

QBi-N97B (MADN9BH)

10" x 10" Embedded Compact Board

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Packing List

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

Item	Quantity
QBi-N97B (MADN9BH)	1
SATA power cable	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.

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.

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。						

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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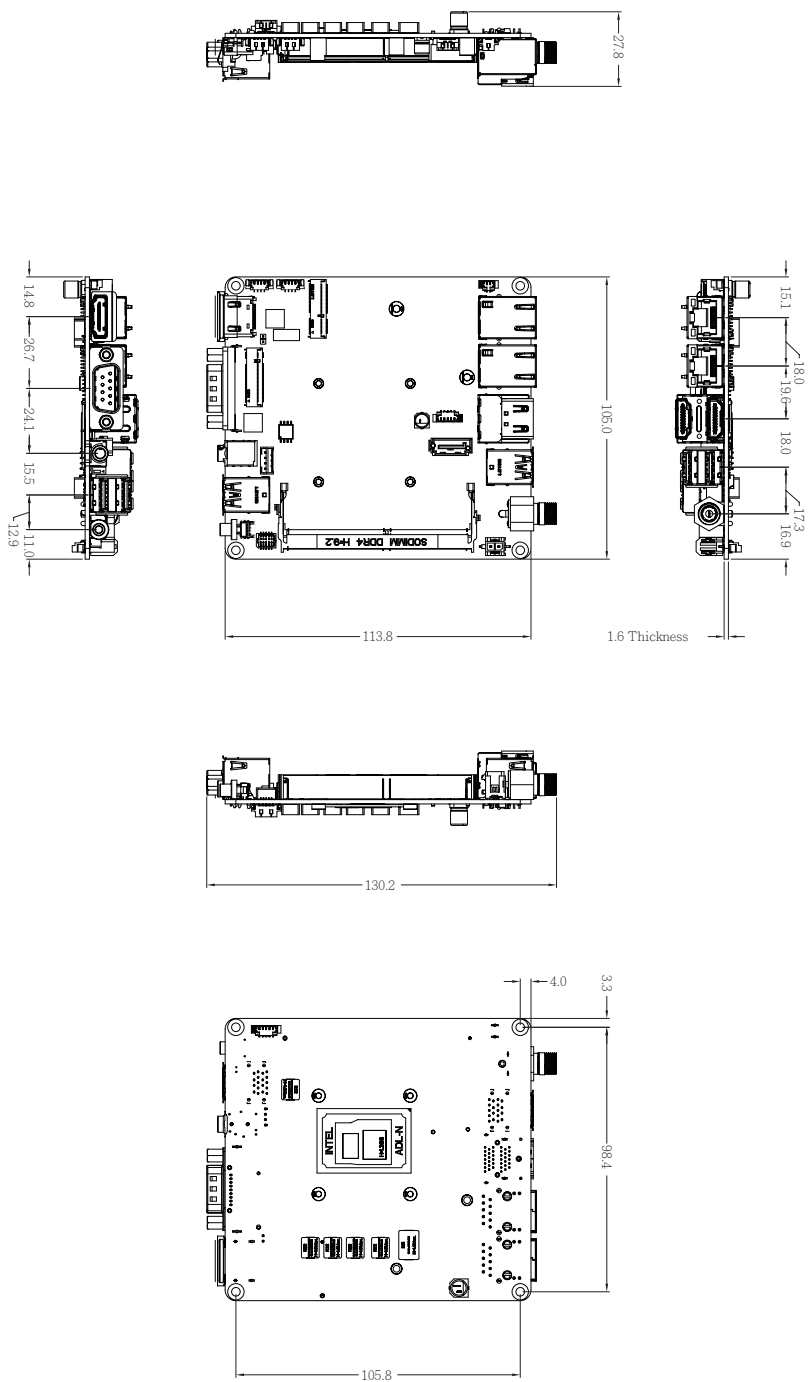
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Chapter 1

Chapter 1 - Product Specifications QBi-N97B (MADN9BH)



1.1 Specifications

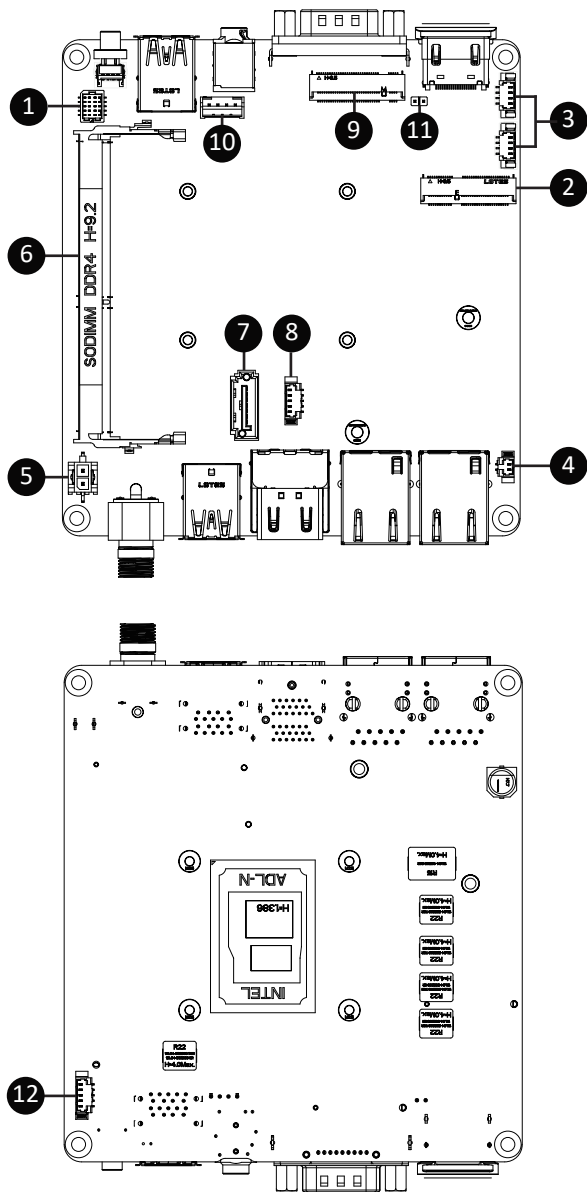
Motherboard	QBi-N97B (MADN9BH)
Form Factor	Embedded Compact Board 105W x 110D (mm)
CPU	Intel® Processor N97 Intel® 7, 4 cores, up to 3.60 GHz TDP 12W
Socket	1 x FCBGA1264
Chipset	—
Memory	1 x DDR4 SO-DIMM socket, Max. Capacity 16 GB Support Single Channel DDR4 3200 MHz memory module
Ethernet	2 x GbE LAN Ports (Realtek® RTL8111H)
Video	Integrated Graphics Processor - Intel® UHD Graphics support: 3 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz (3 independent display outputs)
Audio	Realtek® ALC269
Storage	1 x SATA 6Gb/s Port
Raid	—
Expansion Slots	1 x 2280 M.2 M-Key (PCIe Gen 3x1, SATA 6Gb/s) 1 x 2230 M.2 E-Key
Internal I/O	1 x 2-pin power connector 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Speaker out header 2 x USB 2.0 headers
Front IO	2 x USB 3.2 Gen 2x1 1 x Power button with LED 1 x COM Port (RS-232) 1 x Combo audio jack (Headphone & Headset) 1 x HDMI

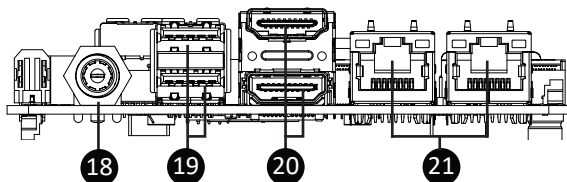
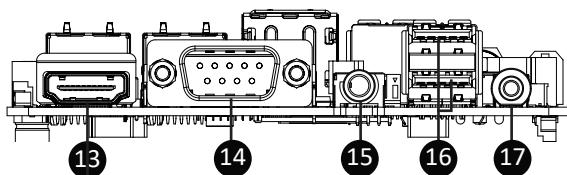
Motherboard	QBi-N97B (MADN9BH)
Rear IO	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x HDMI 1 x Screw type DC Jack (+12V~24VDC)
Side IO	—
TPM	Onboard TPM 2.0 security chip NUVOTON NPCT760AABYX
OS Compatibility	Windows 10/11 (x64)
Operating Properties	Operating temperature: 0°C to +60°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -40°C to +85°C Non-operating humidity: 0%-95% (non-condensing)
Packaging Content	Carton size: 465 x 351 x 217 (mm) Packing Capacity: 10pcs Single Box size: 221 x 178 x 65 (mm) Including: SATA power cable 150mm x 1 (P/N: 25CRI-150621-K1R)
Order Information	9MADN9BHMR-SI (Box Packing)

Chapter 2

Chapter 2 – Hardware Information

2.1 Jumpers and Connectors



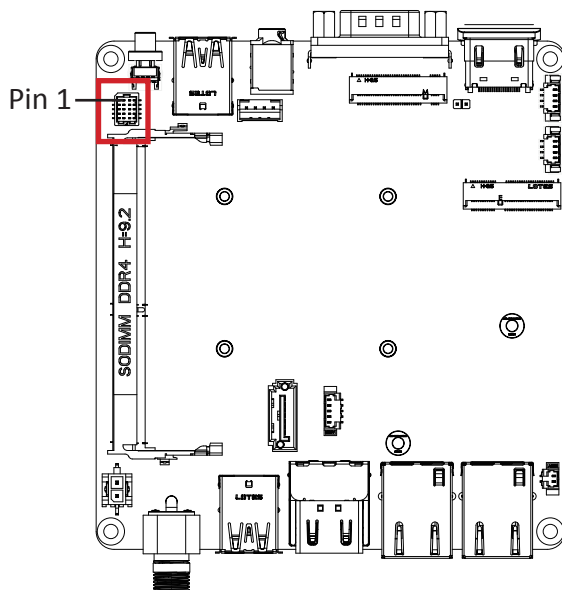


No	Code	Description
1	PWR_BT	Power Button header
2	M2E	M.2 Slot, 2230 E-key
3	F_USB2_1 F_USB2_2	USB 2.0 header
4	BATTERY	Battery connector
5	DC_IN2	DC IN connector
6	SODIMM1	DDR4 SO-DIMM Slot
7	SATA	SATA 6Gb/s connector
8	SATA_PWR	SATA power connector

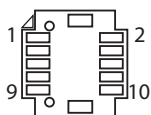
No	Code	Description
9	M2M	M.2 Slot, 2280 M-Key
10	SPK_OUT	Speaker out connector
11	ME	ME Enable jumper
12	CPU_FAN	CPU Fan connector
13	HDMI2_3	HDMI connector
14	COM1	Serial port connector (RS-232)
15	HP	Combo Audio Jack (Headphone & Headset)
16	USB31_2	USB 3.2 Gen 2x1 port x 2
17	PWR_BUT	Power button
18	DC_IN1	Screw type DC Jack
19	USB31_1	USB 3.2 Gen 2x1 port x 2
20	HDMI12_21	HDMI connector x 2
21	LAN1 LAN2	LAN Connector x 2

2.2.1 PWR_BT (Power Button header)

1



Power Button header



Connector PN

50238-01041-001

Vendor

ACES

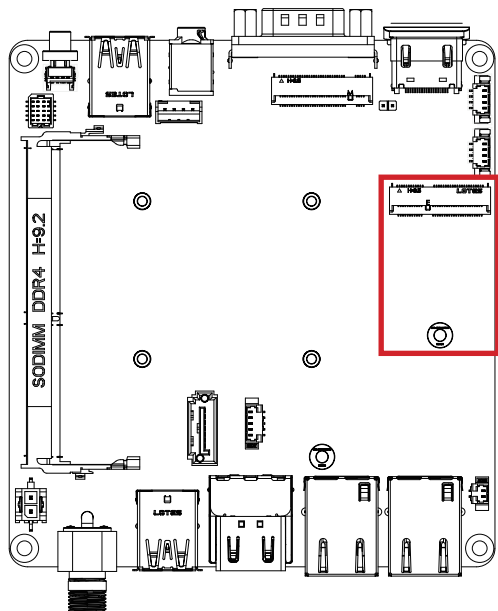
Connector type

2x5pin header, pitch 1.0mm

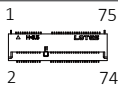
Pin No.	Definition
1	PWRBTSW
2	GND
3	5Vdual
4	MPD-
5	NC
6	HD-
7	NC
8	NC
9	HD+
10	NC

2.2.2 M2E (M.2 Slot, 2230 E-Key)

2



M.2 E Key Connector



Pin No.	Definition	Pin No.	Definition
1	GND	2	3.3V
3	D6p	4	3.3V
5	D6n	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		

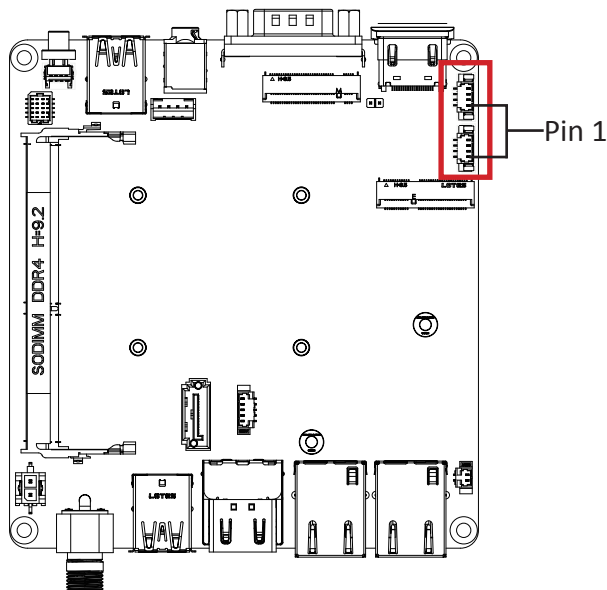
Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE TX7p	34	NC
37	PCIE TX7n	36	NC

39	GND	38	NC
41	PCIE RX7p	40	NC
43	PCIE RX7n	42	NC
45	GND	44	NC
47	PCIE Clock Dp	46	NC
49	PCIE Clock Dn	48	NC
51	GND	50	SUSCLK
53	PCIE Clock Request	52	PLTRST_BT
55	PCIE Wakeup	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

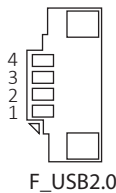
Connector PN	Vendor
APCI0095-P002A	LOTES
80152-8521	BELLWETHER

2.2.3 F_USB2_1, F_USB2_2 (USB 2.0 header)

3



USB 2.0 header

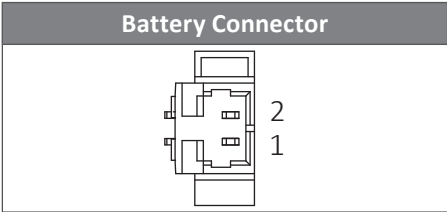
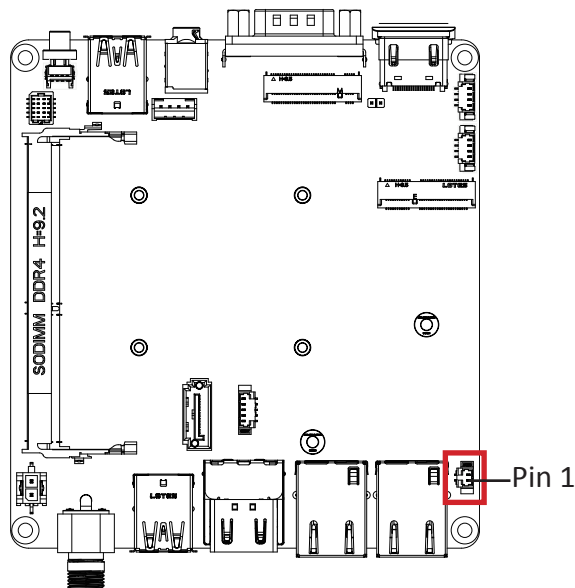


Pin No.	Definition
1	5V
2	D1n
3	D1p
4	GND

Connector PN	Vendor
A1250WV-S-04PNLBT1T00L	JOINT-TECH
50273-0047N-001	ACES
Connector type	
1x4pin header, pitch 1.25mm	

2.2.4 BATTERY (Battery connector)

4

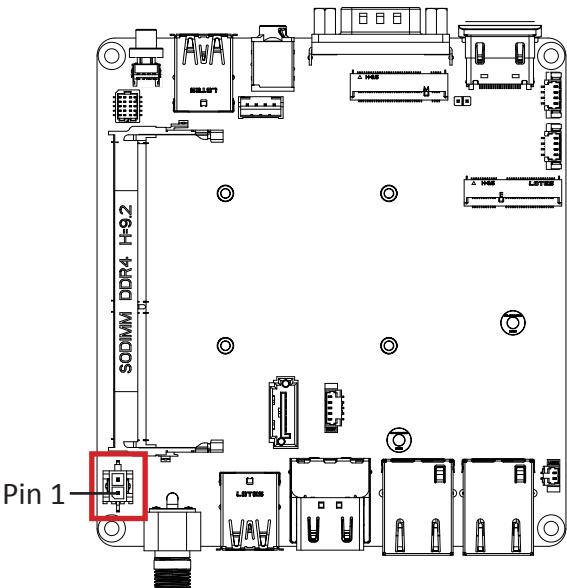


Pin No.	Definition
1	3V
2	GND

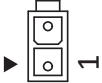
Connector type	
1x2pin header, pitch 1.25mm	

2.2.5 DC_IN2 (DC IN Connector)

5



ATX_IN Connector

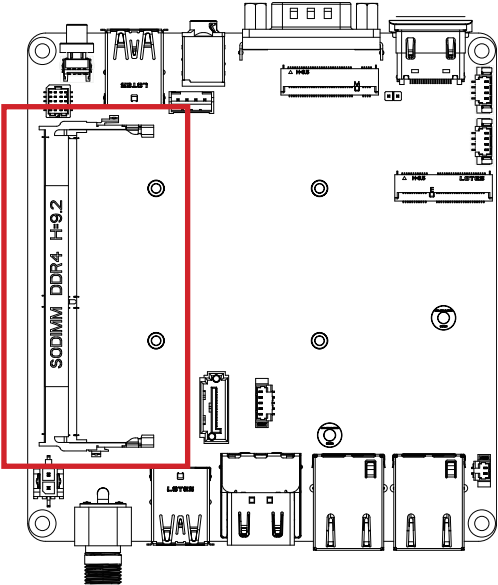


Connector PN	Vendor
99-01740-B004-A	TCONN
Connector type	
1x2pin header, pitch 3.0mm	

Pin No.	Definition
1	GND
2	DC IN

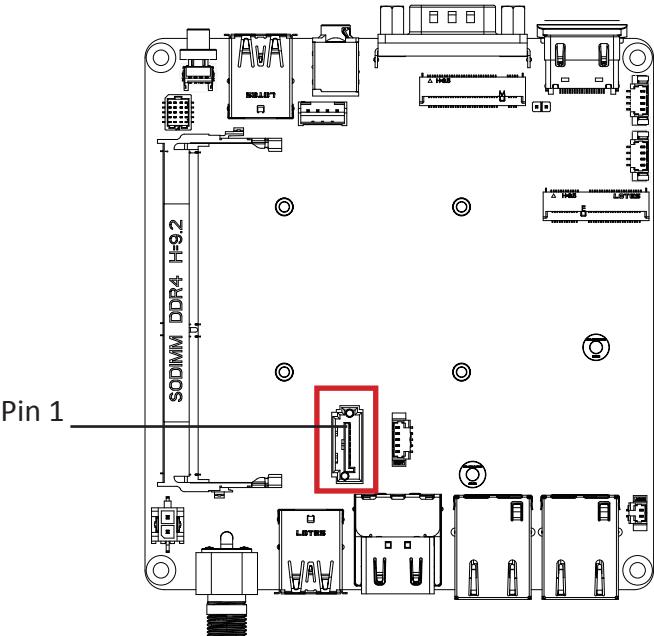
2.2.6 SODIMM1 (DDR4 SO-DIMM Slot)

6



2.2.7 SATA (SATA 6Gb/s connector)

7



SATA 6 Gb/s connector

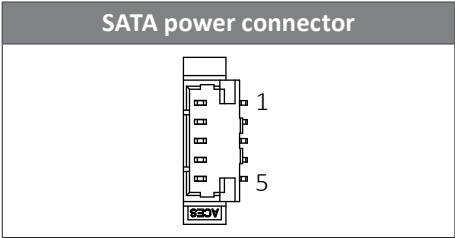
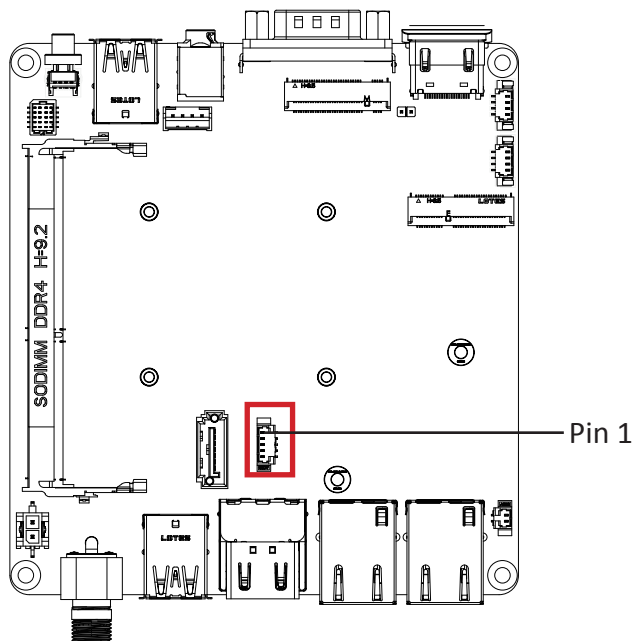
1
7

Connector PN	Vendor
WATF-07DBLBA1UW	WINWIN

Pin No.	Definition
1	GND
2	TXp
3	TXn
4	GND
5	RXn
6	RXp
7	GND

2.2.8 SATA_PWR (SATA power connector)

8

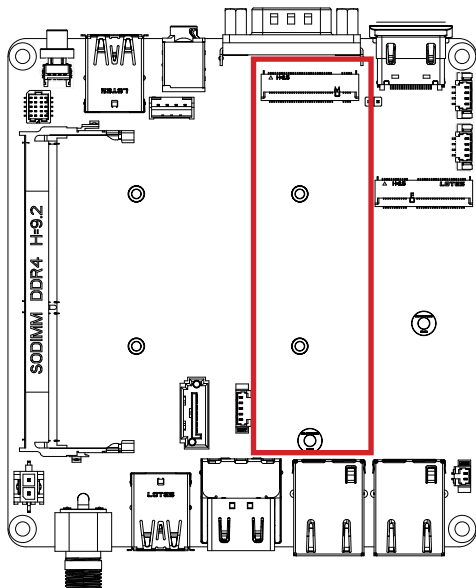


Connector PN	Vendor
85205-0570N	ACES
Connector type	
1x5pin header, pitch 1.25mm	

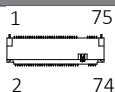
Pin No.	Definition
1	5V
2	5V
3	3.3V
4	GND
5	GND

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

9



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	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
37	NC	38	NC

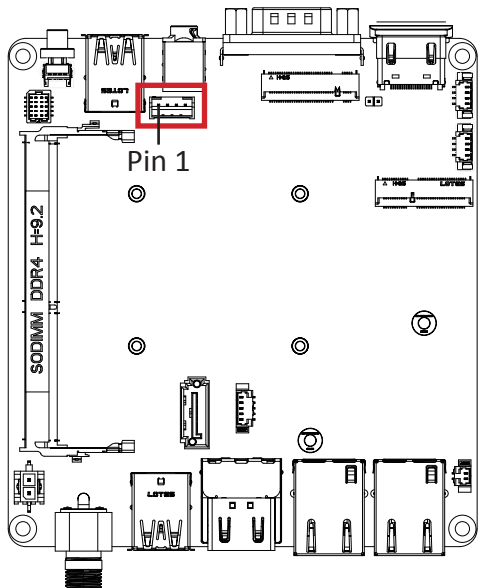
Pin No.	Definition	Pin No.	Definition
39	GND	40	SMB_CLK
41	PCIE RXp	42	SMB_DATA
43	PCIE RXn	44	SMB_ALERT
45	GND	46	NC
47	PCIE TXp	48	NC
49	PCIE TXn	50	PLTRST_B2
51	GND	52	PCIE Clock Request
53	PCIE Clock Dn	54	PCIE Wake up
55	PCIE Clock Dp	56	NC
57	GND	58	NC

Pin No.	Definition	Pin No.	Definition
67	NC	68	SUS_CLK
69	M2 Detect	70	3.3V
71	GND	72	3.3V
73	GND	74	3.3V
75	GND		

Connector PN	Vendor
80159-8521	BELLWETHER
2E0BC21-S85BM-7H	FOXCONN
APCI0096-P002A	LOTES

2.2.10 SPK_OUT (speaker out connector)

10



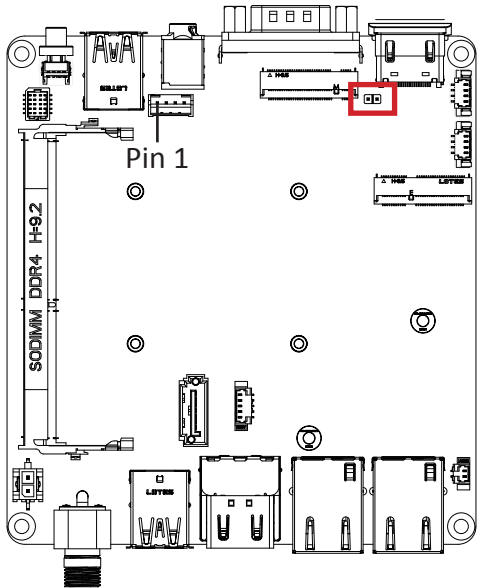
Audio Amplifier Connector	
1 4	

Pin No.	Definition
1	Speaker Out L+
2	Speaker Out L-
3	Speaker Out R-
4	Speaker Out R+

Connector PN	Vendor
A2001WV-04P146	JOINT-TECH
Connector type	
1x4pin header, pitch 2.0mm	

2.2.11 ME (ME Enable jumper)

11



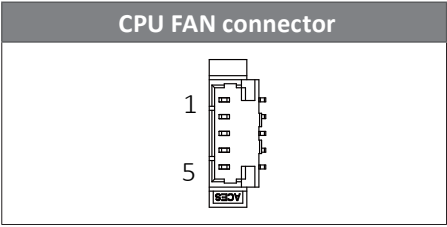
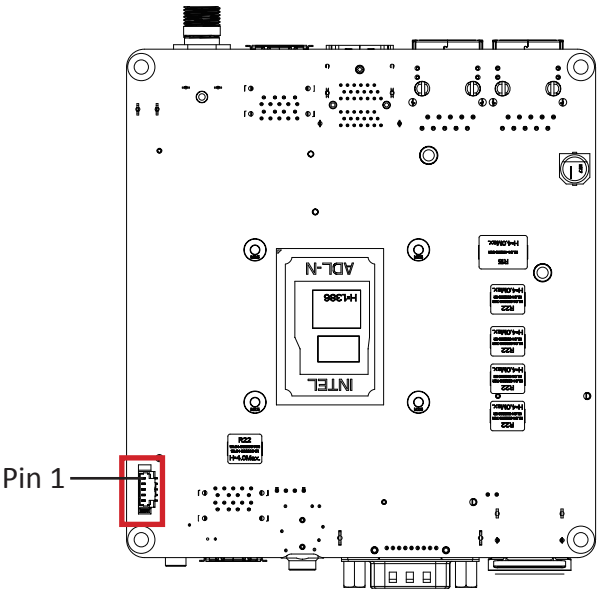
ME Enable Connector	

ME Disable jumper	
	Enable (Default setting)
	Disable

Connector PN	Vendor
220-96-02GBK1	PINREX
Connector type	
1x2pin header, pitch 2.0mm	

2.2.12 CPU FAN (CPU Fan connector)

12

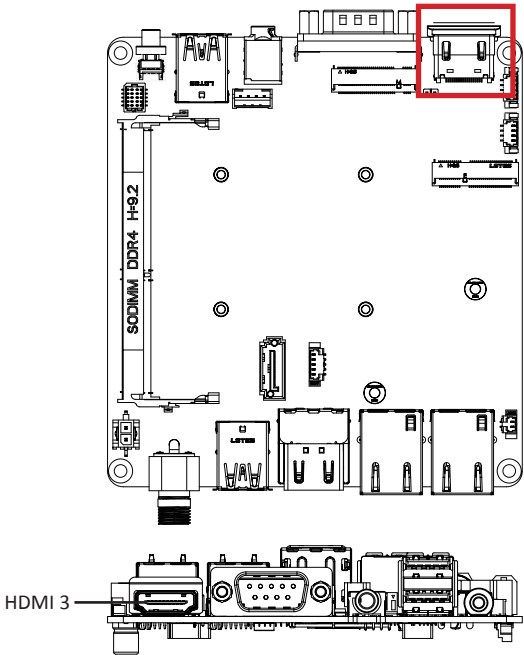


Pin No.	Definition
1	GND
2	VCC
3	CPUFANIN
4	FAN1_PWM
5	NC

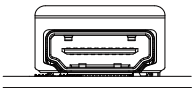
Connector PN	Vendor
85205-0570N	ACES
Connector type	
1x5pin header, pitch 1.25mm	

2.2.13 HDMI2_3 (HDMI connector)

13



HDMI Connector



Connector PN

1165-2CG04-24P

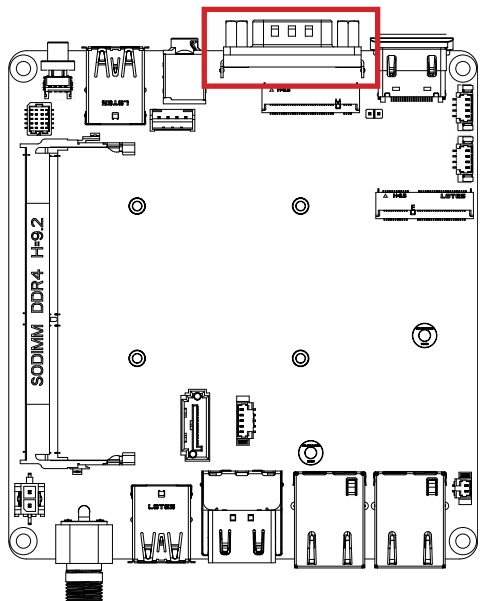
Vendor

TCONN

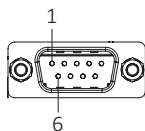
Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	NC
4	TX1p	14	NA
5	GND	15	DDC Clock
6	TX1n	16	DDC Data
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

2.2.14 COM1 (Serial port connector, RS-232)

14



Serial port Connector

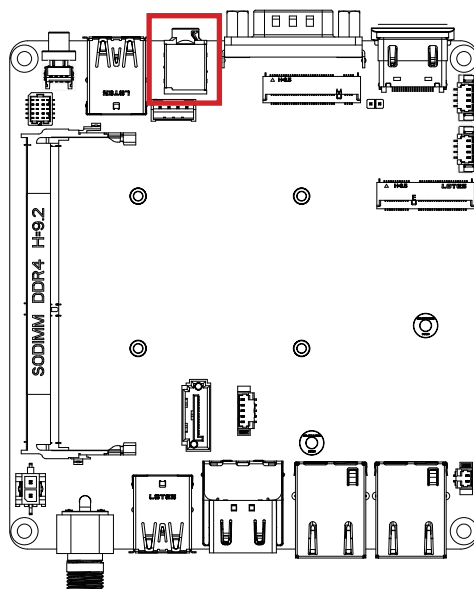


Pin No.	Definition
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

Connector PN	Vendor
SM41D1P1122N33NQ	FENYING

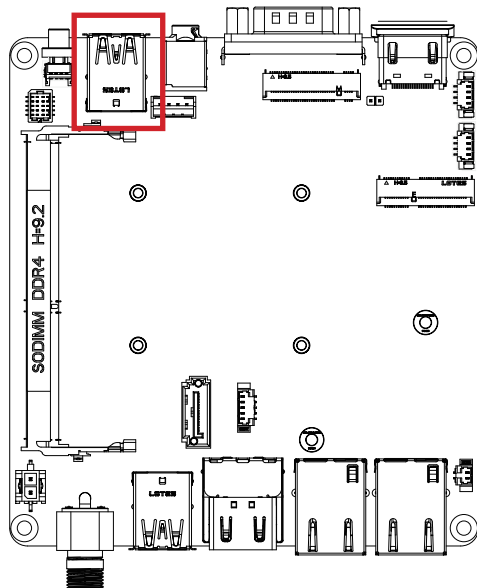
2.2.15 HP (Combo Audio Jack (Headphone & Headset))

15



2.2.16 USB31_2 (USB 3.2 Gen 2x1 connector)

16



USB 3.2 Gen 2x1 connector

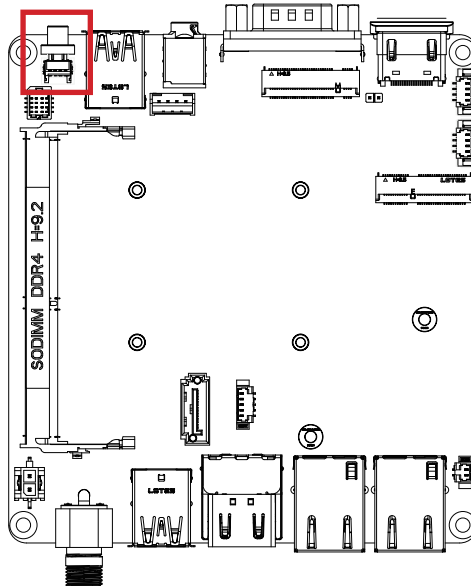


Connector PN	Vendor
18-A5950-6A33-A	TCONN

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

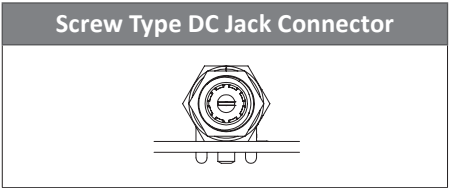
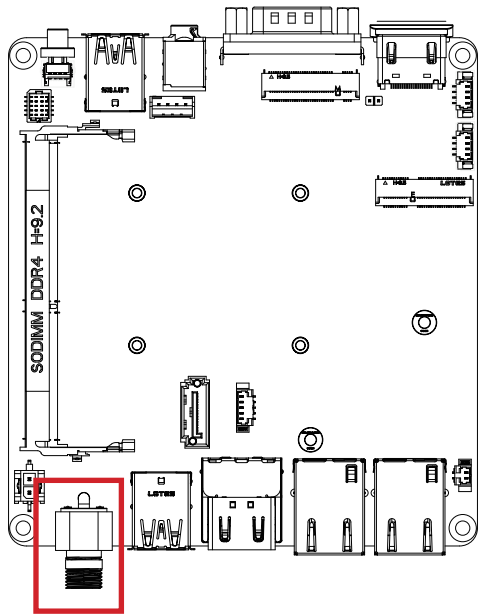
2.2.17 PWR_BUTTON (power button)

17



2.2.18 DC_IN1 (Screw type DC Jack connector)

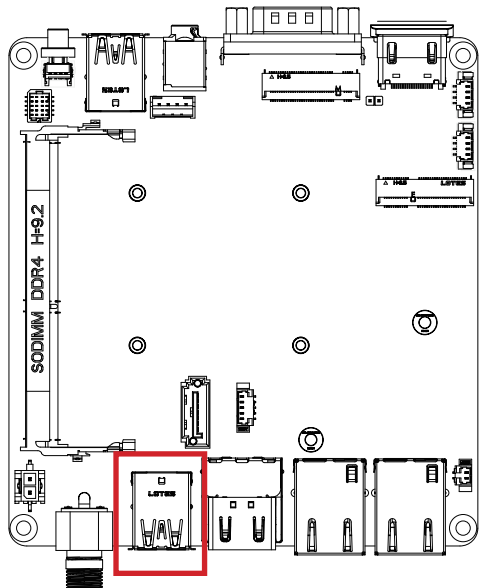
18



Connector PN	Vendor
655-360-000	SHEN-MING

2.2.19 USB31_1 (USB 3.2 Gen 2x1 connector)

19



USB 3.2 Gen 2x1 connector

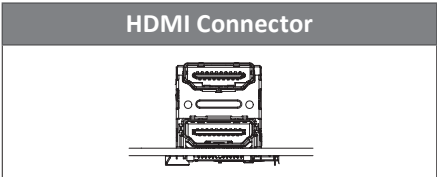
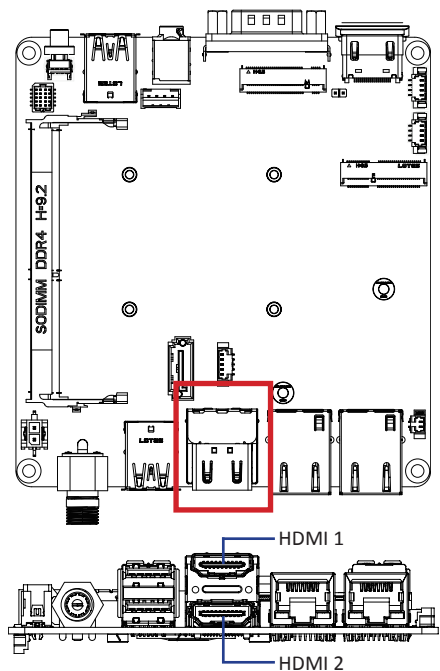
A close-up photograph of the USB 3.2 Gen 2x1 connector, showing its internal pins and the standard USB Type-A housing.

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

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

2.2.20 HDMI12_21 (HDMI connector)

20

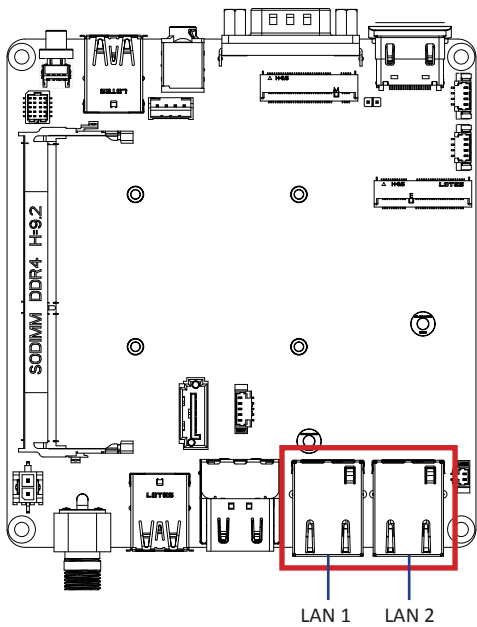


Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	NC
4	TX1p	14	NA
5	GND	15	DDC Clock
6	TX1n	16	DDC Data
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

Connector PN	Vendor
QJ11191-DFB1-4F	FOXCONN

2.2.21 LAN1, LAN2 (LAN connector)

21



LAN Connector

8 1

Link / Activity LED Connection / Speed LED

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

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

Connector PN	Vendor
RT7-GB-0003	UDE

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

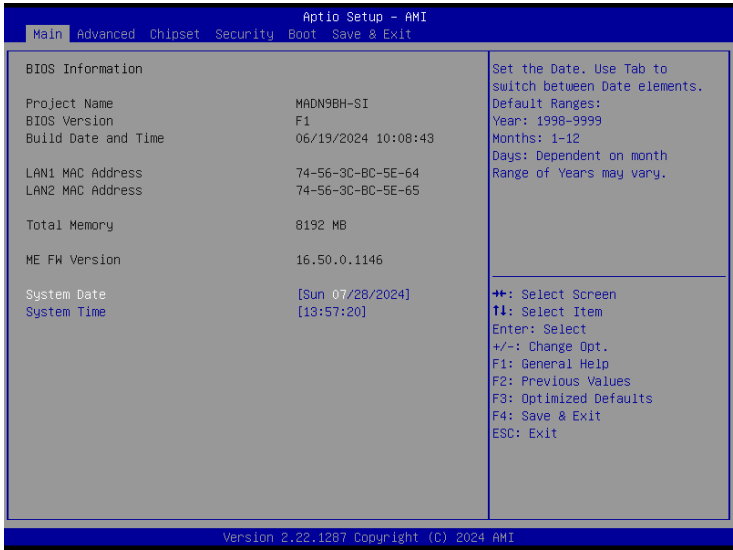
Once the system is power on, press the key as soon as possible to access into BIOS Setup program.

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

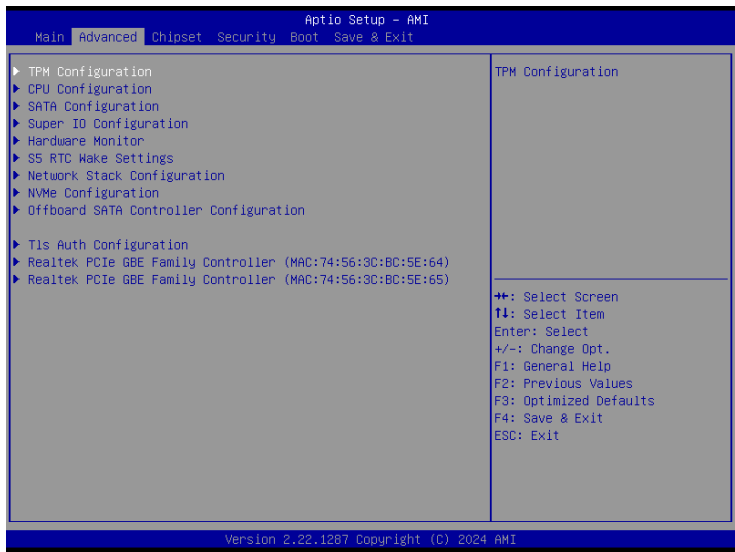
The main menu shows the basic system information.
Use arrow keys to move among the items.



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
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.



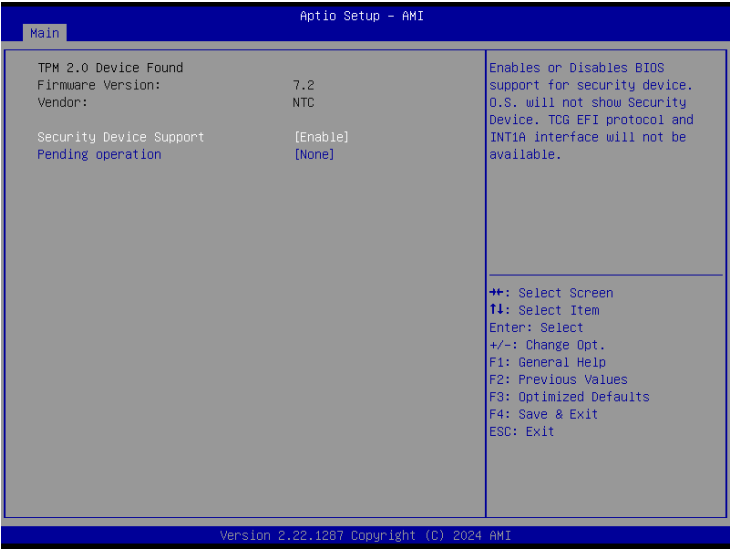
3.3.1 TPM Configuration

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)

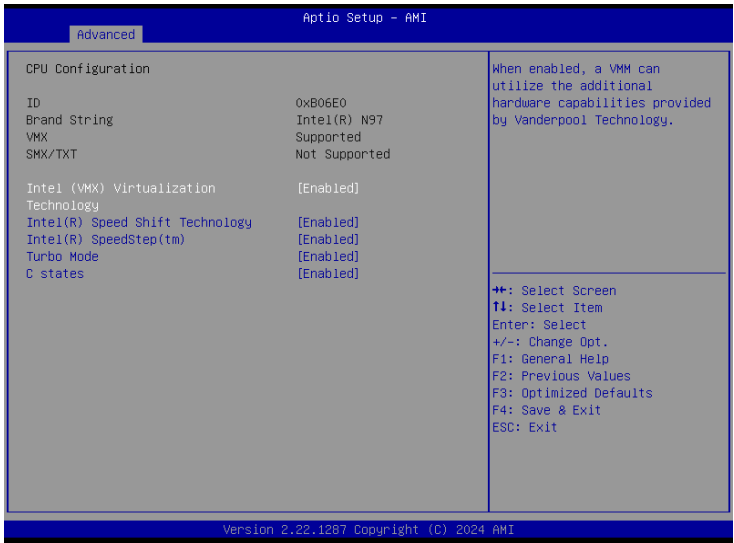
Trusted Computing : Shows TPM information, and TPM module configuration setting.



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.



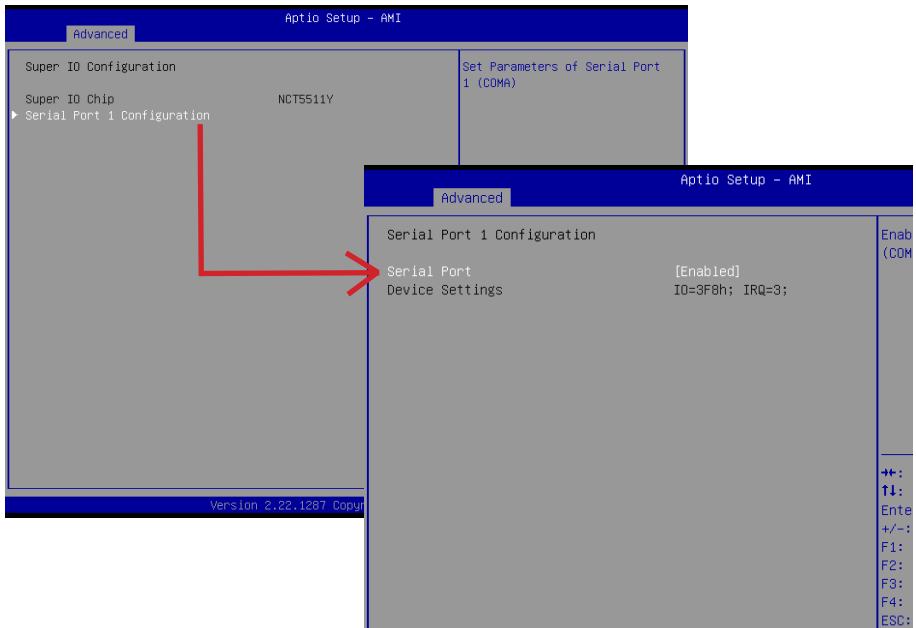
Item	Description
Intel (VMX) Virtualization Technology	Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. Enabled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

3.3.3 SATA Configuration



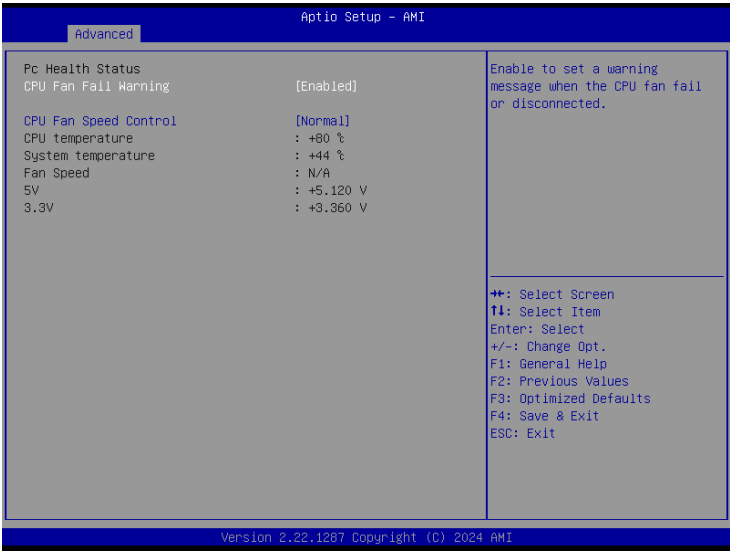
Item	Description
Serial ATA Port	shows 2.5" SATA HDD/SSD information
M.2	shows M.2 SATA interface SSD information

3.3.4 Super IO Configuration



Item	Description
Super IO Chip	Shows Super I/O chip model
Serial Port 1 Configuration	Press [Enter] to configure advanced items : Enable or Disable Serial Port Enabled : Enables Serial Port function (Default setting) Disabled : Disables Serial Port function Device settings : Display the specified Serial Port base I/O address and IRQ

3.3.5 Hardware Monitor



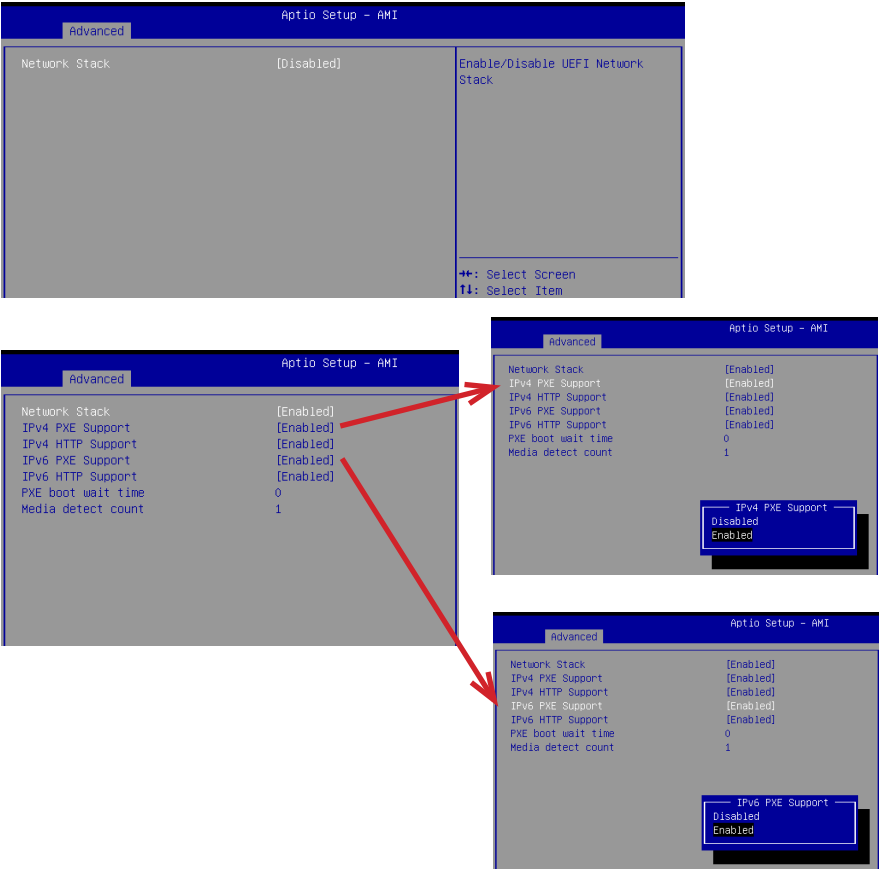
Item	Description
CPU Fan Fail Warning	Enabled : Enables CPU FAN Fail warning alert function (Default setting) Disabled : Disables CPU FAN Fail warning alert function
CPU Fan Speed Control	Normal : Fan speed set by BIOS default (Default setting) Full Speed : Set Fan operates at full speed
CPU Temperature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

3.3.6 S5 RTC Wake Settings



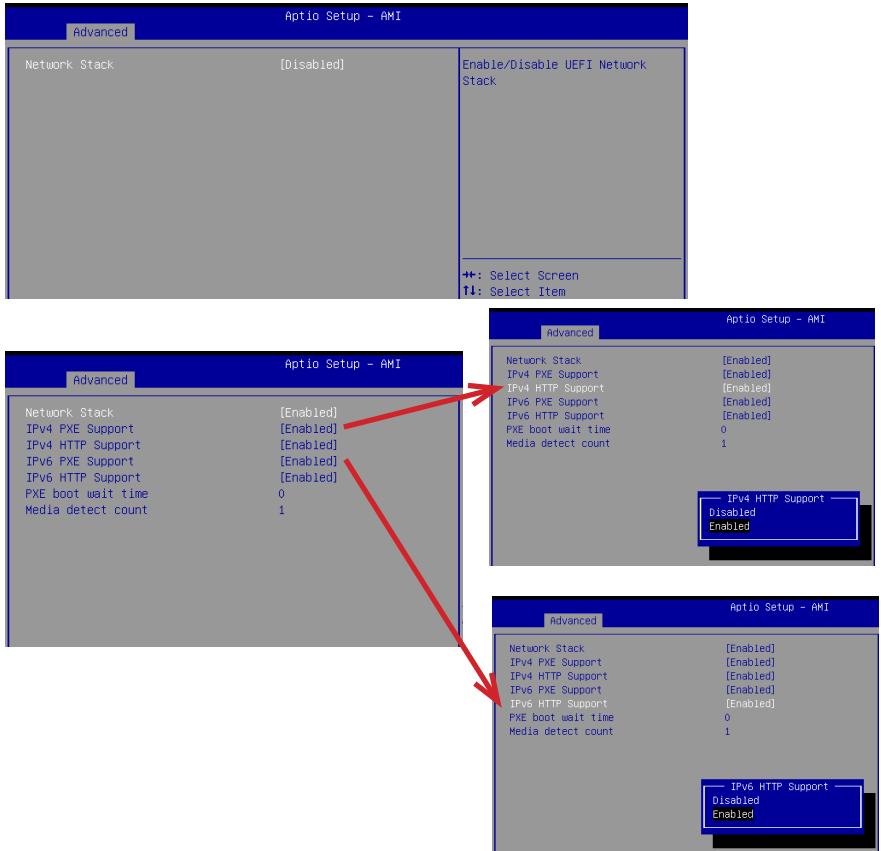
Item	Description
Wake system from S5	Enable or Disable System to wake on a specific time. Disabled : Disables system to wake on a specific time (Default setting) Fixed Time : Enables system to wake on a specific time (Format : hr : min : sec)

3.3.7 Network Stack Configuration-1



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 (Default setting)
IPv6 PXE Support	When Network stack is enabled : Disabled : Disables Ipv6 PXE Support Enabled : Enables Ipv6 PXE Support (Default setting)

3.3.7 Network Stack Configuration-2



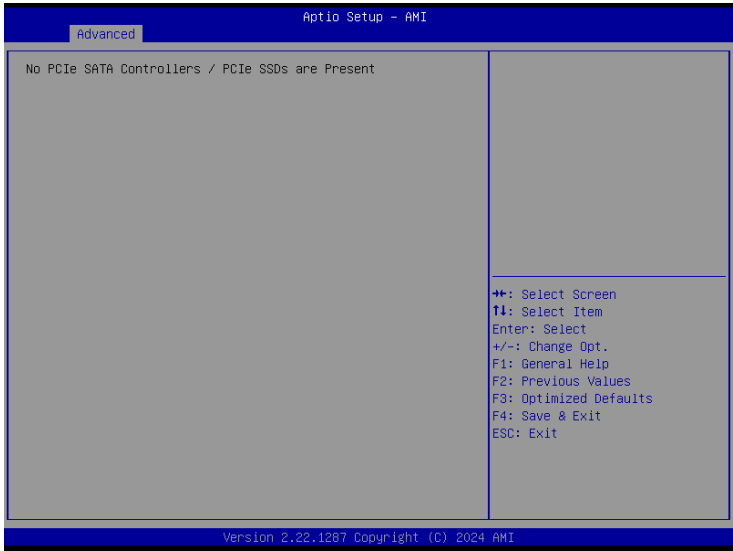
Item	Description
Network Stack	When system is power on, install LAN driver under UEFI mode Disabled : Disables UEFI Network Stack (Default setting) Enabled : Enables UEFI Network Stack
IPv4 HTTP Support	When Network stack is enabled : Disabled : Disables Ipv4 HTTP Support Enabled : Enables Ipv4 HTTP Support (Default setting)
IPv6 HTTP Support	When Network stack is enabled : Disabled : Disables Ipv6 HTTP Support Enabled : Enables Ipv6 HTTP Support (Default setting)

3.3.8 NVMe Configuration

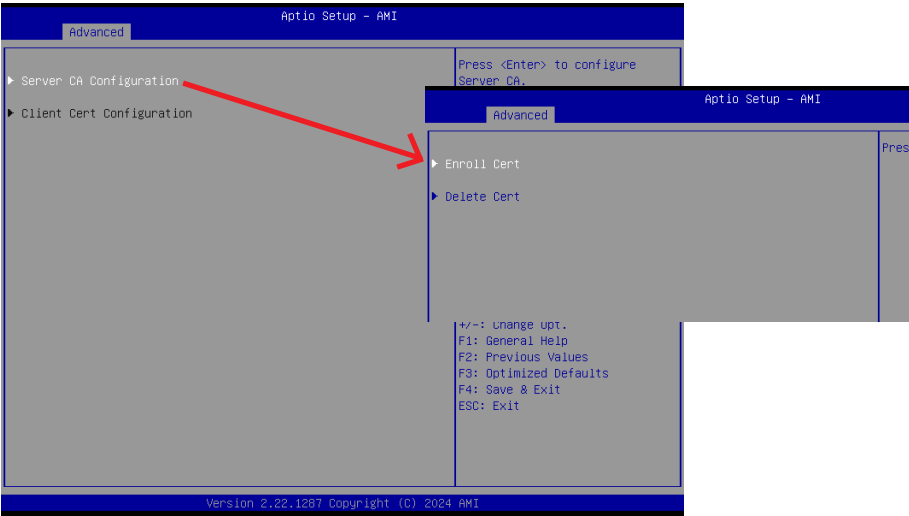
NVMe Configuration shows information when your M.2 NVMe PCIe SSD is installed.



3.3.9 Offboard SATA Controller Configuration



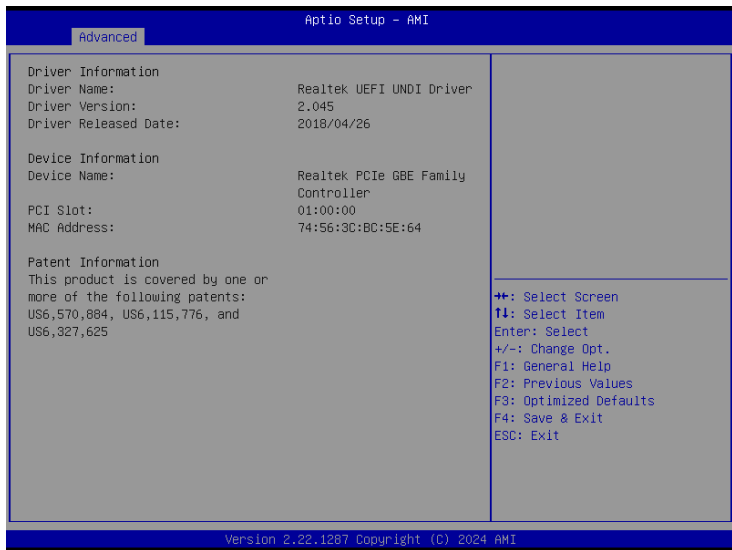
3.3.10 Tls Auth Configuration



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

3.3.11 Realtek PCIe GBE Family Controller (MAC:74:56:3C:BC:5E:64) (MAC address may varied based on different motherboard)

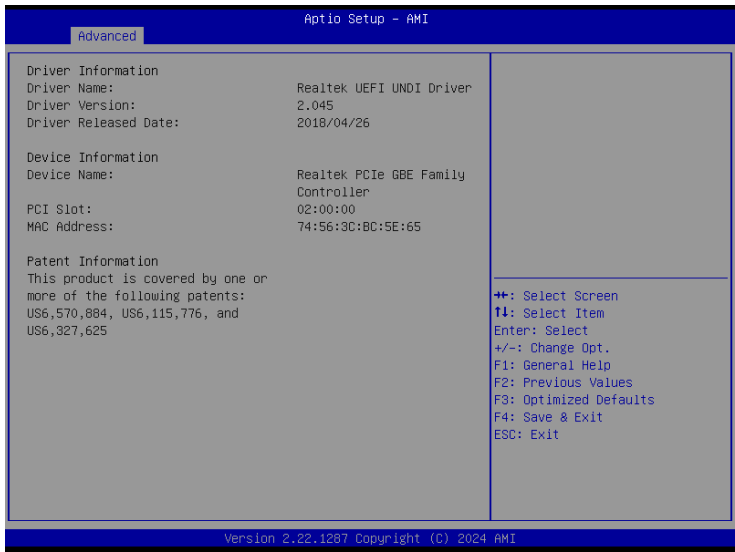
Shows Realtek Ethernet controller information



NOTE : MAC address may varied based on different motherboard

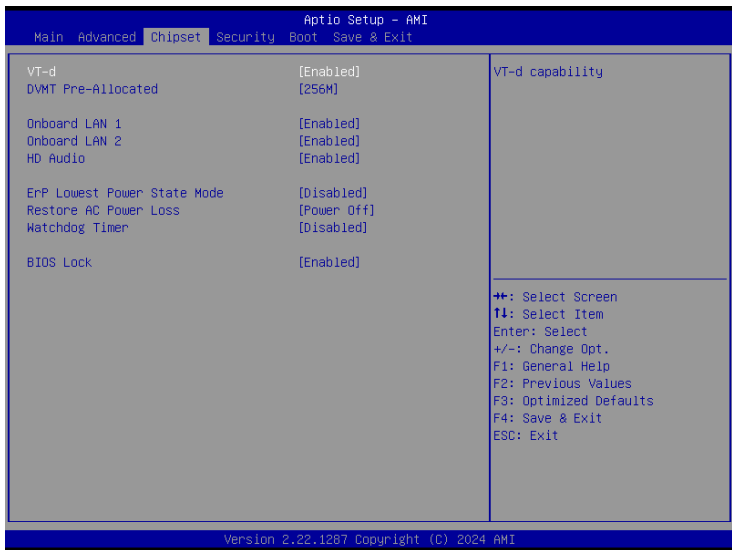
3.3.12 Realtek PCIe GBE Family Controller (MAC:74:56:3C:BC:5E:65) (MAC address may varied based on different motherboard)

Shows Realtek Ethernet controller information



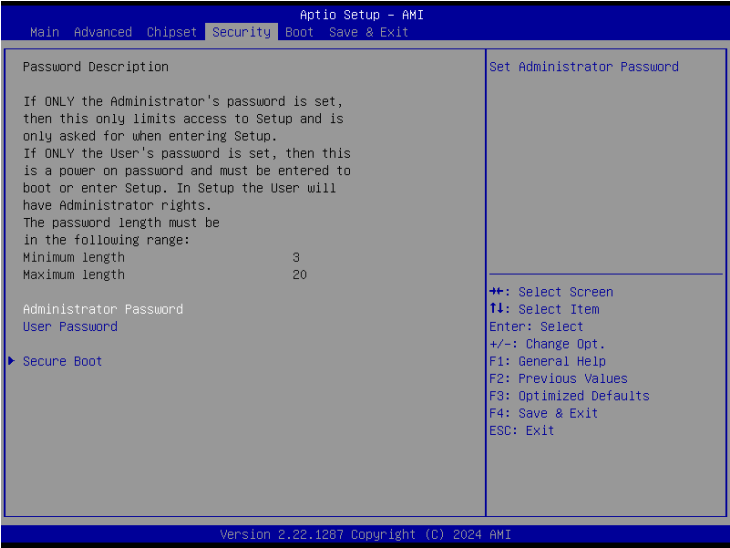
NOTE : MAC address may varied based on different motherboard

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 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 Enables ErP Lowest Power State Mode Enabled : Enables ErP Lowest Power State Mode Disabled : Disables ErP Lowest Power State Mode (Default setting)
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

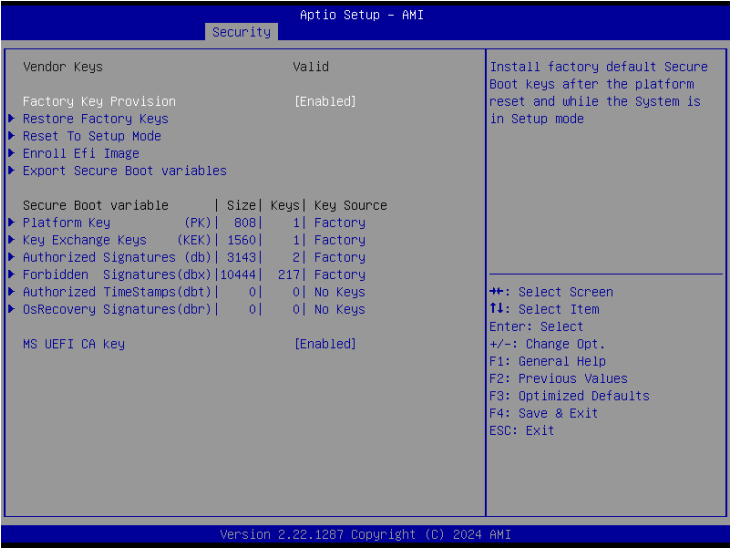
3.5 Security



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
Reset To Setup Mode	Delete all Secure boot key databases from NVRAM
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

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	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)