

MITAC Desktop Board PH11CMI Product Guide

Desktop Board Features

This chapter briefly describes the features of Desktop Board PH11CMI.
Table 1 summarizes the major features of the Desktop Board.

Feature Summary

MECHANICAL	
FORM FACTOR	thin Mini-ITX: 6.7" x 6.7" (170 mm x 170 mm)
SYSTEM	
PROCESSOR	10th Gen Intel® Comet Lake LGA1200 Socket Processor, 10core TDP Max 35W 8ccore TDP 65W
CHIPSET	Intel® H410
MEMORY	DDR4 2933/2666/2400MHz, 2 x 260-pin SO-DIMM, Max. 64GB (Non-ECC)
GRAPHICS	Intel® HD Graphics
ETHERNET	Intel® I219-LM Giga LAN + Intel® I211-AT Giga LAN
AUDIO	Realtek® ALC662/ALC888
I/O CHIPSET	Nuvoton NCT6126D(eSPI)
TPM	TPM header (support TPM module board NPCT750)
EXPANSION SLOT	PCIe x4 slot M.2 2242 / 2280 M key (PCIEx4,SATA) on top side M.2 2230 E key (PCIe, USB 2.0) on top side mPCIe(SATA/USB)
BIOS	256 Mbit SPI, AMI BIOS
H/W MONITOR	Temperature Monitor, Voltage Monitor, Fan Monitor
WATCHDOG TIMER	1~255 Steps bios major, and MiAPI minor
SMART FAN CONTROL	CPU Fan / System Fan
GRAPHICS	
VGA	—
DVI	—
HDMI	Up to 4K (4096 x 2160) @30 Hz

DISPLAYPORT	Up to 4K (4096 x 2304) @60 Hz
2rd DisplarPort	—
LVDS	Up to 1920 x 1200 @60 Hz
eDP(Optional)	Up to 4K (4096 x 2304) @60 Hz
REAR I/O	
USB	4 x USB 3.2 gen1
DISPLAY I/O	1 x HDMI , 1 x DisplayPort
AUDIO I/O	1 x Mic-in ,1 x Line-out
LAN I/O	2 x RJ-45
SERIAL PORT	—
PS/2 PORT	—
OTHERS	DC-in 12V (2.5 mm / ID, 5.5 mm / OD) / DC-in 19V (5.1 mm / ID, 7.4 mm / OD)
INTERNAL CONNECTORS	
STORAGE	2 x SATAIII, 1 x SATA PWR header (same as PH14FEI)
USB	5 x USB 2.0 (1 x USB share mPCIe)
DISPLAY I/O	1 x LVDS (*Optional eDP SKU available), 1 x Backlight Connector
AUDIO I/O	1 x Speaker 2w
SERIAL PORT	4 x RS232 (one supports RS232/422/485 select by bios)
PS/2 PORT	—
PARALLEL PORT	—
GPIO	1 x MiAPI Header (Programmable)
FAN	1 x 4-pin CPU Fan Connector, 1 x 4-pin System Fan Connector
POWER	1 x ATX-4pin Connector, 1 x AT / ATX Mode Select Jumper
OTHERS	1 x Front Audio Header (Mic-in / Line-out), 1 x CMOS Jumper, 1 x panel power select header, 1 x backlight power select header, 1x buzzer header, 1x intrusion header, 1x DMIC
POWER REQUIREMENT	
POWER INPUT	DC-in 12V (2.5 mm / ID, 5.5 mm / OD) / ATX 4-pin 12V / DC-in 19V (5.1 mm / ID, 7.4 mm / OD) / ATX 4-pin 19V
ENVIRONMENTAL	

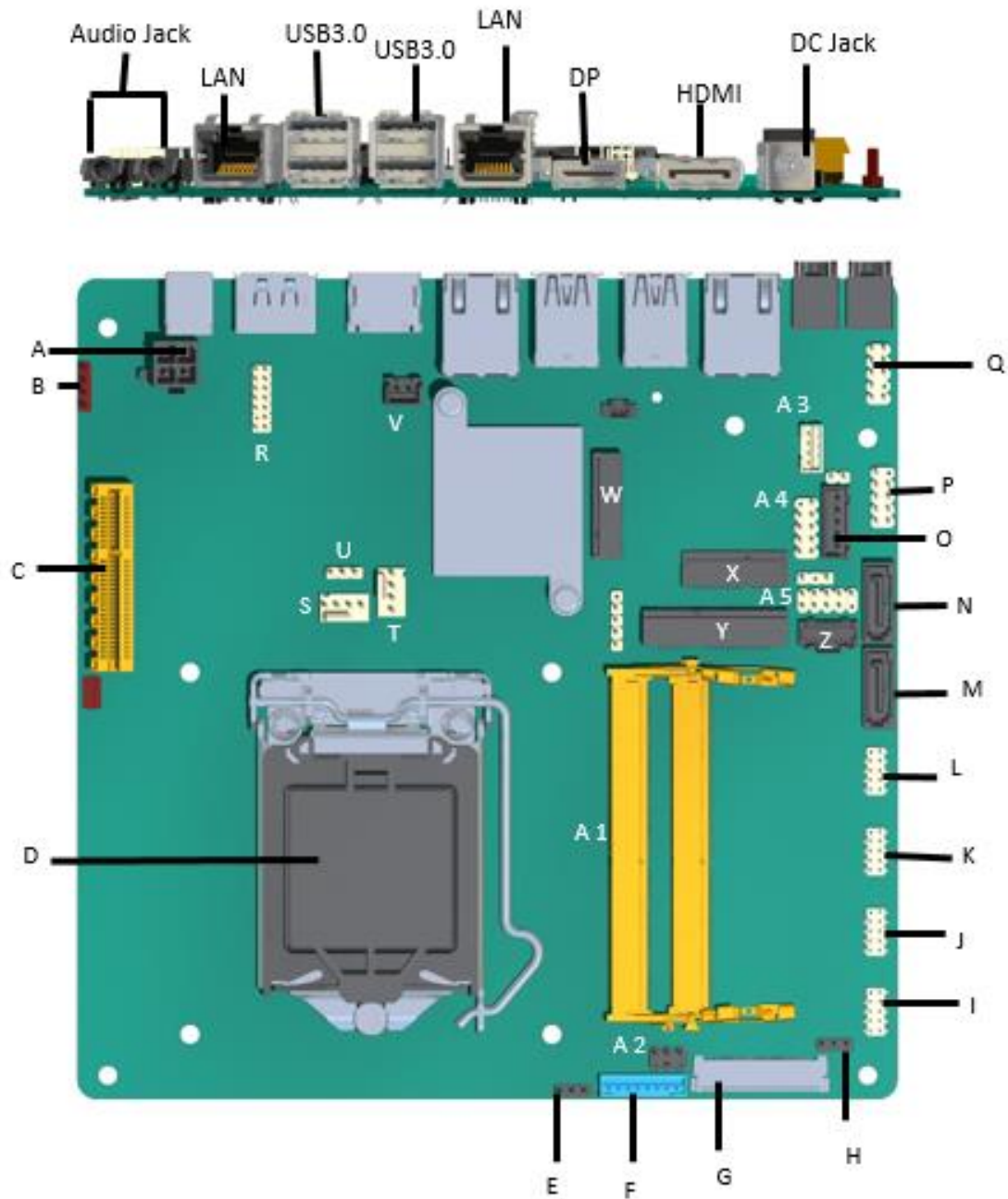
OPERATING TEMPERATURE	0 ~ 60°C (32 ~140°F)
STORAGE TEMPERATURE	-40 ~ 85°C (-40 ~185°F)
OPERATING HUMIDITY	10% ~ 95% R / H, non-condensing
CERTIFICATION	CE & FCC Class B

TABLE 1. MITAC DESKTOP BOARD PH11CMI FEATURES

Note: please install I219 LAN driver into OS image on PXE server before using PXE installation function

Desktop Board Components

Figure 1 shows the approximate location of the major components on the top side of MITAC Desktop Board PH11CMI.



Item	Description
A	ATX 4pin
B	USB2.0 Header 2.54mm pitch
C	PCIEx4
D	LGA1200 CPU socket
E	AT/ATX Header
F	LVDS Back Light Header
G	LVDS/eDP connector
H	LVDS Back light select
I	COM Port Header (RS232/422/485) 2.0mm pitch
J	COM Port Header (RS232) 2.0mm pitch
K	COM Port Header (RS232) 2.0mm pitch
L	COM Port Header (RS232) 2.0mm pitch
M	SATA
N	SATA
O	SATA Power Header
P	USB2.0 Header 2.54mm pitch
Q	Front Audio header
R	TPM Header
S	CPU FAN

T	SYS FAN
U	CMOS
V	Intrusion header
W	M.2 2280 M key
X	M.2 2230 E key
Y	Full Size mini PCIE slot
Z	MiAPI Header
A 1	DDR4 SODIMM socket
A 2	Panel power select
A 3	Speaker Header
A 4	Front Panel header
A5	USB2.0 Header 2.54mm pitch

TABLE 2. MITAC DESKTOP BOARD PH11CMI COMPONENTS (SHOWN IN FIGURE 1)

Processor

The board supports 10th generation Intel Core processors. Other processors may be supported in the future. This board supports processors with a maximum wattage of 65 W Thermal Design Power (TDP).

NOTE

*This board has specific requirements for providing power to the processor.
Additional power required will depend on configurations chosen by the integrator.*

System Memory

NOTE

To be fully compliant with all applicable DDR SDRAM memory specifications, the board should be populated with DIMMs that support the Serial Presence Detect (SPD) data structure. This allows the BIOS to read the SPD data and program the chipset to accurately configure memory settings for optimum performance. If non-SPD memory is installed, the BIOS will attempt to correctly configure the memory settings, but performance and reliability may be impacted or the DIMMs may not function under the determined frequency.

The Desktop Board has two 260-pin DDR4 SO-DIMM sockets with gold-plated contacts.

Connecting to the Internal Headers and Connectors

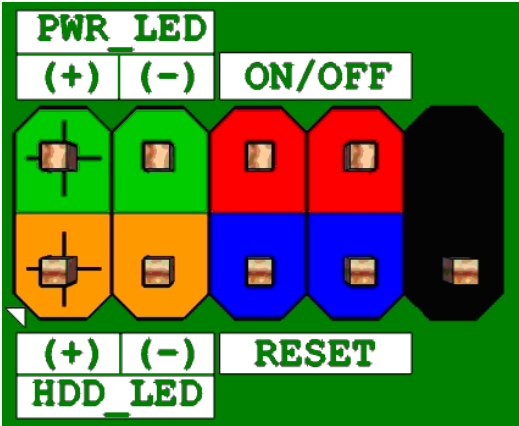


Figure 1 : Front Panel Connector

Pin	Signal Name	Description	Pin	Signal Name	Description
1	HDD_POWER_LED	Pull-up resistor (750) to +5V	2	POWER_LED_MAIN	[Out] Front panel LED (Green)
3	HDD_LED#	[Out] Hard disk activity LED	4	POWER_LED_ALT	[Out] Front panel LED (Yellow)
5	GROUND	Ground	6	POWER_SWITCH#	Power button
7	RESET_SWITCH#	Reset switch	8	GROUND	Ground
9	+5V_DC	Power	10	KEY	No pin

Table 1: Front Panel Connector



Pins 1&2: jumper position for 12V



Pins 2&3: jumper position for 19V

Figure 2 : Inverter power voltage selection header signals

Pin	Signal Name
1	12VDUAL_HDMI
2	BKLT_PWR
3	+19V_A

Table 2: Inverter power voltage selection header signals

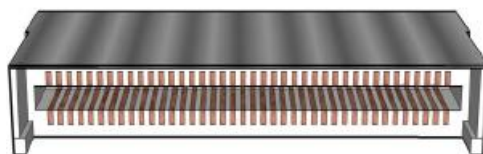


Figure 3: LVDS Connector

Pin	Signal	Description
1	LVDS0_LINK3_CON_DP	LVDS Channel A diff data output - positive
2	LVDS0_LINK3_CON_DN	LVDS Channel A diff data output - negative
3	LVDS0_LINK2_CON_DP	LVDS Channel A diff data output - positive
4	LVDS0_LINK2_CON_DN	LVDS Channel A diff data output - negative
5	LVDS0_LINK1_CON_DP	LVDS Channel A diff data output - positive
6	LVDS0_LINK1_CON_DN	LVDS Channel A diff data output - negative
7	LVDS0_LINK0_CON_DP	LVDS Channel A diff data output - positive
8	LVDS0_LINK0_CON_DN	LVDS Channel A diff data output - negative
9	LVDS1_LINK3_CON_DP	LVDS Channel B diff data output-positive
10	LVDS1_LINK3_CON_DN	LVDS Channel B diff data output-negative
11	LVDS1_LINK2_CON_DP	LVDS Channel B diff data output-positive

12	LVDS1_LINK2_CON_DN	LVDS Channel B diff data output-negative
13	LVDS1_LINK1_CON_DP	LVDS Channel B diff data output-positive
14	LVDS1_LINK1_CON_DN	LVDS Channel B diff data output-negative
15	LVDS1_LINK0_CON_DP	LVDS Channel B diff data output-positive
16	LVDS1_LINK0_CON_DN	LVDS Channel B diff data output-negative
17	GND	Ground
18	3.3V/5V/12V	Selectable LCD power output
19	3.3V/5V/12V	Selectable LCD power output
20	3.3V/5V/12V	Selectable LCD power output
21	NC	NC
22	VCC3	VCC
23	CABLE_ID2	VCC (reserve for MiTAC AIO CABLE_ID2)
24	GND	Ground
25	GND	Ground
26	LVDS0_CLK_CON_DP	LVDS Channel A diff data output - positive
27	LVDS0_CLK_CON_DN	LVDS Channel A diff data output - negative
28	GND	Ground
29	GND	Ground
30	CABLE_ID3	VCC (reserve for MiTAC AIO CABLE_ID3)
31	LVDS_DDC_SCL	LVDS_DDC_SCL
32	CABLE_ID1	VCC (reserve for MiTAC AIO CABLE_ID1)
33	PS8625_BKLT_CTRL	PS8625_BKLT_CTRL
34	LVDS1_CLK_CON_DP	LVDS Channel B diff data output - positive
35	LVDS1_CLK_CON_DN	LVDS Channel B diff data output - negative
36	NC	NC
37	NC	NC
38	NC	NC
39	CABLE_ID4	VCC (reserve for MiTAC AIO CABLE_ID4)
40	NC	NC

Table 3: 40-pin LVDS data header pin-out reference

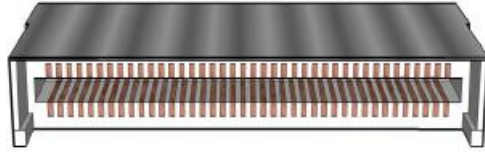


Figure 4: eDP Connector

Pin	Signal	Description
1	NC	NC
2	GND	Ground
3	EDP_CPU_3-	MAIN LINK
4	EDP_CPU_3+	MAIN LINK
5	GND	Ground
6	EDP_CPU_2-	MAIN LINK
7	EDP_CPU_2+	MAIN LINK
8	GND	Ground
9	EDP_CPU_1-	MAIN LINK
10	EDP_CPU_1+	MAIN LINK
11	GND	Ground
12	EDP_CPU_0-	MAIN LINK
13	EDP_CPU_0+	MAIN LINK
14	GND	Ground
15	EDP_CPU_AUX+	Aux channel
16	EDP_CPU_AUX-	Aux channel
17	GND	Ground
18	LCD_VCC	Selectable LCD power output
19	LCD_VCC	Selectable LCD power output
20	LCD_VCC	Selectable LCD power output
21	LCD_VCC	Selectable LCD power output
22	NC	NC
23	NC	NC
24	GND	Ground
25	GND	Ground
26	GND	Ground
27	HPDET	Hot plug detection

28	GND	Ground
29	GND	Ground
30	NC	NC
31	GND	Ground
32	BKLT_EN	BKLT_EN
33	PCH_BACKLIGHT_PWM	PCH_BACKLIGHT_PWM
34	NC	NC
35	NC	NC
36	BKLT_PWR	Selectable BKLT power output
37	BKLT_PWR	Selectable BKLT power output
38	BKLT_PWR	Selectable BKLT power output
39	BKLT_PWR	Selectable BKLT power output
40	NC	NC

Table 4: 40-pin eDP data header pin-out reference

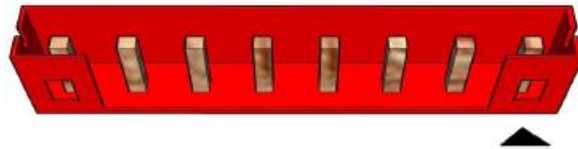


Figure 5: LVDS inverter power header pin-out

Pin	Signal Name	Description
1	LVDS_BKTEN_R	Backlight enable
2	LVDS_PWM	Backlight PWM control
3	12V/19V	Inverter power
4	12V/19V	Inverter power
5	GND	Ground
6	GND	Ground
7	BRIGHT_UP-	BRIGHTNESS UP
8	BRIGHT_DOWN-	BRIGHTNESS DOWN

Table 5: 8-pin LVDS inverter power header signals

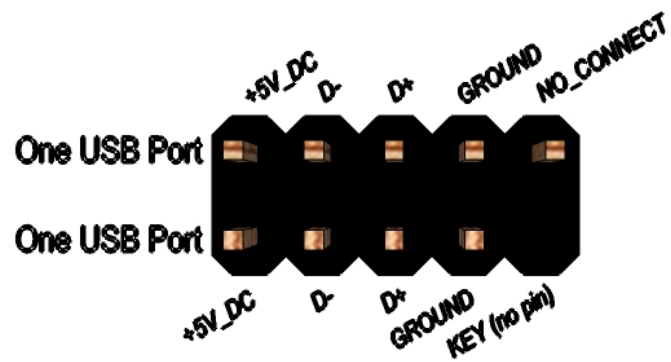


Figure 6: Dual USB2.0 pin-out

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

Table 6 Dual USB 2.0 Header

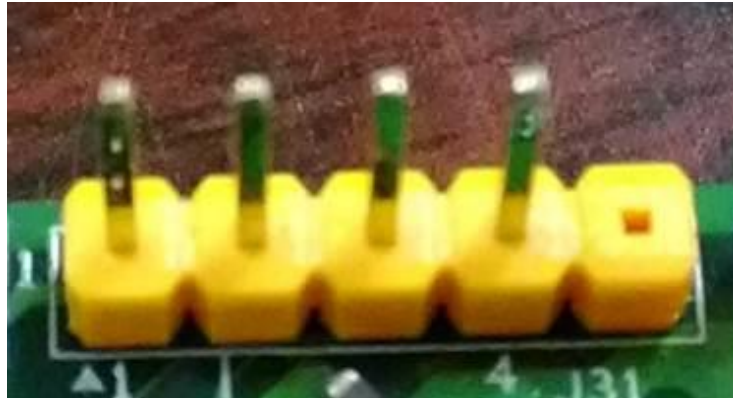


Figure 7: DMIC Cable pin-out

Pin	Signal Name	Description
1	VCC	Power
2	DMIC_DATA_R	DMIC DATA
3	Ground	Ground
4	DMIC_CLK_R	DMIC CLOCK
5	KEY	NO pin

Table 7: DMIC Cable signals

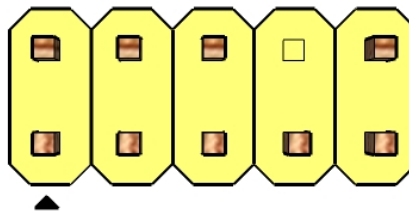


Figure 8: FP Audio pin-out

Pin	Signal Name	Description
1	MIC	Front panel microphone input signal
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 audio dongle is connected to the analog header

5	FP_OUT_R	Right channel audio signal to front panel
6	AUD_SENSE_MIC_FP	Front panel microphone jack detect (short to pin7 to enable)
7	FIO_SENSE	Front panel detect pin
8	Key	No pin
9	FP_OUT_L	Left channel audio signal to front panel
10	AUD_SENSE_HP	Front panel headphone jack detect (shore to pin7 to enable)

Table 8: FP Audio Header

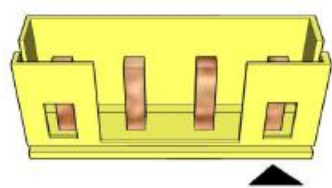


Figure 9: Internal speaker pin-out

Pin	Signal Name
1	Front_L-
2	Front_L+
3	Front_R+
4	Front_R-

Table 9: Internal header signals

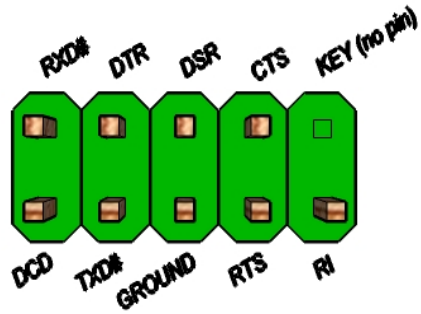
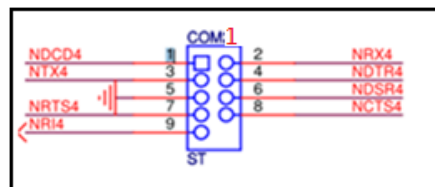


Figure 10: Serial port header pin-out

Pin	Signal Name
1	DCD
2	RXD#
3	TXD#
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	Key



Pin No	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	RX	TX+	DATA+
3	RTX	RX-	NC
4	DTR	RX+	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

Table 10 Serial port header pin-out

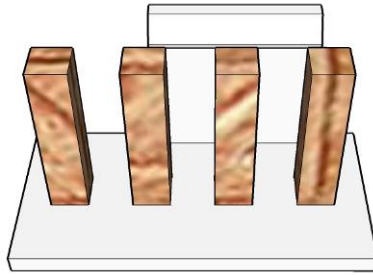


Figure 11 Processor fan header pin-out

Pin	Signal
1	Ground
2	+12V
3	CPU_FAN_TACH
4	CPU_FAN_CTRL

Table 11 fan header signals

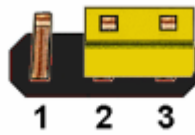


Figure 12: CMOS Clear Header

CMOS Clear

1-2	Clear CMOS
2-3	Normal

Table 12: CMOS Clear behavior

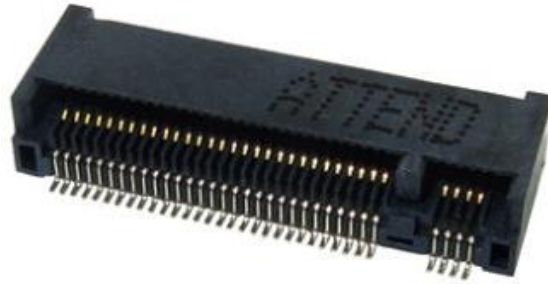


Figure 13: M.2 M key slot For Storage pin-out

74	3.3Vaux	GND	75
72	3.3Vaux	GND	73
70	3.3Vaux	GND	71
68	SUSCLK(32kHz)(O)(0/3.3V)	PEDET(OC-PCIe/GND-SATA)	69
	Connector Key	N/C	67
	Connector Key	Connector Key	
	Connector Key	Connector Key	
	Connector Key	Connector Key	
58	N/C	Connector Key	
56	N/C	GND	57
54	PEWake#(IO){0/3.3V} or N/C	REFCLKP	55
52	PERST#(O)(0/3.3V) or N/C	REFCLKN	53
50	PERST#(O)(0/3.3V) or N/C	GND	51
48	N/C	PETp0/SATA-A+	49
46	N/C	PETn0/SATA-A-	47
44	N/C	GND	45
42	N/C	PERp0/SATA-B-	43
40	N/C	PERn0/SATA-B+	41
38	DEVSLP(O){0/3.3V}	GND	39
36	N/C	PETp1	37
34	N/C	PETn1	35
32	N/C	GND	33
30	N/C	PERp1	31
28	N/C	PERn1	29
26	N/C	GND	27
24	N/C	N/C	25

22	N/C	N/C	23
20	N/C	GND	21
18	3.3Vaux	N/C	19
16	3.3Vaux	N/C	17
14	3.3Vaux	GND	15
12	3.3Vaux	N/C	13
10	DAS/DSS#(I){OD}	N/C	11
8	N/C	GND	9
6	N/C	N/C	7
4	3.3Vaux	N/C	5
2	3.3Vaux	GND	3
		GND	1

Table 13: M.2 M key slot For Storage signals

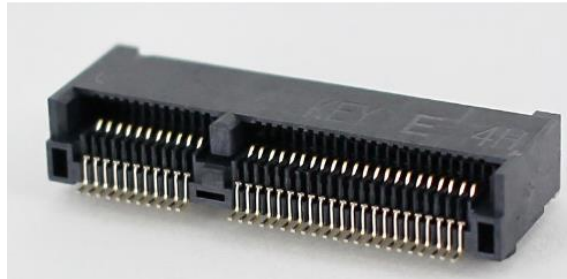


Figure 14: M.2 E key slot For wireless pin-out

	Standard M.2 Key E	LcP Signals	LcP Signals	Standard M.2 Key E	
74	+V3P3A		GND		75
72	+V3P3A		WT_CLKP	REFCLKN1	73
70	PEWake1# (IO)(0/3.3V)		WT_CLKN	REFCLKP1	71
68	CLKREQ1# (IO)(0/3.3V)		GND		69
66	PERST1# (O)(0/3.3V)		WT_D0P	PERn1	67
64	RESERVED	REFCLK0 (I)(1V @38.4MHz)	WT_D0N	PERp1	65
62	ALERT# (I)(0/1.8)	A4WP_IRQ#	GND		63
60	I2C_CLK (O)(0/1.8V)	A4WP_I2C_CLK	WT_D1P	PETn1	61
58	I2C_DATA (IO)(0/1.8)	A4WP_I2C_DATA	WT_D1N	PETp1	59
56	W_DISABLE1# (O)(0/3.3V)		GND		57
54	W_DISABLE2# (O)(0/3.3V)		PEWake0# (IO)(0/3.3V)		55
52	PERST0# (O)(0/3.3V)		CLKREQ0# (IO)(0/3.3V)		53
50	SUSCLK(32kHz) (O)(0/3.3V)	C_P32K (3.3V Tolerant)	GND		51
48	COEX_TXD (O)(0/1.8V)		REFCLKN0		49
46	COEX_RXD (O)(0/1.8V)		REFCLKP0		47
44	COEX3 (IO)(0/1.8V)		GND		45
42	CLink CLK		PERn0		43
40	CLink DATA		PERp0		41
38	CLink RESET (O)(0/3.3V)		GND		39
36	LPSS UART RTS (O)(0/1.8V) / BRI_DT (MUX'd in PCH/SoC)		PETn0		37
34	LPSS UART CTS (I)(0/1.8V) / RGI_RSP (MUX'd in PCH/SoC)		PETp0		35
32	LPSS UART Tx (O)(0/1.8V) / RGI_DT (MUX'd in PCH/SoC)		GND		33
E	Connector Key		Connector Key		E
	Connector Key		Connector Key		
	Connector Key		Connector Key		
	Connector Key		Connector Key		
22	LPSS UART Rx (I)(0/1.8V) / BRI_RSP (MUX'd in PCH/SoC)		WGR_CLKP	SDIO Reset#(O)(0/1.8V)	23
20	UART Wake# (I)(0/3.3V)		WGR_CLKN	SDIO Wake#(I)(0/1.8V)	21
18	GND	GND/LNA_EN (LcP Production)	GND	SDIO DAT3(IO)(0/1.8V)	19
16	LED2# (I)(OD)		WGR_D0P	SDIO DAT2(IO)(0/1.8V)	17
14	PCM_OUT (O)(0/1.8V) / CLKREQ0 (MUX'd in PCH/SoC)		WGR_D0N	SDIO DAT1(IO)(0/1.8V)	15
12	PCM_IN (I)(0/1.8V)		GND	SDIO DAT0(IO)(0/1.8V)	13
10	PCM_SYNC (OI)(0/1.8V) / RF_RESET_B (MUX'd in PCH/SoC)		WGR_D1P	SDIO CMD(IO)(0/1.8V)	11
8	PCM_CLK (OI)(0/1.8V)		WGR_D1N	SDIO CLK(O)(0/1.8V)	9
6	LED1# (I)(OD)		GND		7
4	+V3P3A		USB_D-		5
2	+V3P3A		USB_D+		3
			GND		1

Table 14: M.2 E key slot For wireless signals

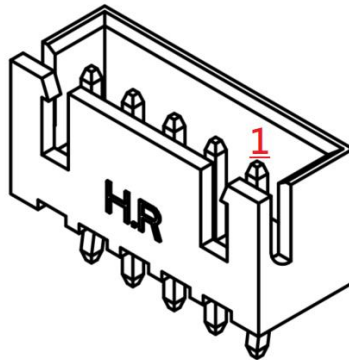


Figure 15: SATA Power Cable pin-out

Pin	Signal Name	Description
1	VCC3	+3V
2	GND	Ground
3	VCC	+5V
4	GND	Ground
5	12V	+12V

Table 15: SATA Power Cable signals

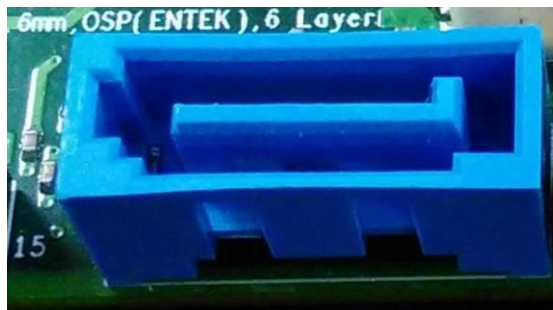


Figure 16: SATA Header pin-out

Pin	Signal Name	Description
1	GND	Ground
2	SATAHDR_TXP0_C	SATA DATA Transmit(positive)
3	SATAHDR_TXN0_C	SATA DATA Transmit(negative)
4	GND	Ground
5	SATAHDR_RXN0_C	SATA DATA Receive(negative)
6	SATAHDR_RXP0_C	SATA DATA Receive(positive)
7	GND	Ground
8	G1	NC
9	G2	NC

Table 16: SATA Header signals

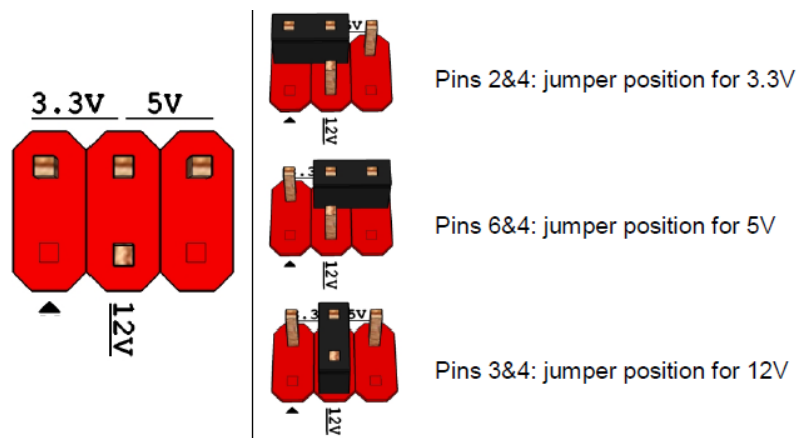


Figure 17: Panel power Header pin-out

Pin	Signal Name	Description
1	Key	No pin
2	3.3V	3.3V option (default)
3	12V	12V option
4	LCD_VCC	Send voltage to connector
5	Key	No pin
6	5V	5V option

Table 17: Panel power Header signal



Figure 18: AUX LED Header pin-out

Pin	Signal Name
1	+5V
2	Power LED

Table 18: AUX LED Header signal

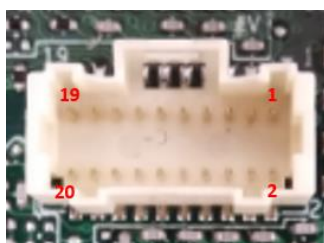


Figure 19: MiAPI Header

Pin	Net name	Pin	Net name
1	MAPI_GPIO1	2	VCC
3	MAPI_GPIO2	4	MAPI_GPIO6
5	MAPI_GPIO3	6	MAPI_GPIO7
7	MAPI_GPIO4	8	MAPI_GPIO8
9	MAPI_GPIO5	10	MAPI_GPIO9
11	WD_Time	12	MAPI_GPIO10
13	Power Button	14	SMBUS_DATA
15	UART_TX	16	SMBUS_CLK
17	UART_RX	18	5VSB
19	GND	20	NA

Table 19: MiAPI pin out



Figure 20: Chassis intrusion switch Header

Pin	Net name	Pin	Net name
1	INTRUDER_N	2	GND

Table 20: Chassis intrusion switch pin define



Figure 21: USB2.0 Header

Pin	Signal Name
1	+5V DC
2	Data (negative)
3	Data (positive)
4	Ground

Table 21: USB2.0 pin define

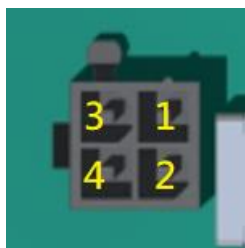


Figure 22: ATX 4pin connector

Pin	Signal Name
1	GND
2	GND
3	12v/19v DC in
4	12v/19v DC in

Table 22: ATX 4pin pin define



Pins 1&2: jumper position for AT mode⁺



Pins 2&3: **Non-AT mode (Default)**⁺

Figure 23: AT jumper

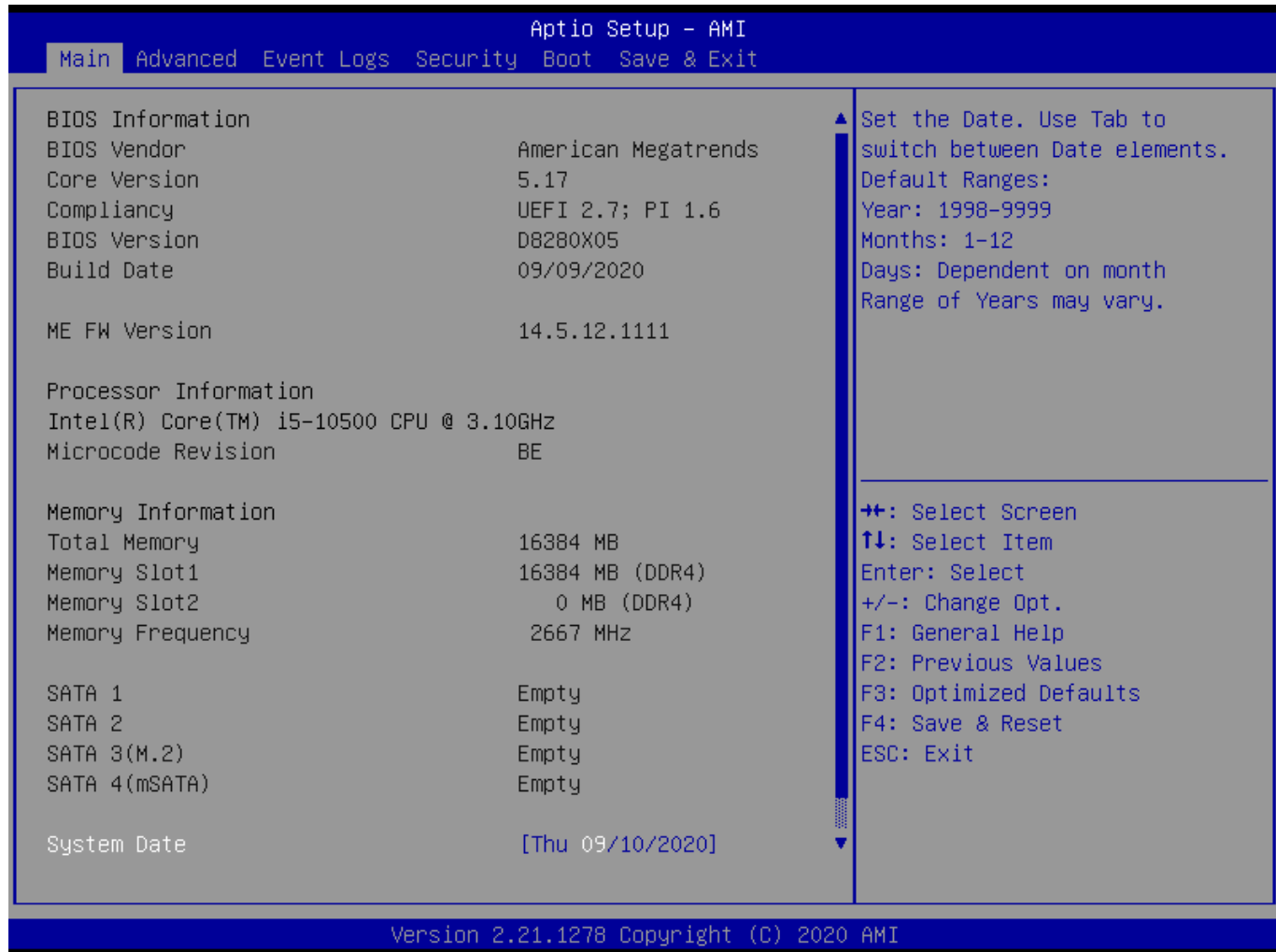
Pin	Signal Name	Description
1	PSON_AT_N	Power on signal(Always on)
2	SW_PWRBT_N	Power switch signal
3	NC	No connection

Table 23: AT jumper pin define

MITAC Desktop Board PH11CMI

BIOS Specification

1. MAIN PAGE



Aptio Setup - AMI		
Main	Advanced	Event Logs Security Boot Save & Exit
BIOS Vendor	American Megatrends	▲ Set the Time. Use Tab to switch between Time elements.
Core Version	5.17	
Compliance	UEFI 2.7; PI 1.6	
BIOS Version	D8280X05	
Build Date	09/09/2020	
ME FW Version	14.5.12.1111	
Processor Information		
Intel(R) Core(TM) i5-10500 CPU @ 3.10GHz		
Microcode Revision	BE	
Memory Information		
Total Memory	16384 MB	⇄: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Memory Slot1	16384 MB (DDR4)	
Memory Slot2	0 MB (DDR4)	
Memory Frequency	2667 MHz	
SATA 1	Empty	
SATA 2	Empty	
SATA 3(M.2)	Empty	
SATA 4(mSATA)	Empty	
System Date	[Thu 09/10/2020]	
System Time	[10:33:02]	

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

Field Name	Core Version
Default Value	5.17
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Compliance
Default Value	UEFI 2.7 ; PI 1.6
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
Default Value	Display build date of the BIOS
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	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 Slot1
Value	Display the installed memory size of slot1.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Memory Slot2
Value	Display the installed memory size of slot2.
Comment	This field is not selectable. There is no help text associated with it.

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

Field Name	SATA 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	SATA 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	SATA 3(M.2)
Value	Display the installed SATA device model/size of port 3.
Comment	This field is not selectable. There is no help text associated with it.

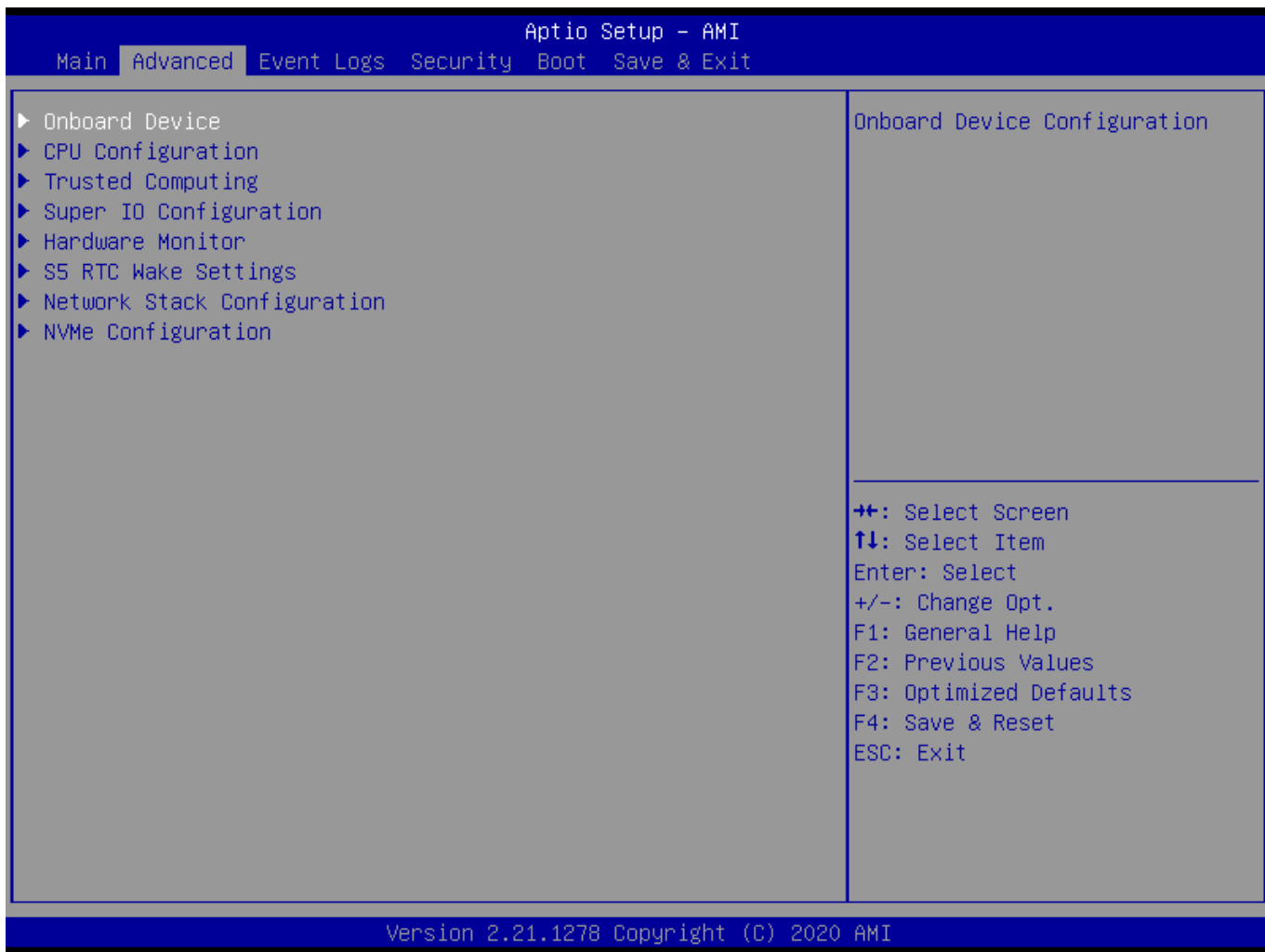
Field Name	SATA 4(mSATA)
Value	Display the installed SATA device model/size of port 4.
Comment	This field is not selectable. There is no help text associated with it.

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 : 1998-9999

Help	Set the Date. Use Tab to switch between Date elements. Default Rangers: Year : 1998-9999 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	Trusted Computing
Help	Trusted Computing Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

Field Name	Hardware 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

Aptio Setup - AMI		
Advanced		
Turbo Mode	[Enabled]	Enable/Disable processor Turbo Mode (requires Intel Speed Step or Intel Speed Shift to be available and enabled).
State After G3	[S5 State]	
Force Enable LVDS	[Enabled]	
LVDS Resolution	[1920x1080]	
LVDS Configuration Control	[Dual channel, 8-bit VESA mapping]	
DVMT Pre-Allocated	[64M]	
DVMT Total Gfx Mem	[256M]	
SATA Mode Selection	[AHCI]	
Wake on LAN Enable	[Enabled]	
HD Audio	[Enabled]	
ME Update	[Disabled]	
DeepSx Power Policies	[Enabled in S4-S5]	
Chassis Intrusion	[Disabled]	→+: 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	Turbo Mode
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable processor Turbo Mode (requires Intel Speed Step or Intel Speed Shift to be available and enabled).

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	Force Enable LVDS
Default Value	[Disabled]

Possible Value	Disabled Enabled
Help	Force Enable LVDS. Enabled: Enable LVDS whether plug correct panel cable or not. Disabled: Enable LVDS only when plug correct panel cable.

Field Name	LVDS Resolution (Hide if “Force Enable LVDS” is Disabled)
Default Value	[1920x1080]
Possible Value	800x600 1024x768 1280x1024 1366x768 1280x800 1920x1080
Help	Select LVDS panel resolution.

Field Name	LVDS Configuration Control (Hide if “Force Enable LVDS” is Disabled)
Default Value	[Dual channel, 8-bit VESA mapping]
Possible Value	Single channel, 8-bit VESA mapping Dual channel, 8-bit VESA mapping Single channel, 6-bit VESA/JEIDA mapping Dual channel, 6-bit VESA/JEIDA mapping
Help	Select LVDS link number and data mapping.

Field Name	DVT 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	DVT 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	SATA Mode Selection
Value	[AHCI]
Possible Value	AHCI / Intel RST With Intel Optane System Acceleration
Help	Determines how SATA controller(s) operate.

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.

Field Name	DeepSx Power Policies
Default Value	[Disabled]
Possible Value	Enabled in S4-S5 Disabled
Help	Configure the DeepSx Mode configuration.

Field Name	Chassis Intrusion
Default Value	[Disabled]
Possible Value	Disabled Enabled Reset
Help	Configure Chassis Intrusion.

2.2 CPU CONFIGURATION

Aptio Setup - AMI

Advanced

CPU Configuration		Enables utilization of additional hardware capabilities provided by Intel (R) Trusted Execution Technology. Changes require a full power cycle to take effect.
Type	Intel(R) Core(TM) i5-10500 CPU @ 3.10GHz	
ID	0xA0650	
Speed	3100 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	
Intel Trusted Execution Technology	[Disabled]	
C states	[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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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.

Field Name	Intel Trusted Execution Technology
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Enables utilization of additional hardware capabilities provided by Intel (R) Trusted Execution Technology. Changes require a full power cycle to take effect.

Field Name	C states
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable/Disable CPU Power Management. Allows CPU to go to C states when it's not 100% utilized.

2.3 TRUSTED COMPUTING

Aptio Setup - AMI		
Advanced		
TPM 2.0 Device Found		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.
Firmware Version:	500.16	
Vendor:	INTC	
Security Device Support	[Enable]	
Pending operation	[None]	
		++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.21.1278 Copyright (C) 2020 AMI		

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

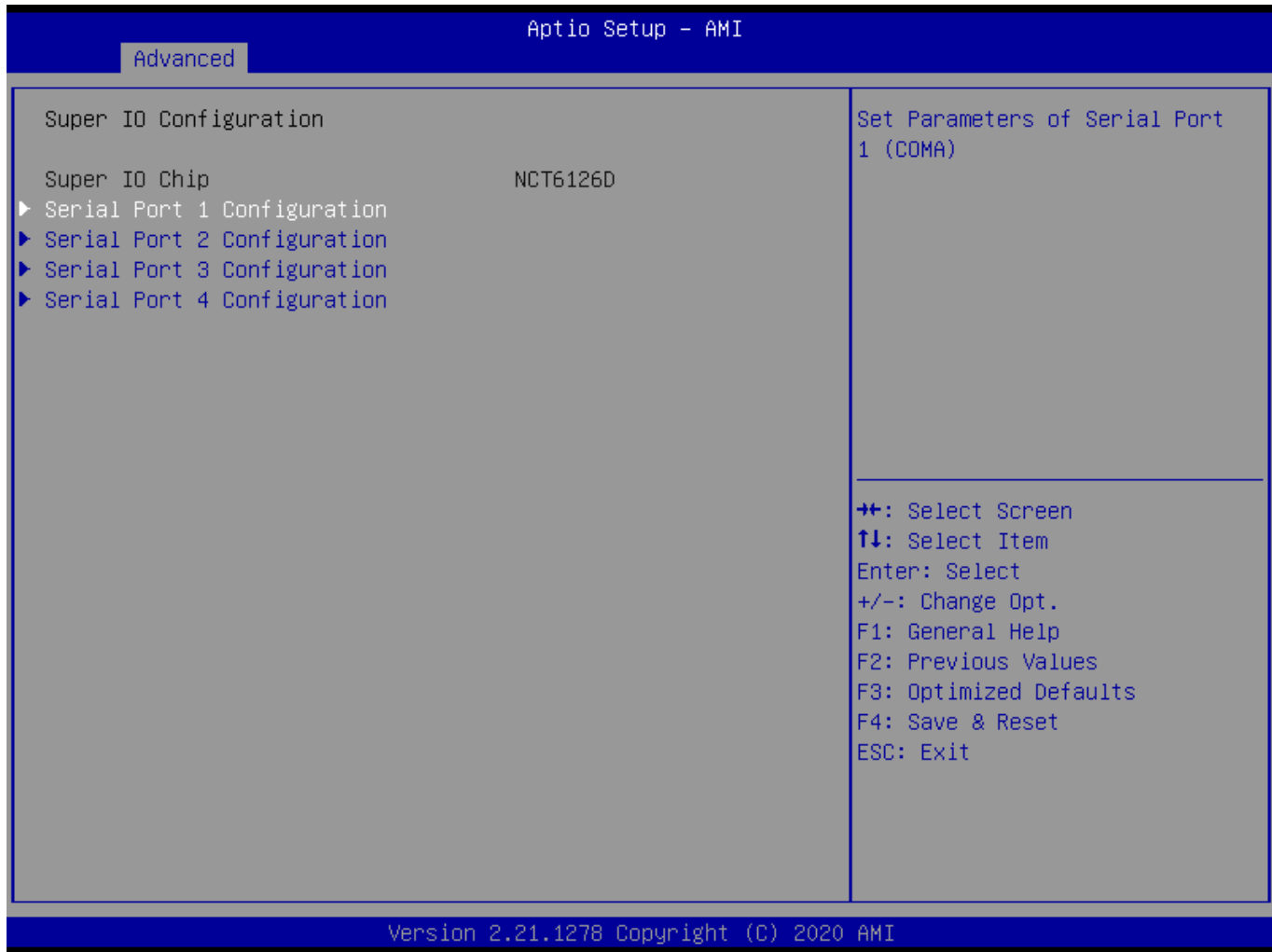
Field Name	Vender
Default Value	TPM module vender name.
Comment	This field is not selectable. There is no help text associated with it.

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 SUPER IO CONFIGURATION



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

Field Name	Serial Port 3 Configuration
------------	------------------------------------

Help	Set Parameters of Serial Port 3 (COMC)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Serial Port 4 Configuration
Help	Set Parameters of Serial Port 4 (COMD)
Comment	Press Enter when selected to go into the associated Sub-Menu.

2.4.1 Serial Port 1 Configuration

Aptio Setup - AMI

Advanced

Serial Port 1 Configuration

Serial Port

Device Settings

Change Settings

Mode Configuration

[Enabled]

IO=3E8h; IRQ=7;

[Auto]

[3T/5R RS232]

Enable or Disable Serial Port (COM)

↔: 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	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	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=3E8h; IRQ=7; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=220h; IRQ=3,4,5,6,7,9,10,11,12; IO=228h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

Field Name	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	Configure serial port as RS232/RS422/RS485.

2.4.2 Serial Port 2 Configuration

Aptio Setup - AMI

Advanced

Serial Port 2 Configuration

Serial Port [Enabled]

Device Settings IO=2E8h; IRQ=12;

Change Settings [Auto]

Enable or Disable Serial Port (COM)

↔: 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	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.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=2E8h; IRQ=12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=220h; IRQ=3,4,5,6,7,9,10,11,12; IO=228h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

2.4.3 Serial Port 3 Configuration

Aptio Setup - AMI

Advanced

Serial Port 3 Configuration

Serial Port

Device Settings

Change Settings

[Enabled]

IO=220h; IRQ=5;

[Auto]

Enable or Disable Serial Port (COM)

→+: 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	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.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=220h; IRQ=5; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=220h; IRQ=3,4,5,6,7,9,10,11,12; IO=228h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

2.4.4 Serial Port 4 Configuration

Aptio Setup - AMI

Advanced

Serial Port 4 Configuration

Serial Port

Device Settings

Change Settings

[Enabled]

IO=3F8h; IRQ=4;

[Auto]

Enable or Disable Serial Port (COM)

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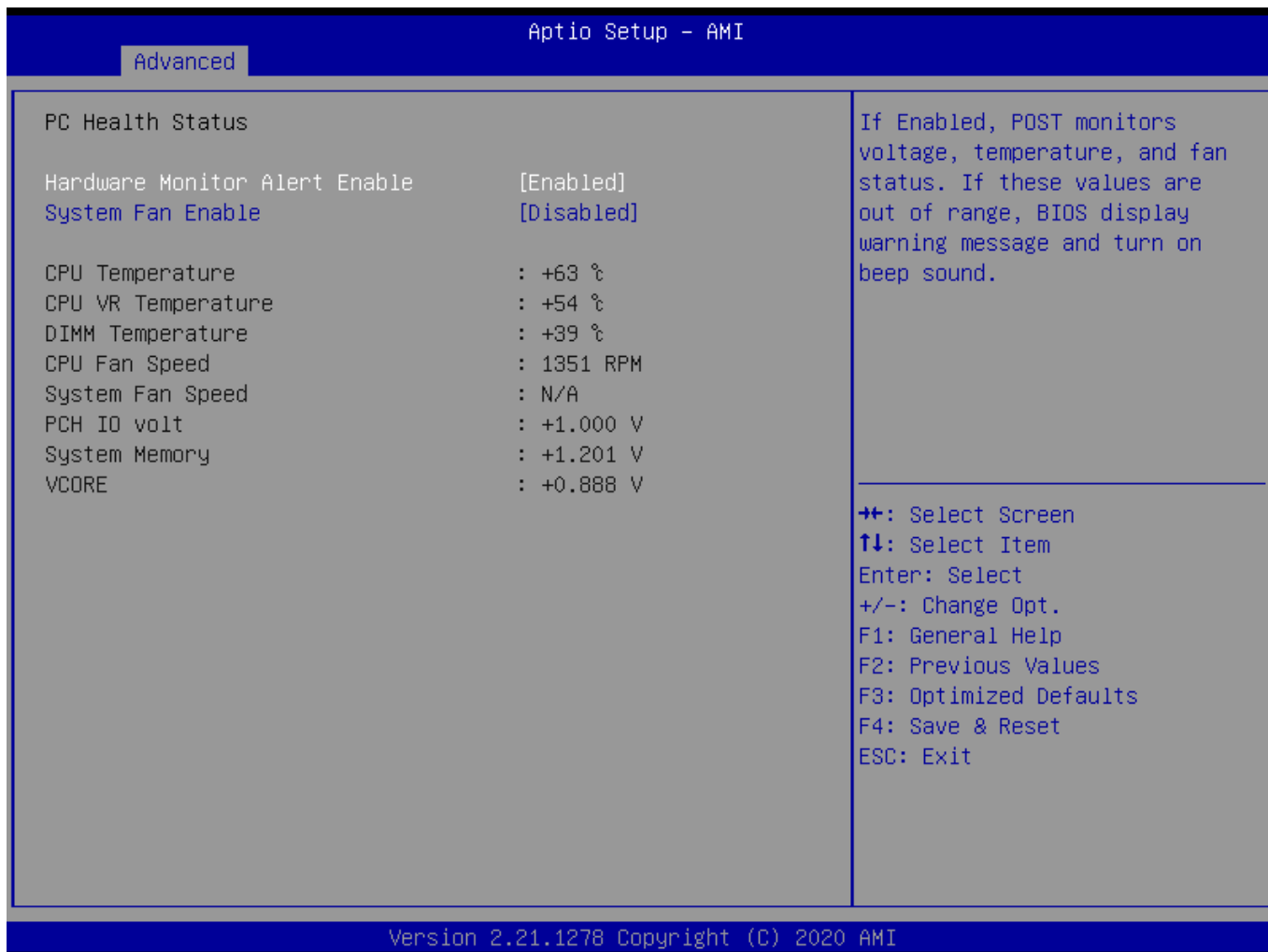
Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

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.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=3F8h; IRQ=4; IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;

	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

2.5 HARDWARE MONITOR



Field Name	Hardware Monitor Alert Enable
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	If Enabled, POST monitors voltage, temperature, and fan status. If these values are out of range, BIOS display warning message and turn on beep sound.

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

Type	Range
CPU Temperature	-20 ~ (By Processor Tjmax) °C
CPU VR Temperature	-20 ~ 120 °C
DIMM Temperature	-20 ~ 120 °C
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.
Front Fan Speed	
CPU Vcore	0~1.5V
PCH IO	0.95~1.05V
System Memory	1.16~1.26V

2.6 S5 RTC WAKE SETTINGS

Aptio Setup - AMI		
Advanced		
Wake system from S5	[Fixed Time]	Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr::min::sec specified.
Wake up hour	0	
Wake up minute	0	
Wake up second	0	
		→+: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.21.1278 Copyright (C) 2020 AMI		

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

2.7 NETWORK STACK CONFIGURATION

Aptio Setup - AMI

Advanced

Network Stack

[Enabled]

IPv4 PXE Support

[Disabled]

IPv6 PXE Support

[Disabled]

Enable/Disable UEFI Network Stack

→+: 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	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	[Disabled]
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	[Disabled]
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 CHANGE SMBIOS EVENT LOG SETTINGS

Aptio Setup - AMI		
Event Logs		
Enabling/Disabling Options		Change this to enable or disable all features of Smbios Event Logging during boot.
Smbios Event Log	[Enabled]	
Erasing Settings		
Erase Event Log	[No]	
When Log is Full	[Do Nothing]	
		⇄: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.21.1278 Copyright (C) 2020 AMI		

Field Name	Smbios Event Log
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Change this to enable or disable all feature 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 to any logging activation during reset.

Field Name	Whea Log is Full
Default Value	[Do Nothing]

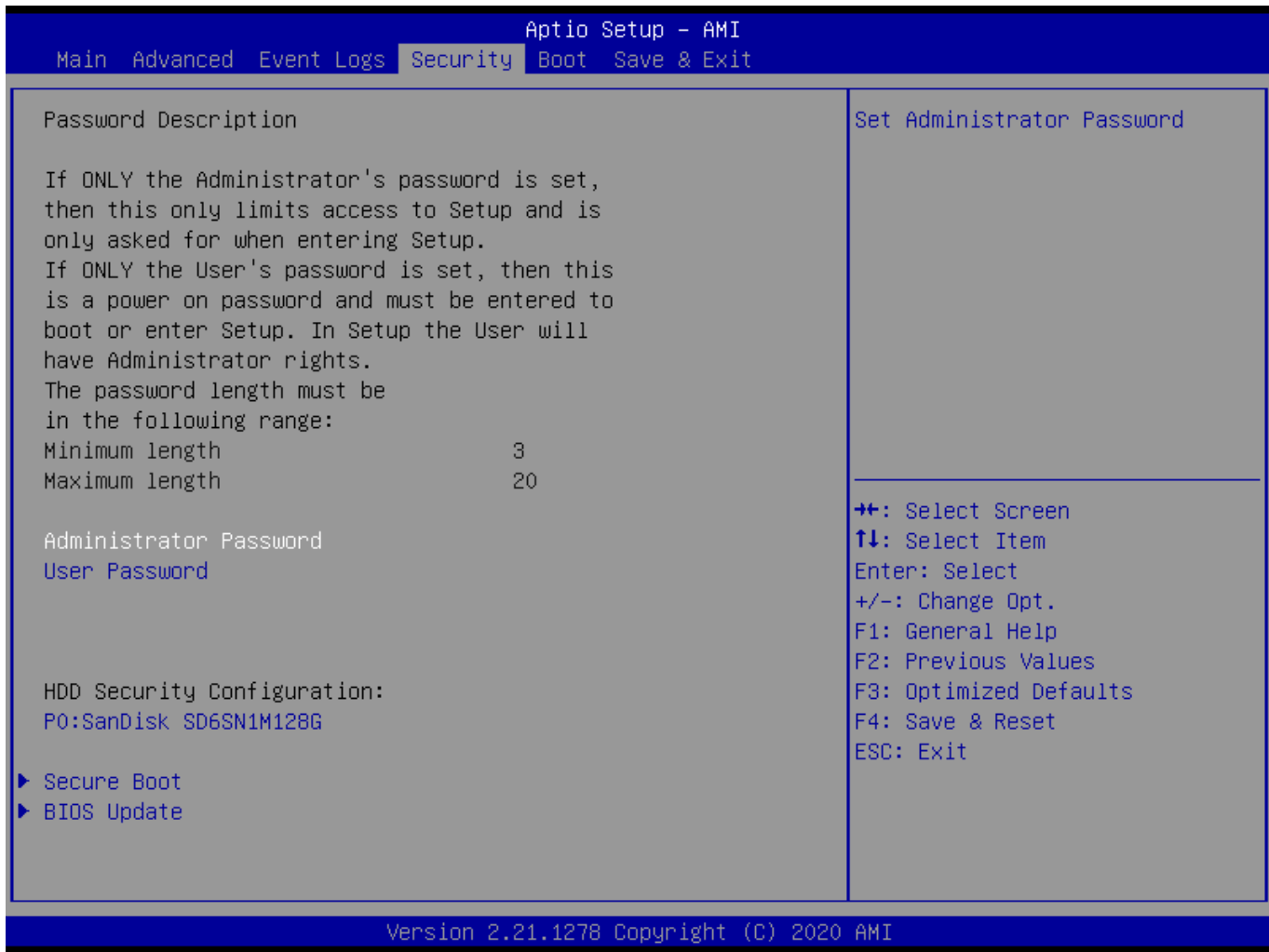
Possible Value	Do Nothing Erase Immediately
Help	Choose options for reactions to a full Smbios Event Log.

3.1 VIEW SMBIOS EVENT LOG

Aptio Setup - AMI						
Event Logs						
DATE	TIME	ERROR CODE	SEVERITY	COUNT	DESCRIPTION	
09/09/20	15:21:35	Smbios 0x16	N/A	N/A	Log Area Reset and Count is applicable only for	
09/09/20	15:21:36	Smbios 0x8D	N/A	N/A	Multi-Events	
					⇄: Select Screen	
					↑↓: Select Item	
					Enter: Select	
					+/-: Change Opt.	
					F1: General Help	
					F2: Previous Values	
					F3: Optimized Defaults	
					F4: Save & Reset	
					ESC: Exit	
Version 2.21.1278 Copyright (C) 2020 AMI						

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

Aptio Setup - AMI											
Security											
<p>HDD Password Description :</p> <p>Allows Access to Set, Modify and Clear Hard Disk User Password User Password is mandatory to Enable HDD Security. If the 'Set User Password' option is hidden, do power cycle to enable the option again.</p> <p>HDD PASSWORD CONFIGURATION:</p> <table><tr><td>Security Supported :</td><td>Yes</td></tr><tr><td>Security Enabled :</td><td>No</td></tr><tr><td>Security Locked :</td><td>No</td></tr><tr><td>Security Frozen :</td><td>Yes</td></tr><tr><td>HDD User Pwd Status:</td><td>NOT INSTALLED</td></tr></table>		Security Supported :	Yes	Security Enabled :	No	Security Locked :	No	Security Frozen :	Yes	HDD User Pwd Status:	NOT INSTALLED
Security Supported :	Yes										
Security Enabled :	No										
Security Locked :	No										
Security Frozen :	Yes										
HDD User Pwd Status:	NOT INSTALLED										
<p>→+: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit</p>											
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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

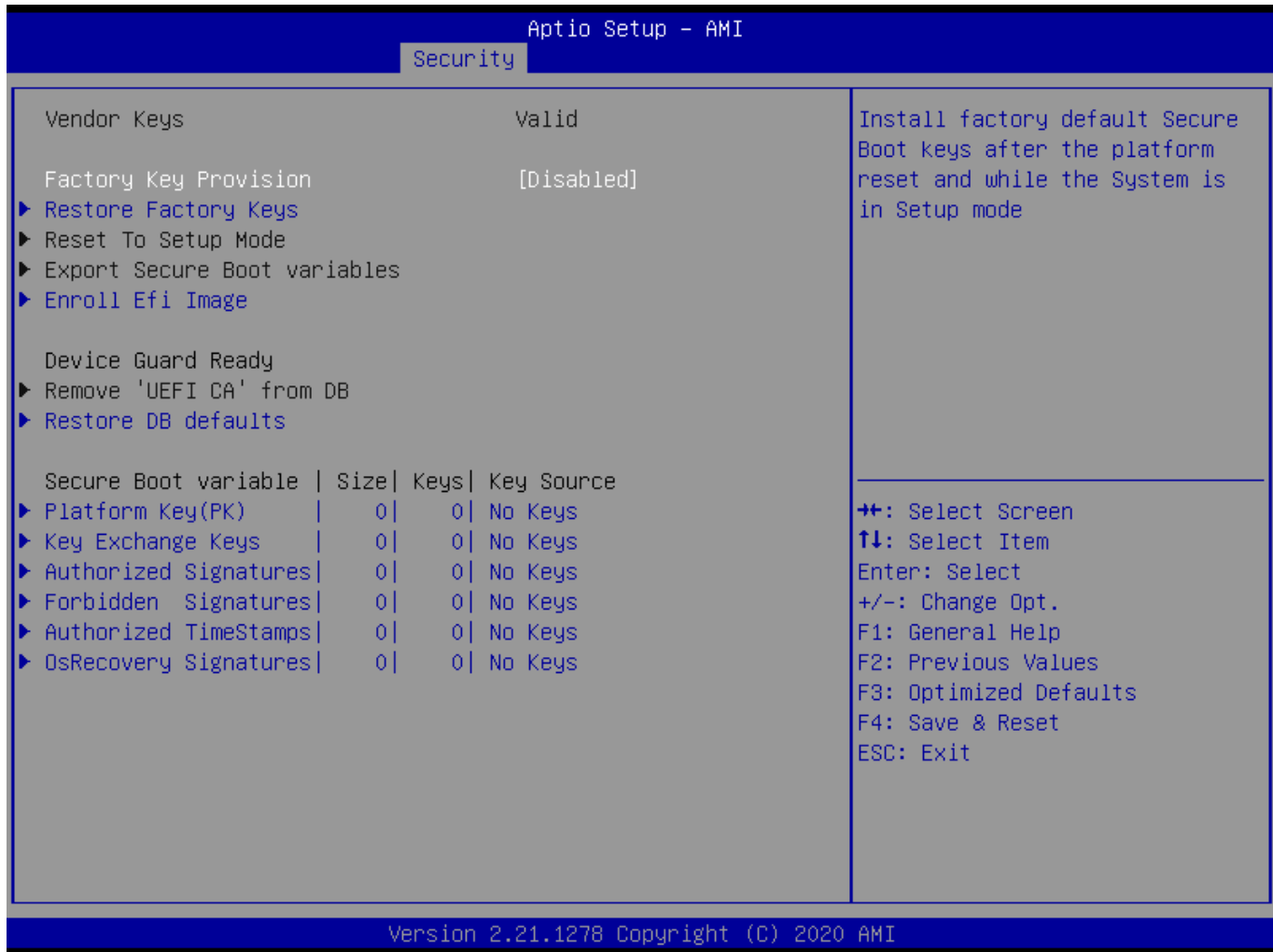
Field Name	Secure Boot Mode
Default Value	[Standard]
Possible Value	Standard Custom
Help	Secure Boot mode options:Standard or Custom.In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication

Field Name	Restore Factory Keys
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	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



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 is 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
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Help	Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device
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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

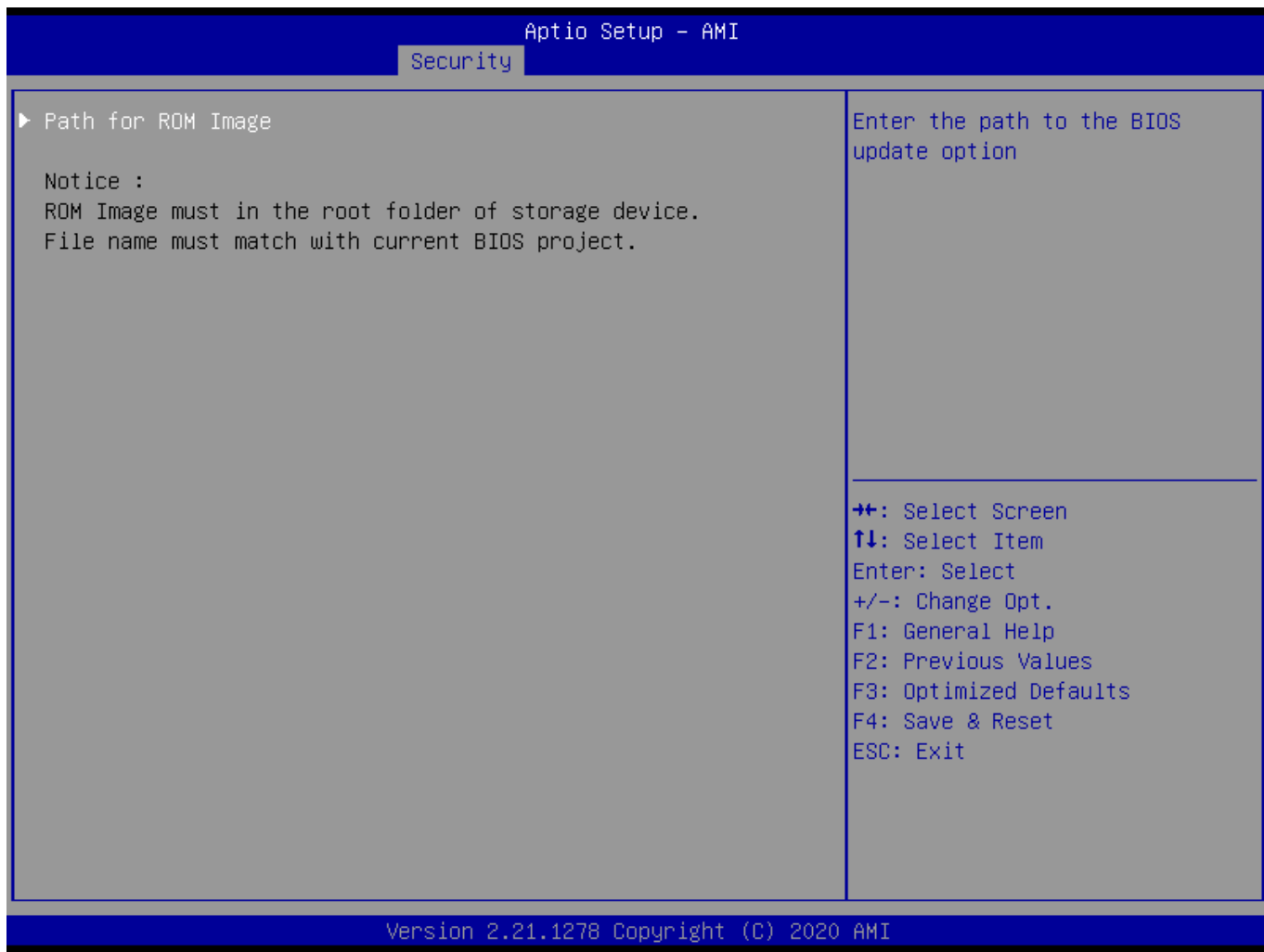
	b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

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.

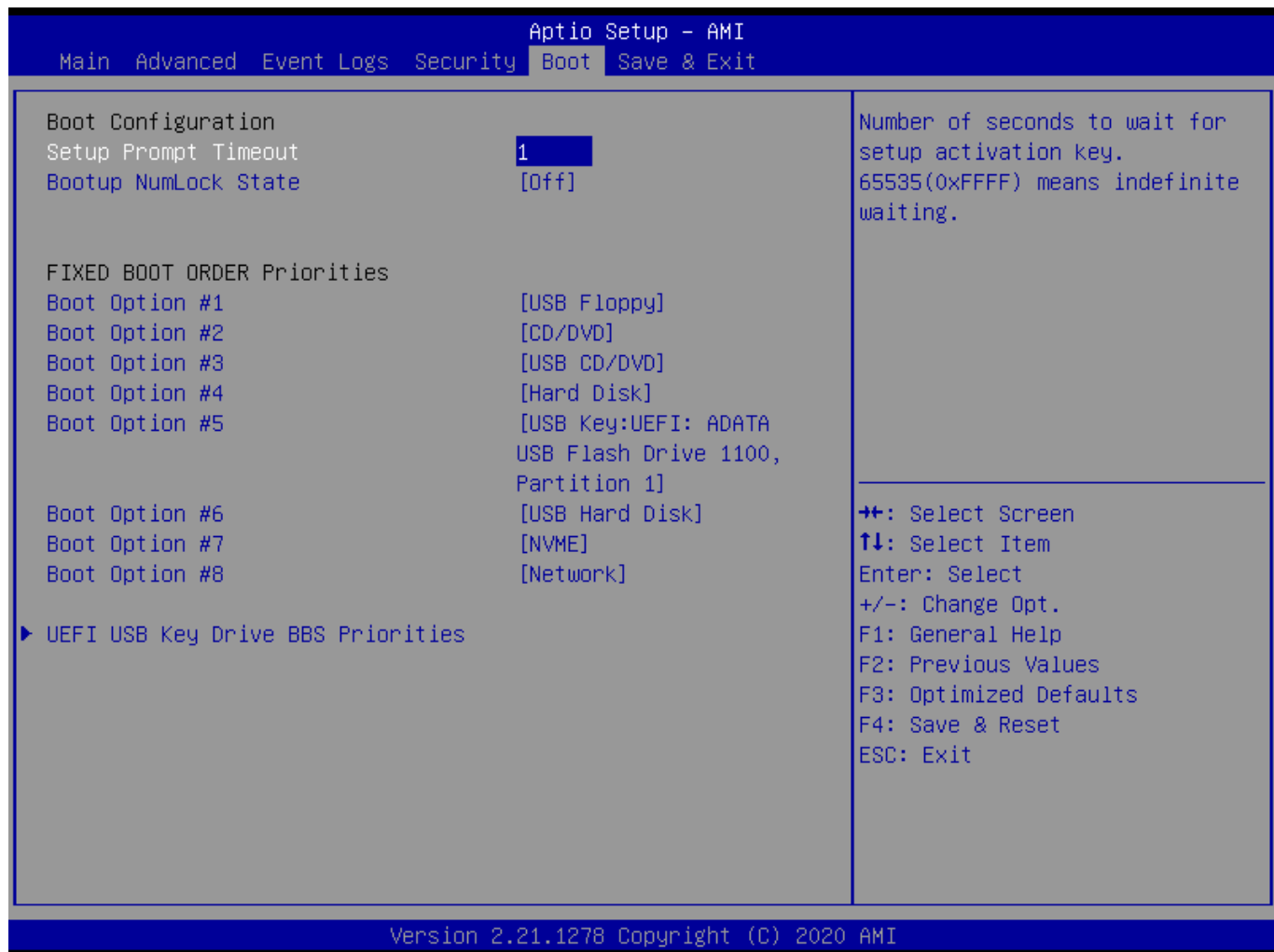
Field Name	OsRecovery Signatures
Default Value	Size:0, Keys:0, Key source: No Keys
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHAXXX 2.Authenticated UEFI Variable 3.EFI PE/COFF 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 flash 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	[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	[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 #4
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 #5
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 #6
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 #7
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 #8
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) CDROM/DVD ROM Drive BBS Priorities
Help	Specifies the Boot Device Priority sequence from available CDROM/DVD 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.