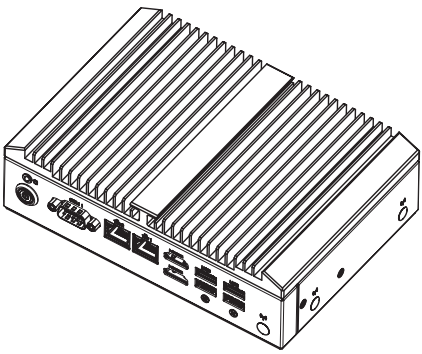
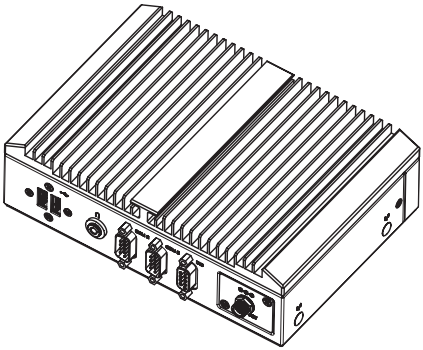
QBiX-Pro-WHLA8565H-A2
QBiX-Pro-WHLA8265H-A2
QBiX-Pro-WHLA8145H-A2

QBiX-Pro Industrial Embedded System
Quick Start Guide





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Packing List

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

Item	Quantity
System kit	1
19V / 90W(65W) adapter	1
HDD screw, M3 x 8L	4
Power cord (May vary based on local distribution)	1
SATA Cable	1
Exsiccator (10g)	1
Thermal pad for HDD	2
Thermal pad for DIMM2	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.

High Temperature Warning

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

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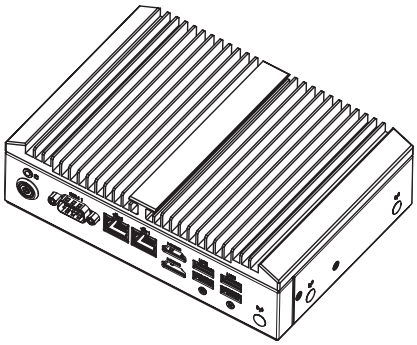
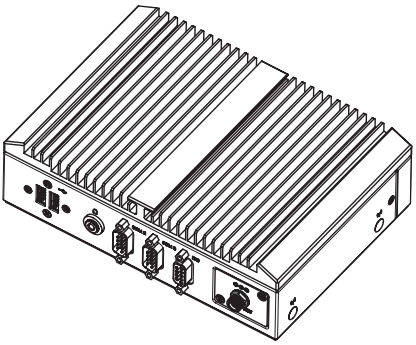
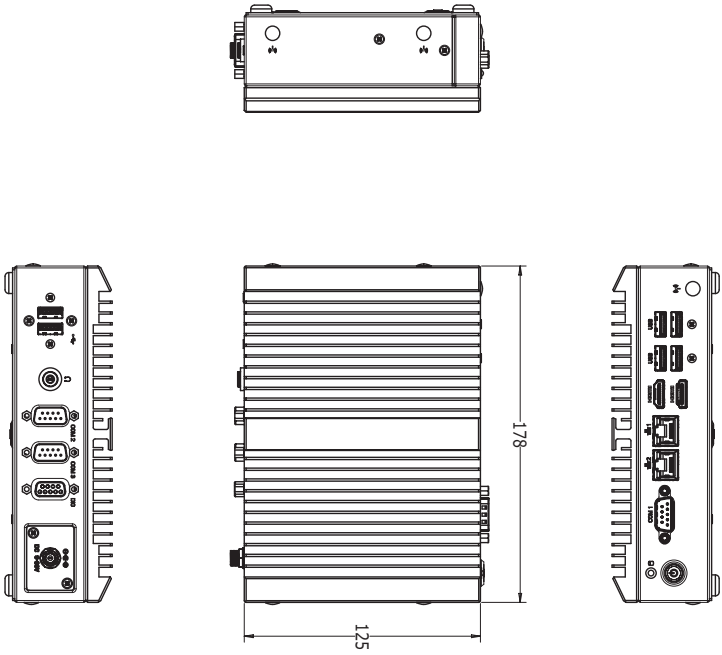
Chapter 1

Chapter 1 - Product Specifications



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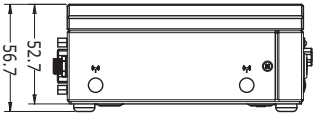
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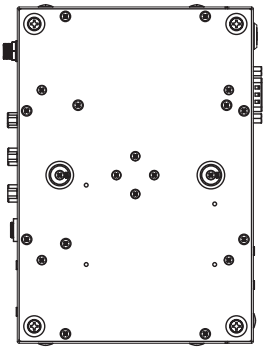


1.1 Specifications

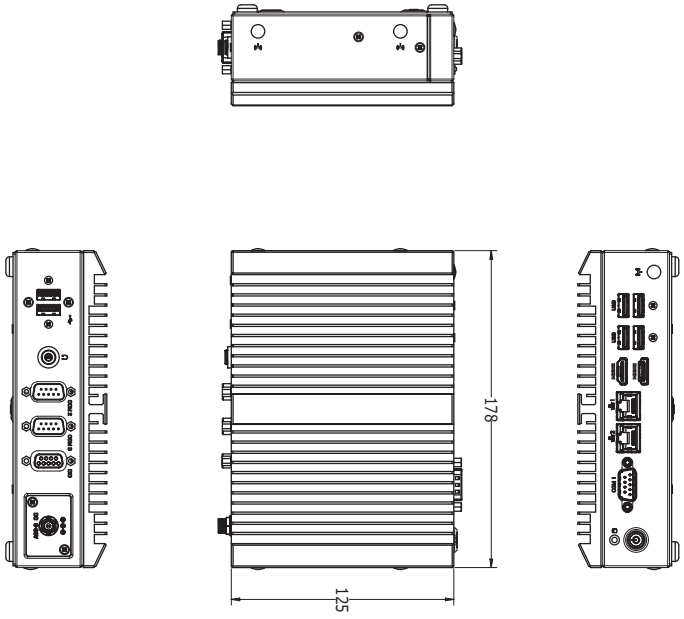
System	QBiX-Pro-WHLA8565H-A2 (QP-8565A-SI)	QBiX-Pro-WHLA8265H-A2 (QP-8265A-SI)	QBiX-Pro-WHLA8145H-A2 (QP-8145A-SI)
Dimension	System Size : 178W x 125D x 52.7H (mm)		
CPU	Intel® Core™ i7-8565U Processor 14nm, 4 cores, 8 threads 1.8GHz, up to 4.6 GHz, TDP 15W	Intel® Core™ i5-8265U Processor 14nm, 4 cores, 8 threads 1.6GHz, up to 3.9 GHz, TDP 15W	Intel® Core™ i3-8145UE Processor 14nm, 2 cores 2.2GHz up to 3.90 GHz, TDP 15W
Chipset	SOC		
Memory	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Dual channel memory architecture Support DDR 2400MHz		
Ethernet	2 x GbE LAN ports (Intel® i219V and Intel® i211AT)		
Graphic support	Integrated Graphics Processor - Intel® UHD Graphics 620 support 2 x HDMI 1.4 port, supporting a maximum resolution of 4096 x 2160@30 Hz		
Audio	Realtek ALC269 High Definition Audio		
Storage	1 x SATA 6 Gb/s port (Support 2.5'' Hard drive/SSD)		
Expansion Slots	1 x M.2 slot (Support NGFF-2230 Wifi/ BT) 1 x M.2 slot (Supports NGFF-2280 SATA/ PCIeX4) 1 x Mini-PCIe slot (PCIeX1+USB2.0)ws Sim Slot		
Front I/O	1 x Power bottom 1 x HDD LED 2 x HDMI 2 x RJ45 4 x USB 3.1 Gen 2 1 x RS-232/422/485 (1 x RS-232, 5/12V/ RI)		
Rear I/O	2 x USB 2.0 2 x RS232 1 x GPIO (8bits) 1 x Headphone Jack 1 x Screw type DC input		
Side I/O	2 x Antenna option		
TPM	—		

System	QBiX-Pro-WHLA8565H-A2 (QP-8565A-SI)	QBiX-Pro-WHLA8265H-A2 (QP-8265A-SI)	QBiX-Pro-WHLA8145H-A2 (QP-8145A-SI)
Power	DC 9~36V (Full Range)		
Operation Temperature	Operating temperature: 0°C to 50°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -20°C to 70°C Non-operating humidity: 0%-95% (non-condensing) Use wide temperature range memory and storage		
Vibration During Operation	Operation: IEC 60068-2-64, 5 Grms, random, 5 ~ 500 Hz, 1 hr / Per Axis, with SSD/M.2 2280 Non-operation: IEC 60068-2-6, 2 G, Sine, 10 ~ 500 Hz, 1 Oct/min, 1 hr / Per Axis		
Shock During Operation	Operation: IEC 60068-2-27, 50 G, half sine, 11 ms duration, With SSD		
Packaging Content	Box Packing Capacity: 5 pcs Carton size: 500 x 327 x 217 (mm) Content: 90W(65W)adapter & power cord		
Order Information	System: 6BQP8565AMR-SI	System: 6BQP8265AMR-SI	System: 6BQP8145AMR-SI

Chapter 2

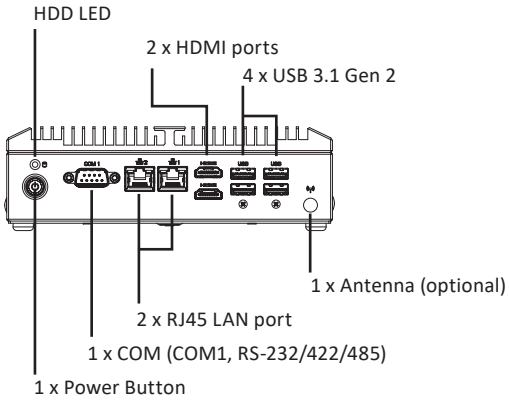
Chapter 2 – QBiX-Pro-WHLA8565H-A2 (QP-8565A-SI)
QBiX-Pro-WHLA8265H-A2 (QP-8265A-SI)
QBiX-Pro-WHLA8145H-A2 (QP-8145A-SI)
Industrial Embedded System Kit

2.1 Dimension

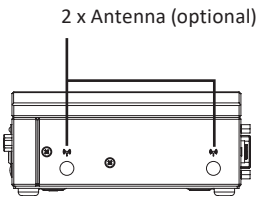


2.2 Getting Familiar with Your Unit

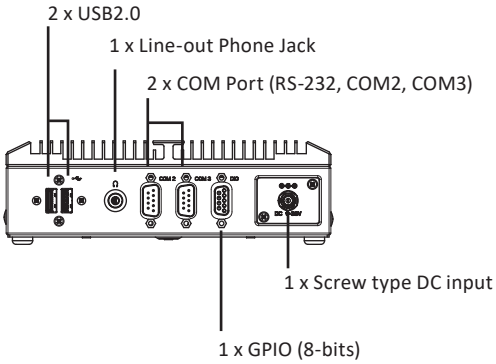
[Front Side]



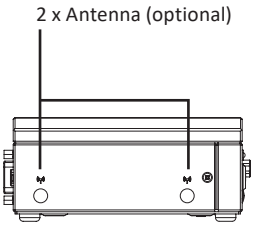
[Left Side]



[Rear Side]

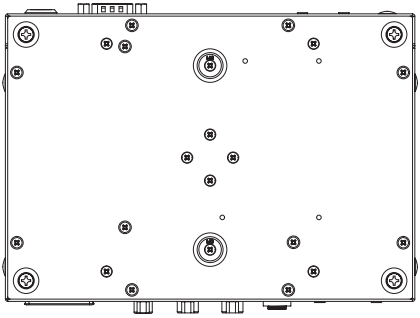


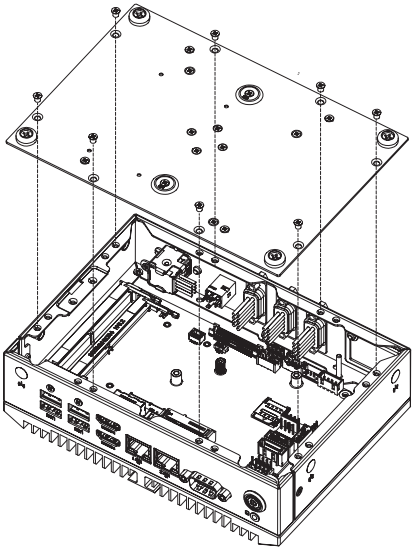
[Right Side]



[Install]

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

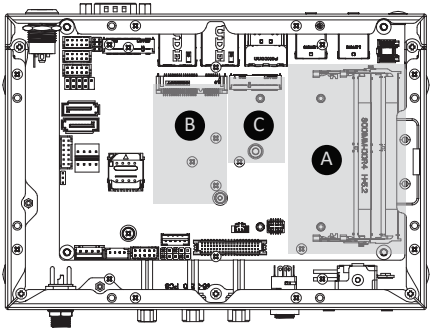


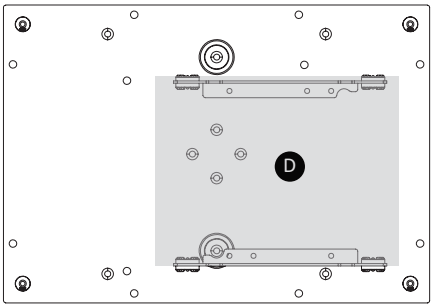


[Bottom PCB Side]

	Information
A	2 x DDR4 SO-DIMM sockets, DDR4 2400 MHz, Max. Capacity 32 GB
B	1 x Min PCIe slot (PCIeX1 + USB2.0) with Sim Slot

	Information
C	1 x M.2 slot (Support NGFF-2230 WiFi/BT) 1 x M.2 slot (Supports NGFF-2280 SATA)
D	2.5'' Hard drive/SSD



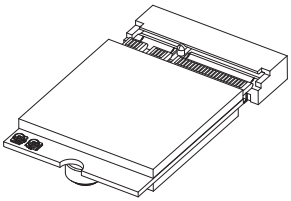


2.3 A) Wireless Module: How to safely install the Module (Wireless Module inclusion may vary based on local distribution)

1

Carefully insert the wireless module into the M.2 slot

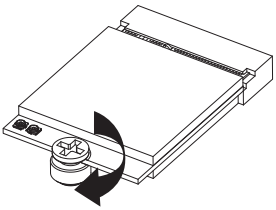
小心地將無線模組安裝於M.2插槽中。



2

Lock the screw in the middle.

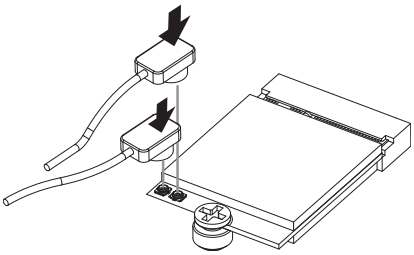
鎖入固定於無線模組中央頂端的螺絲。



3

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

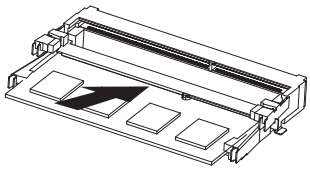
向下安裝連結於無線模組左側頂端天線。



2.4 B) Memory Installation: DDR3L SO-DIMM

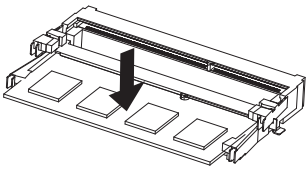
1

Carefully insert SO-DIMM memory modules.
小心地由下至上將 SO-DIMM 記憶體安裝於記憶體插槽。



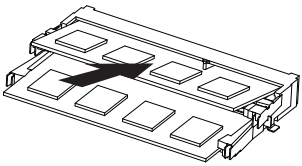
2

Push down until the modules click into place.
當記憶體固定於插槽後，再輕輕下壓至定點。



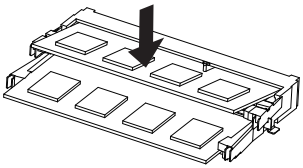
3

Carefully insert SO-DIMM memory modules.
安裝下層記憶體後，重覆前述動作安裝上層記憶體。



4

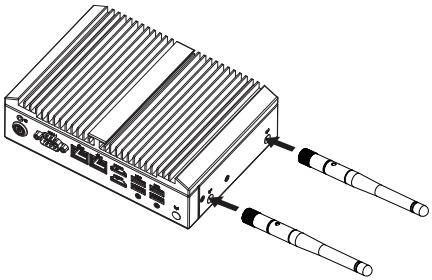
Push down until the modules click into place.
當記憶體固定於插槽後，再輕輕下壓至定點。



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

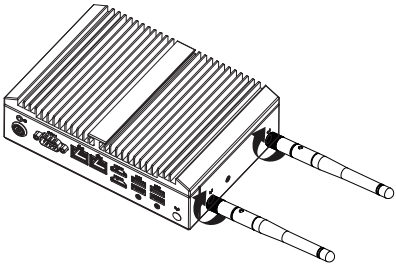
1

Carefully insert the antennas into the connectors.
小心地將天線插入天線插孔中。



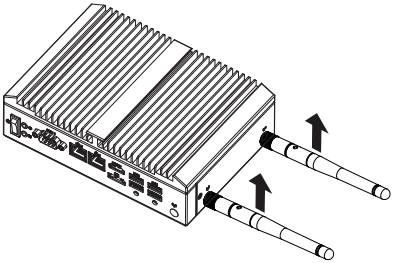
2

Turn the antennas clockwise until they are completely secure on the connectors.
握住天線接頭底端，按順時針方向將天線旋入插孔中牢牢固定。



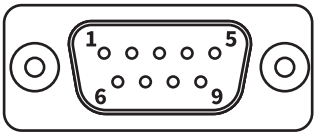
3

Flip up the antenna heads so that they are perpendicular to the machine.
栓緊後請將天線拉起朝上呈垂直狀。



2.6 Cable Pin-define

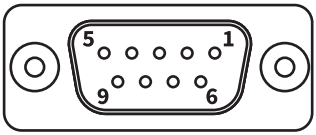
1. DB9 COM (25CF8-210620 S9R)



DB9 Pin Define

DB9 Pin	RS-232
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

2. DBP DIO (25CR5-050600 S9R)



DBP DIO Pin	Pin Name
1	GPO_1
2	GPO_2
3	GPO_3
4	GPO_4
5	GPI_1
6	GPI_2
7	GPI_3
8	GPI_4
9	5V

3. CIOPH (GPIO_PWR)

Pin	Pin Name
1	GPO_1
2	GPI_1
3	GPO_2
4	GPI_2
5	GPO_3
6	GPI_3
7	GPO_4
8	GPI_4
9	SMBUS CLK
10	SMBUS DATA
11	GND
12	5V
13	GND
14	PWRBTSW

2.7 Support

- For a list of tested memory, M.2, 2.5'' SSD, wireless adapters and OS supported, go to: http://www.gigaipc.com
- To download the latest drivers and BIOS updates, go to: http://www.gigaipc.com
- For product support, go to: http://www.gigaipc.com

2.8 Safety and Regulatory Information

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

HIGH DEFINITION MULTIMEDIA INTERFACE

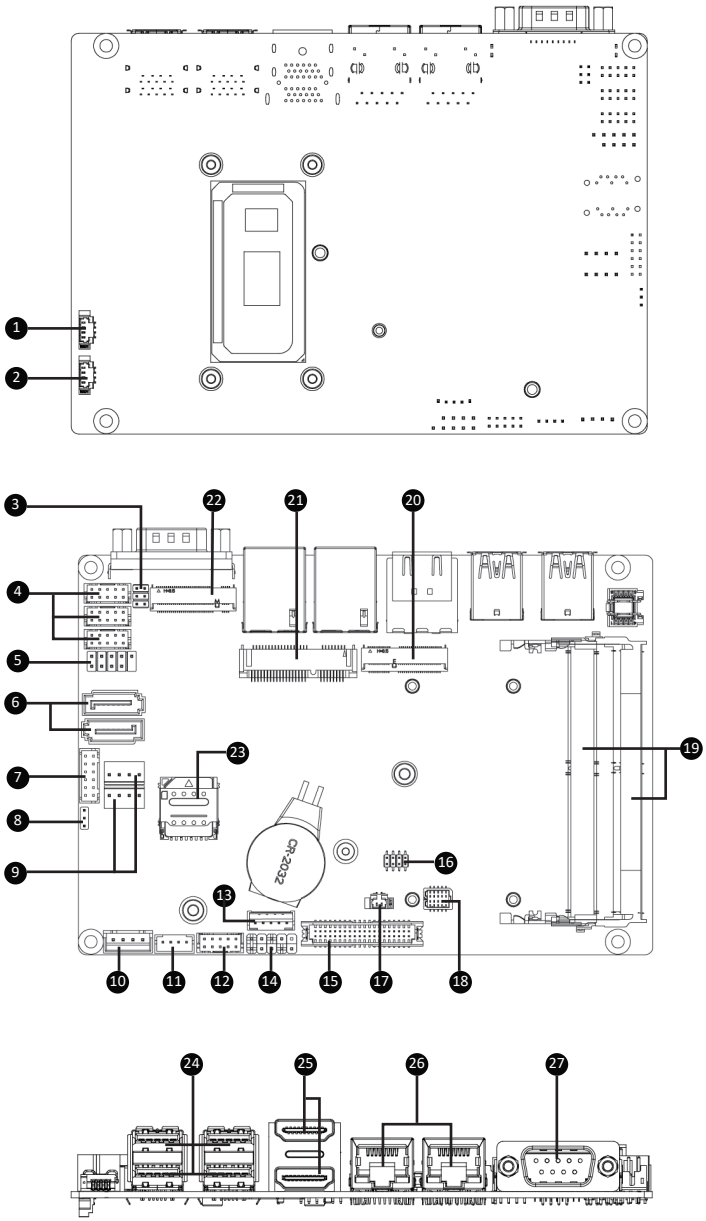
At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

Chapter 3

Chapter 3 – Hardware Information

GIGAIPC reserves the right to modify or revise the content at anytime without prior notice.

3.1 Jumpers and Connectors



No	Code	Description
1	CPU FAN	CPU FAN connector
2	SYS FAN	System FAN connector
3	JCOM1	COM1 (COM RI# pin RI#/5V/12V Select)
4	COM2 COM3 COM4	Serial port header
5	FUSB	USB 2.0 header
6	SATAIII1 SATAIII0	SATA 6GB/S Connector
7	GPIO_CNT	General purpose input/output header
8	SATAPW1 SATAPW2	SATA 6Gb/s power connector
9	AT_CN	AT/ATX power mode select jumper
10	DC_IN	DC IN 1x4pin power connector
11	SPK_OUT	Speaker out connector
12	FP_Audio	Front Audio connector
13	BKL_CN	Back light brightness control connector
14	SYS_PANEL	Front panel header
15	LVDS	LVDS connector
16	LSW	LVDS resolution jumper
17	BATTERY	Battery cable connector
18	LPC_CN	LPC Connector
19	SODIMM1 SODIMM2	DDR4 SO-DIMM Slot

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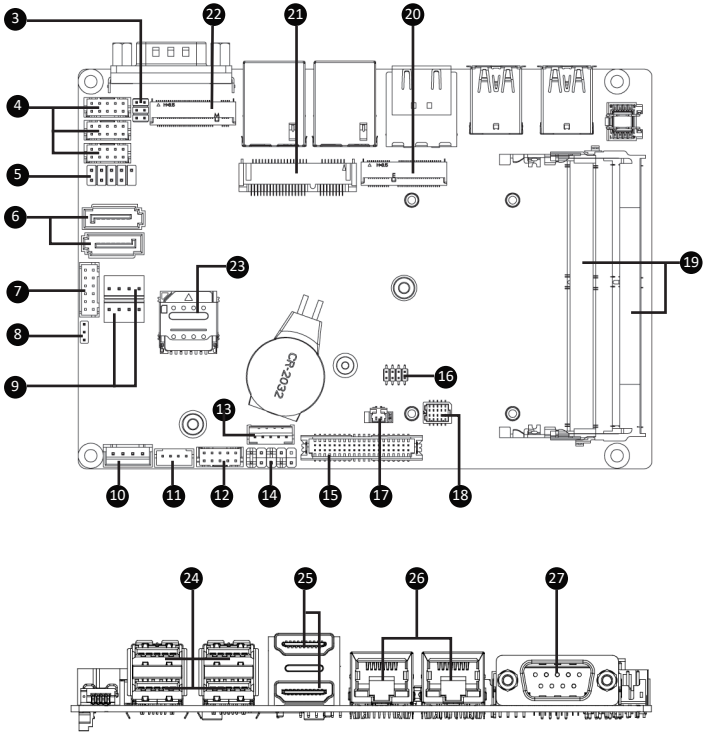
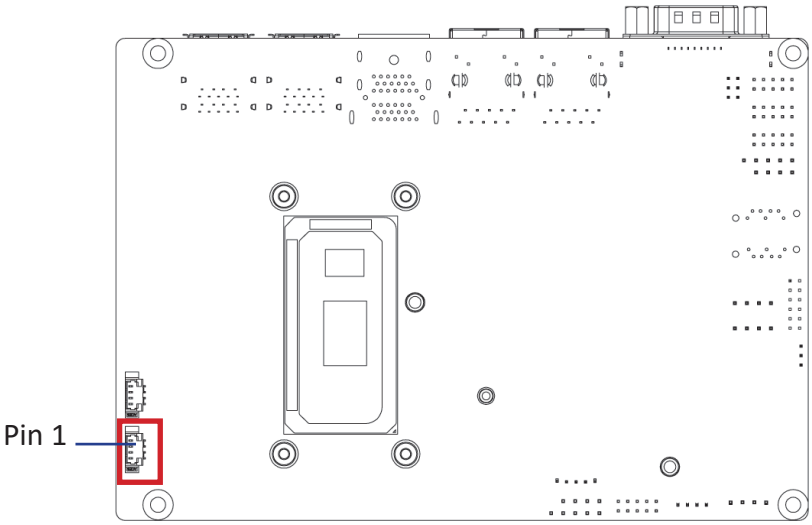
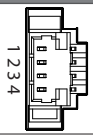
No	Code	Description
20	M2E1	M.2 Slot, E-key, NGFF2230, WiFi & Bluetooth module
21	MPCIE	Mini PCIe full size, support 3G/4G module
22	M2M1	M.2 Slot, SATA/PCIeX4, NGFF2280
23	SIM-CARD	Sim Card slot
24	RUSB1 RUSB2	USB3.1 Connector x 4
25	HDMI1 HDMI2	HDMI connector
26	LAN1, LAN2	LAN connector
27	COM1	Serial Port connector



3.2.1 CPU FAN (CPU FAN connector)

1



CPU FAN connector


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

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

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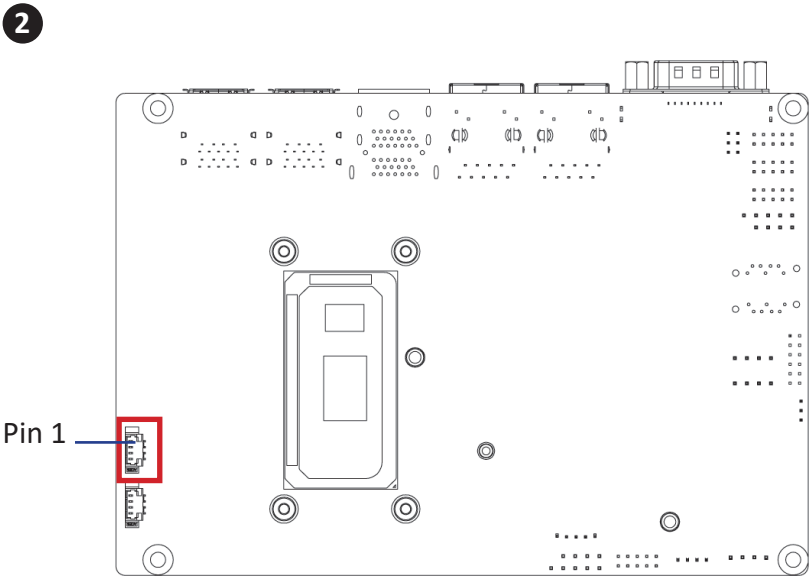
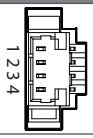
3.2.2 System FAN (System FAN connector)

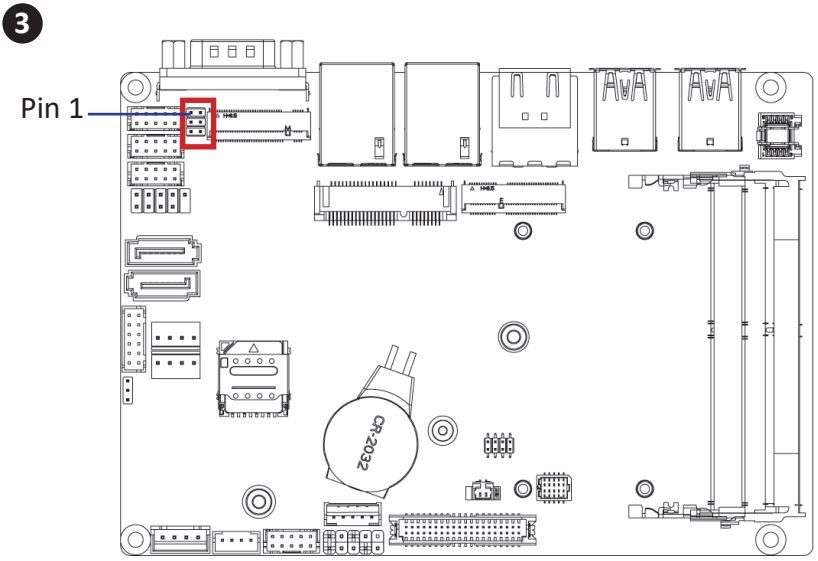


System FAN


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

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

3.2.3 JCOM1 (COM1 RI# pin RI#/5V/12V Select)



JCOM11 Jumper Select	
1 2 5 6	1-2 Close: 5V (Power COM)
1 2 5 6	3-4 Close: RI (Stand COM) (Default-Setting)
1 2 5 6	5-6 Close: 12V (Power COM)

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

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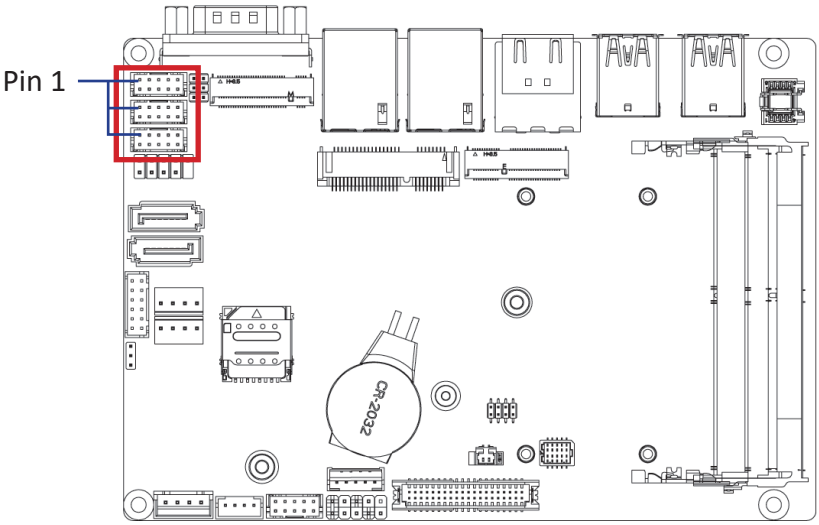
3.2.4 COM2, COM3, COM4 (Serial port header)

4



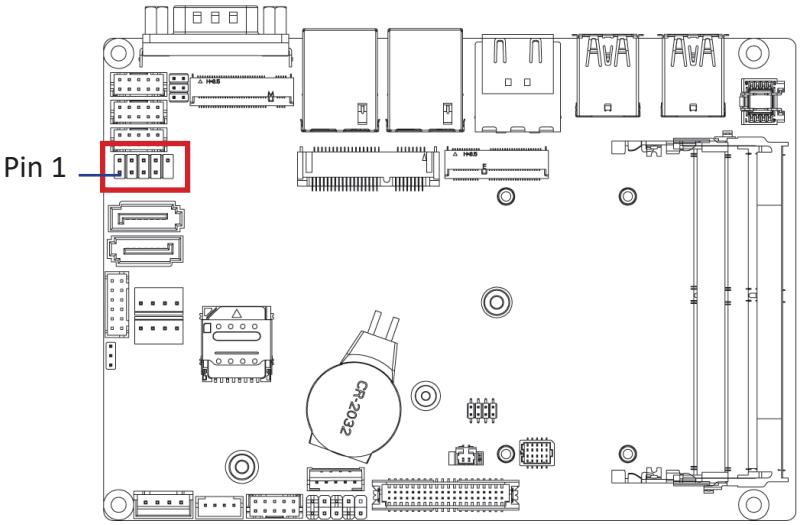
Serial Port Cable Connector

Connector PN	Vendor
725-81-10TW00	PINREX
A2004WV-2X05P46	JOINT-TECH

Pin No.	Definition
1	RXD
2	DCD
3	DTR
4	TXD
5	DSR
6	GND
7	CTS
8	RTS
9	No Connect
10	RI/ 5V/ 12V

3.2.5 FUSB (USB 2.0 header)

5



USB 2.0 Header
2 4 6 8 10 1 3 5 7 9

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

Pin No.	Definition
1	5V
2	5V
3	DX-
4	DY-
5	DX+
6	DY+
7	GND
8	GND
9	No Pin
10	No Connect

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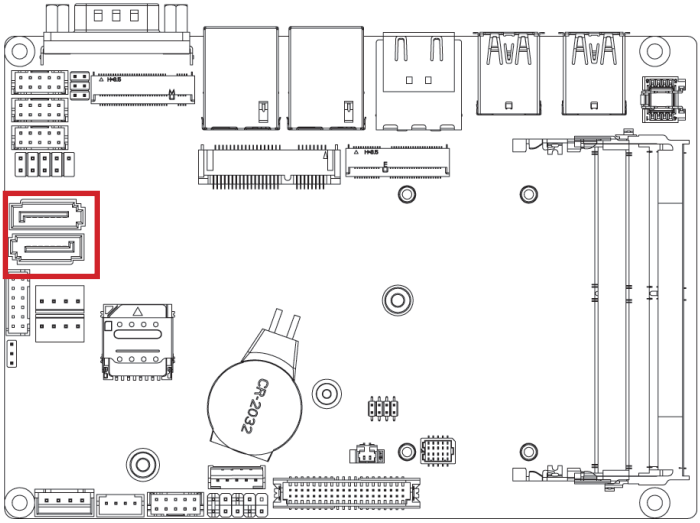
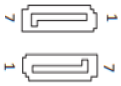
3.2.6 SATAIII_0, SATAIII_1 (SATA 6Gb/s Connector)

6



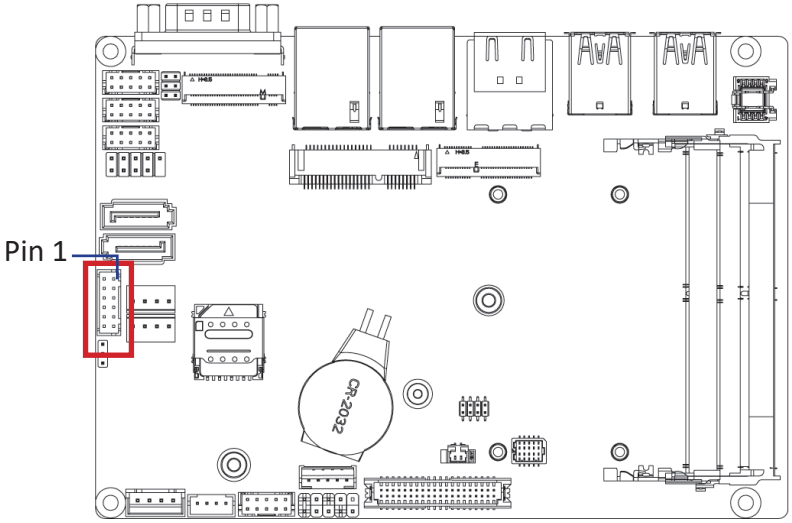
SATA Connector


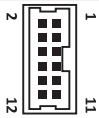
SATAIII_1,SATAIII_0	
Connector PN	Vendor
WATM-07ABNB2BAUW3	WINWIN
770-83-07SW19	PINREX

Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

3.2.7 GPIO_CNT (General Purpose input/output header)

7



GPIO Connector


Connector PN	Vendor
725-81-12TW00	PINREX
A2004WV-2X06P46	JOINT-TECH

Pin No.	Definition
1	GPO1
2	GPI1
3	GPO2
4	GPI2
5	GPO3
6	GPI3
7	GPO4
8	GPI4
9	SMB_CLK
10	SMB_DATA
11	5V
12	GND

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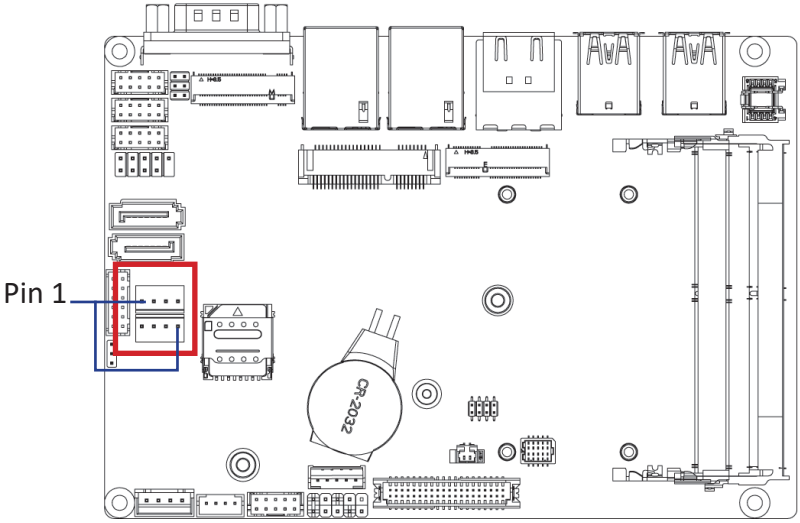
3.2.8 SATAPW1, SATAPW2 (SATA 6Gb/s power connector)

8



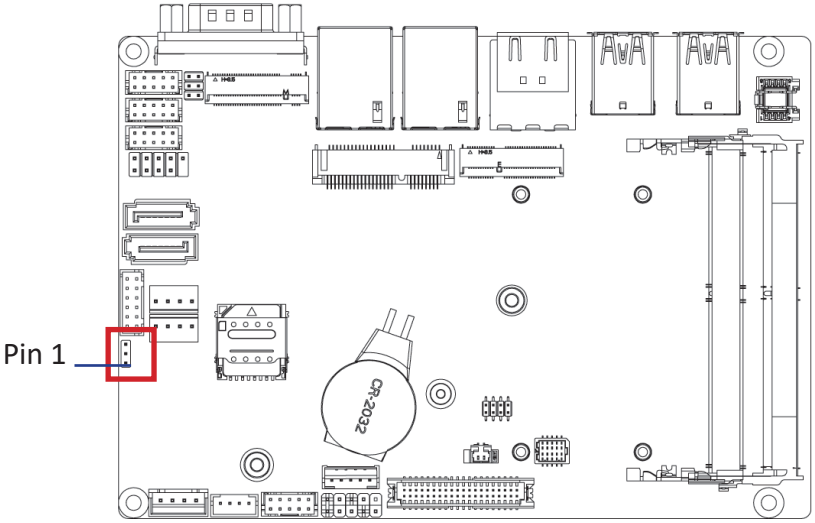
Hard Disk Power Connector
4 ▪▪▪▪ 1

Connector PN	Vendor
743-81-04TW00	PINREX
WF04Q2-3BJQ000	HORNGTONG

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

3.2.9 AT_CN (AT/ATX power mode select jumper)

9



AT/ATX power mode select jumper

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

Pin No.	Definition
1	AT MODE
2	TXD5
3	ATX MODE
Jumper setting 1-2 Close : AT mode. 2-3 Close : ATX mode.(Default setting)	

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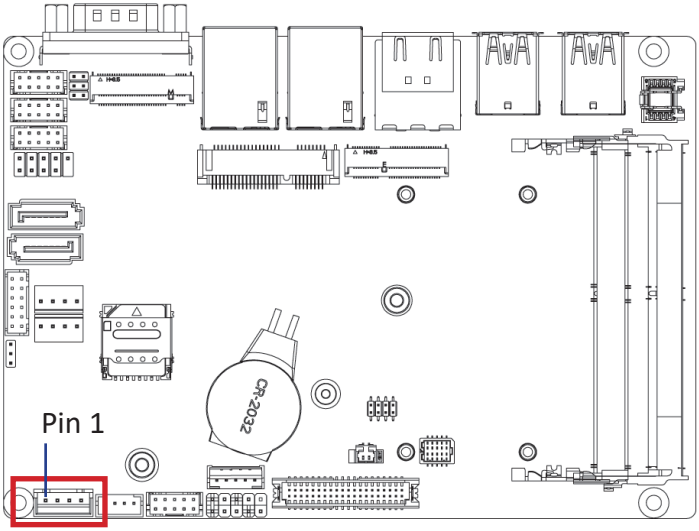
3.2.10 DC_IN (DC IN 1x4-pin power connector)

10



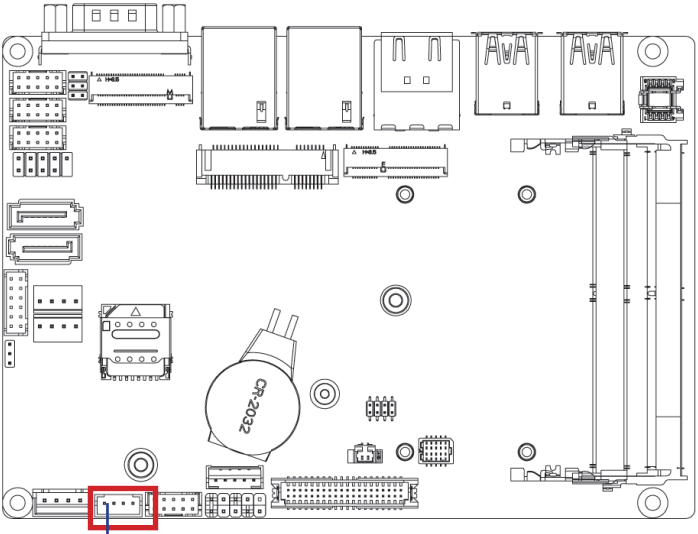
DC in connector

Connector PN	Vendor
753-81-04TW00	PINREX

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

3.2.11 SPK_OUT (Speaker out connector)

11



Audio Amplifie Connector
1

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

Connector PN	Vendor
721-81-045W00	PINREX
A2001WV-04P146	JOINT-TECH

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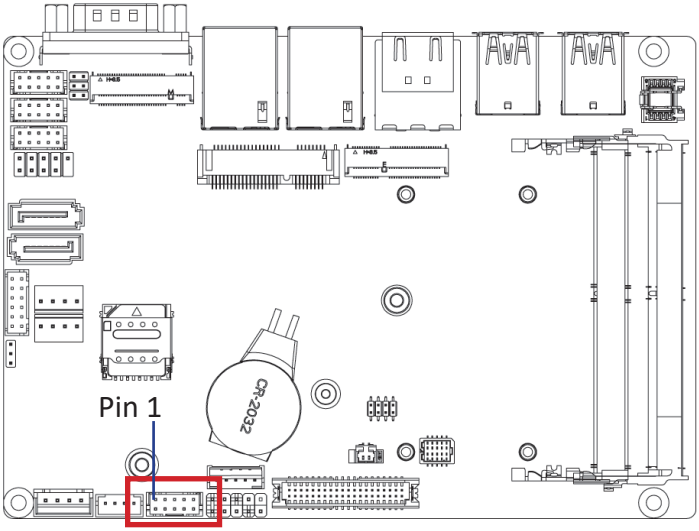
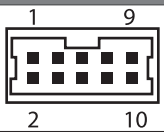
3.2.12 FP_Audio (Front Audio connector)

12



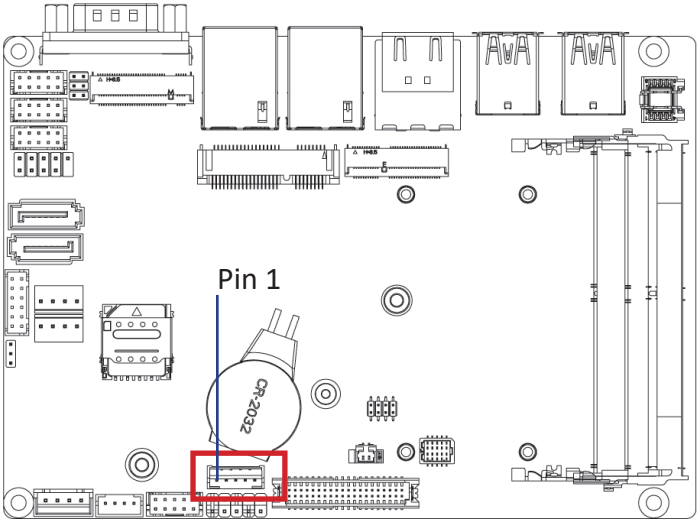
Front Audio Connector


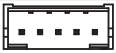
Pin No.	Definition
1	MIC_L
2	GND
3	MIC_R
4	Detect
5	HPOUT_R
6	MIC_JD
7	FAUDIO_JD
8	No Connect
9	HPOUT_L
10	GND

Connector PN	Vendor
725-81-10TW00	PINREX
A2004WV-2X05P46	JOINT-TECH

3.2.13 BKL_CN (Back light brightness control connector)

13



Back light brightness control connector
1  5

Connector PN	Vendor
A2001WV-05P146	JOINT-TECH

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

Connector PN	Vendor
721-81-05TW00	PINREX

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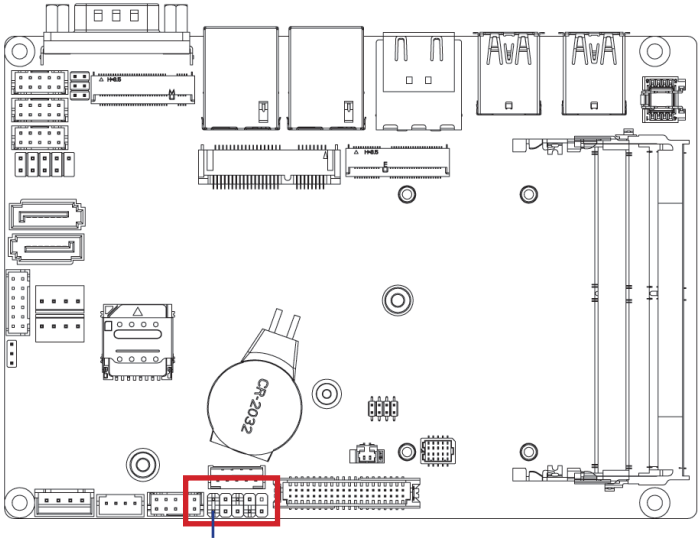
3.2.14 SYS_PANEL (Front panel header)

14



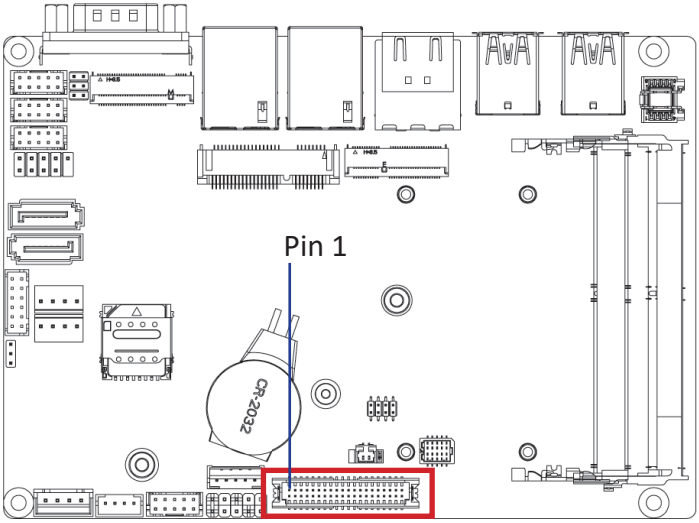
System Panel Header
2 10 1 9

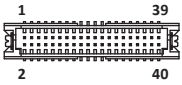
Connector PN	Vendor
210-92-05G111	PINREX

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

3.2.15 LVDS (LVDS connector)

15



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-
17	A3-	37	GND
18	A2-	38	GND
19	GND	39	12V
20	GND	40	12V

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

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

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

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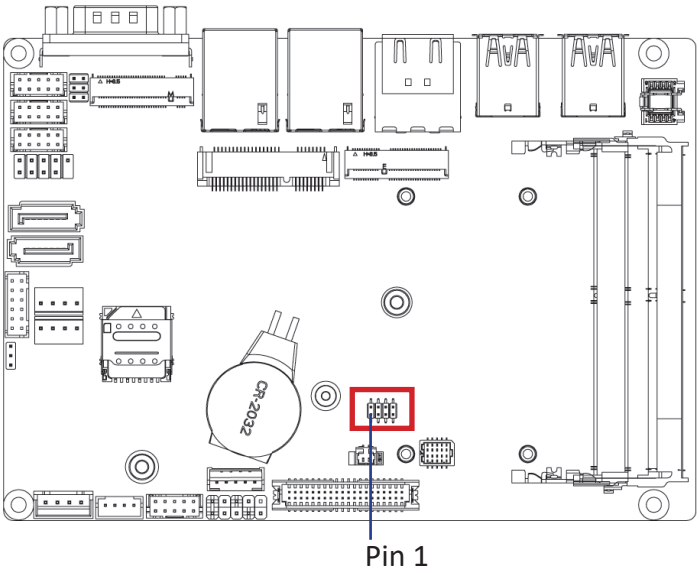
3.2.16 LSW (LVDS resolution jumper)

16

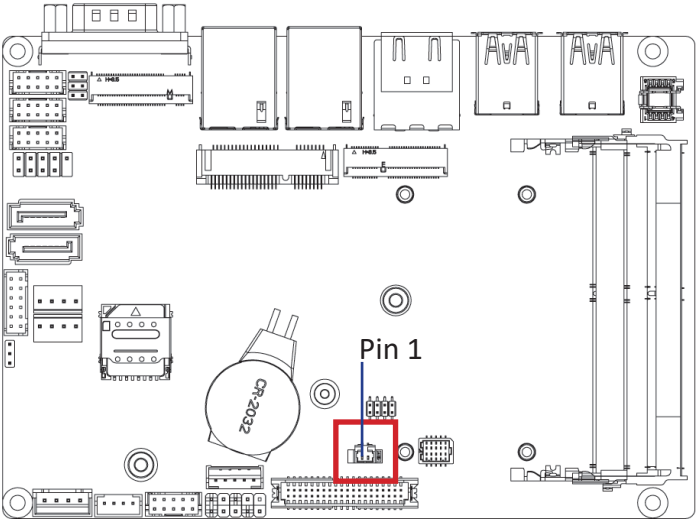


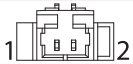
LVDS Resolution Jumper			
Jumper Setting	Resolution	Jumper Setting	Resolution
1 8	800 x 600 18bit	1 8	1366 x 768 24bit
1 8	1024 x 768 18bit	1 8	1440 x 900 24bit
1 8	1024 x 768 24bit	1 8	1400 x 1050 24bit
1 8	1024 x 600 18bit	1 8	1600 x 900 24bit
1 8	1280 x 800 18bit	1 8	1680 x 1050 24bit
8 1	1024 x 600 18bit	1 8	1600 x 1200 24bit
1 8	1280 x 1024 24bit	1 8	1920 x 1080 24bit
1 8	1366 x 768 18bit	1 8	1920 x 1200 24bit

Connector PN	Vendor
222-97-04GBE1	PINREX

3.2.17 BATTERY (Battery cable connector)

17



Battery Cable Connector


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

Pin No.	Definition
1	3.3V
2	GND

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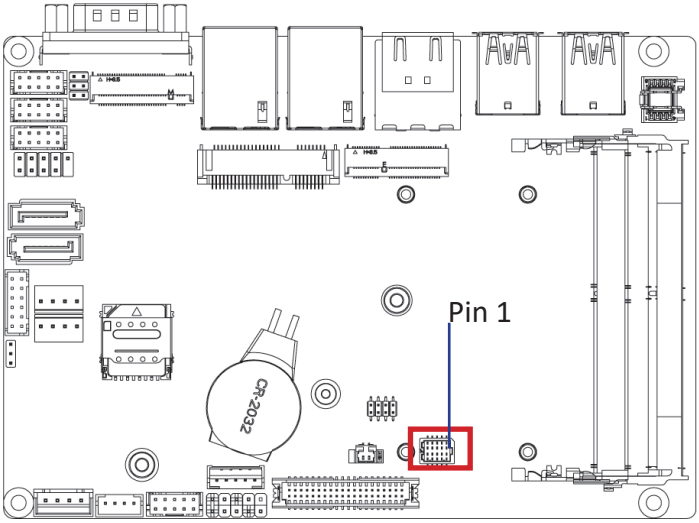
3.2.18 LPC_CN (LPC Connector)

18



LPC_CN Connector

Pin No.	Definition
1	CK_LPC1
2	GND
3	LFRAME#
4	LAD0
5	PLT_RST_80H
6	LAD1
7	LAD3
8	LAD2
9	3.3V
10	SERIRQ