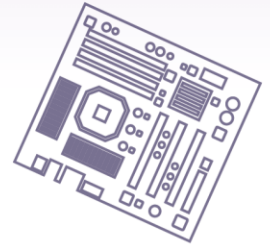
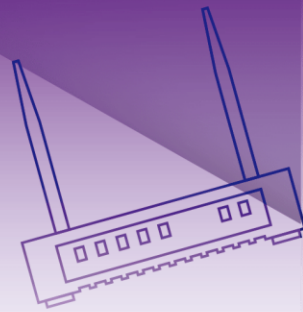
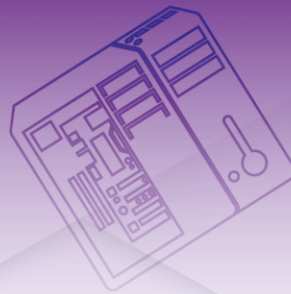


 Portwell



ANS-7A44 Series

Desktop Network Appliance

User Manual

Version R 1.2

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Revision History

R 1.0	Official Release Rev. 1.0
R 1.1	Remove unnecessary material number information in 2.3
R 1.2	Update the product picture.
R 1.3	Add ANS-7A43G/ ANS-7A42G info Add Ordering guide

Table of Contents

CHAPTER 1 PRODUCT OVERVIEW.....	5
1.1 INTRODUCTION	6
1.2 PRODUCT SPECIFICATIONS.....	7
1.3 ORDERING GUIDL	8
1.4 DIMENSION.....	9
CHAPTER 2 SYSTEM OVERVIEW.....	10
2.1 FRONT VIEW	11
2.2 REAR VIEW	12
2.3 JUMPER SETTING.....	13
CHAPTER 3 SYSTEM INSTALLATION	27
3.1 OPENING THE CHASSIS	28
3.2 MEMORY INSTALLATION	29
3.3 M.2 INSTALLATION	30
3.4 5G INSTALLATION.....	32
3.5 WI-FI INSTALLATION	34
3.6 INSTALLING MICRO SIM CARDS.....	35
3.7 5G/WI-FI ANTENNA AND SMA BULKHEAD JACK INSTALLATION	36
3.8 REPLACE CMOS BATTERY	39
CHAPTER 4 BIOS SETUP ITEMS	40
4. 1 ENTERING SETUP -- LAUNCH SYSTEM SETUP	41
4.2 HOW TO UPDATE THE BIOS FILE.....	76
4.2 HOW TO UPDATE THE EC FILE.....	79
CHAPTER 5 IMPORTANT INSTRUCTIONS	82
5.1 NOTE ON THE WARRANTY.....	83
5.2 EXCLUSION OF ACCIDENT LIABILITY OBLIGATION	83
5.3 LIABILITY LIMITATIONS / EXEMPTION FROM THE WARRANTY OBLIGATION	83
5.4 DECLARATION OF CONFORMITY.....	83

CHAPTER 6 PORTWELL SOFTWARE SERVICE	84
6.1 PET TOOL	85

Chapter 1

Product Overview

- 1.1 Introduction
- 1.2 Product Specifications
- 1.3 Ordering Guide
- 1.4 Dimension

1.1 Introduction

The ANS-7A44 series desktop networking appliance is powered by the AMD V3000 processor, providing up to 8 cores and 16 threads for efficient multi-tasking and performance-intensive applications. This system supports up to 64GB of DDR5 SO-DIMM memory with 4800MT/s speed, ensuring fast data processing capabilities.

The device is equipped with six 2.5GbE RJ45 ports, featuring two pairs of bypass functionality for enhanced network redundancy and security, as well as two 10GbE SFP+ ports for high-speed network connectivity. Storage includes two M.2 Key M 2242/2280 slot for PCIe x4 and PCIe x4 or SATA storage devices, offering flexibility for different application needs. Expansion is facilitated by two additional M.2 Key B 3042/3052 slots with support for micro-SIM cards, along with an M.2 Key E 2230/3042 slot for further connectivity and expansion options.

To address varying customer needs, we offer both fan-based and fanless system architectures. The ANS-7A44/7A43/7A42G, which includes a fan, are designed to operate within a temperature range of 0 to 40° C, making it suitable for controlled environments. On the other hand, the fanless ANS-7A44E is optimized for quiet operation and high reliability in more challenging environments, supporting an extended operating temperature range of -20 to 50° C. Both systems are equipped with dual 12VDC power inputs and are certified for CE/FCC Class B compliance, making them ideal for use in enterprise networking scenarios such as SD-WAN, edge computing, and firewall deployments.

With its robust set of features, the ANS-7A44 series is ideal for use in scenarios requiring reliable and secure network infrastructure, such as small to medium-sized businesses, branch offices, and remote site deployments.

1.2 Product Specifications

Model name	ANS-7A44E	ANS-7A44G/ ANS-7A43G/ ANS-7A42G/
Main Processor	AMD V3C18I processors, TDP 15W	AMD V3C18I/V3C16/V3C14 processors, TDP 15W
System BIOS	AMI BIOS	
Main Memory	2x DDR5 SO-DIMM up to 64GB	
Storage	1x M.2 Key M 2242/2280 Slot (PCIe x4) 1x M.2 Key M 2242/2280 Slot (PCIe x4 or SATA)	
Expansion Interface	2x M.2 Key-B 3042/3052 slot with 2x Micro SIM 1x M.2 Key A-E 2230/3042 slot with PCIe and USB 2.0 signals	
Security	TPM 2.0	
Console	1x RJ45 Console	
USB	2x USB 3.2 Gen1x2 (10Gbps)	
Ethernet	6x 2.5GbE RJ45 (Intel I226) and Two pairs of LAN bypass 2x 10GbE SFP+	
Antenna	10 x SMA Antenna holes for WiFi or LTE/5G module	
Power	Dual 12VDC outputs with 90W Power Adapter, 110- 220V AC input	
OS	Linux	
Dimension (WxDxH)	330 x 205 x 55 mm	345 x 205.2 x 44.4 mm
Mounting	Desktop	
Operating Temperature	-20 ~ 50° C (by SKU) 0 - 40° C (by SKU)	0 - 40° C
Storage Temperature	-40 ~ 70° C (-40 - 158° F) Humidity: 10 - 90% RH, non-condensing	
Certification	CE/FCC Class B	

1.3 Ordering Guide

AS1-3391	(R).ATO. ANS-7A44E. For ANSB-7A44G Board with AMD V3C18I CPU, Proprietary Fan-less Barebone System. Dual 12V Input. 2.5GbE*6. SPF+*2. DDR5 SO-DIMM*2
AS1-3392	(R).ATO. ANS-7A44G. For ANSB-7A44G Board with AMD V3C18I CPU, Proprietary Barebone System. Dual 12V Input. 2.5GbE*6. SPF+*2. DDR5 SO-DIMM*2
AS1-3394	(R).ATO. ANS-7A43G. For ANSB-7A44G Board with AMD V3C16 CPU, Proprietary Barebone System. Dual 12V Input. 2.5GbE*6. SPF+*2. DDR5 SO-DIMM*2
AS1-3393	(R).ATO. ANS-7A42G. For ANSB-7A44G Board with AMD V3C14 CPU, Proprietary Barebone System. Dual 12V Input. 2.5GbE*6. SPF+*2. DDR5 SO-DIMM*2

1.4 Dimension

In this section, we present the dimensions of two system models: the ANS-7A44E and the ANS-7A44/7A43/7A42G.

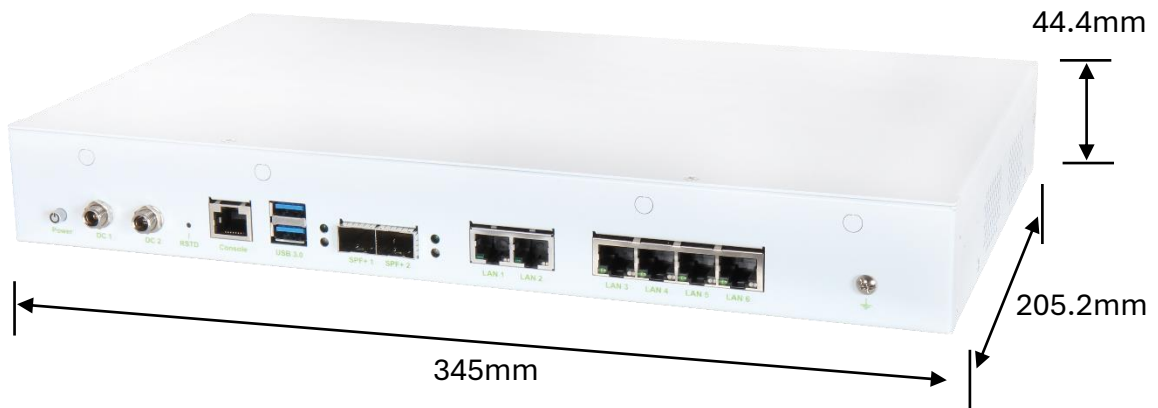


Figure 1 **ANS-7A44/7A43/7A42G** Mechanical Dimension

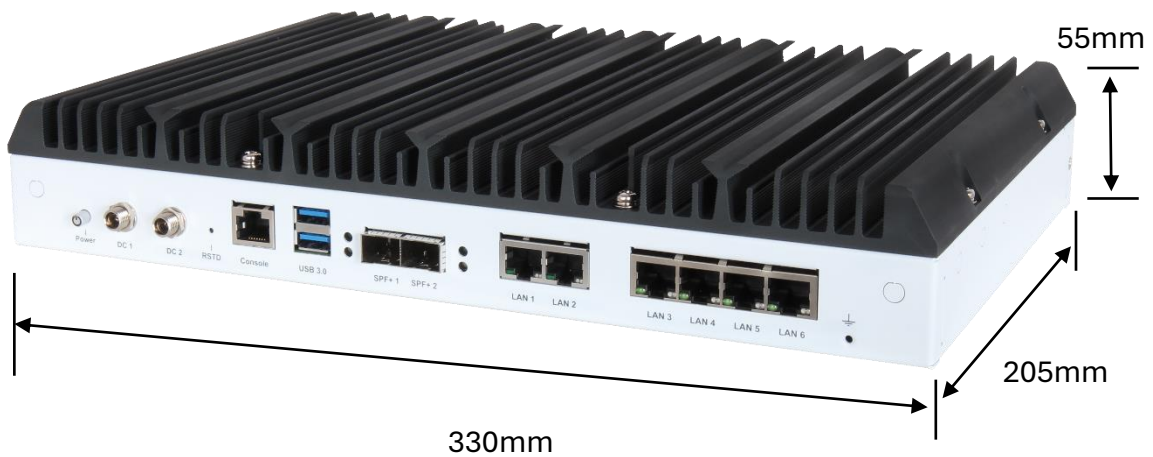


Figure 2 **ANS-7A44E** Mechanical Dimension

Chapter 2

System Overview

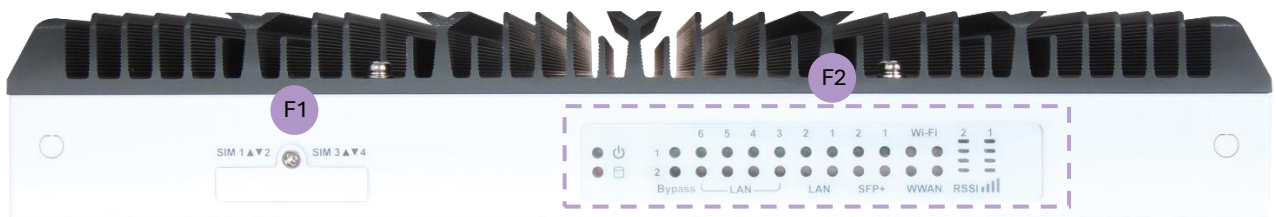
- 2.1 Front view
- 2.2 Rear view
- 2.3 Jumper setting

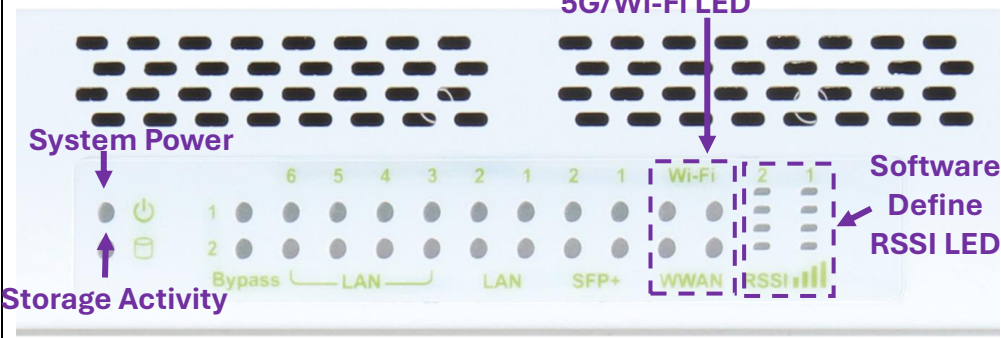
2.1 Front view

- ANS-7A44/7A43/7A42G System



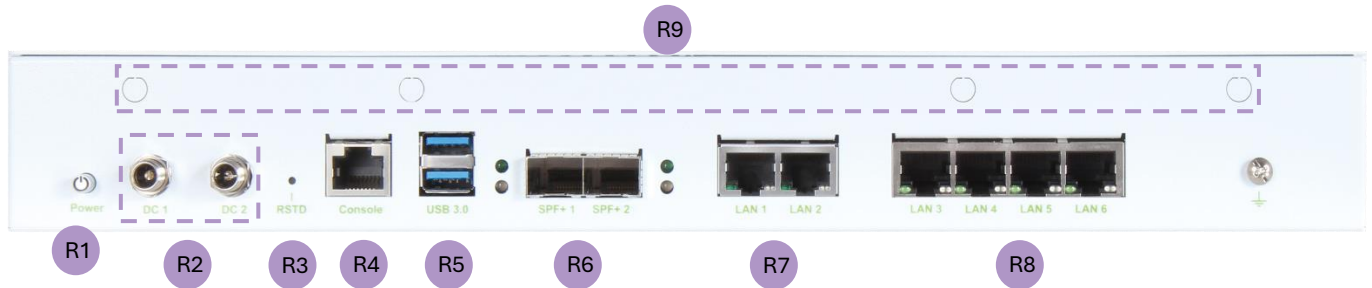
- ANS-7A44E System



No.	Description
F1	4x Micro SIM Card
F2	<p>LED Indicators</p> 

2.2 Rear view

- ANS-7A44/7A43/7A42G System



- ANS-7A44/7A43/7A42G System



No.	Description
R1	Power Switch
R2	2x DC Jack
R3	Reset Button
R4	1x RJ45 Console Port
R5	2x USB 3.2 Gen1x2 (10Gbps) Ports
R6	2x 10G SFP+ Ports
R7	2x 2.5GbE RJ45 Ports
R8	4x 2.5GbE RJ45 Ports, Two pairs of LAN bypass
R9	4x SMA connectors for Wi-Fi / LTE module (Optional)

2.3 Jumper setting

This chapter indicates jumpers', headers and connectors' locations. Users may find useful information related to hardware settings in this chapter.

Drawing Overview

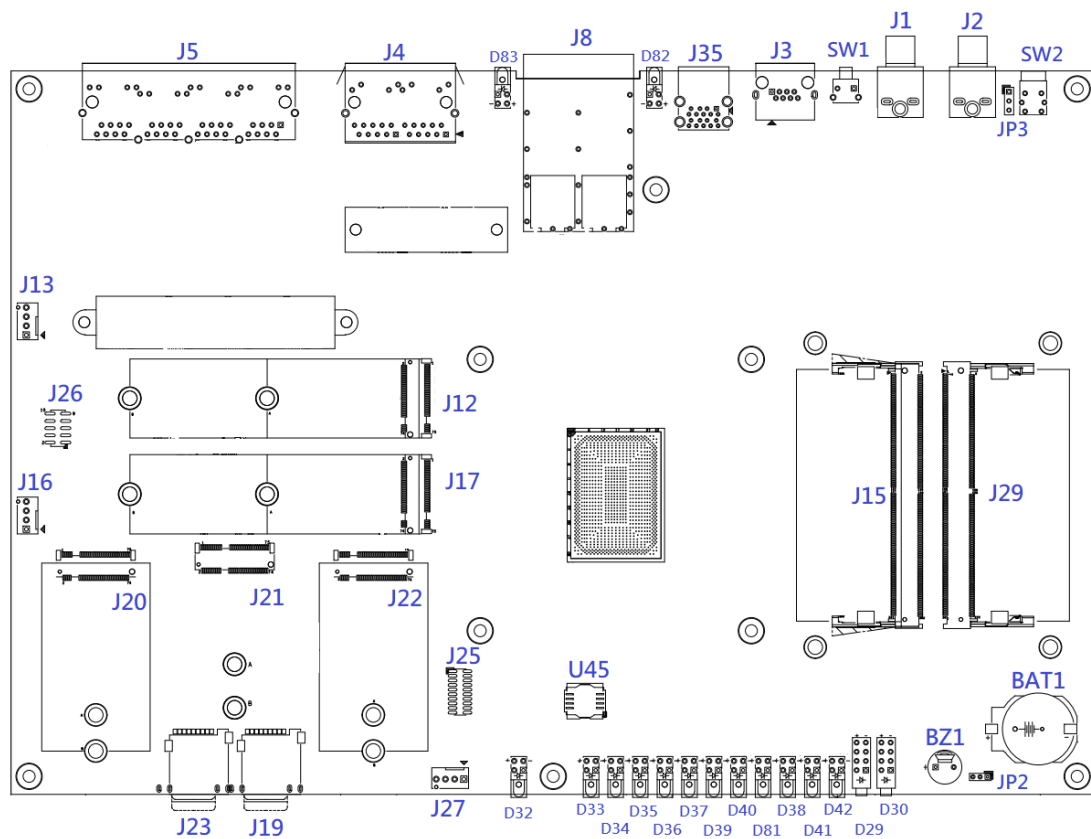


Figure 3 Top Side

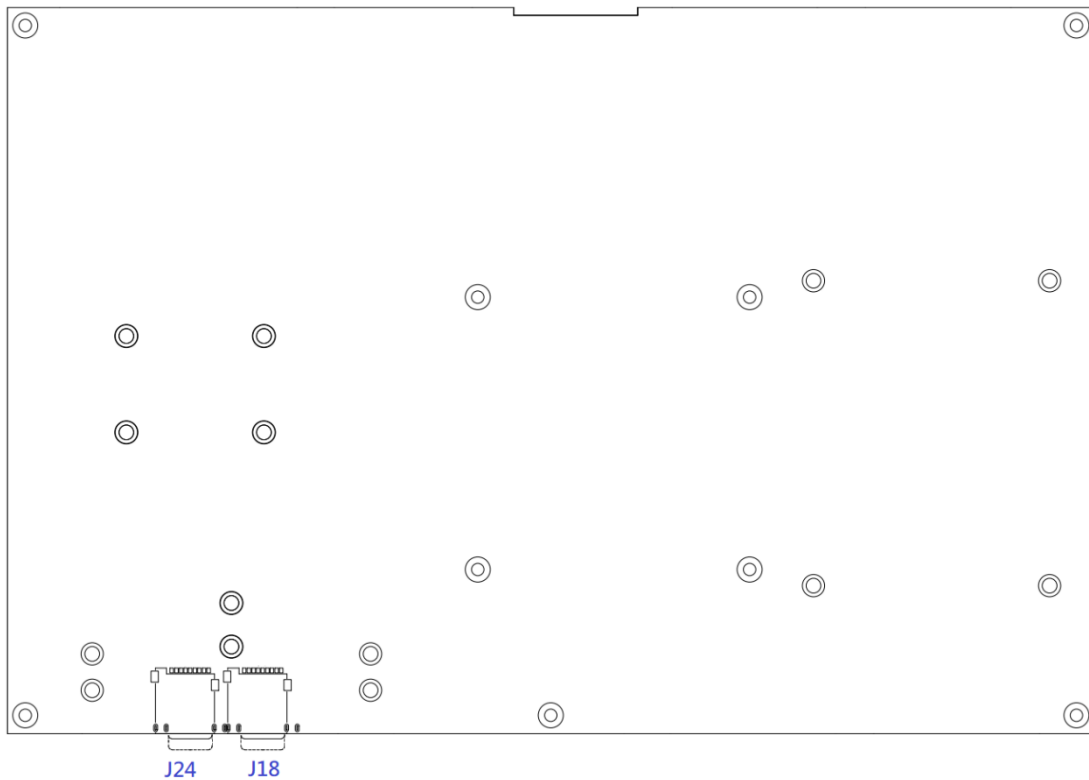
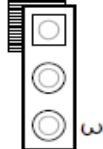


Figure 4 Bottom Side

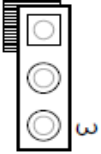
Jumper Setting List

Location	Connector	Function
JP2	Pin Header 3Px1 P=2.0mm 180D	Clear CMOS
JP3	Pin Header 3Px1 P=2.54mm 180D	SW2 Function Select

JP2: Clear CMOS

PCB Footprint	Jumper Setting	Function Description
	1-2	Normal (Default)
	2-3	Clear CMOS

JP3: SW2 Function Select

PCB Footprint	Jumper Setting	Function Description
	1-2	Power Button (Default)
	2-3	Reset Button

Connector Function List

Location	Connector	Function
J12	NGFF M.2 Key-M H=8.5mm	M.2 2280/2242 NVMe PCIe4 SSD
J13	Connector FAN 3PIN P=2.54mm	System1 FAN Connector
J15	DDR5 SO-DIMM 262P Black	DDR4 SODIMM Connector (Channel A)
J16	Connector FAN 3PIN P=2.54mm	System2 FAN Connector
J17	NGFF M.2 Key-M H=8.5mm	M.2 2280/2242 NVMe PCIe4 SSD / SATA3
J18	Micro SIM Connector	SMI4 Non-Push Type for J22 UIM2
J19	Micro SIM Connector	SMI3 Non-Push Type for J22 UIM1
J20	NGFF M.2 Key-B H=8.5mm	M.2 3052/3042 USB3.1 Gen1
J21	NGFF M.2 Key-E H=8.5mm	M.2 2230/3042 PCIe1+USB2.0
J22	NGFF M.2 Key-B H=8.5mm	M.2 3052/3042 USB3.1 Gen1
J23	Micro SIM Connector	SIM1 Push Push Type for J20 UIM1
J24	Micro SIM Connector	SIM2 Push Push Type for J20 UIM2
J25	Pin Header 10Px2 P=1.27mm 180D	AMD HDT Connector
J26	Pin Header 5Px2 P=2.0mm 180D	80 Port
J27	Connector FAN 4PIN P=2.54mm	CPU FAN Connector
J29	DDR5 SO-DIMM 262P Black	DDR4 SODIMM Connector (Channel B)
U45	SMD IC SOCKET For SPI SO-8	BISO Flash ROM
BZ1	DIP Buzzer 9.6x5mm	System Buzzer
BAT1	SMD Battery Holder	CR2032 Battery

J12: M.2 Key-M 2280/2242 NVMe PCIe4 SSD

*Reference standard M.2 definition SPEC

J17: M.2 Key-M 2280/2242 NVMe PCIe4 SSD / SATA3

*Reference standard M.2 definition SPEC

J21: M.2 Key-E 2230/3042 PCIe1+USB2.0

*Reference standard M.2 definition SPEC

J15: DDR5 SODIMM Connector (Channel A)

*Reference standard DDR5 SO-DIMM definition SPEC

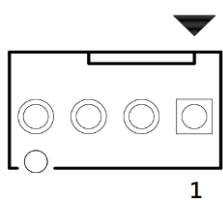
J29: DDR4 SODIMM Connector (Channel B)

*Reference standard DDR5 SO-DIMM definition SPEC

J13: System1 FAN Connector

J16: System2 FAN Connector

J27: CPU FAN Connector

PCB Footprint	Pin No.	Signal Description		
	1	GND		
	2	+12V		
	3	CPU_FAN_IN		
	4	CPU_FAN_Out		

J20: M.2 Key-B 3052/3042 USB3.1 Gen1

J23: SIM1 Push Push Type for J20 UIM1

J24: SIM2 Push Push Type for J20 UIM2

*Reference standard M.2 definition SPEC

J22: M.2 Key-B 3052/3042 USB3.1 Gen1

J19: SMI3 Non-Push Type for J22 UIM1

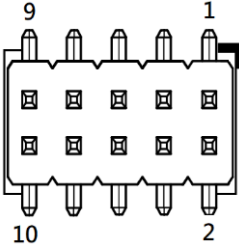
J18: SMI4 Non-Push Type for J22 UIM2

*Reference standard M.2 definition SPEC

J25: AMD HDT Connector (Reserve)

*For Debug.

J26: 80 Port

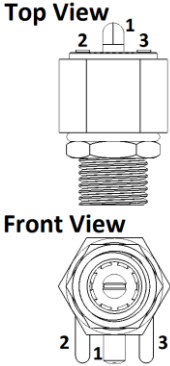
PCB Footprint	Pin No.	Signal Description	Pin No.	Signal Description
	1	LED_A	2	+3.3V
	3	LED_B	4	LED_E
	5	LED_C	6	LED_F
	7	LED_D	8	LED_G
	9	LED_DP	10	GND

Rear I/O List

Location	Connector	Function
J1	DC Jack	DC2_Redundant Power: +12V DC In
J2	DC Jack	DC1_Redundant Power: +12V DC In
J3	RJ45 Connector	Console Port
J4	RJ45 1x2 W/LED	LAN1&LAN2: Dual Port 2.5Gb Ethernet
J5	RJ45 1x4 W/LED	LAN3~LAN6: Quad Port 2.5Gb Ethernet
J35	Dual USB 3.2 Type A 90D	USB3.2 Dual Port
J8	SFP Plus CAGE 1x2 Port	10G1&10G2: Dual Port SFP+
SW1	Push-Button Switch. 2P 90D	Factory Default
SW2	TACT SWITCH.6P 90D W/LED Blue	Power or Reset Button and Power LED

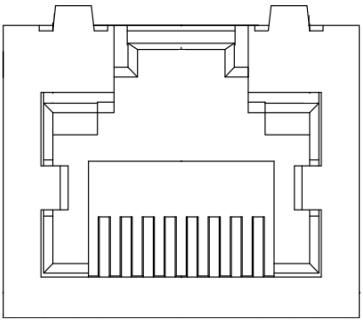
J2:DC1_Redundant Power: +12V DC In

J1:DC2_Redundant Power: +12V DC In

PCB Footprint	Pin No.	Signal Description		
	1	+12V		
	2	GND		
	3	GND		

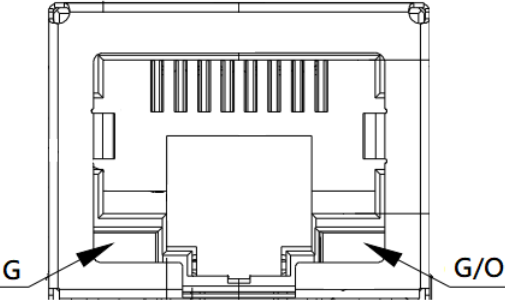
J3: Console Port

*The console port does not use RTS/CTS.

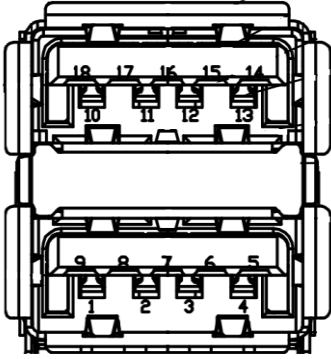
PCB Footprint	Pin No.	Signal Description		
	1	CTS		
	2	DTR		
	3	TXD		
	4	GND		
	5	GND		
	6	RXD		
	7	DSR		
	8	RTS		

J4: LAN1&LAN2: Dual Port 2.5Gb Ethernet

J5: LAN3~LAN6: Quad Port 2.5Gb Ethernet

PCB Footprint	Pin No.	Signal Description	Pin No.	Signal Description
	1	MDI0_P	G	Link/Activity
	2	MDI0_N	G/O	Green : 2.5G
	3	MDI1_P		Orange : 1G
	4	MDI2_P		Dark : 10M/100M
	5	MDI2_N		
	6	MDI1_N		
	7	MDI3_P		
	8	MDI3_N		

J35: Dual USB 3.2 Type A 90D

PCB Footprint	Pin	Signal	Pin	Signal
	No.	Description(Lower)	No.	Description(Upper)
	1	+5V	10	+5V
	2	USB2_D-	11	USB2_D-
	3	USB2_D+	12	USB2_D+
	4	GND	13	GND
	5	USB3_SSRX-	14	USB3_SSRX-
	6	USB3_SSR+-	15	USB3_SSR+-
	7	USB_GND	16	USB_GND
	8	USB3_SSTX-	17	USB3_SSTX-
	9	USB3_SST+-	18	USB3_SST+-

J8: 10G1&10G2: Dual Port SFP+

*Reference standard SFF-8472 definition SPEC

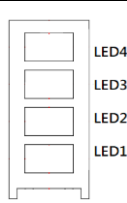
LED List

Location	Component	Function
D29	Green LED 4x1 Stack	RSSI 2 LED
D30	Green LED 4x1 Stack	RSSI 1 LED
D32	Green & Red LED 2x1 Stack	Power & Storage Access LED
D33	Green LED 2x1 Stack	LAN Bypass LED
D34	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN6 LED

Location	Component	Function
D35	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN5 LED
D36	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN4 LED
D37	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN3 LED
D39	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN2 LED
D40	Green & Green/Yellow LED 2x1 Stack	RJ45 LAN1 LED
D81	Green & Green/Yellow LED 2x1 Stack	10G2 SFP+ LED
D38	Green & Green/Yellow LED 2x1 Stack	10G1 SFP+ LED
D41	Blue LED 2x1 Stack	5G/LTE and Wi-Fi LED
D42	Blue LED 2x1 Stack	5G/LTE and Wi-Fi LED
D83	Green & Green/Yellow LED 2x1 Stack	10G2 SFP+ LED
D82	Green & Green/Yellow LED 2x1 Stack	10G1 SFP+ LED

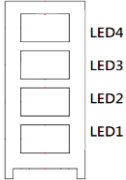
D30: RSSI 1 LED

Software Defined from AMD V3000 GPO.

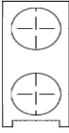
PCB Footprint	Pin No.	Function Description
	LED4	EGPIO138
	LED3	EGPIO137
	LED2	EGPIO136
	LED1	EGPIO135

D29: RSSI 2 LED

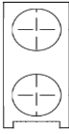
Software Defined from AMD V3000 GPO.

PCB Footprint	Pin No.	Function Description
	LED4	EGPIO143
	LED3	EGPIO142
	LED2	EGPIO141
	LED1	EGPIO140

D32: Power & Storage Access LED

PCB Footprint	Pin No.	Function Description
	Upper	Green LED : Power
	Lower	Red LED : Storage Access

D33: LAN Bypass LED

PCB Footprint	Pin No.	Function Description
	Upper	Green LED : Bypass 1
	Lower	Green LED : Bypass 2

D40: RJ45 LAN1 LED

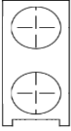
D39: RJ45 LAN2 LED

D37: RJ45 LAN3 LED

D36: RJ45 LAN4 LED

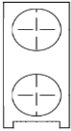
D35: RJ45 LAN5 LED

D34: RJ45 LAN6 LED

PCB Footprint	Pin No.	Function Description
	Upper	Green LED : Link/Activity
	Lower	Green LED : 2.5GbE
		Orange LED : 1GbE
		Dark : 10M/100MbE

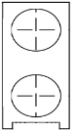
D38: 10G1 SFP+ LED , D82: 10G1 SFP+ LED

D81: 10G2 SFP+ LED , D83: 10G2 SFP+ LED

PCB Footprint	Pin No.	Function Description
	Upper	Green LED : Link/Activity
	Lower	Green LED : 10GbE
		Orange LED : 1G/100MbE

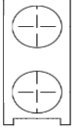
D42: 5G/LTE and Wi-Fi LED

Software Defined from AMD V3000 GPO.

PCB Footprint	Pin No.	Function Description
	Upper	EGPIO153
	Lower	EGPIO154

D41: 5G/LTE and Wi-Fi LED

Software Defined from AMD V3000 GPO.

PCB Footprint	Pin No.	Function Description
	Upper	EGPIO155
	Lower	EGPIO156



Chapter 3

System Installation


- 3.1 Opening the Chassis
- 3.2 Memory installation
- 3.3 M.2 installation
- 3.4 5G installation
- 3.5 Wi-Fi installation
- 3.6 Installing Micro SIM Cards
- 3.7 Antenna Cable Assembly

3.1 Opening the Chassis

- ANS-7A44/7A43/7A42G System

	<p>There are 6 screws (as shown) that tightly hold the top cover with the main frame of the chassis. Unscrew all the screws to remove the top cover.</p>
	<p>Remove the top cover and see the air duct in the system. There are 2 screws (as shown) that mount the air duct with the main board of the system. Unscrew all the screws to remove the air duct.</p>

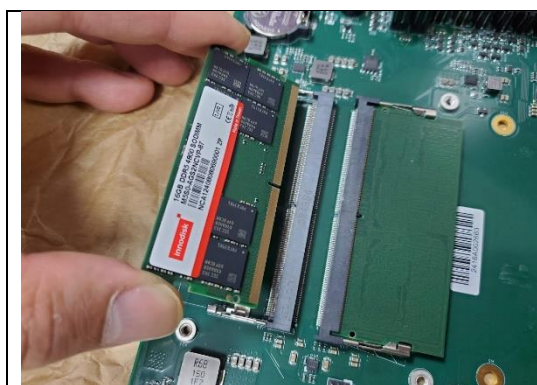
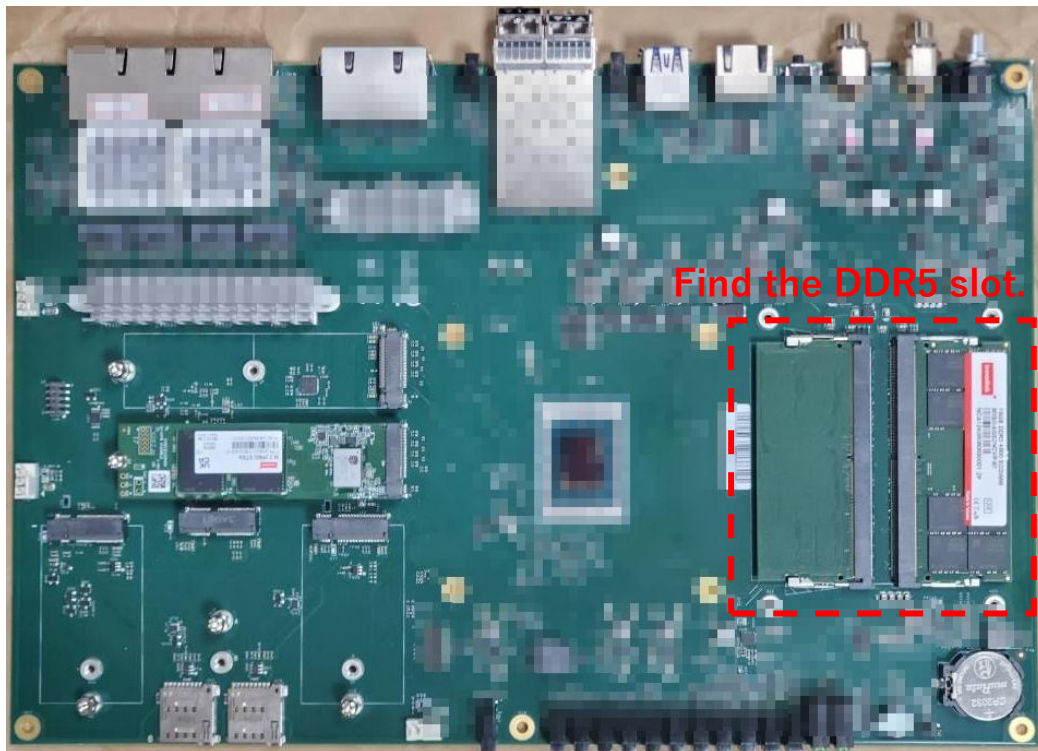
- ANS-7A44E System

	<p>There are 8 screws (as shown) that tightly fix the top cover to the main frame of the chassis. Remove all screws to remove the top cover. Since there is thermal grease and thermal pad, please remove it carefully to avoid damage.</p>
---	---

*Please refer to the actual product for product color.

3.2 Memory installation

The system supports two DDR5 SO-DIMM slot for high-performance tasks. Follow the instructions below to provide a general installation and handling information for SO-DIMM memory module.



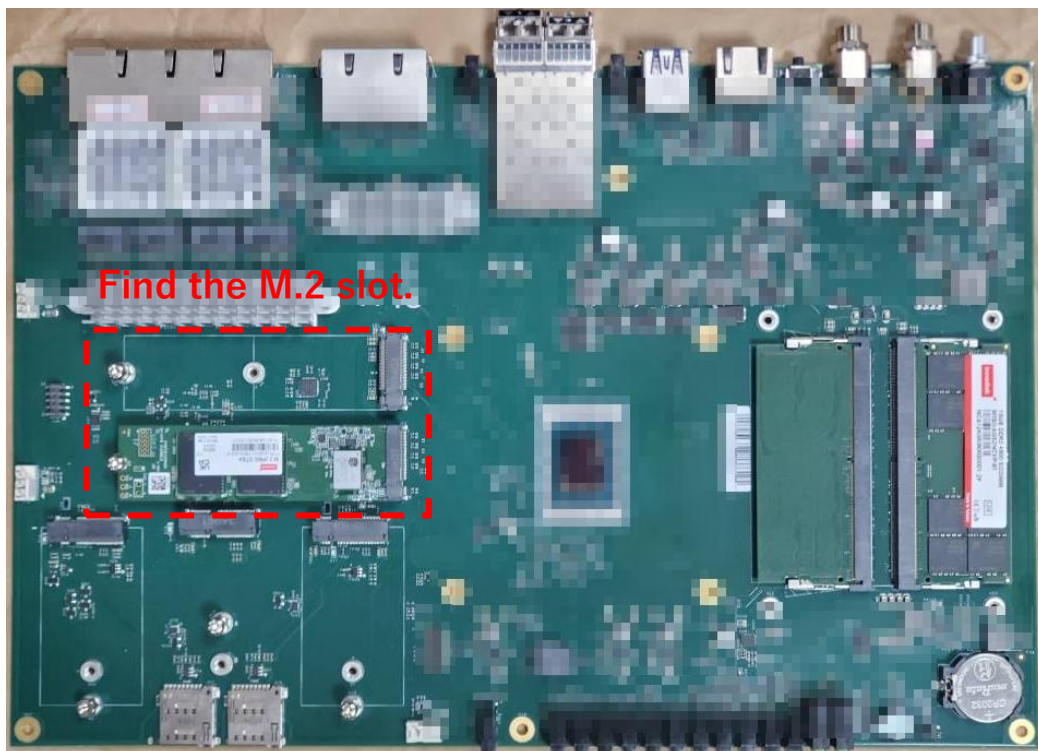
Align a DIMM on the socket such that the notch on the DIMM matches the DIMM slot key on the socket.



Push down the RAM module until it clicks in place.

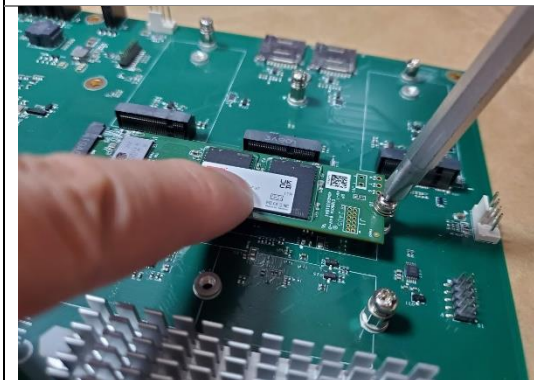
3.3 M.2 installation

The system supports two M.2 slot for storage. Follow the instructions below for installation.





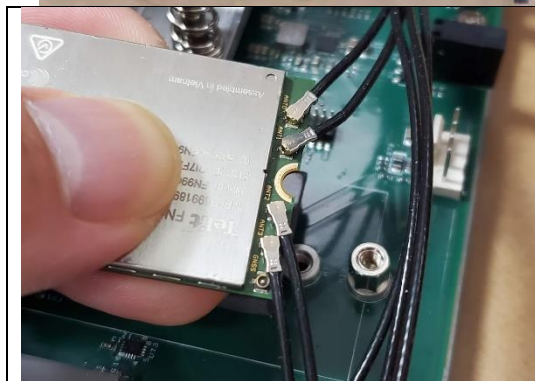
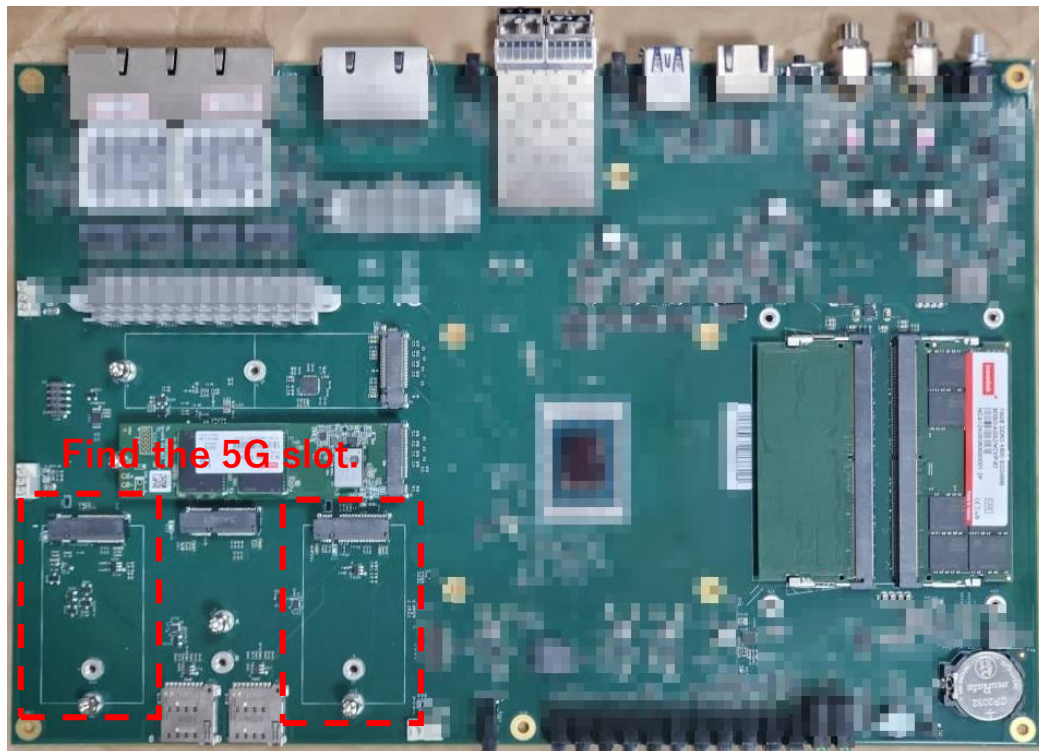
Align and insert the M.2 card into the module slot.



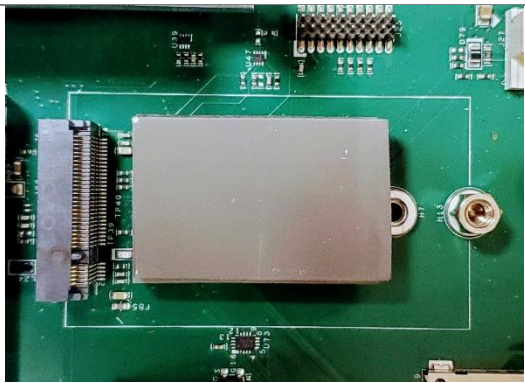


Push down and secure the M.2 card in place using the bundled screw(M3x6).

3.4 5G installation

The system supports two M.2 slot for LTE/5G. Follow the instructions below for installation.

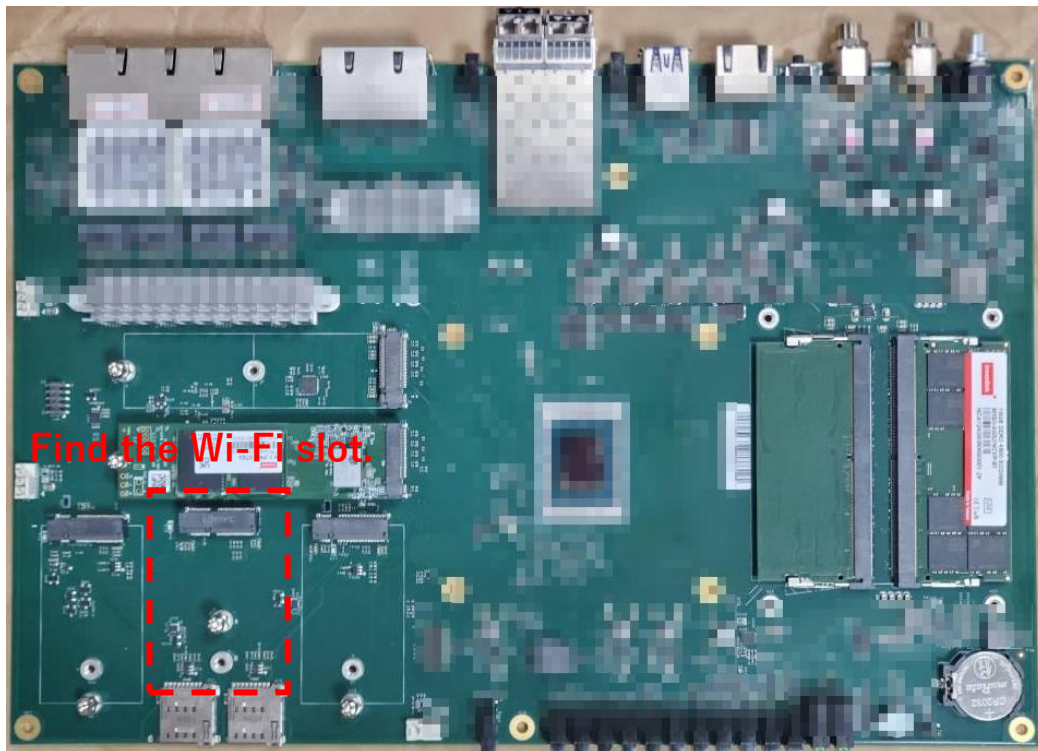


Carefully connect the black antenna cables into their respective sockets on the module. Make sure to align them well before applying force to click them into place, as the connectors are small and fragile.

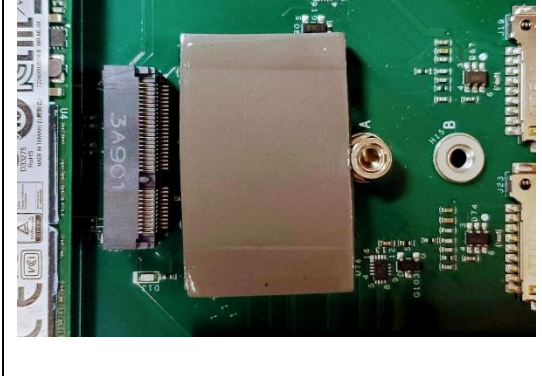

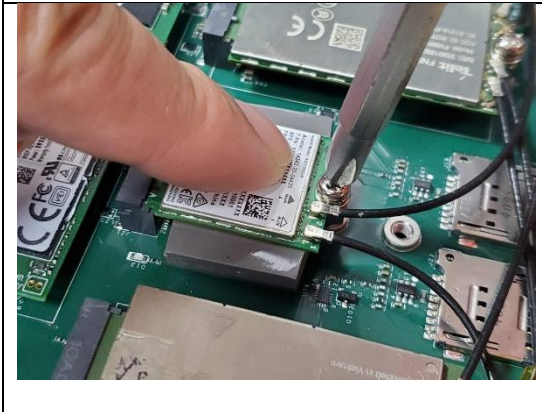
	<p>Place a dedicated thermal pad in the center of the installation area. (Only for ANS-7A44/7A43/7A42G)</p>
	<p>Align and insert the 5G module into the module slot.</p>
	<p>Push down and secure the 5G module in place using the bundled screw(M3x6).</p>

3.5 Wi-Fi installation

The system supports one M.2 slot for Wi-Fi. Follow the instructions below for installation.


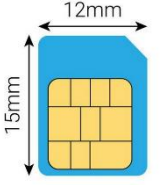


Carefully connect the black antenna cables into their respective sockets on the module. While keeping a finger on top of the antennas to hold them in place. Make sure to align them well before applying force to click them into place, as the connectors are small and fragile.

	<p>Place a dedicated thermal pad in the center of the installation area. (Only for ANS-7A44/7A43/7A42G)</p>
	<p>Align and insert the Wi-Fi module into the module slot.</p>
	<p>Push down and secure the Wi-Fi module in place using the bundled screw(M3x6).</p>

3.6 Installing Micro SIM Cards

The system supports four SIM cards for two 5G module. The SIM card slot is located on the system's front panel. After removing the SIM card cover, you will see four SIM card slots.


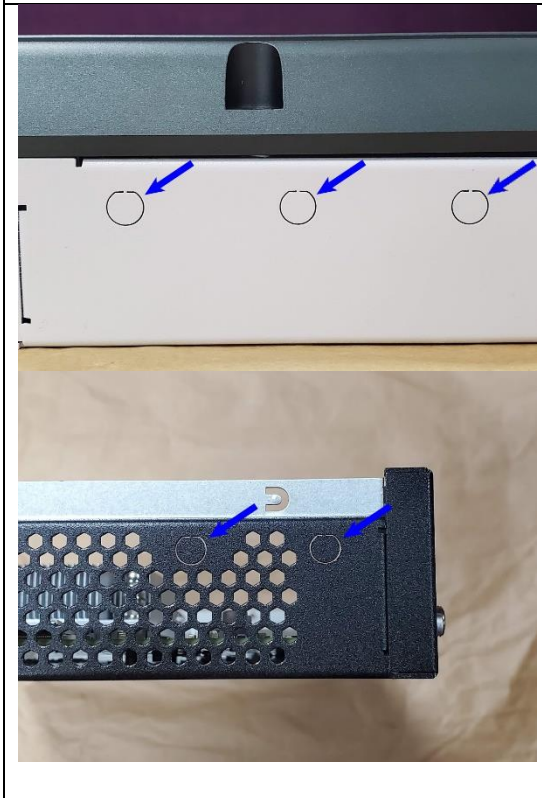
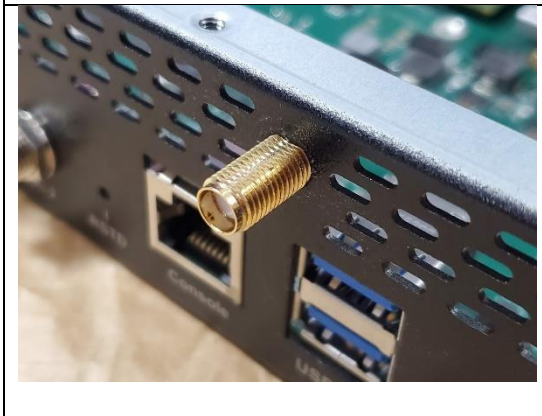
	<p>Open the SIM card slot cover. Insert the Micro SIM card into the slot (as shown) with the gold contacts facing PCB.</p> <p>Removing Micro SIM card: Press the Micro SIM card to eject, then pull it out.</p> <div style="text-align: right;">  <p>Micro SIM</p> </div>
---	---

3.7 5G/Wi-Fi Antenna and SMA

Bulkhead Jack installation

The system has 10 antenna holes to support SMA antenna. Follow the instructions below for installation.

	<p>In the accessory box (if you have purchased 5G/Wi-Fi modules), there are two types of bulkhead jack.</p> <p>The upper connector (as shown) is a female SMA bulkhead jack for 5G modules, below is a female RP-SMA bulkhead jack for Wi-Fi modules.</p> <p>5G RF Cable 1: cm, P/N: 5G RF Cable 2: cm, P/N: 5G RF Cable 3: cm, P/N: Wi-Fi RF Cable P/N:</p>
---	--

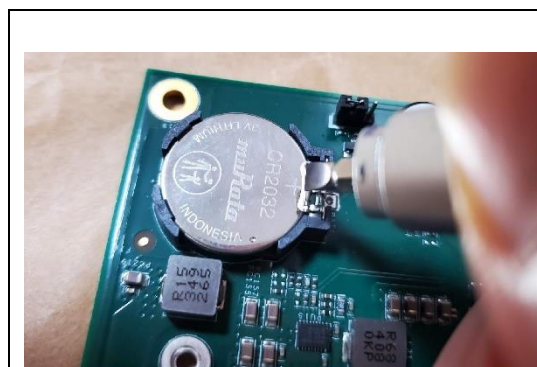
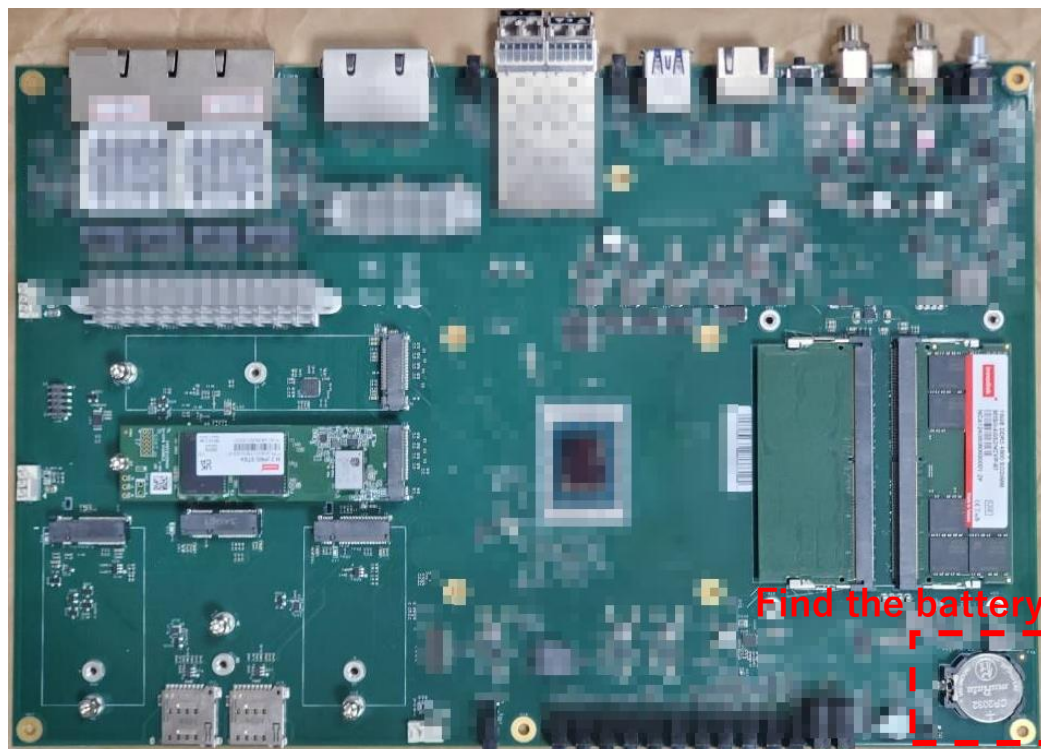
	<p>In the accessory box (if you have purchased 5G/Wi-Fi modules), there are two types of antennas.</p> <p>The upper antenna (as shown) is a male SMA connector 5G SMA bulkhead jack, below is a male RP-SMA connector for Wi-Fi SMA bulkhead jack.</p> <p>Antenna for 5G, P/N: Antenna for WiFi, P/N:</p>
	<p>Find the SMA jack reserved hole on the chassis (like shown).</p>
	<p>open it then push the SMA jack through the hole from inside the chassis.</p>



Outside the panel, push on the washer and tighten the nut with a 8mm hex tool.

3.8 Replace CMOS battery

A coin-cell battery powers the RTC and CMOS memory. The battery has an estimated life of three years when the unit isn't plugged into an AC power source. When the computer is plugged in, the standby current from the power supply extends the life of the battery.



Find the location of CMOS battery on motherboard. There is a latch used to secure battery on battery holder, press the latch down by screwdriver. Battery pops up when the latch gets loose. Remove the battery and replace with a new one.

*Battery type: CR2032/CR2032X 3V Li-ion battery. The CR2032X for extended temperature support wider operating temperature -40 to +85 ° C.

Chapter 4

BIOS setup items

- 4.1 Entering Setup -- Launch System Setup
- 4.2 How to update the BIOS file
- 4.3 How to update the EC file

ANS-7A44 Series is equipped with the AMI BIOS stored in Flash ROM. This BIOS has a built-in Setup program that allows users to modify the basic system configuration easily. This type of information is stored in CMOS RAM so that it is retained during power-off periods. When the system is turned on, ANS-7A44 Series communicates with peripheral devices and checks its hardware resources against the configuration information stored in the CMOS memory. If any error is detected, or the CMOS parameters need to be initially defined, the diagnostic program will prompt the user to enter the SETUP program. Some errors are significant enough to abort the start up.

4. 1 Entering Setup -- Launch

System Setup

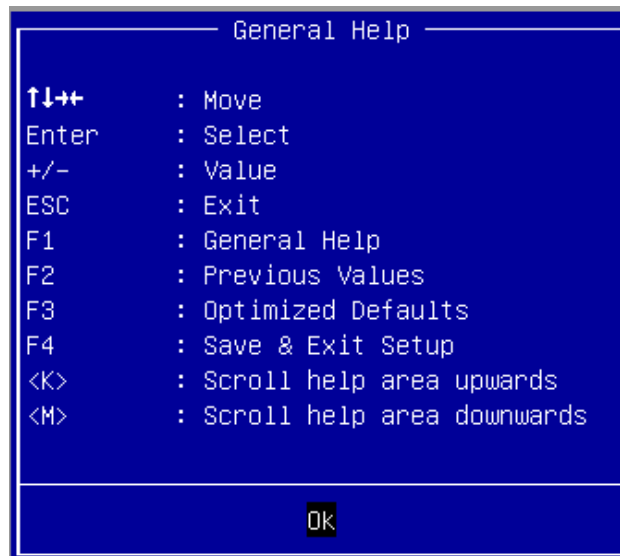
Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press key will enter BIOS setup screen.

Press to enter SETUP

If the message disappears before responding and still wish to enter Setup, please restart the system by turning it OFF and On or pressing the RESET button. It can be also restarted by pressing <Ctrl>, <Alt>, and <Delete> keys on keyboard simultaneously.

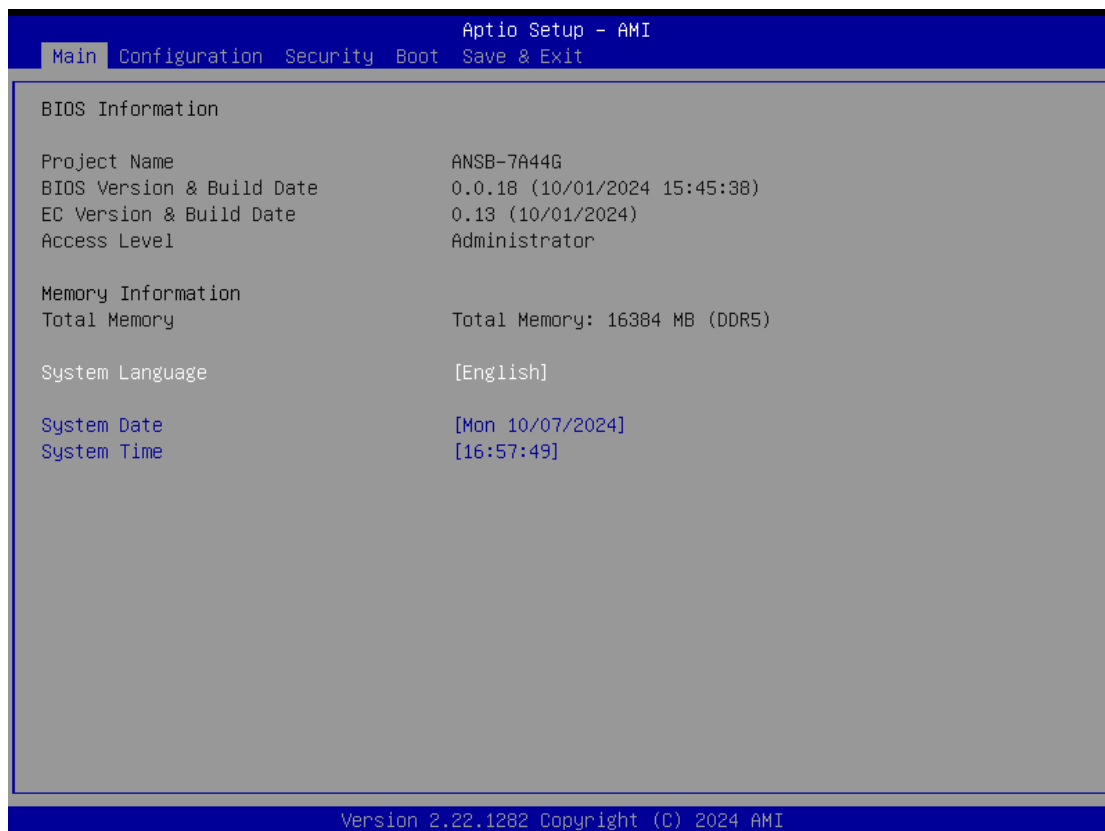
Press <F1> to Run General Help or Resume

The BIOS setup program provides a General Help screen. The menu can be easily called up from any menu by pressing <F1>. The Help screen lists all the possible keys to use and the selections for the highlighted item. Press <Esc> to exit the Help screen.



4.1.1 Main

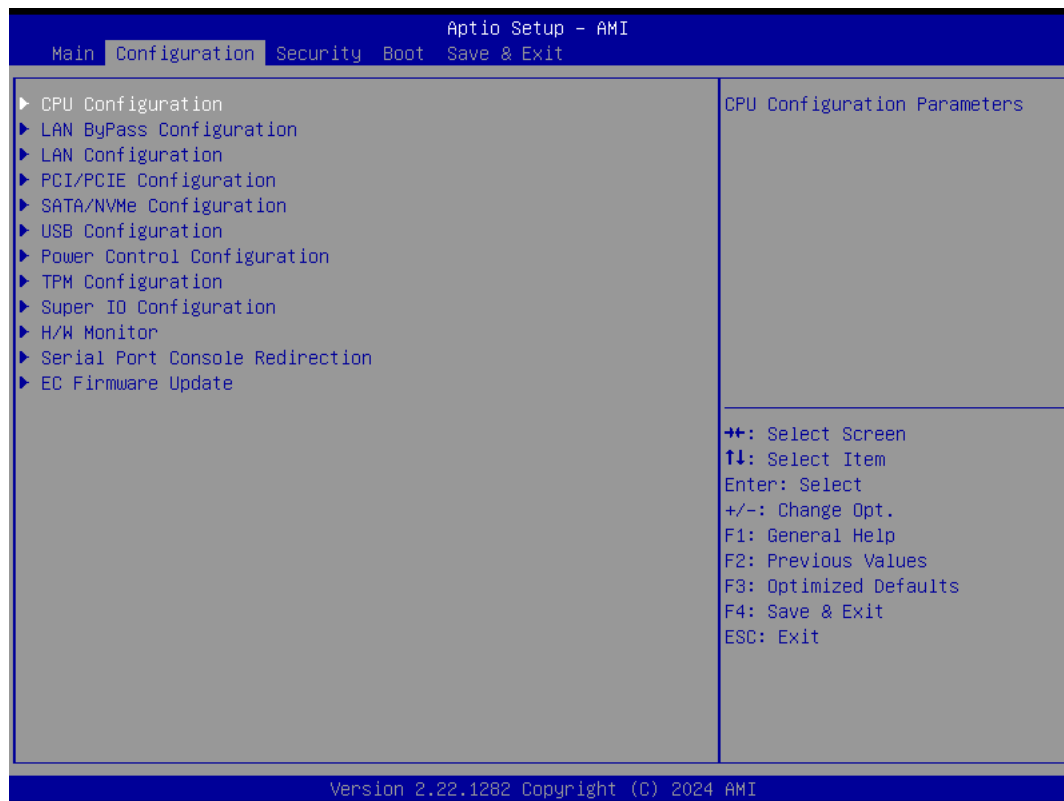
Use this menu for basic system configurations, such as time, date etc.



Feature	Description	Options
System Date	The date format is <Day>, <Month> <Date> <Year>. Use [+] or [-] to configure system Date.	
System Time	The time format is <Hour> <Minute> <Second>. Use [+] or [-] to configure system Time.	

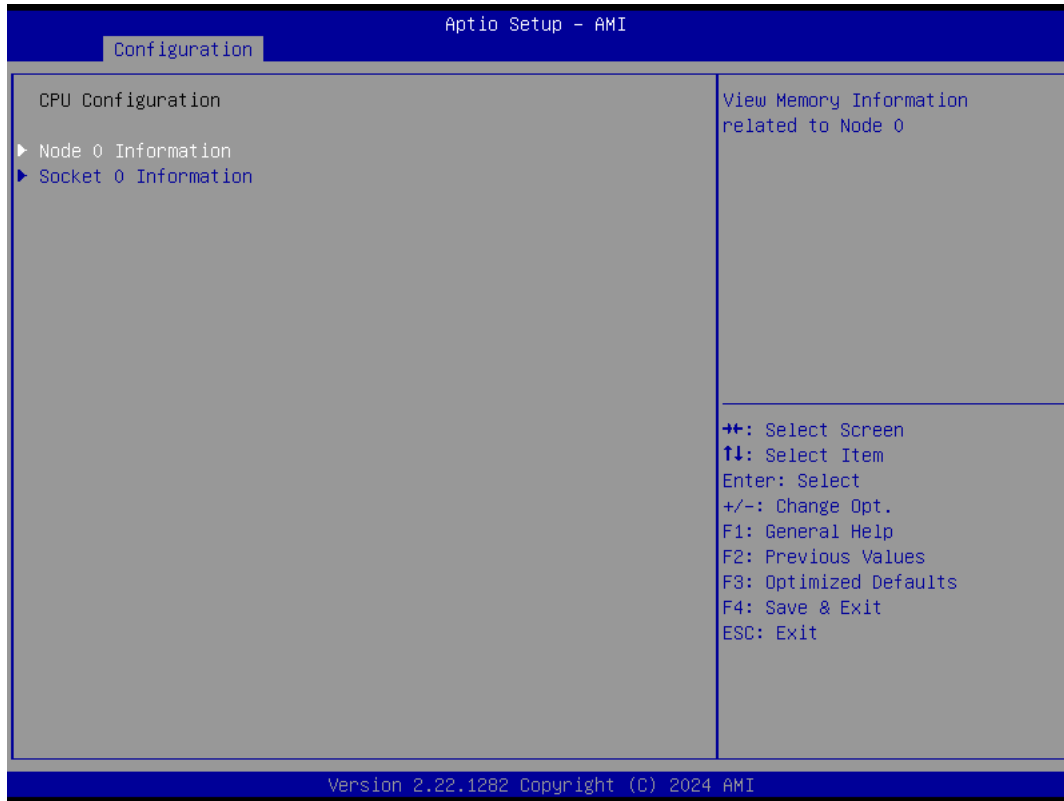
4.1.2 Configuration

Use this menu to set up the items of special enhanced features

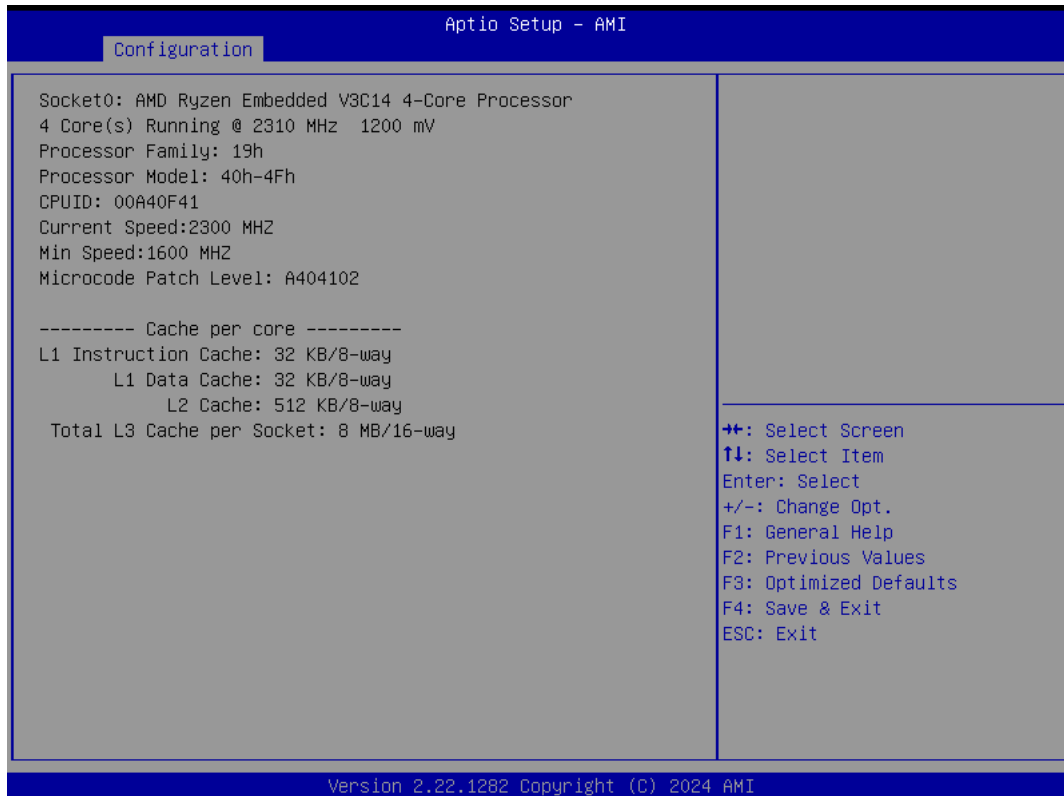


CPU Configuration

CPU Configuration Parameters



Node 0 Information



Socket 0 Information

Aptio Setup - AMI

Configuration

<p>Socket 0 Information</p> <p>ChannelA Dimm0: Not Present</p> <p>ChannelB Dimm0: size=16384 MB Current speed=4800 MTs Max speed=4800 MTs</p>	<p>++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
---	---

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LAN ByPass Configuration

Aptio Setup - AMI

Configuration

<p>LAN ByPass Configuration</p> <p>LAN ByPass Control [Enabled]</p> <p>LAN A ByPass Control</p> <p>LAN A ByPass Mode - Next Boot [Normal Mode] LAN A ByPass Mode - Power Off [Normal Mode] LAN A ByPass Mode - WDT Trigger [Normal Mode] LAN A ByPass Mode - WDT TimeOut [Normal Mode]</p> <p>LAN B ByPass Control</p> <p>LAN B ByPass Mode - Next Boot [Normal Mode] LAN B ByPass Mode - Power Off [Normal Mode] LAN B ByPass Mode - WDT Trigger [Normal Mode] LAN B ByPass Mode - WDT TimeOut [Normal Mode]</p> <p>Watch Dog Timer Configuration</p> <p>Enable Watch Dog Timer [Disabled]</p>	<p>LAN ByPass Control Enable.</p> <p>++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
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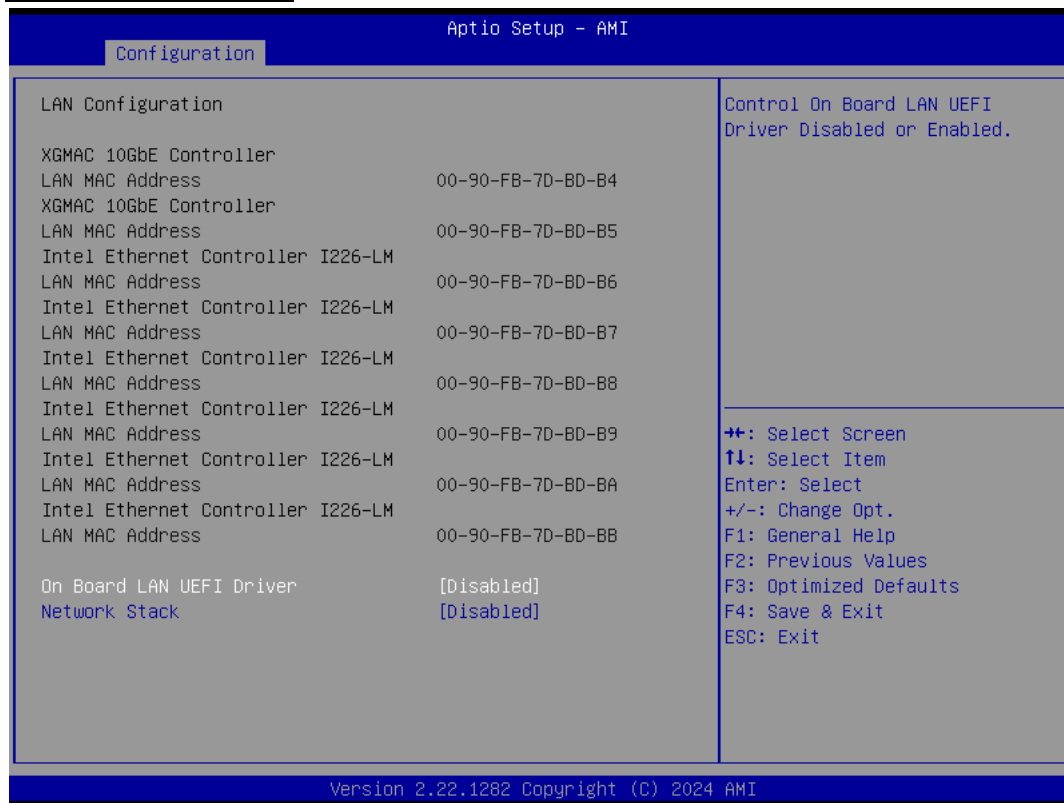
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Feature	Description	Options
LAN ByPass	LAN ByPass Control Enabled	★Disabled,
Watch Dog Timer Configuration		
Enable Watch Dog Timer	Enable/Disabled Watch Dog Timer	★Disabled, Enabled
Minute	Set WDT timer value Seconds / minutes	★0 (0-59)
Second	Set WDT timer value Seconds / minutes	★0 (0-59)

Feature	Description	Options
LAN ByPass Control – [Enabled]		
LAN A ByPass Control		
LAN A ByPass Mode – Next Boot	Next Boot ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN A ByPass Mode – Power Off	Power Off ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN A ByPass Mode – WDT Trigger	WDT Trigger ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN A ByPass Mode – WDT TimeOut	WDT TimeOut ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN B ByPass Control		
LAN B ByPass Mode – Next Boot	Next Boot ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN B ByPass Mode – Power Off	Power Off ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode

LAN B ByPass Mode – WDT Trigger	WDT Trigger ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode
LAN B ByPass Mode – WDT TimeOut	WDT TimeOut ByPass Mode Config.	★Normal Mode Open Mode Bypass Mode

LAN Configuration



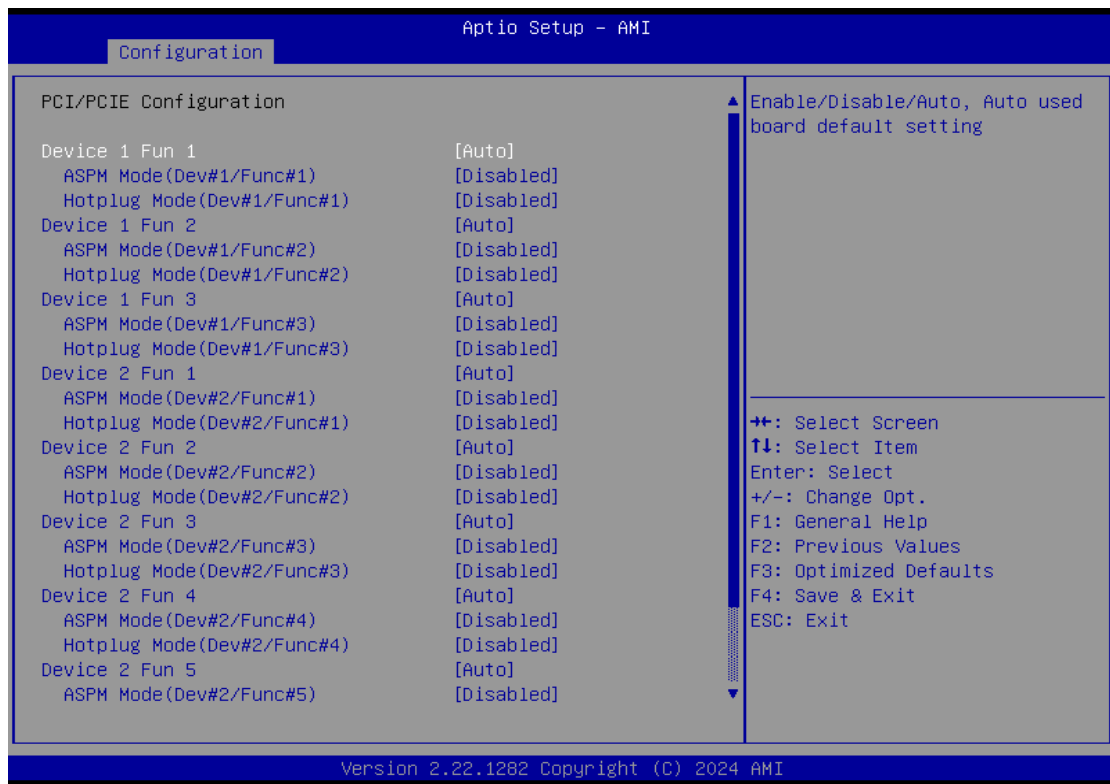
The screenshot shows the 'Configuration' tab in the Aptio Setup - AMI utility. The 'LAN Configuration' section lists various network controllers and their MAC addresses. At the bottom, the 'On Board LAN UEFI Driver' and 'Network Stack' are both set to [Disabled]. A legend on the right side of the screen provides navigation instructions: ++ for Select Screen, ↑↓ for Select Item, Enter for Select, +/- for Change Opt., F1 for General Help, F2 for Previous Values, F3 for Optimized Defaults, F4 for Save & Exit, and ESC for Exit. The version information at the bottom reads 'Version 2.22.1282 Copyright (C) 2024 AMI'.

Feature	Description	Options
On Board LAN UEFI Driver	Control On Board LAN UEFI Driver Disabled or Enabled.	★Disabled, Enabled
Network Stack	Enable/Disabled UEFI Network Stack.	★Disabled,

On Board LAN UEFI Driver	[Enabled]	F3: Optimized Defaults
Network Stack	[Enabled]	F4: Save & Exit
IPv4 PXE Support	[Disabled]	ESC: Exit
IPv4 HTTP Support	[Disabled]	
IPv6 PXE Support	[Disabled]	
IPv6 HTTP Support	[Disabled]	

Feature	Description	Options
Network Stack [Enabled]		
IPv4 PXE Support	Enable/Disabled IPv4 PXE boot Support. If Disabled, Pv4 PXE boot Support will	★Disabled, Enabled
IPv4 HTTP Support	Enable/Disabled IPv4 HTTP boot Support. If Disabled, Pv4 HTTP boot Support will not be available.	★Disabled, Enabled
IPv6 PXE Support	Enable/Disabled IPv6 PXE boot Support. If Disabled, Pv6 PXE boot Support will not be available.	★Disabled, Enabled
IPv6 HTTP Support	Enable/Disabled IPv6 HTTP boot Support. If Disabled, Pv6 HTTP boot Support will not be available.	★Disabled, Enabled

PCI/PCIE Configuration



Feature	Description	Options
Device 1 Fun 1	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#1 #Func#1)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev#)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug

Feature	Description	Options
Device 1 Fun 2	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#1 #Func#2)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev#)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug
Device 1 Fun 3	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#1 #Func#3)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev#)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug
Device 2 Fun 1	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#2 #Func#1)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev#)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug
Device 2 Fun 2	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled

ASPM Mode (Dev#2 #Func#2)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev#	NB Root Port Hotplug Mode Control	★Disabled, Hotplug
Feature	Description	Options
Device 2 Fun 3	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#2 #Func#3)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev# 2#Func#3)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug Enhanced
Device 2 Fun 4	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#2 #Func#4)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev# 2#Func#4)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug Enhanced
Device 2 Fun 5	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled
ASPM Mode (Dev#2 #Func#5)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev# 2#Func#5)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug Enhanced
Device 2 Fun 6	Enable/Disabled/Auto, Auto used board default setting.	★Auto, Disabled, Enabled

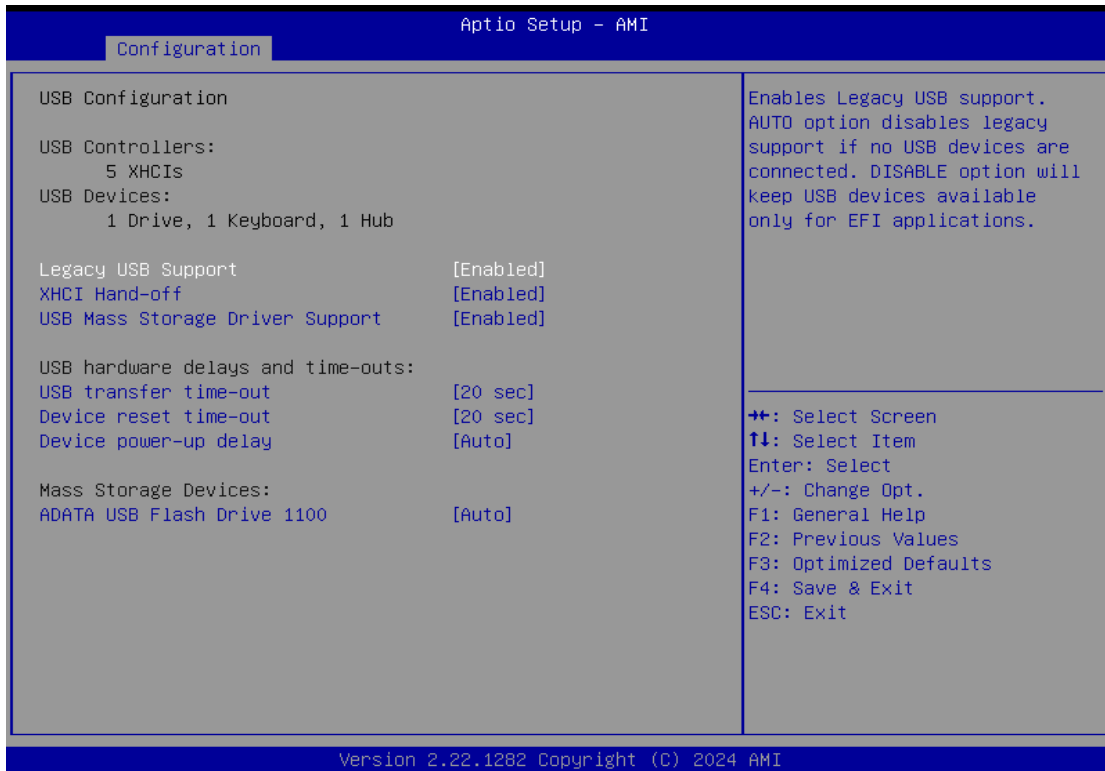
ASPM Mode (Dev#2 #Func#6)	NB Root Port ASPM Mode Control	★Disabled, L0s Entry, L1 Entry, Auto,
Hotplug Mode (Dev# 2#Func#6)	NB Root Port Hotplug Mode Control	★Disabled, Hotplug Enhanced

SATA-NVMe Configuration / NVMe controller and Drive information





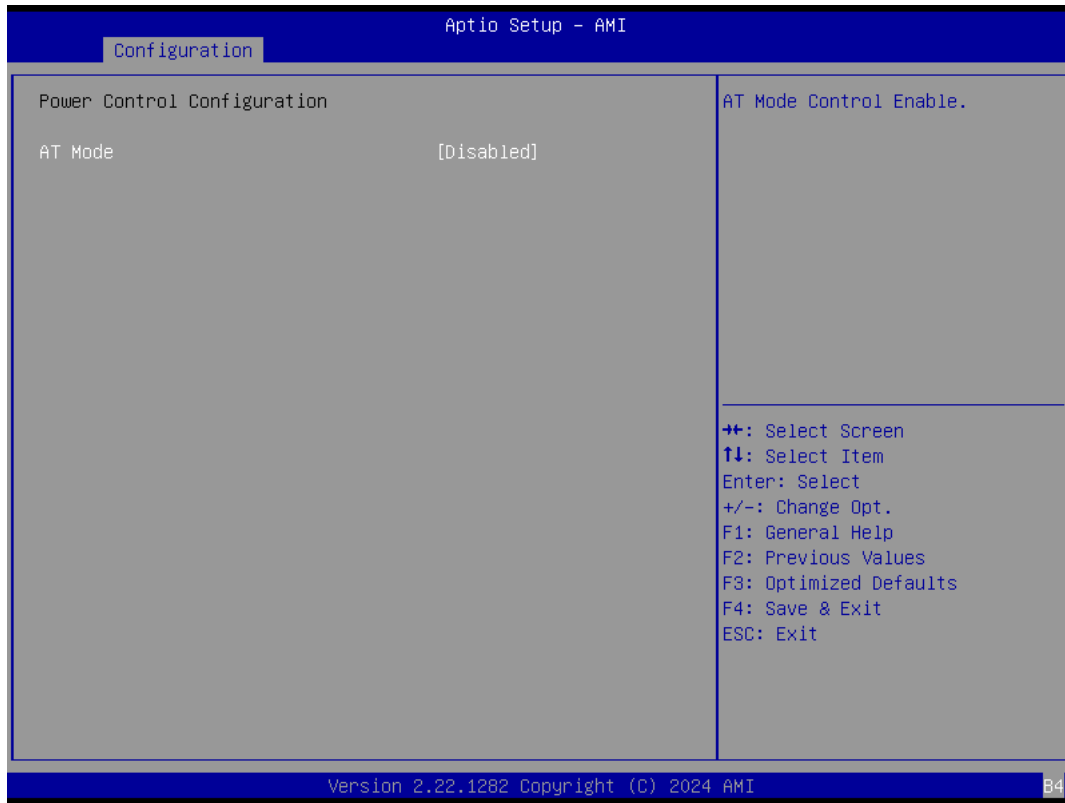
USB Configuration



Feature	Description	Options
Legacy USB Support	Enables Legacy USB Support. Auto option disable legacy Support if no USB devices are connected. Disable option will keep USB device available only for EFI applications.	★Enabled, Disabled, Auto
XHCI Hand-off	This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.	★Enabled, Disabled
USB Mass Storage Driver Support	Enable/Disable USB Mass Storage Driver Support	★Enabled, Disabled

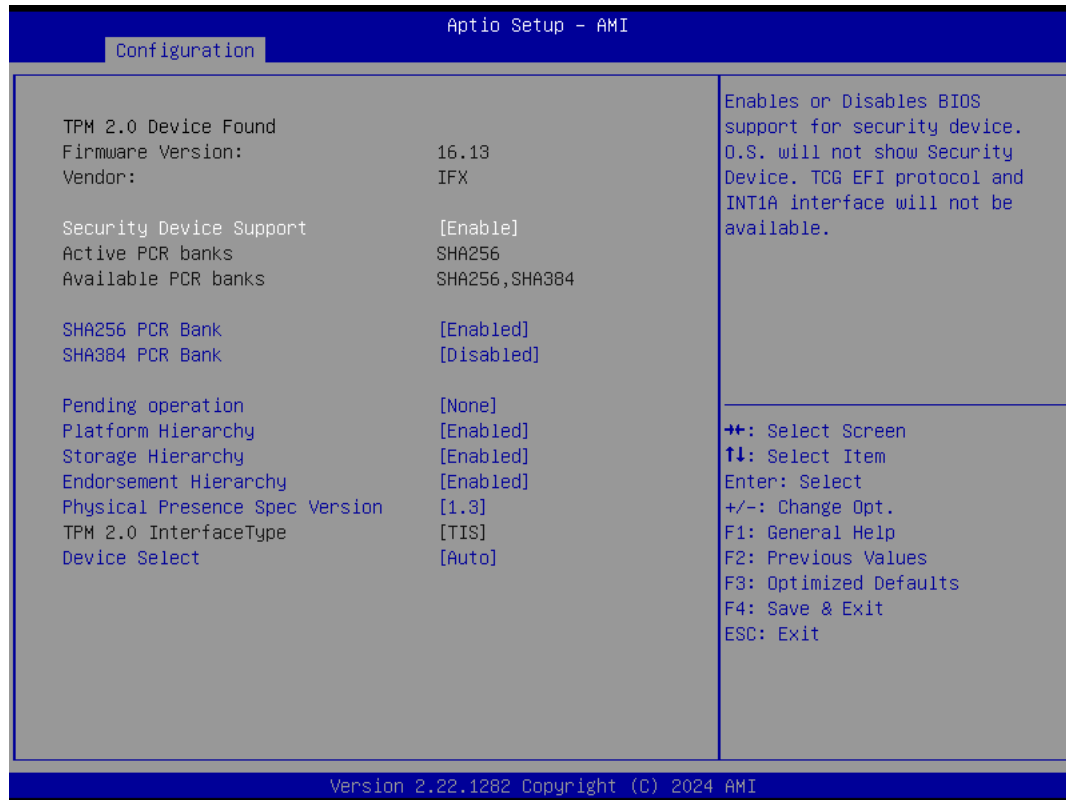
Feature	Description	Options
USB transfer time-out	The time-out value for Control, Bulk, and Interrupt transfers.	1, 5, 10, ★20 sec
Device reset time-out	USB mass storage device Start Unit command time-out.	10, ★20, 30, 40 sec
Device power-up delay	Maximum time the device will take before it properly reports itself to the Host Controller. 'AUTO' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken	★AUTO, Manual
Device power-up delay [Manual]		
Device power-up delay	Delay range is 1~40 seconds, in one second increments.	★5

Power Control Configuration



Feature	Description	Options
AT Mode	AT Mode Control Enable.	★Disabled,

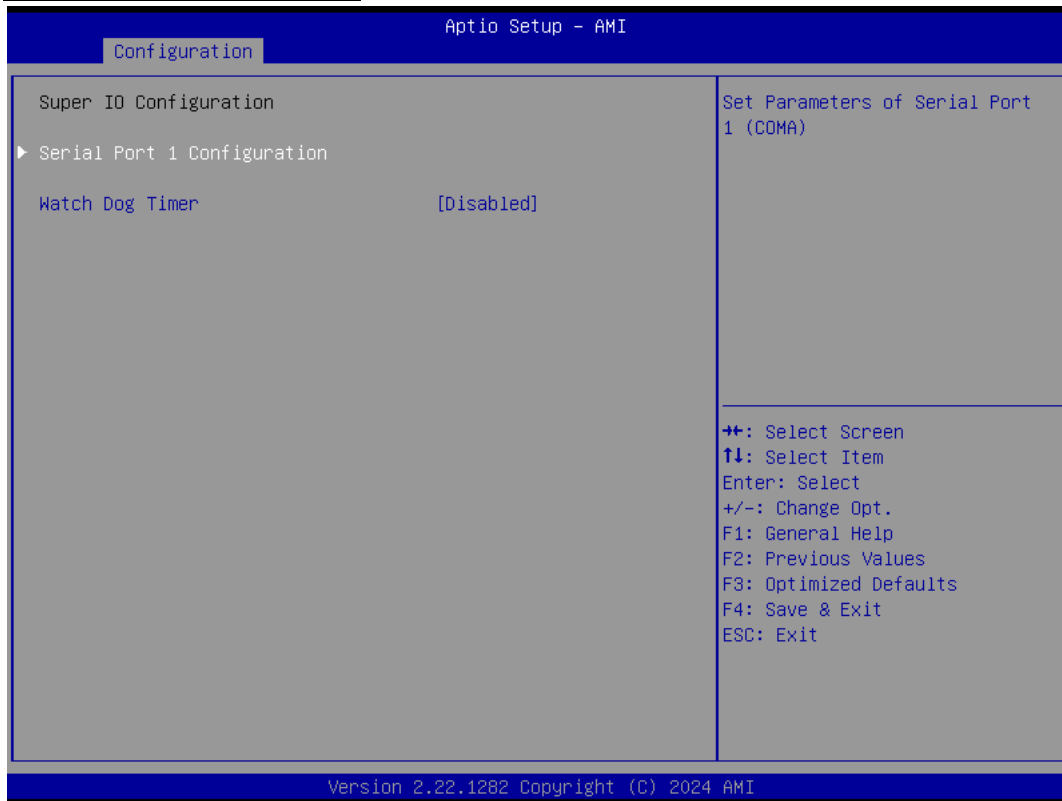
TPM Configuration

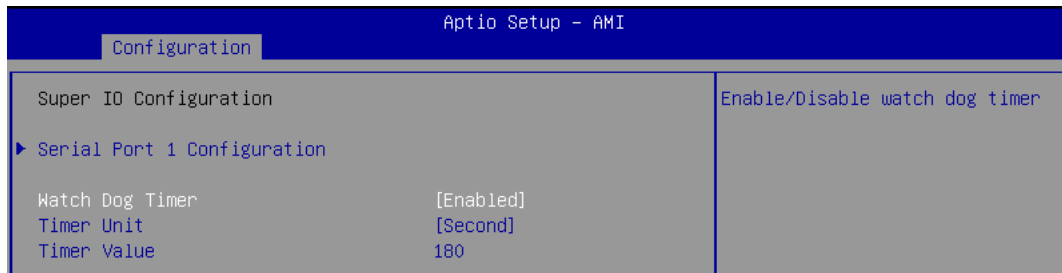


Feature	Description	Options
Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A Interface will not be available.	★Enabled, Disabled
SHA256 PCR	Enable or Disable SHA256 PCR Bank	★Enabled,
SHA384 PCR	Enable or Disable SHA384 PCR Bank	★Disabled,
Pending operation	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.	★None, TPM Clear
Platform Hierarchy	Enable or Disable Platform Hierarchy	★Enabled, Disabled
Storage	Enable or Disable Storage Hierarchy	★Enabled,

Endorsement Hierarchy	Enable or Disable Endorsement Hierarchy	★Enabled, Disabled
Physical Presence Spec Version	Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3.	★1.3, 1.2
Device Select	TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated.	★Auto, TPM 2.0, TPM 1.2

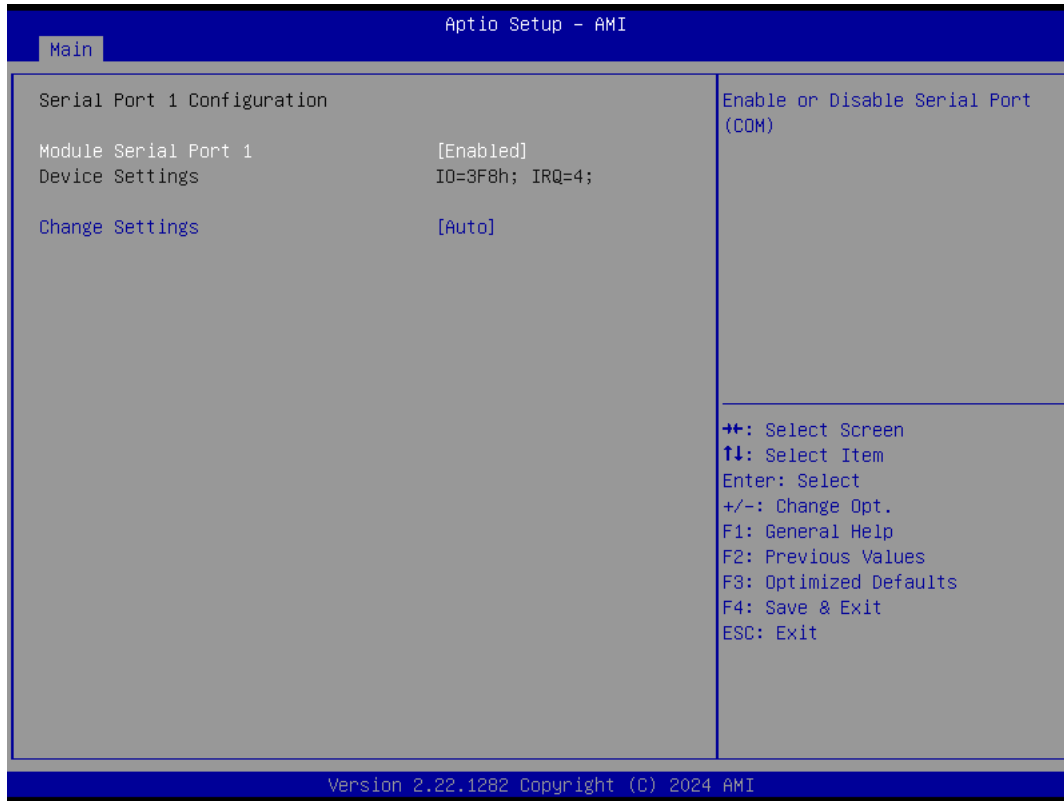
Super IO Configuration





Feature	Description	Options
Watch Dog Timer	Enable/Disable Watch Dog Timer	★Disabled,
Watch Dog Timer [Enable]		
Timer Unit	Select Timer count unit of WDT	★Second, Minute
Timer value	Set WDT Timer value seconds / minutes	★180

Serial Port 1 Configuration



Feature	Description	Options
Module Serial Port 1	Enable or Disable Serial Port (COM)	★Enabled, Disabled
Change Settings	Select an optimal setting for Super IO Device.	★Auto IO=3F8h; IRQ=4 IO=3F8h; IRQ=3,4,10,11 IO=2F8h; IRQ=3,4,10,11 IO=3E8h; IRQ=3,4,10,11 IO=2E8h; IRQ=3,4,10,11

H/W Monitor

Aptio Setup - AMI

Configuration

<p>H/W Monitor</p> <p>CPU Temperature : +32 °C System Temperature : +28 °C</p> <p>CPU fan speed : N/A System fan 1 speed : N/A System fan 2 speed : 4130 RPM</p> <p>▶ CPU Smart Fan Configuration ▶ System Smart Fan 1 Configuration ▶ System Smart Fan 2 Configuration</p> <p>Vcore : +0.612 V +3.3V : +3.318 V +5V : +5.011 V +12V (J1 DC1) : +0.162 V +12V (J2 DC2) : +12.230 V VDIMM : +1.098 V VBAT : +2.850 V</p>	<p>Set Parameters of CPU Smart Fan</p> <hr/> <p>⇧⇧: Select Screen ⇩⇩: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
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CPU Smart Fan Configuration

Aptio Setup - AMI

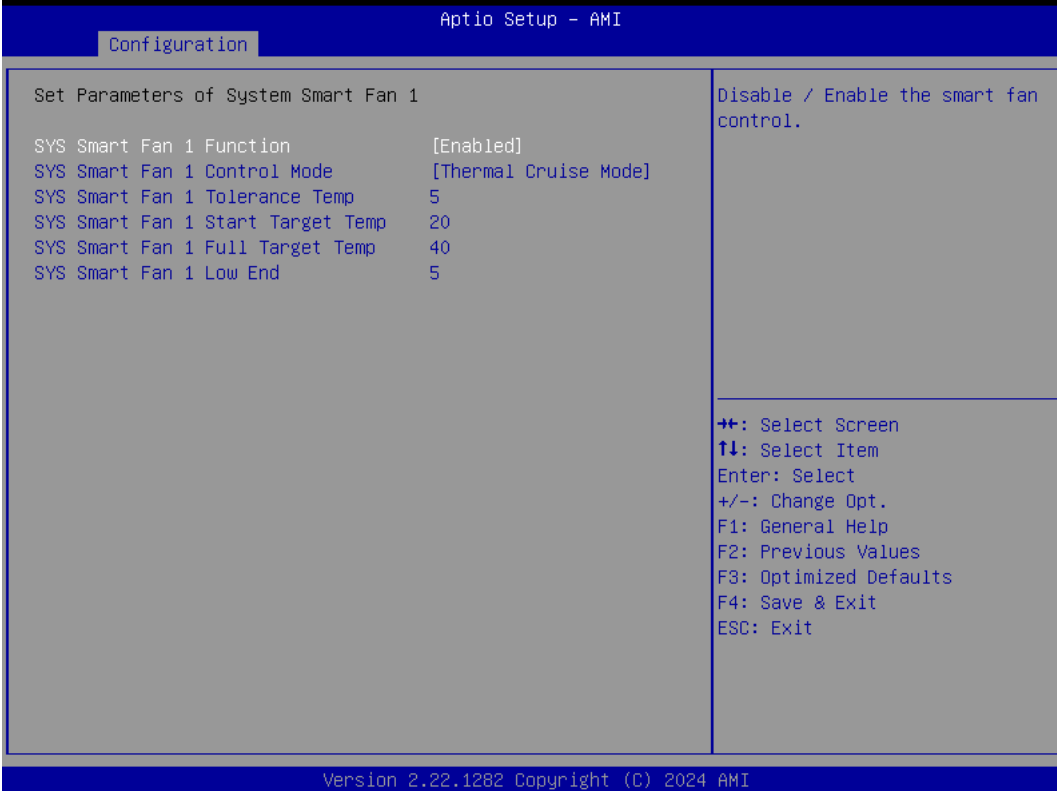
Configuration

<p>Set Parameters of CPU Smart Fan</p> <p>CPU Smart Fan Function [Enabled] CPU Smart Fan Control Mode [Thermal Cruise Mode] CPU Smart Fan Tolerance Temp 5 CPU Smart Fan Start Target Temp 20 CPU Smart Fan Full Target Temp 40 CPU Smart Fan Low End 5</p>	<p>Disable / Enable the smart fan control.</p> <hr/> <p>⇧⇧: Select Screen ⇩⇩: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
---	--

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Feature	Description	Options
CPU Smart Fan	Disable / Enable the Smart Fan	★Enabled,
CPU Smart Fan Control Mode	Select smart fan control mode.	★Thermal Cruise Mode, Fan
CPU Smart Fan Tolerance Temp	In Thermal Cruise Mode: tolerance of target temperature.	★5
CPU Smart Fan Start Target Temp	In Thermal Cruise Mode: start temperature.	★20
CPU Smart Fan Full Target Temp	In Thermal Cruise Mode: full speed temperature.	★40
CPU Smart Fan Low End	In Thermal Cruise Mode: low end of fan speed (0-100%)	★5

System Smart Fan 1 Configuration



Aptio Setup - AMI

Configuration

Set Parameters of System Smart Fan 1

SYS Smart Fan 1 Function	[Enabled]
SYS Smart Fan 1 Control Mode	[Thermal Cruise Mode]
SYS Smart Fan 1 Tolerance Temp	5
SYS Smart Fan 1 Start Target Temp	20
SYS Smart Fan 1 Full Target Temp	40
SYS Smart Fan 1 Low End	5

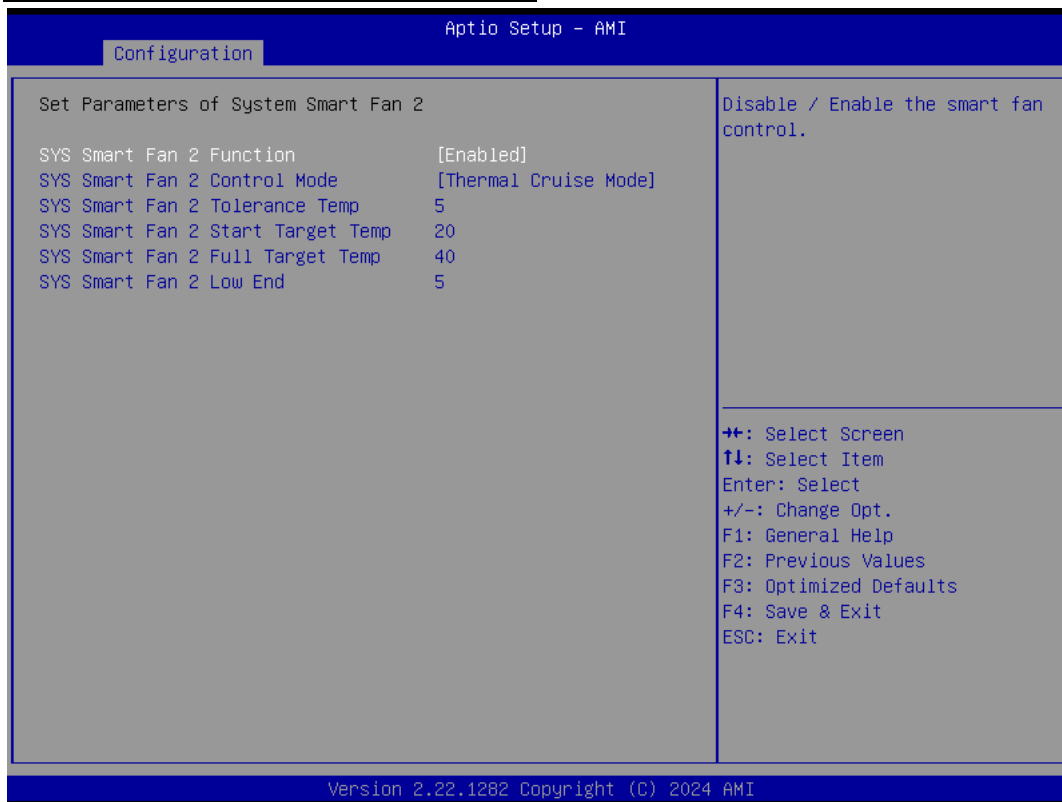
Disable / Enable the smart fan control.

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

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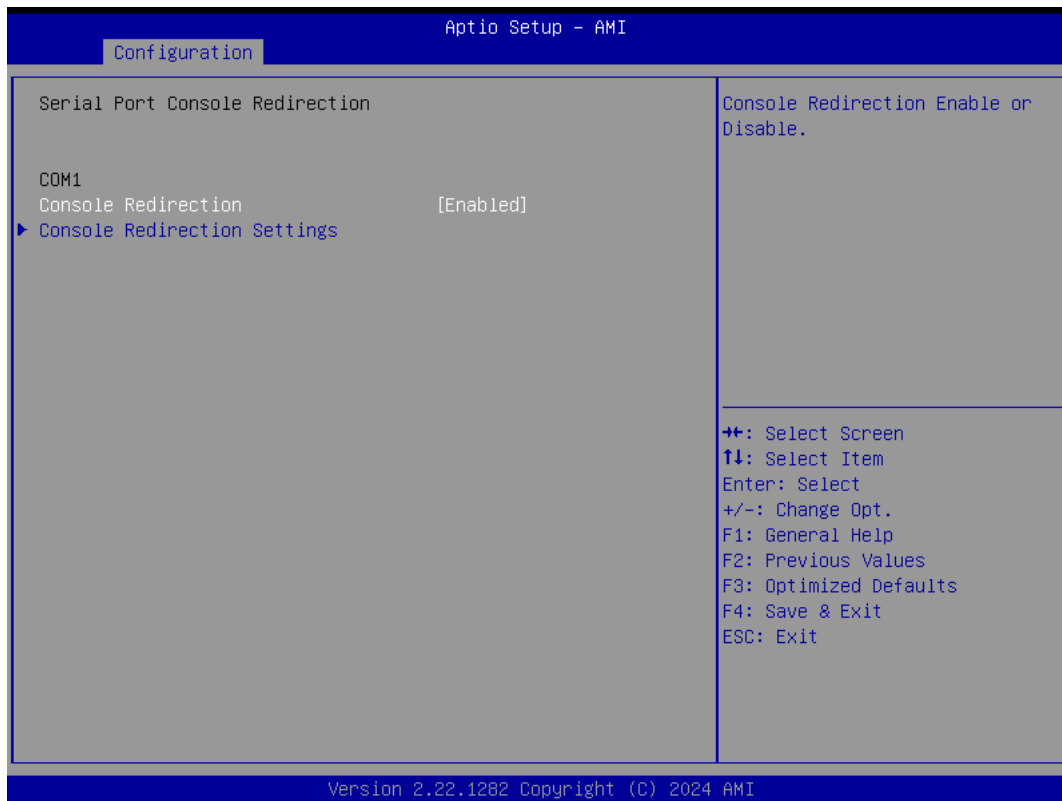
Feature	Description	Options
SYS Smart Fan 1 Function	Disable / Enable the Smart Fan Control.	★Enabled, Disabled
SYS Smart Fan 1 Control Mode	Select smart fan control mode.	★Thermal Cruise Mode, Fan
SYS Smart Fan 1 Tolerance Temp	In Thermal Cruise Mode: tolerance of target temperature.	★5
SYS Smart Fan 1 Start Target Temp	In Thermal Cruise Mode: start temperature.	★20
SYS Smart Fan 1 Full Target Temp	In Thermal Cruise Mode: full speed temperature.	★40
SYS Smart Fan 1 Low End	In Thermal Cruise Mode: low end of fan speed (0-100%)	★5

System Smart Fan 2 Configuration



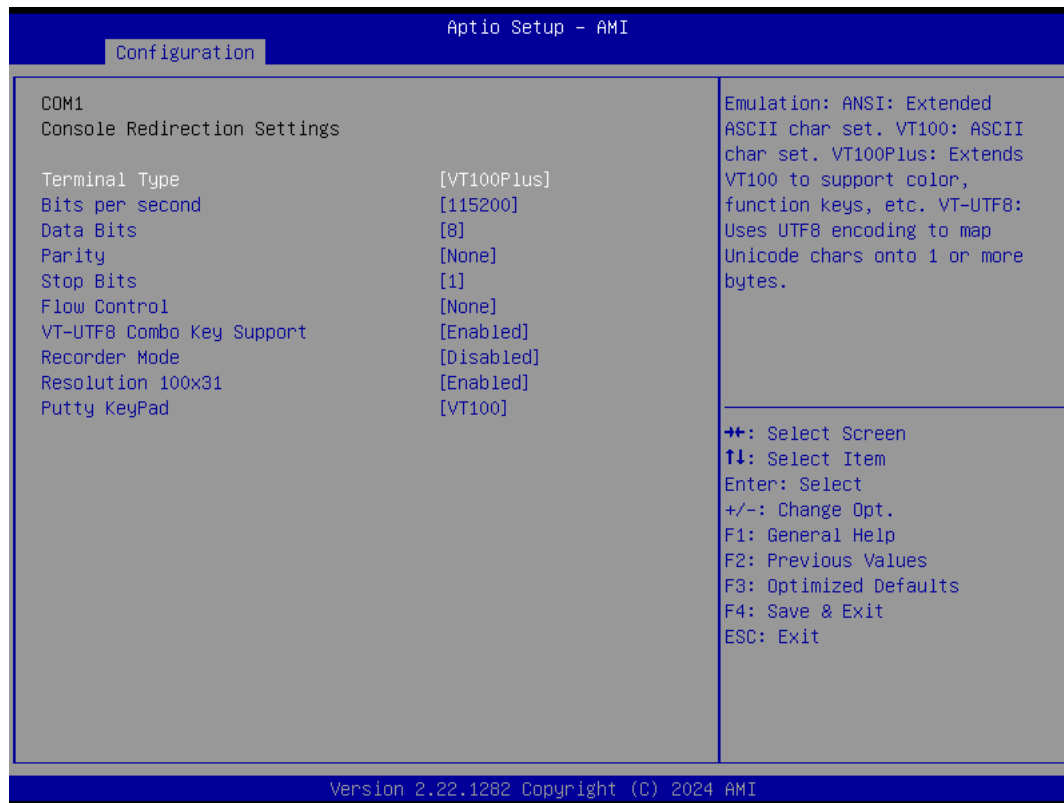
Feature	Description	Options
SYS Smart Fan 2 Function	Disable / Enable the Smart Fan Control.	★Enabled, Disabled
SYS Smart Fan 2 Control Mode	Select smart fan control mode.	★Thermal Cruise Mode, Fan
SYS Smart Fan 2 Tolerance Temp	In Thermal Cruise Mode: tolerance of target temperature.	★5
SYS Smart Fan 2 Start Target	In Thermal Cruise Mode: start temperature.	★20
SYS Smart Fan 2 Full Target Temp	In Thermal Cruise Mode: full speed temperature.	★40
SYS Smart Fan 2 Low End	In Thermal Cruise Mode: low end of fan speed (0-100%)	★5

Serial Port Console Redirection



Feature	Description	Options
Console Redirection	Console Redirection Enable or Disable	★Enabled, Disabled

COM1 Console Redirection Settings



Feature	Description	Options
Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.	★VT100Plus, ANSI, VT100, VT-UTF8
Bits per second	Select Serial port transmission speed. The speed must be matched on other side. Long or noisy lines may require lower speeds.	★115200, 9600, 19200, 38400, 57600
Data Bits	Data Bits	★8, 7

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

Putty KeyPad	Select FunctionKey and KeyPad on Putty	★VT100, LINUX, XTERMR6, SCO, ESCN,VT400
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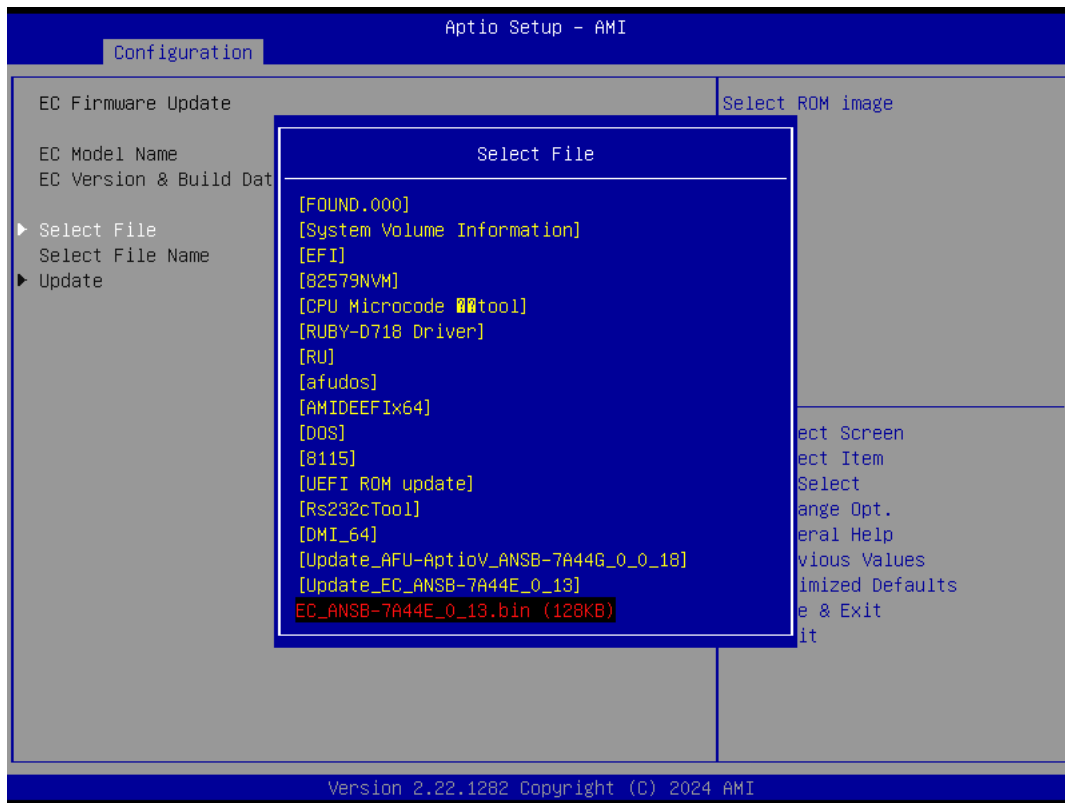
EC Firmware Update



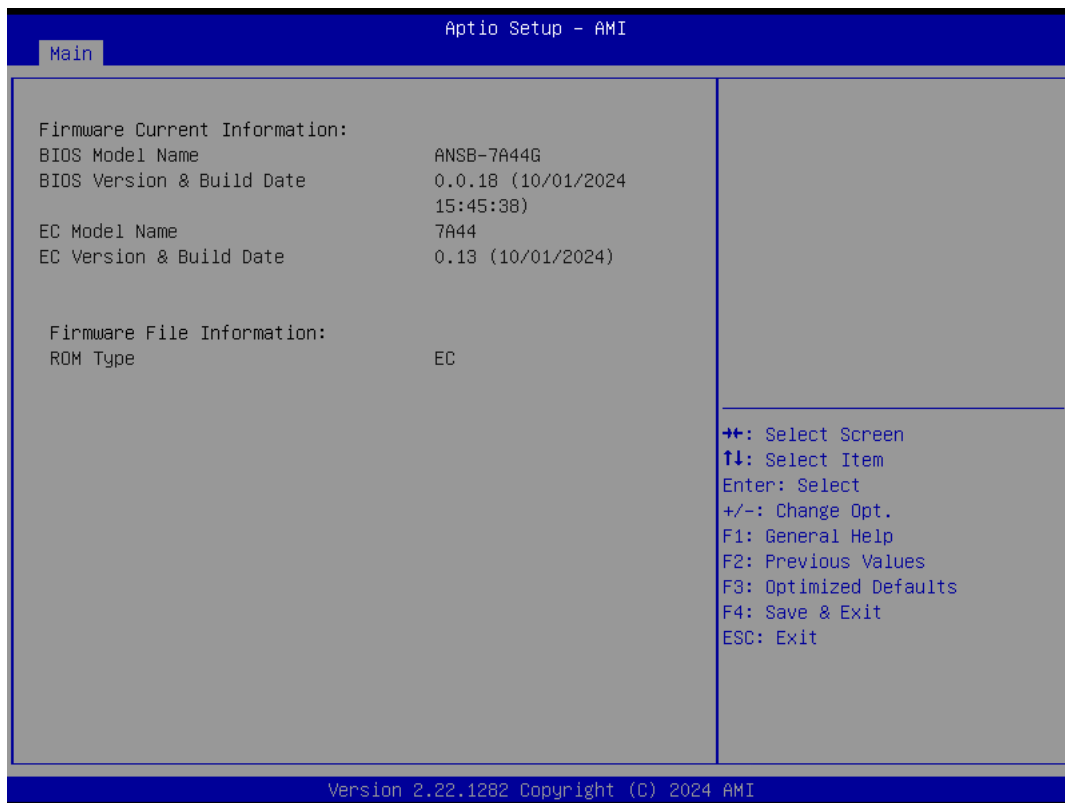
Feature	Description	Options
Select File	Select ROM image	Bin file to the

Update EC

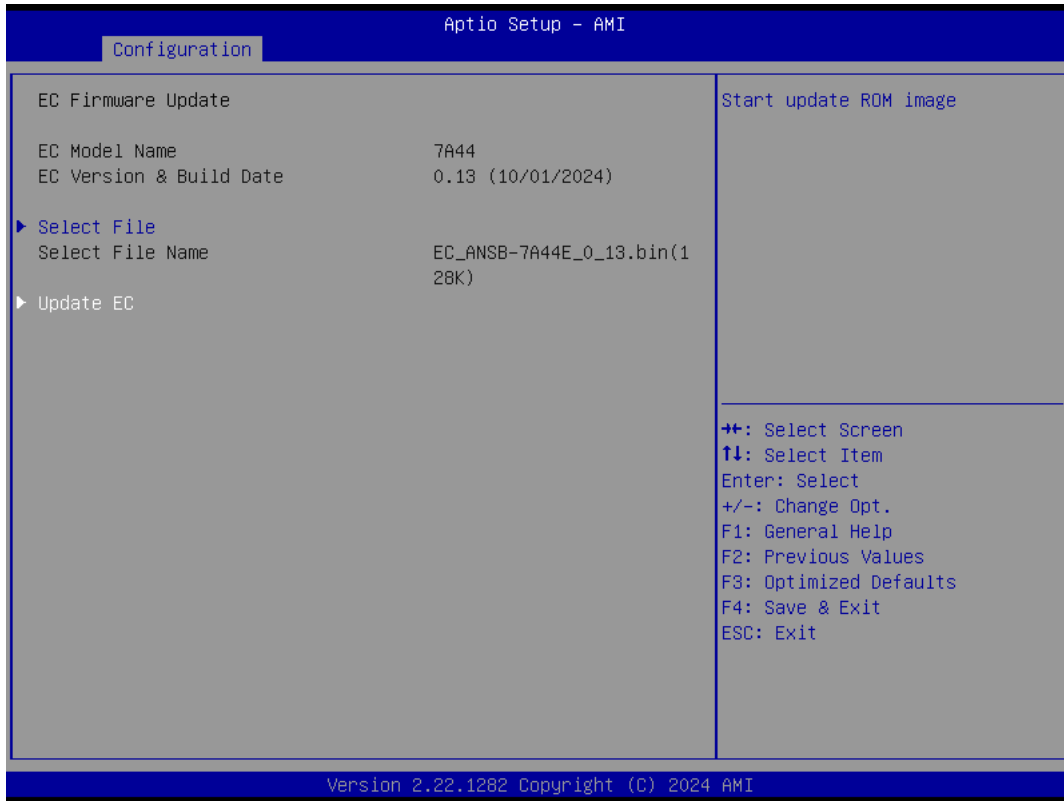
- Step 1. Prepare a USB DOK.
- Step 2. Unzip update file to the USB DOK.
- Step 3. Select File System (USB DOK)
- Step 4. Select Update EC



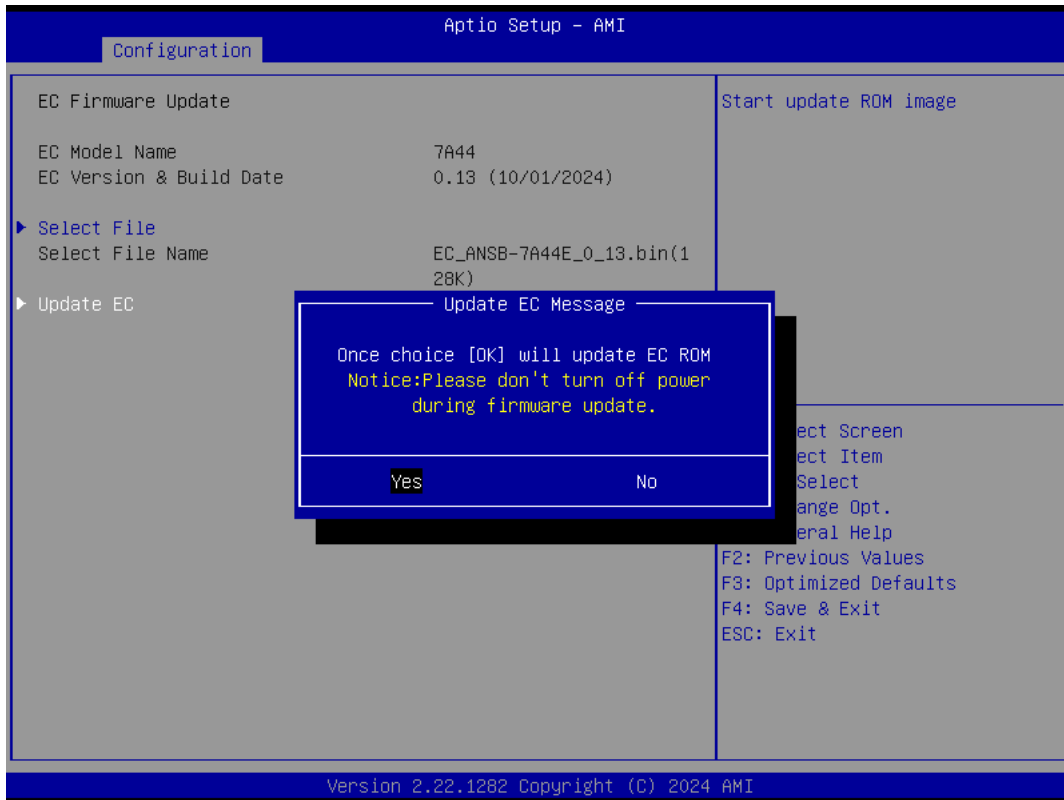
Step 5. EC Information



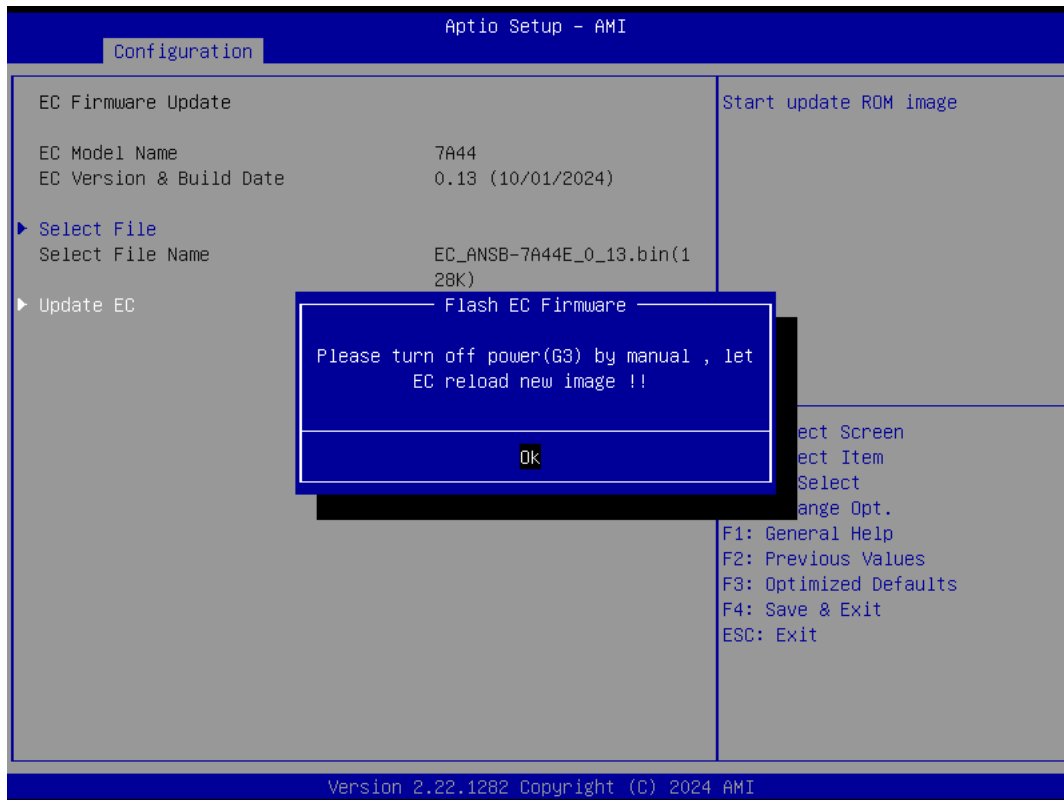
Step 6. Update EC



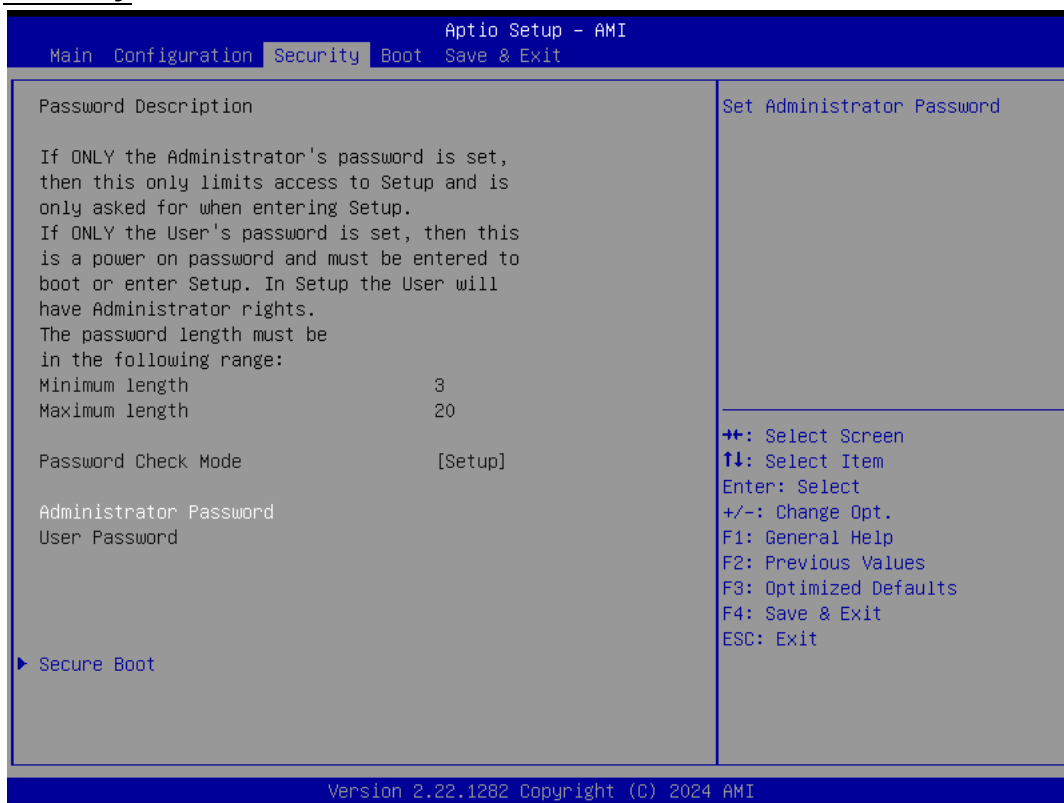
Step 7. Update EC Message



Step 8. Update EC PASS



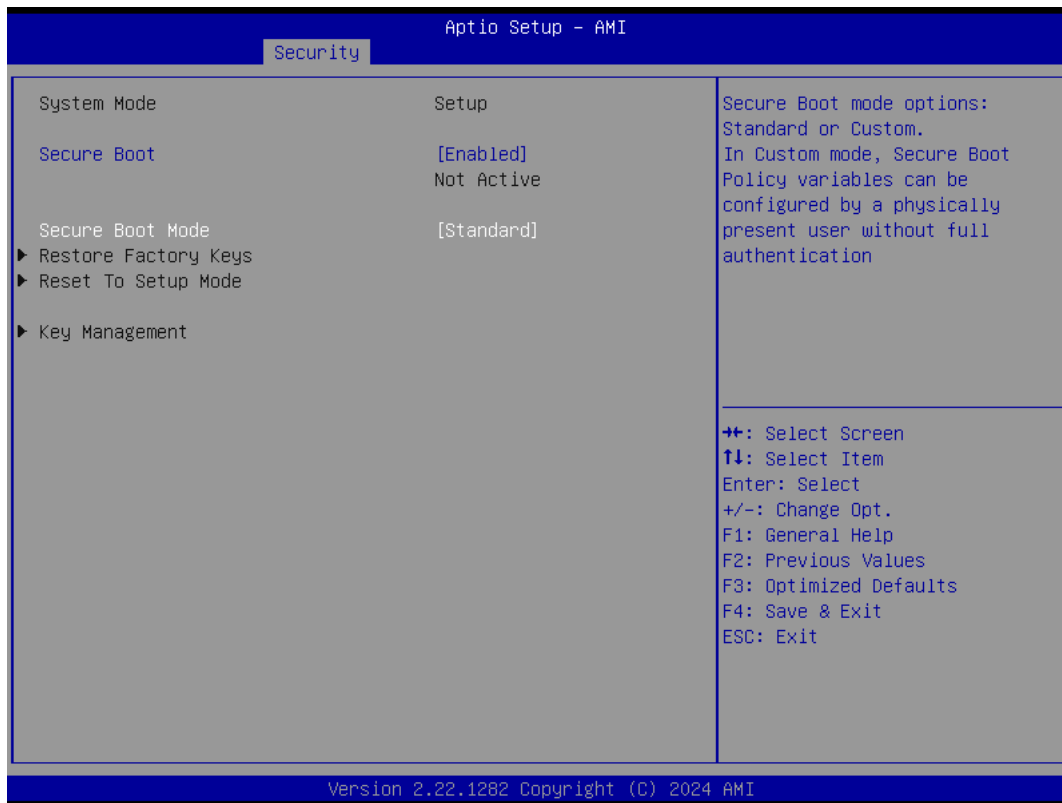
Security



Feature	Description	Options
Password Check Mode	[Setup] check password when enter setup screen. [Power on] check password on every time system power on.	★Setup, Power on
Administrator Password	Administrator Password	Set Administrator Password

Secure Boot

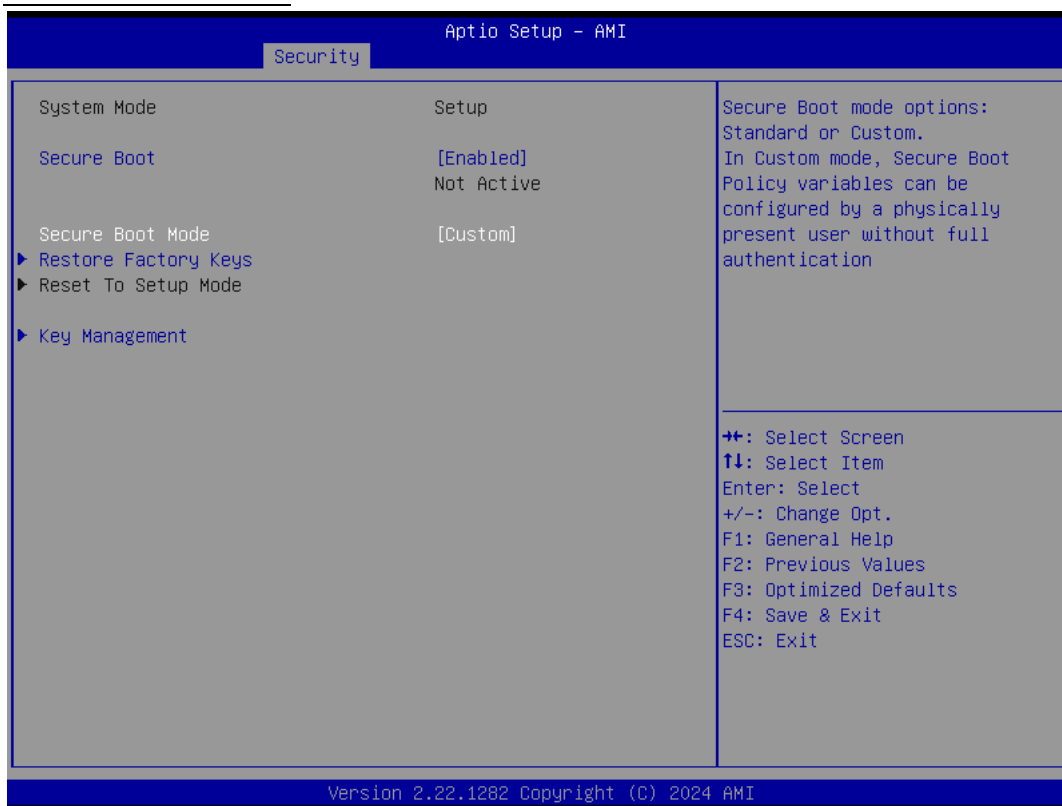
Secure Boot configuration



Feature	Description	Options
Secure Boot	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.	★Enabled, Disabled

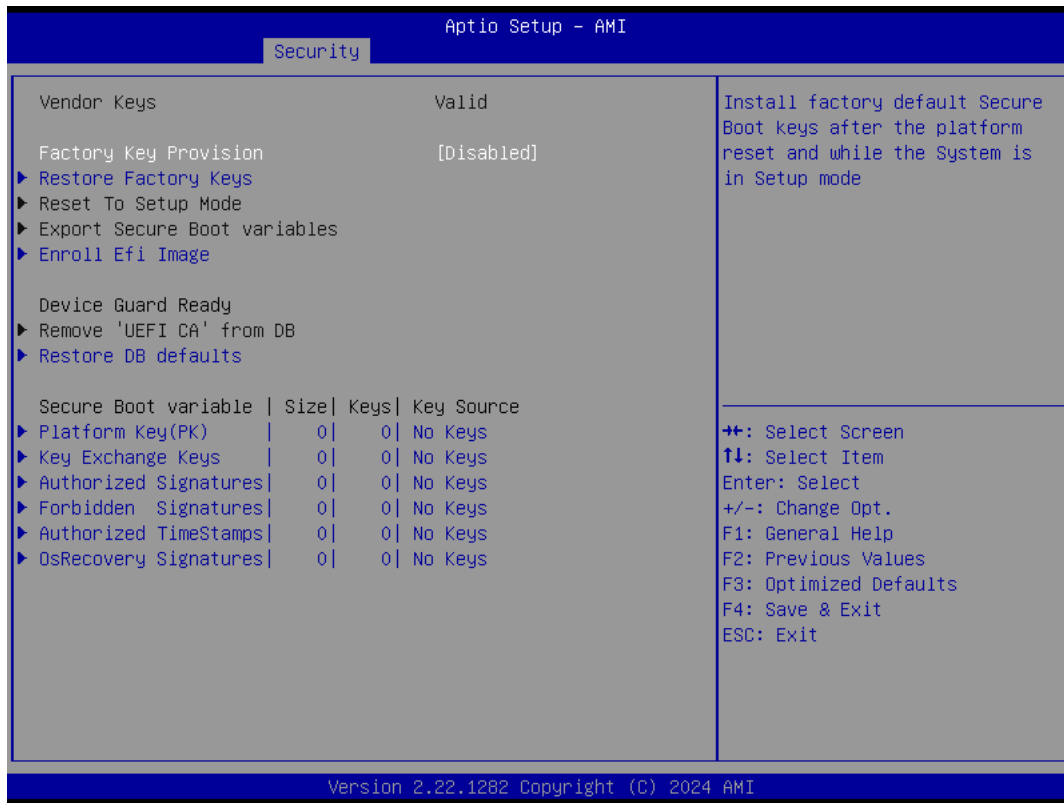
Secure Boot Mode	Secure Boot Mode options: Standard or Custom. In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication	★Standard, Custom
Secure Boot Mode – [Custom]		
Secure Boot		★Standard,

Secure Boot Mode



Feature	Description	Options
Secure Boot Mode – [Custom]		
Restore Factory keys	Force System to User Mode. Install factory default Secure Boot key databases.	★Yes, No

Key Management

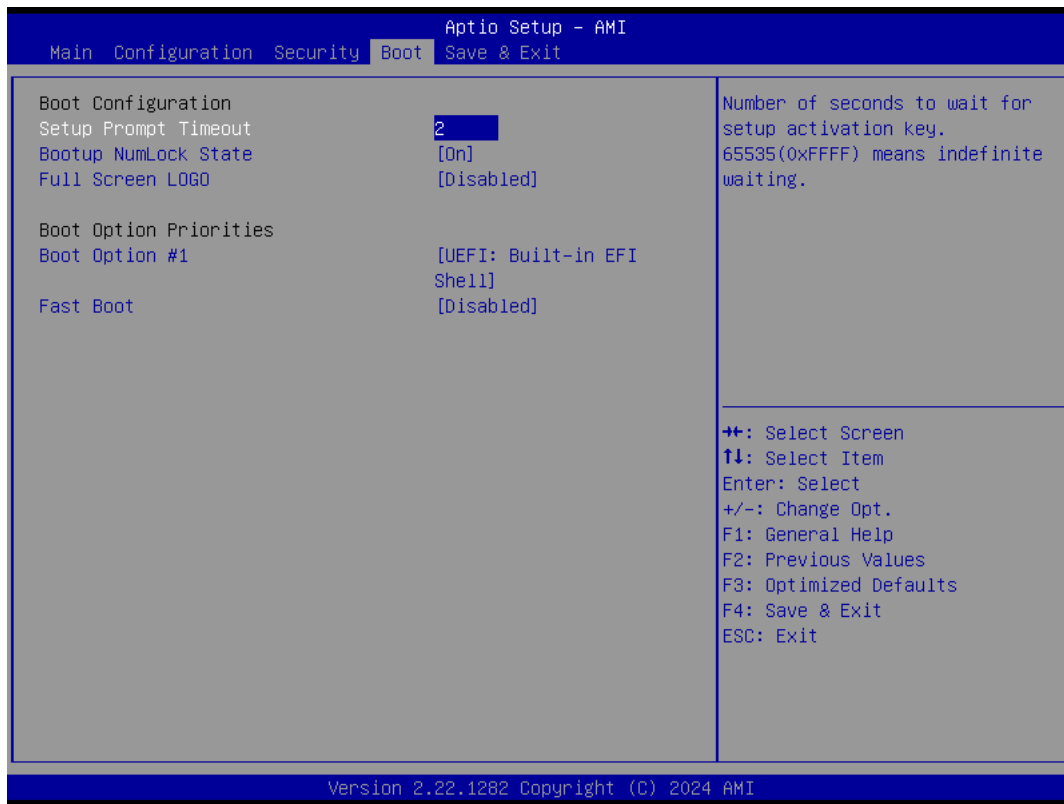


Feature	Description	Options
Factory keys Provision	Install factory default Secure Boot key after the platform reset and while the System is in Setup mode.	★Disabled, Enabled
Restore Factory keys	Force System to User Mode. Install factory default Secure Boot key databases	★Yes, No
Enroll Efi Image	Allow Efi image to run in Secure Boot mode. Enroll SHA256 Hash certificate of PE image into Authorized Signature Database (db)	
Restore DB defaults	Restore DB variable to factory defaults	★Yes, No

Feature	Description	Options
Platform Key(PK)	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	
Key Exchange Keys		
Authorized Signatures		
Forbidden Signatures		
Authorized TimeStamps		
OsRecovery Signatures		

Boot

Boot Configuration

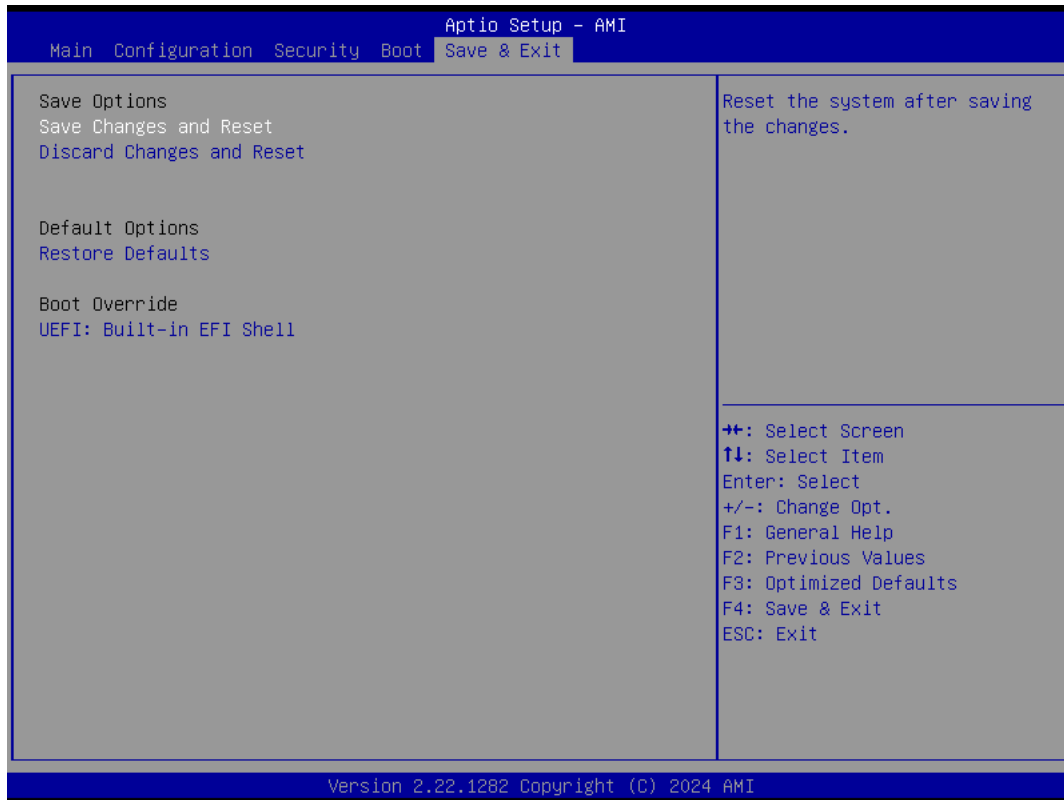


Feature	Description	Options
Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.	★2
Bootup NumLock State	Select the keyboard NumLock state	★On, Off
Full Screen LOGO	Enable or disable Quiet Boot option and Full screen Logo.	★Disabled, Enabled
Boot Option #1	Sets the system boot order	★UEFI: Built-in EFI Shell, Disabled
Fast Boot	Enable or disable boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.	★Disabled, Enabled



Feature	Description	Options
Fast Boot – [Enabled]		
SATA Support	If Last Boot SATA Devices Only, Only last boot SATA device will be available in port. If ALL SATA Devices, all SATA devices will be available in OS and Port.	★Last Boot SATA Devices Only, All SATA Devices
NVMe Support	If Disabled, NVMe device will be skipped.	★Enabled, Disabled
USB Support	If Disabled, all USB devices will NOT be available until after OS boot. If Partial Initial, USB Mass Storage and specific USB port/device will NOT be available before OS boot. If Enabled, all ISB devices will be available in OS and Post.	★Full Initial, Disabled, Partial Initial
PS2 Device Support	If Disabled, PS2 devices will be skipped.	★Enabled, Disabled
Network Stack Device Support	If Disabled, Network Stack Device will be skipped.	★Disabled, Enabled
Redirection Support	If Disabled, Redirection function will be disabled.	★Disabled, Enabled

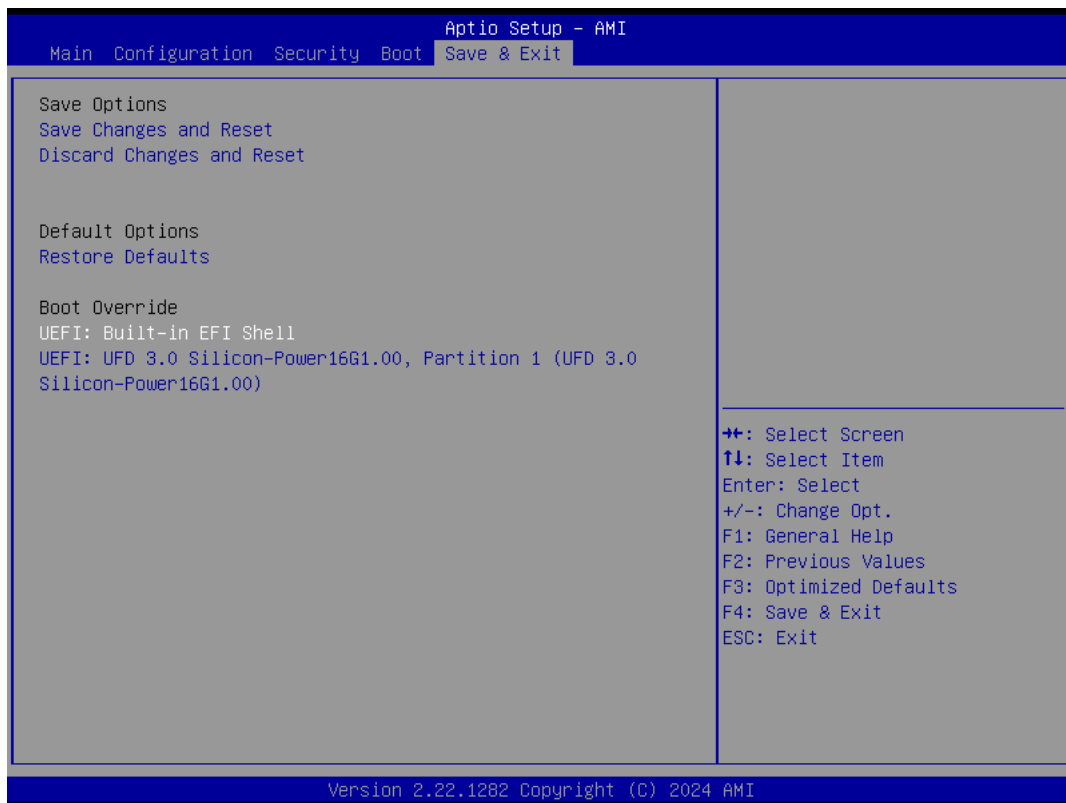
Save & Exit



Feature	Description	Options
Save Changes and Reset	Reset the system after saving the changes.	
Discard Changes and	Reset system setup without saving any changes.	
Restore Defaults	Restore/Load Default values for all the setup options.	
UEFI: Built-in EFI Shell	Reset the system after saving the changes.	

4.2 How to update the BIOS file

1. Please visit web site of Portwell download center as below hyperlink
<http://www.portwell.com.tw/support/download>
2. Type in your User name and password and log in the download center.
3. Select “Search download” and type the keyword “ANSB-7A44G”
4. ANSB-7A44G **UEFI Update SOP process**
 - Step 1. Prepare a USB DOK.
 - Step 2. Unzip update file to the USB DOK.
 - Step 3. Plug the USB DOK into the target system and boot from UEFI Shell.(Diagrammatic sketch)



Step 4. Under the UEFI shell, direct to your USB DOK, below is an example uses fs0. Then direct to the folder with updated file and type command: "update" and press enter. (Diagrammatic sketch)

```
EFI Shell version 2.80 [5.24]
Current running mode 1.1.2
Device mapping table
  fs0 :Removable HardDisk - Alias hd32a0d0b blk0
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)/HD(1,MBR,0x00057E24,0x800,0
x1CE7800)
  blk0 :Removable HardDisk - Alias hd32a0d0b fs0
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)/HD(1,MBR,0x00057E24,0x800,0
x1CE7800)
  blk1 :Removable BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)

Press ESC in 4 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> cd Update_AFU-AptioV_ANSB-7A44G_0_0_18

fs0:\Update_AFU-AptioV_ANSB-7A44G_0_0_18> ls
Directory of: fs0:\Update_AFU-AptioV_ANSB-7A44G_0_0_18

10/07/24 09:58a <DIR>          8,192 .
10/07/24 09:58a <DIR>           0 ..
10/01/24 03:52p                374 ReadMe.txt
10/01/24 03:52p          8,121,390 Update.efi
      2 File(s)  8,121,764 bytes
      2 Dir(s)

fs0:\Update_AFU-AptioV_ANSB-7A44G_0_0_18> Update.efi_
```

Step 5. The updating process will start and you can see the updating progress. Once finished, please power off and restart the system.

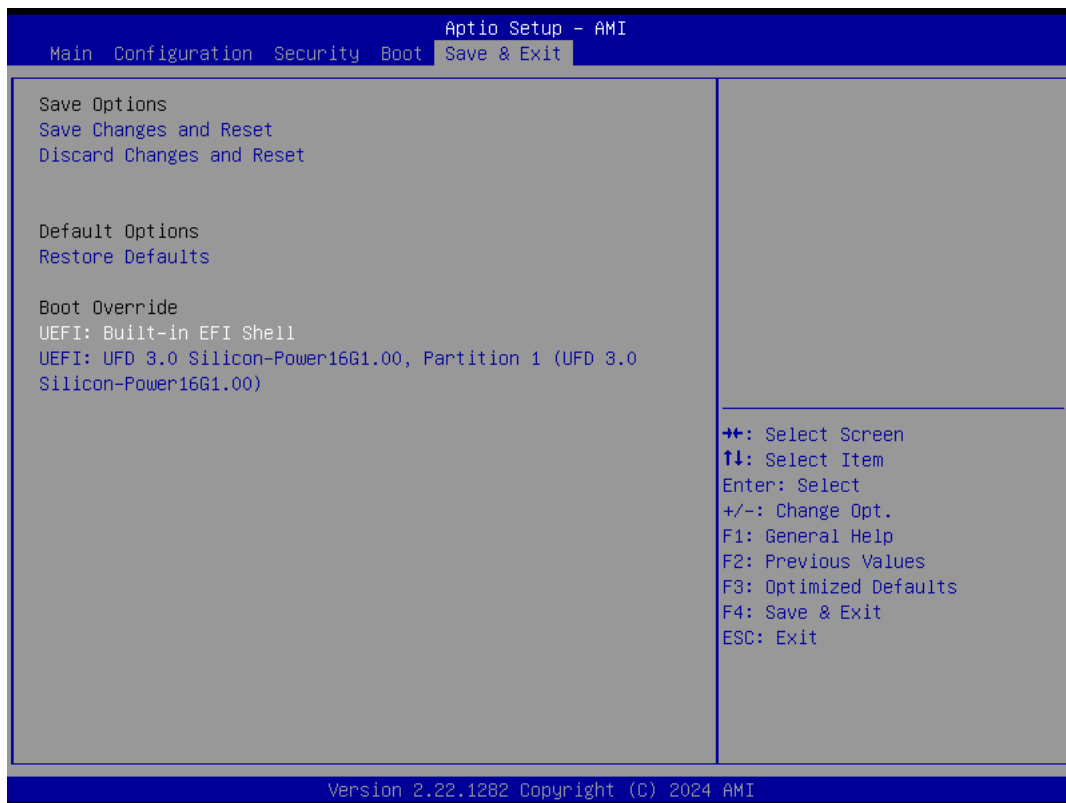
(Diagrammatic sketch)



Step 6. When you see the “Programming success” message, which means the BIOS update processes finished. Please cut the AC power off and wait for 10 seconds before powering on.

4.2 How to update the EC file

1. Please visit web site of Portwell download center as below hyperlink
<http://www.portwell.com.tw/support/download>
2. Type in your User name and password and log in the download center.
3. Select “Search download” and type the keyword “ANSB-7A44G”
4. ANSB-7A44G **UEFI Update SOP process**
 - Step 1. Prepare a USB DOK.
 - Step 2. Unzip update file to the USB DOK.
 - Step 3. Plug the USB DOK into the target system and boot from UEFI Shell.(Diagrammatic sketch)



Step 4. Under the UEFI shell, direct to your USB DOK, below is an example uses fs0. Then direct to the folder with updated file and type command: "update" and press enter.

(Diagrammatic sketch)

```
EFI Shell version 2.80 [5.24]
Current running mode 1.1.2
Device mapping table
  fs0 :Removable HardDisk - Alias hd32a0d0b blk0
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)/HD(1,MBR,0x00057E24,0x800,0
x1CE7800)
  blk0 :Removable HardDisk - Alias hd32a0d0b fs0
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)/HD(1,MBR,0x00057E24,0x800,0
x1CE7800)
  blk1 :Removable BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x8,0x1)/Pci(0x0,0x4)/USB(0x0,0x0)/USB(0x3,0x0)

Press ESC in 3 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> cd Update_EC_ANSB-7A44E_0_13

fs0:\Update_EC_ANSB-7A44E_0_13> ls
Directory of: fs0:\Update_EC_ANSB-7A44E_0_13

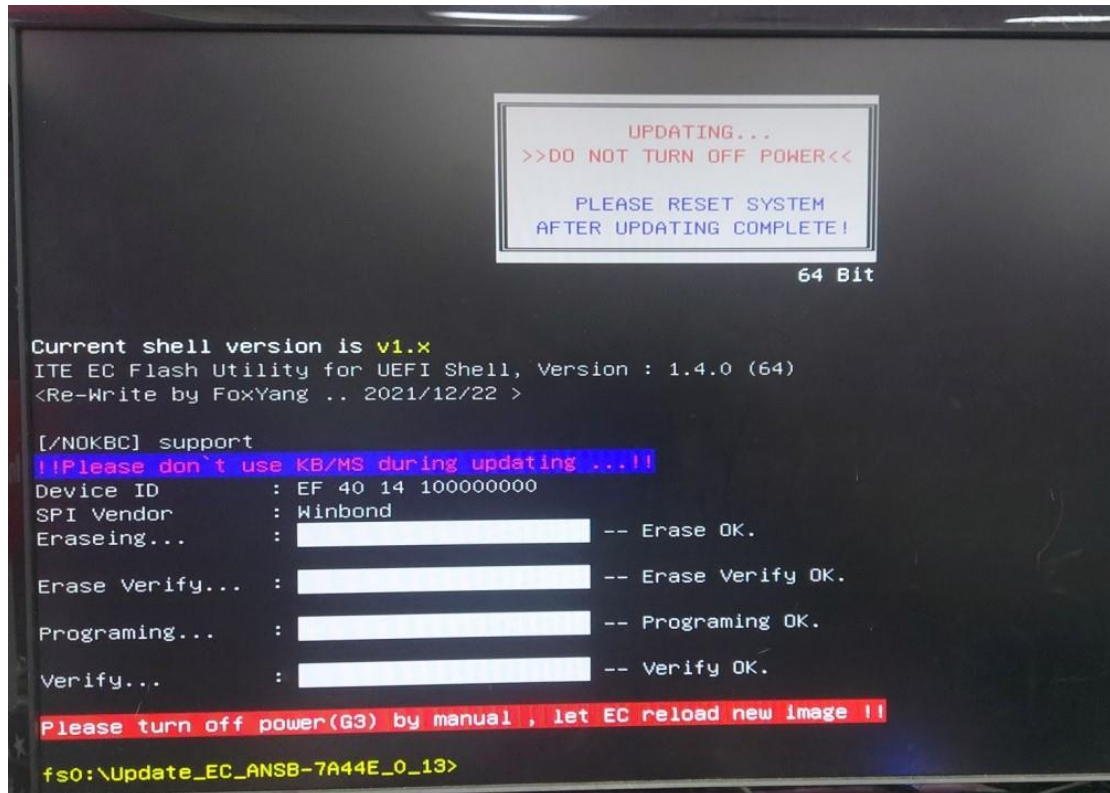
10/07/24 10:52a <DIR>          8,192 .
10/07/24 10:52a <DIR>           0 ..
10/01/24 03:03p              385 ReadMe.txt
10/01/24 03:03p            71,874 Update.efi
      2 File(s)          72,259 bytes
      2 Dir(s)

fs0:\Update_EC_ANSB-7A44E_0_13> Update.efi_
```

Step 5. The updating process will start and you can see the updating progress.

Once finished, please power off and restart the system.

(Diagrammatic sketch)



Step 6. When you see the “Please turn off power (G3) by manual, let EC reload new image” message, which means the EC update processes finished. Please cut the AC power off and wait for 10 seconds before powering on.

Chapter 5

Important instructions

- 5.1 Note on the Warranty
- 5.2 Exclusion of Accident Liability Obligation
- 5.3 Liability limitations / Exemption from the Warranty Obligation
- 5.4 Declaration of Conformity

This chapter includes instructions which must be carefully followed when the embedded system is used.

5.1 Note on the Warranty

Due to their limited-service life, parts which, by their nature, are especially subject to wear are not included in the guarantee beyond the legal stipulations.

5.2 Exclusion of Accident Liability Obligation

Portwell, Inc. shall be exempt from the statutory accident liability obligation if users fail to abide by the safety instructions.

5.3 Liability Limitations / Exemption from the Warranty Obligation

In the event of damage to the system unit caused by failure to abide by the hints in this manual and on the unit (especially the safety instructions), Portwell, Inc. shall not be required to respect the warranty even during the warranty period and shall be free from the statutory accident liability obligation.

5.4 Declaration of Conformity

EMC

CE/FCC Class B

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.
2. This equipment must accept any interference that may cause undesired operation.

Chapter 6

6.1 PET tool

6.1 PET tool

Portwell Evaluation Tool (PET)

The Portwell Evaluation Tool (PET) is an API which Portwell's customers can access the GPIO, I2C, SMBus, etc under Windows and Linux OS. For more information, please contact Portwell.

Please visit our Download Center to obtain the necessary documents and files, such as the catalog, user manual, PET, BIOS, and driver.

<https://www.portwell.com.tw/support-center/download-center/>

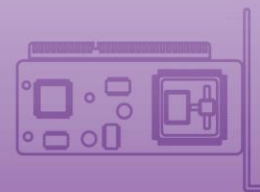
If you have other additional technical information or request which is not covered in this manual, please fill in the technical request form as below hyperlink.

<https://www.portwell.com.tw/support-center/technical-request/>

We will do our best to provide a suggestion or solution for you.

Portwell

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