GIGAIPC

QS-N150A

Industrial Embedded System

Quick Start Guide

Copyright Notice

Acknowledgement

Packing List

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

Item	Quantity
System	1
Power Cord : Optional (by region)	1
PSU ADP 19V 65W 100-240VAC (P/N: 25EP2-10065V-A3S)	1
RJ45 to D-SUB Cable #24 150mm (P/N: 25CR0-150402-S9R)	1
VESA Mount Bracket (P/N: 25HB1-TPL021-S8R)	1
VESA Mount screws (P/N: 25KSD-000002-C0R)	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.

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.**

FCC Statement

Warning!

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.

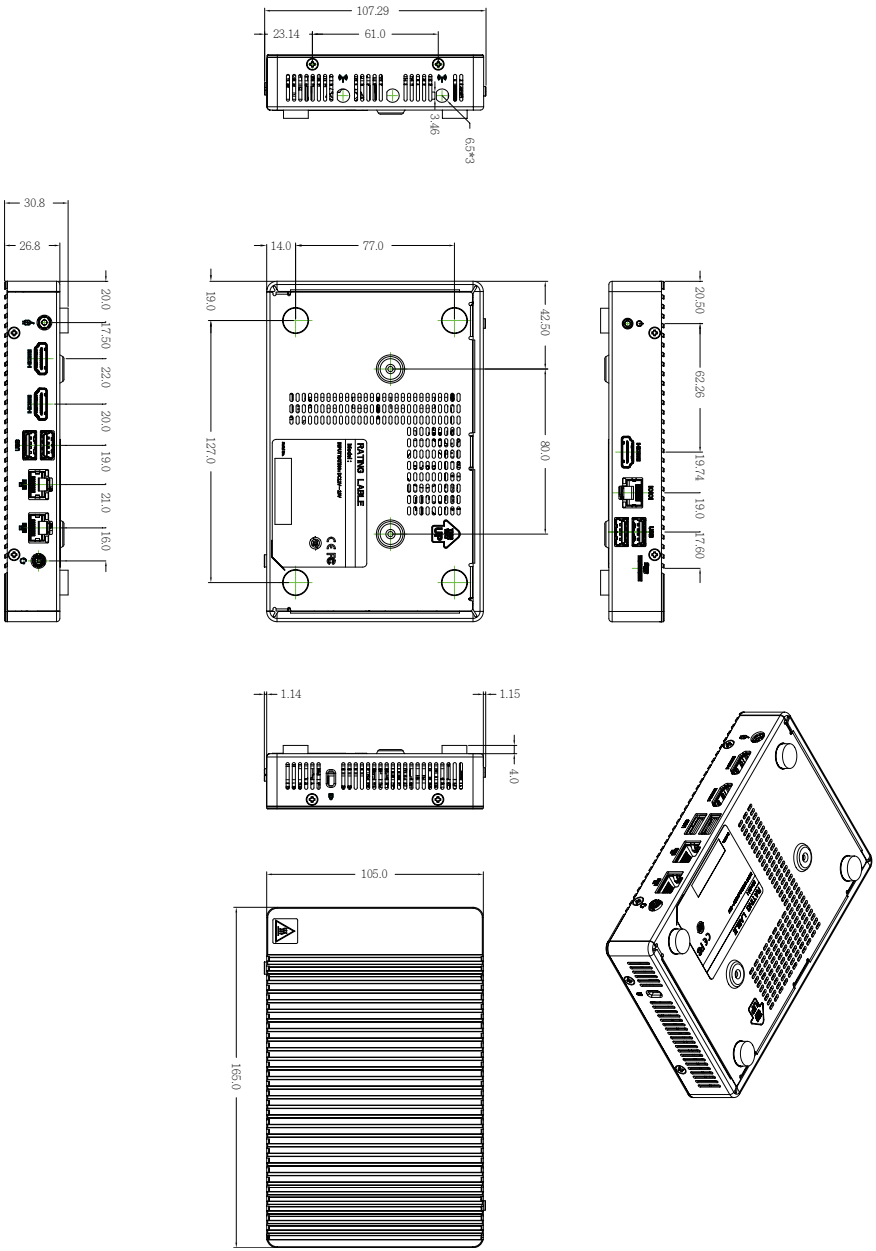
High Temperature Warning

(1) This equipment is intended to be used in Restrict Access Location. The access can only be gained by Skilled person or by Instructed person who have been instructed about the metal chassis of the equipment is so hot that Skilled person have to pay special attention or take special protection. Only authorized by well trained professional person can access the restrict access location.
(2) External metal parts are hot!! Before touching it, special attention or protection is necessary

Table Contents

Chapter 1

Chapter 1 - Product Specifications


107.29
23.14
61.0
3.46
6.5*3
30.8
26.8
20.0
7.50
22.0
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19.0
21.0
16.0
14.0
77.0
19.0
127.0
42.50
80.0
RATING LABLE
20.50
62.26
19.74
19.0
17.60
1.14
1.15
4.0
105.0
165.0

1.1 Specifications

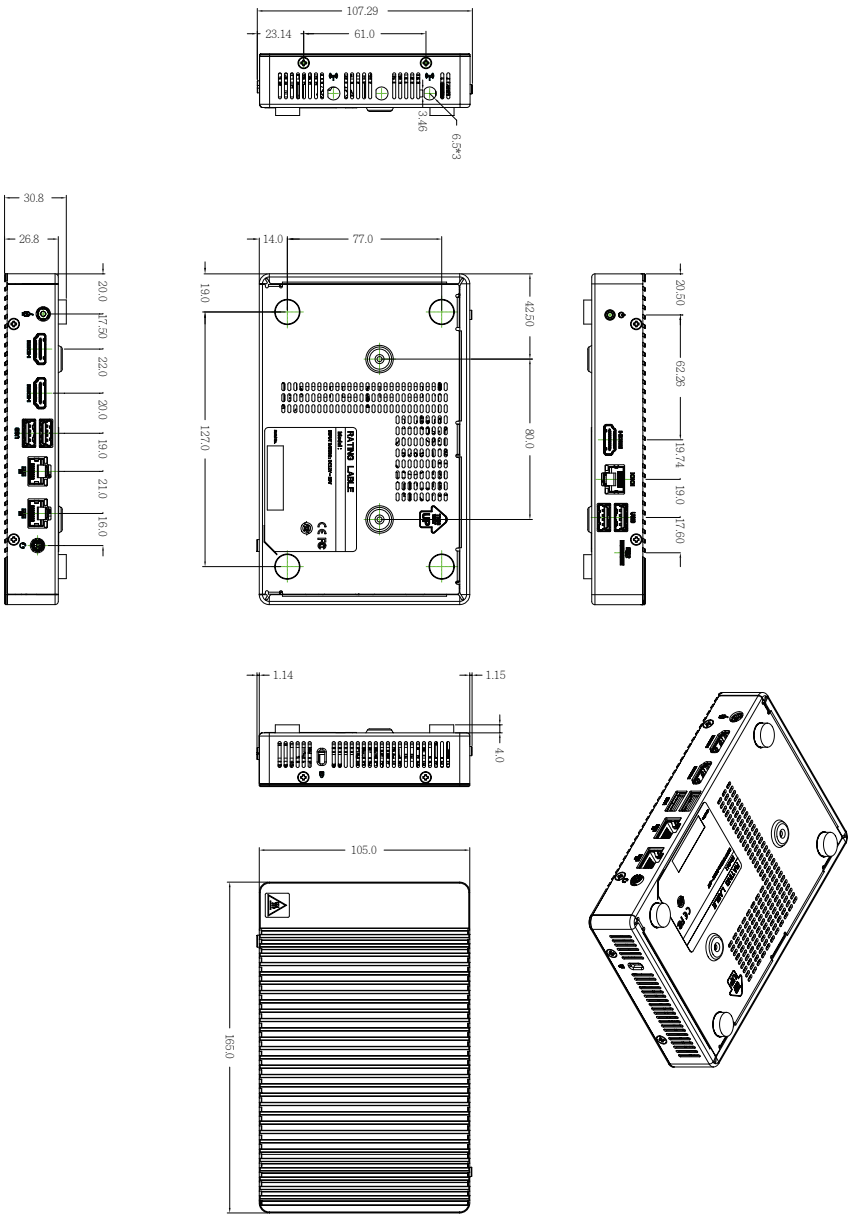
System	QS-N150A
Dimension	System Size : 165W x 105D x 27H (mm)
CPU	Intel® Processor N150 Intel 7, 4 cores, up to 3.60 GHz
Memory	1 x DDR5 SO-DIMM sockets, Max. Capacity 16 GB Support Single Channel DDR5 4800 MHz memory modules
Ethernet	2 x GbE LAN Ports (Realtek® RTL8111H)
Graphic support	Integrated Graphics Processor - Intel® Graphics: 3 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz (HDMI 1 & 2 port support CEC) ＊ For HDMI CEC support, please enable it from BIOS (refer page 62~63) (3 independent display outputs)
Audio	Realtek® ALC269
Storage	—
Expansion Slots	1 x 2280 M.2 M-Key (PCIe Gen3x1, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x 3042 M.2 B-key with SIM Slot (USB 2.0)
Front I/O	2 x USB 3.2 Gen 1 1 x COM Port (RS-232)(RJ45 Type) 1 x Micro SD card slot 1 x Power button 1 x HDMI
Rear I/O	1 x Combo audio jack (Headphone & Headset) 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x HDMI 1 x DC Jack
Side I/O	3 x External Antenna Holes (Optional)
Power	+12~19VDC (Adapter 19V/65W)
Operation temperature	Operating temperature: 0°C to 50°C Operating humidity: 50°C @ 20-95% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 85°C @ 95% (non-condensing)

System	QS-N150A
Vibration During Operation	Operation: IEC 60068-2-64, 3 Grms, random, 5 ~ 500 Hz, 1 hr / Per Axis, With SSD/M.2 2280 Non-operation: IEC 60068-2-6, 2 G, Sine, 10 ~ 500 Hz, 1 Oct/min, 1 hr / Per Axis
Shock During Operation	Operation: IEC 60068-2-27, 50 G, half sine, 11 ms duration, With SSD
Packaging Content	Carton size: 416 x 359 x 257 (mm) Packing Capacity: 10pcs Single Box size: 209 x 169 x 75 (mm) Including: Power Cord : Optional (by region) PSU ADP 19V 65W 100-240VAC x 1 (P/N: 25EP2-10065V-A3S) RJ45 to D-SUB Cable #24 150mm x 1 (P/N: 25CR0-150402-S9R) VESA Mount Bracket x 1 (P/N: 25HB1-TPL021-S8R) VESA Mount screws x 1 (P/N: 25KSD-000002-C0R)
Order Information	System: 6BQSN150AMR-SI (Box packing)

Chapter 2

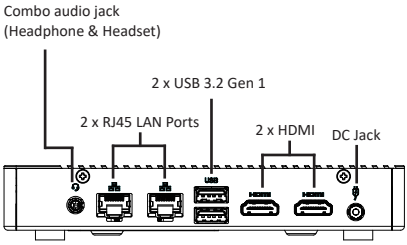
Chapter 2 – QS-N150A

2.1 Dimension

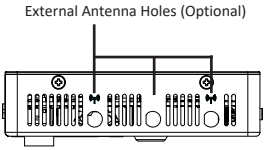


2.2 Getting Familiar with Your Unit

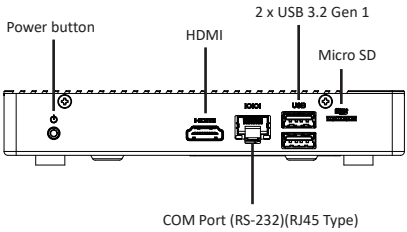
[Rear I/O Port on Board]



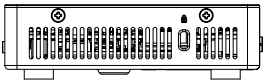
[Left side]



[Front Side]



[Right Side]

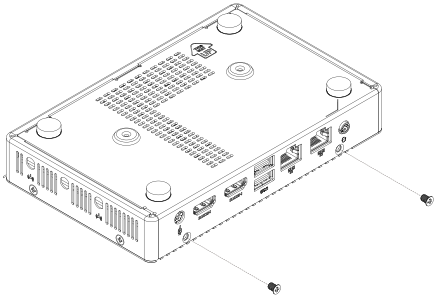


[Installation]

* Before opening the case, make sure to unplug the power cord.
* Before Connecting the power, make sure to fasten the case securely.

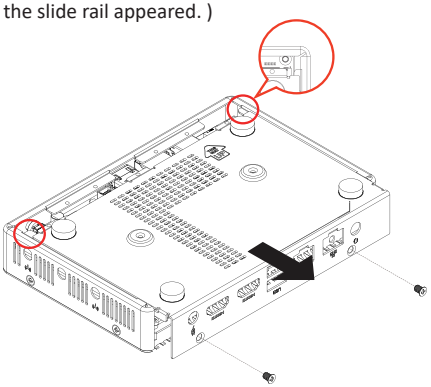
❶

Loosen 2 screws on the rear IO side to open the chassis.



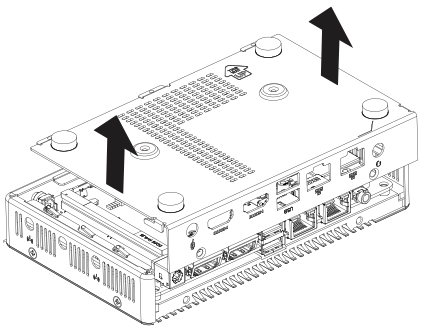
❷

Follow below direction to push the bottom cover. (*Caution : Stop pushing the bottom cover when the slide rail appeared.)



❸

Please lift the bottom cover up vertically to avoid damaging the thermal pad.



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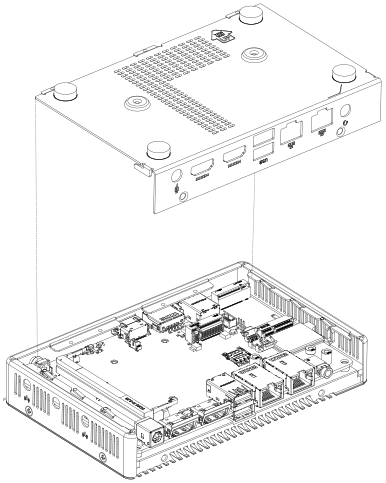
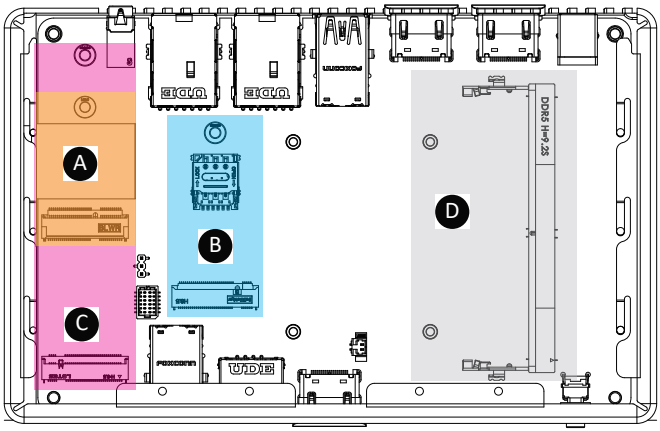


[Bottom PCB Side]

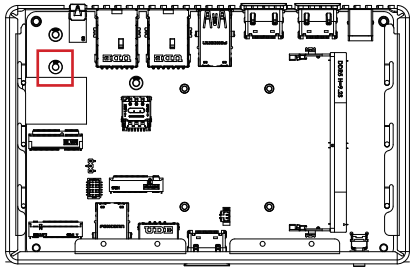
	Information
A	M.2 2230 E-Key connector
B	M.2 3042 B-Key connector
C	M.2 2280 M-Key connector
D	DDR5 SO-DIMM Slot



2.3 A) Wireless Module : How to safely install the Module (Wireless Module inclusion may vary based on local distribution)

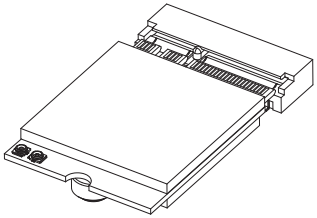
1

Remove the release paper on the thermal pad and the screw from the screw hole. (Location : MSO1)



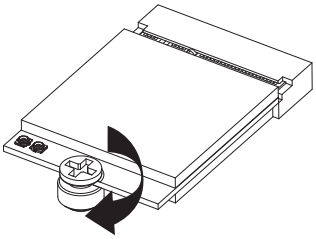
2

Carefully insert the wireless module into the M.2 slot.



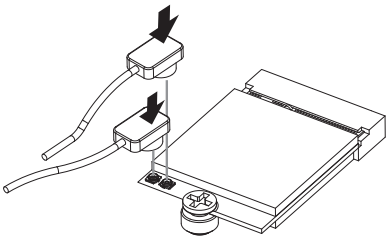
3

Lock the screw in the middle.



4

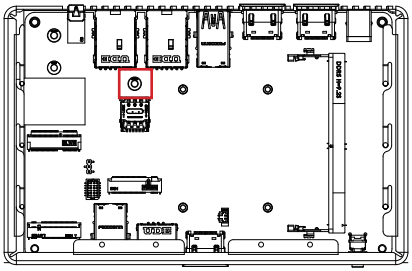
Install the antenna on the left side of the connection wireless module down.



2.4 B) 5G module Installation: How to safely install the module (5G Module inclusion may vary based on local distribution)

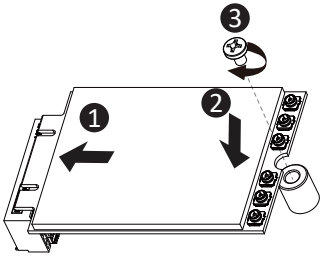
1

Remove the screw from the screw hole. (Location : MSO3)



2

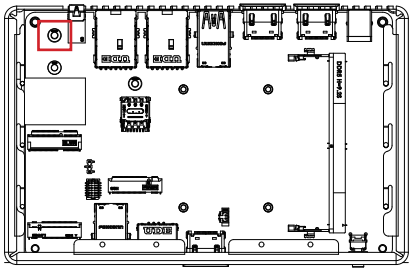
Carefully insert the 5G module into the slot, and secure with the screw.



2.5 C) M.2 SSD Installation: How to safely install the M.2 2280 SSD

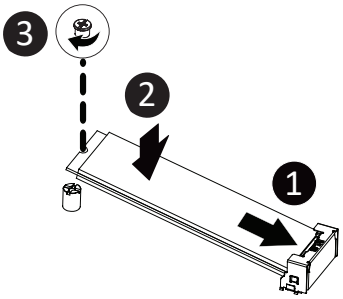
1

Remove the screw from the screw hole. (Location : MSO2)



2

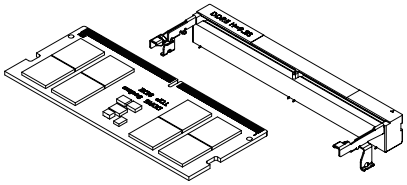
Carefully insert the M.2 SSD into the slot, and secure with the screw.



2.6 D) Memory Installation: DDR5 SO-DIMM

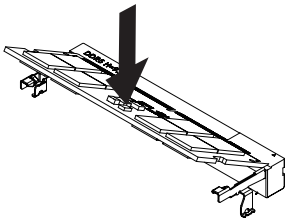
1

Carefully insert SO-DIMM memory modules.



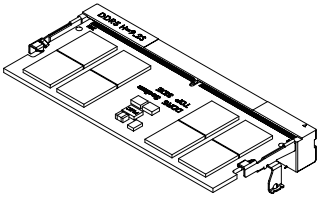
2

Push down until the modules click into place.



3

Make sure the module is completely installed.

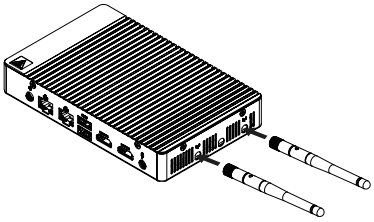


2.7 Antenna Installation (Antenna inclusion may vary based on local distribution)

Either for Wifi antenna or 5G antenna installation.

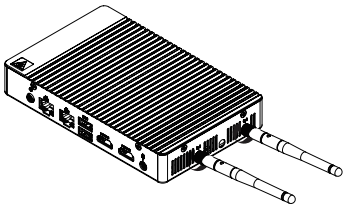
1

Carefully insert the antennas into the connectors.



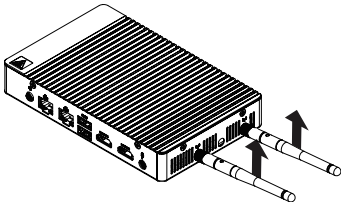
2

Turn the antennas clockwise until they are completely secure on the connectors.



3

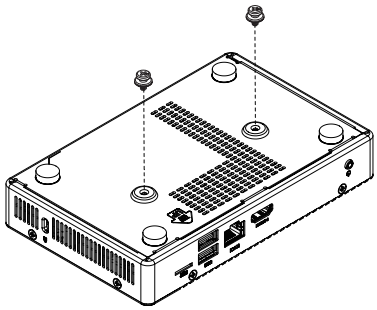
Flip up the antenna heads so that they are perpendicular to the machine.



2.8 VESA Bracket Installation

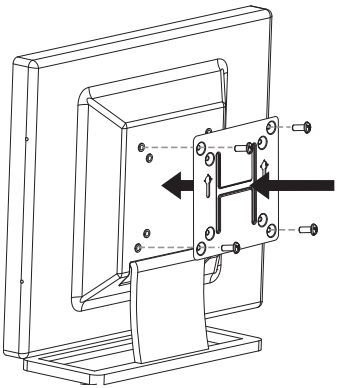
1

Attach the screws provided on the underside of the QBiX-Plus.



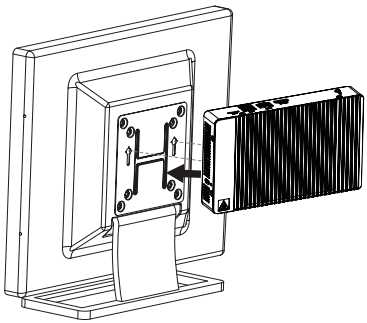
2

Attach the VESA mounting plate to the rear of a compatible display using the screws provided.



3

The QBiX-plus can now be mounted by sliding the device into place.



2.9 Safety and Regulatory Information

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible.
Disposal of used Batteries must be in accordance with local environmental regulations.
Failure to use the included Power Adapter may violate regulatory compliance and may expose the user to safety hazards.

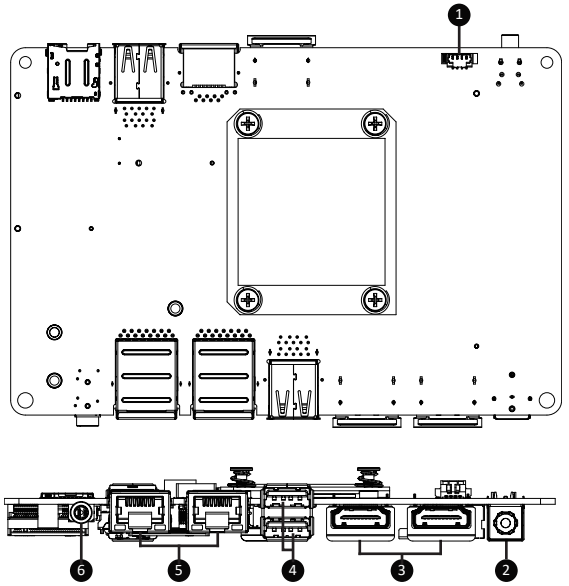
HIGH DEFINITION MULTIMEDIA INTERFACE

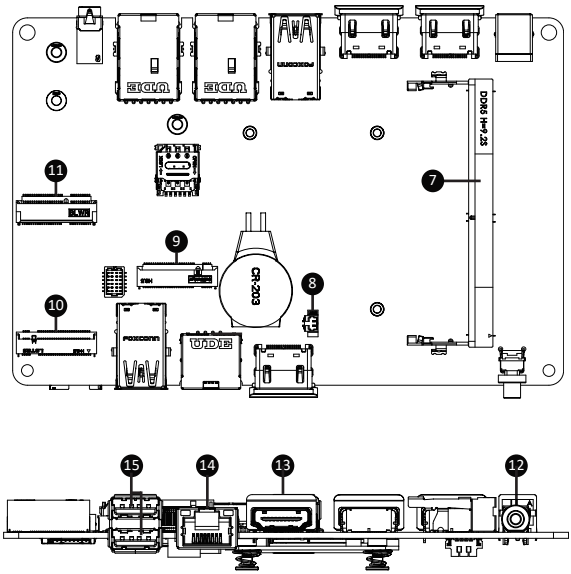
At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

Chapter 3

Chapter 3 – Motherboard Pin Define

3.1 Jumpers and Connectors

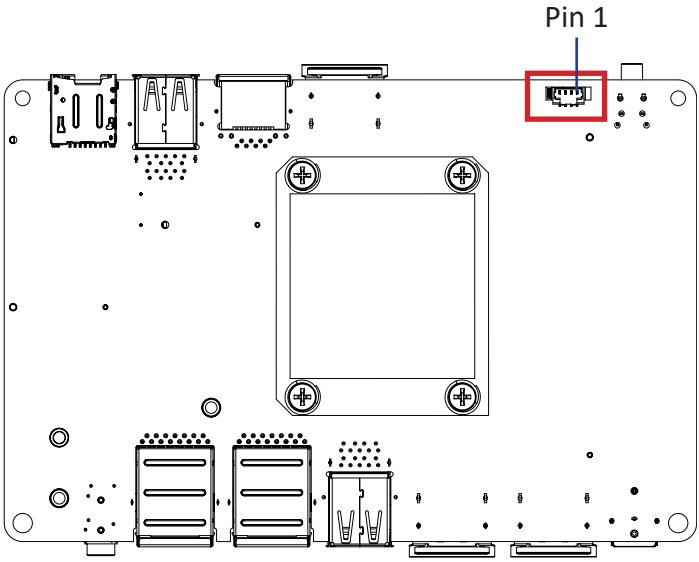




	Code	Description
1	FAN	FAN connector
2	DC_IN	DC Jack connector
3	HDMI20_2, HDMI20_3	HDMI connector
4	USB3_1	USB 3.2 Gen 1 Connector
5	LAN_1, LAN_2	LAN connector
6	HP_MIC	Combo audio jack (Headphone & Headset)
7	SODIMM	DDR5 SO-DIMM Slot
8	BAT	Battery cable connector
9	M2B	M.2 slot, 3042 B-key
10	M2M	M.2 Slot, 2280 M-Key
11	M2E	M.2 Slot, 2230 E-key
12	PWR_BUTTON	Power button with LED
13	HDMI20_1	HDMI connector
14	RJ45_COM	Serial Port (RS-232)(RJ45 type)
15	USB3_2	USB 3.2 Gen 1 Connector

3.2.1 FAN (FAN connector)

1



FAN Connector
4 1

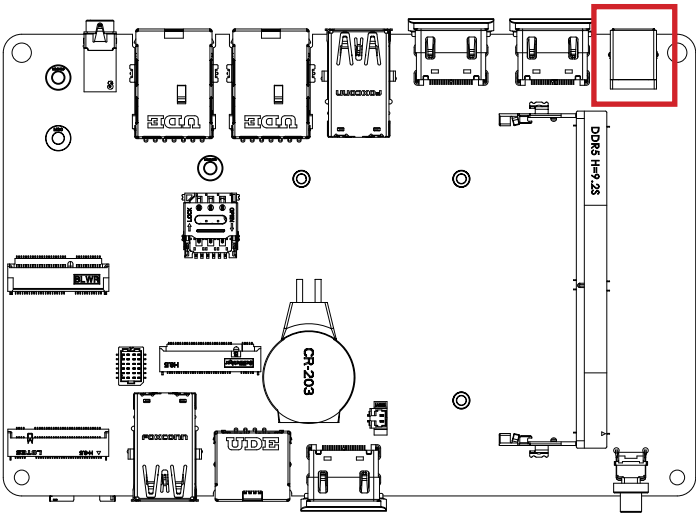
Pin No.	Definition
1	GND
2	5V
3	NC
4	NC

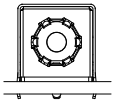
Connector PN	Vendor
85205-0470N	ACE
A1250WV-S-04PC	JOINT-TECH

Connector type
1x4pin header, pitch 1.25mm

3.2.2 DC_IN (DC Jack connector)

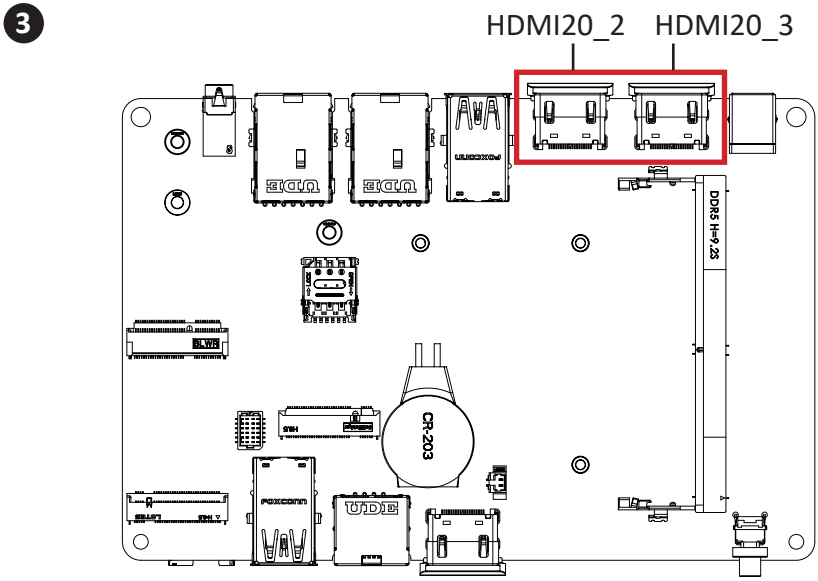
2

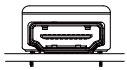


DC_IN Connector


Connector PN	Vendor
WTJ-020-88JSB	KYOYAKU

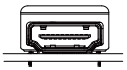
3.2.3 HDMI20_2, HDMI20_3 (HDMI connector)



HDMI 2 Connector


Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	CEC
4	TX1p	14	NC
5	GND	15	SCL
6	TX1n	16	SDA
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

Connector PN	Vendor
1165-2CG04-24P	TCONN

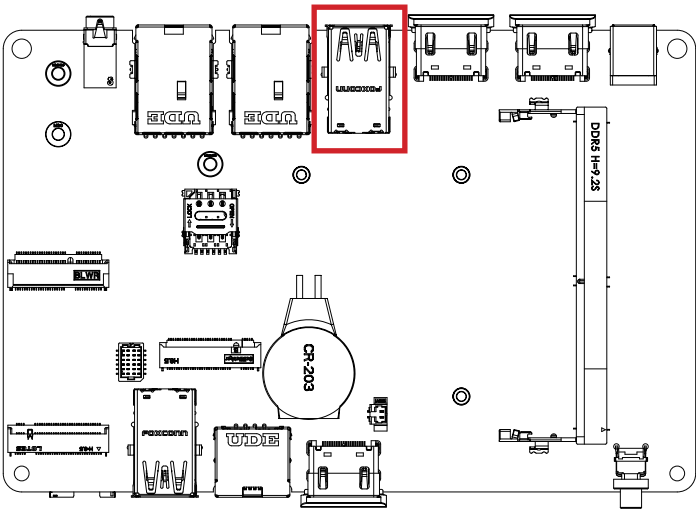
HDMI 3 Connector


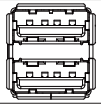
Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	NC
4	TX1p	14	NC
5	GND	15	SCL
6	TX1n	16	SDA
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

Connector PN	Vendor
1165-2CG04-24P	TCONN

3.2.4 USB3_1 (USB 3.2 Gen 1 connector)

4



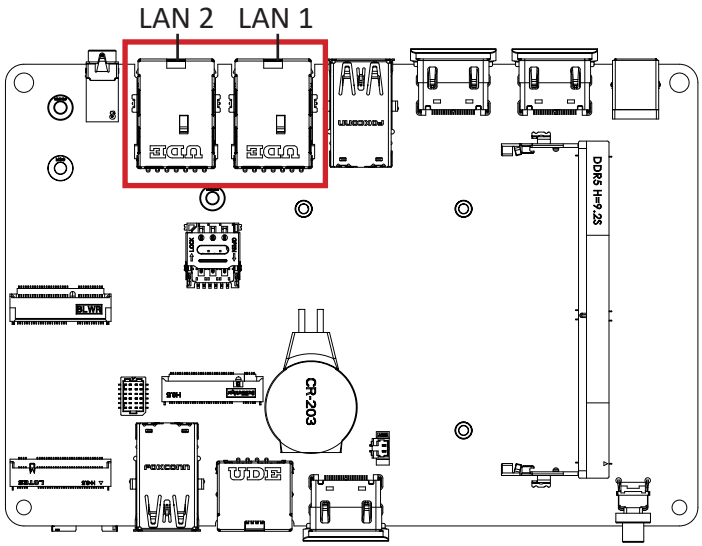
USB 3.2 Gen 1 connector


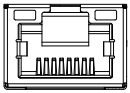
Connector PN	Vendor
UEA1141-R23L12-7H	FOXCONN

Pin No.	Definition	Pin No.	Definition
1	5V	10	5V
2	D1n	11	D0n
3	D1p	12	D0p
4	GND	13	GND
5	USB3_RX1n	14	USB3_RX2n
6	USB3_RX1p	15	USB3_RX2p
7	GND	16	GND
8	USB3_TX1n	17	USB3_TX2n
9	USB3_TX1p	18	USB3_TX2p

3.2.5 LAN_1, LAN_2 (LAN connector)

5



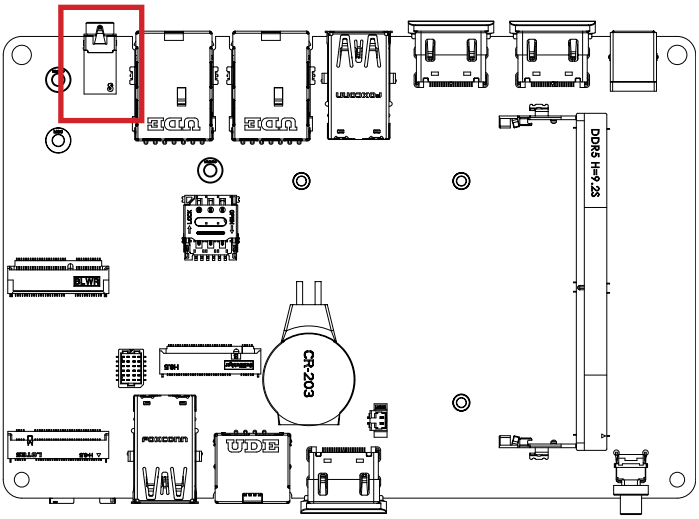
LAN connector


State	Description
Orange On	1Gbps data rate
Green On	100Mbps data rate
Off	10Mbps data rate

Pin No.	Definition	Pin No.	Definition
1	GND	6	BI_DC-
2	BI_DA+	7	BI_DB-
3	BI_DA-	8	BI_DD+
4	BI_DB+	9	BI_DD-
5	BI_DC+	10	GND

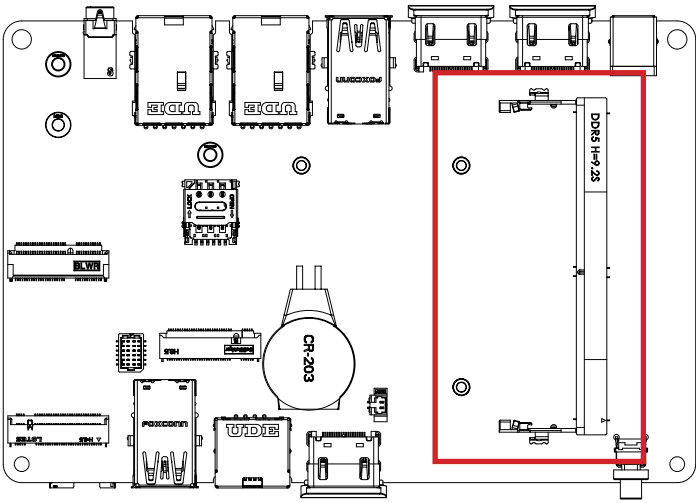
3.2.6 HP_MIC (Combo audio jack (Headphone & Headset)

6



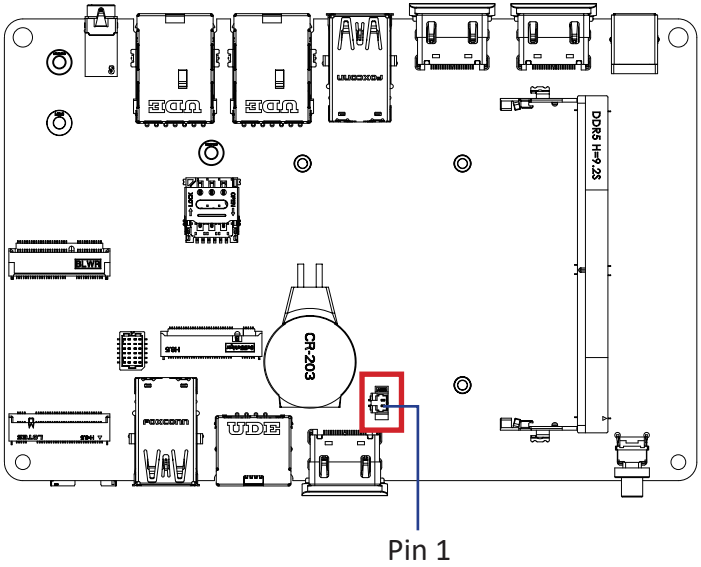
3.2.7 SODIMM (DDR5 SO-DIMM Slot)

7



3.2.8 BAT (Battery cable connector)

8



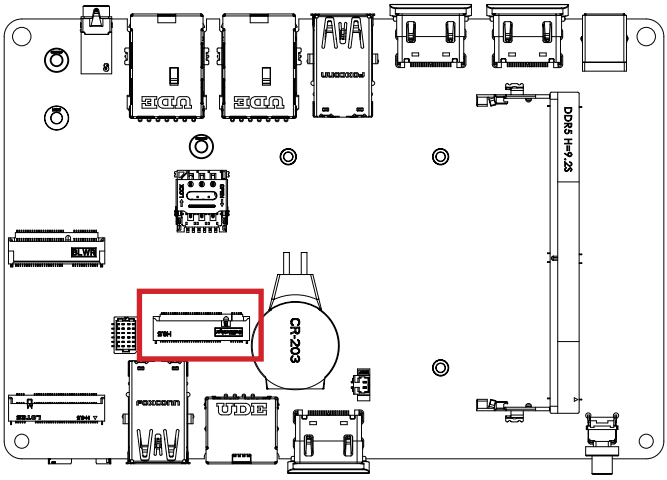
Battery Cable Connector
2  1

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

Connector type
1x2pin header, pitch 1.25mm

Pin No.	Definition
1	3.3V
2	GND

3.2.9 M2B (M.2 slot, 3042 B-key)



M.2 B-Key Connector
74 2 75 1

Pin No.	Definition	Pin No.	Definition
1	3.3V	2	3.3V
3	GND	4	3.3V
5	GND	6	WWAN_PWR_OFF
7	USB D+	8	WWAN_Disable
9	USB D-	10	LED
11	GND		

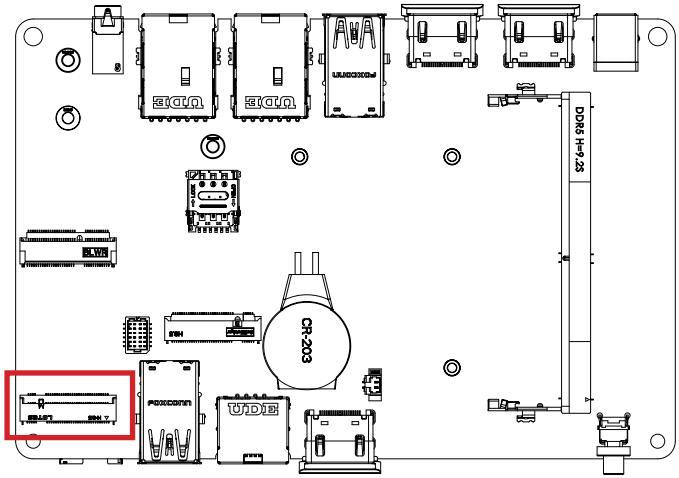
Pin No.	Definition	Pin No.	Definition
21	NC	20	NC
23	NC	22	NC
25	NC	24	NC
27	GND	26	WWAN_Disable2
29	NC	28	NC
31	NC	30	SIM_RST#
33	GND	32	SIM_CLK
35	NC	34	SIM_DATA

Pin No.	Definition	Pin No.	Definition
37	NC	36	SIM_PWR
39	GND	38	NC
41	PCIE_RXn	40	NC
43	PCIE_RXp	42	NC
45	GND	44	NC
47	PCIE_TXn	46	NC
49	PCIE_TXp	48	NC
51	GND	50	PLT_RST
53	CLK_n	52	CK_REQ
55	CLK_p	54	PCIE_WAKE
57	GND	56	NC
59	NC	58	NC
61	NC	60	NC
63	NC	62	NC
65	NC	64	NC
67	GPP_RESET	66	NC
69	M2B_DET	68	NC
71	GND	70	3.3V
73	GND	72	3.3V
75	M2B_CFG2	74	3.3V

Connector PN	Vendor
80149-8521	BELLWETHER
2E0BC21-S85BB-7H	FOXCONN

3.2.10 M2M (M.2 slot, 2280 M-key)

10



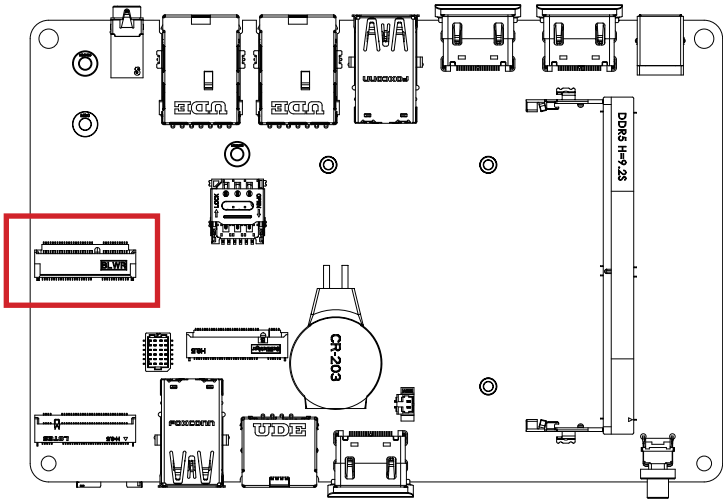
M.2 M Key Connector			
74 2			
75 1			
Pin No.	**Definition**	**Pin No.**	**Definition**
1	GND	2	3.3V
3	GND	4	3.3V
5	NC	6	NC
7	NC	8	NC
9	GND	10	M2_LED
11	NC	12	3.3V
13	NC	14	3.3V
15	GND	16	3.3V
17	NC	18	3.3V
19	NC	20	NC
21	GND	22	NC
23	NC	24	NC
25	NC	26	NC
27	GND	28	NC
29	NC	30	NC
31	NC	32	NC
33	GND	34	NC
35	NC	36	NC

Pin No.	Definition	Pin No.	Definition
37	NC	38	DEVSLP
39	GND	40	NC
41	PCIE12_ SATA1_RXp	42	NC
43	PCIE12_ SATA1_RXn	44	NC
45	GND	46	NC
47	PCIE12_ SATA1_TXn	48	NC
49	PCIE12_ SATA1_TXp	50	PERST#
51	GND	52	CLK_REQ
53	CLK_n	54	PCIE_WAKE#
55	CLK_p	56	NC
57	GND	58	NC

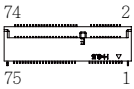
Pin No.	Definition	Pin No.	Definition
67	NC	68	NC
69	PEDET	70	3.3V
71	GND	72	3.3V
73	GND	74	3.3V
75	GND		

Connector PN	Vendor
80159-8521	BELLWETHER

3.2.11 M2E (M.2 Slot, 2230 E-key)



M.2 E Key Connector



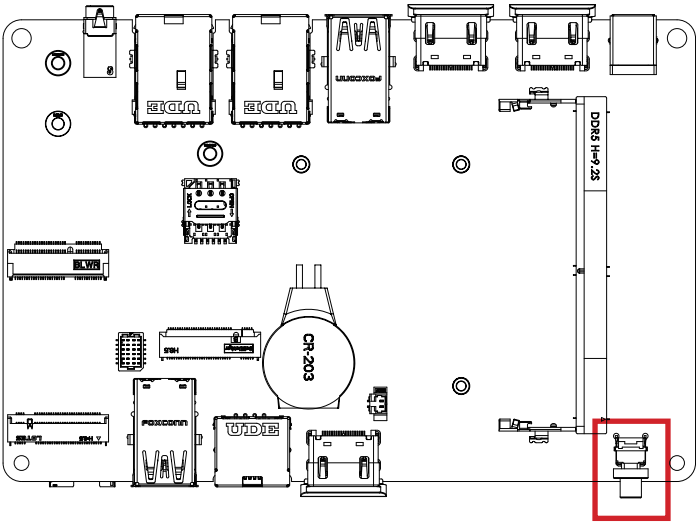
Pin No.	Definition	Pin No.	Definition
1	GND	2	3.3V
3	USBp	4	3.3V
5	USBn	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	NC
17	NC	18	GND
19	NC	20	NC
21	NC	22	NC
23	NC		

Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE_TXp	34	NC
37	PCIE_TXn	36	NC
39	GND	38	NC
41	PCIE_RXp	40	NC
43	PCIE_RXn	42	NC
45	GND	44	NC
47	PCIE_CLKp	46	NC
49	PCIE_CLKn	48	NC
51	GND	50	SUSCLK
53	PCIE_CLKREQ	52	PERST#
55	PCIE_WAKE	54	BT_Disable#
57	GND	56	WIFI_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	3.3V
75	GND	74	3.3V

Connector PN	Vendor
80152-4221	BELLWETHER
APCI0076-P001A	LOTES
AS0BC21-S40BE-7H	FOXCONN

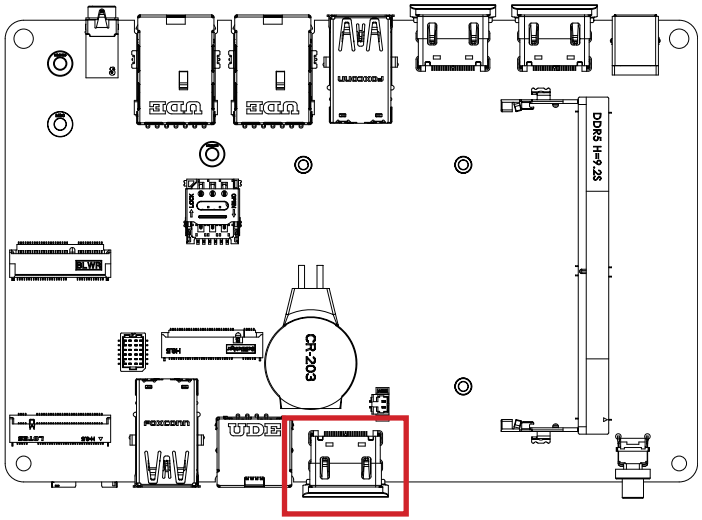
3.2.12 PWR_BUTTON (Power button with LED)

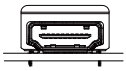
12



3.2.13 HDMI20_1 (HDMI connector)

13



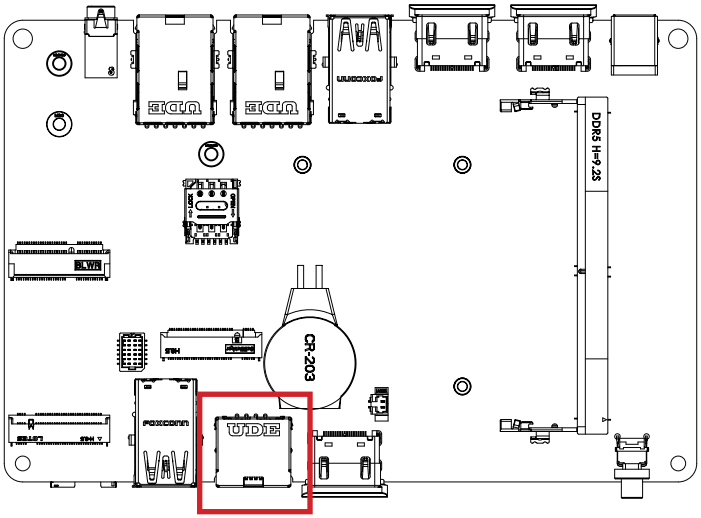
HDMI Connector


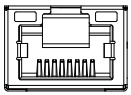
Connector PN	Vendor
1165-2CG04-24P	TCONN

Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	CEC
4	TX1p	14	NC
5	GND	15	SCL
6	TX1n	16	SDA
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

3.2.14 RJ45_COM (Serial Port (RS-232)(RJ45 type))

14

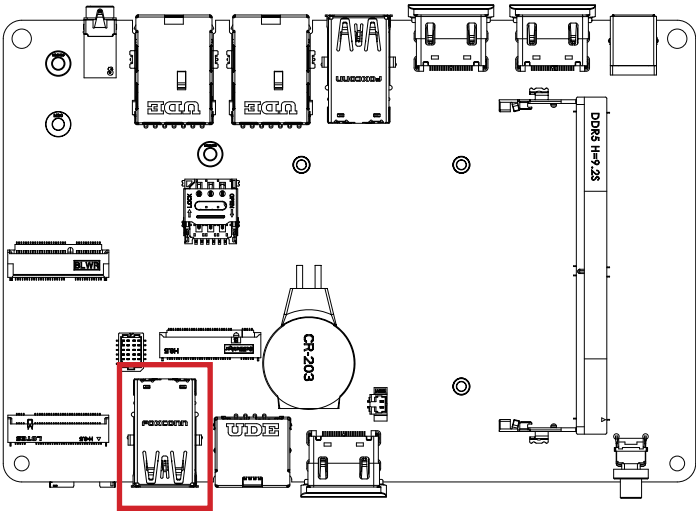


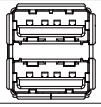
RJ45-COM connector


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

3.2.15 USB3_2 (USB 3.2 Gen 1 connector)

15



USB 3.2 Gen 1 connector


Connector PN	Vendor
UEA1141-R23L12-7H	FOXCONN

Pin No.	Definition	Pin No.	Definition
1	5V	10	5V
2	D1n	11	D0n
3	D1p	12	D0p
4	GND	13	GND
5	USB3_RX1n	14	USB3_RX2n
6	USB3_RX1p	15	USB3_RX2p
7	GND	16	GND
8	USB3_TX1n	17	USB3_TX2n
9	USB3_TX1p	18	USB3_TX2p

Chapter 4

Chapter 4 – BIOS

4.1 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.

4.1.1 How to Entering into BIOS menu

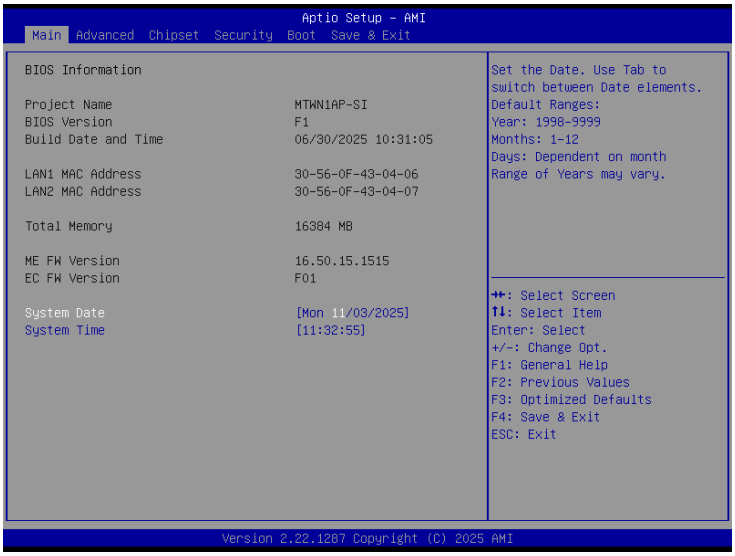
Once the system is power on, press the <DEL> key as soon as possible to access into BIOS Setup program.

4.1.2 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

4.2 The Main Menu

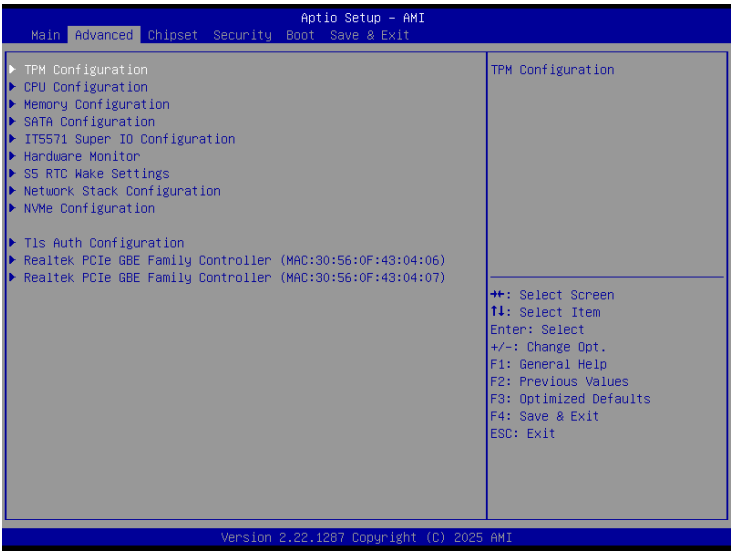
The main menu shows the basic system information.
Use arrow keys to move among the items.



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
Total Memory	Shows the total memory size of the installed memory
ME FW version	Shows ME firmware version
EC FW version	Shows EC 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)

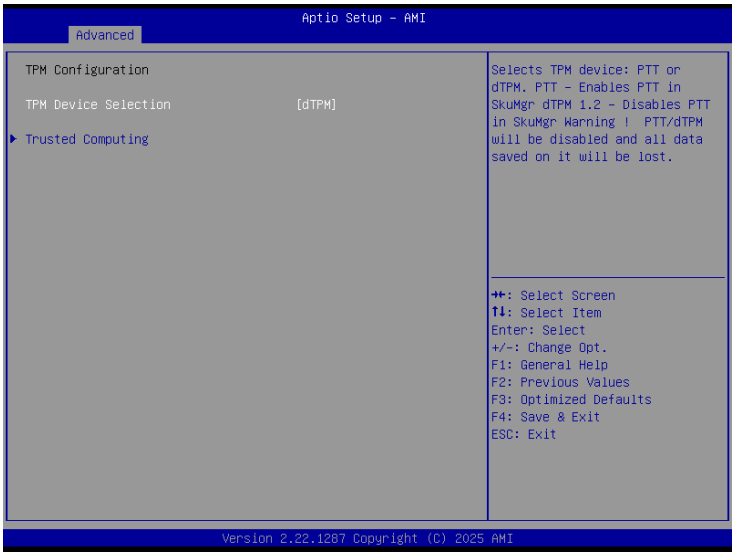
4.3 Advanced

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.



4.3.1 TPM Configuration

Use TPM Configuration submenu to choose TPM interface.



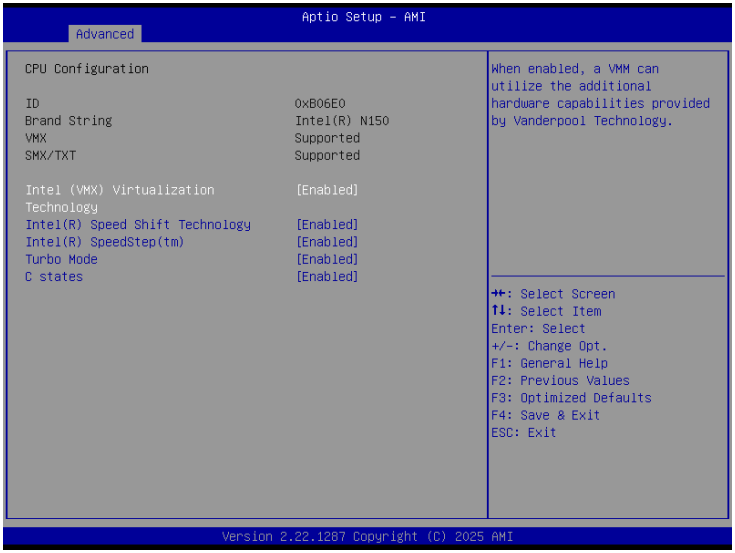
Item	Description
TPM Device Selection	PTT : Internal TPM dTPM : External TPM (When using External TPM module or having TPM chip on MB)(Default setting)

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**

4.3.2 CPU Configuration

This submenu shows detailed CPU informations.

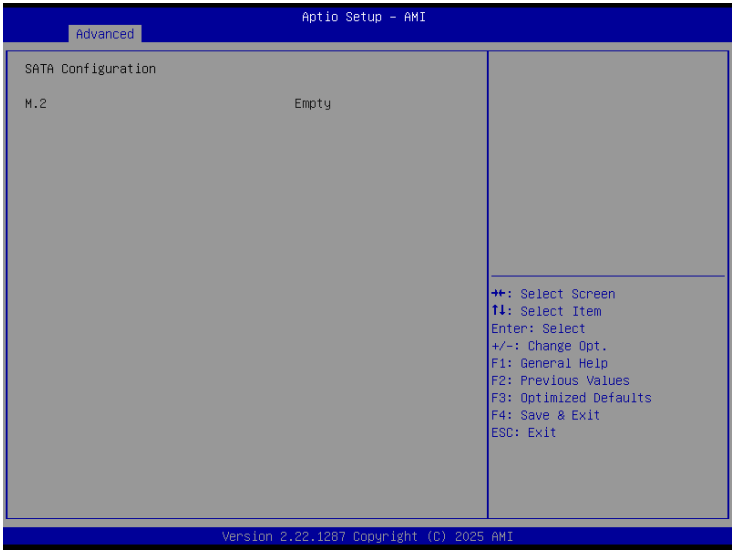


Item	Description
Intel (VMX) Virtualization Technology	Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. **Enabled : 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 (Default setting)** **Disabled : Disables Intel(R) Speed Shift Technology**
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(R) SpeedStep Technology (Default setting)** **Disabled : Disables Intel(R) 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**

4.3.3 Memory Configuration

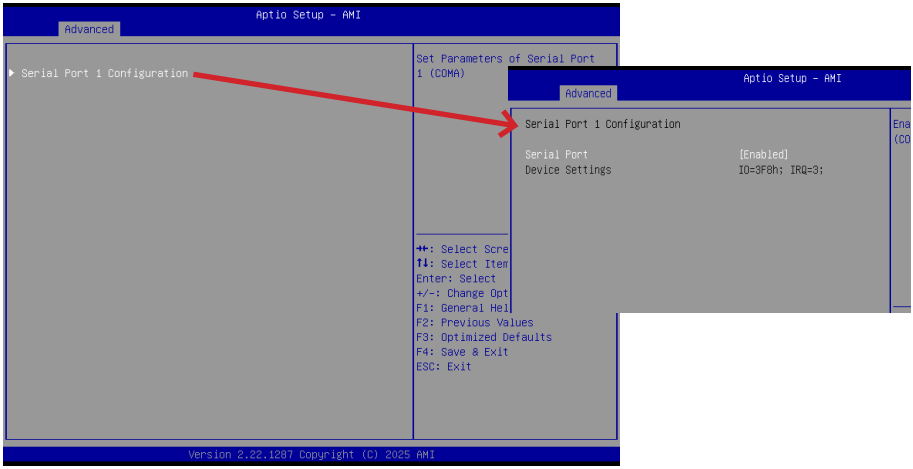
Item	Description
In-Band ECC Support	Enable or Disable In-Band ECC Support function. **Disabled : Disables In-Band ECC Support (Default setting)** **Enabled : Enables In-Band ECC Support**

4.3.4 SATA Configuration



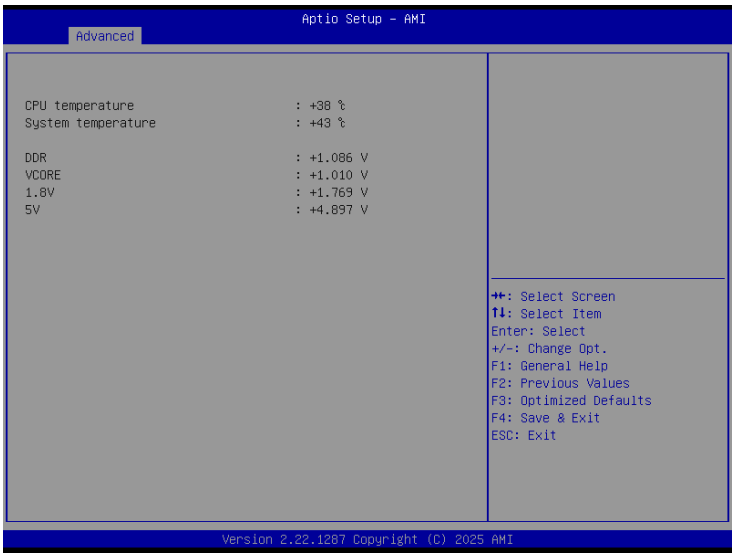
Item	Description
M.2 Port	shows M.2 SSD information

4.3.5 IT5571 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

4.3.6 Hardware Monitor

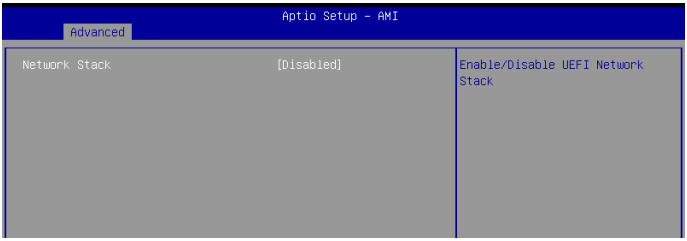


Item	Description
CPU temperature	Shows current CPU temperature
System	Shows current system temperature

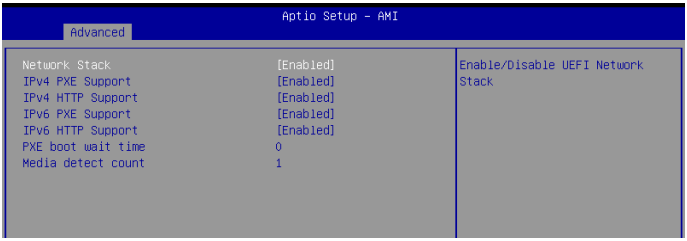
4.3.7 S5 RTC Wake Settings

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)**

4.3.8 Network Stack Configuration



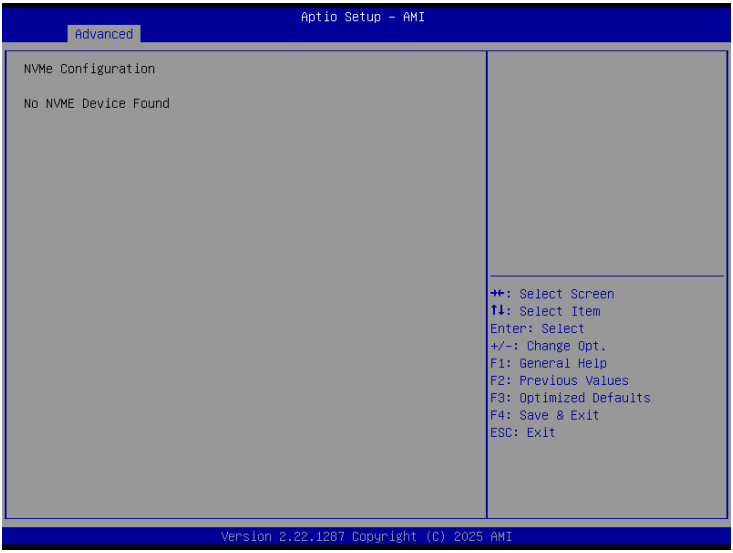
When Network stack is enabled :



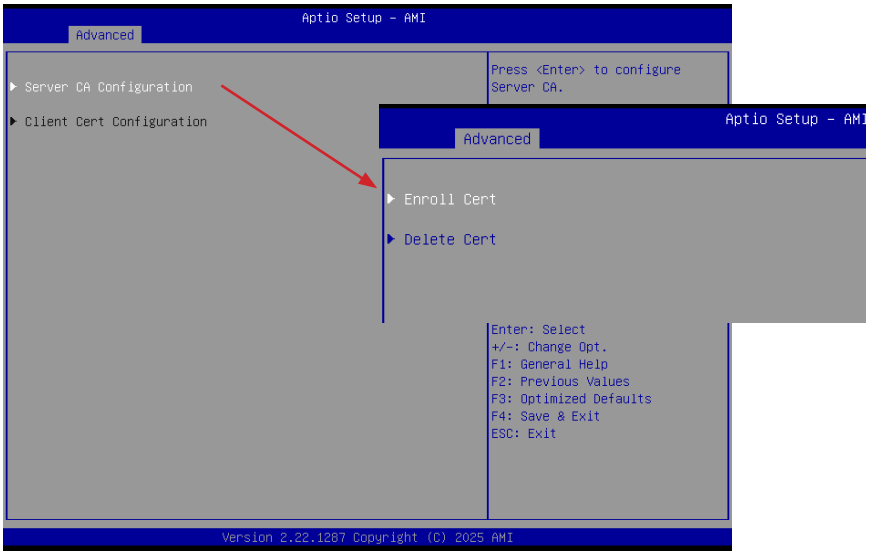
Item	Description
Network Stack	When system is power on, install LAN driver under UEFI mode **Disabled : Disables UEFI Network Stack (Default setting)** **Enabled : Enables UEFI Network Stack**
IPv4 PXE Support	When Network stack is enabled : **Disabled : Disables IPv4 PXE Support** **Enabled : Enables IPv4 PXE Support**
IPv4 HTTP Support	When Network stack is enabled : **Disabled : Disables IPv4 HTTP Support** **Enabled : Enables IPv4 HTTP Support**
IPv6 PXE Support	When Network stack is enabled : **Disabled : Disables IPv6 PXE Support** **Enabled : Enables IPv6 PXE Support**
IPv6 HTTP Support	When Network stack is enabled : **Disabled : Disables IPv6 HTTP Support** **Enabled : Enables IPv6 HTTP 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.

4.3.9 NVMe Configuration

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



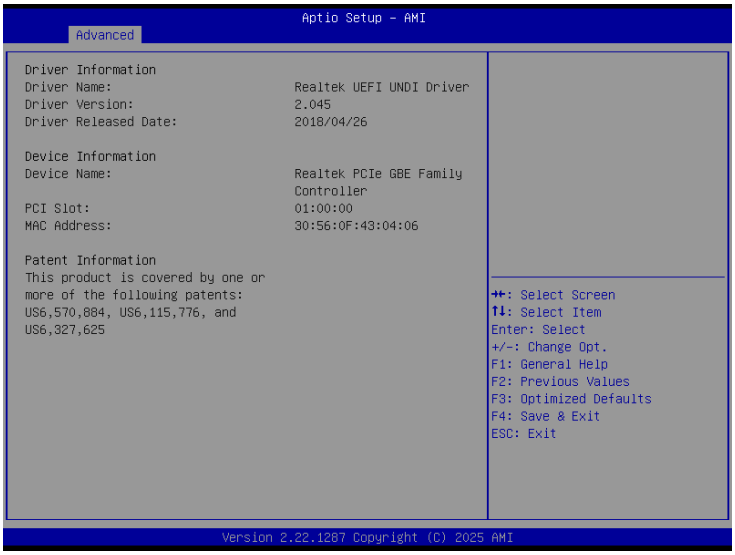
4.3.10 Tls Auth Configuration



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

4.3.11 Realtek PCIe GBE Family Controller (MAC:30:56:0F:43:04:06) (MAC address may varied based on different motherboard)

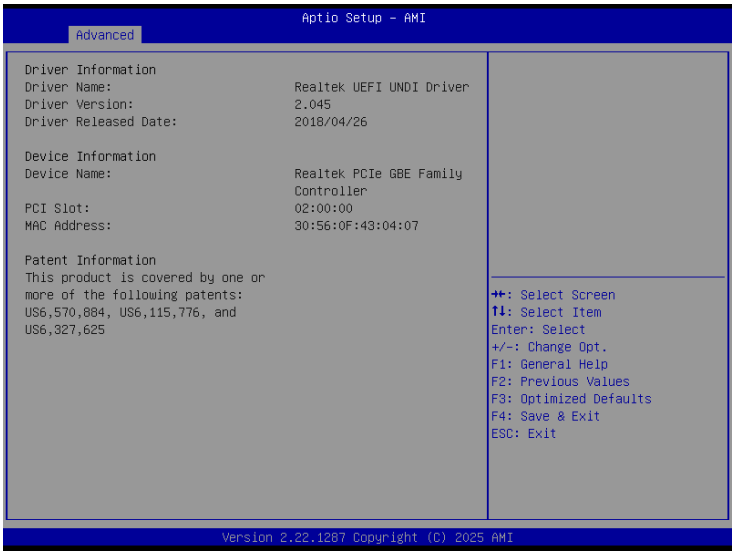
Shows Realtek Ethernet controller information



NOTE：MAC address may varied based on different motherboard

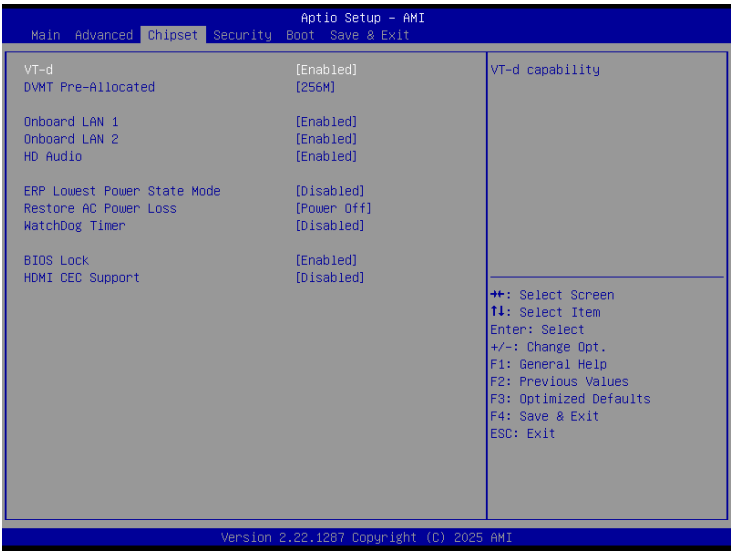
4.3.12 Realtek PCIe GBE Family Controller (MAC:30:56:0F:43:04:07) (MAC address may varied based on different motherboard)

Shows Realtek Ethernet controller information



NOTE：MAC address may varied based on different motherboard

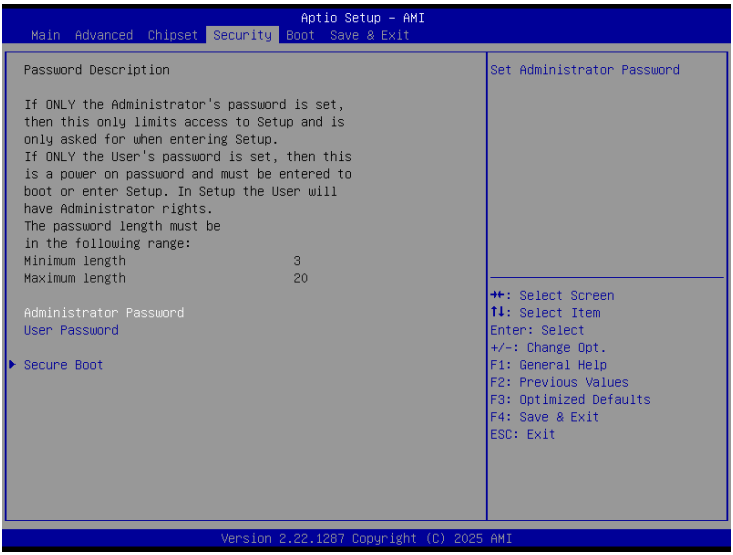
4.4 Chipset



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 LAN1 **Onboard LAN2**	Enable/Disable onboard LAN controller **Enabled : Enables onboard LAN controller (Default setting)** **Disabled : Disables onboard LAN controller**
HD Audio	Enable/Disable onboard audio controller **Enabled : Enables onboard audio controller (Default setting)** **Disabled : Disables onboard audio controller**
ERP Lowest Power State Mode	Enable/Disable power saving funtion **Enabled : Enables ERP Lowest Power State Mode** **Disabled : Disabled ERP Lowest Power State Mode (Default setting)**

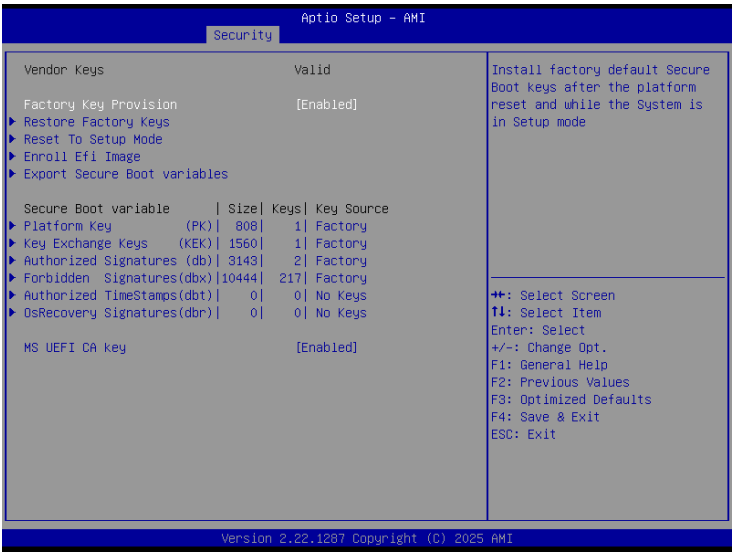
Restore AC Power Loss	To set which option the system should returns if a sudden power loss occured **Power off : Do not power on when the power is back (Default setting)** **Power on : System power on when the power is back** **Last state : Restore the system to the state before power loss occures**
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**
HDMI CEC Support	Enable/Disable HDMI CEC Support **Enabled : Enables BIOS Lock function** **Disabled : Disabled BIOS Lock funtion (Default setting)**

4.5 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

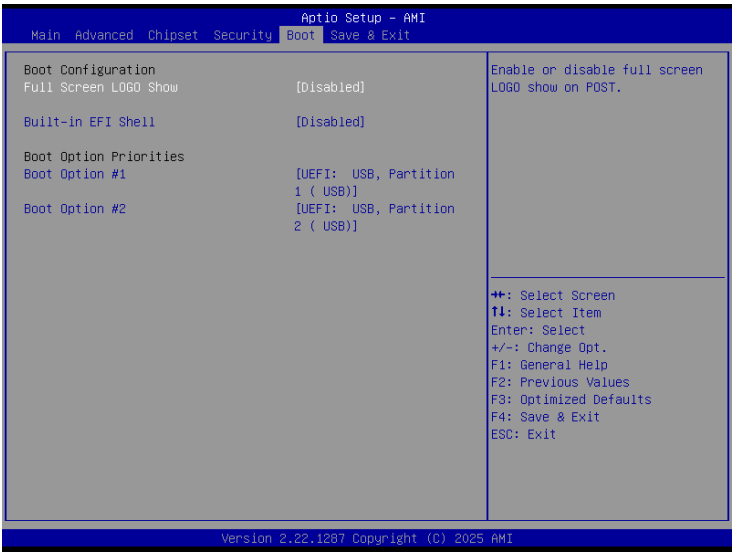


Item	Description
Factory Key Provision	Install factory default Secure Boot keys after the platform reset and while the system is in Setup mode **Enabled : Enables Factory Key Provision (Default setting)** **Disabled : Disables Factory Key Provision**
Restore Factory Keys	To restore factory settings **Yes : 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	Enabled : Enables MS UEFI CA Key (Default setting) Disabled : Disables MS UEFI CA Key

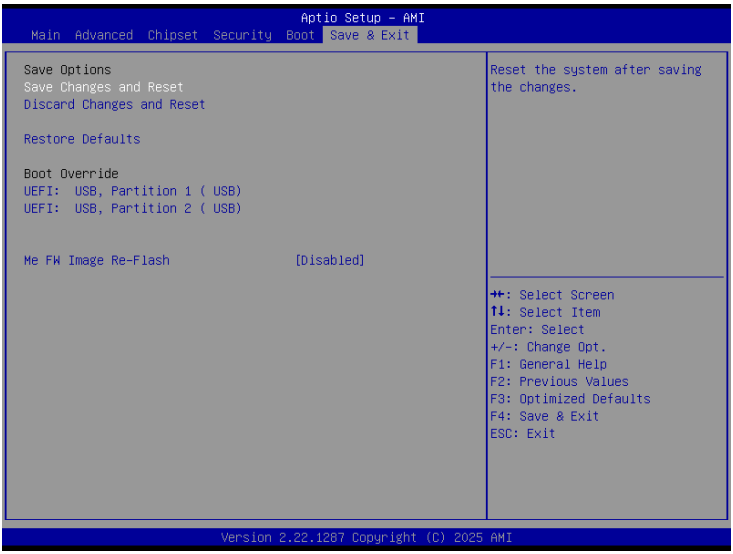
4.6 Boot

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)**
Boot Option Priorities	Shows the information of the storage that be installed in the system **Choose/set the boot priority**

4.7 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)**