QBiP-x7433REC

3.5” SBC Boards

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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
QBiP-x7433REC	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the GIGAIPC.com for the latest version of this document.

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Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Do not cover the openings on the device to ensure optimal heat dissipation.

13. Watch out for high temperatures when the system is running.

14. Do not touch the heat sink or heat spreader when the system is running

15. Never pour any liquid into the openings. This could cause fire or electric shock.

16. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

17. If any of the following situations arises, please the contact our service personnel:
    i. Damaged power cord or plug
    ii. Liquid intrusion to the device
    iii. Exposure to moisture
    iv. Device is not working as expected or in a manner as described in this manual
    v. The device is dropped or damaged
    vi. Any obvious signs of damage displayed on the device

18. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

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FCC Statement

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量
GIGAIPC Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及其电子组件	○	○	○	○	○	○
外部信号连接器及线材	○	○	○	○	○	○

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006 标准规定的限量要求以下。
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006 标准规定的限量要求。
备注: 此产品所标示之环保使用期限, 系指在一般正常使用状况下。

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China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products
GIGAIPC Main Board/ Daughter Board/ Backplane

Component	Poisonous or Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
PCB & Other Components	O	O	O	O	O	○
Wires & Connectors for External Connections	O	O	O	O	O	O

O : The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.
X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.
Note: The Environment Friendly Use Period as labeled on this product is applicable under normal usage only

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Chapter 1

Chapter 1 - Product Specifications
QBiP-x7433REC

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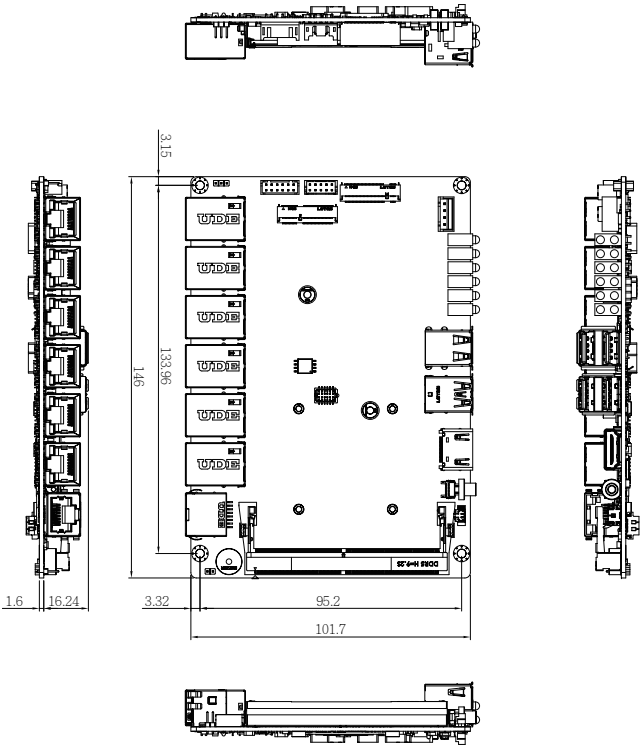
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16.24
3.32
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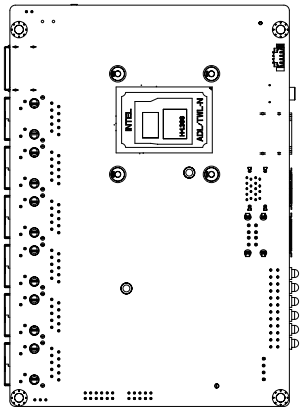
INTEL
ADL/TGL-H

1.1 Specifications- QBiP-x7433REC

Motherboard	QBiP-x7433REC
Form Factor	3.5'' SBC 146W x 101.7D (mm)
CPU	Intel® Atom® x7433RE Processor Intel 7, 4 cores, up to 3.40 GHz TDP 9W
Socket	1 x FCBGA1264
Memory	1 x DDR5 SO-DIMM socket, Max. Capacity 16 GB Support Single Channel DDR5 4800 MHz memory module
Ethernet	6 x 2.5GbE LAN Ports (Realtek® RTL8125D)
Video	Integrated Graphics Processor - Intel® UHD Graphics support: 1 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz
Expansion Slots	1 x 2280 M.2 M-Key (PCIe Gen3x2) 1 x 2230 M.2 E-Key
Internal I/O	1 x 4-pin box power connector (DC in +12V~36VDC) 1 x CPU fan header 1 x COM header (RS-232) 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header
Front I/O	1 x HDMI 1 x USB 3.2 Gen 2 (10 Gbps) 1 x USB 3.2 Gen 1 (5 Gbps) 2 x USB 2.0 1 x Power button 6 x LAN status LED
Rear I/O	6 x RJ45 LAN Ports 1 x Console Port (RS-232)(RJ45 Type)
TPM	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0
OS Compatibility	Windows 11 Enterprise LTSC 2024 Windows 11 IoT Enterprise LTSC 2024, x64 Windows 11 IoT Enterprise, version 24H2 x64 Windows 10 IoT Enterprise LTSC 2021, x64

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Motherboard	QBiP-x7433REC
Operating Properties	Operating temperature: 0°C to 60°C Operating humidity: 60°C @ 20-95% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 85°C @ 95% (non-condensing)

Chapter 2

Chapter 2 – Hardware Information

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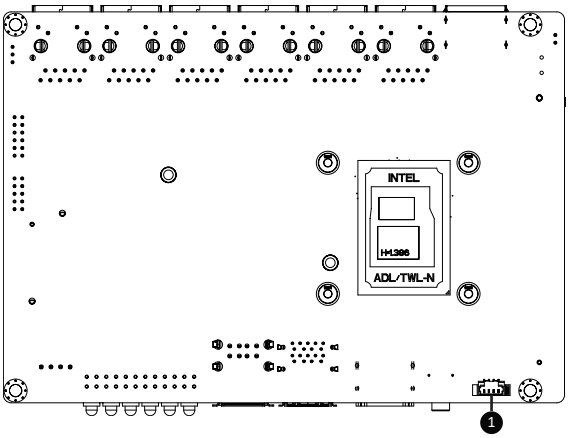
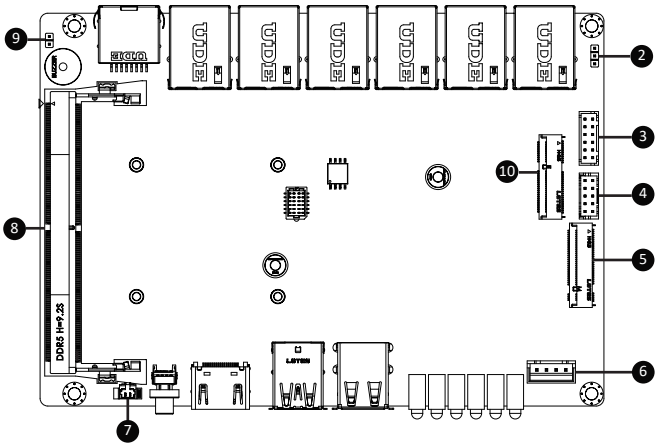
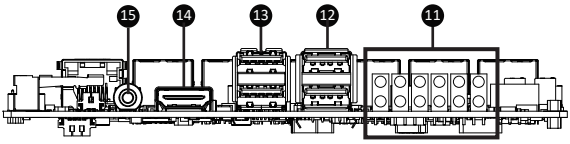
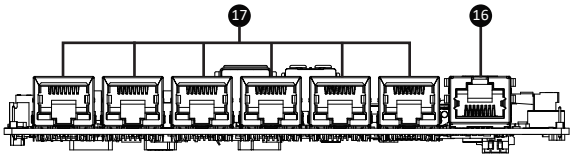
2.1 Jumpers and Connectors









No	Code	Description
1	FAN	FAN connector
2	AT_CN	AT/ATX mode select jumper
3	GPIO_CNT	General Purpose input/output header
4	COM2	Serial port header (RS-232)
5	M2M	M.2 slot, 2280 M-key
6	DC_IN	DC IN 1x4pin power connector
7	BATTERY	Battery cable connector
8	SODIMMA	DDR5 SO-DIMM socket
9	ME	ME Disable jumper
10	M2E	M.2 slot, 2230 E-key
11	LAN1_LED LAN2_LED LAN3_LED LAN4_LED LAN5_LED LAN6_LED	LAN LEDs
12	USB20	USB 2.0 port x 2

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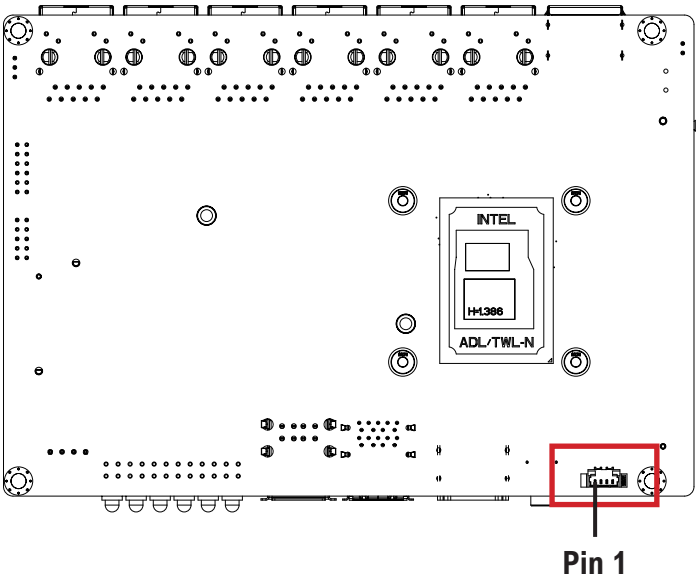
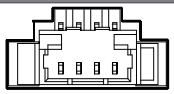
No	Code	Description
13	USB32	USB 3.2 Gen 2 port x 1 USB 3.2 Gen 1 port x 1
14	HDMI	HDMI connector
15	PWR_ BUTTON	Power button
16	RJ45_COM1	Serial Port (RS-232)(RJ45 type)
17	LAN1, LAN2, LAN3, LAN4, LAN5, LAN6	LAN Connector x 6

2.2.1 FAN (FAN connector)

1



CPU/System FAN

1 2 3 4

Connector PN	Vendor
85205-0470N	ACES
A1250WV-S-04PC	JOINT-TECH

Connector type
1x4pin header, pitch 1.25mm

Pin No.	Definition
1	GND
2	12V
3	Detect
4	Speed Control

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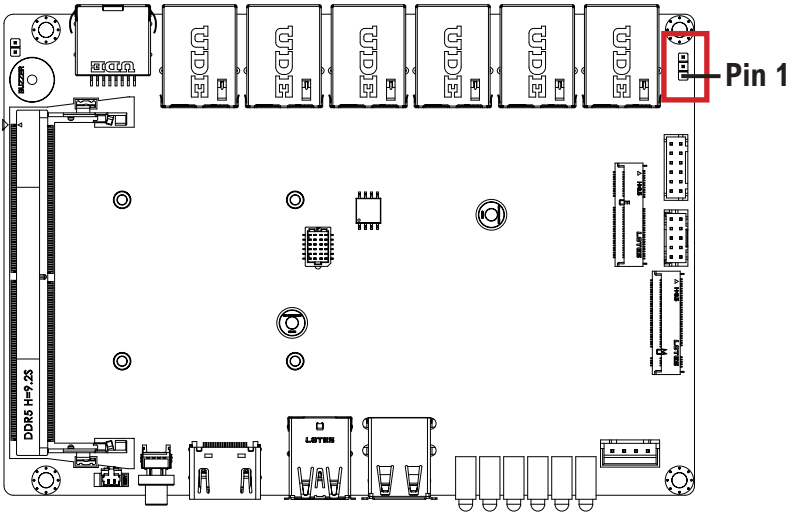
2.2.2 AT_CN (AT/ATX mode select jumper)

2



AT/ATX mode select jumper	
3 1	1-2 Close : AT mode.
	2-3 Close : ATX mode. (Default setting)

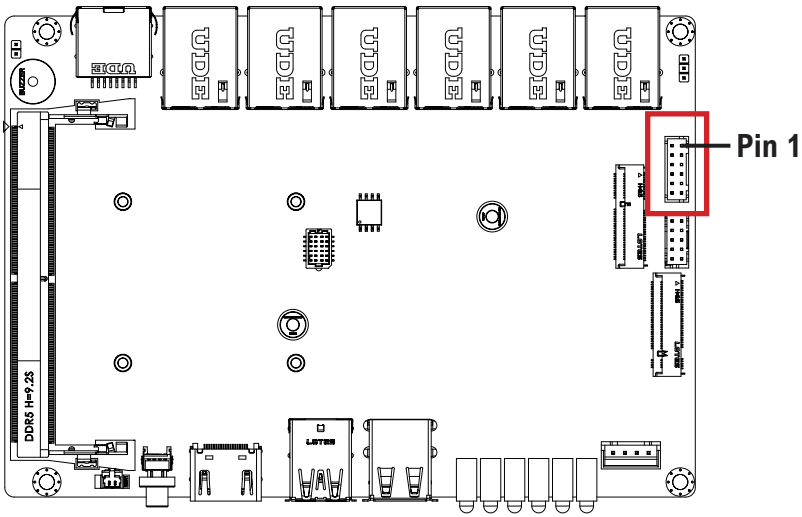
Pin No.	Definition
1	AT MODE
2	Detect
3	ATX MODE

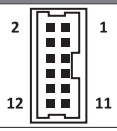
Connector PN	Vendor
220-96-03GB01	PINREX
220-96-03GB001K	PINREX

Connector type
1x3pin header, pitch 2.0mm

2.2.3 GPIO_CNT (General Purpose input/output header)

3



GPIO Connector


Pin No.	Definition
1	GPIO-output_1
2	GPIO-input_1
3	GPIO-output_2
4	GPIO-input_2
5	GPIO-output_3
6	GPIO-input_3
7	GPIO-output_4
8	GPIO-input_4
9	SMBus Clock
10	SMBus DATA

Pin No.	Definition
11	5V
12	GND

Connector PN	Vendor
725-81-12TW00	PINREX

Connector type
2x6pin header, pitch 2.0mm

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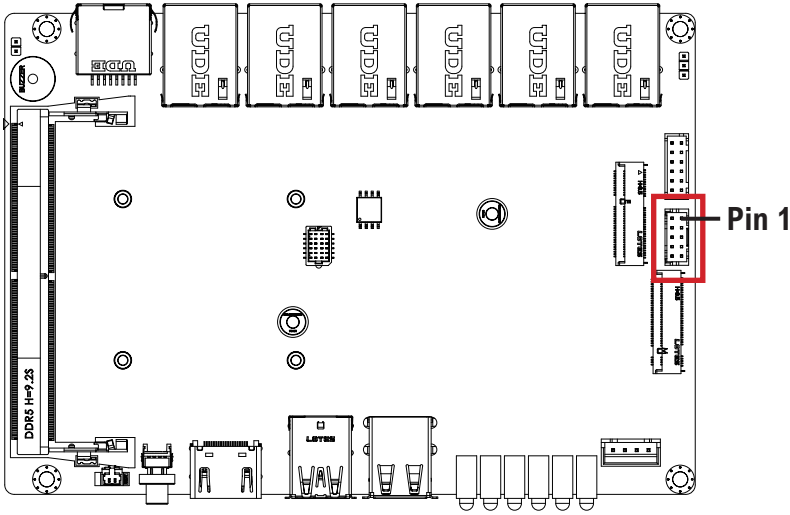
2.2.4 COM2 (Serial port header)

❹



Serial Port Cable Connector
2 1   10 9

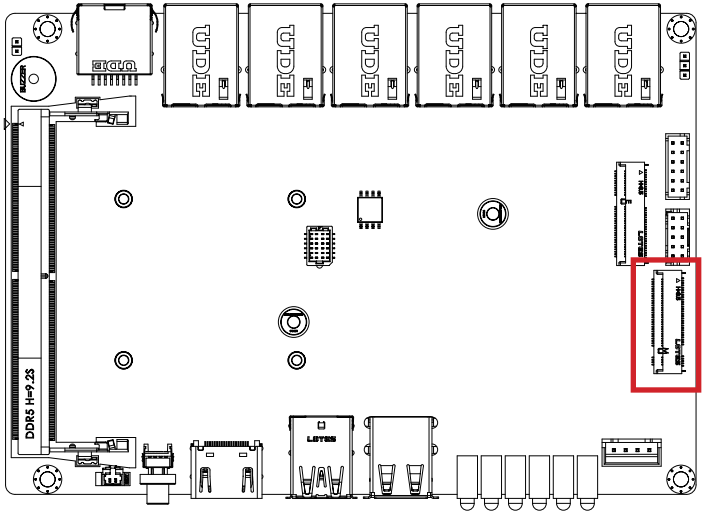
Pin No.	Definition
1	RXD
2	DCD
3	DTR
4	TXD
5	DSR
6	GND
7	CTS
8	RTS
9	No Connect
10	RI

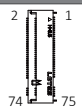
Connector PN	Vendor
725-81-10TW00	PINREX

Connector type
2x5pin header, pitch 2.0mm

2.2.5 M2M (M.2 Slot, 2280 M-Key)

5



M.2 M Key Connector


Pin No.	Definition	Pin No.	Definition
1	GND	2	3.3V
3	GND	4	3.3V
5	NC	6	NC
7	NC	8	NC
9	GND	10	SSD LED
11	NC	12	3.3V
13	NC	14	3.3V
15	GND	16	3.3V
17	NC	18	3.3V
19	NC	20	NC
21	GND	22	NC
23	NC	24	NC
25	NC	26	NC
27	GND	28	NC
29	PCIE1 RXn	30	NC
31	PCIE1 RXp	32	NC
33	GND	34	NC

Pin No.	Definition	Pin No.	Definition
35	PCIE1 TXn	36	NC
37	PCIE1 TXp	38	devslp
39	GND	40	NC
41	PCIE0 RXn	42	NC
43	PCIE0 RXp	44	NC
45	GND	46	NC
47	PCIE0 TXn	48	NC
49	PCIE0 TXp	50	PCI Reset
51	GND	52	PCIE Clock Request
53	PCIE Clock n	54	NC
55	PCIE Clock p	56	NC
57	GND	58	NC

Pin No.	Definition	Pin No.	Definition
67	NC	68	NC
69	Detect	70	3.3V
71	GND	72	3.3V
73	GND	74	3.3V
75	GND		

Connector PN	Vendor
80159-8521	BELLWETHER

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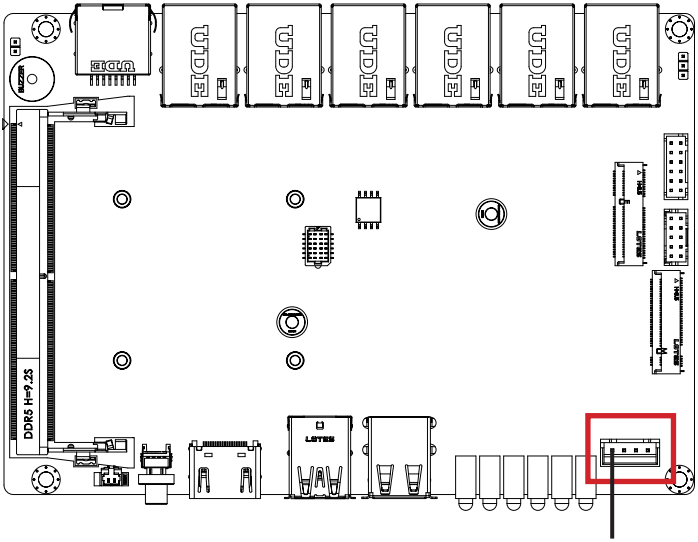
2.2.6 DC_IN (DC IN 1x4pin power connector)

❻



DC in Connector
DC_IN 1 ○ ○ ○ 4

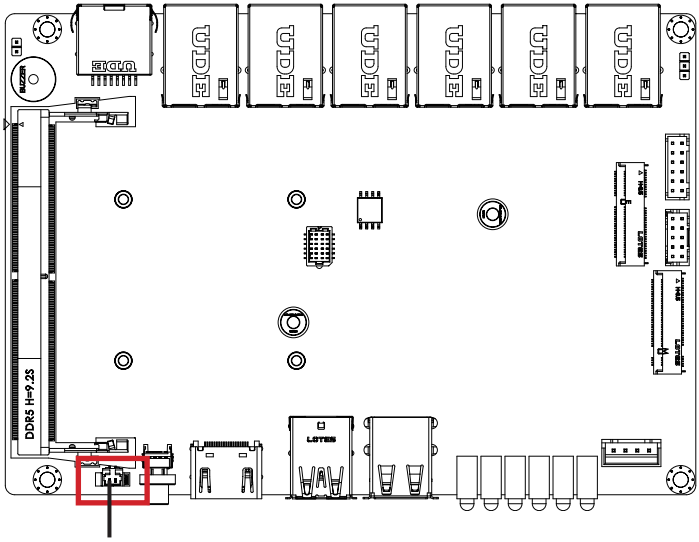
Connector PN	Vendor
753-81-04TW00	PINREX

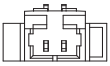
Connector type
1x4pin header, pitch 2.5mm

Pin No.	Definition
1	GND
2	DC in
3	DC in
4	GND

2.2.7 BATTERY (Battery cable connector)

7



Battery Cable Connector
 1 2

Connector PN	Vendor
85205-0270L	ACES
A1250WV-S-02PC	JOINT-TECH

Connector type
1x2pin header, pitch 1.25mm

Pin No.	Definition
1	3V
2	GND

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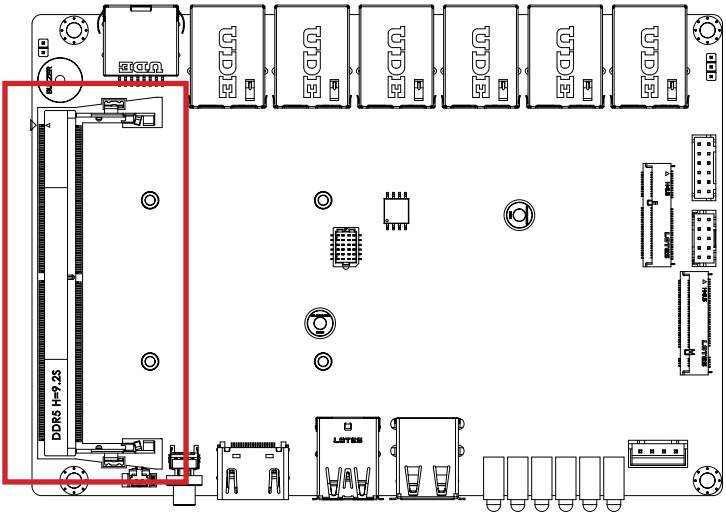
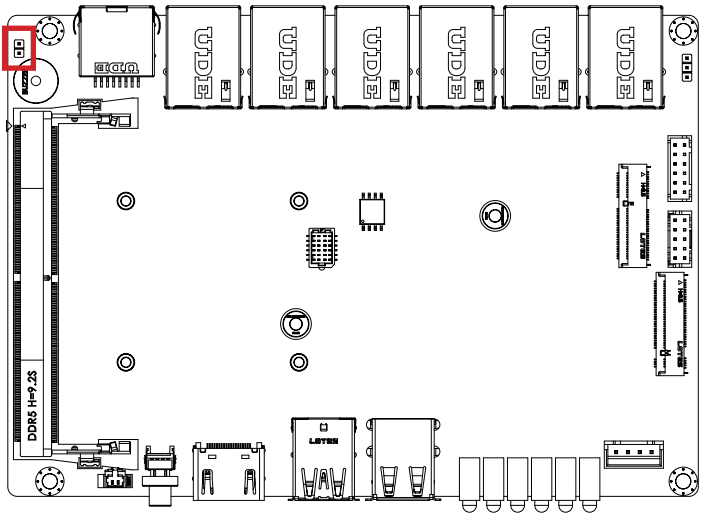
2.2.8 SODIMMA (DDR5 SO-DIMM socket)

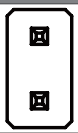
8



2.2.9 ME (ME Disable jumper)

9



ME Disable Connector


Connector PN	Vendor
220-96-02GBK1	PINREX

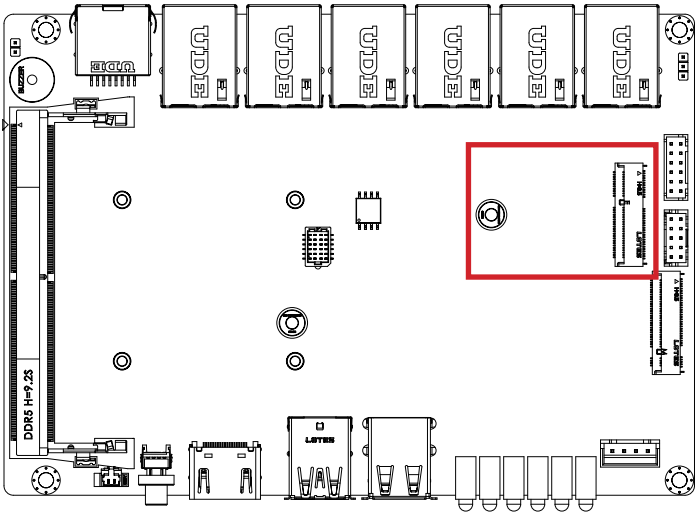
Connector type
1x2pin header, pitch 2.0mm

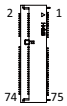
ME Disable jumper	
	Enable (Default setting)
	Disable

GIGAIPC reserves the right to modify or revise the content at anytime without prior notice.

2.2.10 M2E (M.2 slot, 2230 E-key)

10



M.2 E Key Connector


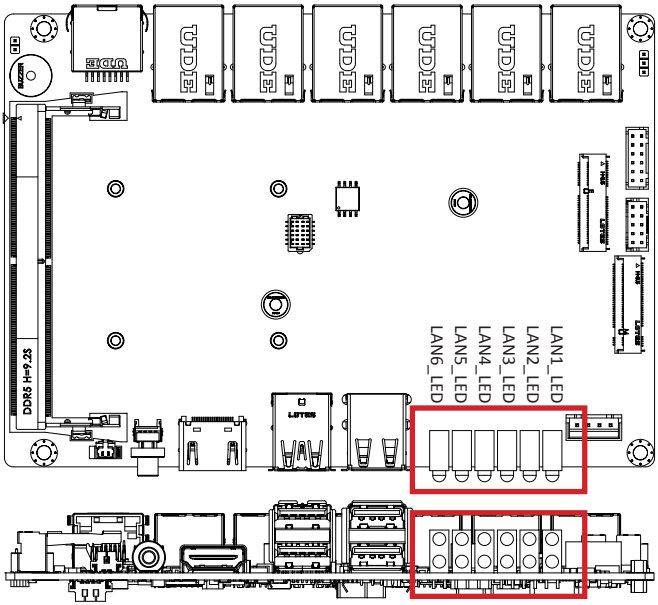
Pin No.	Definition	Pin No.	Definition
1	GND	2	3V
3	USB_Dp	4	3V
5	USB_Dn	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	GND	14	NC
15	NC	16	NC
17	NC	18	GND
19	GND	20	NC
21	NC	22	NC
23	NC		

Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE1 TXp	34	NC
37	PCIE1 TXn	36	NC
39	GND	38	NC
41	PCIE1 RXp	40	NC
43	PCIE1 RXn	42	NC
45	GND	44	NC
47	CLK_Dp	46	NC
49	CLK_Dn	48	NC
51	GND	50	NC
53	CLK_REQ	52	PCIE_RST
55	PCIE_WAKE	54	BT_Disable
57	GND	56	WLAN_ DISABLE
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	NC
69	GND	68	NC
71	NC	70	NC
73	NC	72	3V
75	GND	74	3V

Connector PN	Vendor
APCI0095-P002A	LOTES
80152-8521	BELLWETHER
2E0BC21-S85BE-LH	FOXCONN

2.2.11 LAN1_LED, LAN2_LED, LAN3_LED, LAN4_LED LAN5_LED, LAN6_LED (LAN LEDs)

11



LAN LEDs Connector
Active Speed

Connector PN	Vendor
PA2/439682/ YYG2/2/20/HA	ETERNAL-SHINE

State	Description
Yellow On	2.5Gbps data rate
Green On	1Gbps data rate
Off	100M & 10Mbps data rate

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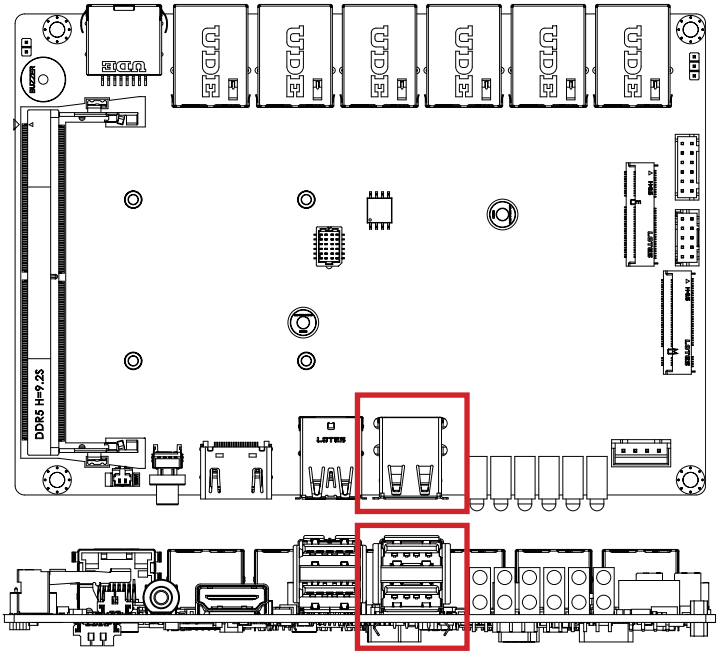
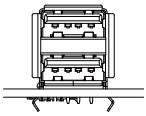
2.2.12 USB20 (USB 2.0 port x 2)

12



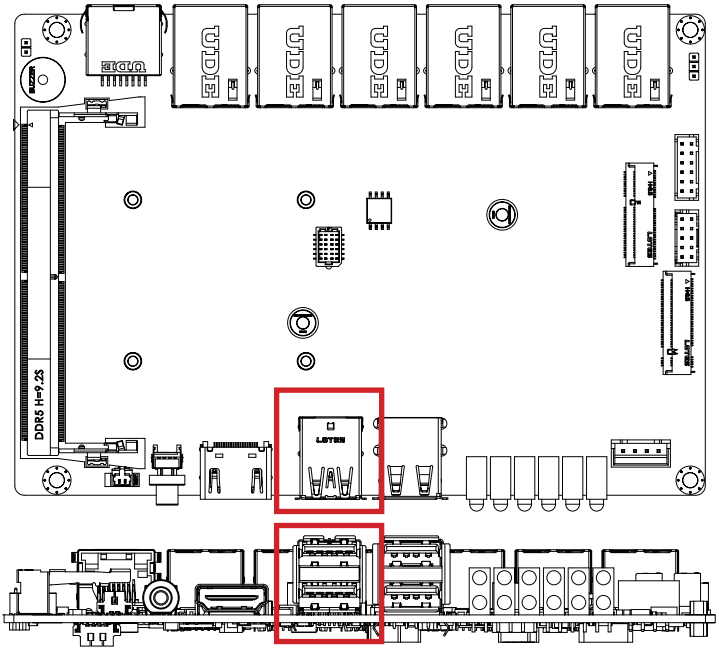
USB Connector


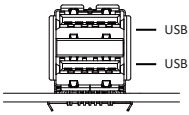
Pin No.	Definition
1	5V
2	D1n
3	D1p
4	GND
5	5V
6	D2n
7	D2p
8	GND

Connector PN	Vendor
UB1112C-8FDE-4F	FOXCONN

2.2.13 USB32 (USB 3.2 Gen 2 port x 1 + USB 3.2 Gen 1 port x 1)

13



USB Connector
 USB 3.2 Gen 2 (10 Gbps) USB 3.2 Gen 1 (5 Gbps)

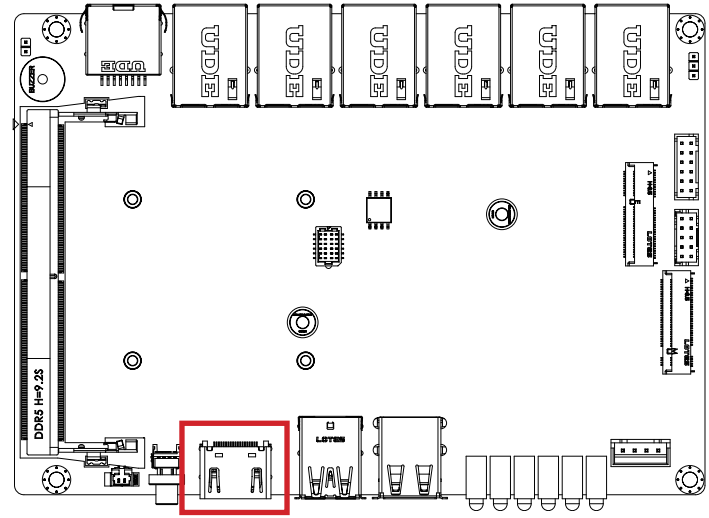
Connector PN	Vendor
18-A5950-6A33-A	TCONN

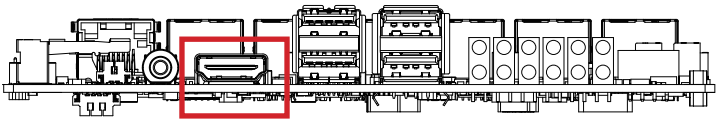
Pin No.	Definition	Pin No.	Definition
1	5V	10	5V
2	USB_Dn	11	USB_Dn
3	USB_Dp	12	USB_Dp
4	GND	13	GND
5	USB3_RXn	14	USB3_RXn
6	USB3_RXp	15	USB3_RXp
7	GND	16	GND
8	USB3_TXn	17	USB3_TXn
9	USB3_TXp	18	USB3_TXp

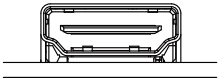
GIGAIPC reserves the right to modify or revise the content at anytime without prior notice.

2.2.14 HDMI (HDMI connector)

14





HDMI Connector


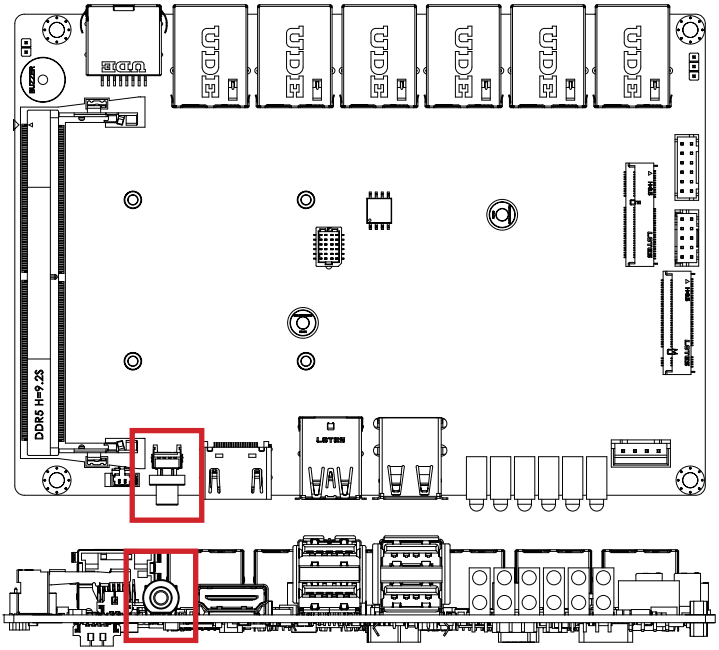
Pin No.	Definition	Pin No.	Definition
1	TX2p	20	TX2p
2	GND	21	GND
3	TX2n	22	TX2n
4	TX1p	23	TX1p
5	GND	24	GND
6	TX1n	25	TX1n
7	TX0p	26	TX0p
8	GND	27	GND
9	TX0n	28	TX0n
10	CLKp	29	CLKp

Pin No.	Definition	Pin No.	Definition
11	GND	30	GND
12	CLKn	31	CLKn
13	NC	32	NC
14	NA	33	NA
15	DDC Clock	34	DDC Clock
16	DDC Data	35	DDC Data
17	GND	36	GND
18	5V	37	5V
19	Hot Plug Detect	38	Hot Plug Detect

Connector PN	Vendor
D13-0715-19681	WALTA

2.2.15 PWR_BUTTON (Power button)

15



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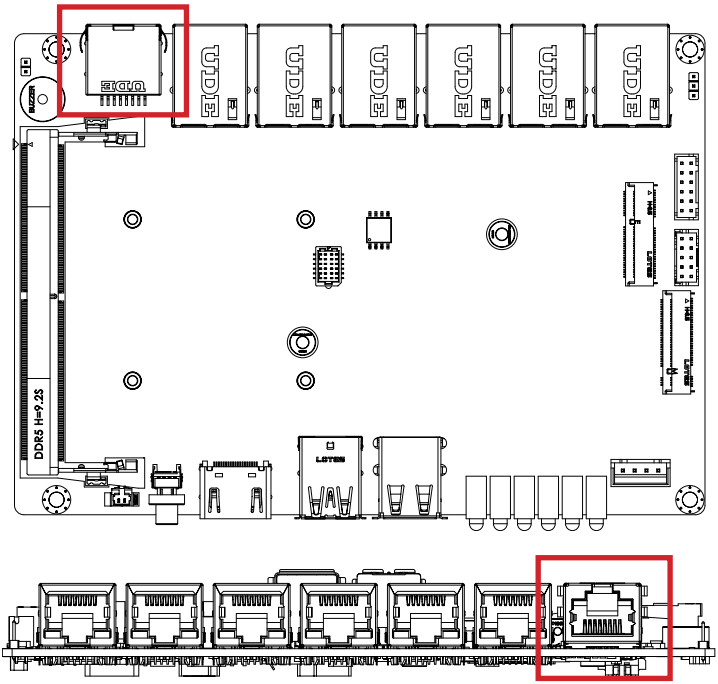
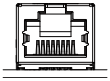
2.2.16 RJ45_COM1 (Serial Port (RS-232)(RJ45 type))

16



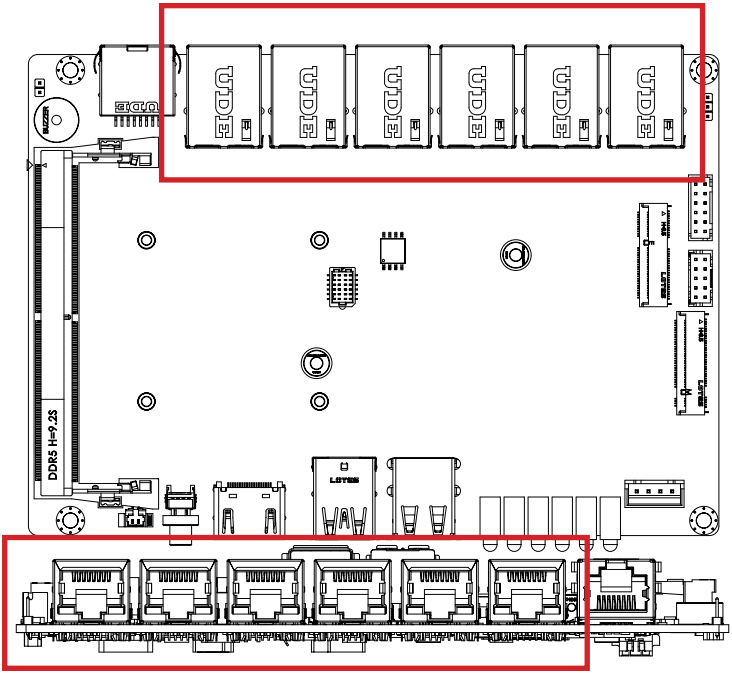
RJ45-COM connector


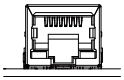
Connector PN	Vendor
C13-10000002	UDE

Pin No.	Definition
1	DSR
2	RTS
3	GND
4	TXD
5	RXD
6	DCD
7	CTS
8	DTR

2.2.17 LAN1, LAN2, LAN3, LAN4, LAN5, LAN6 (LAN connector x 6)

17



LAN connector


Pin No.	Definition
1	TX1+
2	TX1-
3	TX2+
4	TX2-
5	TX3+
6	TX3-
7	TX4+
8	TX4-

Connector PN	Vendor
RB1-GB-0010	UDE

State	Description
Yellow On	2.5Gbps data rate
Green On	1Gbps data rate
Off	100M & 10Mbps data rate

GIGAIPC reserves the right to modify or revise the content at anytime without prior notice.

Chapter 3

Chapter 3 – BIOS

3.1 Introduction

BIOS (Basic input/output system) provides hardware detailed information and boot-up options, which include firmware to control, set-up and test all hardware settings. Therefore, BIOS is the communication bridge between OS/application software and hardware.

3.1.1 How to Entering into BIOS menu

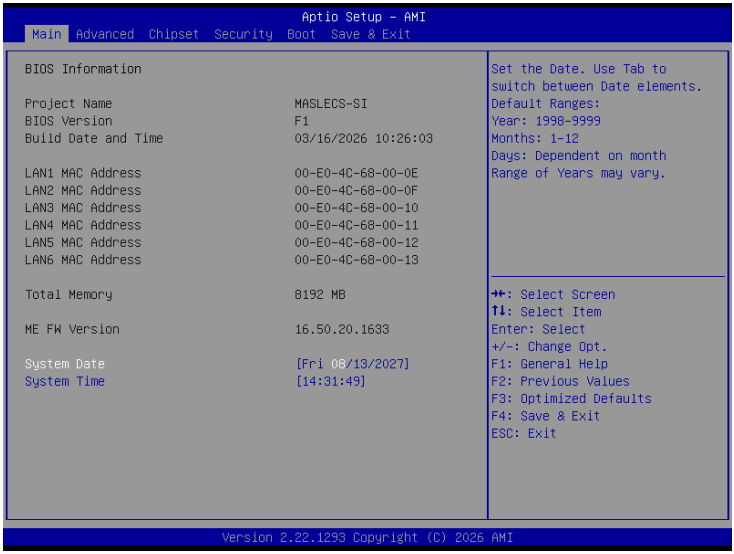
Once the system is power on, press the <DEL> key as soon as possible to access into BIOS Setup program.

3.1.2 Function Keys to setup in BIOS Setup program

Function keys	Description
→←	Select Screen
↑↓	Select Item
Enter	Execute command or enter the submenu
+	Increase the numeric value or make changes
—	Decrease the numeric value or make changes
F1	General Help
F2	Previous Values
F3	Load Optimized Defaults Settings
F4	Save changes & Exit the BIOS Setup program
ESC	Exit the BIOS Setup program

3.2 The Main Menu

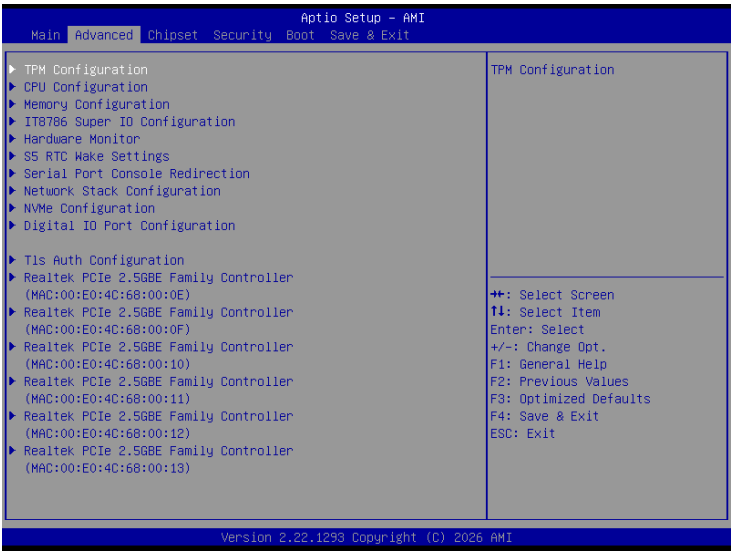
The main menu shows the basic system information.
Use arrow keys to move among the items.



Items	Description
Project Name	Shows Project name information
BIOS Version	Shows the BIOS version of the system
Build Date and Time	Shows the Build Date and Time when the BIOS was created
LAN1 MAC Address	Shows LAN1 MAC Address information
LAN2 MAC Address	Shows LAN2 MAC Address information
LAN3 MAC Address	Shows LAN3 MAC Address information
LAN4 MAC Address	Shows LAN4 MAC Address information
LAN5 MAC Address	Shows LAN5 MAC Address information
LAN6 MAC Address	Shows LAN6 MAC Address information
Total Memory	Shows the total memory size of the installed memory
ME FW version	Shows ME firmware version
System Date	Set the Date for the system (Format : Week - Month - Day - Year)
System Time	Set the time for the system (Format : Hour - Minute - Second)

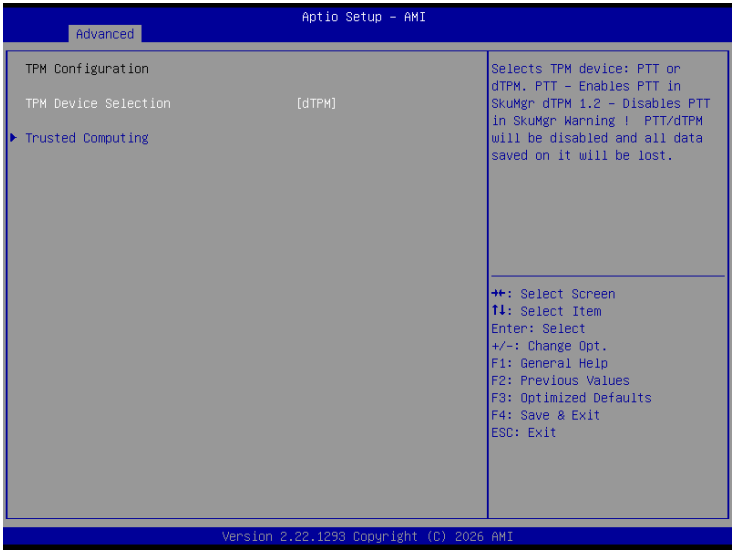
3.3 Advanced

The Advanced menu is to configure the functions of hardware settings through submenu. Use arrow keys to move among the items, and press <Enter> to access into the related submenu.



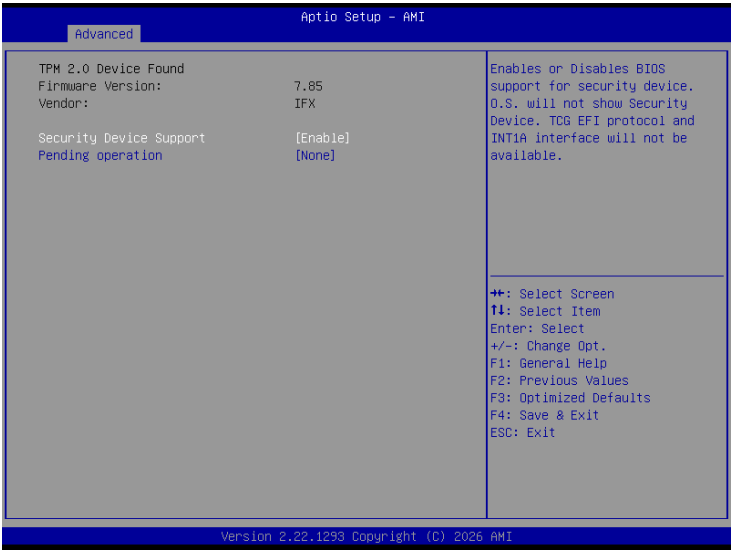
3.3.1 TPM Configuration

Use TPM Configuration submenu to choose TPM interface.



Item	Description
TPM Device Selection	**PTT : Internal TPM** **dTPM : External TPM (When using External TPM module or having TPM chip on MB) (Default setting)**

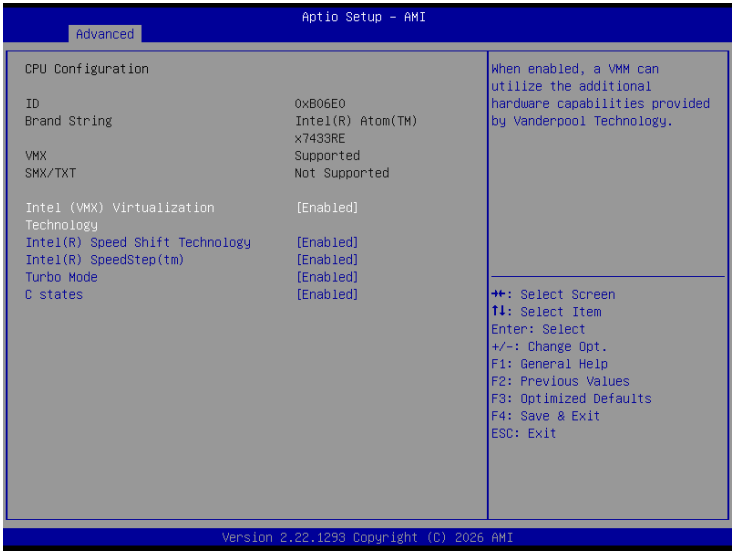
Trusted Computing : Shows TPM information, and TPM module configuration setting.



Item	Description
Security Device support	**Enabled : Enables TPM feature (Default setting)** **Disabled : Disables TPM feature**
Pending operation	**None : No execution will be conducted (Default setting)** **TPM clear : Set to clear data on TPM**

3.3.2 CPU Configuration

This submenu shows detailed CPU informations.

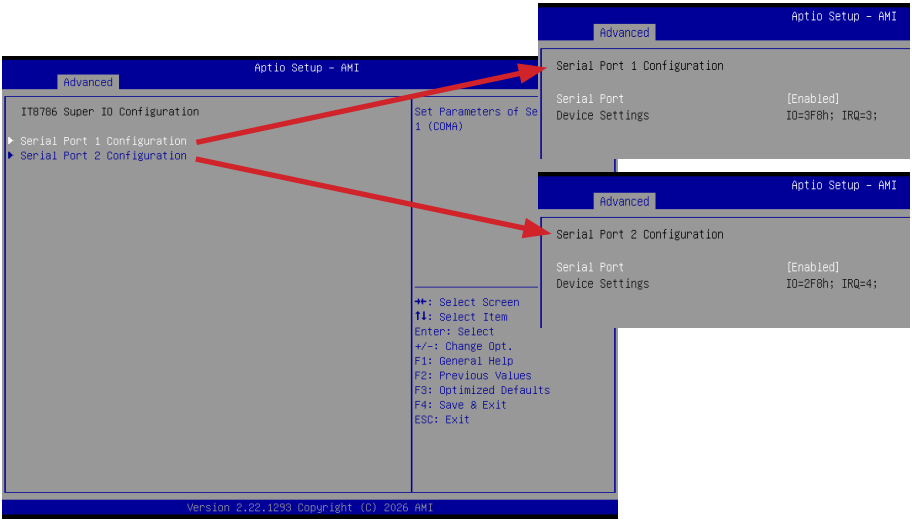


Item	Description
Intel (VMX) Virtualization Technology	Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. **Enabled : Enables Intel Virtualization Technology (Default setting)** **Disabled : Disables Intel Virtualization Technology**
Intel(R) Speed Shift Technology	To speed up CPU frequency transition time from basic frequency to maximum frequency. **Enabled : Enables Intel(R) Speed Shift Technology Interrupt control (Default setting)** **Disabled : Disables Intel(R) Speed Shift Technology Interrupt control**
Intel(R) SpeedStep(tm)	According to Intel CPU loading, Intel SpeedStep Technology will automatically adjust the CPU voltage and core frequency to decrease heat and power consumption for power saving. **Enabled : Enables Intel SpeedStep Technology (Default setting)** **Disabled : Disables Intel SpeedStep Technology**
Turbo Mode	**Enabled : Enables Turbo Mode (Default setting)** **Disabled : Disables Turbo Mode**
C states	Command CPU to enter into low power consumption mode when CPU is under idle mode. **Enabled : Enables C states (Default setting)** **Disabled : Disables C states**

3.3.3 Memory Configuration

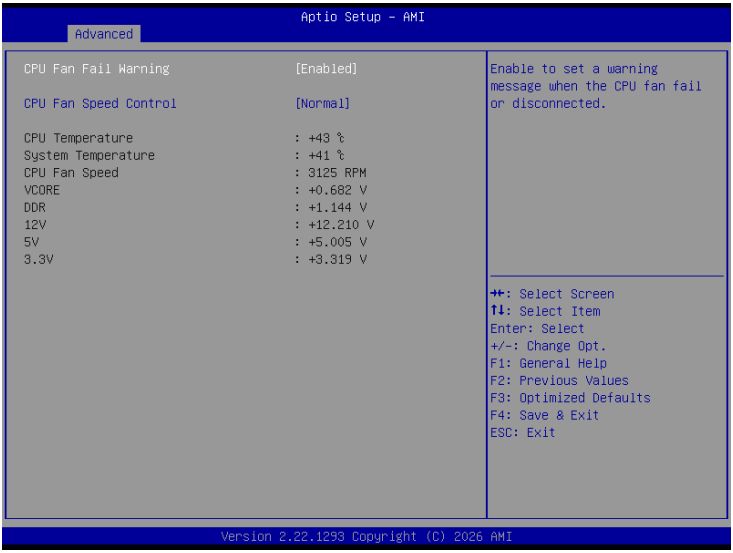
Item	Description
In-Band ECC Support	Enable or Disable In-Band ECC Support function. **Disabled : Disables In-Band ECC Support (Default setting)** **Enabled : Enables In-Band ECC Support**

3.3.4 IT8786 Super IO Configuration



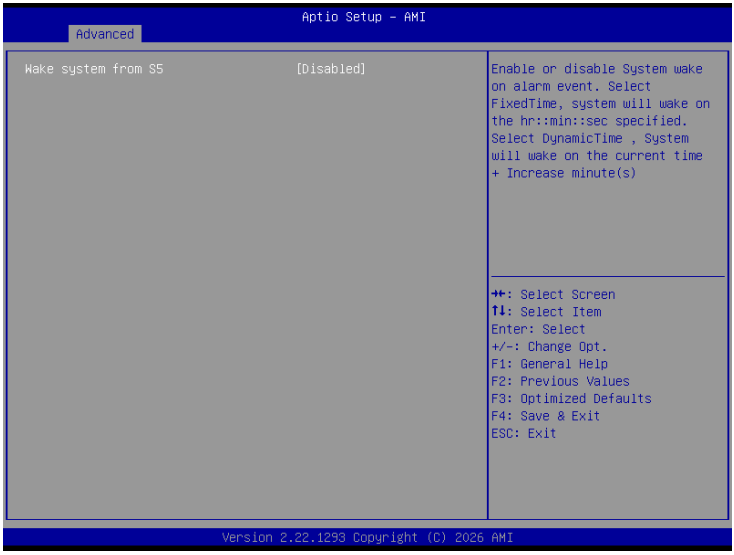
Item	Description
Serial Port 1 Configuration	Press [Enter] to configure advanced items : Serial Port : **Enabled : Enables allows you to configure the serial port settings** **Disabled : if Disabled, displays no configuration for the serial port** Device settings : Display the specified Serial Port base I/O address and IRQ
Serial Port 2 Configuration	

3.3.5 Hardware Monitor



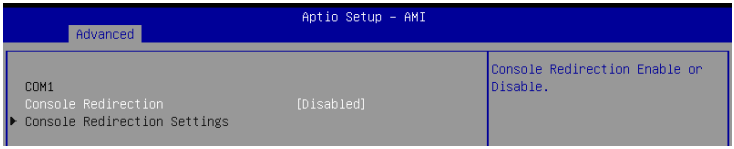
Item	Description
CPU Fan Fail Warning	Enabled : Enables CPU FAN Fail warning alert function (Default setting) Disabled : Disables CPU FAN Fail warning alert function
CPU Fan Speed Control	Normal : Fan speed set by BIOS default (Default setting) Full Speed : Set Fan operates at full speed

3.3.6 S5 RTC Wake Settings

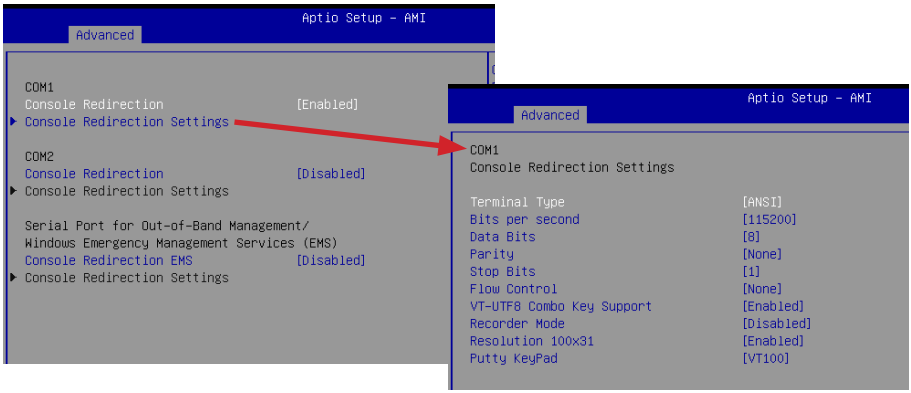


Item	Description
Wake system from S5	Enable or Disable System to wake on a specific time. **Disabled : Disables system to wake on a specific time (Default setting)** **Fixed Time : Enables system to wake on a specific time (Format : hr : min : sec)**

3.3.7 Serial Port Console Redirection - COM1



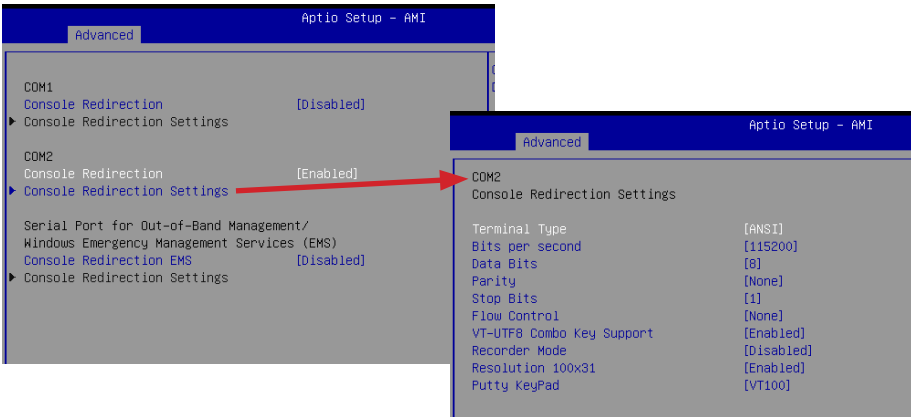
When Console Redirection is enabled :



Item	Description
Console Redirection Settings	When Console Redirection is enabled : COM1 Console Redirection Settings **Terminal Type : VT100, VT100Plus, VT-UTF8, ANSI (Default setting)** **Bits per second : 9600, 19200, 38400, 57600, 115200 (Default setting)** **Data Bits : 7 , 8 (Default setting)** **Parity : None (Default setting), Even, Odd, Mark, Space** **Stop Bits : 1 (Default setting), 2** **Flow Control : None (Default setting), Hardware RTS/CTS** **VT-UTF8 Combo Key Support : Disabled, Enabled (Default setting)** **Recorder Mode : Disabled (Default setting), Enabled** **Resolution 100x31 : Disabled, Enabled (Default setting)** **Putty KeyPad : VT100 (Default setting), LINUX, XTERMR6, SCO, ESCN, VT400**

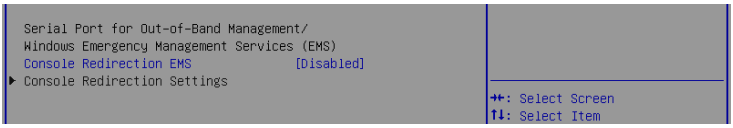
3.3.7 Serial Port Console Redirection - COM2

When Console Redirection is enabled :

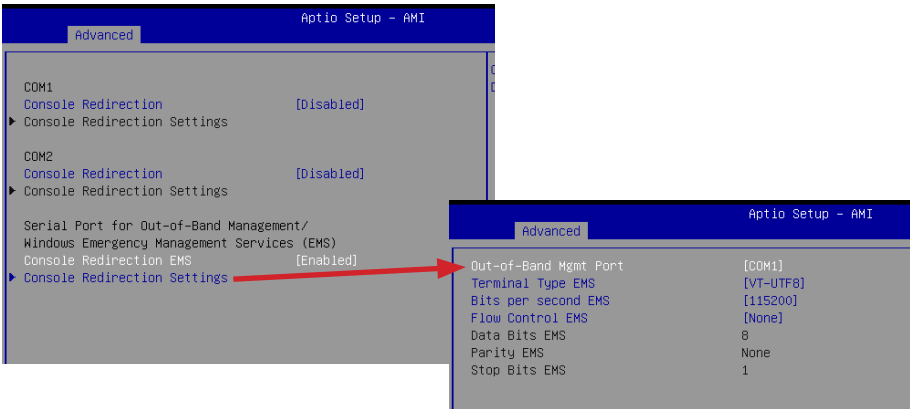


Item	Description
Console Redirection Settings	When Console Redirection is enabled : COM2 Console Redirection Settings **Terminal Type : VT100, VT100Plus, VT-UTF8, ANSI (Default setting)** **Bits per second : 9600, 19200, 38400, 57600, 115200 (Default setting)** **Data Bits : 7 , 8 (Default setting)** **Parity : None (Default setting), Even, Odd, Mark, Space** **Stop Bits : 1 (Default setting), 2** **Flow Control : None (Default setting), Hardware RTS/CTS** **VT-UTF8 Combo Key Support : Disabled, Enabled (Default setting)** **Recorder Mode : Disabled (Default setting), Enabled** **Resolution 100x31 : Disabled, Enabled (Default setting)** **Putty KeyPad : VT100 (Default setting), LINUX, XTERMR6, SCO, ESCN, VT400**

3.3.7 Serial Port Console Redirection - Serial Port for Out-of-Band Management/ Windows Emergency Management Services (EMS)

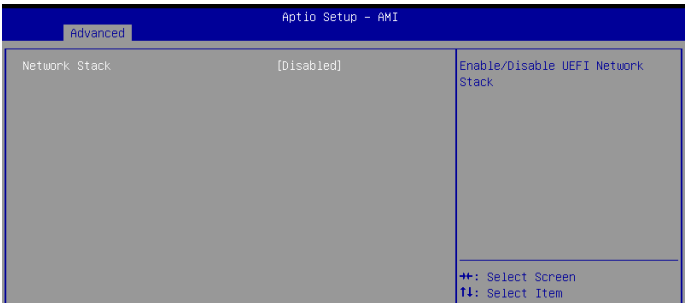


When Console Redirection EMS is enabled :

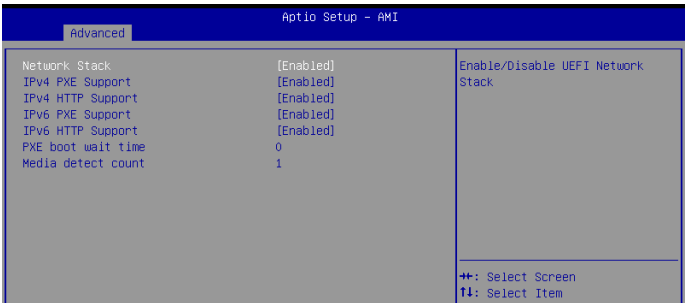


Item	Description
Console Redirection Settings	When Console Redirection EMS is enabled : Serial Port for Out-of-Band Management/ Windows Emergency Management Services (EMS) Console Redirection Settings **Out-of-Band Mgmt Port : COM1 (Default setting), COM2** **Terminal Type EMS : VT100, VT100Plus, VT-UTF8 (Default setting), ANSI** **Bits per second : 9600, 19200, 38400, 57600, 115200 (Default setting)** **Flow Control EMS : None (Default setting), Hardware RTS/CTS, Software Xon/Xoff**

3.3.8 Network Stack Configuration



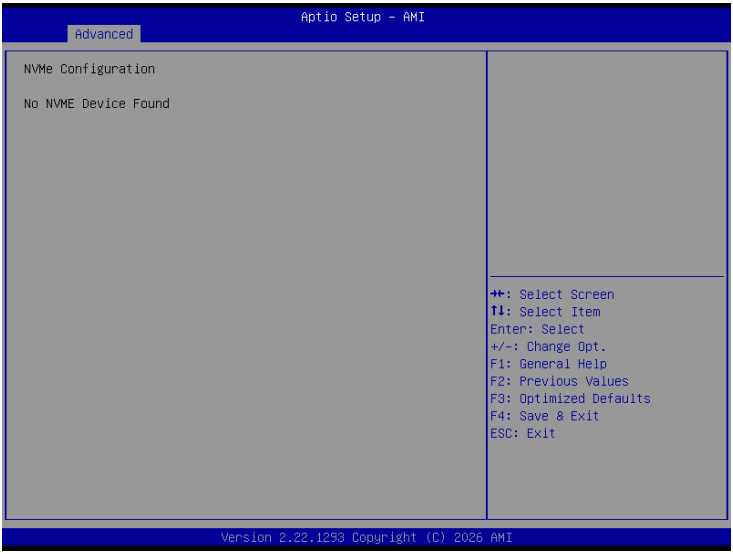
When Network stack is enabled :



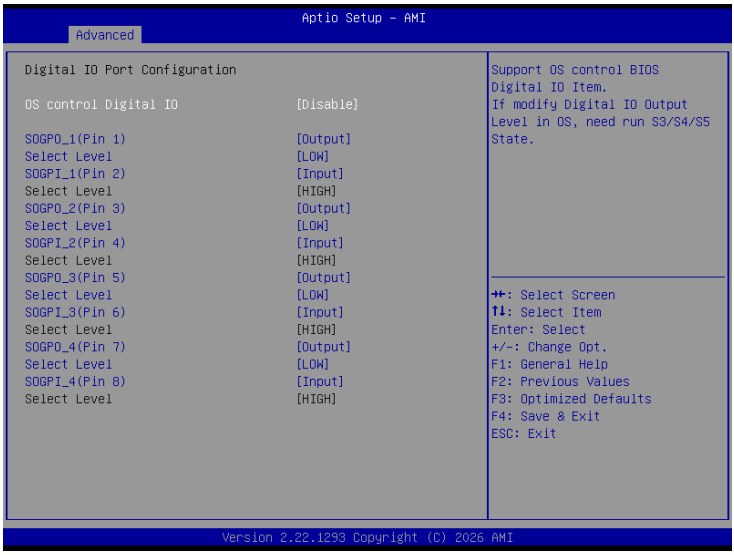
Item	Description
Network Stack	When system is power on, install LAN driver under UEFI mode **Disabled : Disables UEFI Network Stack (Default setting)** **Enabled : Enables UEFI Network Stack**
IPv4 PXE Support	When Network stack is enabled : **Disabled : Disables Ipv4 PXE Support** **Enabled : Enables Ipv4 PXE Support**
IPv4 HTTP Support	When Network stack is enabled : **Disabled : Disables Ipv6 PXE Support** **Enabled : Enables Ipv6 PXE Support**
IPv6 PXE Support	When Network stack is enabled : **Disabled : Disables Ipv4 PXE Support** **Enabled : Enables Ipv4 PXE Support**
IPv6 HTTP Support	When Network stack is enabled : **Disabled : Disables Ipv6 PXE Support** **Enabled : Enables Ipv6 PXE Support**
PXE boot wait time	Wait time in seconds, or use ESC key to abort the PXE boot.
Media detect count	Number of times the presence of media will be checked.

3.3.9 NVMe Configuration

NVMe Configuration shows information when your M.2 NVMe PCIe SSD is installed.

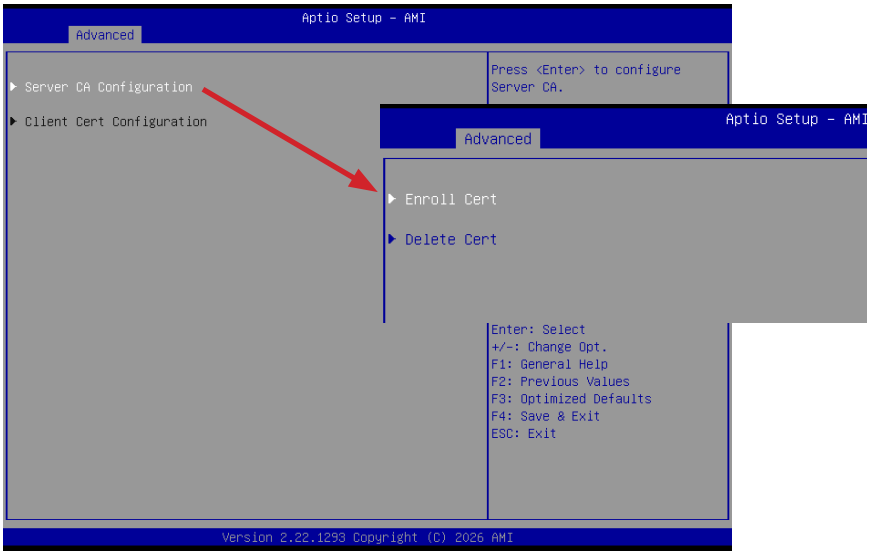


3.3.10 Digital IO Port Configuration



Item	Description
OS control Digital IO	**Disabled : If Digital IO Output value/level is modified in OS, they will not be memorized and kept. (Default setting)** **Enabled : If Digital IO Output value/level is modified in OS, they will be memorized and kept.**
SOGPO_1 (Pin 1) **SOGPI_1 (Pin 2)** **SOGPO_2 (Pin 3)** **SOGPI_2 (Pin 4)** **SOGPO_3 (Pin 5)** **SOGPI_3 (Pin 6)** **SOGPO_4 (Pin 7)** **SOGPI_4 (Pin 8)**	Configure Digital IO Input or Output values for each pin.

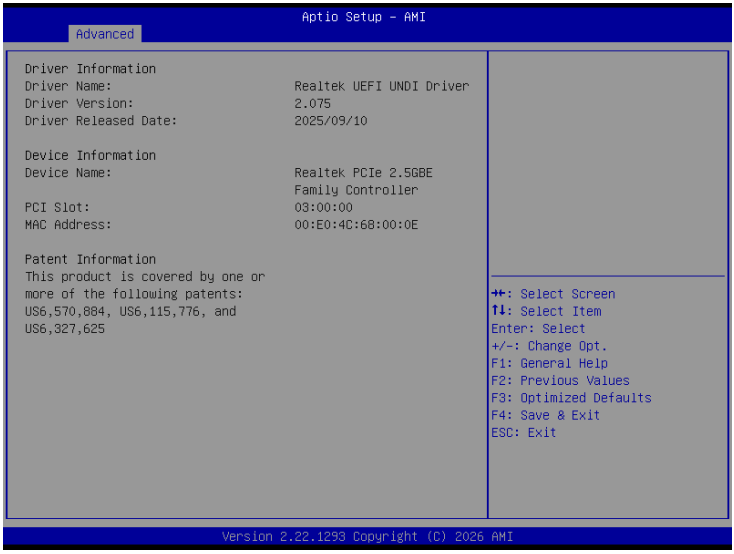
3.3.11 Tls Auth Configuration



Item	Description
Enroll Cert	Press [Enter] to configure advanced items : **Server CA Configuration :** Enroll Cert : 1. Enroll Cert Using File 2. Cert GUID : Input digit character in 11111111-2222-3333-4444-1234567 890ab format. 3. Commit Changes and Exit 4. Discard Changes and Exit

3.3.12 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:0E) (MAC address may varied based on different motherboard)

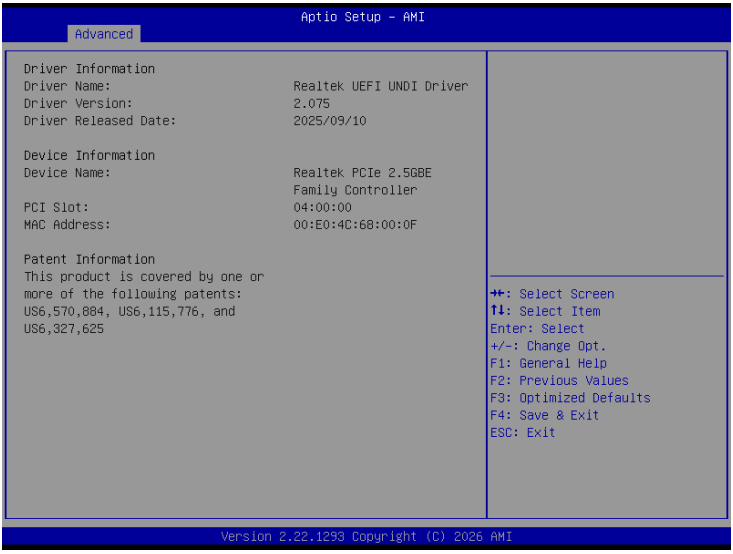
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

3.3.13 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:0F) (MAC address may varied based on different motherboard)

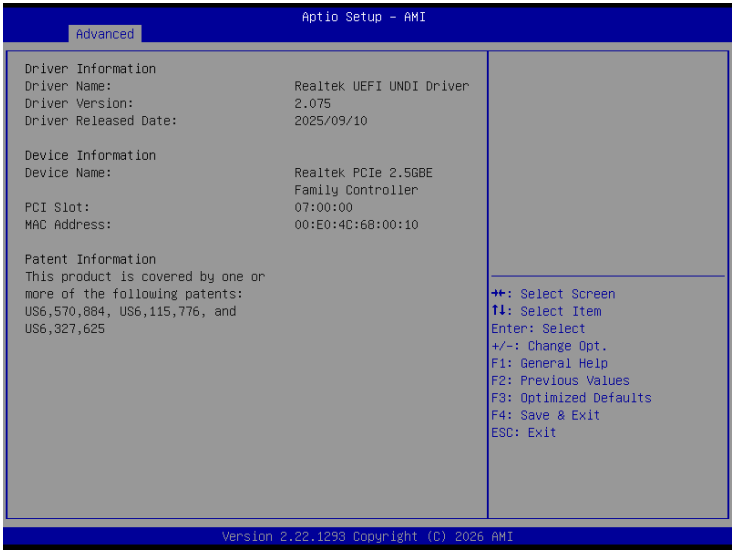
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

3.3.14 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:10) (MAC address may varied based on different motherboard)

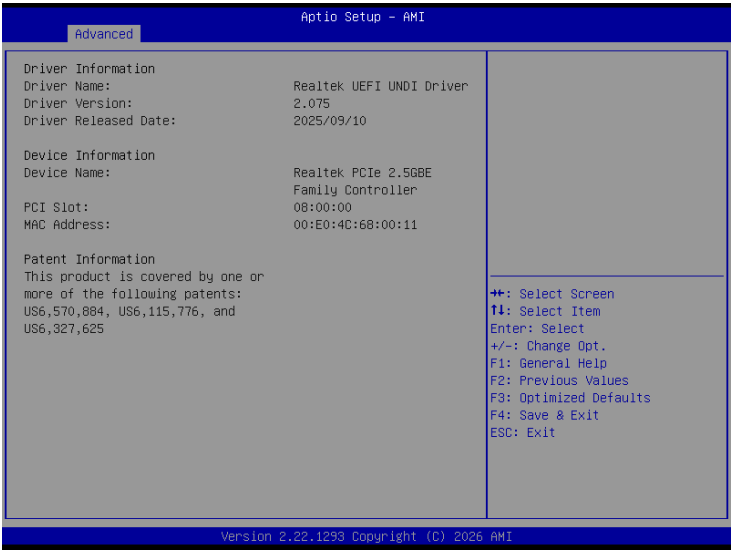
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

3.3.15 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:11) (MAC address may varied based on different motherboard)

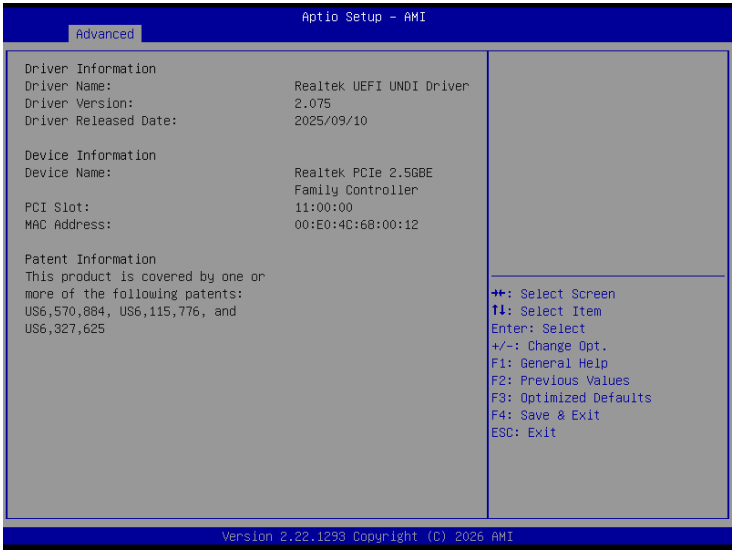
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

3.3.16 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:12) (MAC address may varied based on different motherboard)

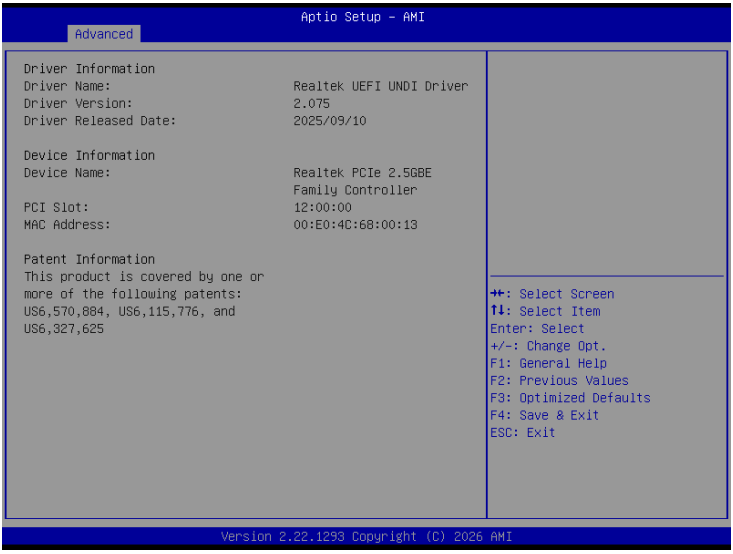
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

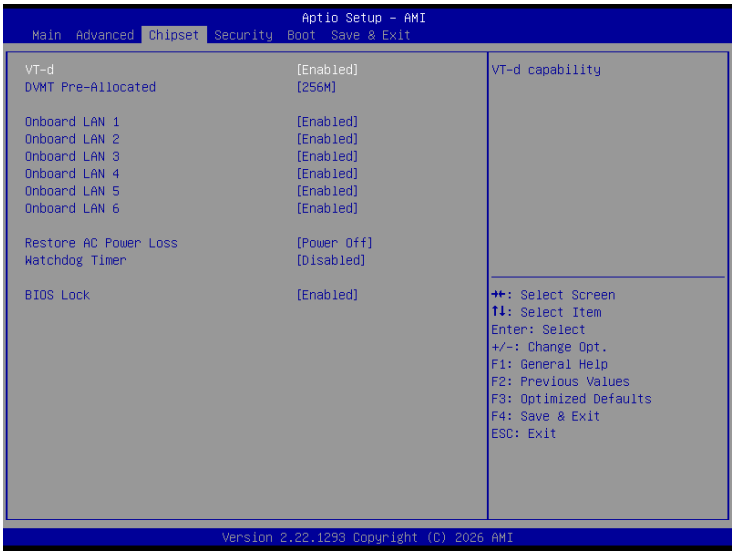
3.3.17 Realtek PCIe 2.5GBE Family Controller (MAC: 00:E0:4C:68:00:13) (MAC address may varied based on different motherboard)

Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

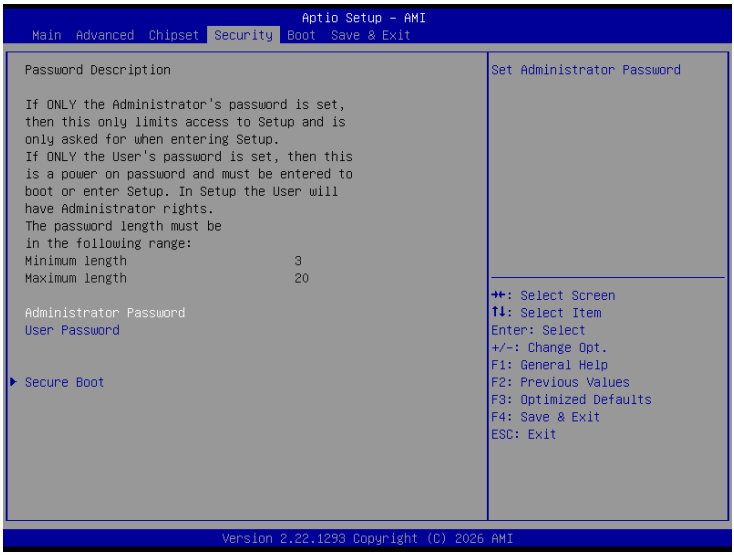
3.4 Chipset



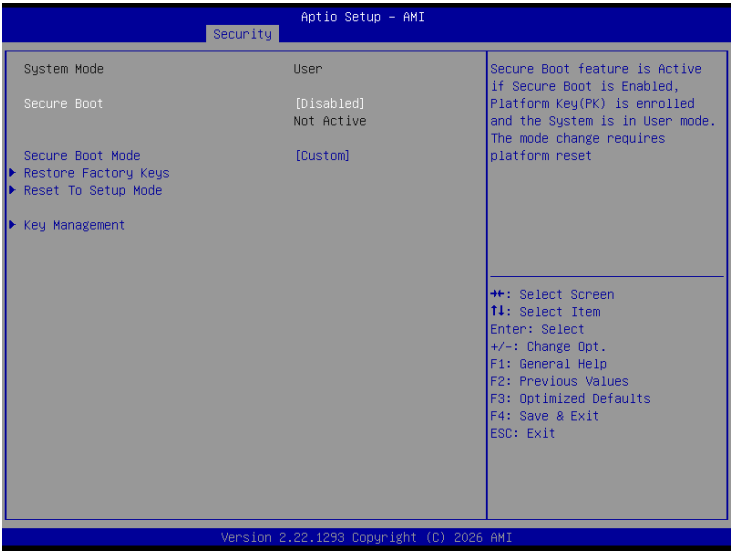
Item	Description
VT-d	**Enabled : Enables VT-d function (Default setting)** **Disabled : Disables VT-d function**
DVMT Pre-Allocated	Use DVMT Pre-Allocated to set the amount of system memory which is installed to the integrated graphics processor **Option items : 32M , 64M , 128M , 256M(Default setting)**
Onboard LAN 1 **Onboard LAN 2** **Onboard LAN 3** **Onboard LAN 4** **Onboard LAN 5** **Onboard LAN 6**	Enable/Disable onboard LAN controller **Enabled : Enables onboard LAN controller (Default setting)** **Disabled : Disables onboard LAN controller**
Restore AC Power Loss	To set which option the system should returns if a sudden power loss occured **Power off : Do not power on when the power is back (Default setting)** **Power on : System power on when the power is back** **Last state : Restore the system to the state before power loss occures**

Watchdog Timer	Enable/Disable Watchdog Timer function **Enabled : Enables Watchdog Timer function** **Disabled : Disabled Watchdog Timer function (Default setting)**
BIOS Lock	Enable/Disable BIOS Lock function **Enabled : Enables BIOS Lock function (Default setting)** **Disabled : Disabled BIOS Lock funtion**

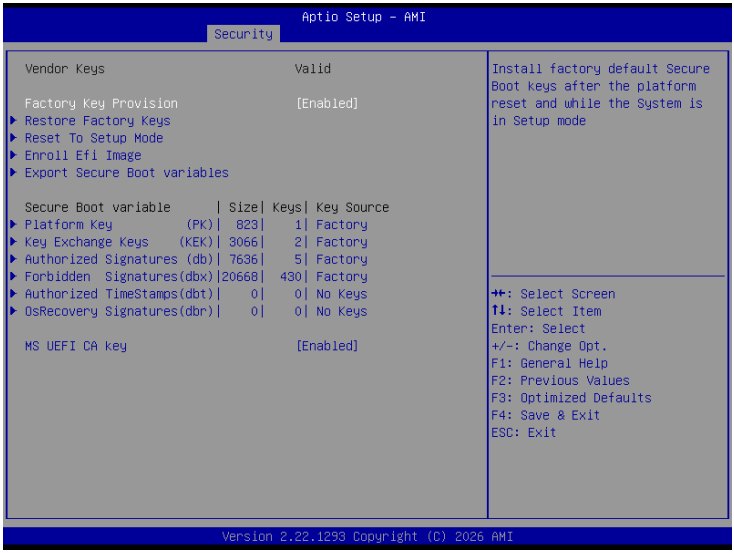
3.5 Security



Item	Description
Administrator Password	To set up Administrator's password **Minimum length : 3** **Maximum length : 20**
User Password	To set up User's password **Minimum length : 3** **Maximum length : 20**
Secure Boot	Press <Enter> to configure the advanced items



Item	Description
Secure Boot	Secure Boot requires all the applications that are running during the booting process to be pre-signed with valid digital certificates **Enabled : Enables Secure Boot function** **Disabled : Disables Secure Boot function (Default setting)**
Secure Boot Mode	**Standard : Standard mode** **Custom : Custom mode (Default setting)**
Restore Factory Keys	To restore factory settings **Yes : Agree to restore factory settings** **No : Cancel to restore factory settings**
Reset To Setup Mode	**Yes : Agree to setup mode** **No : Cancel to setup mode**
Key Management	Enables expert users to modify Secure boot policy variables without full authentication Press <Enter> to configure the advanced items

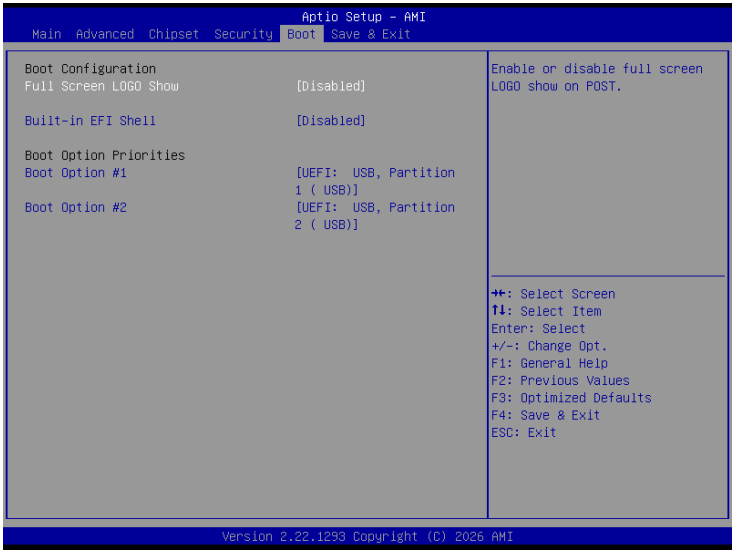


Item	Description
Factory Key Provision	Install factory default Secure Boot keys after the platform reset and while the system is in Setup mode **Enabled : Enables Factory Key Provision (Default setting)** **Disabled : Disables Factory Key Provision**
Restore Factory Keys	To restore factory settings **Yes : Agree to restore factory settings** **No : Cancel to restore factory settings**
Reset To Setup Mode	**Yes : Agree to setup mode** **No : Cancel to setup mode**
Enroll Efi Image	Allow the image to run in Secure Boot mode
Export Secure Boot variables	Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device

Item	Description
Platform Key (PK)	These items allows you to enroll factory defaults or load Certificates from a file.
Key Exchange Keys (KEK)	
Authorized Signatures (db)	
Forbidden Signatures (dbx)	
Authorized TimeStamps (dbt)	
OsRecovery Signatures (dbr)	
MS UEFI CA Key	Device Guard ready system must not list 'Microsof t UEFI C A' Certificate in Authorized Signature database(db)

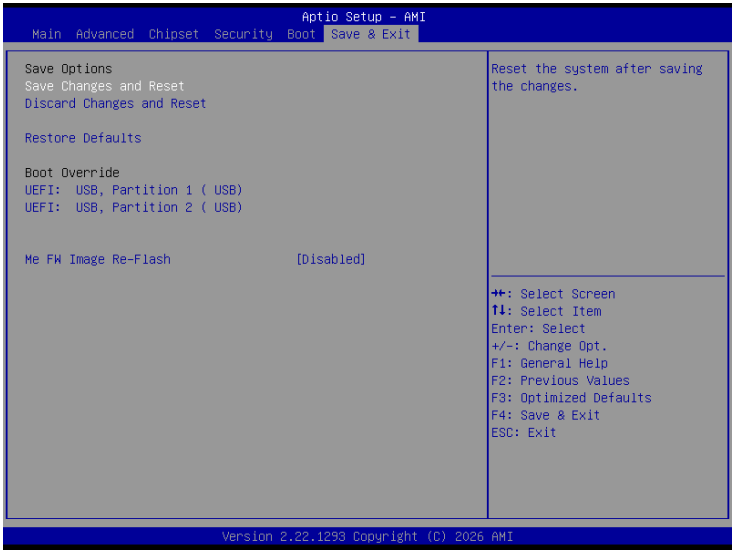
3.6 Boot

This Boot menu allows you to set/change system boot options



Item	Description
Full Screen LOGO Show	Enable/Disable full screen LOGO show on POST screen **Enabled : Enables Full screen LOGO Show on POST screen** **Disabled : Disables Full screen LOGO Show on POST screen (Default setting)**
Built-in EFI Shell	Enable/Disable Built-in EFI Shell **Enabled : Enables Built-in EFI Shell** **Disabled : Disables Built-in EFI Shell (Default setting)**
Boot Option Priorities	Shows the information of the storage that be installed in the system **Choose/set the boot priority**

3.7 Save & Exit



Item	Description
Save Changes and Reset	After configuring all the options that you wish to change, choose this option to save all the changes and reboot the system **Yes : Agree to save and reset** **No : Cancel to save and reset**
Discard Changes and Reset	Choose this option to reboot the system without saving any changes **Yes : Agree to discard changes and reset** **No : Cancel to discard changes and reset**
Restore Defaults	Restore/Load default values for all the setup options **Yes : Agree to load optimized defaults** **No : Cancel to load optimized defaults**
Me FW Image Re-Flash	Enable/Disable Me FW image re-flash function **Enabled : Enables Me FW image re-flash function** **Disabled : Disables Me FW image re-flash function (Default setting)**