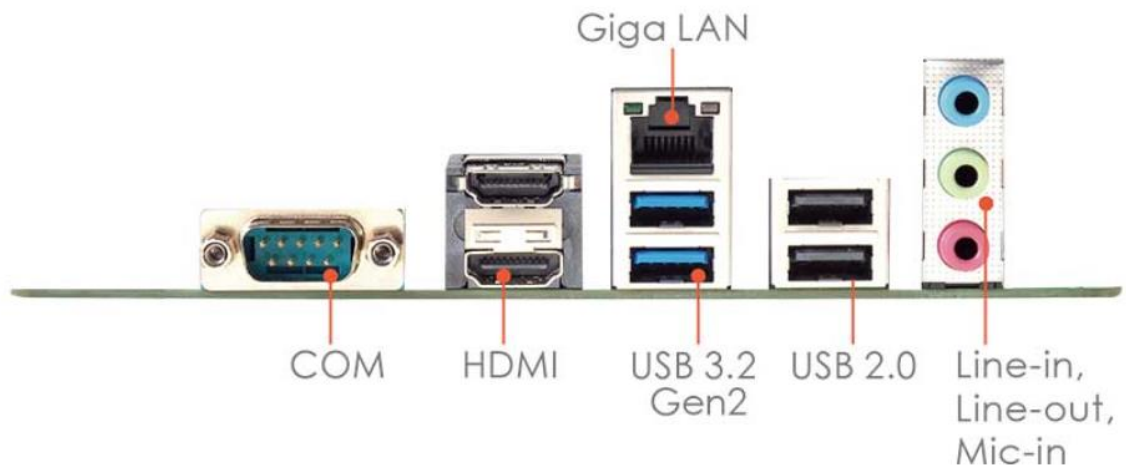


## 1.1.2 Placement



1	MiAPI Digital I/O power setting.	9	Front Audio Header
2	AT/ATX Mode setting	10	Front I/O Header
3	CMOS Clear	11	System FAN Header
4	Dual USB2.0 Header	12	CPU FAN Header
5	Dual USB2.0 Header	13	MiAPI Header
6	Dual USB2.0 Header	14	TPM Header
7	SATAIII	15	M.2 M Key
8	Speaker header	16	M.2 E Key

### 1.1.3 Placement – Rear IO



# 2. Product Specification

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## 2.1 Jumper Setting

### 1. JPIO\_PW1

MiAPI Digital I/O power setting.



Default: Set JP on pin 1-2 for 3.3V support



Set JP on pin 2-3 for 5V support

### 2. J\_AT1

AT/ATX Mode setting.



Default: Set JP on pin 1-2: ATX Mode



Set JP on pin2-3: AT Mode

### 3. J\_CMOS1

CMOS Clear



Pins 1&2: jumper position for CMOS Reset

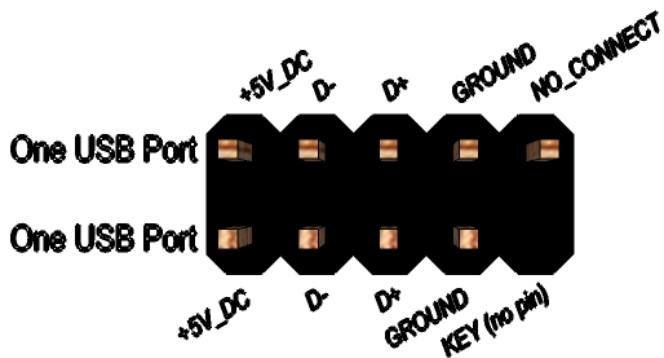


Default Set JP on pin 2-3: no

## 2.2 Connector Pinout

### 4. JUSB2\_3

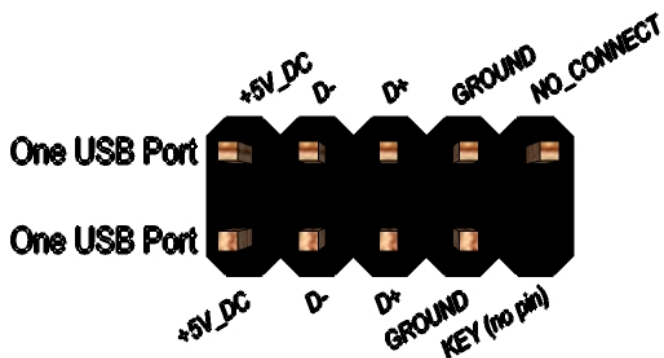
Dual USB2.0 Header



Pin	Signal	Pin	Signal
1	N/A	2	+5V DC
3	N/A	4	Data (negative)
5	N/A	6	Data (positive)
7	N/A	8	Ground
9	Key (no pin)	10	No Connect

### 5. JUSB2\_2

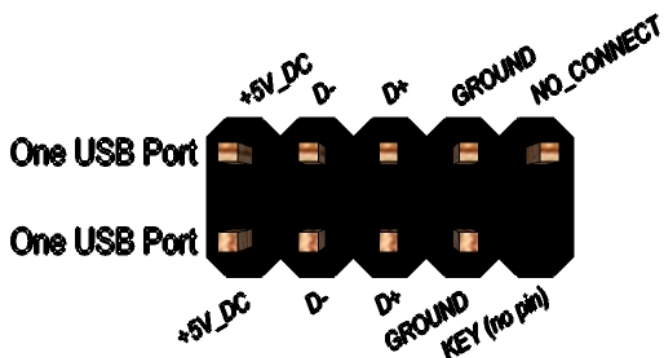
Dual USB2.0 Header



Pin	Signal	Pin	Signal
1	+5V DC	2	+5V DC
3	Data (negative)	4	Data (negative)
5	Data (positive)	6	Data (positive)
7	Ground	8	Ground
9	Key (no pin)	10	No Connect

### 6. JUSB2\_1

Dual USB2.0 Header

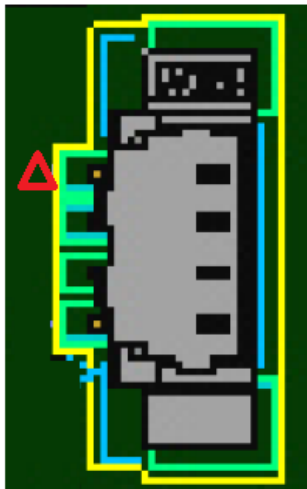


Pin	Signal	Pin	Signal
1	+5V DC	2	+5V DC
3	Data (negative)	4	Data (negative)
5	Data (positive)	6	Data (positive)
7	Ground	8	Ground
9	Key (no pin)	10	No Connect



## 8. INT\_SPK1

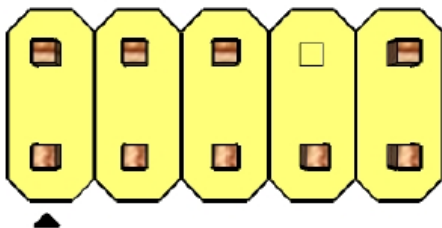
Speaker header



Pin	Signal
1	+12V DC
2	SPK-L
3	SPK-R
4	GND

## 9. FP\_HDA1

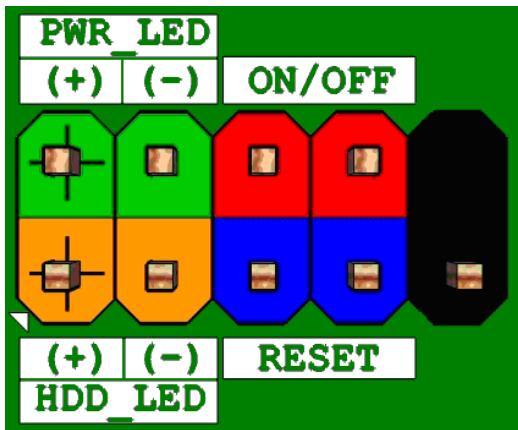
Front Audio Header



Pin	Signal name	Description
1	MIC	Front panel microphone input signal (biased when supporting stereo microphone)
2	AUD_GND	Ground used by analog audio circuits
3	MIC_BIAS	Microphone power / additional MIC input for stereo microphone support
4	PRESENCE#	Active low signal that signals BIOS that an Intel® HD Audio dongle is connected to the analog header. PRESENCE# = 0 when an Intel® HD Audio dongle is connected.
5	FP_OUT_R	Right channel audio signal to front panel (headphone drive capable)
6	AUD_GND	Ground used by analog audio circuits
7	RESERVED	Reserved
8	KEY	No pin
9	FP_OUT_L	Left channel audio signal to front panel (headphone drive capable)
10	AUD_GND	Ground used by analog audio circuits

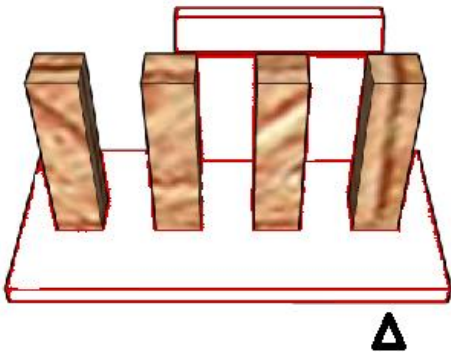
### 10. FIO1

Front I/O Header



### 11. J\_CPUFAN1

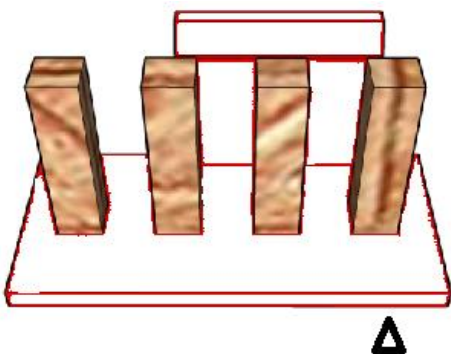
CPU FAN Header



Pin	Signal
1	GND
2	+12V DC
3	FAN TACH
4	FAN CTRL

### 12. J\_SYSFAN1

System FAN Header



Pin	Signal
1	GND
2	+12V DC
3	FAN TACH
4	FAN CTRL

### 13. J\_MAPI\_1

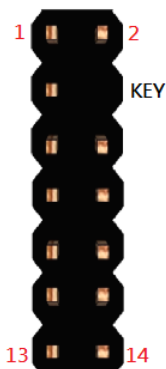
MiAPI Digital I/O Header



1		2	MiAPI_VCC
3	DIO0	4	Power Button Even
5	DIO1	6	UART-TX
7	DIO2	8	UART-RX
9	DIO3	10	MiAPI_5VSB
11	DIO4	12	WDT
13	DIO5	14	GND
15	DIO6	16	I2C_SDA
17	DIO7	18	I2C_CLK
19		20	I2C_INT
21		22	I2C_RST
23	SMB_DAT	24	GND
25	SMB_CLK		

### 14. J\_TPM1

For eSPI TPM Module



1	3VSB	2	CS1
3	MISO	KEY	
5	MOSI	6	RST_N
7	IRQ	8	GND
9	CS0	10	CLK
11		12	DET_N
13	WP	14	3VSB

**PD14EHI**

**BIOS SETUP**

**SPEC**

# 1 Main Page

Aptio Setup - AMI

Main | Advanced | Event Logs | Security | Boot | Save & Exit

<p>BIOS Information</p> <p>BIOS Vendor                    American Megatrends</p> <p>Core Version                    5.19</p> <p>Compliancy                    UEFI 2.7; PI 1.6</p> <p>BIOS Version                    D8690X03</p> <p>Build Date                    10/20/2022</p> <p>Compute Die Information</p> <p>Name                            ElkhartLake ULX</p> <p>Type                            Intel(R) Celeron(R)</p> <p>                                  N6210 @ 1.20GHz</p> <p>Microcode Revision            16</p> <p>Total Memory                    4096 MB</p> <p>Memory Data Rate               2400 MHz</p> <p>ME FW Version                   15.40.16.2485</p> <p>System Date                    [Sun 03/31/2024]</p> <p>System Time                    [08:55:37]</p>	<p>Set the Date. Use Tab to switch between Date elements. Default Ranges: Year: 2005-2099 Months: 1-12 Days: Dependent on month Range of Years may vary.</p> <hr/> <p>↔: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Reset ESC: Exit</p>
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Field Name	<b>BIOS Vender</b>
Default Value	American Megatrends
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Core Version</b>
Default Value	5.19
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Compliancy</b>
Default Value	UEFI 2.7 ; PI 1.6
Comment	This field is not selectable. There is no help text associated with it.

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

Field Name	<b>Build Date</b>
Default Value	Display build date of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Processor Information</b>
Value	Display the installed CPU brand.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Microcode Version</b>
Value	Display the CPU microcode revision.

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

Field Name	<b>Memory Frequency</b>
Value	Display the installed memory frequency.
Comment	This field is not selectable. There is no help text associated with it.

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

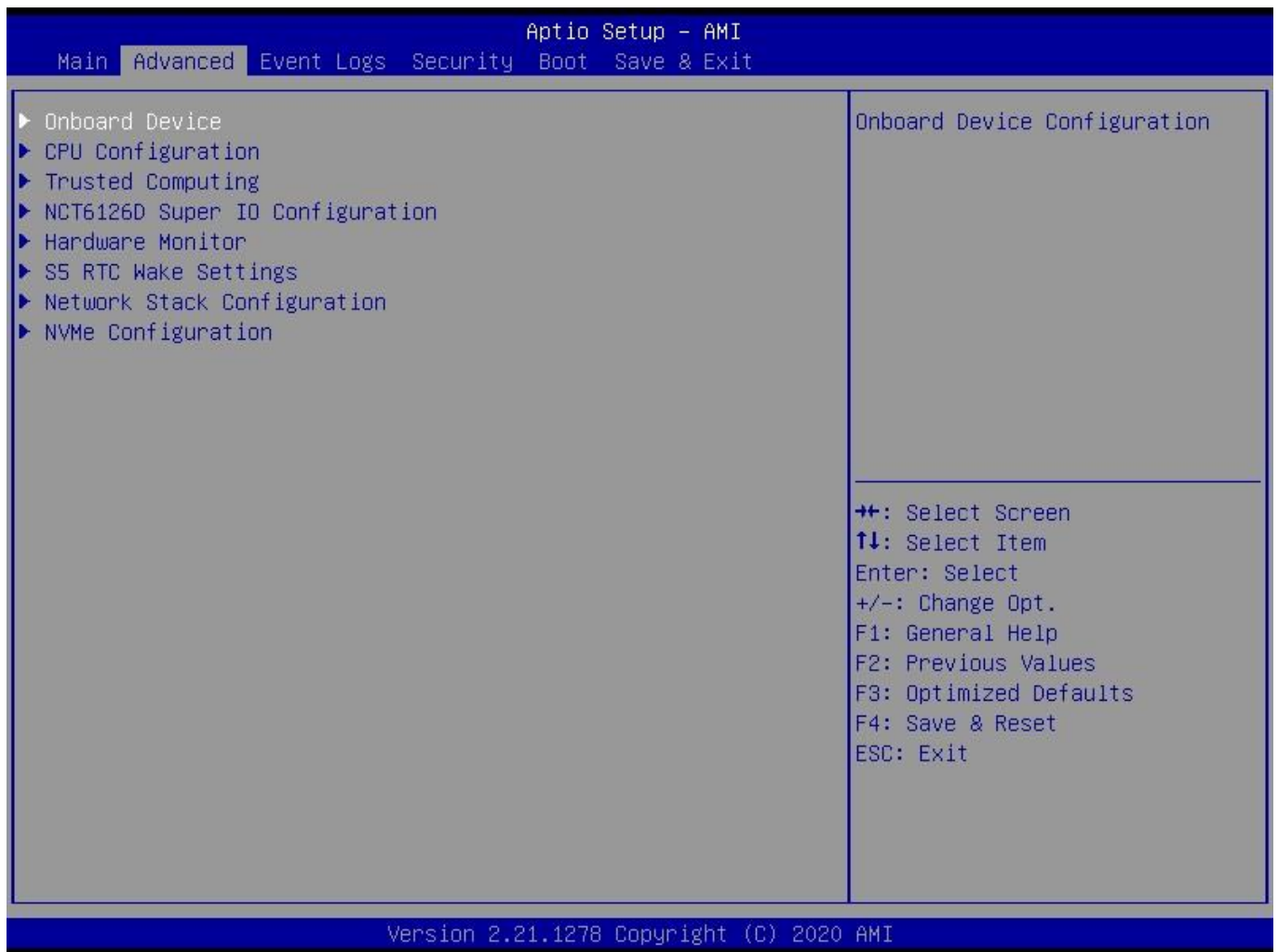
  

Field Name	<b>System Date</b>
Default Value	[Www mm/dd/yyyy]
Possible Value	Www : Mon/Tue/Wed/Thu/Fri/Sat/Sun mm : 1-12 dd : 1-31 yyyy : 2005-2099
Help	Set the Date. Use Tab to switch between Date elements. Default Ranges: Year: 2005-2099 Months: 1-12 Days: Dependent on month Range of Years may vary.

Field Name	<b>System Time</b>
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	<b>Onboard Device</b>
Help	Onboard Device Configuration.
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

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

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

Field Name	<b>Hardware Monitor</b>
Help	Monitor hardware status
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

Field Name	<b>Network Stack Configuration</b>
Help	Network Stack Settings.

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



## Onboard Device

Aptio Setup - AMI

Advanced

State After G3 DVMT Pre-Allocated DVMT Total Gfx Mem Wake on LAN Enable HD Audio ME Update TPM Device Selection	[S5 State] [64M] [256M] [Enabled] [Enabled] [Disabled] [PTT]	Specify what state to go to when power is re-applied after a power failure (G3 state).
		⇐: Select Screen ⇕: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit

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Field Name	<b>State After G3</b>
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	<b>DVMT Pre-Allocated</b>
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	<b>DVMT Total Gfx Mem</b>
Default Value	[256M]
Possible Value	128M 256M

	MAX
Help	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.

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

Field Name	<b>HD Audio</b>
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	<b>ME Update</b>
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.

Field Name	<b>TPM Device Selection</b>
Default Value	[PTT]
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.

## CPU Configuration

Aptio Setup - AMI

Advanced

CPU Configuration		When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Type	Genuine Intel(R) CPU 0000 @ 1.80GHz	
ID	0x90661	
Speed	1800 MHz	
L1 Data Cache	32 KB x 4	
L1 Instruction Cache	32 KB x 4	
L2 Cache	1536 KB x 4	
L3 Cache	4 MB	
L4 Cache	N/A	
VMX	Supported	
SMX/TXT	Not Supported	
Intel (VMX) Virtualization Technology	[Enabled]	⇄: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit

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

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

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

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

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

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

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

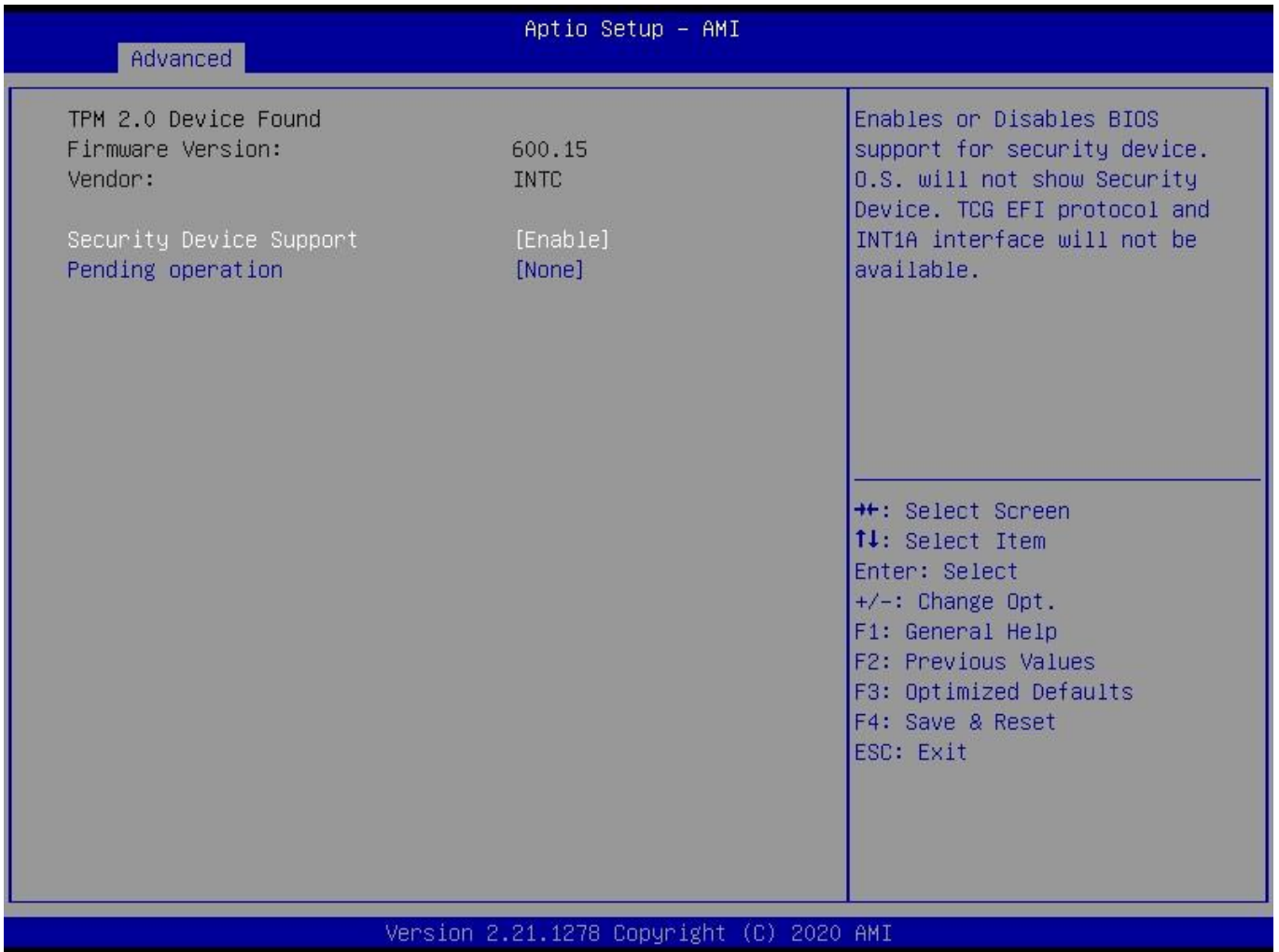
Field Name	<b>L4 Cache</b>
Default Value	L4 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

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

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

Field Name	<b>Intel (VMX) Virtualization Technology</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

## 2.3 Trusted Computing



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

Field Name	<b>Vender</b>
Default Value	TPM module vender name.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Security Device Support</b>
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	<b>Pending operation</b>
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.



# NCT6126D Super IO Configuration



Field Name	<b>Serial Port 1 Configuration</b>
Help	Set Parameters of Serial Port 1 (COMA)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Serial Port 2 Configuration(Option)</b>
Help	Set Parameters of Serial Port 2 (COMB)
Comment	Press Enter when selected to go into the associated Sub-Menu.

## Serial Port 1 Configuration(option)

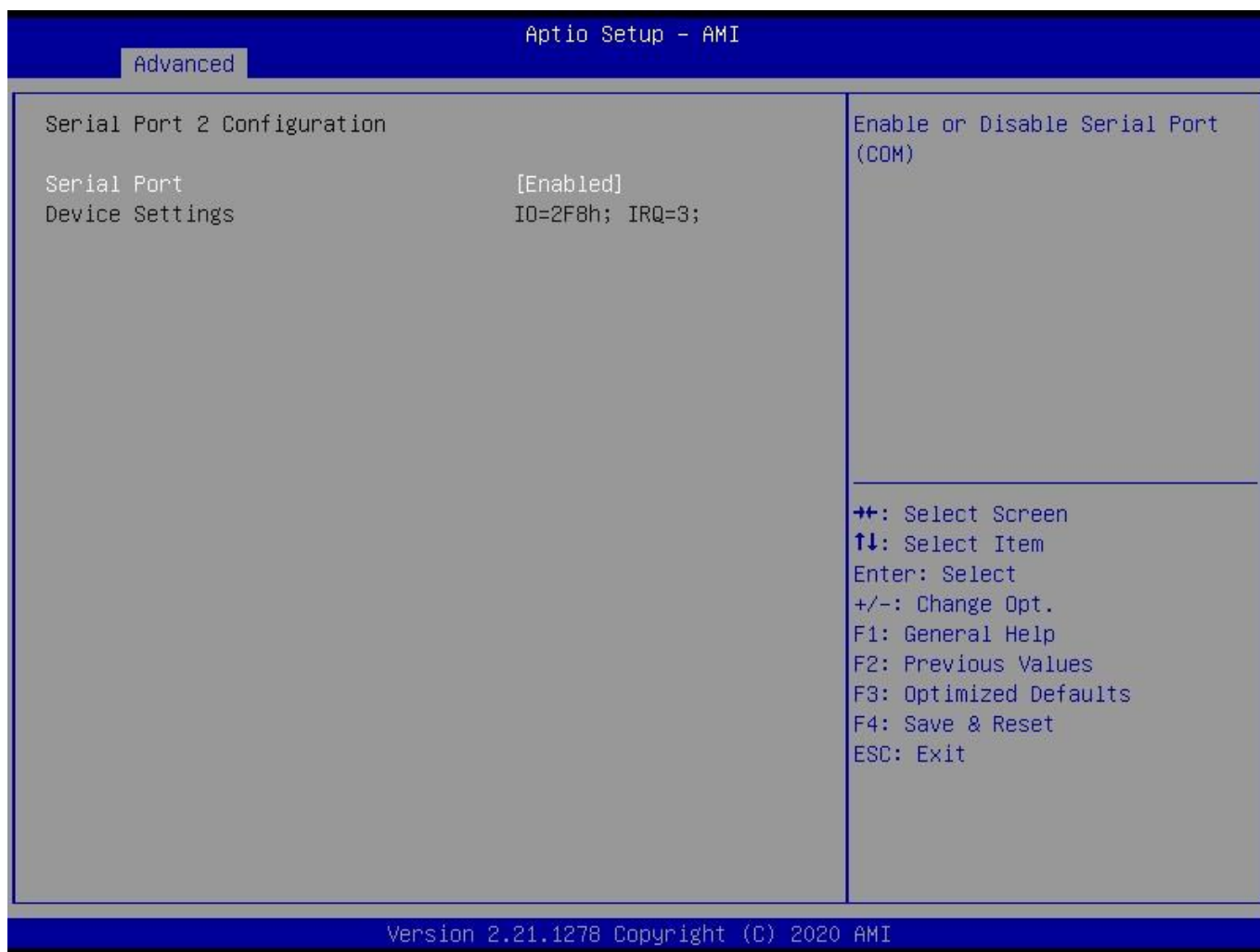


Field Name	<b>Serial Port</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

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



## Serial Port 2 Configuration(option)



Field Name	<b>Serial Port</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

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

# Hardware Monitor

Aptio Setup - AMI
Advanced

<p>PC Health Status</p> <p>Hardware Monitor Alert Enable      [Disabled]</p> <p>CPU temperature                        : +44 ℃</p> <p>VR Temperature                         : +33 ℃</p> <p>System Temperature                    : +29 ℃</p> <p>System Fan Speed                       : N/A</p> <p>CPU Fan Speed                          : N/A</p> <p>5VSB                                      : +5.088 V</p> <p>VCC                                        : +5.048 V</p> <p>12V                                        : +12.384 V</p> <p>CPUV CORE                              : +1.624 V</p> <p>VCCRTC                                  : +3.120 V</p> <p>3VSB                                      : +3.296 V</p> <p>VCC3                                      : +3.360 V</p>	<p>If Enabled, POST monitors voltage, temperature, and fan status. If these values are out of range, BIOS display warning message.</p> <hr/> <p>←→: Select Screen              ↑↓: Select Item              Enter: Select              +/-: Change Opt.              F1: General Help              F2: Previous Values              F3: Optimized Defaults              F4: Save &amp; Reset              ESC: Exit</p>
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Type	Range
CPU Temperature	Depend on CPU
VR Temperature	-20 ~ 120 °C
System Temperature	-20 ~ 120 °C
System 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.
CPU 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.
5VSB	4.75V~5.25V (Pin 100 VIN0 => Vref = 1V)
VCC	4.75V~5.25V (Pin 99 VIN1 => Vref = 1V)
12V	11.4V~12.6V (Pin 98 VIN2 => Vref = 1V)
CPUV CORE	0V~2V (Pin 101 CPUCORE)
VCCRTC	2V~3.465V (Pin 74 VBAT)
3VSB	3.135V~3.465V (Pin 97 AVSB)
VCC3	3.135V~3.465V(Pin 12 3VCC)

Field Name	Hardware Monitor Alert Enable (Hide when Smbios Event Log disable)
Default Value	[Disabled]
Possible Value	Enabled

	Disabled
Help	If Enabled, POST monitors voltage, temperature, and fan status. If these values are out of range, BIOS display warning message.

Field Name	System Fan Enable (Hide when Hardware Monitor Alert Enable disable)
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	If Enabled, POST monitors system fan status. If this value is out of range, BIOS display warning message.

## S5 RTC Wake Settings

Aptio Setup - AMI

Advanced

Wake system from S5	[Disabled]	<p>Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr::min::sec specified.</p> <hr/> <p>           ⇐⇐: Select Screen            ⇕⇕: Select Item            Enter: Select            +/-: Change Opt.            F1: General Help            F2: Previous Values            F3: Optimized Defaults            F4: Save &amp; Reset            ESC: Exit         </p>
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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 will 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

## Network Stack Configuration



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

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

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



## NVMe Configuration



Field Name	<b>(Device)</b>
Comment	Press Enter when selected to go into the associated Sub-Menu.



### 3 Event Logs



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

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

## Change Smbios Event Log Settings

Aptio Setup - AMI

Event Logs

<p>Enabling/Disabling Options Smbios Event Log</p> <p>Erasing Settings Erase Event Log When Log is Full</p>	<p>[Enabled]</p> <p>[No]</p> <p>[Do Nothing]</p>	<p>Choose options for erasing Smbios Event Log. Erasing is done prior to any logging activation during reset.</p> <hr/> <p>           ⇐⇐: Select Screen            ⇕⇕: Select Item            Enter: Select            +/-: Change Opt.            F1: General Help            F2: Previous Values            F3: Optimized Defaults            F4: Save &amp; Reset            ESC: Exit         </p>
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Field Name	<b>Smbios Event Log</b>
Default Value	[Enabled]
Help	Change this to enable or disable all feature of Smbios Event Logging during boot.

Field Name	<b>Erase Event Log</b>
Default Value	[No]
Possible Value	No / Yes, Next reset / Yes, Every reset
Help	Choose options for erasing Smbios Event Log. Erasing is done prior to any logging activation during reset.

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

## View Smbios Event Log

Aptio Setup - AMI

Event Logs

DATE	TIME	ERROR CODE	SEVERITY	COUNT	DESCRIPTION
06/04/20	06:35:10	Smbios 0x16	N/A	N/A	Log Area Reset and Count is applicable only for Multi-Events

⇐⇐: Select Screen  
 ⇕: Select Item  
 Enter: Select  
 +/-: Change Opt.  
 F1: General Help  
 F2: Previous Values  
 F3: Optimized Defaults  
 F4: Save & Reset  
 ESC: Exit

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

## 4 Security Page

Aptio Setup - AMI

Main Advanced Event Logs **Security** Boot Save & Exit

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Password Description

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

Administrator Password

User Password

HDD Security Configuration:

P0:ST2000NM0008-2F3100

▶ Secure Boot

▶ BIOS Update

Set Administrator Password

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

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Field Name	<b>Administrator Password</b>
Help	Set Administrator Password

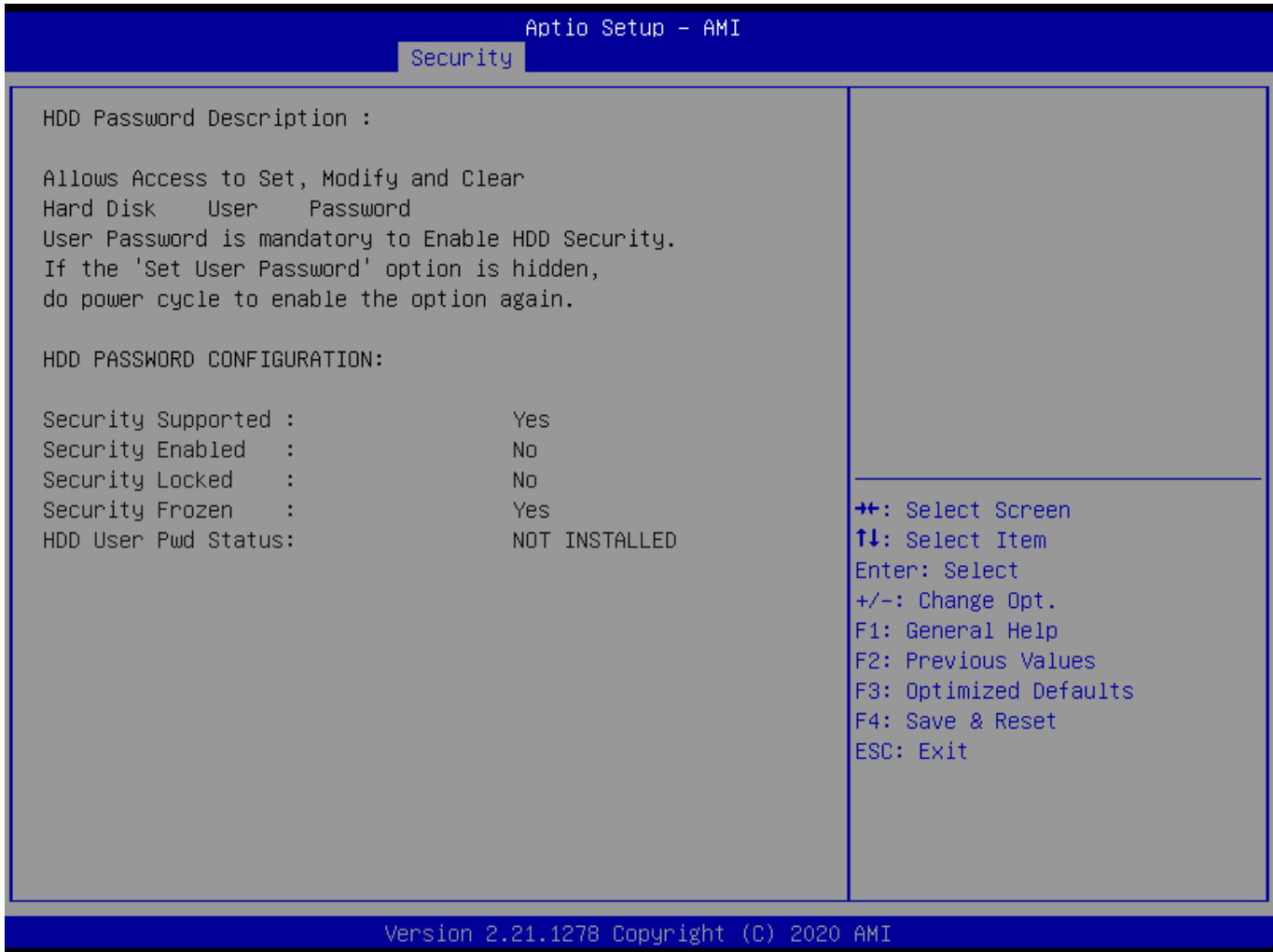
Field Name	<b>User Password</b>
Help	Set User Password.

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

Field Name	<b>Secure Boot</b>
Help	Secure Boot Configuration
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

## 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 impact 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

## Secure Boot



Field Name	<b>Secure Boot</b>
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

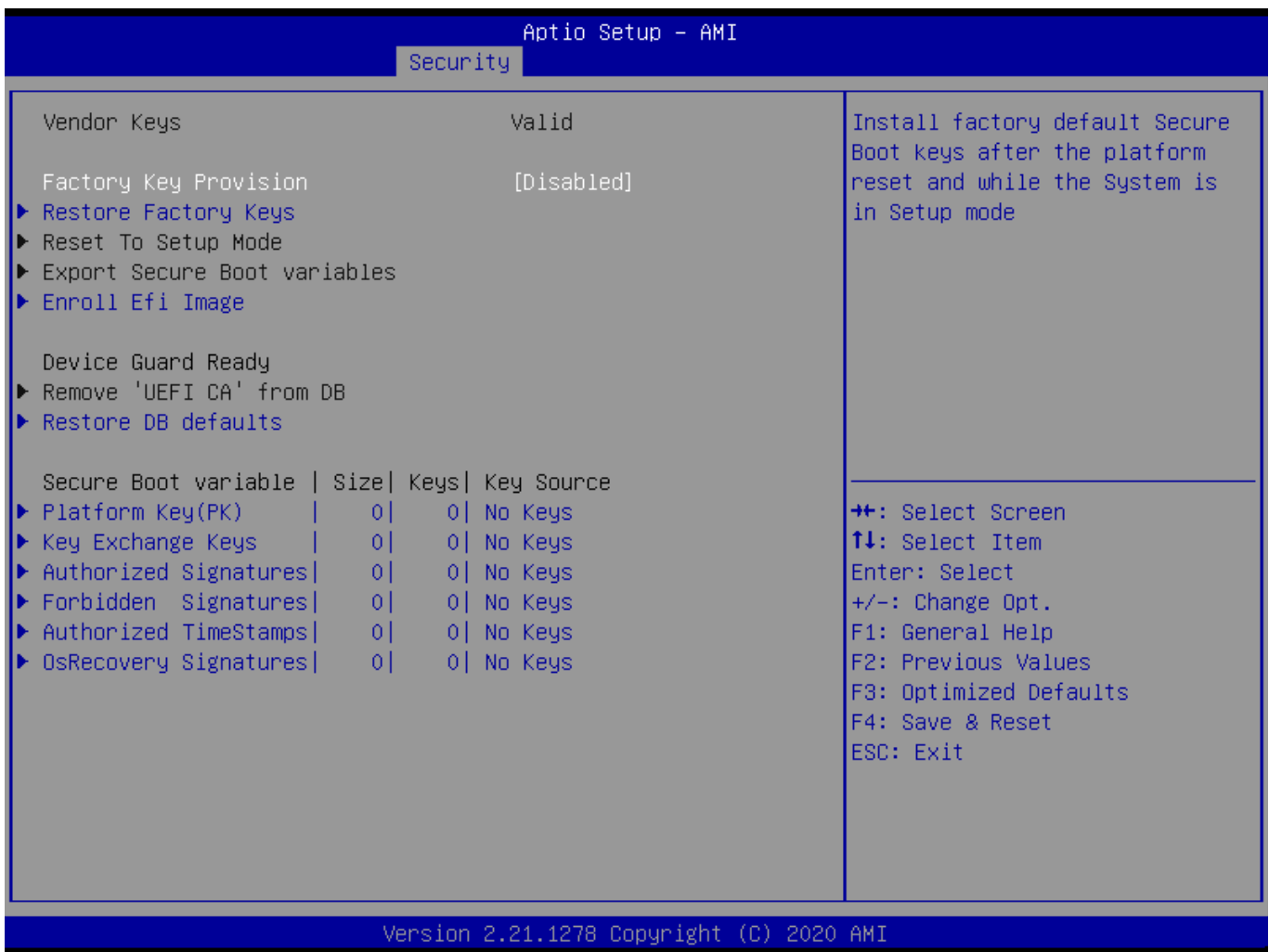
Field Name	<b>Secure Boot Mode</b>
Default Value	[Standard]
Possible Value	Standard Custom
Help	Secure Boot mode options:Standard or Custom.In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication

Field Name	<b>Restore Factory Keys</b>
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	<b>Reset to Setup Mode</b>
Help	Delete all Secure Boot key databases from NVRAM

Field Name	<b>Key Management</b>
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

## Key Management



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

Field Name	<b>Restore Factory Keys</b>
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	<b>Reset to Setup Mode</b>
Help	Delete all Secure Boot key databases from NVRAM

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

Field Name	<b>Enroll Efi Image</b>
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	<b>Remove 'UEFI CA' from DB</b>
Help	Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database (db)

Field Name	<b>Restore DB defaults</b>
Help	Restore DB variable to factory defaults

Field Name	<b>Platform Key (PK)</b>
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	<b>Key Exchange Keys</b>
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	<b>Authorized Signatures</b>
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	<b>Forbidden Signatures</b>
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	<b>Authorized TimeStamps</b>
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.

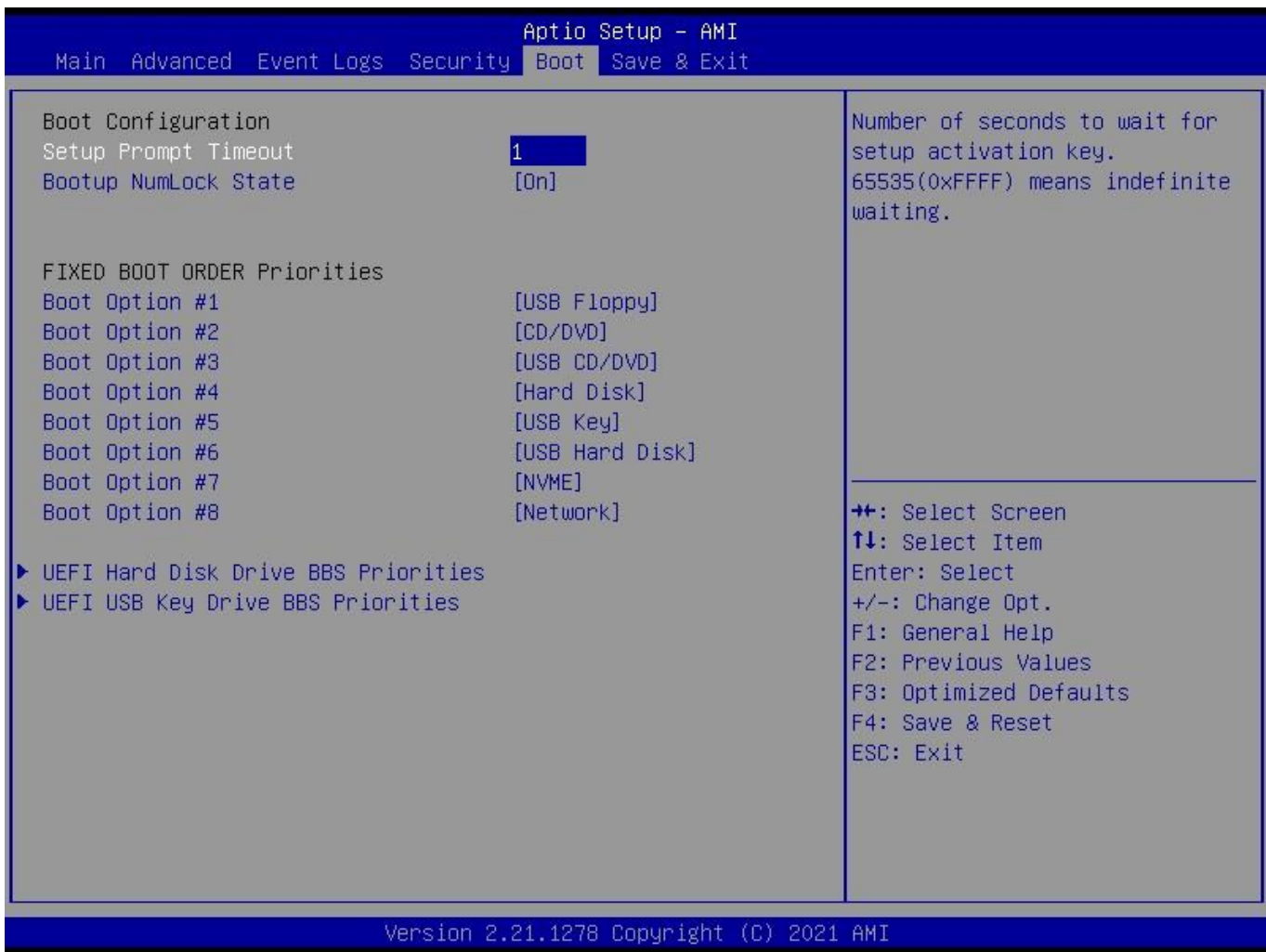
Field Name	<b>OsRecovery Signatures</b>
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI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

## BIOS Update



Field Name	<b>Path for ROM Image</b>
Help	Enter the path to the BIOS update option

## 5 Boot Page



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

Field Name	<b>Bootup NumLock State</b>
Default Value	[On]
Possible Value	On Off
Help	Select the keyboard NumLock state

Field Name	<b>Boot Option #1</b>
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
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Field Name	<b>Boot Option #2</b>
Default Value	[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	<b>Boot Option #3</b>
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	<b>Boot Option #4</b>
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	<b>Boot Option #5</b>
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	<b>Boot Option #6</b>
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	<b>Boot Option #7</b>
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	<b>Boot Option #8</b>
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	<b>UEFI USB Floppy Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available UEFI USB Floppy Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

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

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

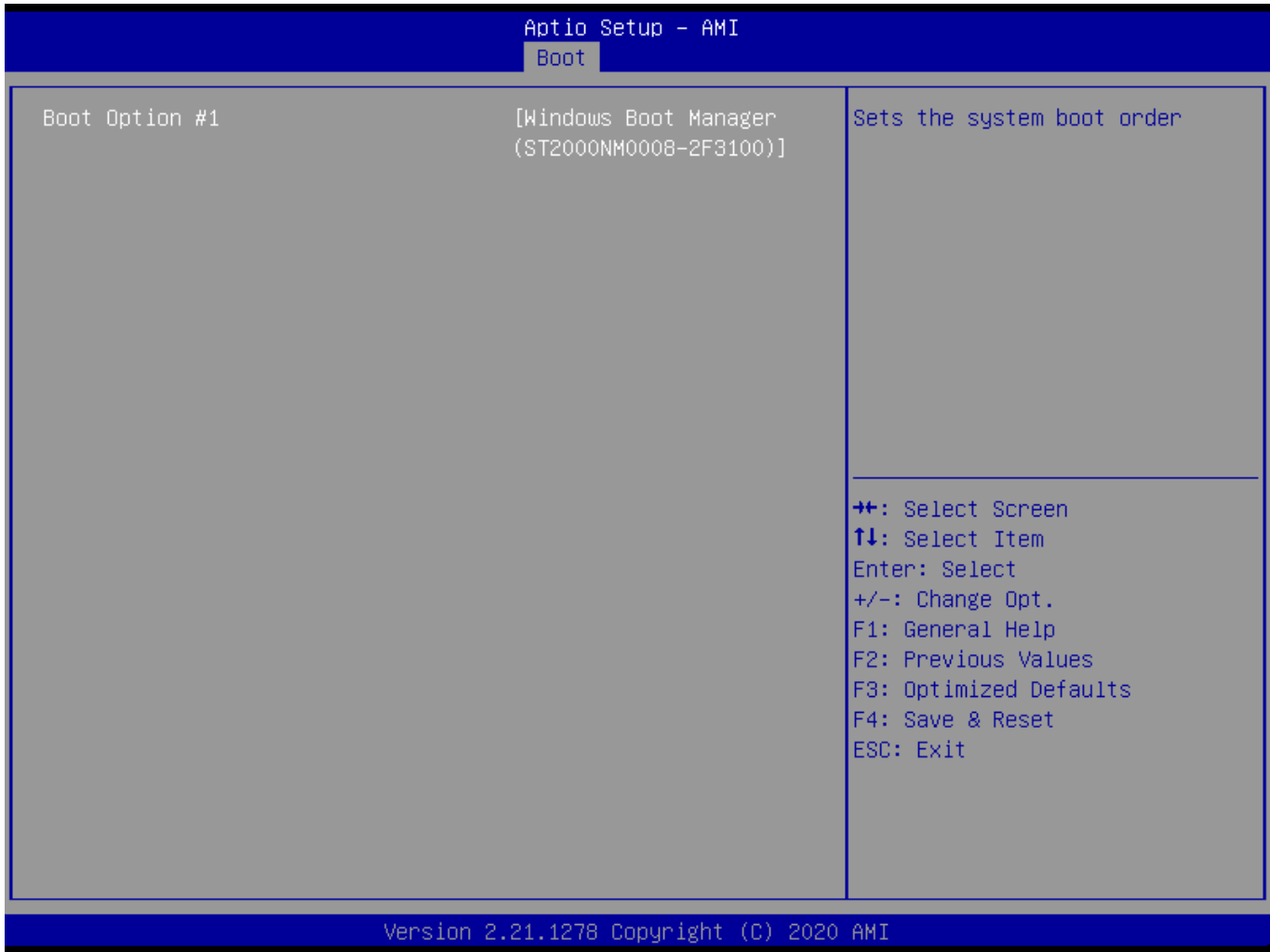
Field Name	<b>UEFI USB KEY Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available UEFI USB Key Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

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

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

**(List Boot Device Type) Drive BBS Priorities**



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

## 6 Save & Exit Page



Field Name	<b>Save Changes and Reset</b>
Help	Reset the system after saving the changes.

Field Name	<b>Discard Changes and Rest</b>
Help	Reset system setup without saving any changes.

Field Name	<b>Restore Defaults</b>
Help	Restore/Load Default values for all the setup options.