

QBiP-1505A

3.5" SBC Boards- QBiP-1505A
User's Manual 1st Ed

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Packing List

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

Item	Quantity
QBiP-1505A	1
SATA 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	○	○	○	○	○	○

○: 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	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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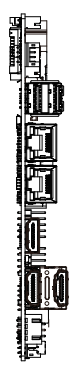
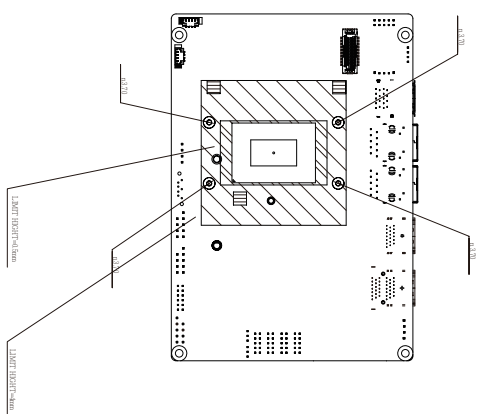
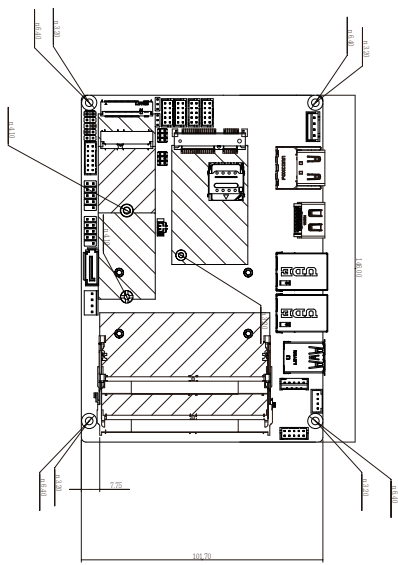
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Chapter 1

Chapter1 - Product Specifications QBiP-1505A



1.1 Specifications- QBiP-1505A

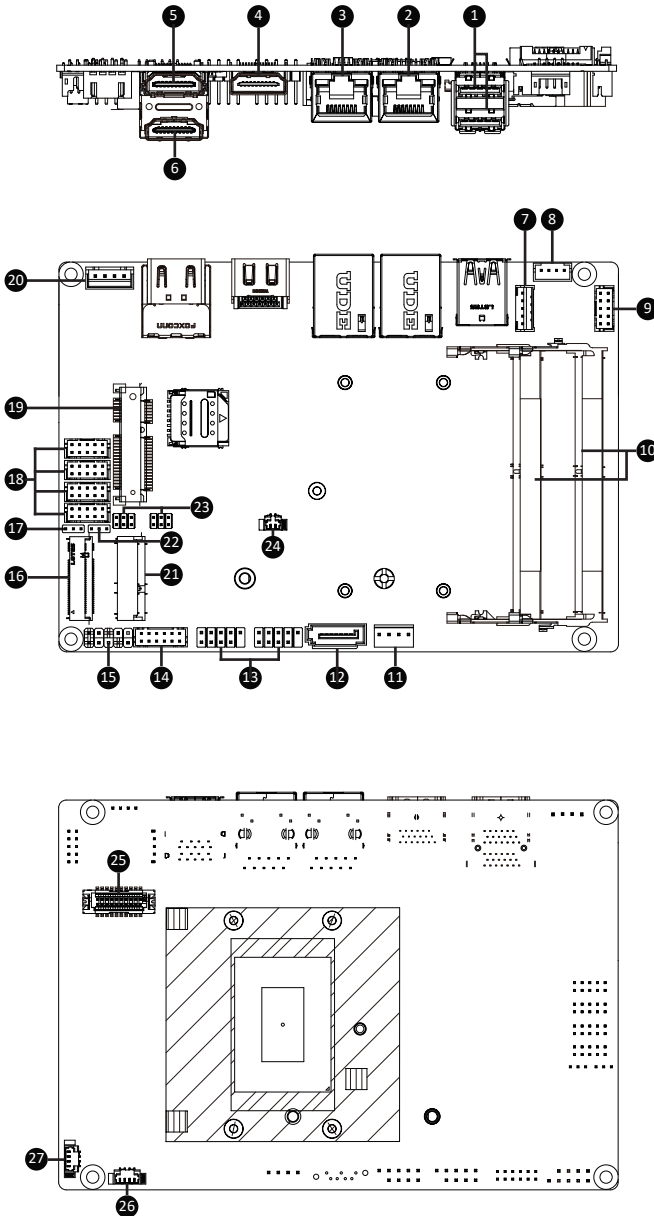
Motherboard	QBiP-1505A (MRZNROS)
Form Factor	3.5" SBC 146W x 101.7Dmm
CPU	AMD Ryzen™ R1505G Embedded Processor 14nm, 2 cores, 4 threads, 2.4 GHz, up to 3.3 GHz TDP 25W
Package	FP5 Type 1
Chipset	SoC
Memory	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Support Dual channel DDR4 2400 MHz memory modules
Ethernet	2 x GbE LAN Ports (Realtek® RTL8111HS)
Video	Integrated Graphics Processor - AMD Radeon™ Vega 3 Graphics 3 x HDMI 2.0 ports, supporting a maximum resolution of 4096x2160 @60Hz 1 x eDP port, supporting a maximum resolution of 3840x2160 @60Hz (Share from HDMI) (3 independent display outputs)
Audio	Realtek® Audio Codec
Storage	1 x SATA 6Gb/s Port
Expansion Slots	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot (PCIe x1 + USB2.0)

Motherboard	QBiP-1505A (MRZNR0S)
Internal I/O	1 x 4-pin box power connector (DC in +9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x eDP/HDMI jumper 1 x GPIO (8-bits) & SMBus header 1 x Buzzer
Rear I/O	3 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1
TPM	Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0
OS Compatibility	Windows 10 (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)

Chapter 2

Chapter 2 – Hardware Information

2.1 Jumpers and Connectors

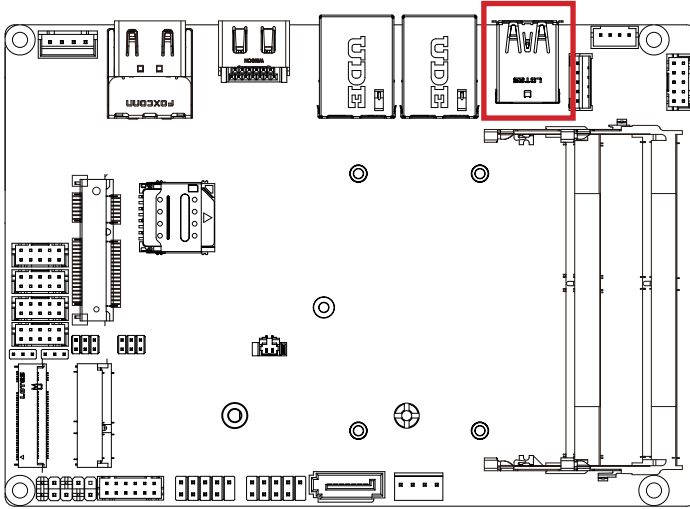


	Code	Description
1	USB3	USB 3.2 Gen 1 connector
2	LAN1	LAN connector
3	LAN2	LAN connector
4	HDMI3	HDMI 3 connector
5	HDMI1_2	HDMI 2 connector
6		HDMI 1 connector
7	BKL_CN	Backlight Control header
8	SPKR	Speaker out connector
9	F_AUDIO	Front panel audio header
10	SODIMM1, SODIMM2	DDR4 SO-DIMM slot
11	SATAPWR	SATA power connector
12	SATA	SATA 6Gb/s connector
13	F_USB2_1 F_USB2_2	USB 2.0 header
14	GPIO_CNT	General Purpose input/output header
15	SYS_PANEL	Front panel header
16	M2M	M.2 slot, 2280 M-Key
17	AT_CN	AT/ATX mode select jumper
18	COM1, COM2, COM3, COM4	Serial port header COM1, COM2 : RS-232/422/485 & RI/5V/12V COM3, COM4 : RS-232
19	MPCIE	Mini PCIE slot
20	DC_IN	DC IN 1x4-pin power connector
21	M2E	M.2 slot, 2230 E-Key

	Code	Description
22	LVDS_HDMI	HDMI/eDP mode select jumper
23	JCOM1 JCOM3	RI pin RI/5V/12V select jumper for COM1 & COM2 Port
24	Battery	Battery connector
25	EDP	eDP connector (*The HDMI3's Function is Disabled, during eDP Function Enabled)
26	CPU_FAN	CPU Fan connector
27	SYS_FAN	System Fan connector

2.2.1 USB3 (USB 3.2 Gen 1 connector)

1



USB 3.2 Gen 1 connector



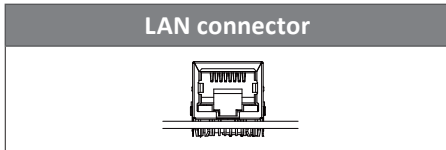
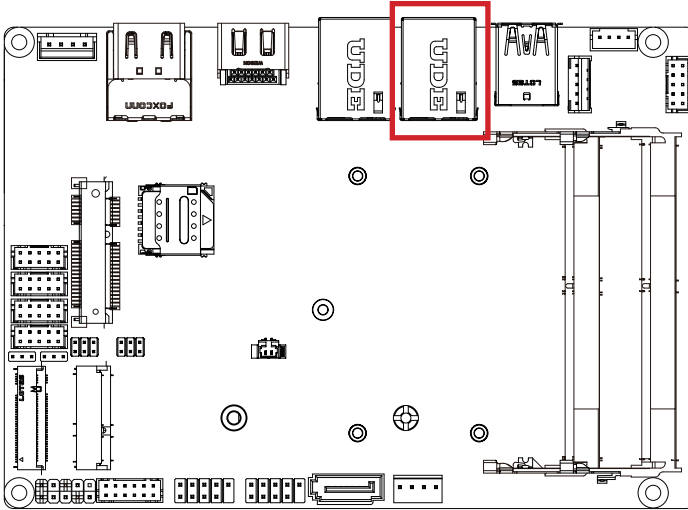
Pin No.	Definition
1	5V
2	D1n
3	D1p
4	GND
5	USB3_RX1n
6	USB3_RX1p
7	GND
8	USB3_TX1n
9	USB3_TX1p
10	5V
11	D0n
12	D0p

Pin No.	Definition
13	GND
14	USB3_RX2n
15	USB3_RX2p
16	GND
17	USB3_TX2n
18	USB3_TX2p

Connector PN	Vendor
UEA11121-8FS6-4F	FOXCONN
ABA-USB-079-K01	LOTES

2.2.2 LAN1 (LAN connector)

2

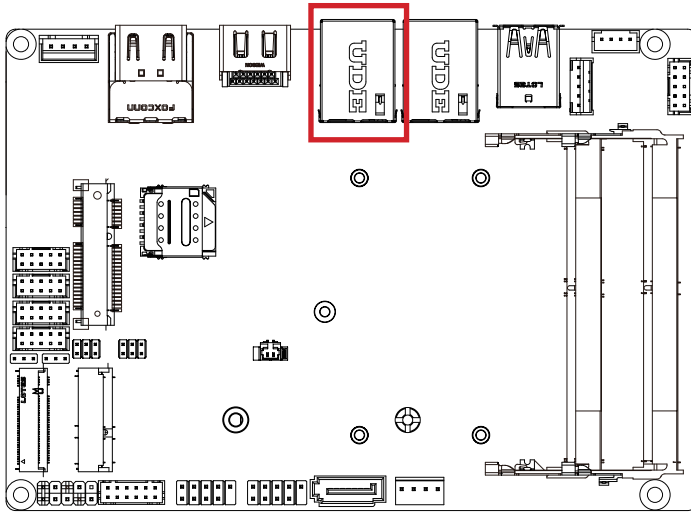


Status	Description
Orange On	1Gbps data rate
Green On	100Mbps data rate
Off	10Mbps data rate

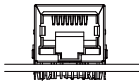
Pin No.	Definition
1	TX1+
2	TX1-
3	TX2+
6	TX2-
4	TX3+
5	TX3-
7	TX4+
8	TX4-

2.2.3 LAN2 (LAN connector)

3



LAN connector

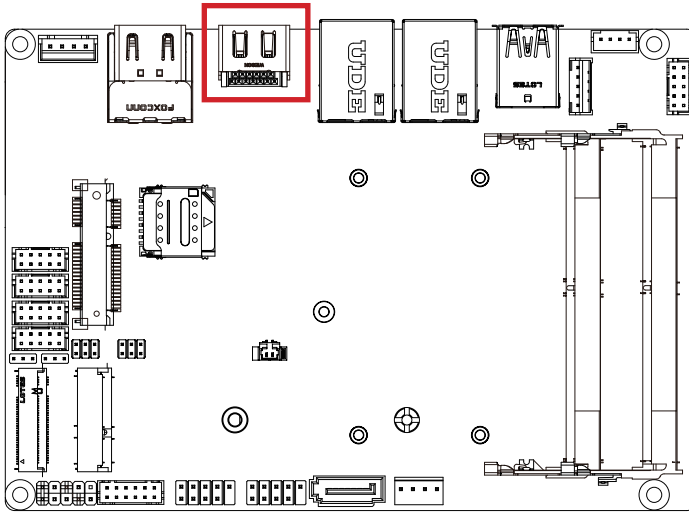


Status	Description
Orange On	1Gbps data rate
Green On	100Mbps data rate
Off	10Mbps data rate

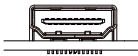
Pin No.	Definition
1	TX1+
2	TX1-
3	TX2+
6	TX2-
4	TX3+
5	TX3-
7	TX4+
8	TX4-

2.2.4 HDMI3 (HDMI connector)

4



HDMI connector

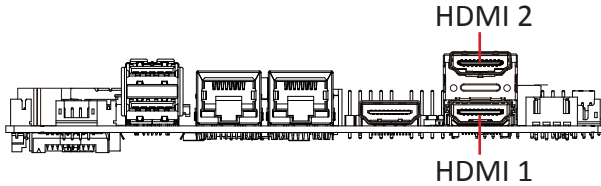
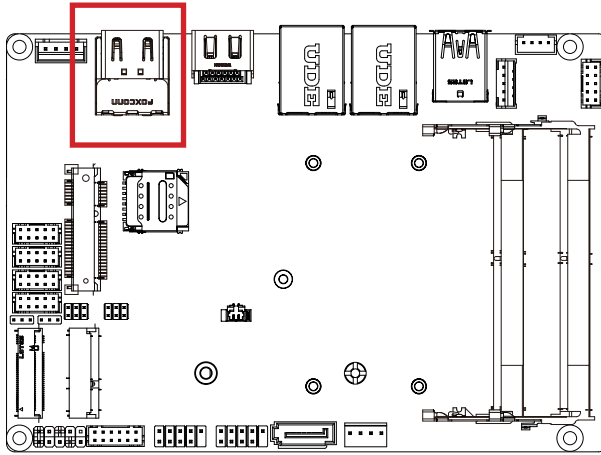


Pin No.	Definition	Pin No.	Definition
1	TX2p	20	TX2p
2	GND	21	GND
3	TX2n	22	TX2n
4	TX1p	23	TX1p
5	GND	24	GND
6	TX1n	25	TX1n
7	TX0p	26	TX0p
8	GND	27	GND
9	TX0n	28	TX0n
10	CLKp	29	CLKp

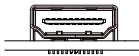
Pin No.	Definition	Pin No.	Definition
11	GND	30	GND
12	CLKn	31	CLKn
13	NC	32	NC
14	NA	33	NA
15	DDC Clock	34	DDC Clock
16	DDC Data	35	DDC Data
17	GND	36	GND
18	5V	37	5V
19	Hot Plug Detect	38	Hot Plug Detect

2.2.5 HDMI1_2 (HDMI connector)

5 6



HDMI connector

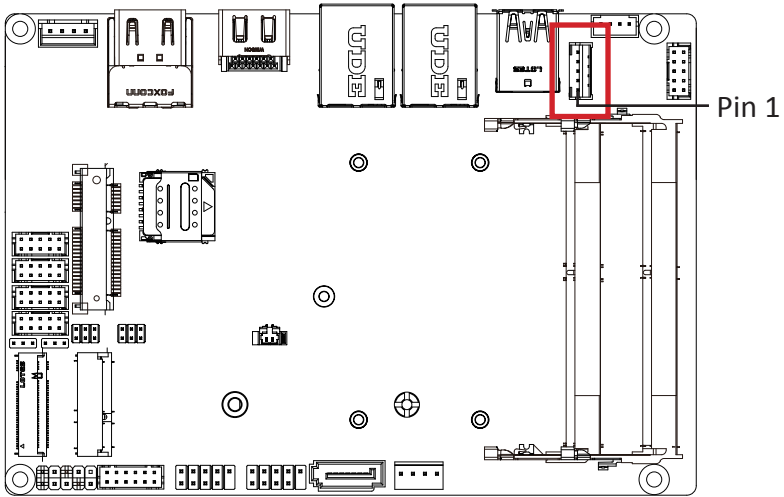


Pin No.	Definition	Pin No.	Definition
1	TX2p	20	TX2p
2	GND	21	GND
3	TX2n	22	TX2n
4	TX1p	23	TX1p
5	GND	24	GND
6	TX1n	25	TX1n
7	TX0p	26	TX0p
8	GND	27	GND
9	TX0n	28	TX0n
10	CLKp	29	CLKp

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

2.2.6 BKL_CN (Backlight Control header)

7



Backlight Control header



Connector PN

721-81-05TW00

Vendor

PINREX

A2001WV-05P146

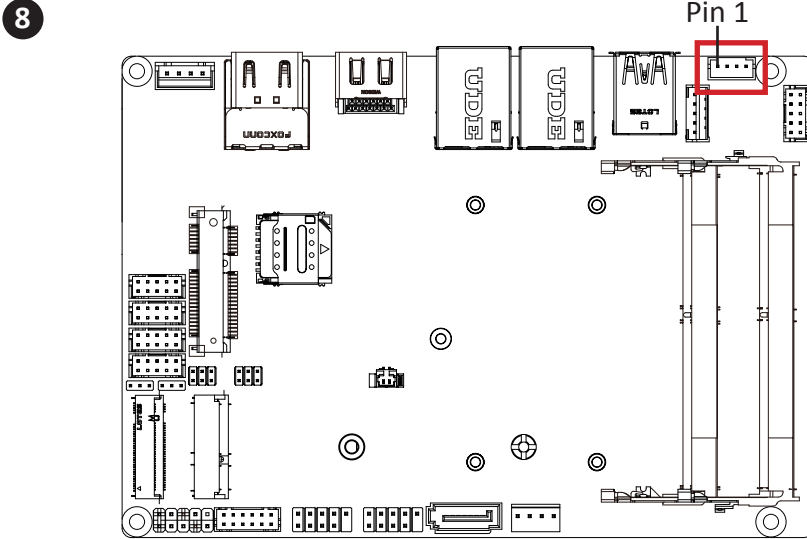
JOINT-TECH

Connector type

1x5pin header, pitch 2.0mm

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

2.2.7 SPKR (Speaker out connector)



Speaker out connector



Connector PN

721-81-045W00

Vendor

PINREX

A2001WV-04P146

JOINT-TECH

Connector type

1x4pin header, pitch 2.0mm

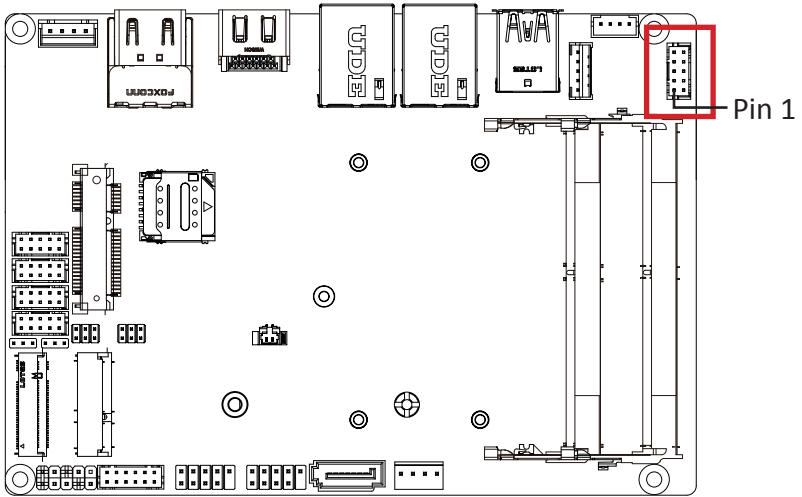
Pin No.

Definition

1	Speaker Out R+
2	Speaker Out R-
3	Speaker Out L-
4	Speaker Out L+

2.2.8 F_Audio (Front panel audio header)

9



Front panel audio header



Connector PN

725-81-10TW00

Vendor

PINREX

A2004WV-2X05P46

JOINT-TECH

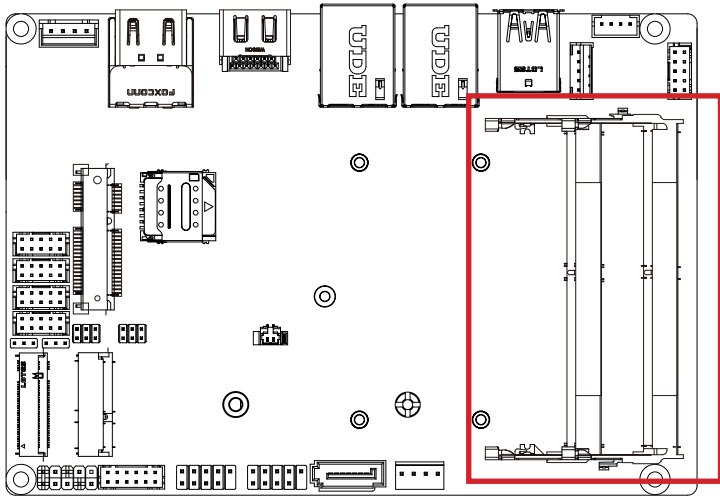
Connector type

2x5pin header, pitch 2.0mm

Pin No.	Definition	Pin No.	Definition
1	F_MIC1_L	2	GND
3	F_MIC1_R	4	F_AUDIO_DET
5	F_HP_R	6	F_MIC_JD
7	FAUDIO_JD	8	NC
9	F_HP_L	10	F_HP_JD

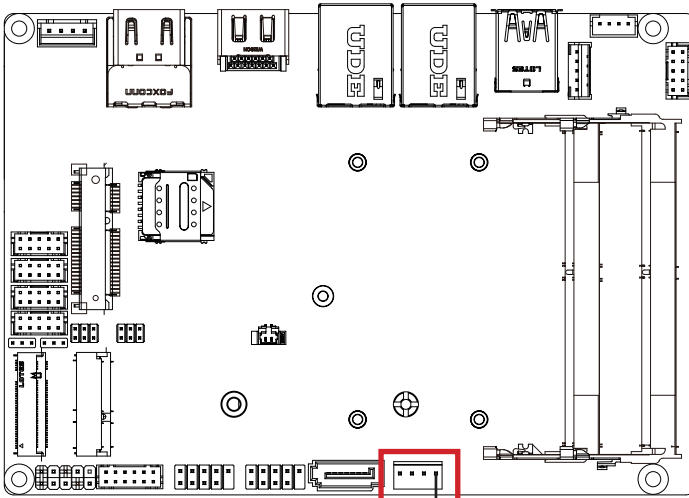
2.2.9 SODIMM1, SODIMM2 (DDR4 SO-DIMM slot)

10



2.2.10 SATAPWR (SATA power connector)

11



Pin 1

Hard Disk Power Connector



Connector PN

743-81-04TW00

WF04Q2-3BJQ000

Vendor

PINREX

HORNGTONG

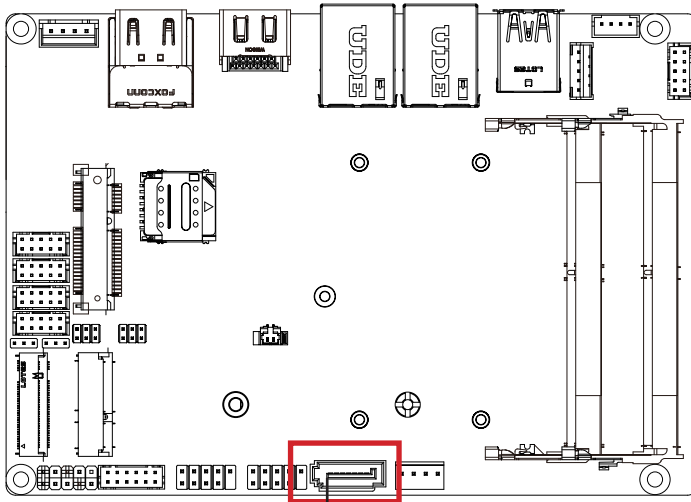
Connector type

1x4pin header, pitch 2.54mm

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

2.2.11 SATA (SATA 6Gb/s connector)

12



Pin 1

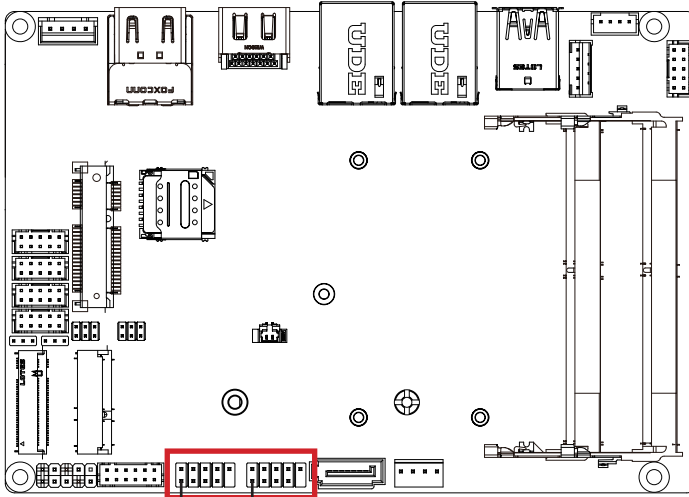
SATA 6Gb/s Connector



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

2.2.12 F_USB2_1, F_USB2_2 (USB 2.0 header)

13



Pin 1

USB 2.0 header



Connector PN

210-92-05G117

Vendor

PINREX

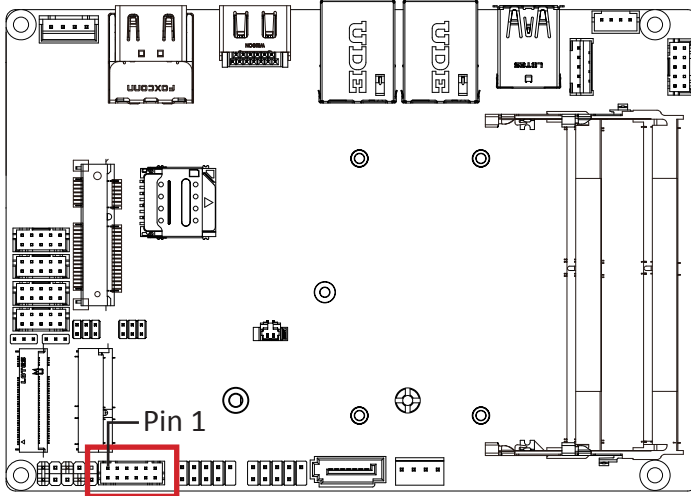
Connector type

2x5pin header, pitch 2.54mm

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

2.2.13 GPIO_CNT (General purpose input/output header)

14



GPIO Connector



Pin No.	Definition
1	GPIO-input_1
2	GPIO-output_1
3	GPIO-input_2
4	GPIO-output_2
5	GPIO-input_3
6	GPIO-output_3
7	GPIO-input_4
8	GPIO-output_4
9	SMBus Clock
10	SMBus DATA
11	5V
12	GND

Connector PN

725-81-12TW00

A2004WV-2X06P46

Vendor

PINREX

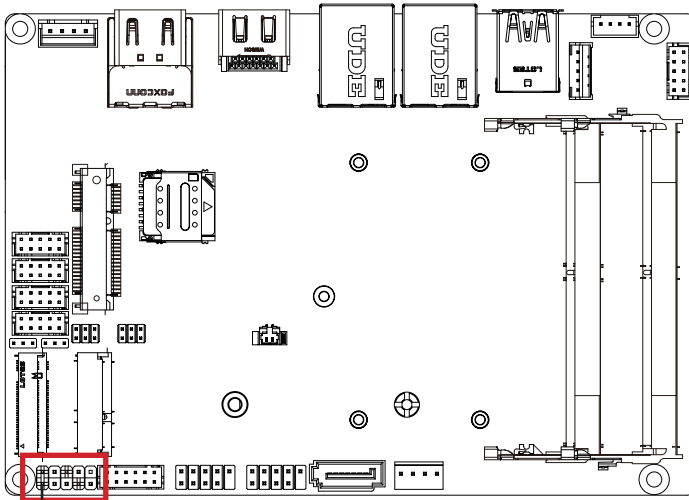
JOINT-TECH

Connector type

2x6pin header, pitch 2.0mm

2.2.14 SYS_PANEL (Front panel header)

15



Pin 1

System Panel Header



Connector PN

210-92-058B02

Vendor

PINREX

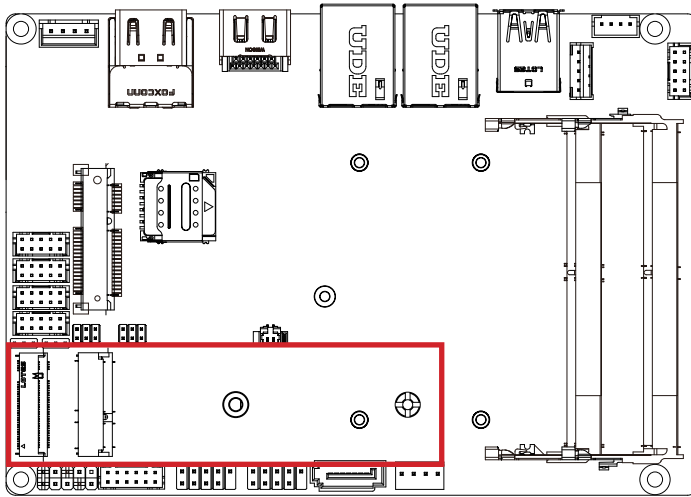
Connector type

2x5pin header, pitch 2.54mm

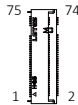
Pin No.	Definition
1	HDD LED+
2	Power LED+
3	HDD LED-
4	Power LED-
5	GND
6	Power Button+
7	Reset Button
8	Power Button-
9	No Connect
10	No Pin

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

16



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

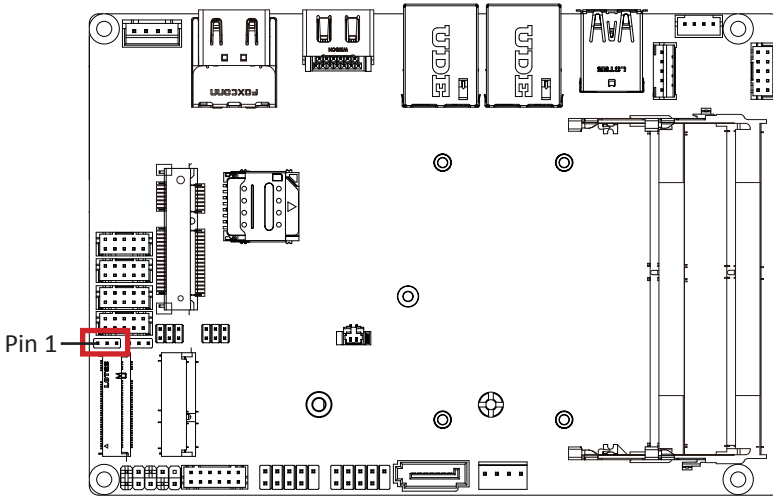
Pin No.	Definition	Pin No.	Definition
35	PCIe2 TXn	36	NC
37	PCIe2 TXp	38	NC
39	GND	40	NC
41	PCIe0 RXn/SATA Bp	42	NC
43	PCIe0 RXp/SATA Bn	44	NC
45	GND	46	NC
47	PCIe0 TXn/SATA An	48	NC
49	PCIe0 TXp/SATA Ap	50	PCI Reset
51	GND	52	PCIe Clock Request
53	PCIe Clock n	54	NC
55	PCIe Clock p	56	NC
57	GND	58	NC


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

Connector PN	Vendor
80159-8521	BELLWETHER

2.2.16 AT_CN (AT/ATX mode select jumper)

17



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

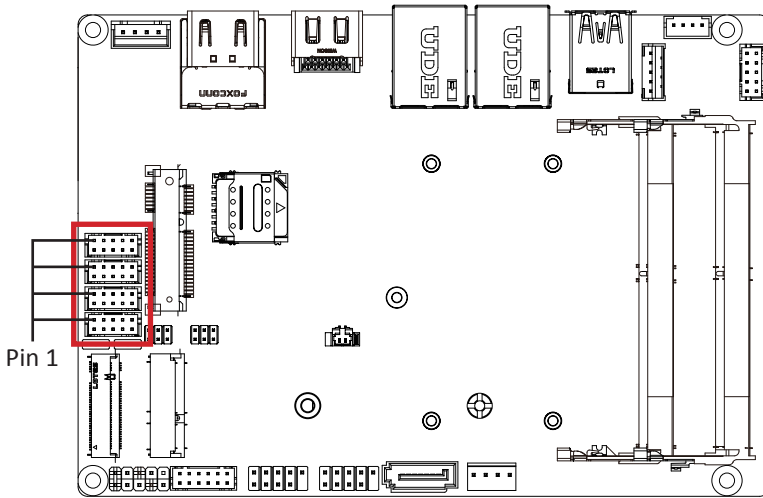
Pin No.	Definition
1	AT MODE
2	Detect
3	ATX MODE

Connector PN	Vendor
220-96-03GB01	PINREX
PH03N2-7BAN000	HORNGTONG
220-96-03GB001K	PINREX

Connector type
1x3pin header, pitch 2.0mm

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

18



Serial Port Cable Connector



Connector PN

725-81-10TW00

Vendor

PINREX

A2004WV-2X05P46

JOINT-TECH

Connector type

2x5pin header, pitch 2.0mm

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	—	—

Note :

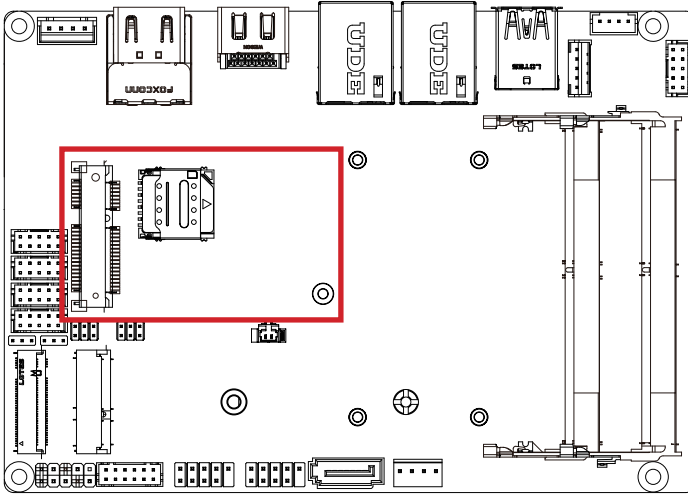
COM1, COM2 : Support RS-232/422/485 & RI/5V/12V

For RI/5V/12V jumper setting, please see P. 43

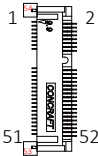
COM3, COM4 : Support RS-232 only

2.2.18 MPCIE (Mini PCIE slot)

19



Mini PCIe Connector



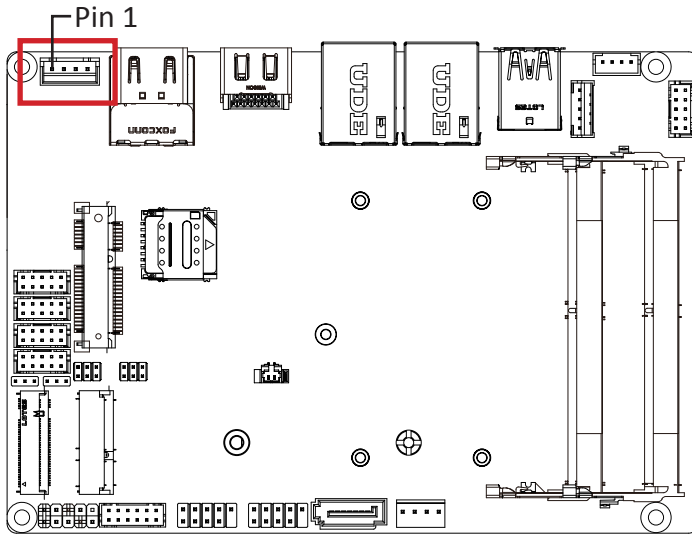
Pin No.	Definition	Pin No.	Definition
1	PCIE WAKE	2	3.3V
3	NC	4	GND
5	NC	6	NC
7	PCIE Clock Request	8	SIM VCC
9	GND	10	SIM DATA
11	PCIE Clock n	12	SIM Clock
13	PCIE Clock p	14	SIM Reset
15	GND	16	UIM VPP3
17	NC	18	GND
19	NC	20	WLAN_DISABLE
21	GND	22	Reset

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
ASOB221-S99Q-7H	FOXCONN

2.2.19 DC_IN (DC IN 1 x 4 pin power connector)

20



DC IN power connector

DC_IN



Connector PN

753-81-04TW00

Vendor

PINREX

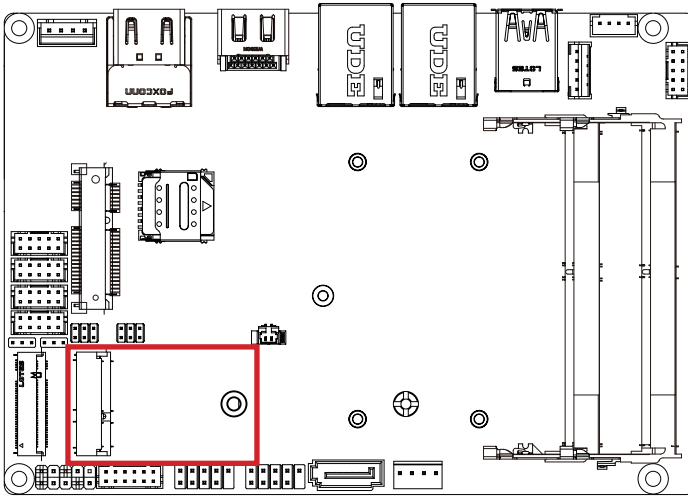
Connector type

1x4pin header, pitch 2.5mm

Pin No.	Definition
1	GND
2	DCIN
3	DCIN
4	GND

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

21



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		

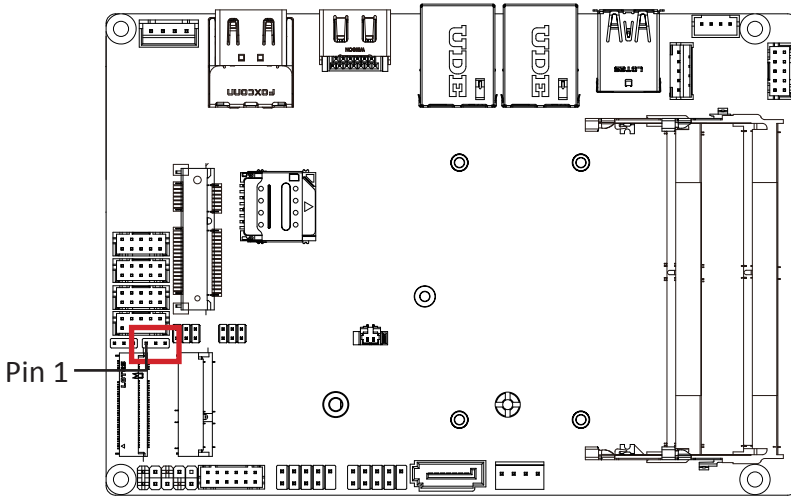
Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCIE_TXp	34	NC
37	PCIE_TXn	36	NC

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	SUSCLK
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
80152-4221	BELLWETHER

2.2.21 LVDS_HDMI (HDMI/eDP mode select jumper)

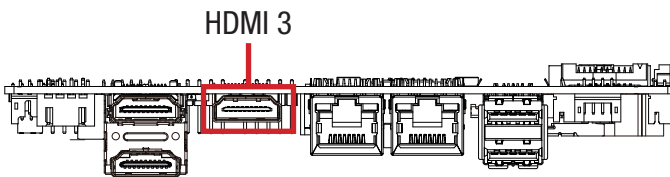
22



HDMI/eDP mode select jumper	
	1-2 Close: HDMI mode. (Default setting, HDMI 3 I/O is Enable)
	2-3 Close: eDP mode. (HDMI 3 I/O Port is Disable)

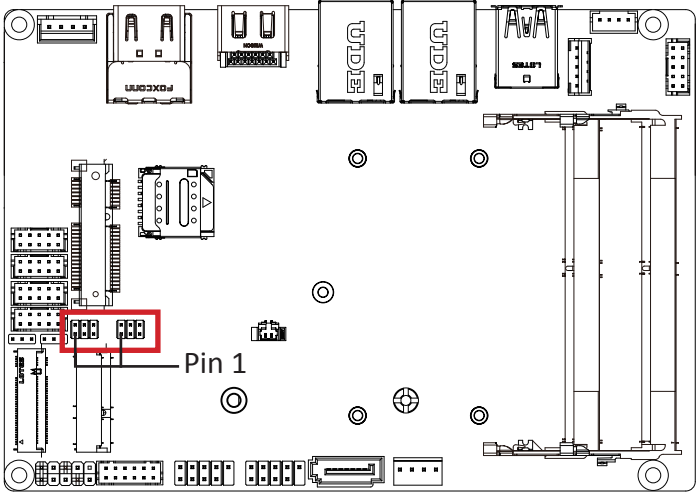
Pin No.	Definition
1	HDMI
2	COMM
3	eDP

Connector type
1x3pin header, pitch 2.0mm



2.2.22 JCOM1, JCOM3 (RI pin RI/5V/12V Select jumper for COM1 & COM2 port)

23

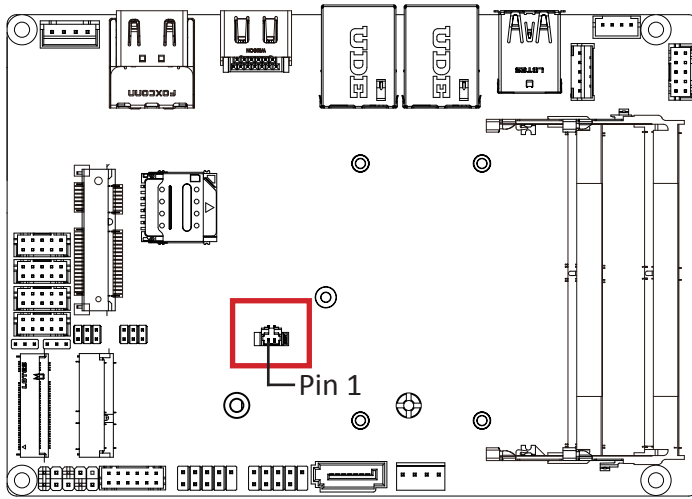


JCOM1, JCOM3 Jumper Select	
	1-2 Close: 5V (Power COM)
	3-4 Close: RI (Stand COM) (Default setting)
	5-6 Close: 12V (Power COM)

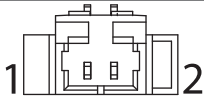
Connector PN	Vendor
222-97-03GBE1	PINREX
Connector type	
2x3pin header, pitch 2.0mm	

2.2.23 Battery (Battery Connector)

24



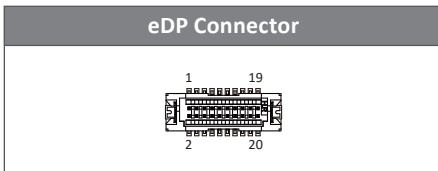
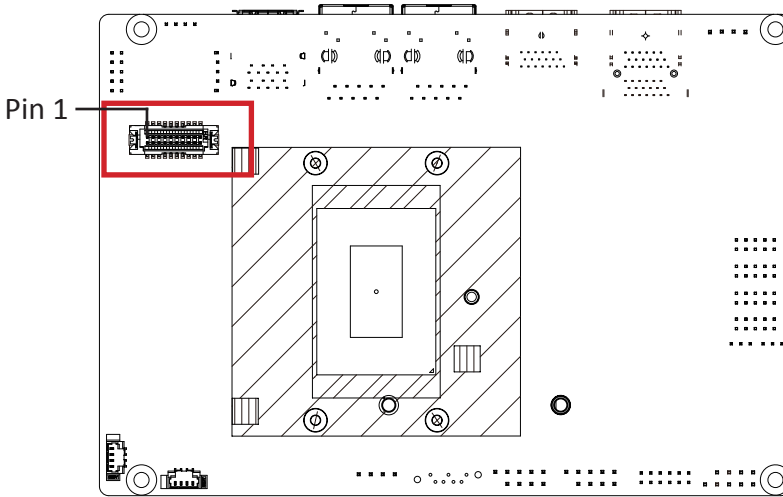
Battery Cable Connector



Pin No.	Definition
1	3.3V RTC
2	GND

2.2.24 EDP (eDP Connector)

25



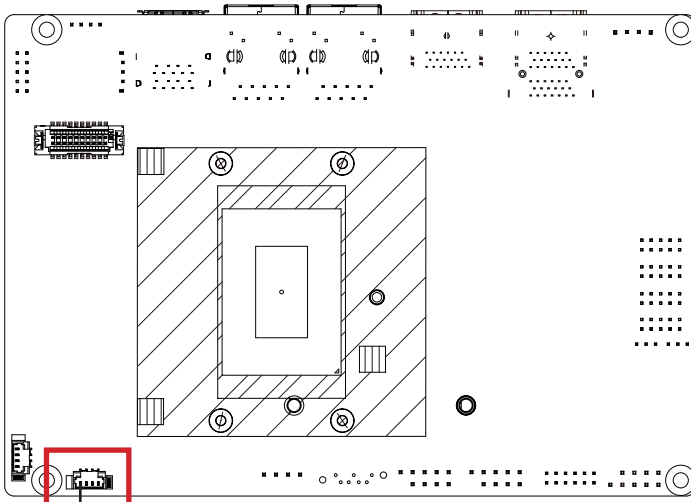
Pin No.	Definition	Pin No.	Definition
1	GND	2	GND
3	EDP_TXn0	4	EDP_TXn3
5	EDP_TXp0	6	EDP_TXp3
7	GND	8	eDP_DET#
9	EDP_TXn1	10	GND
11	EDP_TXp1	12	EDP_AUXn
13	GND	14	EDP_AUXp
15	EDP_TXn2	16	GND
17	EDP_TXp2	18	EDP_HPDP
19	5V	20	3.3V

Connector PN	Vendor
50286-02071-001	ACES
A1252WV-SF-2X10PN6BG1G00L	JOINT-TECH

Connector type
2x10pin header, pitch 1.25mm

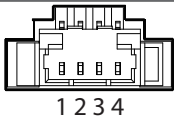
2.2.25 CPU_FAN (CPU FAN Connector)

26



Pin 1

CPU FAN connector



1 2 3 4

Connector PN

85205-0470N

Vendor

ACES

A1250WV-S-04PC

JOINT-TECH

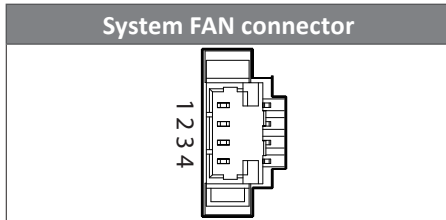
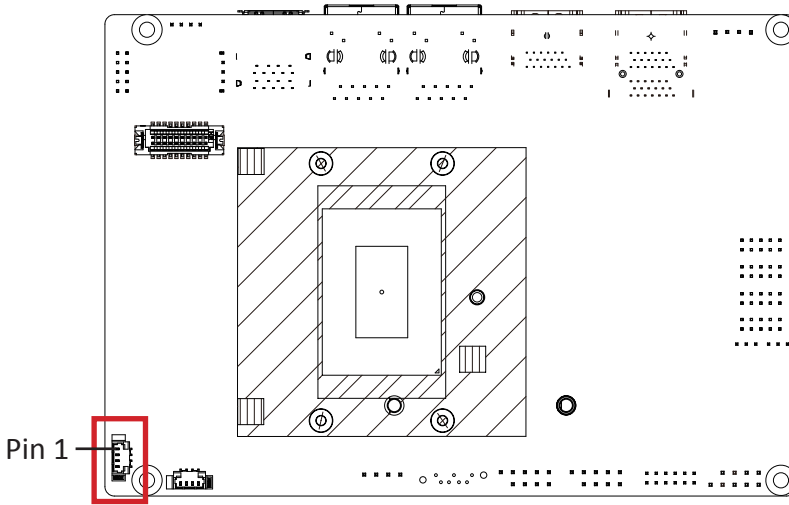
Connector type

1x4pin header, pitch 1.25mm

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

2.2.26 SYS_FAN (System FAN Connector)

27



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

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

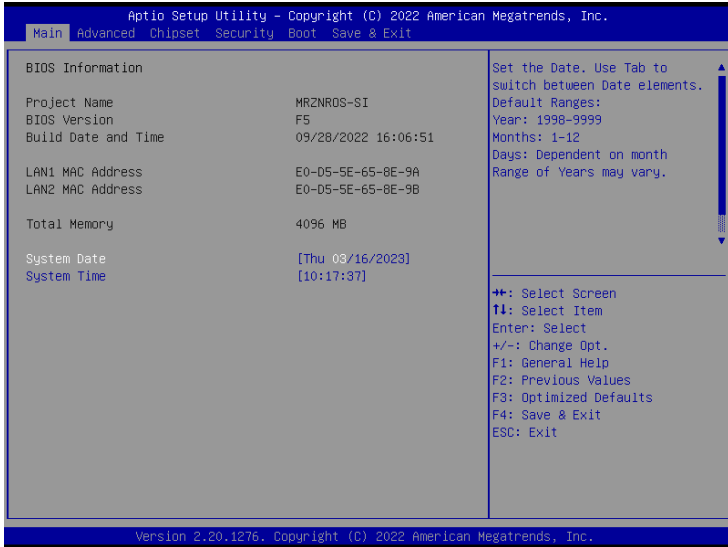
Once the system is power on, press the key as soon as possible to access into BIOS Setup program.

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

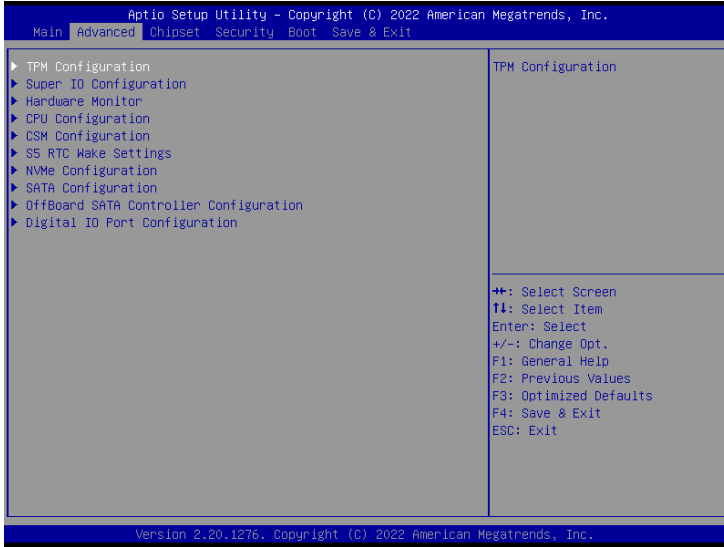
The main menu shows the basic system information. Use arrow keys to move among the items.



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
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)

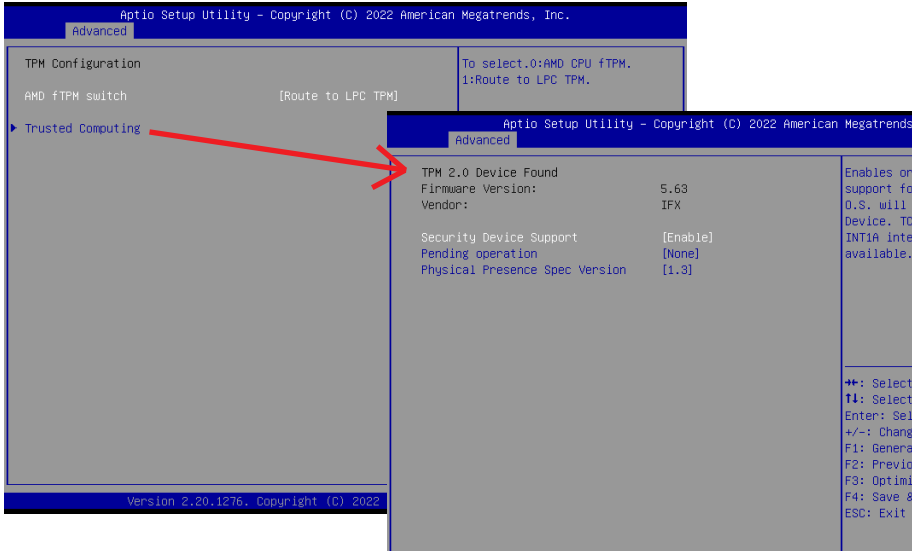
3.3 Advanced

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.



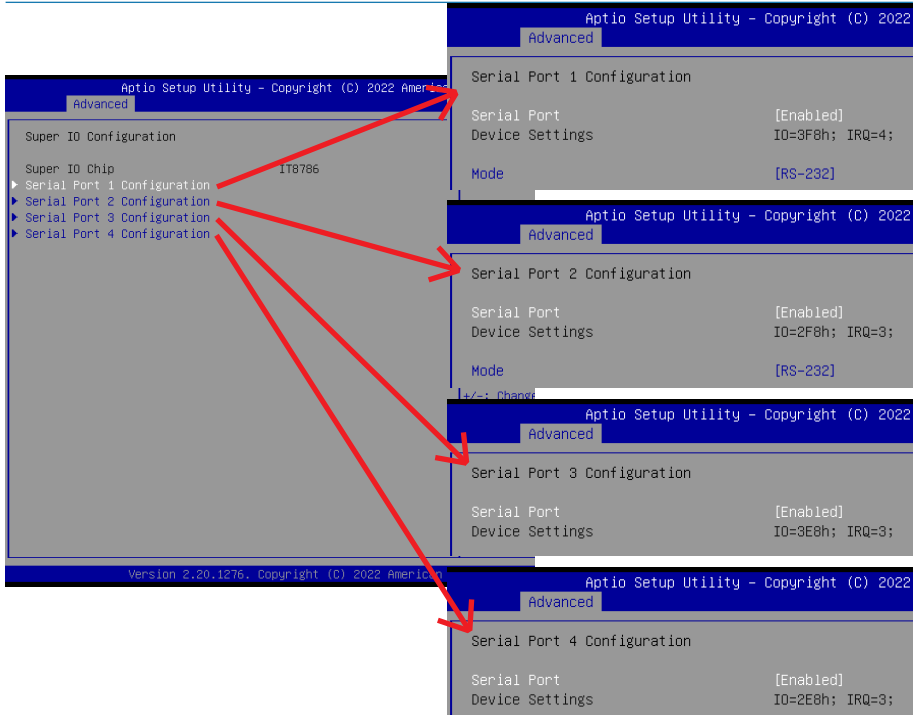
3.3.1 TPM Configuration

Use TPM Configuration submenu to choose TPM interface.



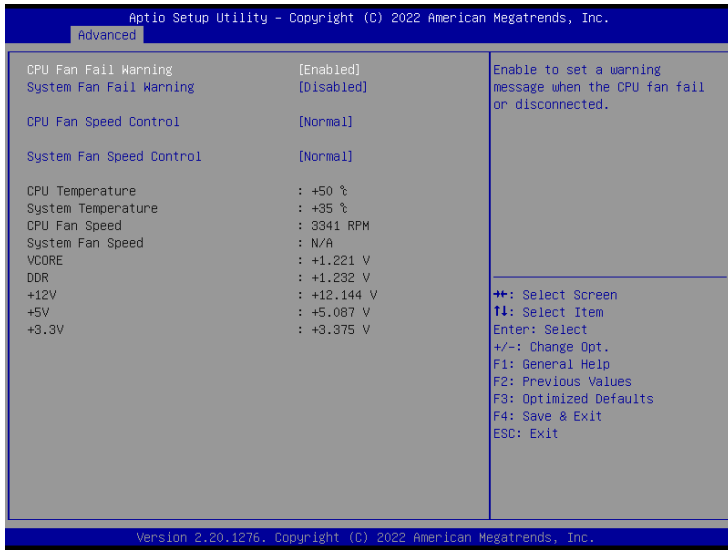
Item	Description
AMD fTPM switch	AMD CPU fTPM : Enables AMD CPU firmwarm TPM Route to LPC TPM : Enables to route to LPC TPM (Default setting)
Trusted Computing	Security Device Support : Enabled : Enables TPM feature (Default setting) Disabled : Disables TPM feature Pending operation : None : No execution will be conducted (Default setting) TPM clear : Set to clear data on TPM Physical Presence Spec Version : Choose PPI spec version Option items : 1.2 or 1.3 (Default setting)

3.3.2 Super IO Configuration



Item	Description
Super IO Chip	Shows Super I/O chip model
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
Serial Port 2 Configuration	Device settings : Display the specified Serial Port base I/O address and IRQ Mode : Choose RS-232, RS-422, or RS-485 feature
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
Serial Port 4 Configuration	Device settings : Display the specified Serial Port base I/O address and IRQ

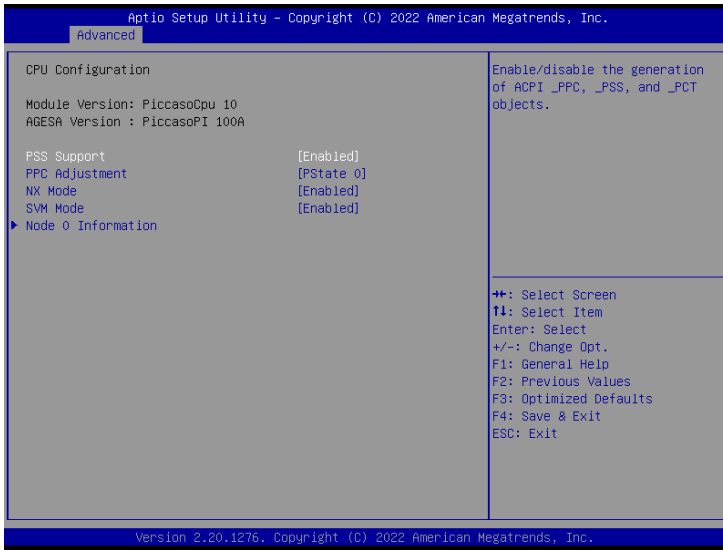
3.3.3 Hardware Monitor



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

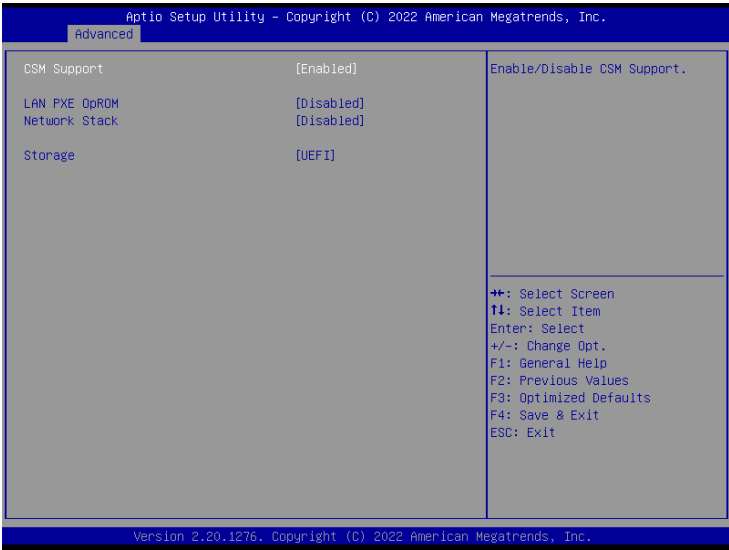
3.3.4 CPU Configuration

This submenu shows detailed CPU informations.



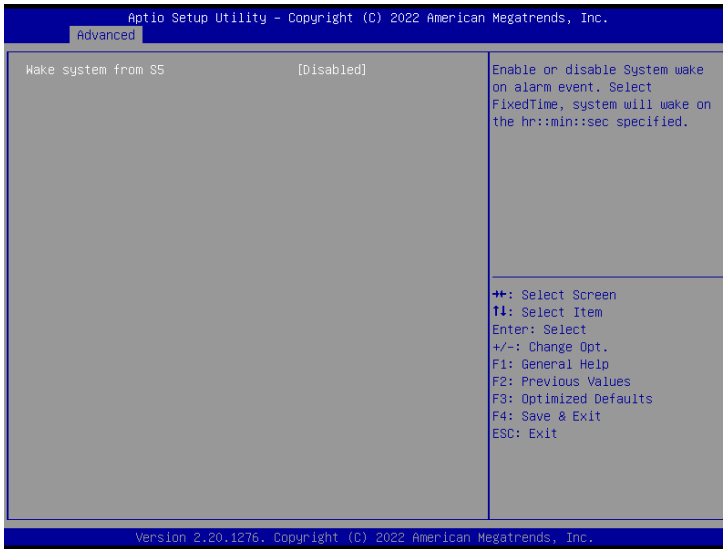
Item	Description
PSS Support	Allows you to get PState information Enabled : Enables to get PState information (Default setting) Disabled : Disables to get PState information
PPC Adjustment	To adjust the PState of the CPU Option items : PState 0 (Default setting), PState 1, PState 2
NX Mode	Enables or Disables the No-execute page-protection function. Enabled : Enables Turbo Mode (Default setting) Disabled : Disables Turbo Mode
SVM Mode	Enables or Disables the CPU virtualization funtion. Enabled : Enables SVM Mode (Default setting) Disabled : Disables SVM Mode
Node 0 Information	Shows AMD CPU information

3.3.5 CSM Configuration



Item	Description
CSM Support	Choose UEFI or Legacy Mode Disabled : UEFI Mode only Enabled : Enables Legacy Mode feature (Default setting)
LAN PXE OpROM	When system is power on, install LAN driver under Legacy mode. Disabled : Disables LAN PXE OpROM (Default setting) Enabled : Enables LAN PXE OpROM
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
Storage	Allows to select whether to enable UEFI or Legacy Storage option ROM Do not launch : Disables option ROM UEFI : Enables UEFI option ROM only (Default setting) Legacy : Enables Legacy option ROM only

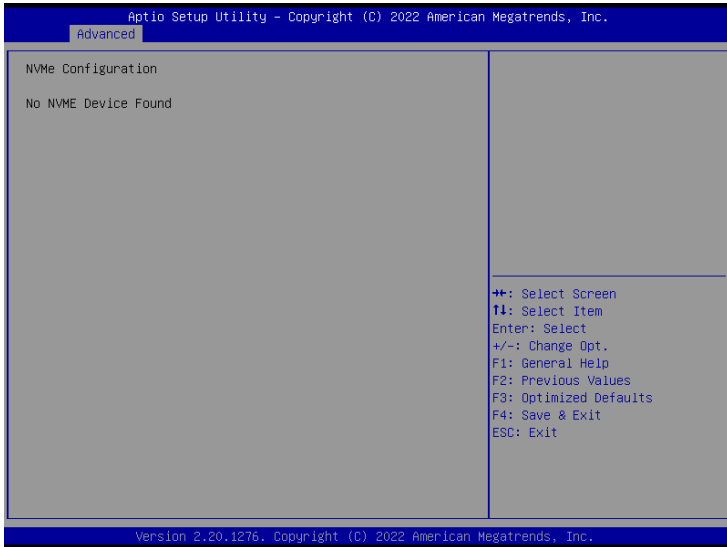
3.3.6 S5 RTC Wake Settings



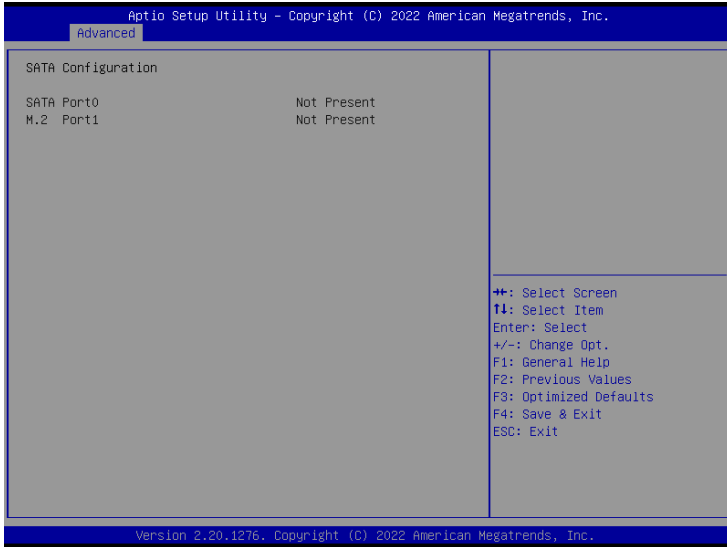
Item	Description
<p>Wake system from S5</p>	<p>Enable or Disable System to wake on a specific time. Disabled : Disables system to wake on a specific time (Default setting) Fixed Time : Enables system to wake on a specific time (Format : hr : min : sec)</p>

3.3.7 NVMe Configuration

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

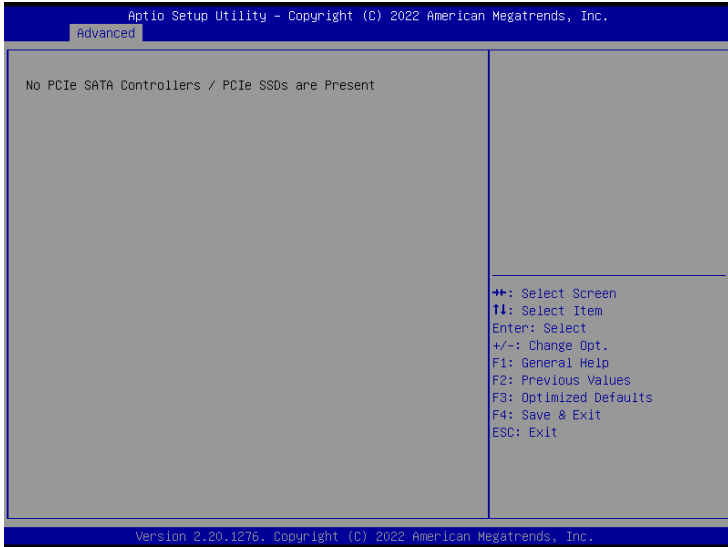


3.3.8 SATA Configuration

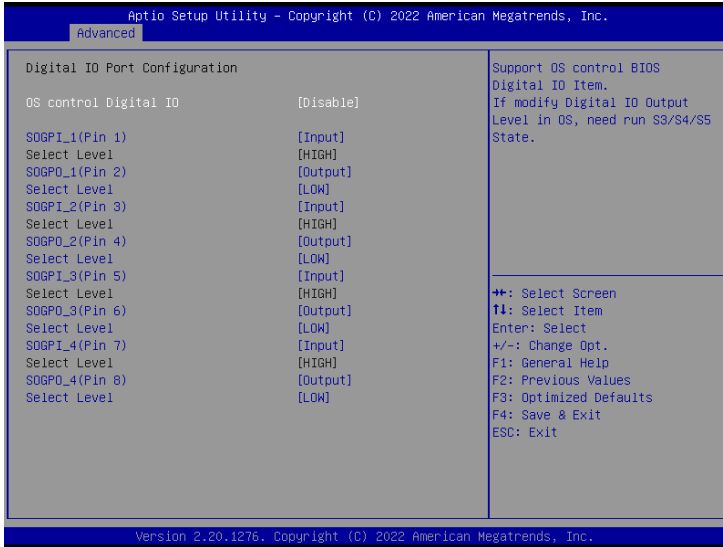


Item	Description
SATA Port 0	shows 2.5" SATA HDD/SSD information
M.2 Port 1	shows M.2 SATA interface SSD information

3.3.9 Offboard SATA Controller Configuration

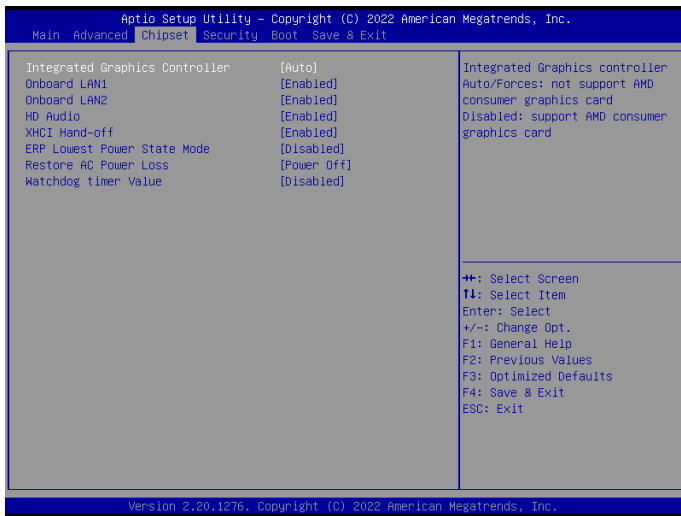


3.3.10 Digital IO Port Configuration



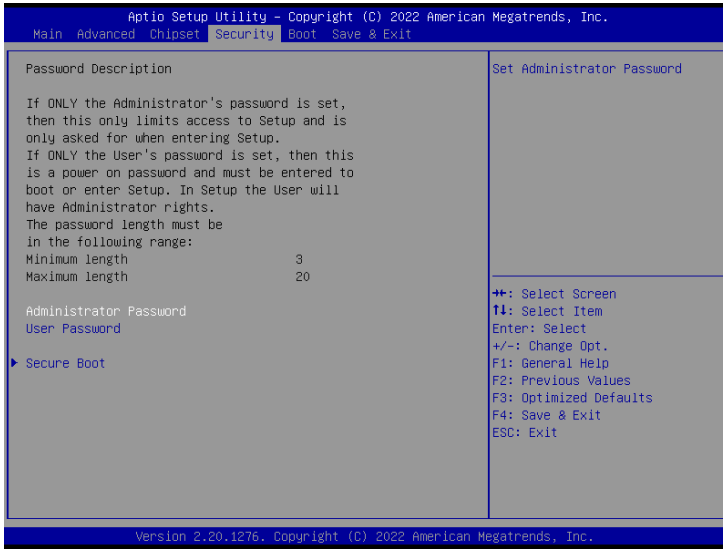
Item	Description
OS control Digital IO	Disabled : If Digital IO Output value/level is modified in OS, they will not be memorized and kept. (Default setting) Enabled : If Digital IO Output value/level is modified in OS, they will be memorized and kept.
SOGPI_1 (Pin 1) SOGPO_1 (Pin 2) SOGPI_2 (Pin 3) SOGPO_2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

3.4 Chipset

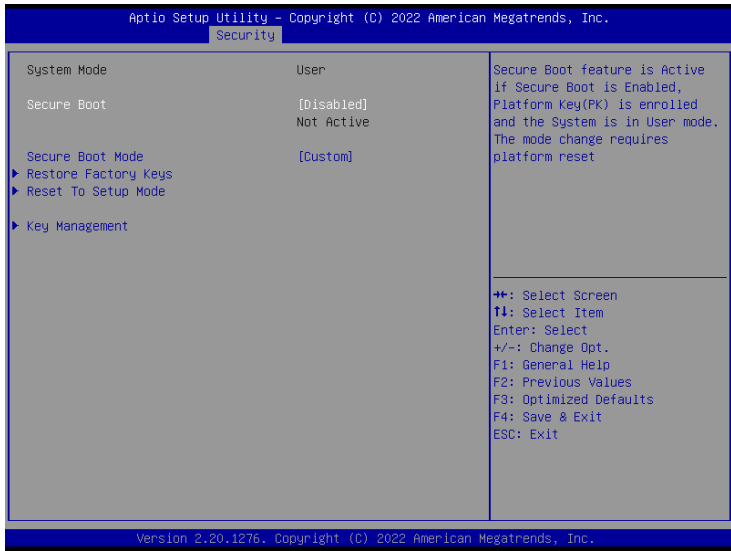


Item	Description
Integrated Graphics Controller	Enables or disables the onboard graphics function Auto : System will automatically enables or disables the onboard graphics depending on the graphics card being installed. (Default setting) Forces : Disables the onboard graphics.
Onboard LAN1 Onboard LAN2	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
XHCI Hand-off	Enable/Disable XHCI Hand-off function Enabled : Enables XHCI Hand-off function (Default setting) Disabled : Disables XHCI Hand-off function
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 occurred Power on : System power on when the power is back Power off : Do not power on when the power is back (Default setting) Last state : Restore the system to the state before power loss occurs
Watchdog Timer Value	Enable/Disable Watchdog Timer function Option items : Disabled (Default setting), 30 Seconds, 60 Seconds

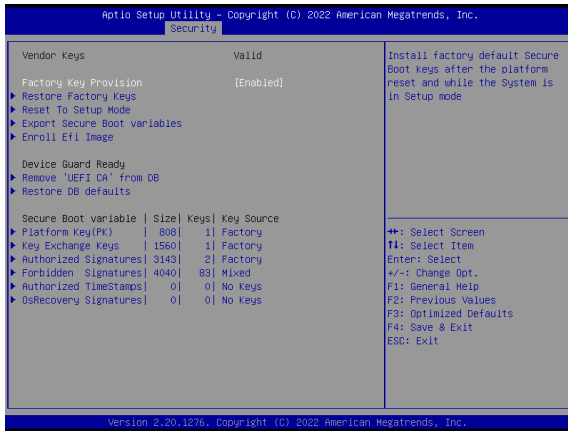
3.5 Security



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

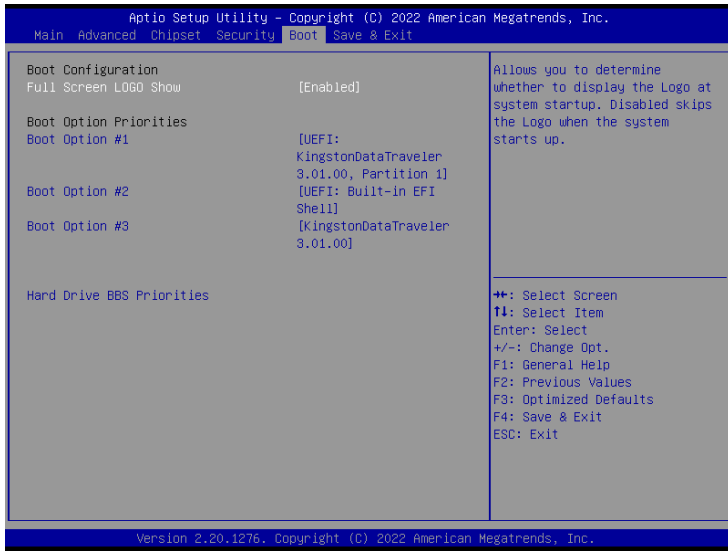


Item	Description
Factory Key Provision	Install factory default Secure Boot keys after the platform reset and while the system is in Setup mode Enabled : Enables Factory Key Provision (Default setting) Disabled : Disables Factory Key Provision
Restore Factory Keys	To restore factory settings Yes : Agree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

Item	Description
Platform Key (PK)	These items allows you to enroll factory defaults or load Certificates from a file.
Key Exchange Keys	
Authorized Signatures	
Forbidden Signatures	
Authorized TimeStamps	
OsRecovery Signatures	

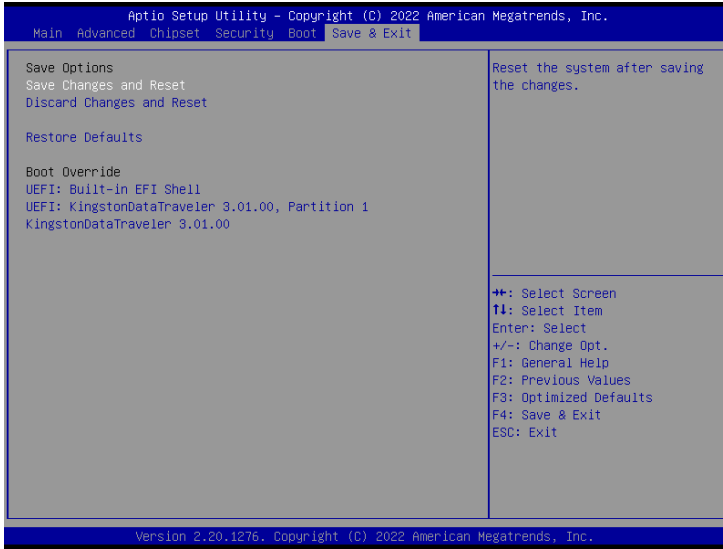
3.6 Boot

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)
Boot Option #1 Boot Option #2 Boot Option #3	Shows the information of the storage that be installed in the system Choose/set the boot priority
Hard Drive BBS Priorities	Set the system boot order

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
Boot Override	Boot override