TA-215AN97A-A1
TA-156AN97A-A1
TA-116AN97A-A1

21.5”, 15.6”, 11.6” True-Flat Multi-Touch panel PC
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 kit	1
Power Cord : Optional (by region)	1
PSU ADP 19V 65W 100-240VAC (25EP1-100651-A3S)	1
Screws For VESA mounting M4x6L	4

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

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.

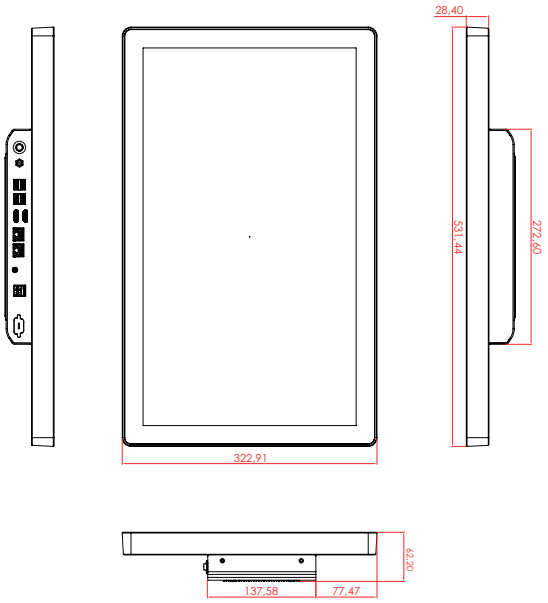
Table Contents

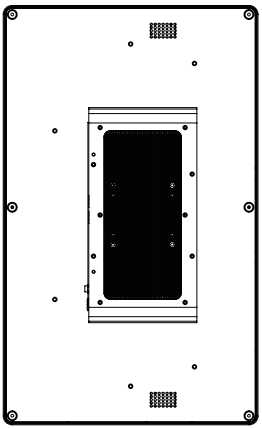
Chapter 1

Chapter 1 - Product Specifications

1.1 Dimension

TA-215AN97A-A1





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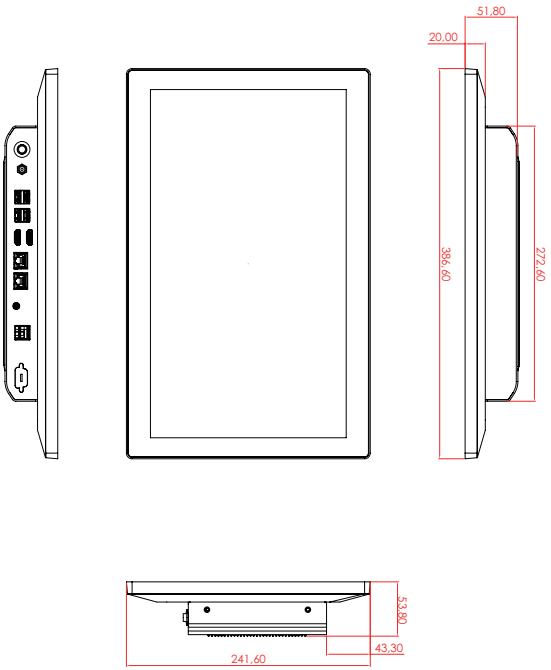

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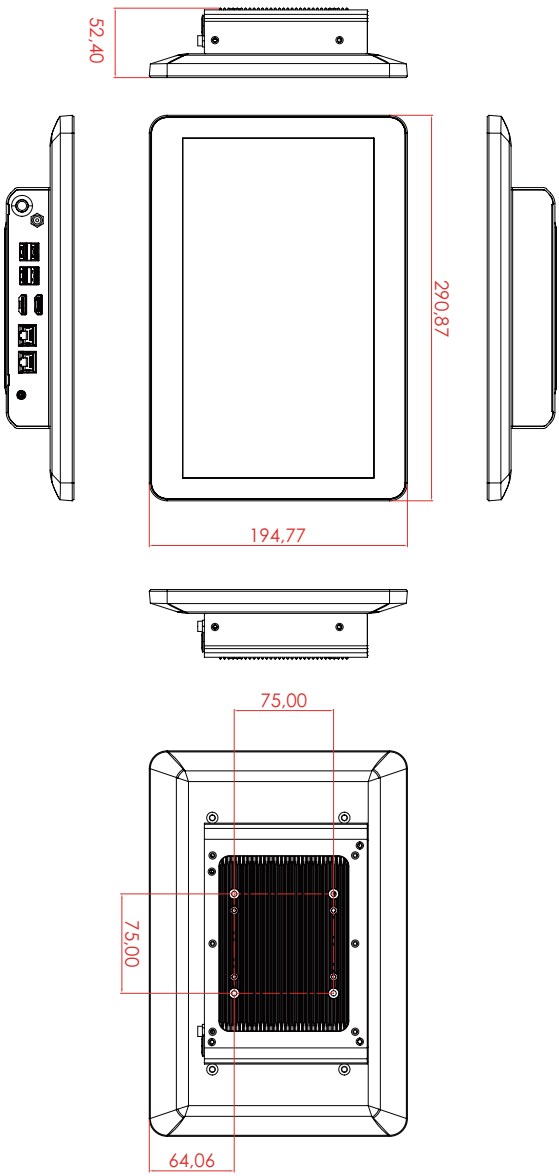


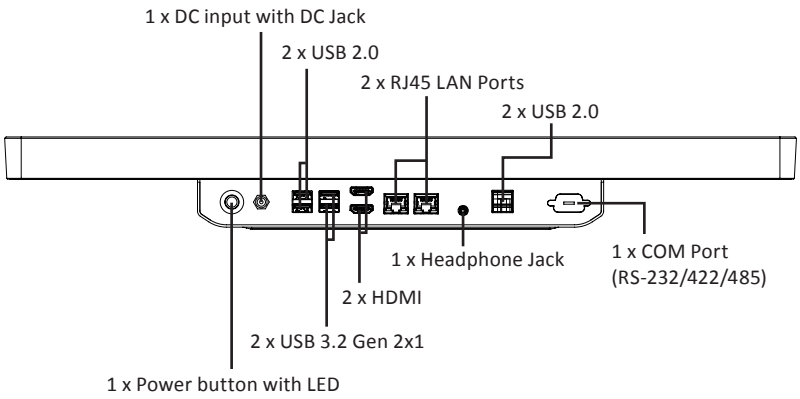
1.2 Specifications

System		TA-215AN97A-A1	TA-156AN97A-A1	TA-116AN97A-A1
LCD	Panel size	21.5”	15.6”	11.6”
	Resolution	1920x1080	1920x1080	1366x768
	Viewing angel	Horizontal : 178 / Vertical : 178	Horizontal : 170 / Vertical : 170	Horizontal : 170 / Vertical : 170
	Brightness	250 Cd/M²	400 Cd/M²	220 cd/m^2
	Color Support	16.7M	262K	262K
	Backlight MTBF	30,000 hrs	30,000 hrs	15,000 hrs
	Contrast Ratio	1000	800	800
Touch screen	Touchscreen Type	Projected Capacitive (PCAP)		
	Surface Hardness	≧ 7H	≧ 7H	6H
	Transparency	86%	86%	85%
Dimension		System Size : 531.4W x 322.9D x 62.2H (mm)	System Size : 386.6W x 241.6D x 53.8H (mm)	System Size : 290.9W x 194.8D x 52.4H (mm)
Weight		6.6 Kg	2.8 Kg	1.7 Kg
CPU		Intel Processor N97 Intel 7, 4 cores, up to 3.60 GHz		
Memory		1 x DDR5 SO-DIMM socket, Max. Capacity 16 GB Support Single Channel DDR5 4800 MHz memory modules		
Ethernet		2 x 2.5GbE LAN Ports (Intel® I225V)		
Graphics support		Integrated Graphics Processor - Intel® UHD Graphics: 2 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz (2 independent display outputs)		
Audio		Realtek® ALC897		
Expansion Slots		1 x 2280 M.2 M-Key (PCIe x2) 1 x 2230 M.2 E-Key 1 x Full-size mini PCIe with SIM slot		

System	TA-215AN97A-A1	TA-156AN97A-A1	TA-116AN97A-A1
TPM	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0		
Rear I/O	2 x USB 3.2 Gen 2x1 4 x USB 2.0 2 x RJ45 LAN Ports 2 x HDMI 1 x COM Port (RS-232/422/485) 1 x Headphone Jack 1 x Power button with LED 1 x DC input with DC Jack	2 x USB 3.2 Gen 2x1 4 x USB 2.0 2 x RJ45 LAN Ports 2 x HDMI 1 x COM Port (RS-232/422/485) 1 x Headphone Jack 1 x Power button with LED 1 x DC input with DC Jack	2 x USB 3.2 Gen 2x1 2 x USB 2.0 2 x RJ45 LAN Ports 2 x HDMI 1 x Headphone Jack 1 x Power button with LED 1 x DC input with DC Jack
Power Input	+12V~36VDC		
Operation Temperature	Operating temperature: 0°C to 40°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 0%-95% (non-condensing) Use wide temperature range memory and storage		
IP Protection	Front bezel meets IP-65		
Mounting	Wall, Stand with VESA 75 x 75		
Order Information	25OL5-212100-M0R (8GB DDR5 RAM, 128GB M.2 SSD)	25OL5-151500-M0R (8GB DDR5 RAM, 128GB M.2 SSD)	25OL5-111100-M0R (8GB DDR5 RAM, 128GB M.2 SSD)

1.3 I/O outlets

TA-215AN97A-A1



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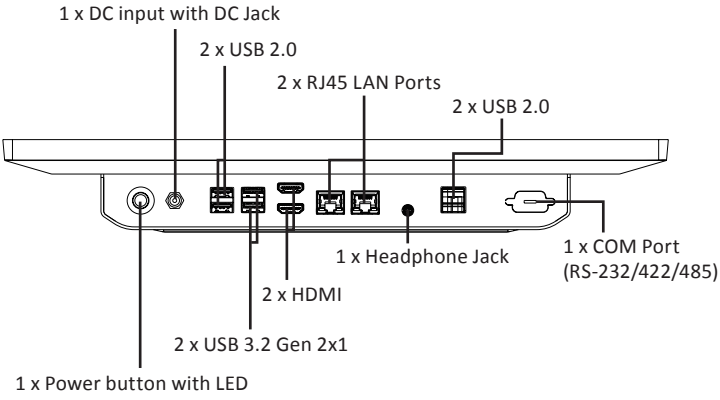

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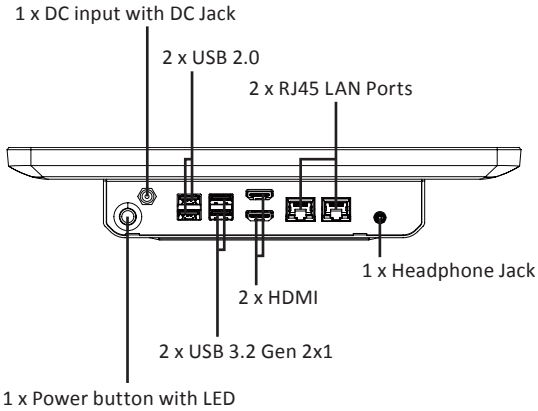
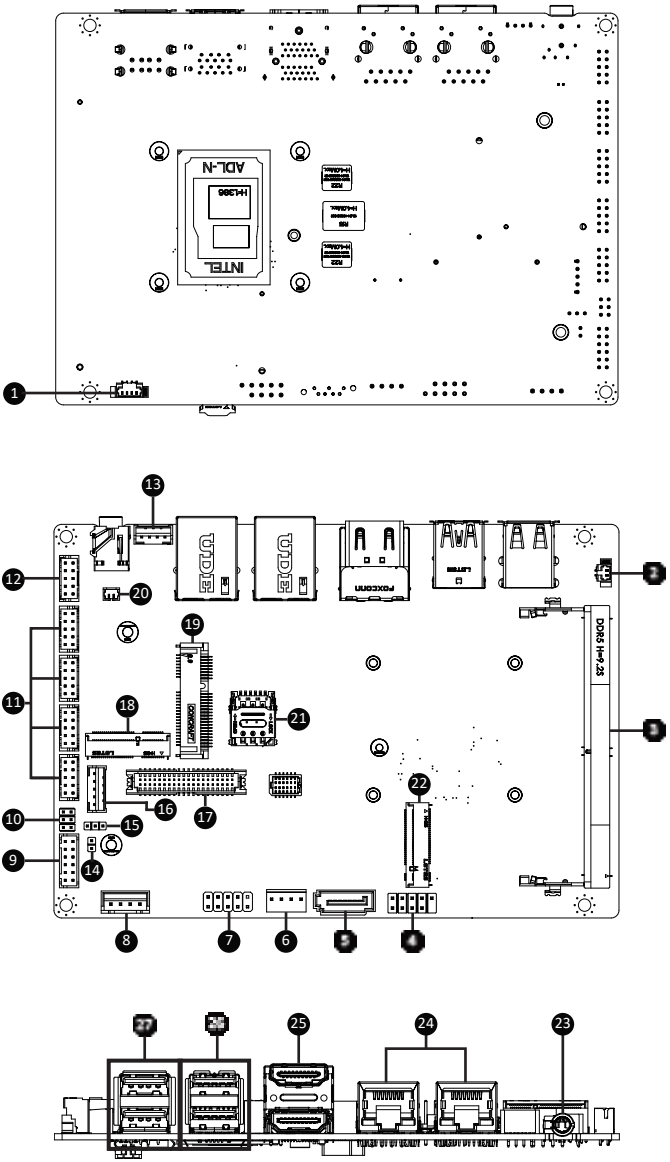


Chapter 2

Chapter 2 – Hardware Information

2.1 Jumpers and Connectors

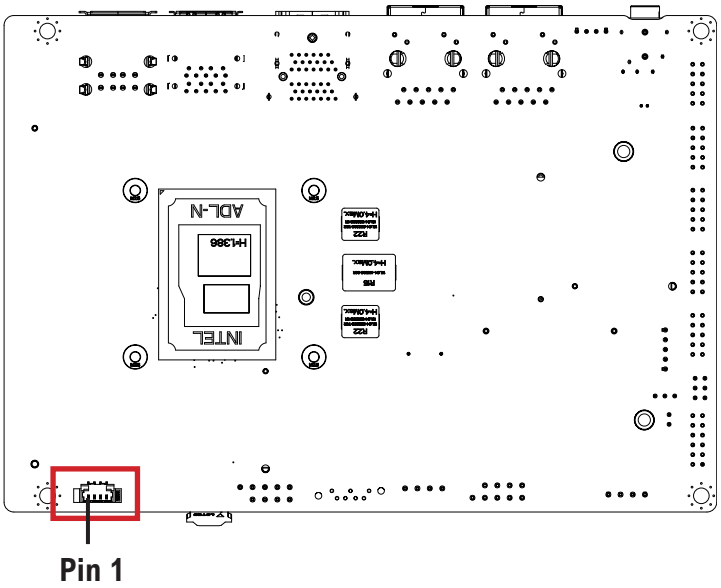


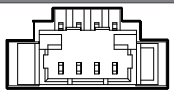
No	Code	Description
1	FAN	FAN connector
2	BATTERY	Battery cable connector
3	SODIMMA	DDR5 SO-DIMM socket
4	FUSB20	USB 2.0 header
5	SATA0	SATA 6Gb/s connector
6	SATAPW	SATA power connector
7	SYS_PANEL	Front panel header
8	DC_IN	DC IN 1x4pin power connector
9	GPIO_CNT	General Purpose input/output header
10	JCOM1	RI# pin RI#/5V/12V Select jumper for COM1 port
11	COM1 COM2 COM3 COM4	Serial port header COM1 : RS-232/422/485 & RI/5V/12V COM2 : RS-232/422/485 COM3, COM4 : RS-232
12	FP_AUDIO	Front panel audio header
13	SPKR	Speaker out connector
14	ME	ME Disable jumper
15	AT_CN	AT/ATX mode select jumper
16	BKL_CN	Backlight Control connector
17	LVDS	LVDS connector
18	M2E	M.2 slot, 2230 E-key
19	MPCIE	Mini-PCIe slot
20	BUZZER	Buzzer header
21	SIM_CARD	3G/4G SIM Slot

No	Code	Description
22	M2M	M.2 slot, 2280 M-key
23	HP	Line out connector
24	LAN1, LAN2	LAN connector
25	HDMI_21	HDMI connector
26	USB32	USB 3.2 Gen 2x1 connector
27	USB2	USB 2.0 connector

2.2.1 FAN (FAN connector)

1



CPU/System FAN

1 2 3 4

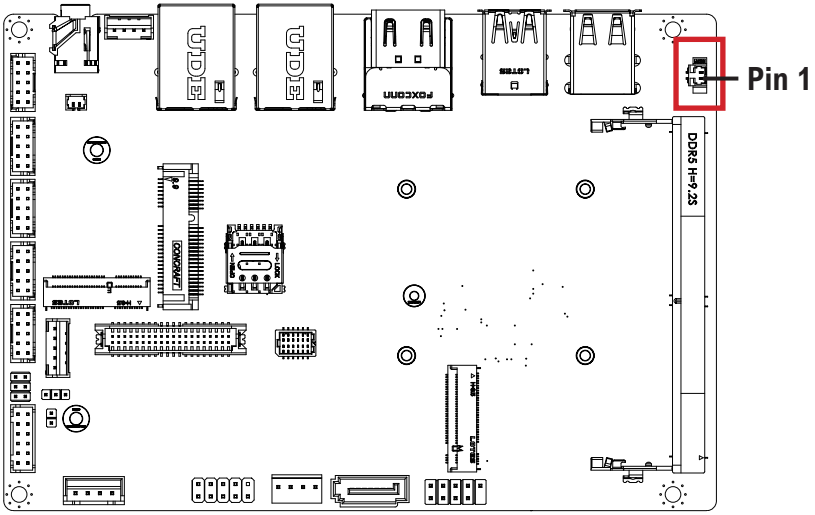
Connector PN	Vendor
85205-0470N	ACES
A1250WV-S-04PC	JOINT-TECH

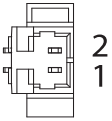
Connector type
1x4pin header, pitch 1.25mm

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

2.2.2 BATTERY

2



Battery Cable Connector
 2 1

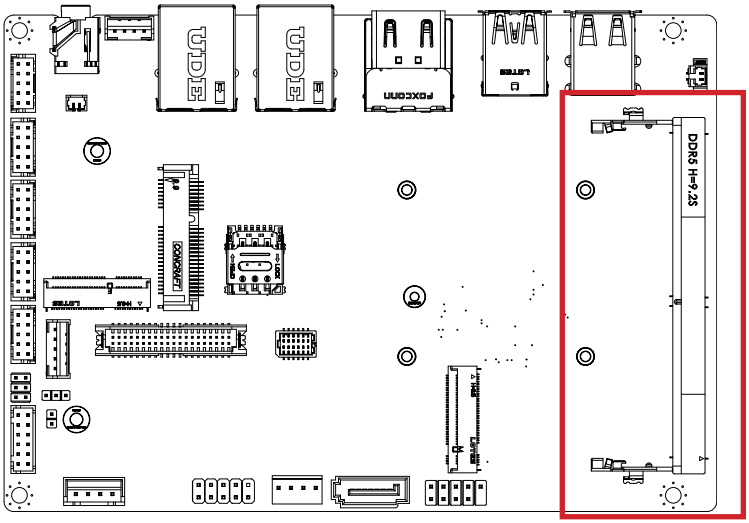
Connector PN	Vendor
85205-0270L	ACES
A1250WV-S-02PC	JOINT-TECH

Connector type
1x2pin header, pitch 1.25mm

Pin No.	Definition
1	3V
2	GND

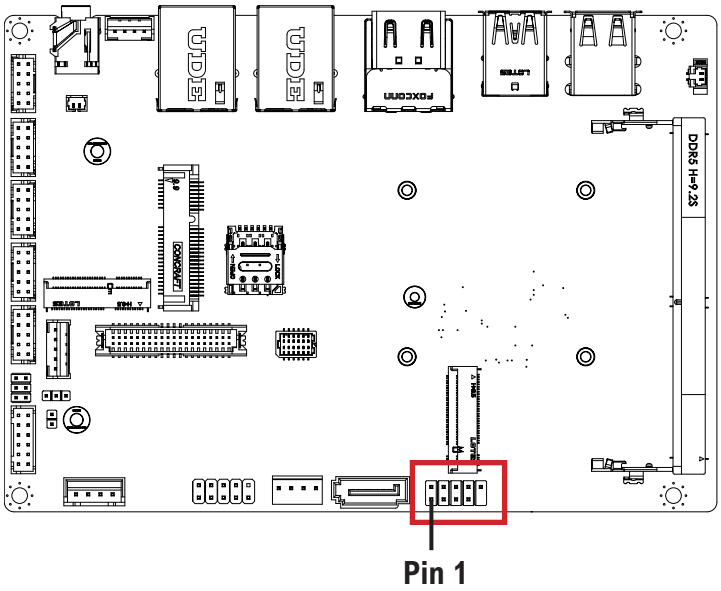
2.2.3 SODIMMA (DDR5 SO-DIMM socket)

3



2.2.4 FUSB20 (USB 2.0 header)

4



USB 2.0 Header
2 10 1 9

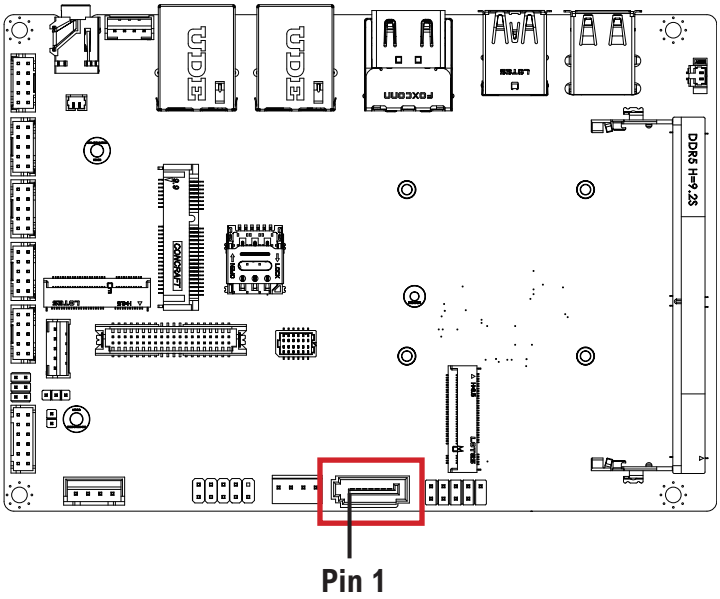
Pin No.	Definition
1	5V
2	5V
3	D2n
4	D1n
5	D2p
6	D1p
7	GND
8	GND
9	No Pin
10	No Connect

Connector PN	Vendor
210-92-05GB04	PINREX
PH10R53BAZ009	HORNGTONG

Connector type
2x5pin header, pitch 2.54mm

2.2.5 SATA0 (SATA 6Gb/s Connector)

5



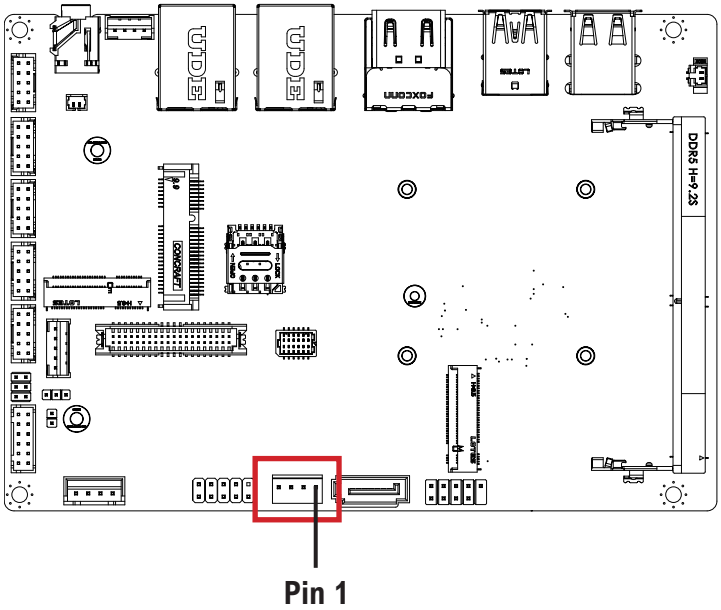
SATA 6Gb/s Connector
1  7

Connector PN	Vendor
WAT3M-07A1G3BU4W	WINWIN
ABA-SAT-054-S15	LOTES

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

2.2.6 SATAPW (SATA power connector)

6



Hard Disk Power Connector
4 ■■■■ 1

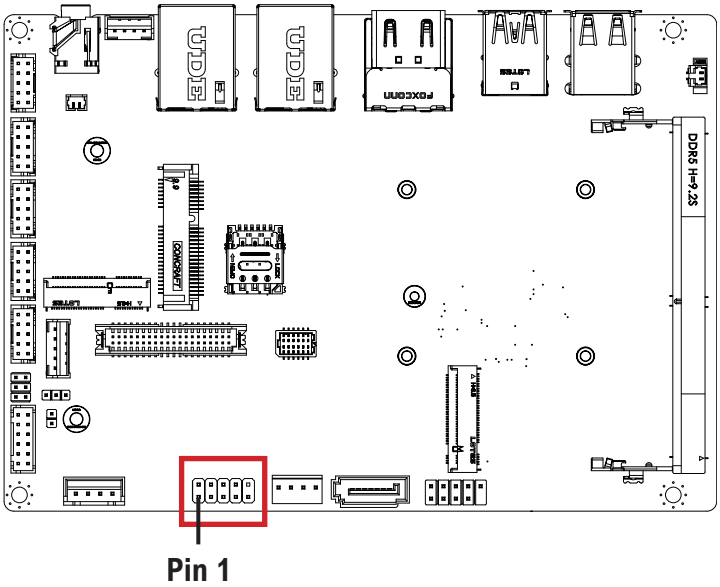
Connector PN	Vendor
743-91-045W00	PINREX

Connector type
1x4pin header, pitch 2.54mm

Pin No.	Definition
1	12V
2	GND
3	GND
4	5V

2.2.7 SYS_PANEL (Front panel header)

7



System Panel Header
2 10 1 9

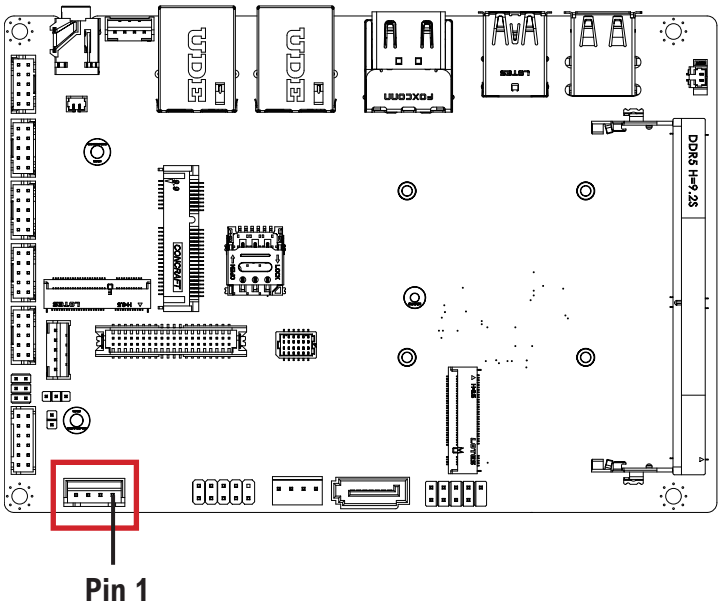
Connector PN	Vendor
210-92-05GW5W	PINREX

Connector type
2x5pin header, pitch 2.54mm

Pin No.	Definition
1	HDD LED_p
2	Power LED_p
3	HDD LED_n
4	Power LED_n
5	GND
6	Power button_p
7	Reset Button
8	Power button_n
9	No Connect
10	No Pin

2.2.8 DC_IN (DC IN 1x4pin power connector)

8



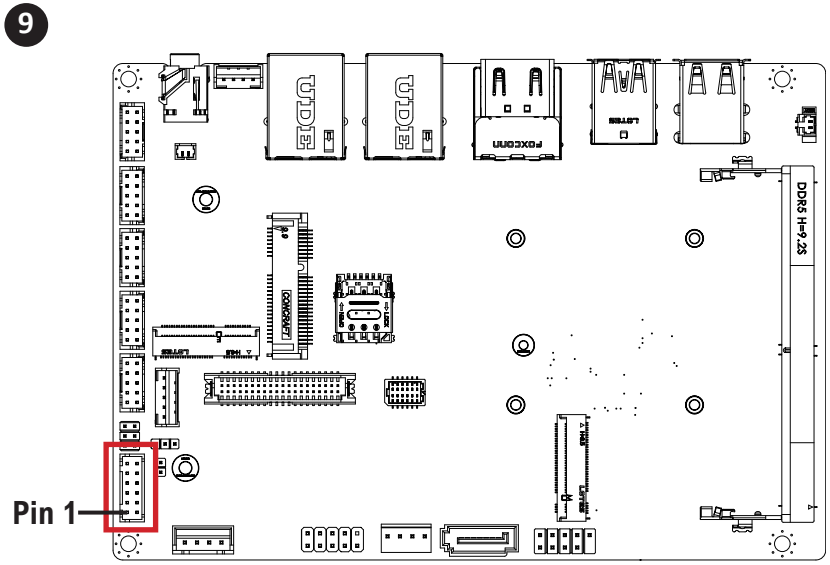
DC in Connector
DC_IN
4 ○○○□ 1

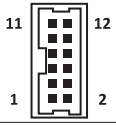
Connector PN	Vendor
753-81-04TW00	PINREX

Connector type
1x4pin header, pitch 2.5mm

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

2.2.9 GPIO_CNT (General Purpose input/output header)



GPIO Connector


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

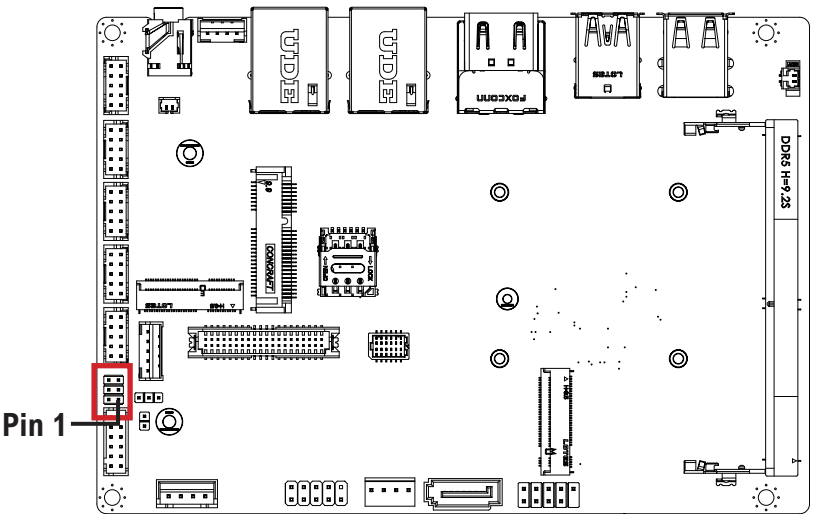
Pin No.	Definition
11	5V
12	GND

Connector PN	Vendor
725-81-12TW00	PINREX

Connector type
2x6pin header, pitch 2.0mm

2.2.10 JCOM1 (RI# pin RI#/5V/12V Select jumper for COM1 Port)

10

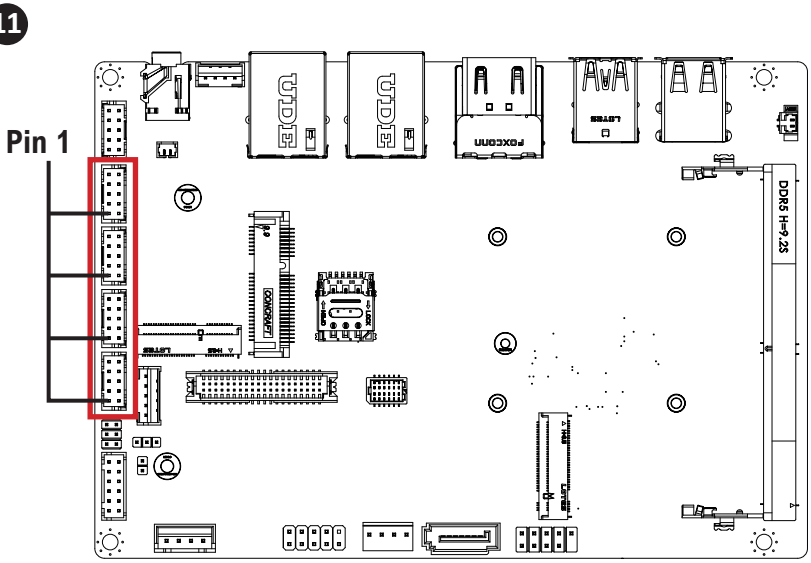


JCOM1 Jumper Select	
6 5 2 1	1-2 Close: 5V (Power COM)
6 5 2 1	3-4 Close: RI (Stand COM)
6 5 2 1	5-6 Close: 12V (Power COM)

Connector PN	Vendor
220-97-03GB01	PINREX
PH06N53BAZ000	HORNGTONG

Connector type
2x3pin header, pitch 2.0mm

2.2.11 COM1, COM2, COM3, COM4 (Serial port header)



Serial Port Cable Connector
9 10 1 2

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/5V/12V	–	–

Connector PN	Vendor
725-81-10TW00	PINREX

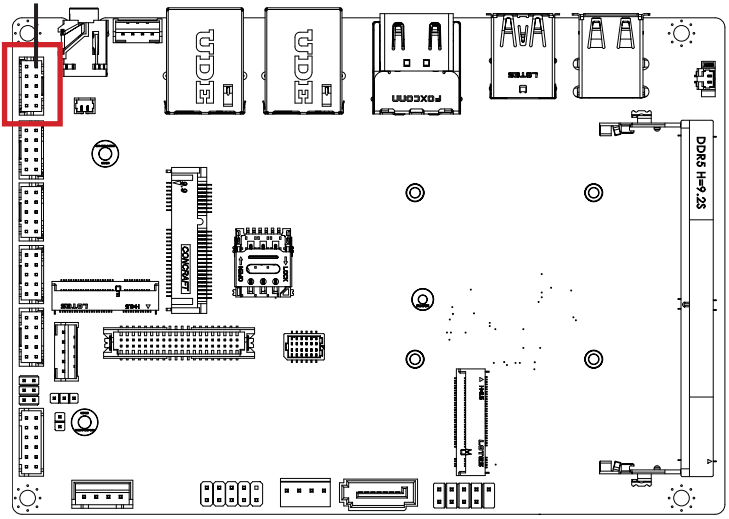
Connector type
2x5pin header, pitch 2.0mm

Note :

COM1 : Support RS-232/422/485 & RI/5V/12V
For RI/5V/12V jumper setting, please see P. 29
COM2 : Support RS-232/422/485
COM3, COM4 : Support RS-232 only

2.2.12 FP_AUDIO (Front panel audio header)

12 Pin 1



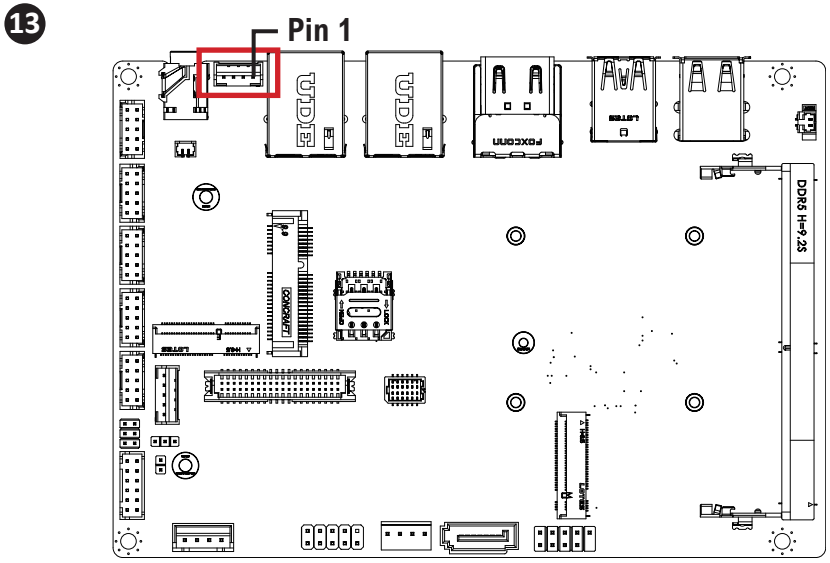
Front panel audio Connector
2 1 10 9

Pin No.	Definition
1	MIC-LEFT
2	GND
3	MIC-RIGHT
4	Detect
5	LINE-RIGHT
6	GND
7	JACKSENCE Detect
8	NC
9	LINE-LEFT
10	GND

Connector PN	Vendor
725-81-10TW00	PINREX

Connector type
2x5pin header, pitch 2.0mm

2.2.13 SPKR (Speaker out connector)



Speaker out connector
4 ▪▪▪▪ 1

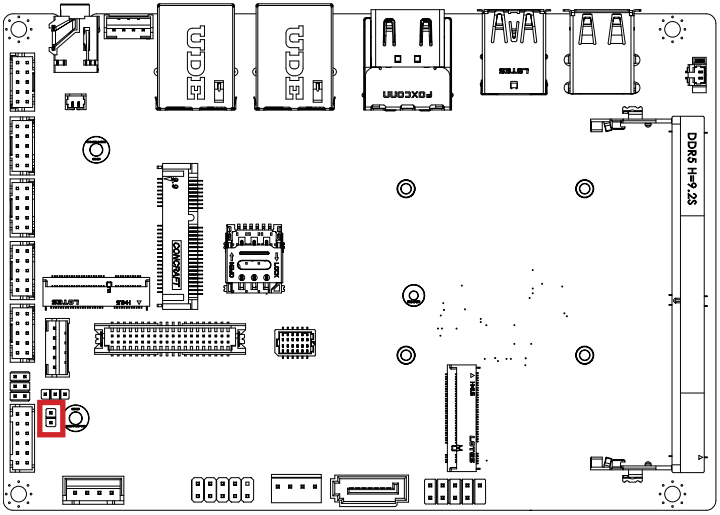
Pin No.	Definition
1	Speaker Out L+
2	Speaker Out L-
3	Speaker Out R-
4	Speaker Out R+

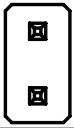
Connector PN	Vendor
A2001WV-04P146	JOINT-TECH

Connector type
1x4pin header, pitch 2.0mm

2.2.14 ME (ME Disable jumper)

14



ME Disable Connector


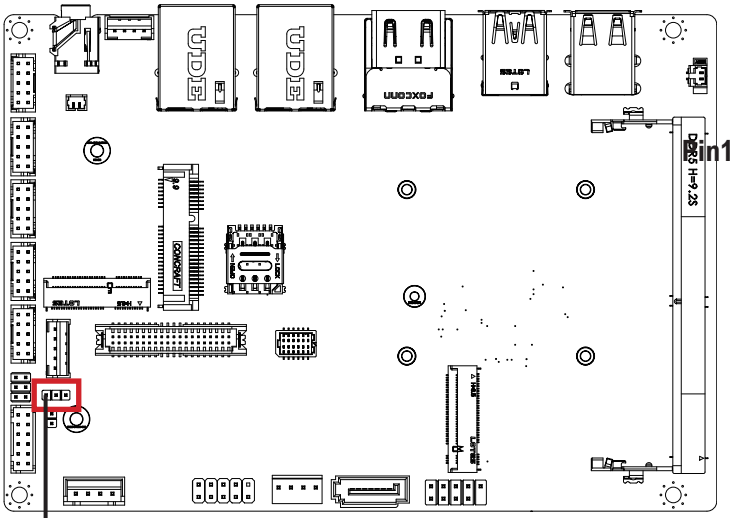
ME Disable jumper	
	Enable (Default setting)
	Disable

Connector PN	Vendor
220-96-02GBK1	PINREX

Connector type
1x2pin header, pitch 2.0mm

2.2.15 AT_CN (AT/ATX mode select jumper)

15



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

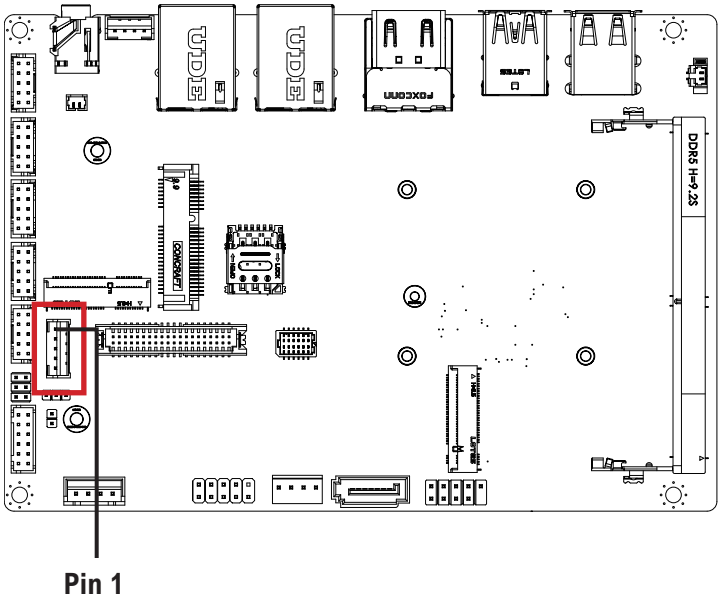
Connector PN	Vendor
220-96-03GB01	PINREX

Connector type
1x3pin header, pitch 2.0mm

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

2.2.16 BKL_CN (Backlight Control connector)

16



Backlight Control connector
1
5

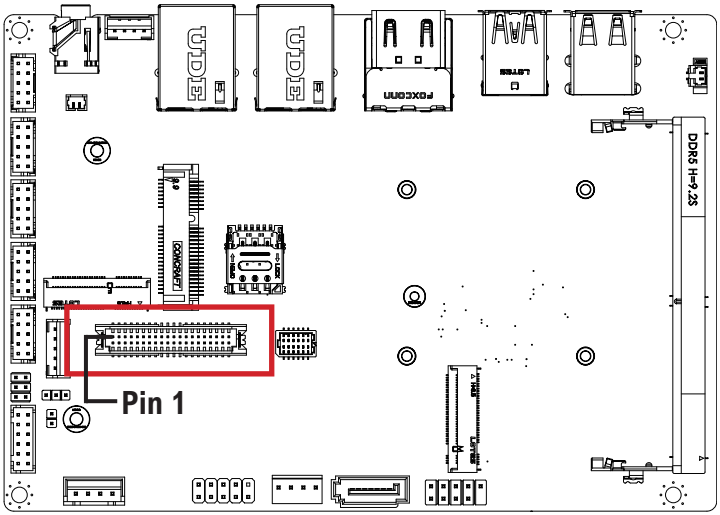
Connector PN	Vendor
721-81-05TW00	PINREX

Connector type
1x5pin header, pitch 2.0mm

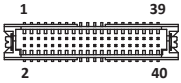
Pin No.	Definition
1	5V (optional 12V)
2	PWM
3	Backlight Enable
4	GND
5	12V

2.2.17 LVDS (LVDS connector)

17



LVDS Connector



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	SPEC0	25	GND
6	SPED0	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-
16	A2+	36	CLK1-

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

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.

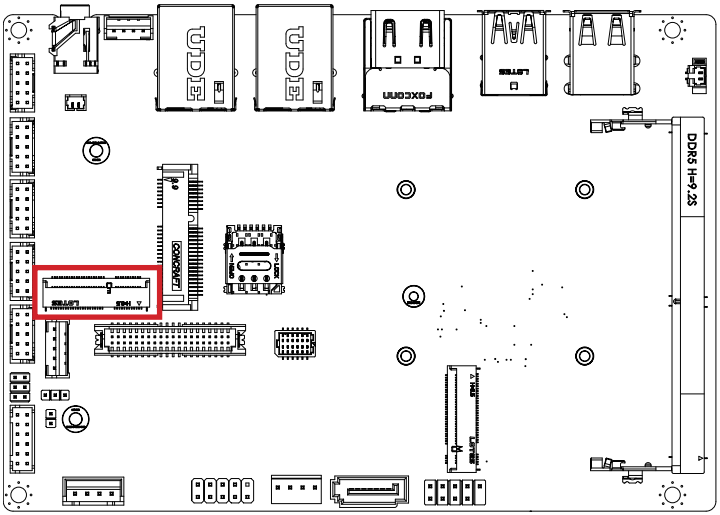
Connector PN	Vendor
712-76-40GWE0	PINREX
A1252WV-SF-2X20PD01	JOINT-TECH

Connector type
2x20pin header, pitch 1.25mm

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

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

18



M.2 E Key Connector	
74 2	
75 1	

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

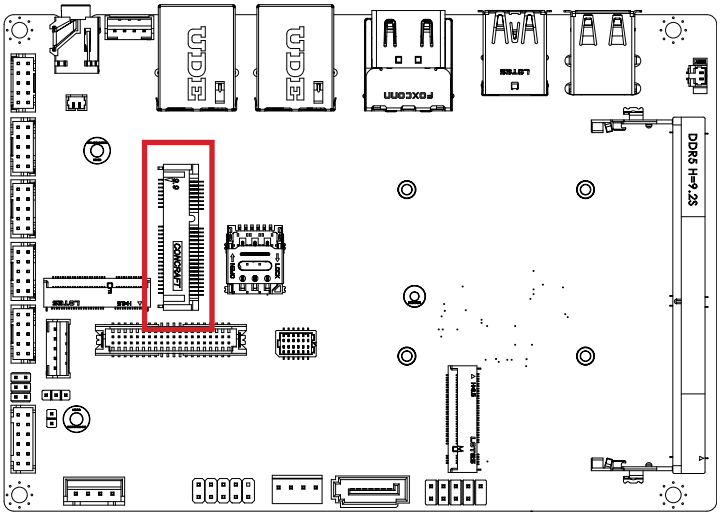
Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE1 TXp	34	NC
37	PCIE1 TXn	36	NC
39	GND	38	NC

41	PCIE1 RXp	40	NC
43	PCIE1 RXn	42	NC
45	GND	44	NC
47	CLK_Dp	46	NC
49	CLK_Dn	48	NC
51	GND	50	SUSCLK
53	CLK_REQ	52	PCIE_RST
55	PCIE_WAKE	54	BT_Disable
57	GND	56	WLAN_ DISABLE
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	PE Reset
69	GND	68	NC
71	NC	70	NC
73	NC	72	3V
75	GND	74	3V

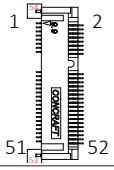
Connector PN	Vendor
APCI0095-P002A	LOTES
80152-8521	BELLWETHER
2E0BC21-S85BE-LH	FOXCONN

2.2.19 MPCIE (Mini PCIe slot)

19



Mini PCIe Connector



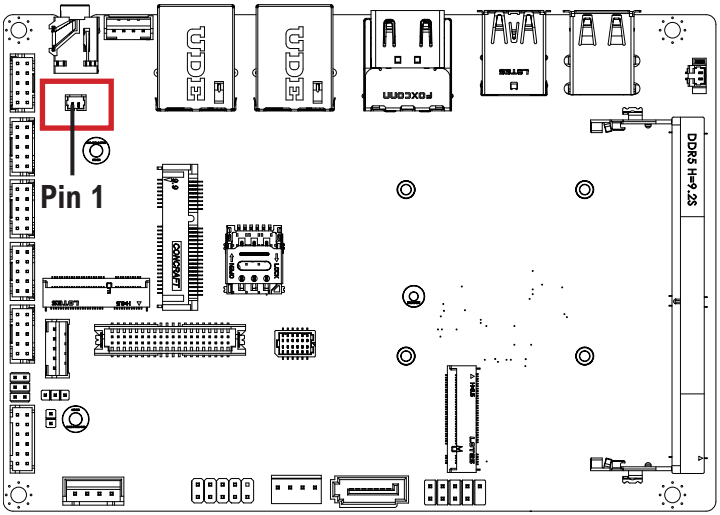
Pin No.	Definition	Pin No.	Definition
1	PCIE WAKE	2	3.3V
3	NC	4	GND
5	NC	6	NC
7	PCIE Clock Request	8	SIM VCC
9	GND	10	SIM DATA
11	PCIE Clock n	12	SIM Clock
13	PCIE Clock p	14	SIM Reset
15	GND	16	VPP
17	NC	18	GND
19	NC	20	WLAN_DISABLE
21	GND	22	Reset

Pin No.	Definition	Pin No.	Definition
23	PCIE RXn	24	3.3V
25	PCIE RXp	26	GND
27	GND	28	NC
29	GND	30	SMB Clock
31	PCIE TXn	32	SMB DATA
33	PCIE TXp	34	GND
35	GND	36	USB Dn
37	GND	38	USB Dp
39	3.3V	40	GND
41	3.3V	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	NC
49	NC	50	GND
51	NC	52	3.3V
53	GND	54	GND

Connector PN	Vendor
AS0B221-S99Q-7H	FOXCONN

2.2.20 BUZZER (Buzzer header)

20



Buzzer header

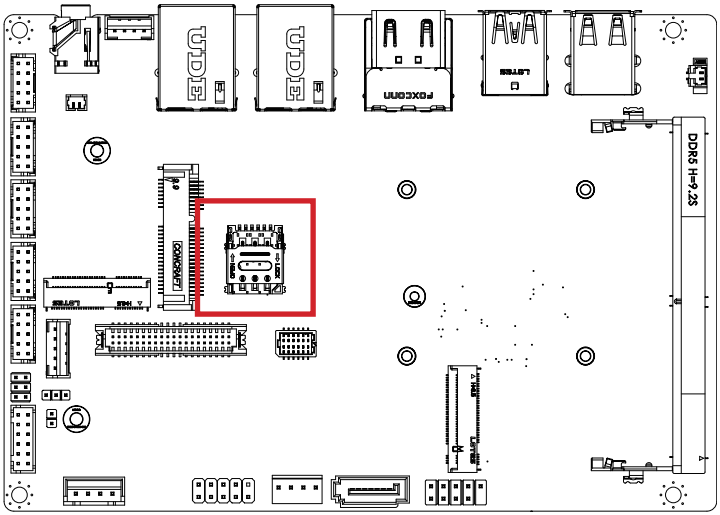

Pin No.	Definition
1	Buzzer
2	5V

Connector PN	Vendor
712-71-02TW01	PINREX
A1250WV-02P	JOINT-TECH

Connector type
1x2pin header, pitch 1.25mm

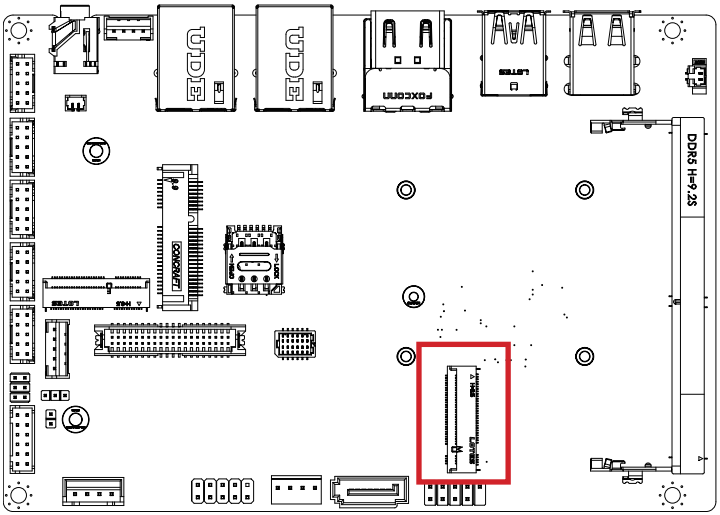
2.2.21 SIM_CARD (3G/4G SIM Slot)

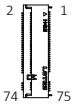
21



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

22



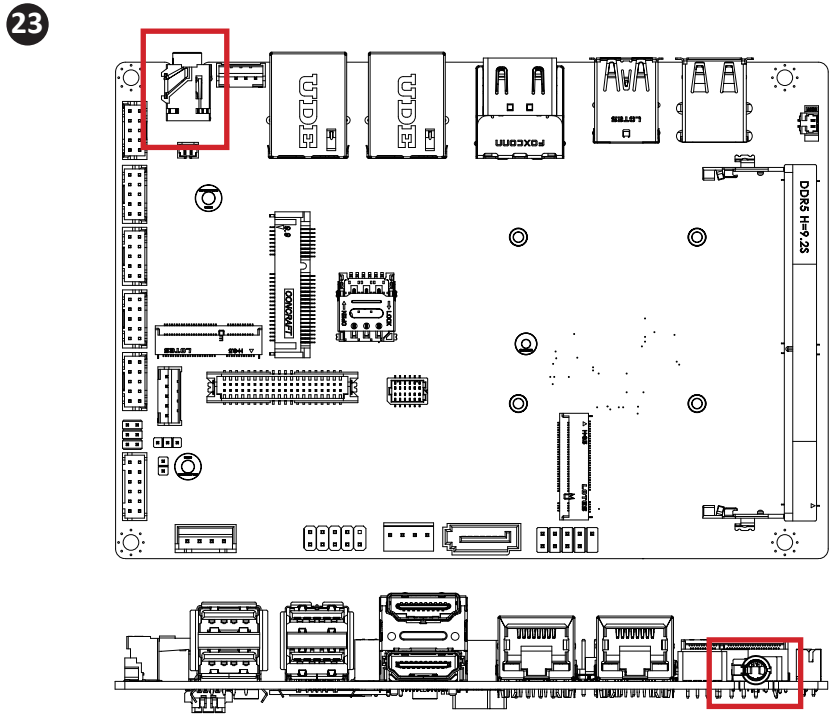
M.2 M Key Connector			
			
Pin No.	Definition	Pin No.	Definition
1	GND	2	3.3V
3	GND	4	3.3V
5	NC	6	NC
7	NC	8	NC
9	GND	10	SSD LED
11	NC	12	3.3V
13	NC	14	3.3V
15	GND	16	3.3V
17	NC	18	3.3V
19	NC	20	NC
21	GND	22	NC
23	NC	24	NC
25	NC	26	NC
27	GND	28	NC
29	PCIE1 RXn	30	NC
31	PCIE1 RXp	32	NC
33	GND	34	NC

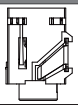
Pin No.	Definition	Pin No.	Definition
35	PCIE1 TXn	36	NC
37	PCIE1 TXp	38	NC
39	GND	40	NC
41	PCIE0 RXn	42	NC
43	PCIE0 RXp	44	NC
45	GND	46	NC
47	PCIE0 TXn	48	NC
49	PCIE0 TXp	50	PCI Reset
51	GND	52	PCIE Clock Request
53	PCIE Clock n	54	NC
55	PCIE Clock p	56	NC
57	GND	58	NC

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

Connector PN	Vendor
80159-8521	BELLWETHER

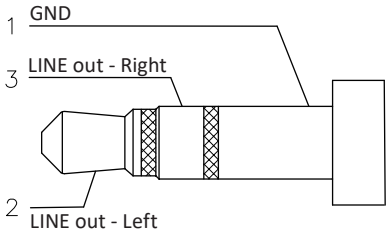
2.2.23 HP (LINE out connector)



Audio Connector


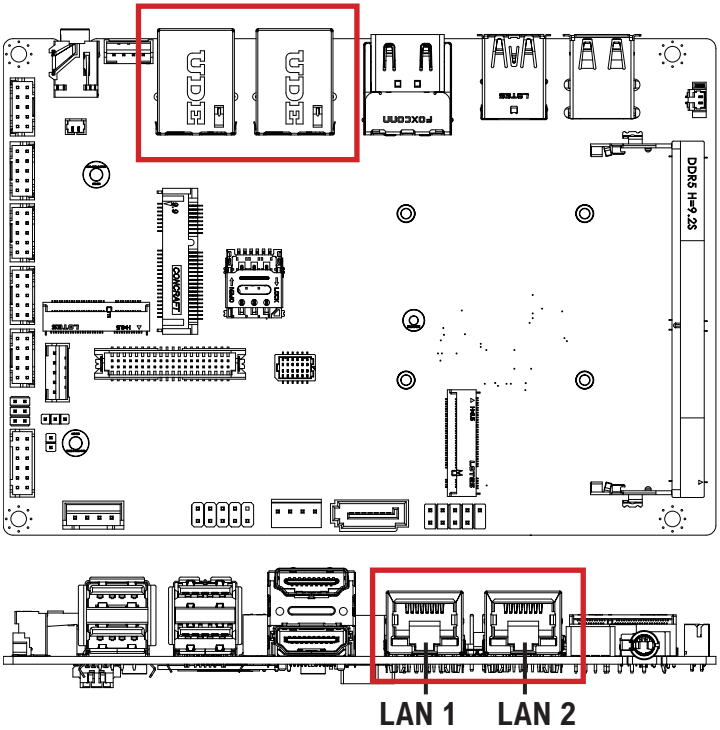
Connector PN	Vendor
WTJ-035-47ABZ1	KYOYAKU

Pin No.	Definition
1	GND
2	LINE out - Left
3	LINE out - Right
4	JackSence
5	GND
6	GND
7	NC



2.2.24 LAN1, LAN2 (LAN connector)

24



LAN Connector

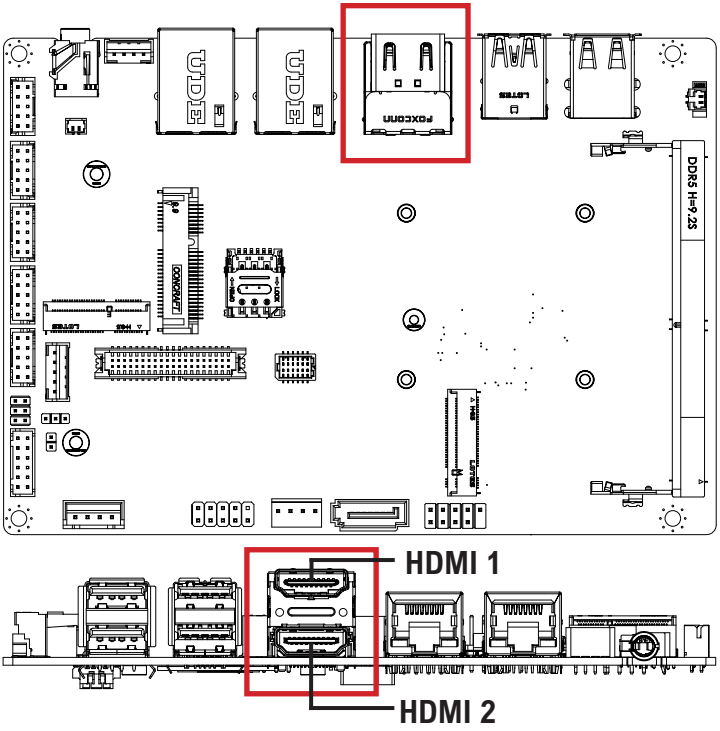

Pin No.	Definition
1	TX1+
2	TX1-
3	TX2+
6	TX2-
4	TX3+
5	TX3-
7	TX4+
8	TX4-

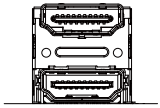
State	Description
Yellow On	2.5Gbps data rate
Green On	1Gbps data rate
Off	100M & 10Mbps data rate

Connector PN	Vendor
RB1-GB-0010	UDE

2.2.25 HDMI_21 (HDMI connector)

25



HDMI Connector


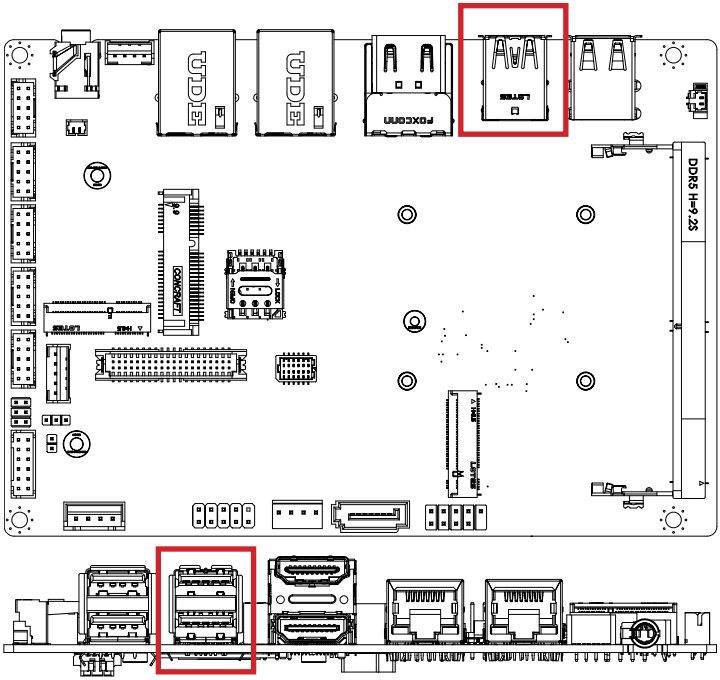
Pin No.	Definition	Pin No.	Definition
1	TX2p	20	TX2p
2	GND	21	GND
3	TX2n	22	TX2n
4	TX1p	23	TX1p
5	GND	24	GND
6	TX1n	25	TX1n
7	TX0p	26	TX0p
8	GND	27	GND
9	TX0n	28	TX0n
10	CLKp	29	CLKp

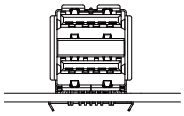
Pin No.	Definition	Pin No.	Definition
11	GND	30	GND
12	CLKn	31	CLKn
13	NC	32	NC
14	NA	33	NA
15	DDC Clock	34	DDC Clock
16	DDC Data	35	DDC Data
17	GND	36	GND
18	5V	37	5V
19	Hot Plug Detect	38	Hot Plug Detect

Connector PN	Vendor
QJ11191-DFB1-4F	FOXCONN

2.2.26 USB32 (USB 3.2 Gen 2x1 connector)

26



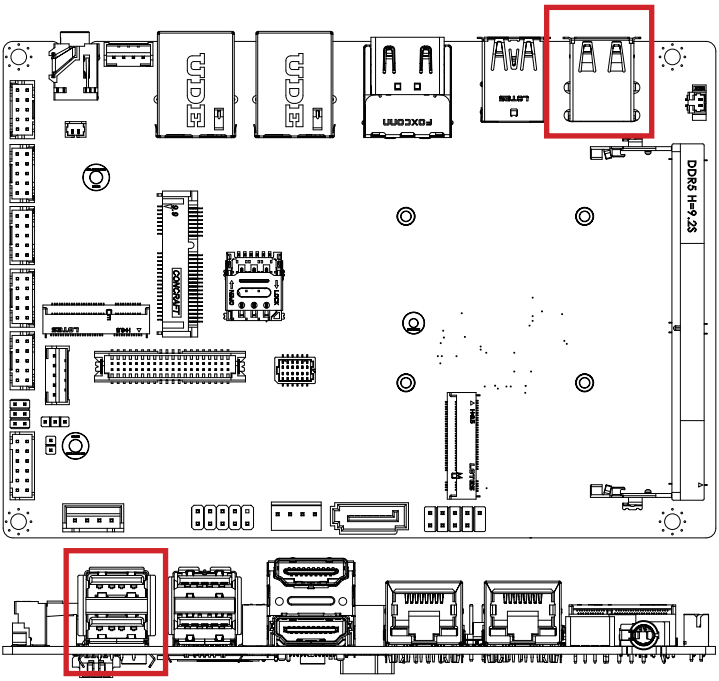
USB Connector


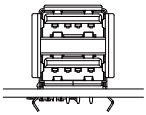
Connector PN	Vendor
18-A5950-6A33-A	TCONN

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

2.2.27 USB2 (USB 2.0 connector)

27



USB Connector


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

Connector PN	Vendor
UB1112C-8FDE-4F	FOXCONN
185-0820112-GB	YSELEC

Chapter 3

Chapter 3 – BIOS

3.1 Introduction

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

3.1.1 How to Entering into BIOS menu

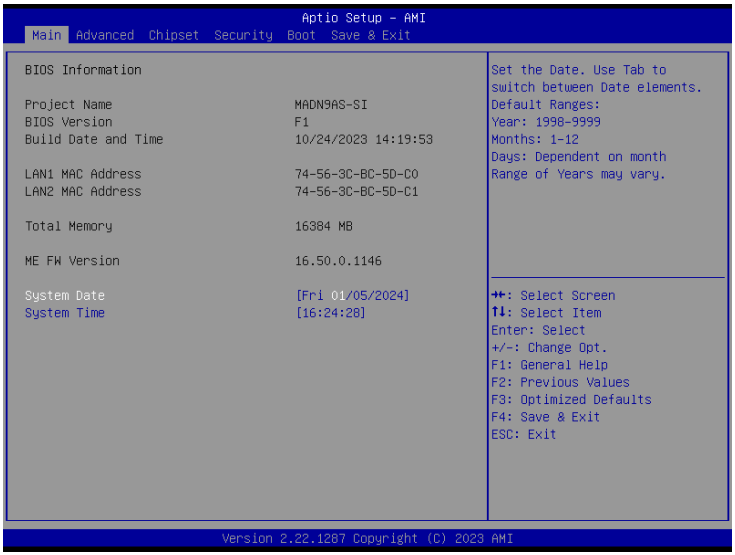
Once the system is power on, press the <DEL> key as soon as possible to access into BIOS Setup program.

3.1.2 Function Keys to setup in BIOS Setup program

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

3.2 The Main Menu

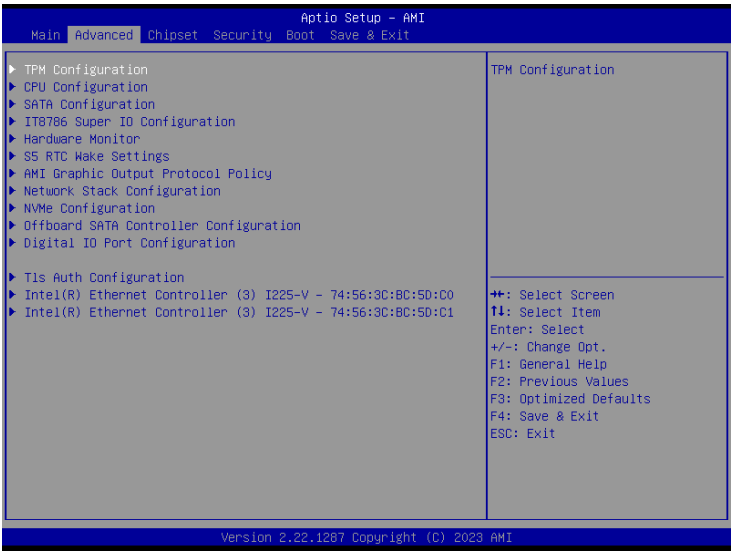
The main menu shows the basic system information.
Use arrow keys to move among the items.



Items	Description
Project Name	Shows Project name information
BIOS Version	Shows the BIOS version of the system
Build Date and Time	Shows the Build Date and Time when the BIOS was created.
LAN1 MAC Address	Shows LAN1 MAC Address information
LAN2 MAC Address	Shows LAN2 MAC Address information
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)

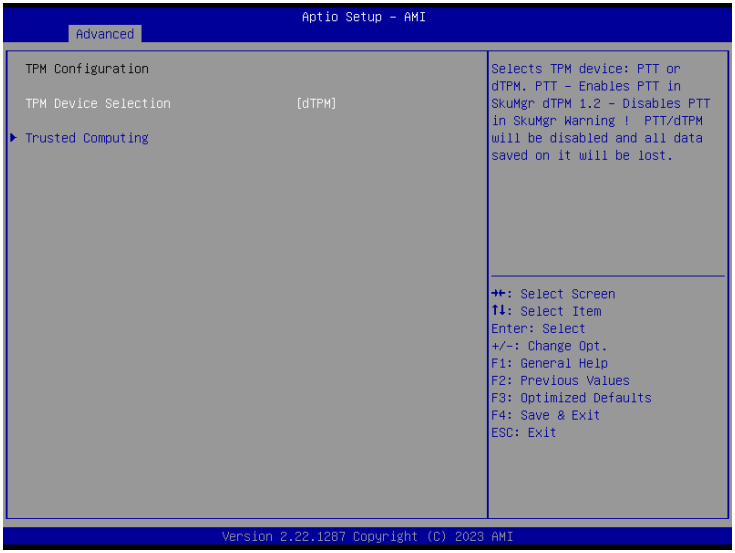
3.3 Advanced

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.



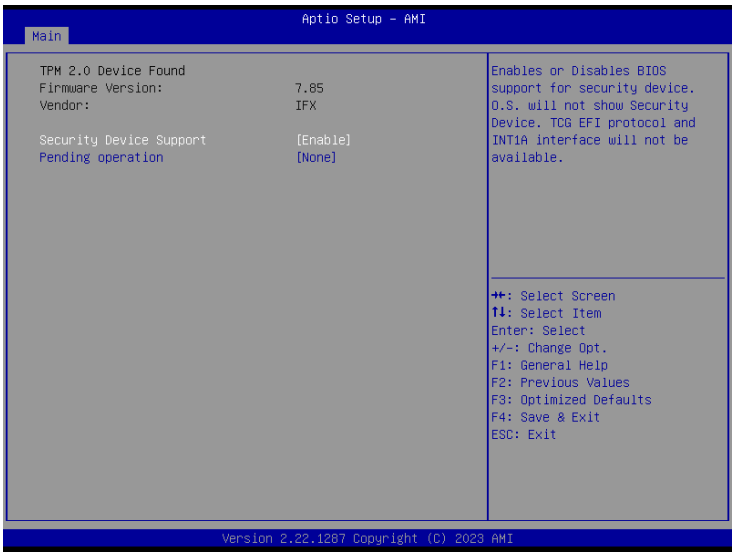
3.3.1 TPM Configuration

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)

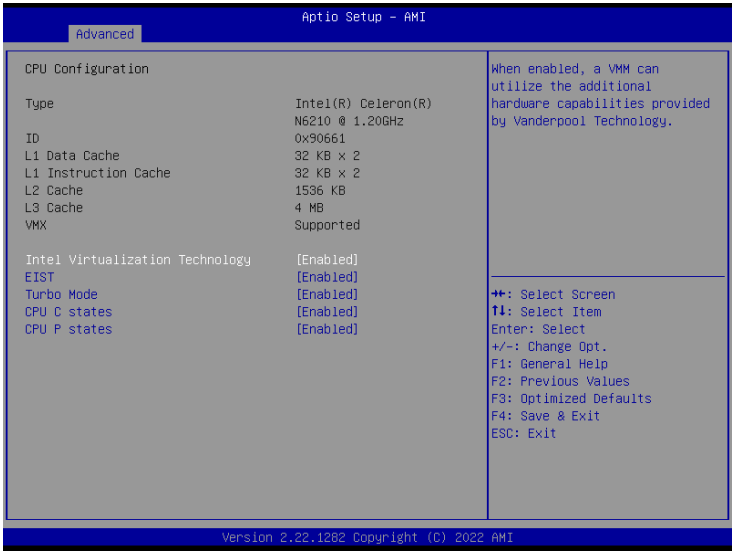
Trusted Computing : Shows TPM information, and TPM module configuration setting.



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**

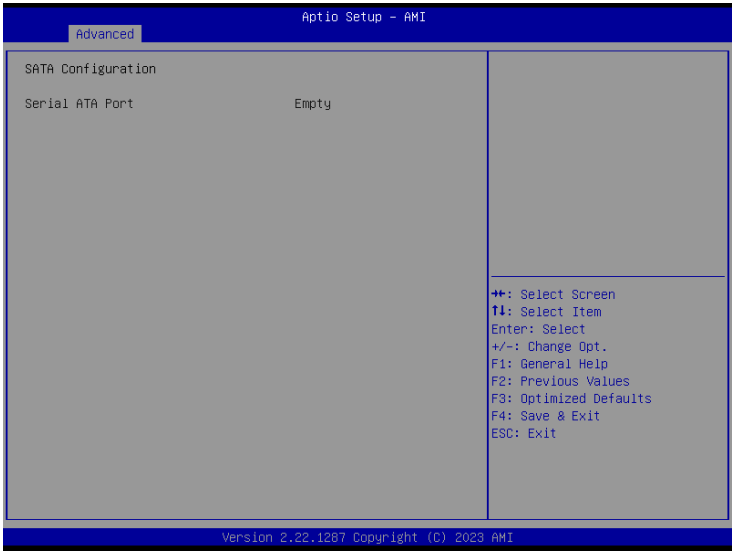
3.3.2 CPU Configuration

This submenu shows detailed CPU informations.



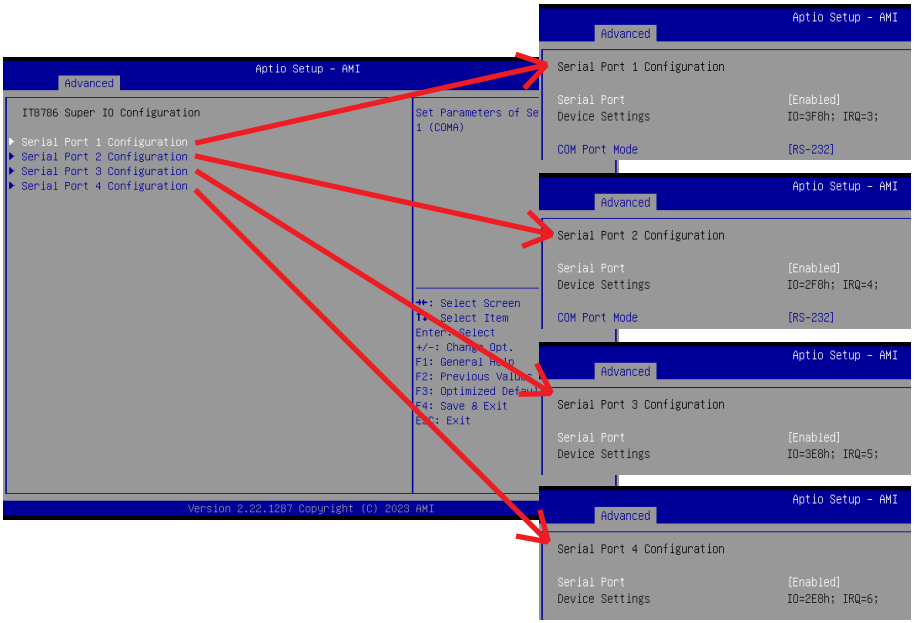
Item	Description
Intel Virtualization Technology	Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. **Enabled : Enables Intel Virtualization Technology (Default setting)** **Disabled : Disables Intel Virtualization Technology**
EIST	According to System loading, Enhanced Intel SpeedStep Technology (EIST)will automatically adjust the CPU voltage and core frequency to decrease heat and power consumption for power saving. **Enabled : Enables EIST Technology (Default setting)** **Disabled : Disables EIST Technology**
Turbo Mode	**Enabled : Enables Turbo Mode (Default setting)** **Disabled : Disables Turbo Mode**
CPU 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**
CPU P states	CPU will adjust frequency depends on it's loading. **Enabled : Enables CPU P states function (Default setting)** **Disabled : Disables CPU P states function**

3.3.3 SATA Configuration



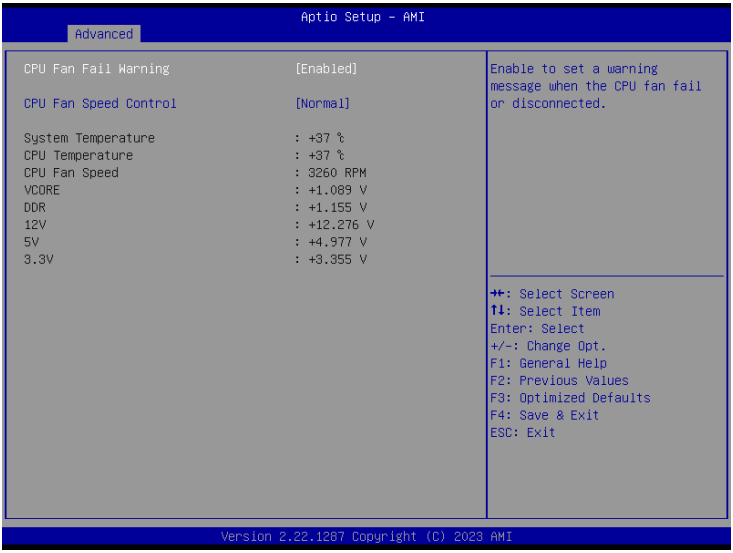
Item	Description
Serial ATA Port	shows 2.5" SATA HDD/SSD information

3.3.4 IT8786 Super IO Configuration



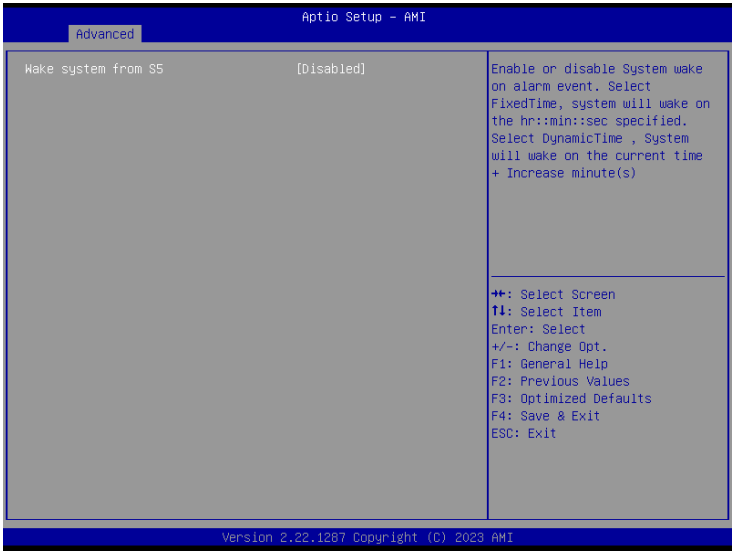
Item	Description
Serial Port 1 Configuration	Press [Enter] to configure advanced items : Serial Port : **Enabled : Enables allows you to configure the serial port settings** **Disabled : if Disabled, displays no configuration for the serial port** Device settings : Display the specified Serial Port base I/O address and IRQ COM Port Mode : Choose RS-232, RS-422, or RS-485 feature
Serial Port 2 Configuration	
Serial Port 3 Configuration	Press [Enter] to configure advanced items : Serial Port : **Enabled : Enables allows you to configure the serial port settings** **Disabled : if Disabled, displays no configuration for the serial port** Device settings : Display the specified Serial Port base I/O address and IRQ
Serial Port 4 Configuration	

3.3.5 Hardware Monitor



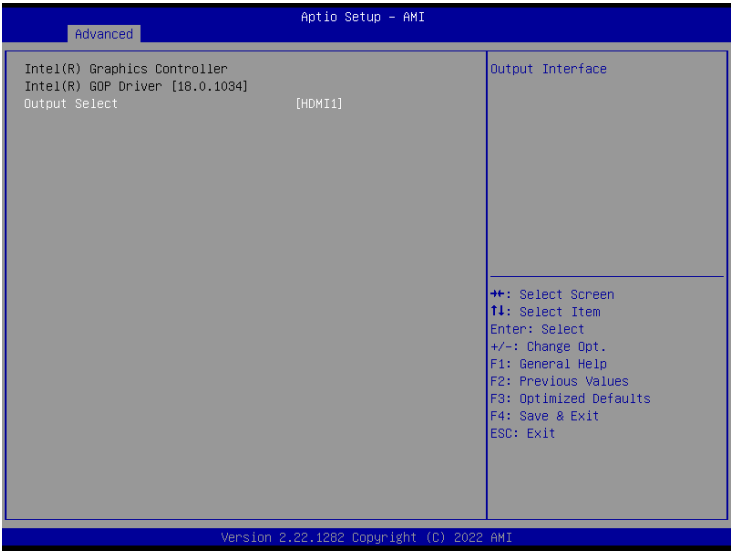
Item	Description
CPU Fan Fail Warning	**Enabled : Enables CPU FAN Fail warning alert function (Default setting)** **Disabled : Disables CPU FAN Fail warning alert function**
CPU Fan Speed Control	**Normal : Fan speed set by BIOS default (Default setting)** **Full Speed : Set Fan operates at full speed**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

3.3.6 S5 RTC Wake Settings



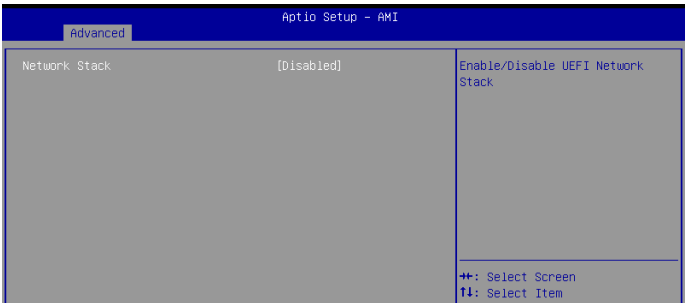
Item	Description
Wake system from S5	Enable or Disable System to wake on a specific time. **Disabled : Disables system to wake on a specific time (Default setting)** **Fixed Time : Enables system to wake on a specific time (Format : hr : min : sec)**

3.3.7 AMI Graphic Output Protocol Policy

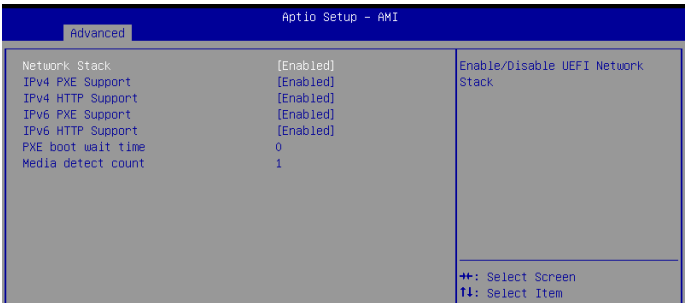


Item	Description
Output Select	Choose default monitor output when there are more than one monitor plugged on the motherboard.

3.3.8 Network Stack Configuration



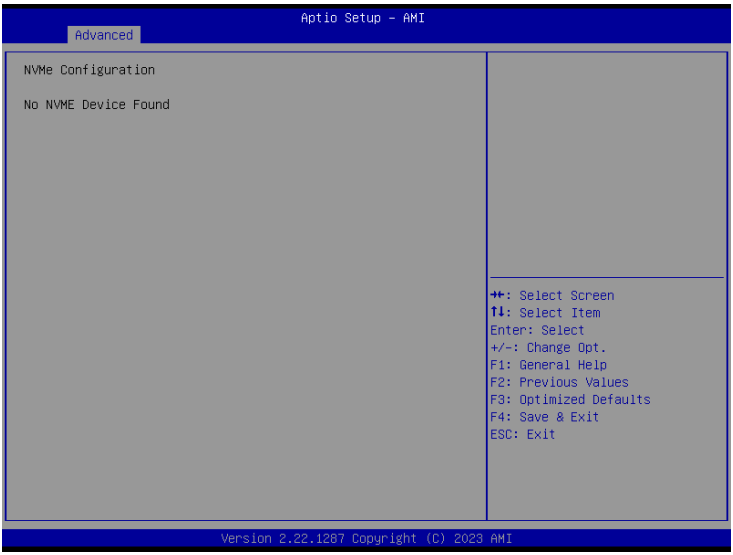
When Network stack is enabled :



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

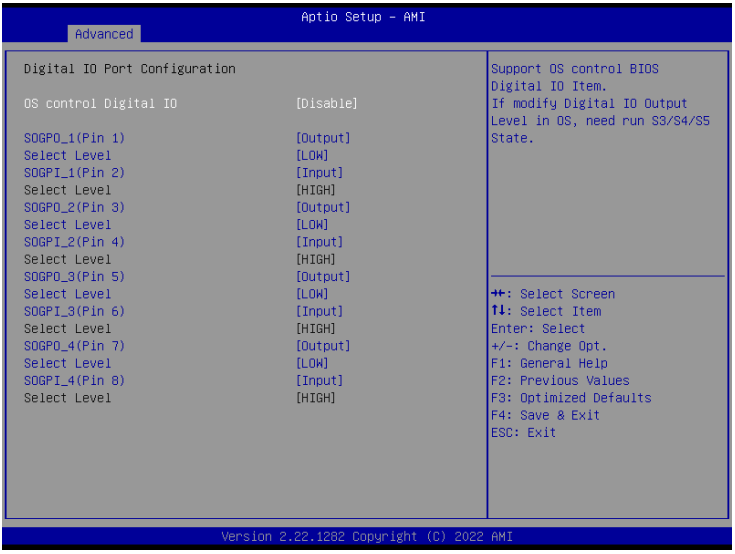
3.3.9 NVMe Configuration

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



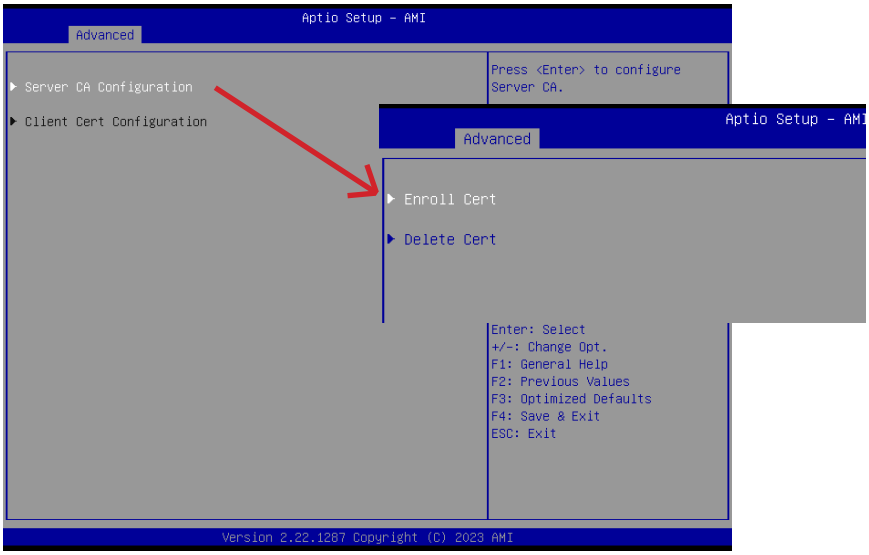
3.3.10 Offboard SATA Controller Configuration

3.3.11 Digital IO Port Configuration



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

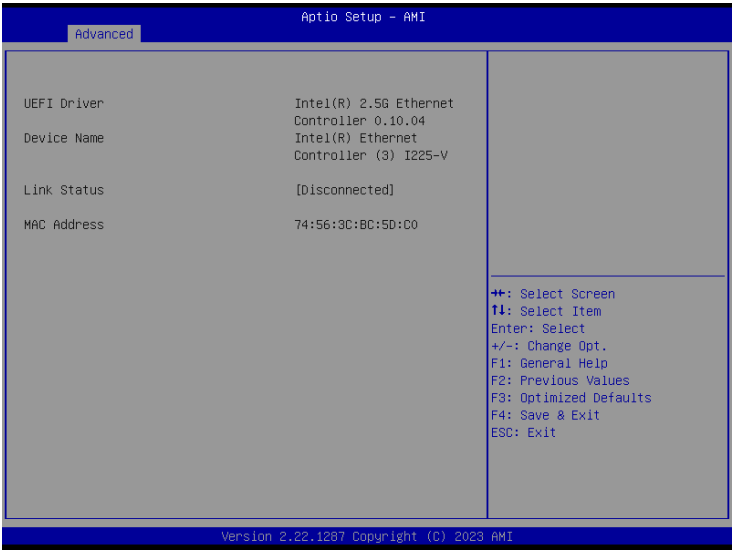
3.3.12 Tls Auth Configuration



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

3.3.13 Intel(R) Ethernet Controller (3) I225-V - 74:56:3C:BC:5D:C0 (MAC address may varied based on different motherboard)

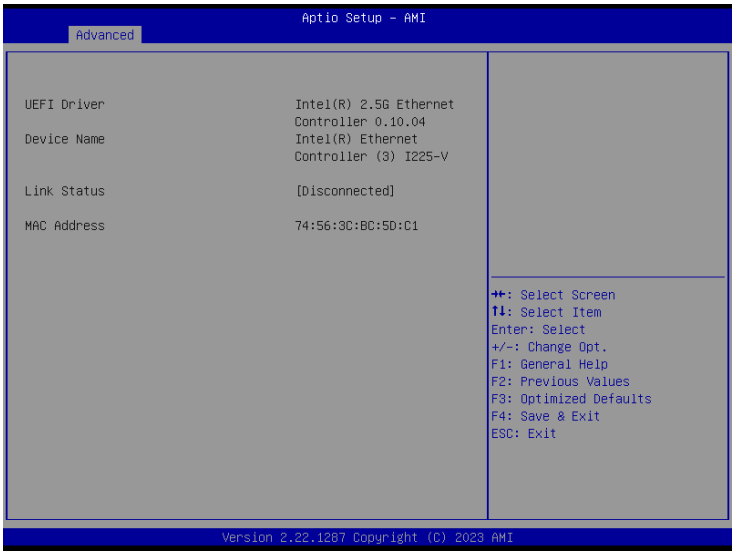
Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

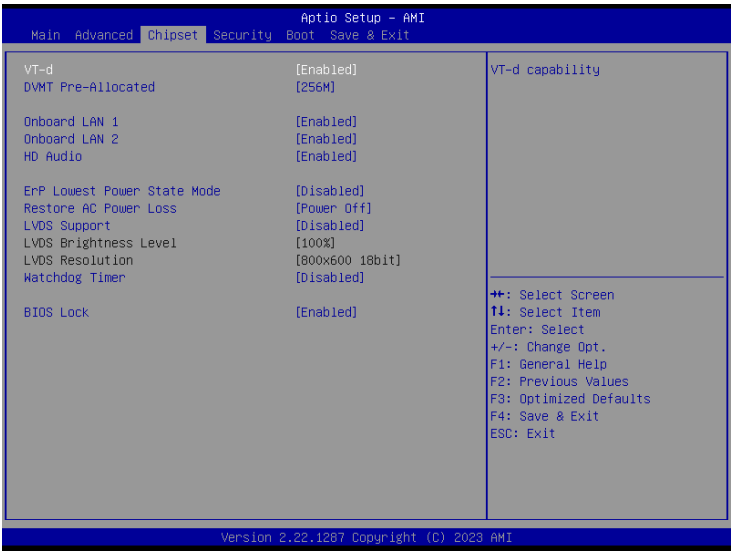
3.3.14 Intel(R) Ethernet Controller (3) I225-V - 74:56:3C:BC:5D:C1 (MAC address may varied based on different motherboard)

Shows Intel Ethernet controller information



NOTE：MAC address may varied based on different motherboard

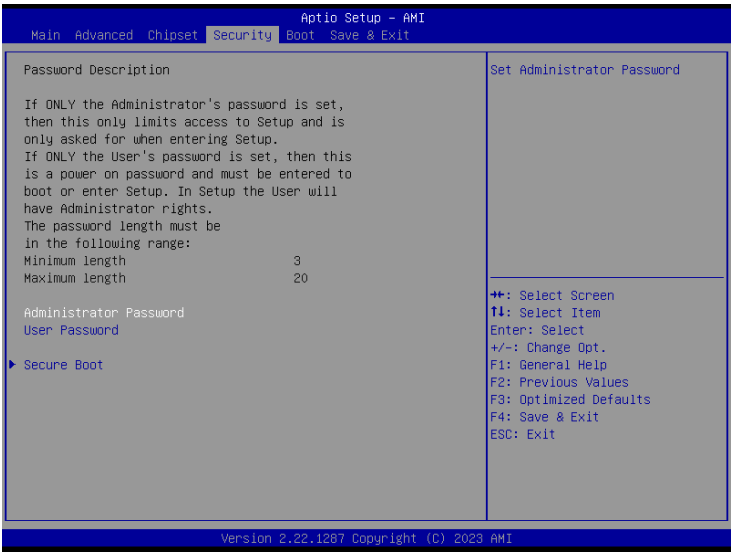
3.4 Chipset



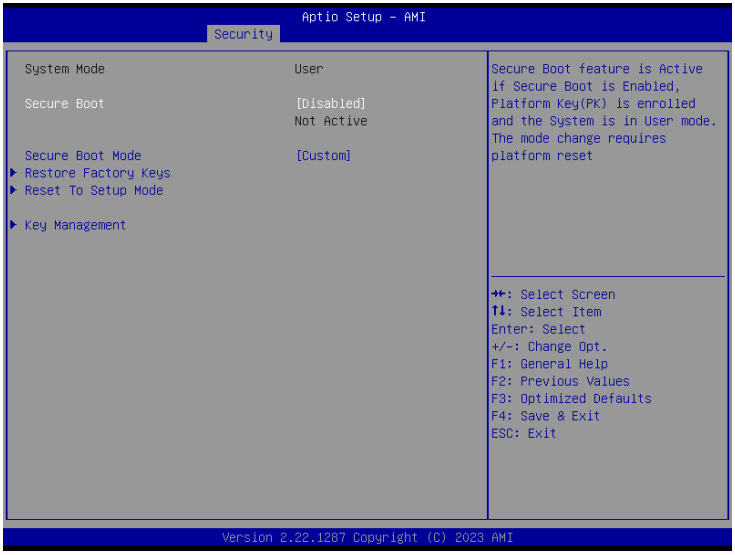
Item	Description
VT-d	**Enabled : Enables VT-d function (Default setting)** **Disabled : Disables VT-d function**
DVMT Pre-Allocated	Use DVMT Pre-Allocated to set the amount of system memory which is installed to the integrated graphics processor **Option items : 32M , 64M , 128M , 256M(Default setting)**
Onboard LAN 1 **Onboard LAN 2**	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**
LVDS Support	**Disabled : Disables LVDS Support (Default setting)** **Enabled : Enables LVDS Support**
LVDS Brightness Level	When LVDS Support is enabled : To modified the backlight brightness of the LVDS panel **Option items : 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100% (Default Setting)**
LVDS Resolution	When LVDS Support is enabled : To modified the LVDS resolution **Option items : 800x600 18bit (Default Setting) , 1024x768 18bit, 1024x768 24bit, 1024x600 18bit, 1280x800 18bit, 1280x960 18bit, 1280x1024 24bit, 1366x768 18bit, 1366x768 24bit, 1440x900 24bit, 1400x1050 24bit, 1600x900 24bit, 1680x1050 24bit, 1600x1200 24bit, 1920x1080 24bit, 1920x1200 24bit**
Watchdog Timer	Enable/Disable Watchdog Timer function **Enabled : Enables Watchdog Timer function** **Disabled : Disabled Watchdog Timer function (Default setting)**
BIOS Lock	Enable/Disable BIOS Lock function **Enabled : Enables BIOS Lock function (Default setting)** **Disabled : Disabled BIOS Lock funtion**

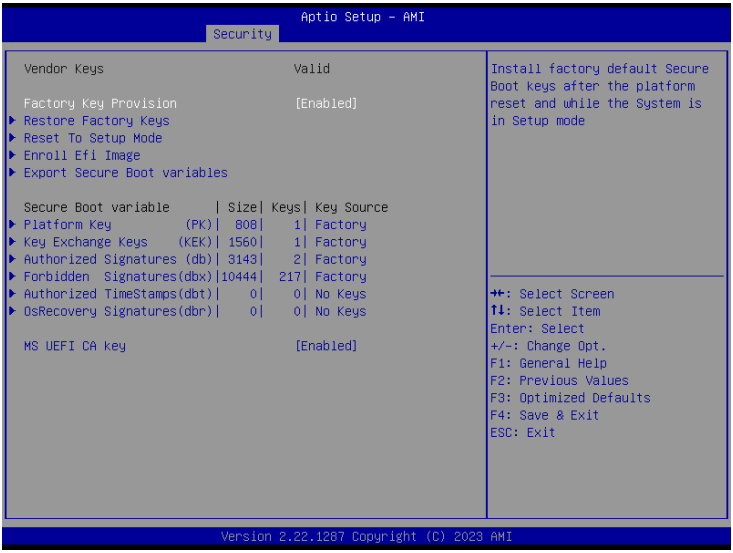
3.5 Security



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



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

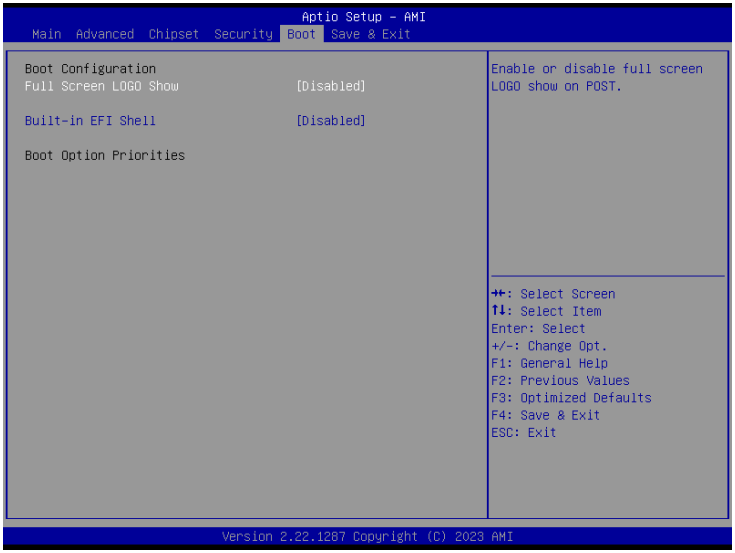


Item	Description
Factory Key Provision	Install factory default Secure Boot keys after the platform reset and while the system is in Setup mode **Enabled : Enables Factory Key Provision (Default setting)** **Disabled : Disables Factory Key Provision**
Restore Factory Keys	To restore factory settings **Yes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

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

3.6 Boot

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



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

3.7 Save & Exit

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