

QM-7433REA-A1 (QM-7433A-SI)

Industrial Embedded System
Quick Start Guide

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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 12V 48W 100-240VAC (25EP0-700480-A3S)	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



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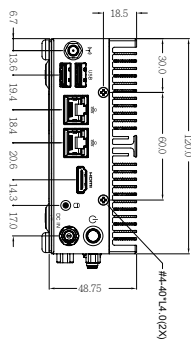
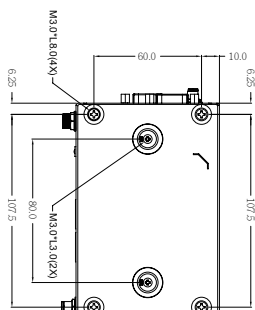
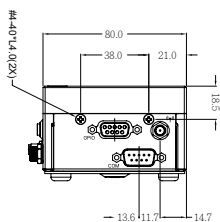
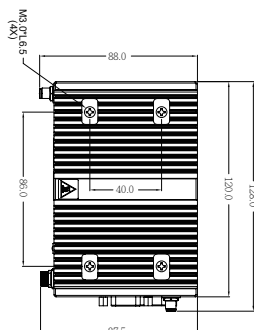
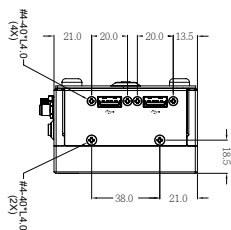
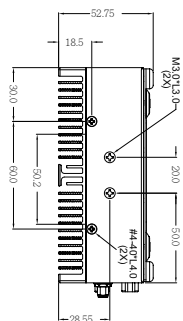
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Chapter 1

Chapter 1 - Product Specifications



1.1 Specifications

System	QM-7433REA-A1 (QM-7433A-SI)
Dimension	System Size : 120W x 80D x 52H(mm)
CPU	Intel® Atom® x7433RE Processor Intel 7, 4 cores, up to 3.40 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® UHD Graphics: 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
Front I/O	2 x RJ45 LAN Ports 1 x USB 3.2 Gen 2x1 1 x USB 3.2 Gen 1 1 x HDMI 1 x DC IN 1 x Power button 1 x HDD LED 1 x External Antenna Hole (Optional)
Side I/O	1 x GPIO (4-bits) 1 x COM Port (RS-232/422/485) 2 x USB 2.0 1 x External Antenna Hole (Optional)
TPM	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0
Power	+12VDC (Adapter 12V/48W)
Operation temperature	Operating temperature: -20°C to 70°C Operating humidity: 40°C @ 20-95% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 60°C @ 95% (non-condensing) Use wide temperature range memory and storage

System	QM-7433REA-A1 (QM-7433A-SI)
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 60068-2-29, 50 G, half sine, 11 ms duration
Packaging Content	Carton size: 360 x 306 x 220 (mm) Packing Capacity: 5pcs Single Box size: 286 x 178 x 66 (mm) Including: Power Cord : Optional (by region) PSU ADP 12V 48W 100-240VAC x 1 (P/N: 25EP0-700480-A3S)
Order Information	System: 6BQM7433AMR-SI (Box packing) (Built in Components: Please contact with your sales representative for more information or e-mailed to : sales@gigaipc.com)

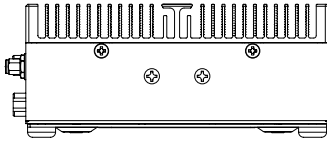
Chapter 2

Chapter 2 – QM-7433REA-A1 (QM-7433A-SI)

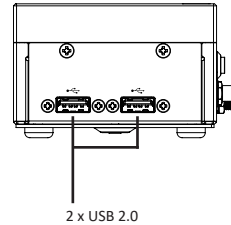


2.2 Getting Familiar with Your Unit

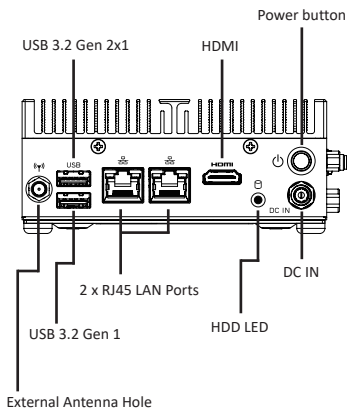
[Rear Side]



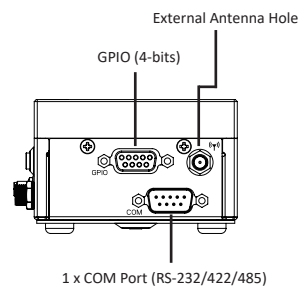
[Left Side]



[Front Side]

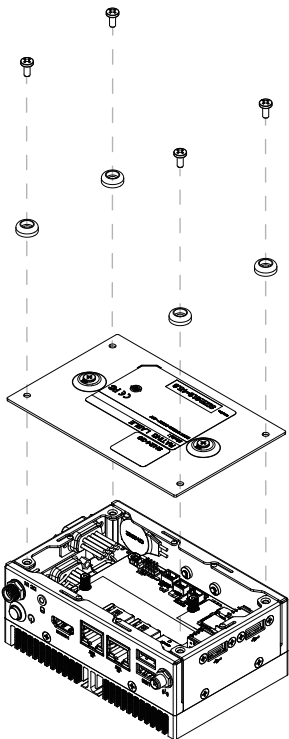


[Right Side]



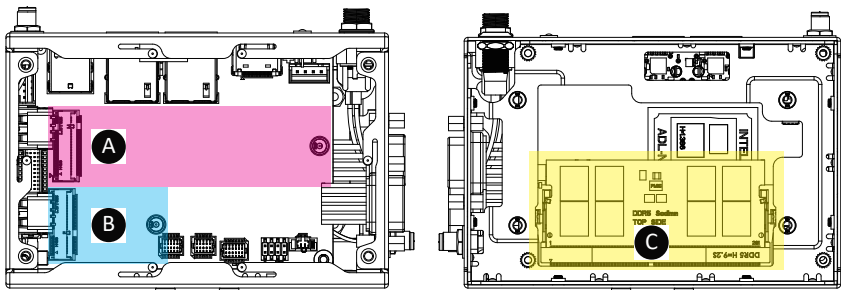
[Installation]

- * Before opening the case, make sure to unplug the power cord.
- * 打開機殼前，請確實移除電源。
- * Before Connecting the power, make sure to fasten the case securely.
- * 接上電源前，請確實將機殼完整鎖附。



[Bottom PCB Side]

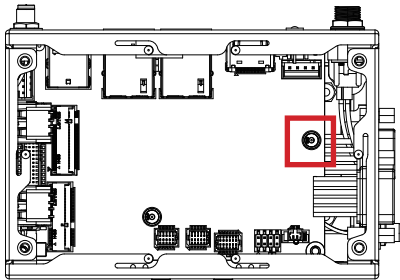
	Information
A	M.2 2280 M-Key connector
B	M.2 2230 E-Key connector
C	DDR5 SO-DIMM Slot



2.3 A) M.2 SSD Installation: How to safely install the M.2 2280 SSD

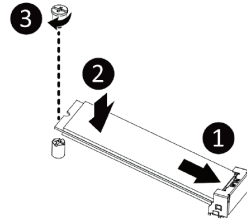
1

Remove the screw from the screw hole.



2

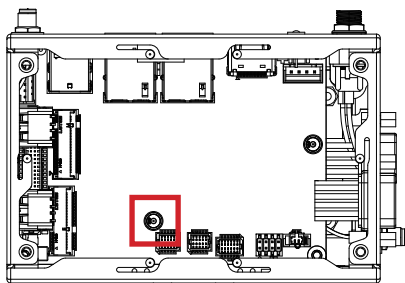
Carefully insert the M.2 SSD into the slot, and secure with the screw.



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

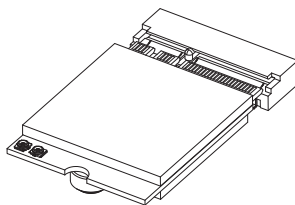
1

Remove the screw from the screw hole.



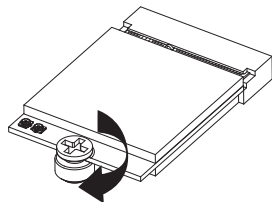
2

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



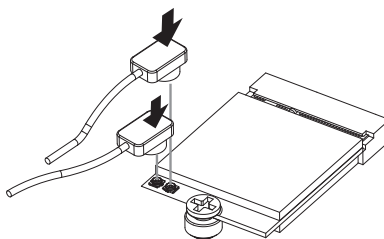
3

Lock the screw in the middle.



4

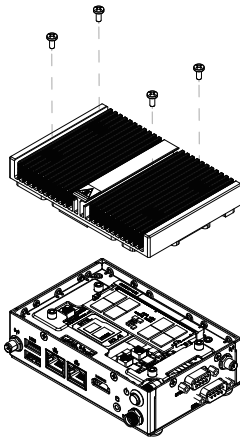
Install the antenna on the left side of the connection wireless module down.



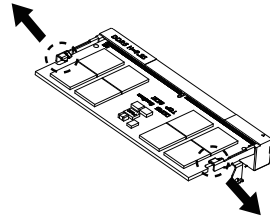
2.5 C) Memory removal: DDR5 SO-DIMM

1

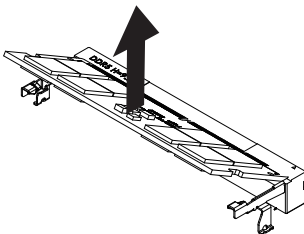
Remove 4 screws on the aluminum extrusion heat sink, then lift the heatsink upward.

**2**

Gently pull the levers on both sides of the memory module outward.

**3**

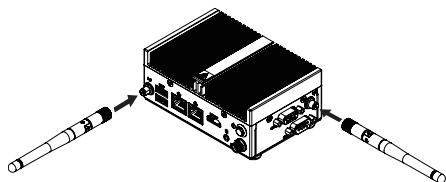
The memory module will release and pop out from the slot, and carefully remove it from the slot.



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

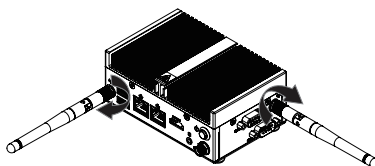
①

Carefully insert the antennas into the connectors.



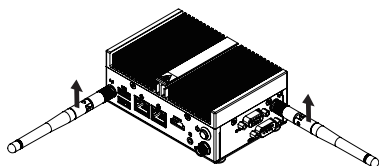
②

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



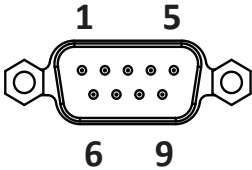
③

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



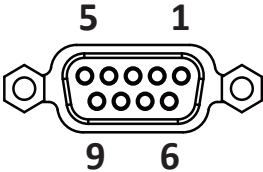
2.7 Cable Pin-define

1. DB9 COM (25CF8-090600-S9R)



DB9 Pin	RS-232	RS-422 Full Duplex	RS-485 Half Duplex
1	DCD	TXD-	D-
2	RXD	TXD+	D+
3	TXD	RXD+	-
4	DTR	RXD-	-
5	GND		
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-
9	RI	-	-

2. DBP DIO (25CR5-070601-S9R)



DBP DIO Pin	Pin Name
1	GPIO-output_1
2	GPIO-input_1
3	GPIO-output_2
4	GPIO-input_2
5	GND
6	NC
7	NC
8	NC
9	5V

2.8 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.



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

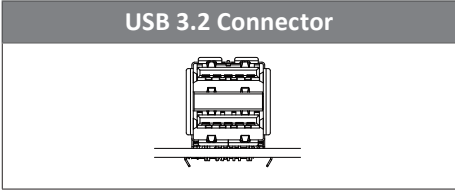
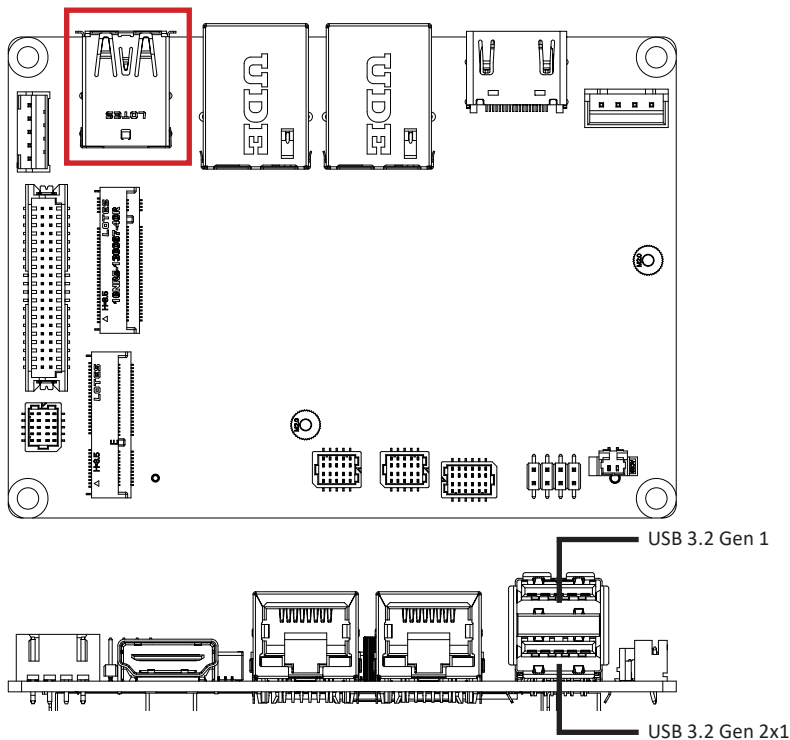
Chapter 3 – Hardware Information



No	Code	Description
1	USB32	USB 3.2 Gen 1 + USB 3.2 Gen 2x1 connector
2	LAN1, LAN2	LAN connector
3	HDMI	HDMI connector
4	DC_IN	DC IN 1x4 pin power connector
5	BATTERY	Battery cable connector
6	GPIO	General purpose input / output header
7	SYS_PANEL	Front panel header
8	COM	Serial port header (RS-232/422/485)
9	M2E	M.2 Slot, 2230 E-key
10	FUSB20	USB 2.0 headers
11	LVDS	LVDS Connector
12	BKL_CN	Backlight Control header
13	M2M	M.2 Slot, 2280 M-key
14	SODIMM	DDR5 SO-DIMM Slot

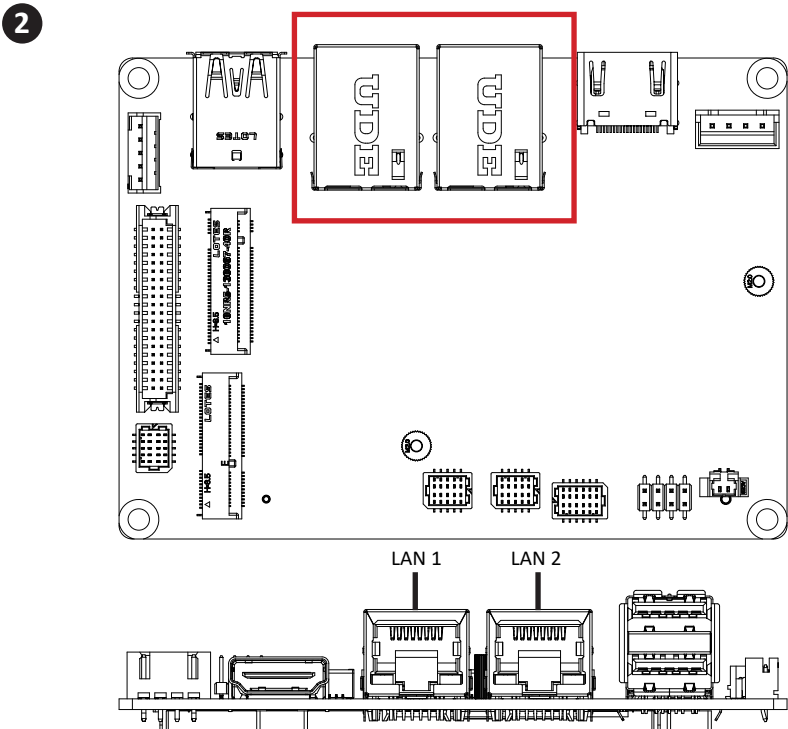
3.2.1 USB32 (USB 3.2 Gen 1 + USB 3.2 Gen 2x1 connector)

1



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

3.2.2 LAN1, LAN2 (LAN connector)



LAN Connector

1 8

Link / Activity LED Connection / Speed LED

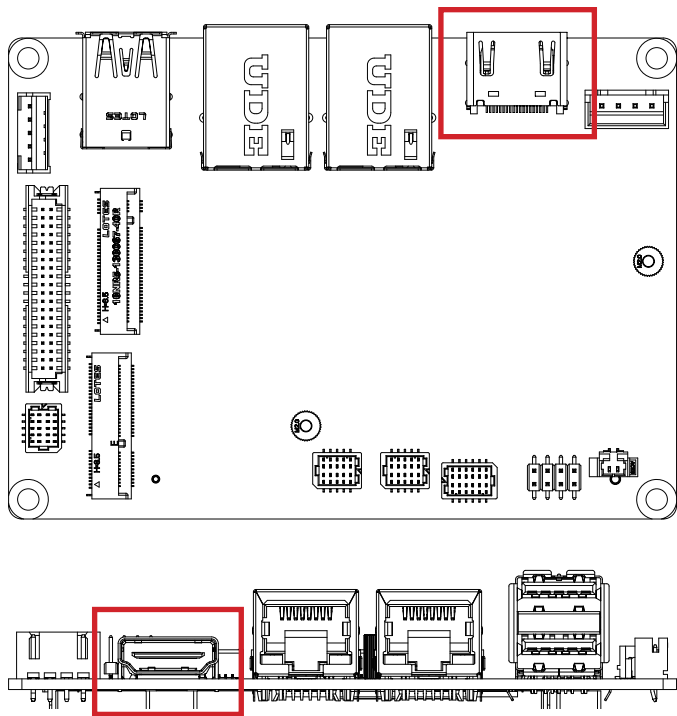
Pin No.	Definition
1	TX1+
2	TX1-
3	TX2+
4	TX2-
5	TX3+
6	TX3-
7	TX4+
8	TX4-

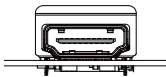
State	Description
Orange On	1Gbps data rate
Green On	100Mbps data rate
Off	10Mbps data rate

Connector PN	Vendor
RB1-GB-0008	UDE

3.2.3 HDMI (HDMI connector)

3



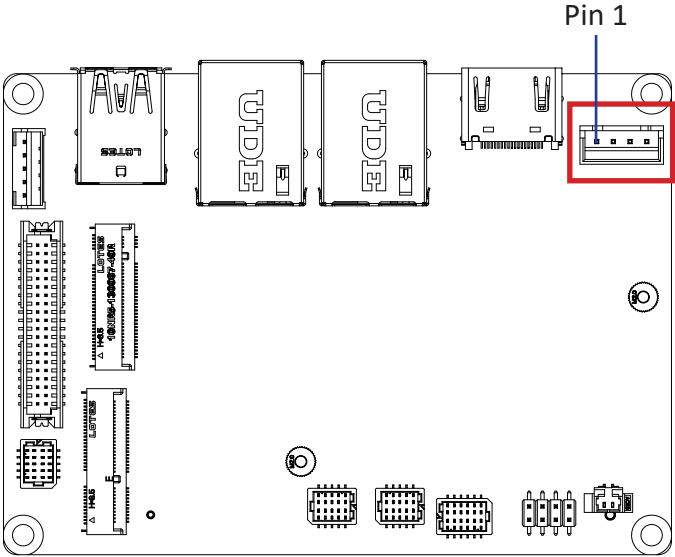
HDMI Connector


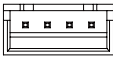
Connector PN	Vendor
D13-0715-19681	WALTA

Pin No.	Definition	Pin No.	Definition
1	HDMI_D2p	11	GND
2	GND	12	HDMI_CLKn
3	HDMI_D2n	13	GND
4	HDMI_D1p	14	NC
5	GND	15	HDMI_SCL
6	HDMI_D1n	16	HDMI_SDA
7	HDMI_D0p	17	GND
8	GND	18	5V
9	HDMI_D0n	19	HDMI_HPD
10	HDMI_CLKp		

3.2.4 DC_IN (DC IN 1x4pin power connector)

4

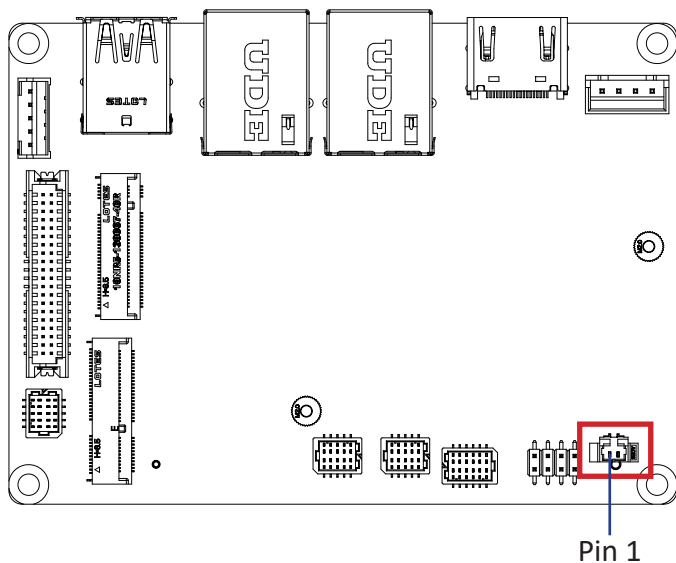


DC IN connector	
	
1 2 3 4	
Pin No.	Definition
1	GND
2	Power
3	Power
4	GND

Connector PN	Vendor
753-81-04TW00	PINREX
Connector type	
1x4pin header, pitch 2.5mm	

3.2.5 BATTERY (Battery cable Connector)

5



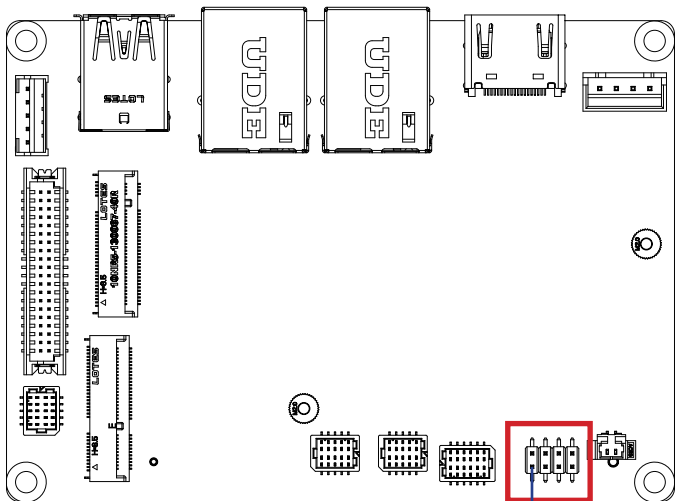
Battery cable Connector


Pin No.	Definition
1	3V
2	GND

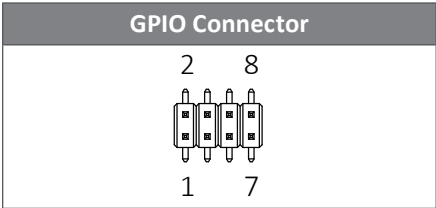
Connector PN	Vendor
85205-0270L	ACES
A1250WV-S-02PC	JOINT-TECH
Connector type	
1x2pin header, pitch 1.25mm	

3.2.6 GPIO (General Purpose input/output header)

6



Pin 1



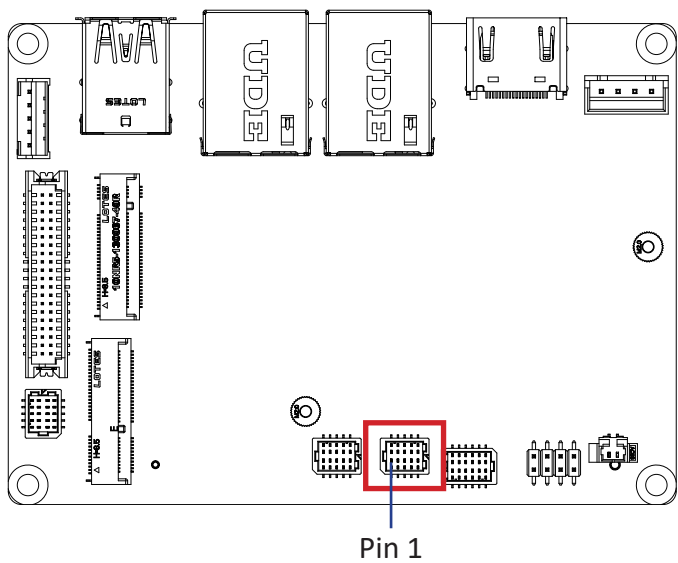
Connector PN	Vendor
222-97-04GBE1	PINREX

Connector type
2x4pin header, pitch 2.0mm

Pin No.	Definition
1	SOGPO_1
2	SOGPI_1
3	SOGPO_2
4	SOGPI_2
5	SMB_CLK
6	SMB_DATA
7	5V
8	GND

3.2.7 SYS_PANEL (Front panel header)

7



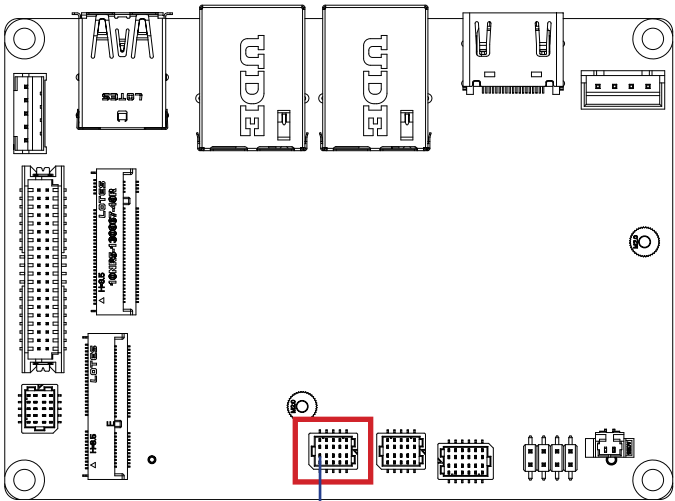
System Panel Header

Pin No.	Definition
1	HD+
2	MPD+
3	HD-
4	MPD-
5	GND
6	PWR_button
7	Reset
8	GND
9	GND
10	GND

Connector PN	Vendor
50238-01041-001	ACES
Connector type	
2x5pin header, pitch 1.0mm	

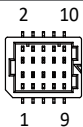
3.2.8 COM (Serial port header (RS-232/422/485))

8



Pin 1

Serial port Connector



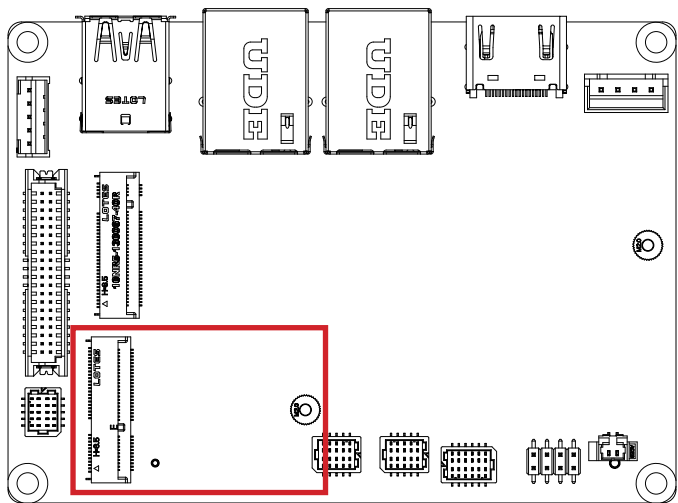
Pin No.	RS-232	RS-422 Full Duplex	RS-485 Half Duplex
1	RXD	TXD+	D+
2	DCD	TXD-	D-
3	DTR	RXD-	—
4	TXD	RXD+	—
5	DSR	—	—
6	GND	—	—
7	CTS	—	—
8	RTS	—	—
9	No Connect	—	—
10	RI	—	—

Connector PN	Vendor
87216-1004-06	ACES

Connector type
2x5pin header, pitch 1.0mm

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

9



M.2 E Key Connector



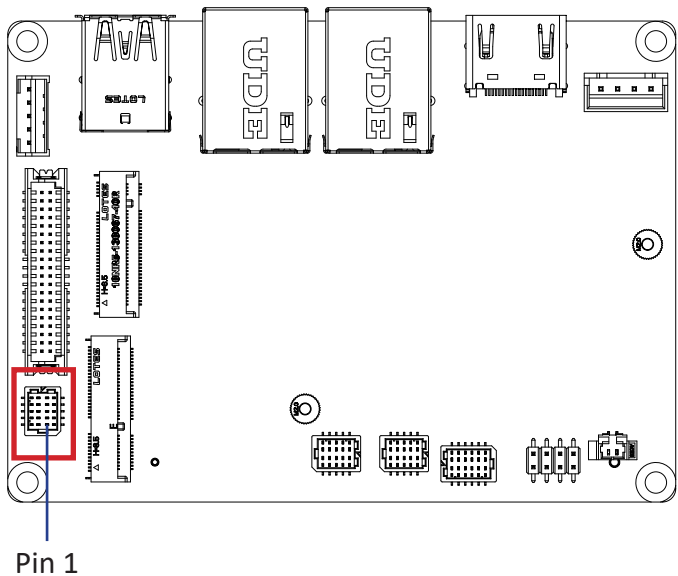
Pin No.	Definition	Pin No.	Definition
1	GND	2	3.3V
3	D1p	4	3.3V
5	D1n	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	NC
17	NC	18	GND
19	NC	20	NC
21	NC	22	NC
23	NC		
Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE_TXp	34	NC
37	PCIE_TXn	36	NC

39	GND	38	NC
41	PCIE_RXp	40	NC
43	PCIE_RXn	42	NC
45	GND	44	NC
47	PCIE_CLOCKp	46	NC
49	PCIE_CLOCKn	48	NC
51	GND	50	NC
53	PCIE Clock Request	52	PCIRST
55	PCIE wake up	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	3.3V
75	GND	74	3.3V

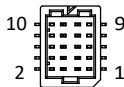
Connector PN	Vendor
80152-8521	BELLWETHER

3.2.10 FUSB20 (USB 2.0 headers)

10



USB 2.0 Header



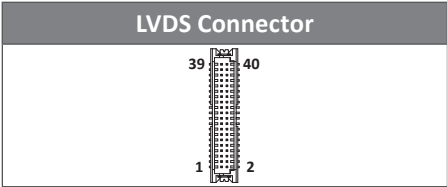
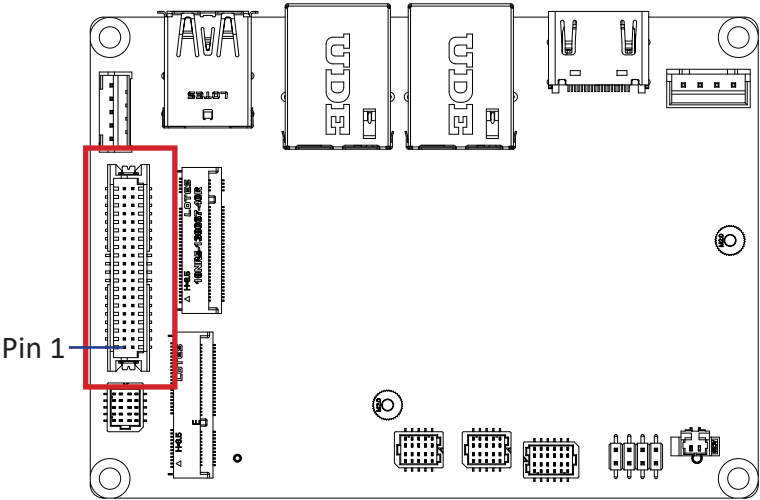
Pin No.	Definition
1	5V
2	5V
3	5V
4	5V
5	DXn
6	DYn
7	DXp
8	DYp
9	GND
10	GND

Connector PN	Vendor
87216-1004-06	ACES

Connector type
2x5pin header, pitch 1.0mm

3.2.11 LVDS (LVDS connector)

11



Pin No.	Definition	Pin No.	Definition
1	3.3V	21	A5+
2	5V	22	A4+
3	3.3V	23	A5-
4	5V	24	A4-
5	SPC0	25	GND
6	SPD0	26	GND
7	GND	27	A7+
8	GND	28	A6+
9	A1+	29	A7-
10	A0+	30	A6-
11	A1-	31	GND
12	A0-	32	GND
13	GND	33	CLK2+
14	GND	34	CLK1+
15	A3+	35	CLK2-

Pin No.	Definition	Pin No.	Definition
16	A2+	36	CLK1-
17	A3-	37	GND
18	A2-	38	GND
19	GND	39	12V
20	GND	40	12V

Connector PN	Vendor
712-76-40GWE0	PINREX
A1252WV-SF-2X20PD01	JOINT-TECH

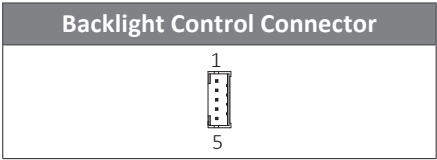
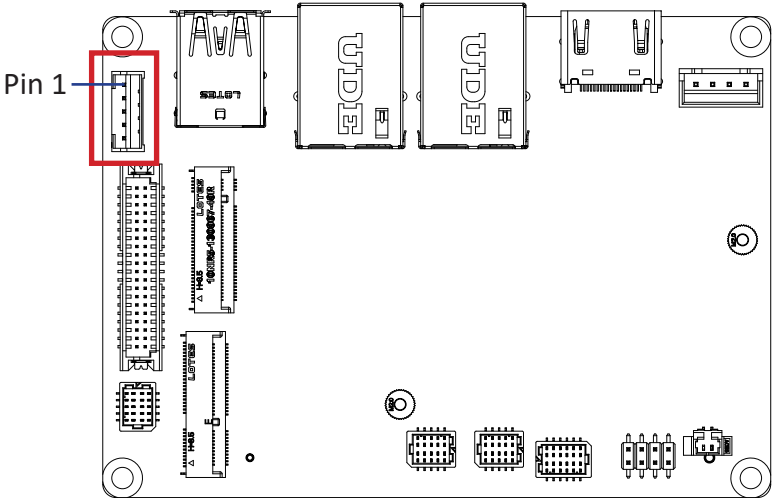
Connector type
2x20pin header, pitch 1.25mm

For each model support LVDS function.
But below model no need to add.
A0~A3 is odd channel 0~3, A4~A7 is even channel.

Note: *The LVDS output connector of the unit is only intended to be connected to an UL/IEC/EN approval equipment with fire enclosure.

3.2.12 BKL_CN (Backlight Control connector)

12

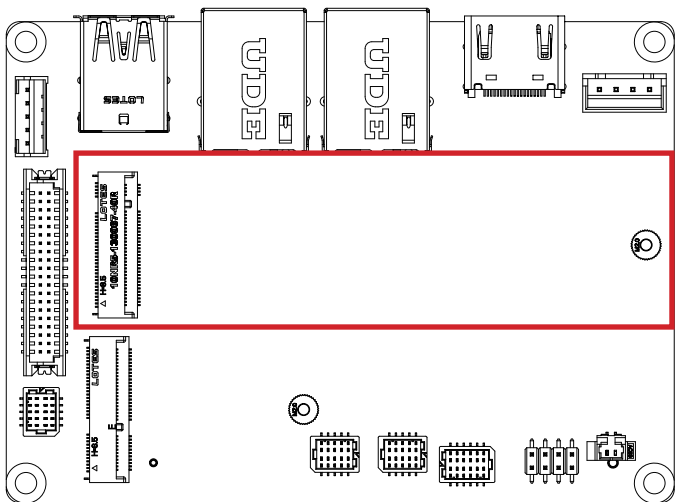


Connector PN	Vendor
721-81-05TW00	PINREX
Connector type	
1x5pin header, pitch 2.0mm	

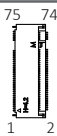
Pin No.	Definition
1	5V (12V optional)
2	PWM (3.3V)
3	Backlight enable (3.3V)
4	GND
5	12V

3.2.13 M2M (M.2 Slot, 2280 M-key)

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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

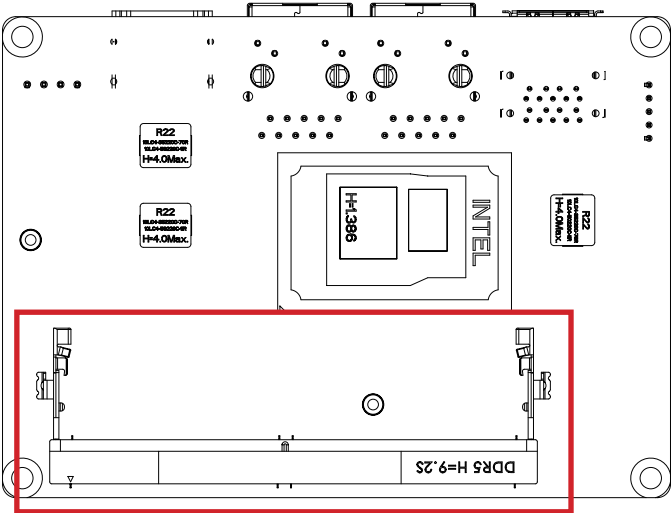
Pin No.	Definition	Pin No.	Definition
33	GND	34	NC
35	PCIe1 TXn	36	NC
37	PCIe1 TXp	38	DEVSLP
39	GND	40	NC
41	PCIe0 RXn	42	NC
43	PCIe0 RXp	44	NC
45	GND	46	NC
47	PCIe0 TXn	48	NC
49	PCIe0 TXp	50	PCI Reset
51	GND	52	PCIe Clock Request
53	PCIe Clockn	54	NC
55	PCIe Clockp	56	NC
57	GND	58	NC

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

3.2.14 SODIMM (DDR5 SO-DIMM slot)

14



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 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

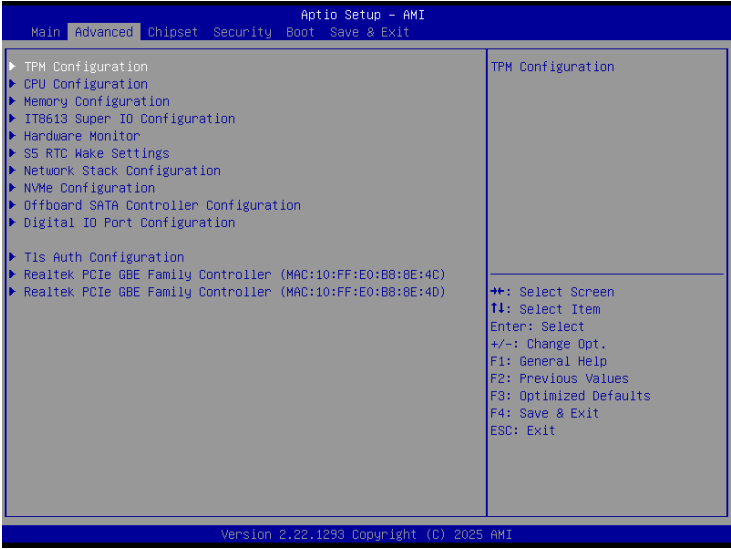
The main menu shows the basic system information.
Use arrow keys to move among the items.



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 TXE 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)

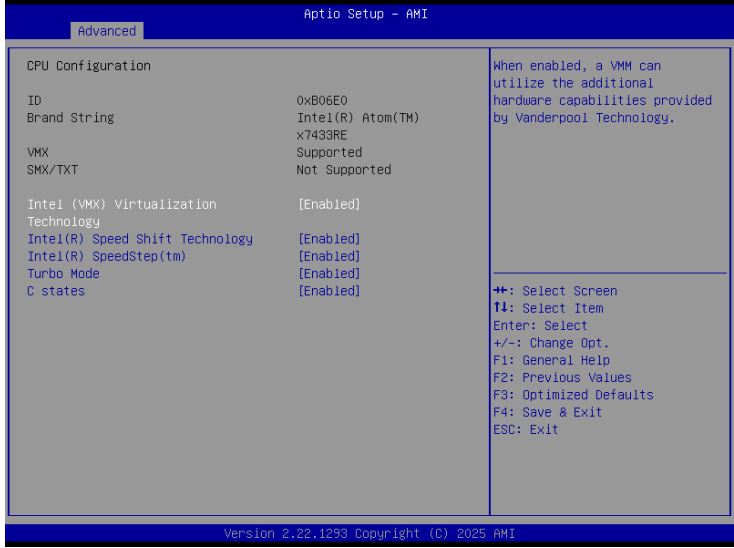
Trusted Computing : Shows TPM information, and TPM module configuration setting.



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.



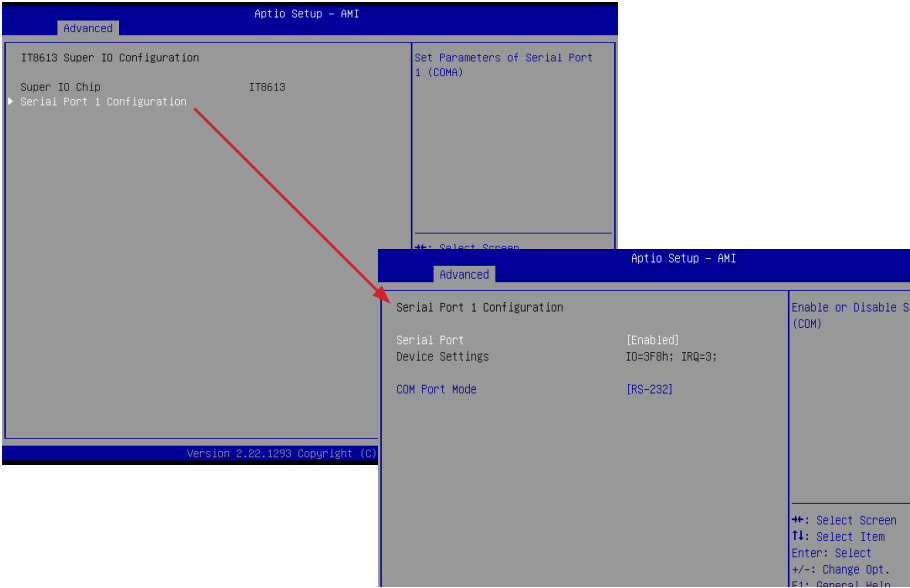
Item	Description
Intel (VMX) Virtualization Technology	Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. Enabled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

4.3.3 Memory Configuration



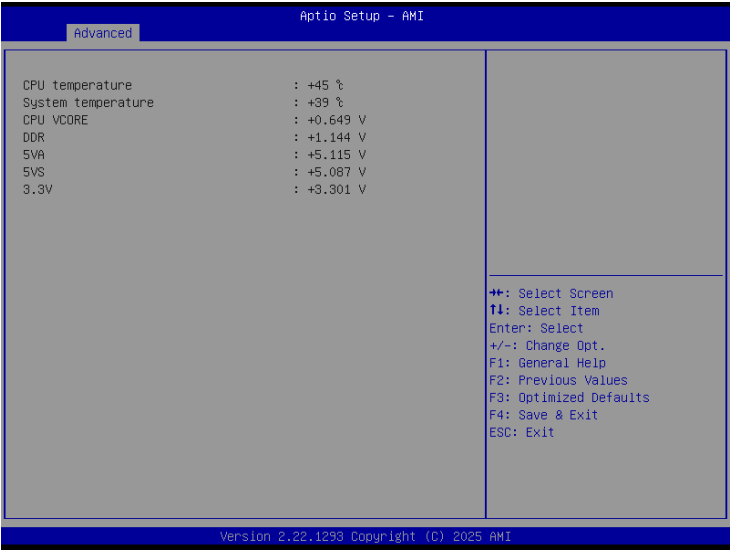
Item	Description
In-Band ECC Support	Enable or Disable In-Band ECC Support function. Disabled : Disables In-Band ECC Support (Default setting) Enabled : Enables In-Band ECC Support

4.3.4 IT8613 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 COM Port Mode : Choose RS-232, RS-422, or RS-485 feature

4.3.5 Hardware Monitor



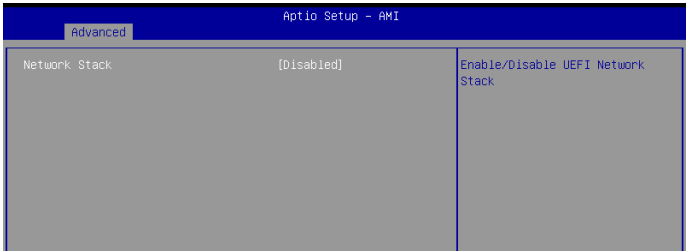
Item	Description
CPU temperature	Shows current CPU temperature
System temperature	Shows current system temperature

4.3.6 S5 RTC Wake Settings

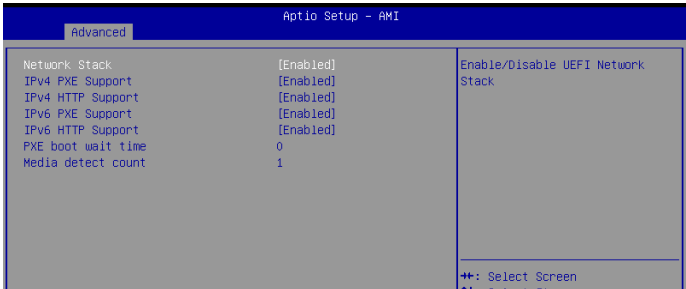


Item	Description
Wake system from S5	Enable or Disable System to wake on a specific time. Disabled : Disables system to wake on a specific time (Default setting) Fixed Time : Enables system to wake on a specific time (Format : hr : min : sec)

4.3.7 Network Stack Configuration



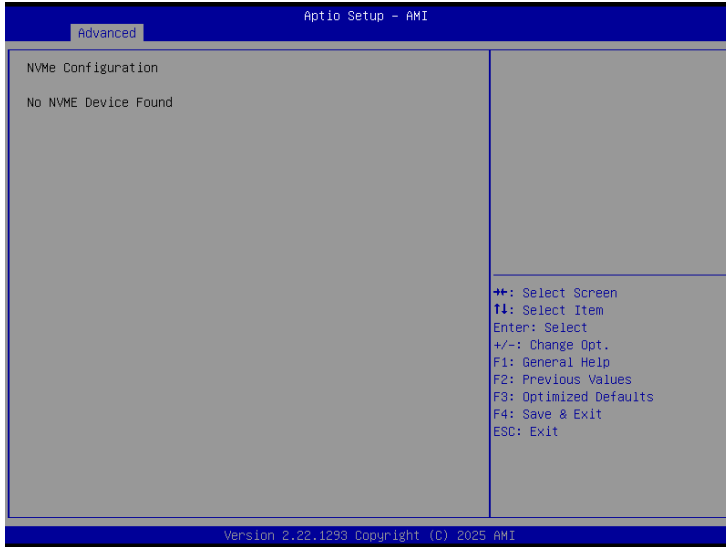
When Network stack is enabled :



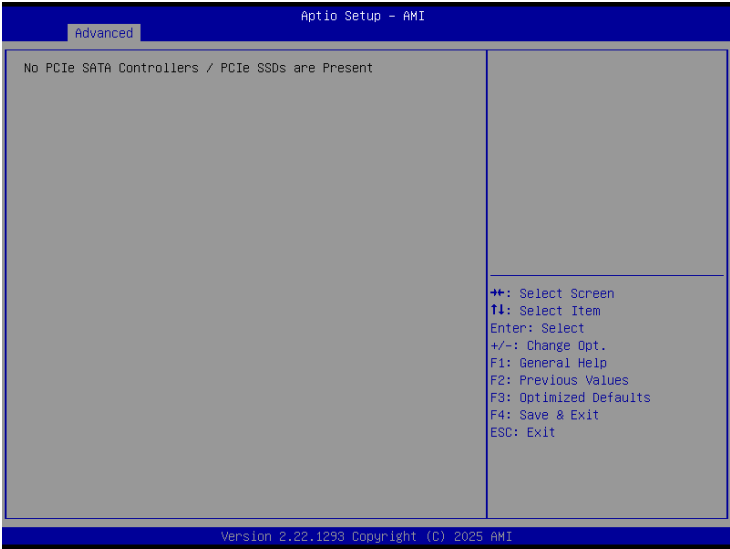
Item	Description
Network Stack	When system is power on, install LAN driver under UEFI mode Disabled : Disables UEFI Network Stack (Default setting) Enabled : Enables UEFI Network Stack
IPv4 PXE Support	When Network stack is enabled : Disabled : Disables Ipv4 PXE Support Enabled : Enables Ipv4 PXE Support
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 Ipv6 PXE Support Enabled : Enables Ipv6 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.

4.3.8 NVMe Configuration

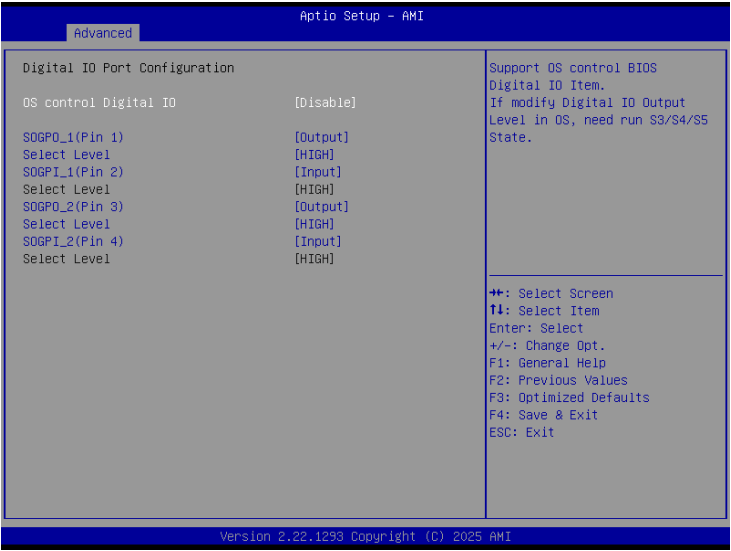
NVMe Configuration shows information when your M.2 NVMe PCIe SSD is installed



4.3.9 Offboard SATA Controller Configuration

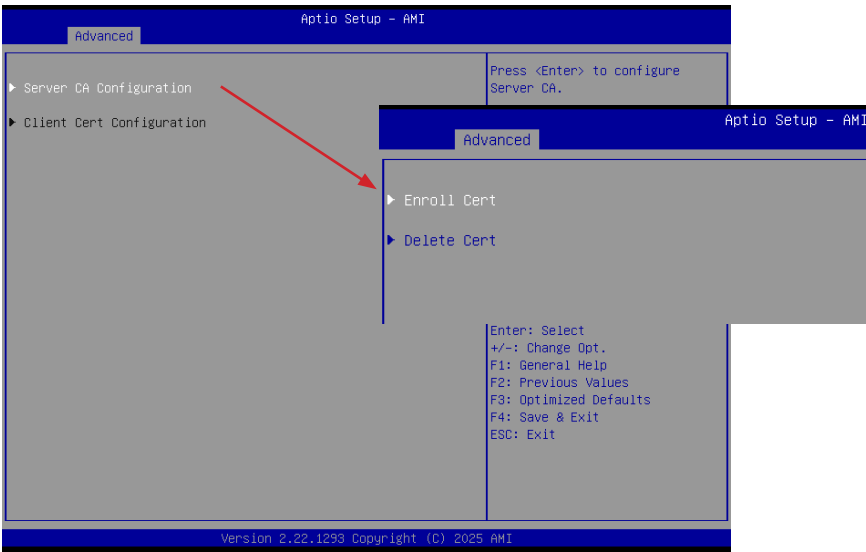


4.3.10 Digital IO Port Configuration



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)	Configure Digital IO Input or Output values for each pin.

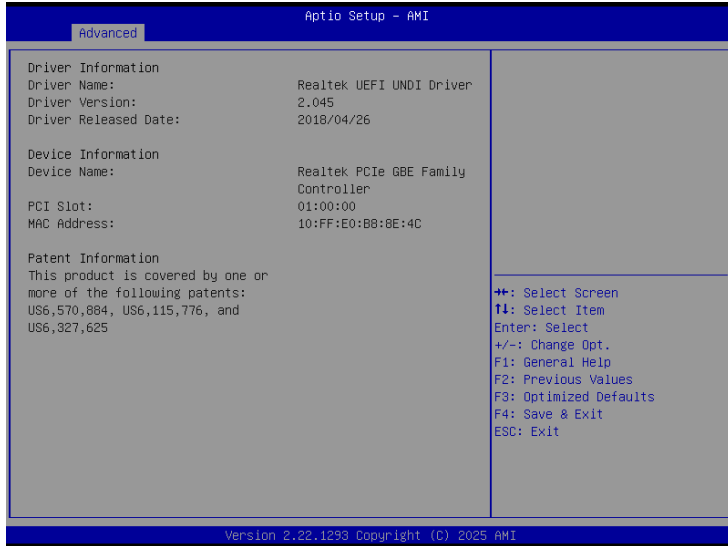
4.3.11 Tls Auth Configuration



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

4.3.12 Realtek PCIe GBE Family Controller (MAC:10:FF:E0:B8:8E:4C) (MAC address may varied based on different motherboard)

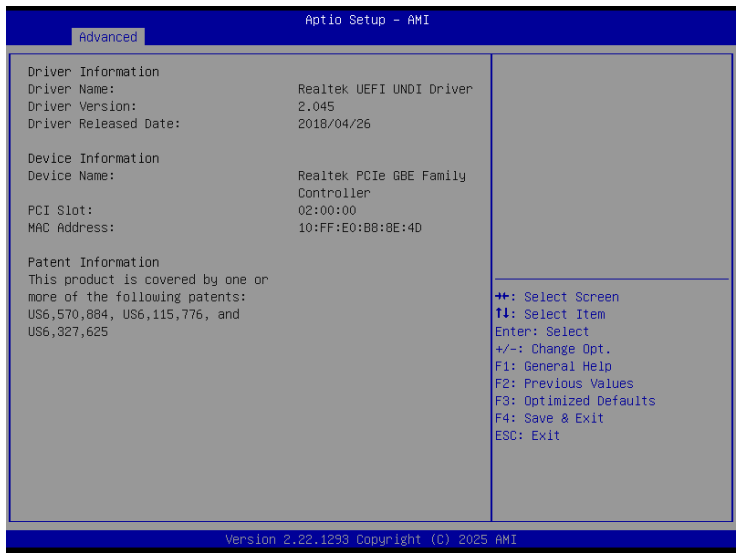
Shows Realtek Ethernet controller information



NOTE : MAC address may varied based on different motherboard

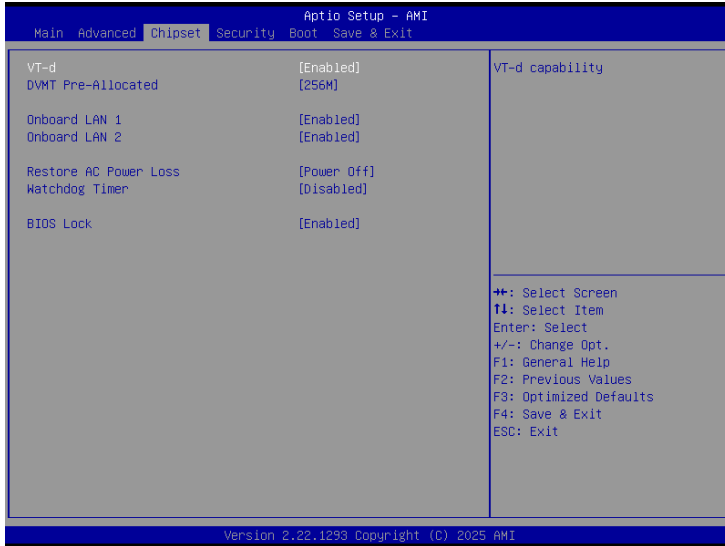
4.3.13 Realtek PCIe GBE Family Controller (MAC:10:FF:E0:B8:8E:4D) (MAC address may varied based on different motherboard)

Shows Intel Ethernet controller information



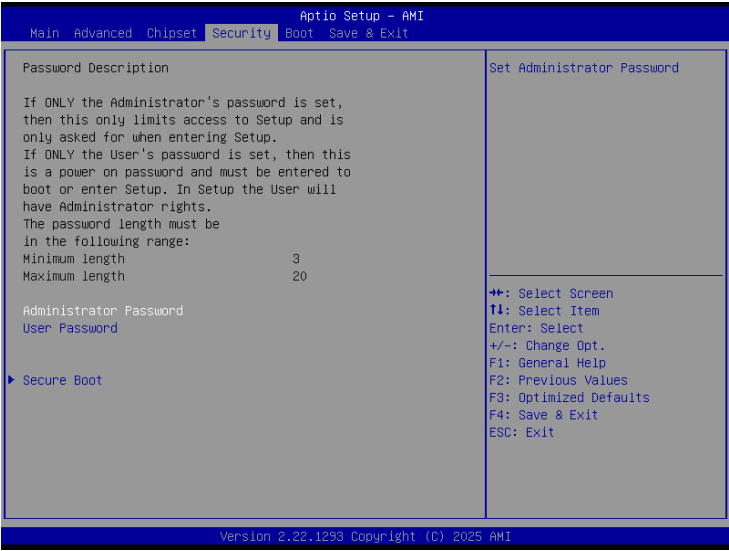
NOTE : MAC address may varied based on different motherboard

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 Enable : Enables onboard LAN controller (Default setting) Disable : Disables onboard LAN controller
Restore AC Power Loss	To set which option the system should returns if a sudden power loss occurred 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 occurs
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

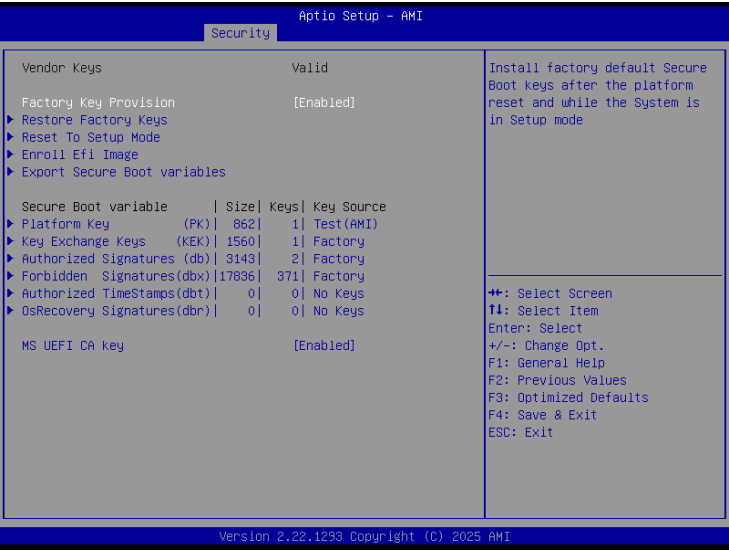
4.5 Security



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)	Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database(db)
MS UEFI CA Key	

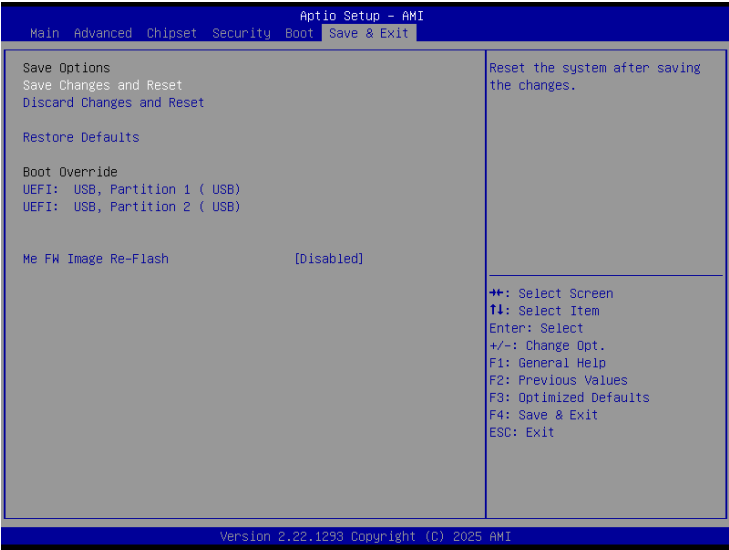
4.6 Boot

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)
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

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)