

uATX-H610A (MH610AM)

Micro-ATX Motherboard
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
uATX-H610A (MH610AM)	1
IO Shield	1
SATA cable	2

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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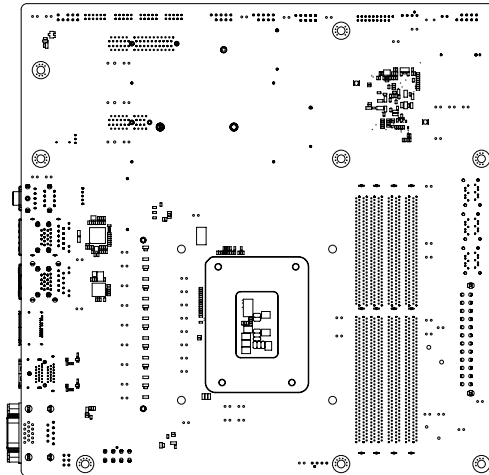
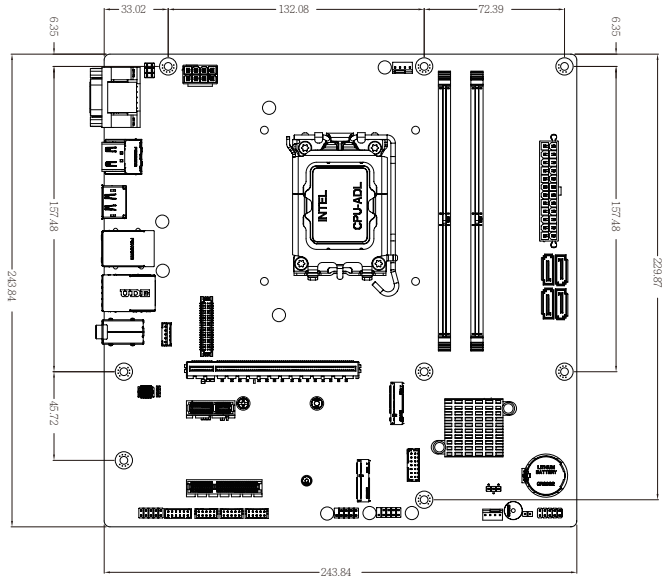
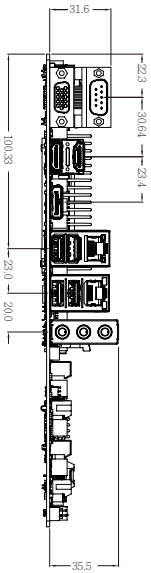
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Chapter 1

Chapter1 - Product Specifications



1.1 Specifications

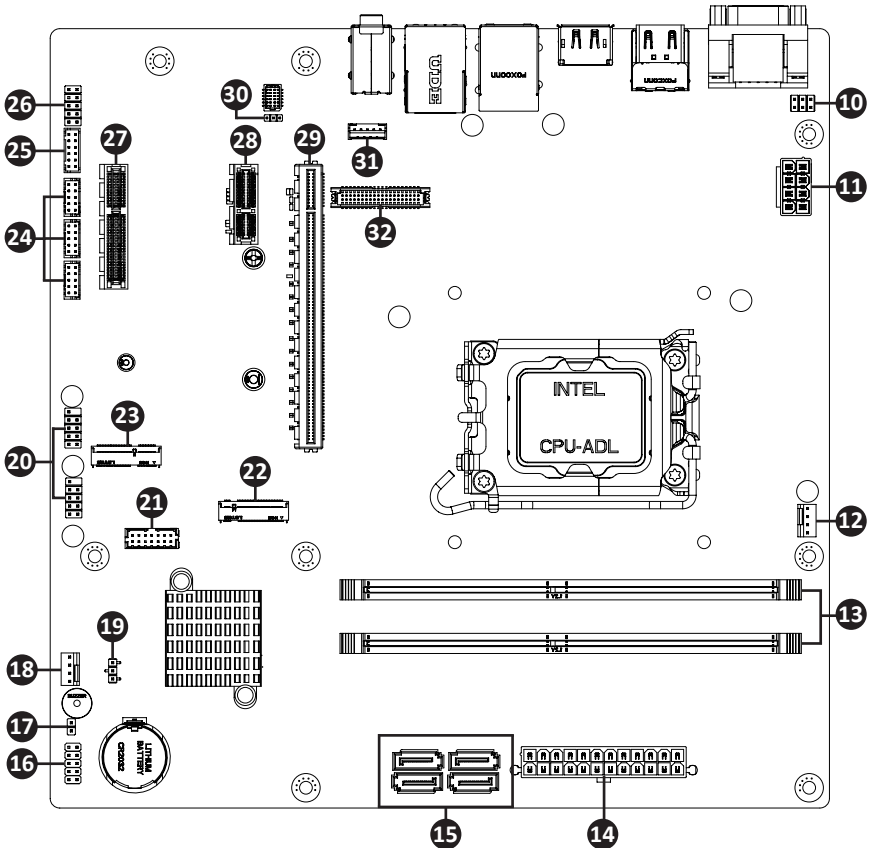
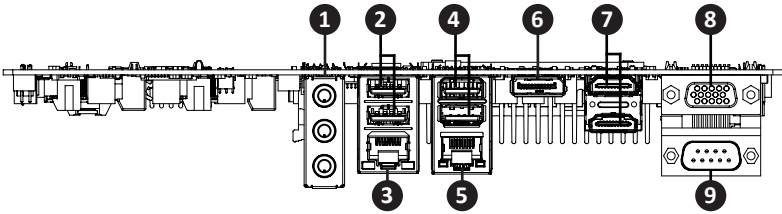
Motherboard	uATX-H610A (MH610AM)
Form Factor	Micro ATX 244W x 244D(mm)
CPU	Support for 14th/13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors in the LGA1700 package TDP under 125W
Socket	1 x LGA 1700
Chipset	Intel® H610 Chipset
Memory	2 x DDR4 DIMM sockets, Max. Capacity 64 GB Support Dual channel DDR4 3200 MHz memory modules
Ethernet	1 x GbE LAN Port (Intel® I219V) 1 x 2.5GbE LAN Port (Intel® I226V)
Video	Integrated Graphics Processor - depends on CPU: 2 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz 1 x DP port, supporting a maximum resolution of 4096x2160 @60Hz 1 x VGA port, supporting a maximum resolution of 1920x1080 @60Hz 1 x LVDS port, supporting a maximum resolution of 1920x1200 @60Hz (3 independent display outputs)
Audio	Realtek® Audio Codec
Storage	4 x SATA 6Gb/s Ports
Expansion Slots	1 x PCIe x16 (Gen 4x16) 1 x PCIe x1 (Gen 3x1) 1 x PCIe x4 (Gen 3x4) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key

Motherboard	uATX-H610A (MH610AM)
Internal I/O	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x Case open header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
Rear I/O	3 x Audio Jacks (Line in, Line out, Mic in) 2 x HDMI 1 x DisplayPort 1 x VGA 1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1
TPM	1 x TPM header (SPI)
OS Compatibility	Windows 10/11 (x64)
Operating Properties	Operating temperature: 0°C to 60°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 0%-95% (non-condensing)

Chapter 2

Chapter 2 – Hardware Information

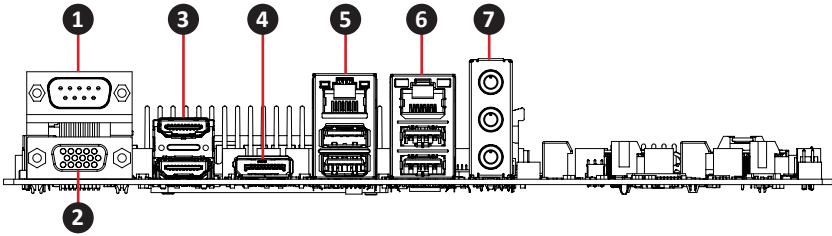
2.1 Jumpers and Connectors



No	Code	Description
1	AUDIO	3 x Audio Jacks (Line in, Line out, Mic in)
2	USB3_LAN2	USB 3.2 Gen 2x1 Connector
3		2.5GbE LAN Port
4	USB3_LAN1	USB 3.2 Gen 1 Connector
5		GbE LAN Port
6	DP	Display Port Connector
7	HDMI_12	HDMI Connector
8	VGA	VGA Port
9	COM1	COM1 Port (RS-232/422/485 & RI/5V/12V)
10	JCOM1	RI pin RI/5V/12V Select jumper for COM1 Port
11	P12V_CPU	8-pin ATX 12V power connector (for CPU)
12	CPU_FAN	CPU Fan connector
13	DIMM_A1, DIMM_B1	DDR4 DIMM Sockets x 2
14	ATX	24-pin ATX main power connector
15	SATA4, SATA5 SATA6, SATA7	SATA 6Gb/s Connector x 4
16	F_PANEL	Front panel header
17	CASE_OPEN	Chassis open intrusion alert header
18	SYS_FAN	System Fan connector
19	CLR_CMOS	Clear CMOS jumper
20	FUSB2_1, FUSB2_2	USB 2.0 header
21	TPM	TPM header
22	M2M	M.2 Slot, 2242/2280 M-key
23	M2E	M.2 Slot, 2230 E-Key
24	COM2, COM3, COM4	Serial Port header (RS-232)

No	Code	Description
25	GPIO_CNT	General Purpose input/output header
26	F_AUDIO	Front panel audio header
27	PCIEX4	PCIe x4 (Gen3 x4) Slot
28	PCIEX1	PCIe x1 (Gen3 x1) Slot
29	PCIEX16_A	PCIe x16 (Gen4 x16) Slot
30	AT_CN	AT/ATX mode select jumper
31	BKL_CN	Backlight Control header
32	LVDS	LVDS connector

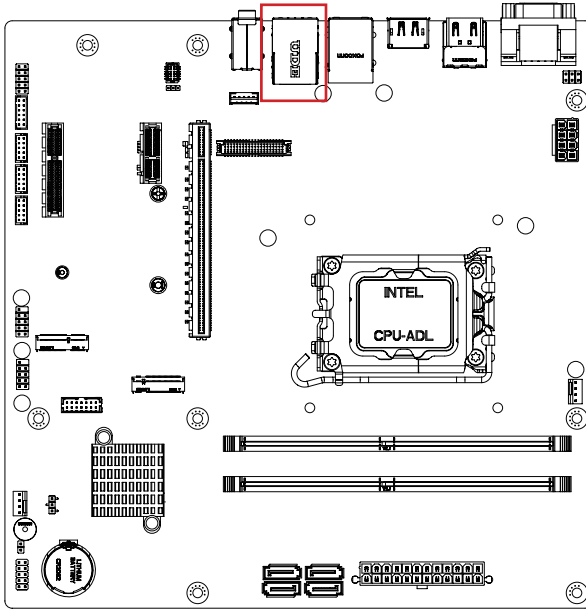
2.2.1 Rear I/O Connector



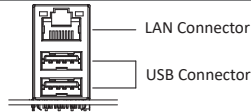
No	Code	Description
1	COM1	COM1 Port (RS-232/422/485 & RI/5V/12V)
2	VGA	VGA Port
3	HDMI_12	HDMI connector
4	DP	Display port
5	USB3_LAN1	1 x GbE LAN Port (top) 2 x USB 3.2 Gen 1 (bottom)
6	USB3_LAN2	1 x 2.5GbE LAN Port (top) 2 x USB 3.2 Gen 2x1 (bottom)
7	AUDIO	3 x Audio Jacks (Line in, Line out, Mic in)

2.2.2 USB_LAN2 (USB 3.2 Gen 2x1 + 2.5GbE LAN Connector)

2 3



USB & LAN Connector

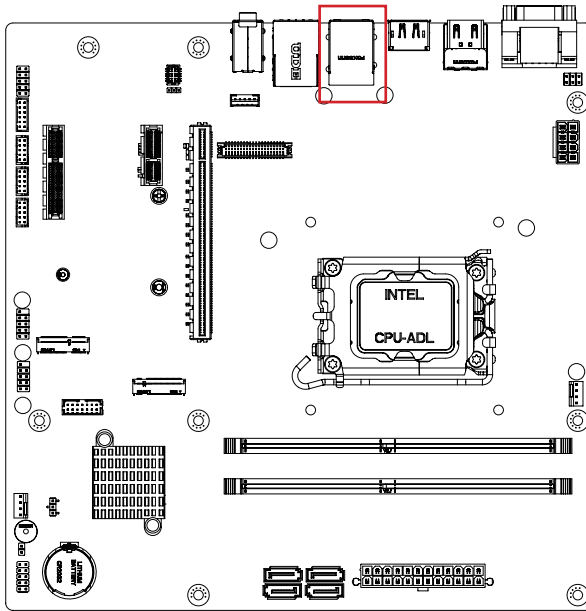


USB Connector			
Pin No.	Definition	Pin No.	Definition
1	5V	10	5V
2	D1n	11	D0n
3	D1p	12	D0p
4	GND	13	GND
5	USB3_RX1n	14	USB3_RX2n
6	USB3_RX1p	15	USB3_RX2p
7	GND	16	GND
8	USB3_TX1n	17	USB3_TX2n
9	USB3_TX1p	18	USB3_TX2p

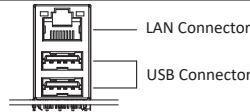
LAN Connector			
Pin No.	Definition	Pin No.	Definition
1	TX1+	4	TX3+
2	TX1-	5	TX3-
3	TX2+	7	TX4+
6	TX2-	8	TX4-
State		Description	
Orange On		2.5Gbps data rate	
Green On		1Gbps data rate	
Off		100M&10Mbps data rate	

2.2.3 USB_LAN1 (USB 3.2 Gen 1 + GbE LAN Connector)

4 5



USB & LAN Connector

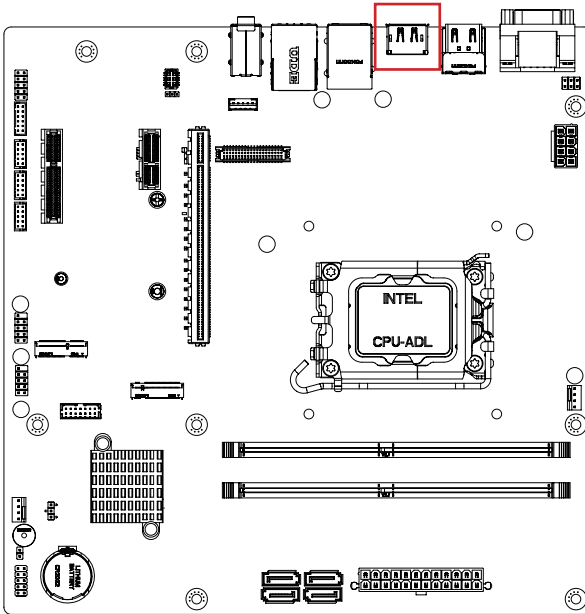


USB Connector			
Pin No.	Definition	Pin No.	Definition
1	5V	10	5V
2	D1n	11	D0n
3	D1p	12	D0p
4	GND	13	GND
5	USB3_RX1n	14	USB3_RX2n
6	USB3_RX1p	15	USB3_RX2p
7	GND	16	GND
8	USB3_TX1n	17	USB3_TX2n
9	USB3_TX1p	18	USB3_TX2p

LAN Connector			
Pin No.	Definition	Pin No.	Definition
1	TX1+	4	TX3+
2	TX1-	5	TX3-
3	TX2+	7	TX4+
6	TX2-	8	TX4-
State		Description	
Orange On		1Gbps data rate	
Green On		100Mbps data rate	
Off		10Mbps data rate	

2.2.4 DP (Display Port Connector)

6



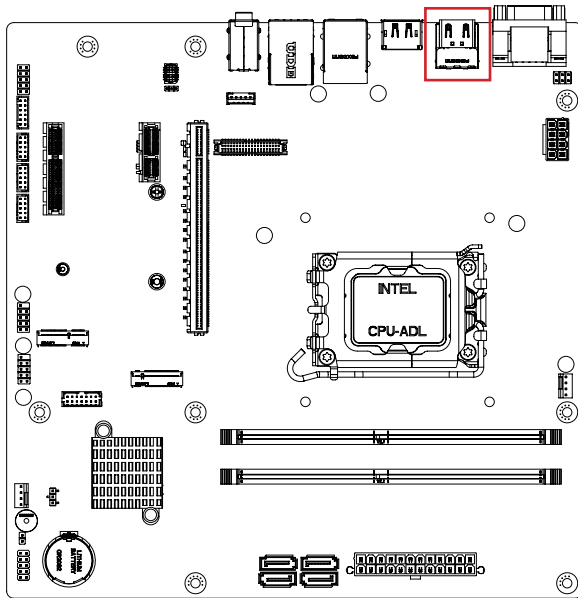
DP Connector



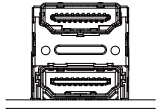
Pin No.	Definition	Pin No.	Definition
1	TX0p	11	GND
2	GND	12	TX3n
3	TX0n	13	GND
4	TX1p	14	GND
5	GND	15	AUXp
6	TX1n	16	GND
7	TX2p	17	AUXn
8	GND	18	Hot Plug Detect
9	TX2n	19	3.3V
10	TX3p	20	3.3V

2.2.5 HDMI_12 (HDMI Connector)

7



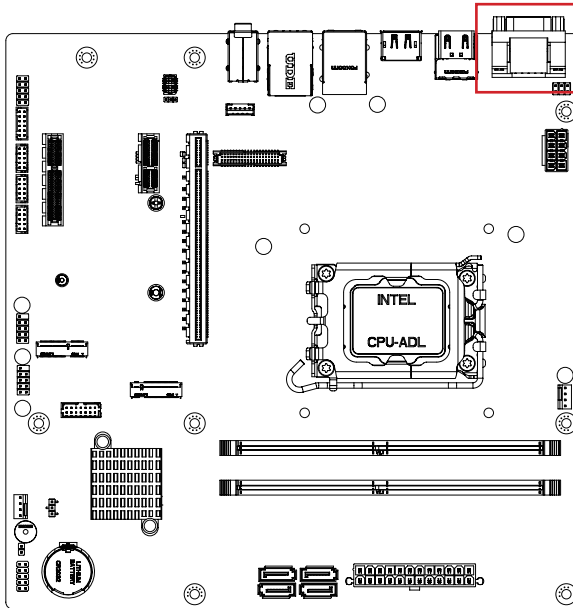
HDMI Connector



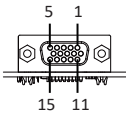
Pin No.	Definition	Pin No.	Definition
1	TX2p	11	GND
2	GND	12	CLKn
3	TX2n	13	NC
4	TX1p	14	NC
5	GND	15	SCL
6	TX1n	16	SDA
7	TX0p	17	GND
8	GND	18	5V
9	TX0n	19	Hot Plug Detect
10	CLKp		

2.2.6 VGA (VGA Port)

8



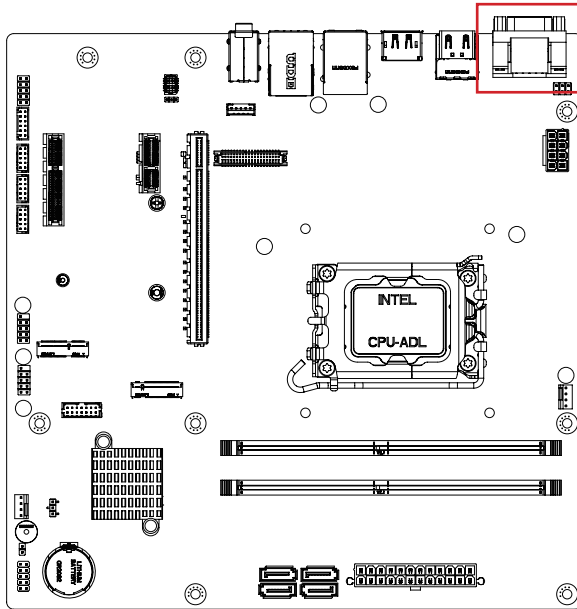
D-sub Connector



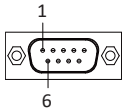
Pin No.	Definition	Pin No.	Definition
1	Red	9	5V
2	Green	10	GND
3	Blue	11	NC
4	NC	12	DDCSDA
5	GND	13	HSYNC
6	GND	14	VSYNC
7	GND	15	DDCSCL
8	GND		

2.2.7 COM1 (COM1 Port (RS-232/422/485 & RI/5V/12V))

9



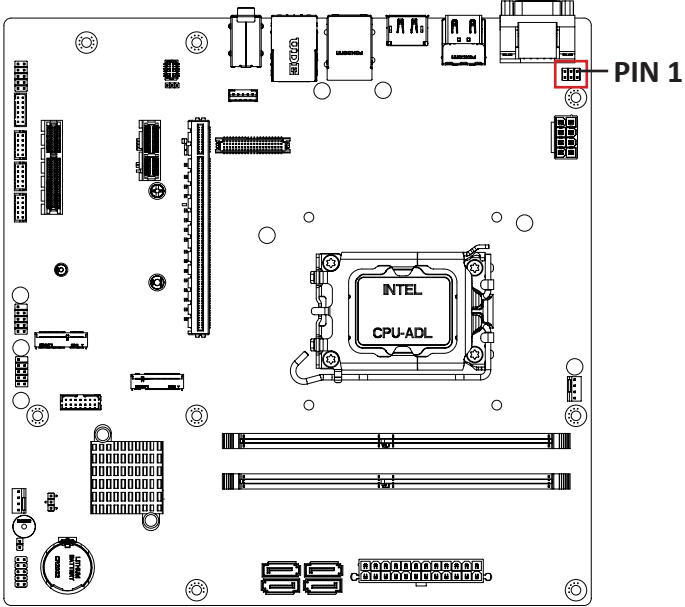
Serial Port Connector



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

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

10



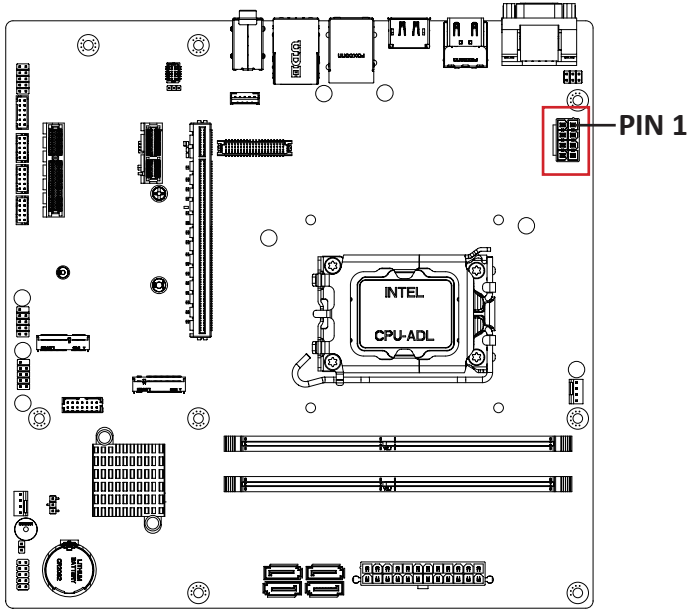
JCOM1 header

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

Connector PN	Vendor
210-92-03GB01	PINREX
PH06R53BAZ000	HORNGTONG
Connector type	
2x3pin header, pitch 2.54mm	

2.2.9 P12V_CPU (8-pin ATX 12V power connector (for CPU))

11



ATX 12V Connector



Connector PN

740-96-085B61

Vendor

PINREX

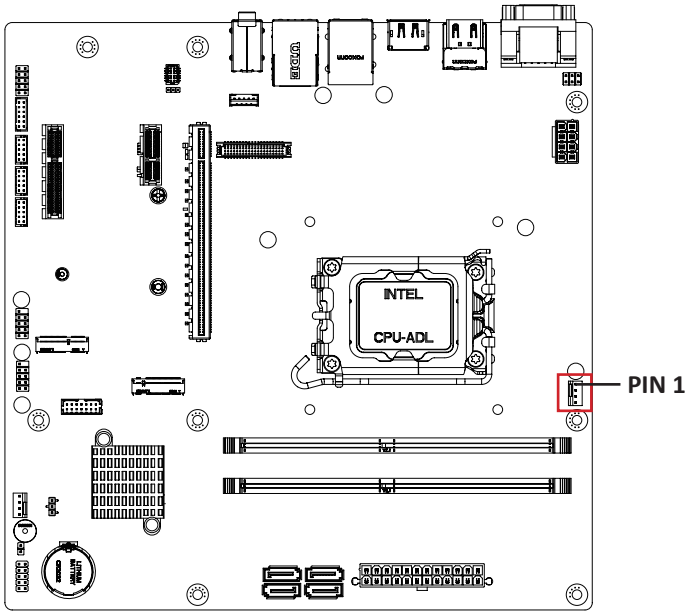
Connector type


2x4pin header, pitch 4.2mm

Pin No.	Definition
1	GND
2	GND
3	GND
4	GND
5	+12V
6	+12V
7	+12V
8	+12V

2.2.10 CPU_FAN (CPU Fan connector)

12



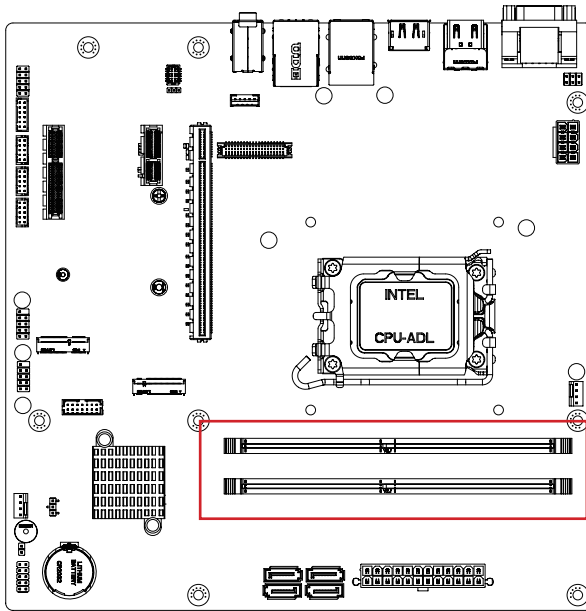
CPU FAN Connector	
	1 4

Connector PN	Vendor
744-81-045W11	PINREX
Connector type	
1x4pin header, pitch 2.54mm	

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

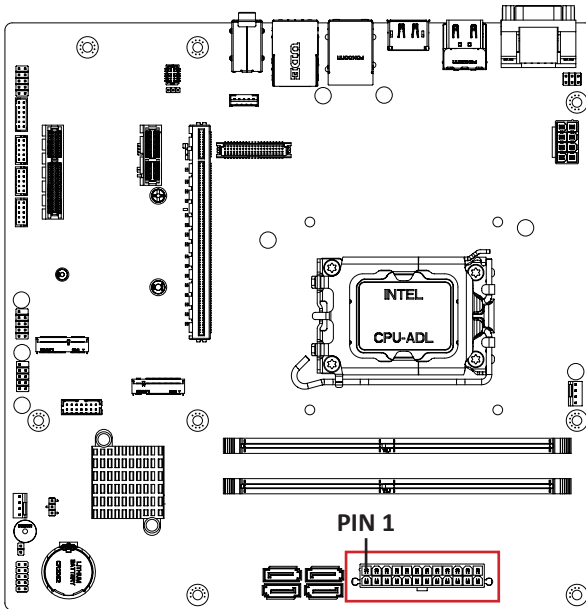
2.2.11 DIMM_A1, DIMM_B1 (DDR4 DIMM Sockets)

13



2.2.12 ATX (24-pin ATX main power connector)

14



ATX power connector



Connector PN

740-96-245B70

Vendor

PINREX

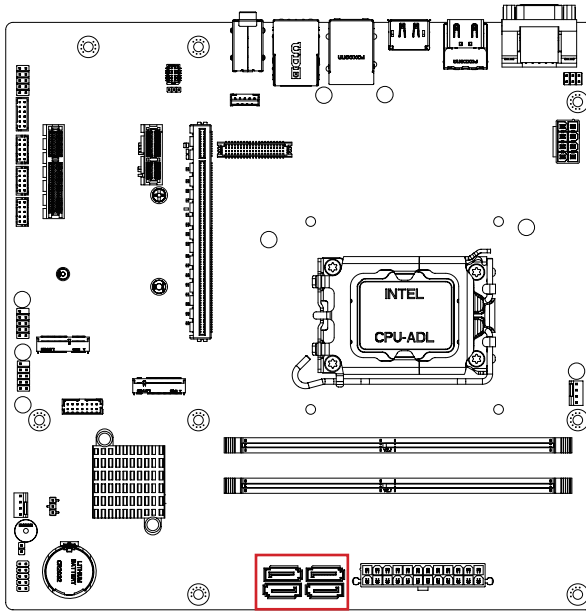
Connector type

2x12pin header, pitch 4.2mm

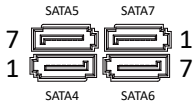
Pin No.	Definition	Pin No.	Definition
1	3.3V	13	3.3V
2	3.3V	14	-12V
3	GND	15	GND
4	5V	16	PS_ON
5	GND	17	GND
6	5V	18	GND
7	GND	19	GND
8	Power Good	20	NC
9	5VSB	21	5V
10	12V	22	5V
11	12V	23	5V
12	3.3V	24	GND

2.2.13 SATA4, SATA5, SATA6, SATA7 (SATA 6Gb/s Connector)

15



SATA 6Gb/s Connector



Connector PN

WATM-07ABNB2BAUW3
770-83-07SW19

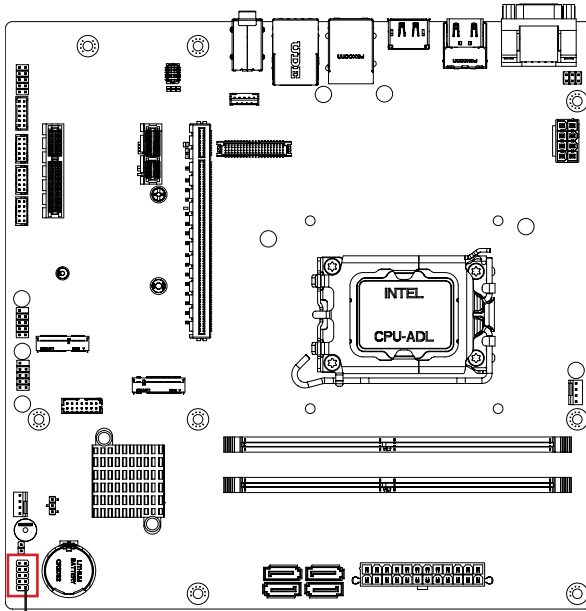
Vendor

WINWIN
PINREX

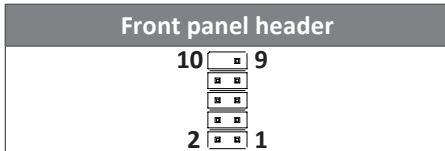
Pin No.	Definition
1	GND
2	TXp
3	TXn
4	GND
5	RXn
6	RXp
7	GND

2.2.14 F_PANEL (Front panel header)

16



PIN 1



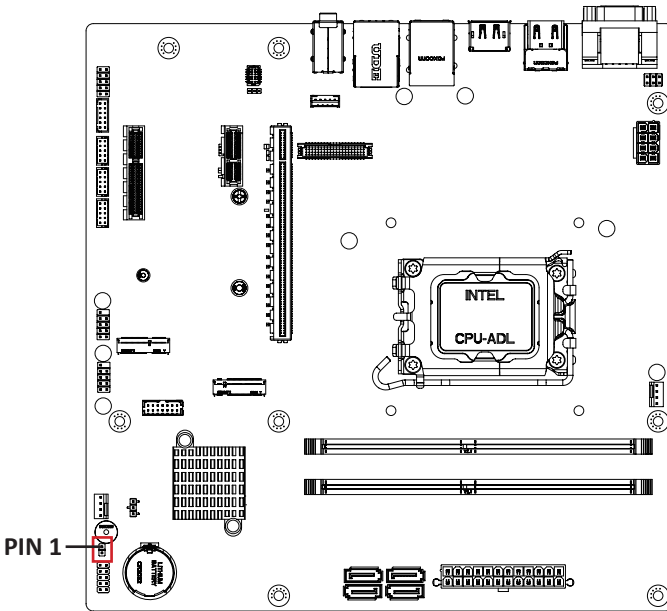
Connector PN	Vendor
210-92-05GW5W	PINREX

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 CASE_OPEN (Chassis open intrusion alert header)

17



chassis open intrusion alert header



Connector PN

210-91-02GBK2

PH02R23BAZE11

Vendor

PINREX

HORNGTONG

Connector type

1x2pin header, pitch 2.54mm

Pin No.

Definition

1

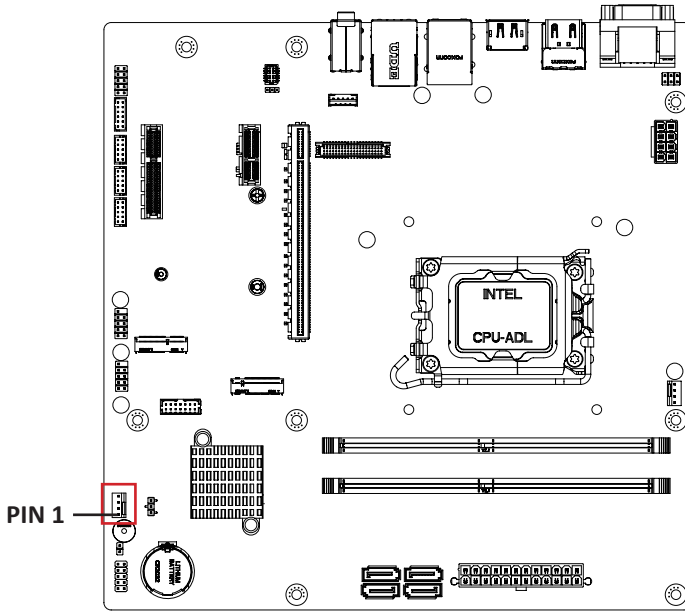
Detect

2

GND

2.2.16 SYS_FAN (CPU Fan connector)

18



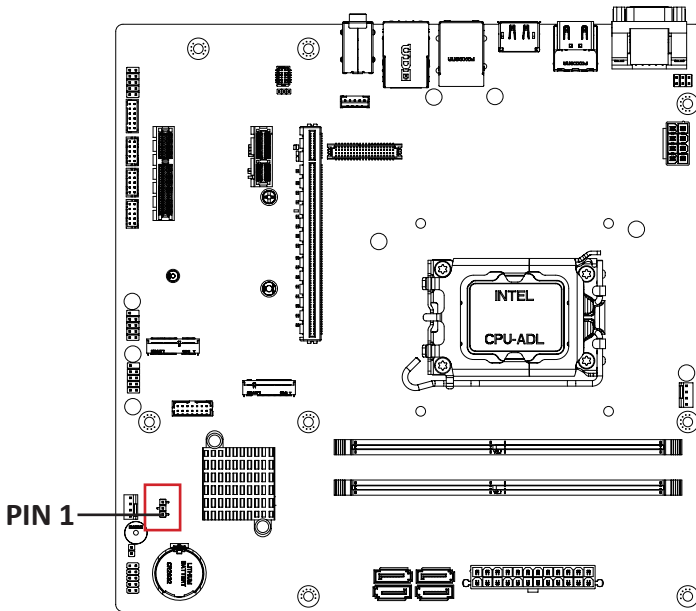
System FAN Connector	
4	
1	

Connector PN	Vendor
744-81-045R11	PINREX
Connector type	
1x4pin header, pitch 2.54mm	

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

2.2.17 CLR_CMOS (Clear CMOS jumper)

19



Clear CMOS connector



Pin No.	Definition
1	NC
2	GND
3	Clear CMOS

1-2 Close:
Normal Operator (Default setting)

2-3 Close:
Clear CMOS data

Connector PN

212-91-03GBE00K

LCH24-K0324S21C-00

Vendor

PINREX

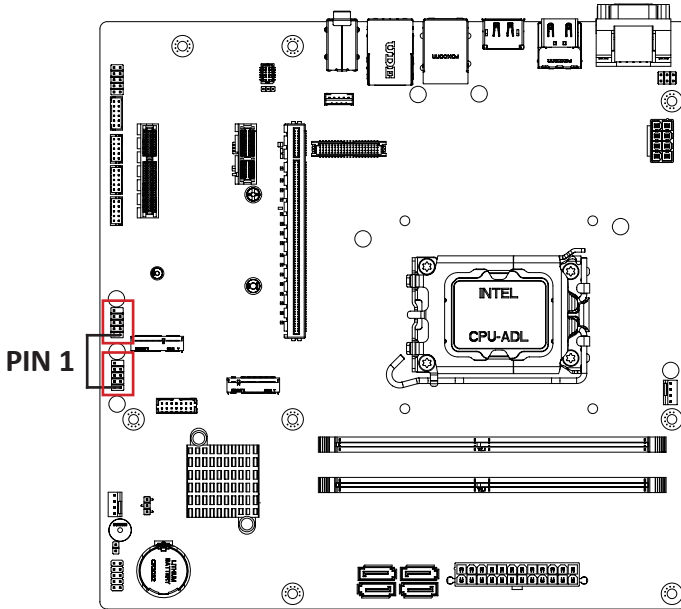
LIONCONN

Connector type

1x3pin header, pitch 2.54mm

2.2.18 FUSB2_1, FUSB2_2 (USB 2.0 header)

20



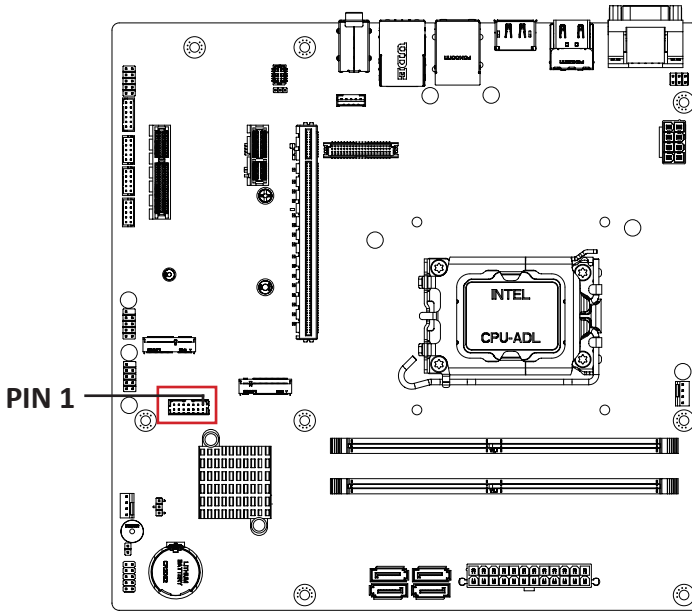
USB 2.0 Header	
10	9
2	1

Connector PN	Vendor
210-92-05GB04	PINREX
PH10R53BAZ009	HORNGTONG
Connector type	
2x5pin header, pitch 2.54mm	

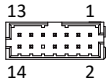
Pin No.	Definition
1	5V
2	5V
3	D2n
4	D1n
5	D2p
6	D1p
7	GND
8	GND
9	No Pin
10	No Connect

2.2.19 TPM (TPM header)

21



TPM module connector



Pin No.	Definition
1	Clock
2	3.3V
3	Reset
4	3.3V
5	SDO
6	IRQ_SERIAL
7	SDIN
8	NC
9	NC
10	NC
11	NC
12	GND
13	CS
14	GND

Connector PN

52M-90-14GBE7

LCB25-I1424S01C-12

Vendor

PINREX

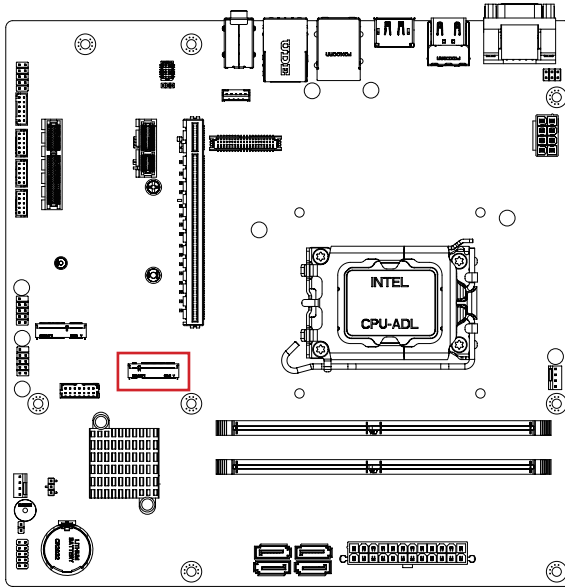
LIONCONN

Connector type

2x7pin header, pitch 2.0mm

2.2.20 M2M (M.2 Slot, 2242/2280 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	SATA3 RXn	6	NC
7	SATA3 RXp	8	NC
9	GND	10	NC
11	SATA3 TXn	12	3.3V
13	SATA3 TXp	14	3.3V
15	GND	16	3.3V
17	SATA2 RXn	18	3.3V
19	SATA2 RXp	20	NC
21	GND	22	NC
23	SATA2 TXn	24	NC
25	SATA2 TXp	26	NC
27	GND	28	NC
29	SATA1 RXn	30	NC
31	SATA1 RXp	32	NC
33	GND	34	NC
35	SATA1 TXn	36	NC

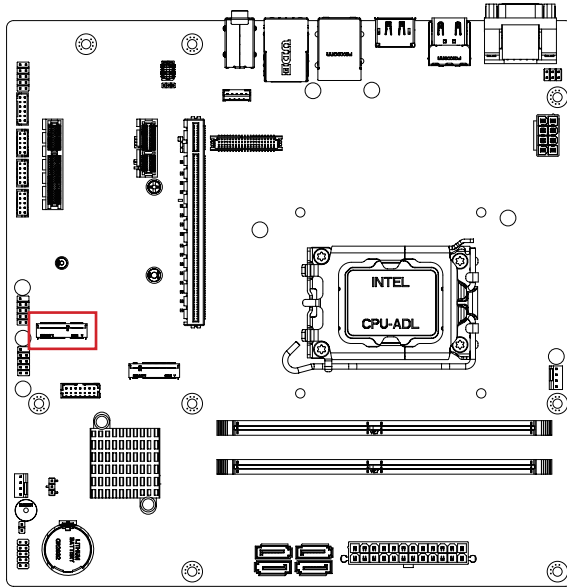
Pin No.	Definition	Pin No.	Definition
37	SATA1 TXp	38	NC
39	GND	40	NC
41	SATA0 RXp	42	NC
43	SATA0 RXn	44	NC
45	GND	46	NC
47	SATA0 TXn	48	NC
49	SATA0 TXp	50	PCI Reset
51	GND	52	PCIe Clock Request
53	PCIe Clockn	54	PCIe Wakeup
55	PCIe Clockp	56	NC
57	GND	58	NC

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

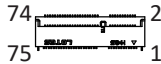
Connector PN	Vendor
80159-8521	BELLWETHER
APCI0096-P002A	LOTES

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

23



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	GND	14	NC
15	NC	16	NC
17	NC	18	GND
19	GND	20	NC
21	NC	22	NC
23	NC		

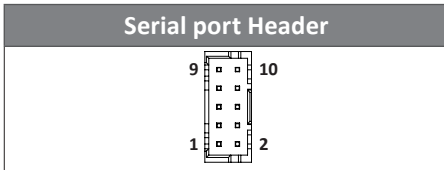
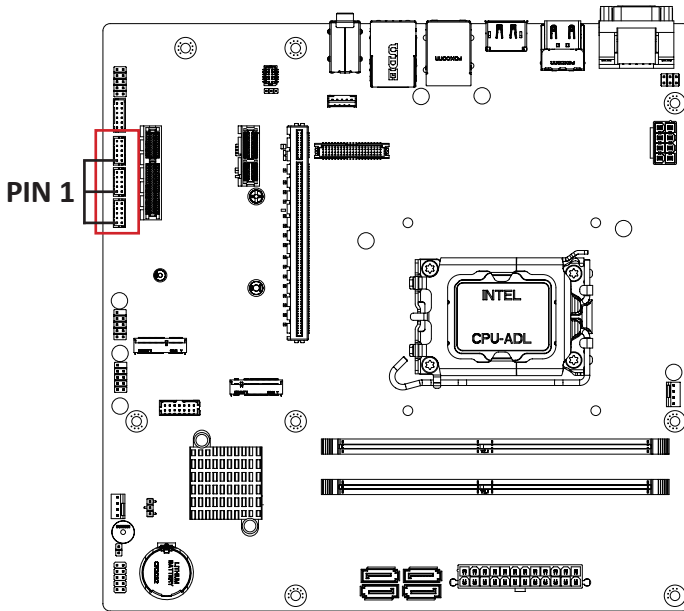
Pin No.	Definition	Pin No.	Definition
33	GND	32	NC
35	PCI_E_TXp	34	NC
37	PCI_E_TXn	36	NC
39	GND	38	CL_Reset

41	PCI_E_RXp	40	CL_DATA
43	PCI_E_RXn	42	CL_Clock
45	GND	44	NC
47	PCI_E_CLOCKp	46	NC
49	PCI_E_CLOCKn	48	NC
51	GND	50	SUSCLK
53	PCI_E Clock Request	52	Reset
55	PCI_E 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
2E0BC21-S85BE-7H	FOXCONN
80152-8521	BELLWETHER
APCI0095-P002A	LOTES

2.2.22 COM2, COM3, COM4 (Serial Port header (RS-232))

24



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

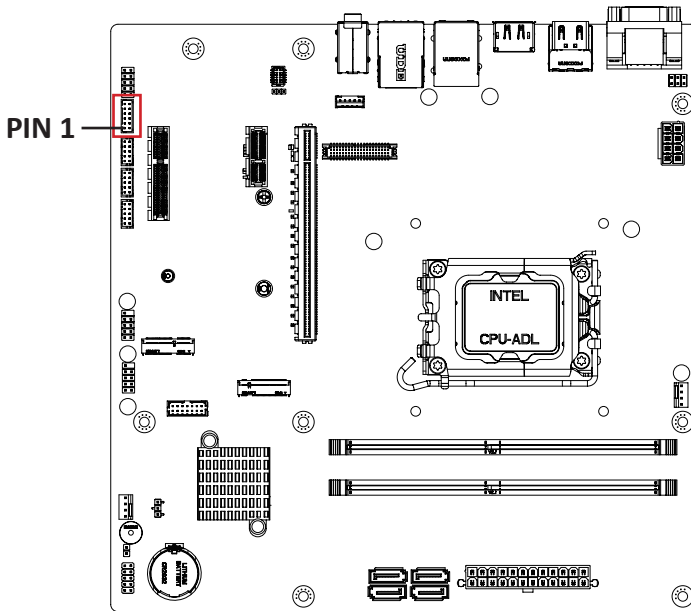
Connector type

2x5pin header, pitch 2.0mm

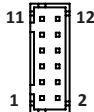
Pin No.	Definition
1	RXD
2	DCD
3	DTR
4	TXD
5	DSR
6	GND
7	CTS
8	RTS
9	No Connect
10	RI

2.2.23 GPIO_CNT (General Purpose input/output header)

25



GPIO Connector



Connector PN

725-81-12TW00

A2004WV-2X06P46

Vendor

PINREX

JOINT-TECH

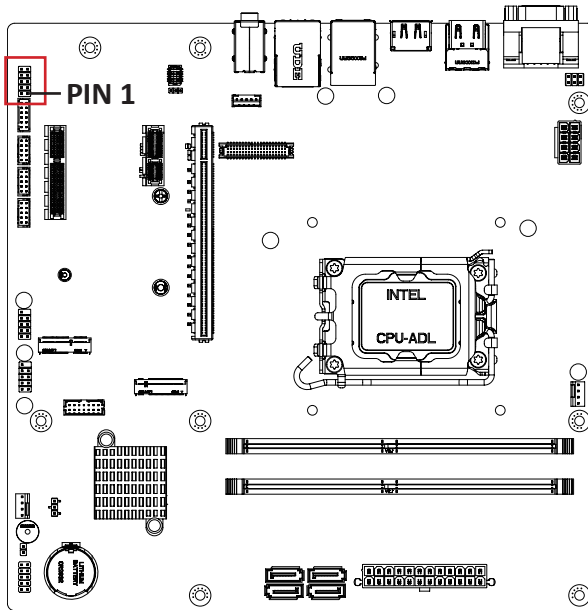
Connector type

2x6pin header, pitch 2.0mm

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
11	5V
12	GND

2.2.24 F_AUDIO (Front panel audio header)

26



Front panel audio header



Connector PN

210-92-05GE05

Vendor

PINREX

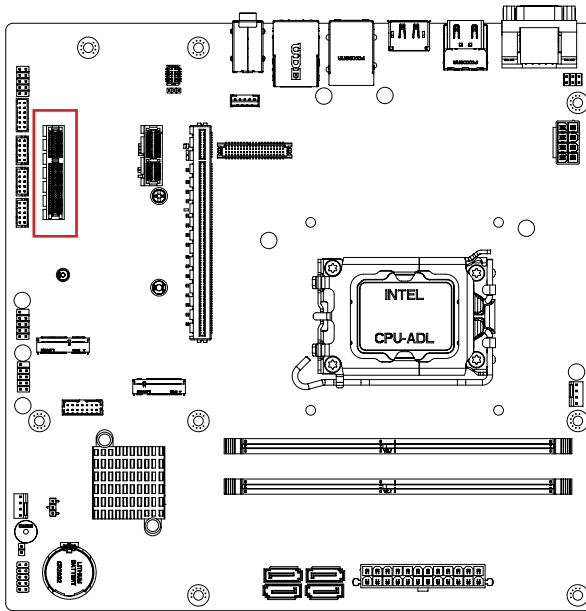
Connector type

2x5pin header, pitch 2.54mm

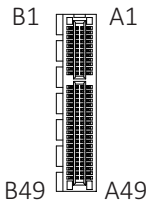
Pin No.	Definition
1	MIC_LEFT
2	GND
3	MIC_RIGHT
4	Detect
5	LINE_RIGHT
6	GND
7	JACKSENSE Detect
8	No connect
9	LINE_LEFT
10	GND

2.2.25 PCIEX4 (PCIe x4 (Gen3 x4) Slot)

27



PCIe x4 connector



Connector PN

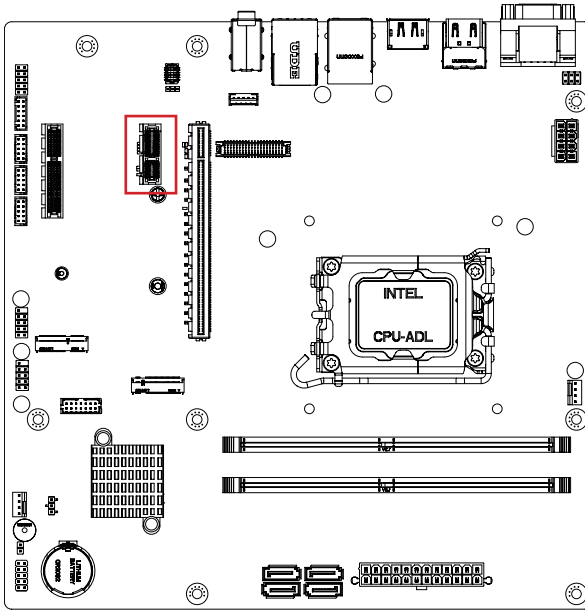
WPES-
064AN41B22UWS
2EG03211-D2D-DF

Vendor

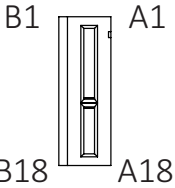
WINWIN
FOXCONN

2.2.26 PCIEX1 (PCIe x1 (Gen3 x1) Slot)

28



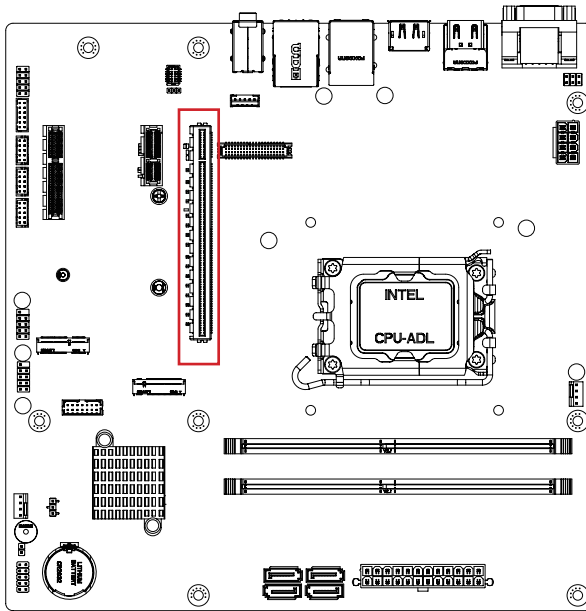
PCIe x1 connector



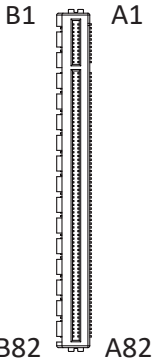
Connector PN	Vendor
WPES-036AN41B22UWS	WINWIN
2EG01811-D7D-DF	FOXCONN

2.2.27 PCIE16_A (PCIe x16 (Gen4 x16) Slot)

29



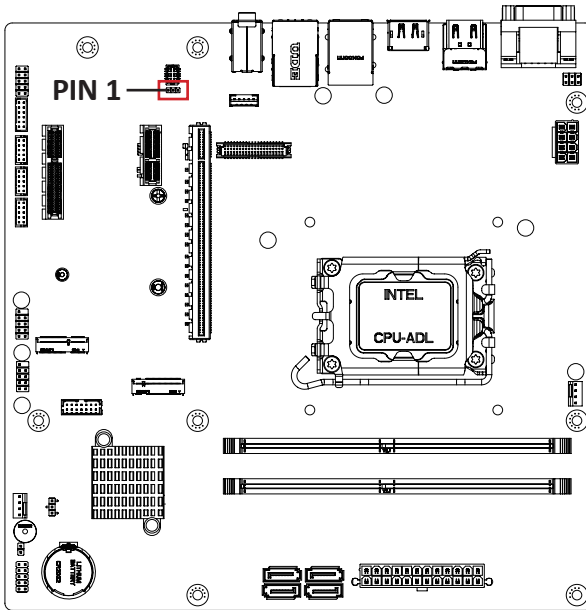
PCIe x16 connector



Connector PN	Vendor
10144667-123Z0LF	FCI

2.2.28 AT_CN (AT/ATX mode select jumper)

30



AT/ATX mode select jumper



1

Connector PN

220-96-03GB01

Vendor

PINREX

Connector type

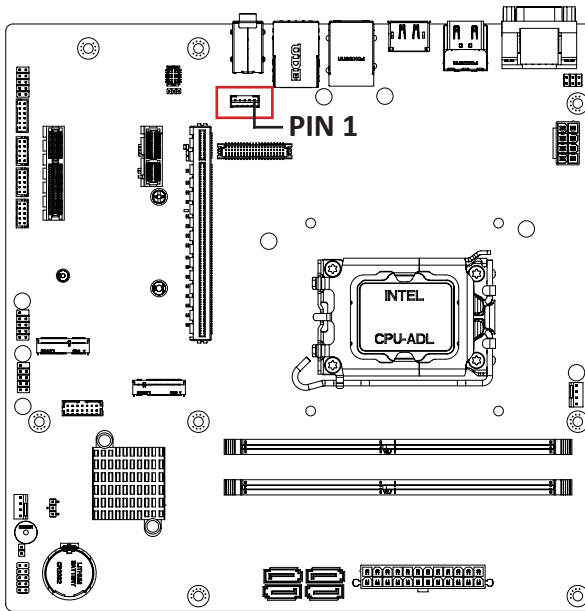
1x3pin header, pitch 2.0mm

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

Jumper setting
 1-2 Close : AT mode.
 2-3 Close : ATX mode.(Default setting)

2.2.29 BKL_CN (Backlight Control header)

31



Backlight control header



Connector PN

721-81-05TW00

Vendor

PINREX

A2001WV-05P146

JOINT-TECH

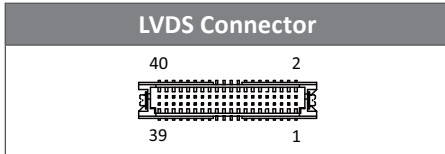
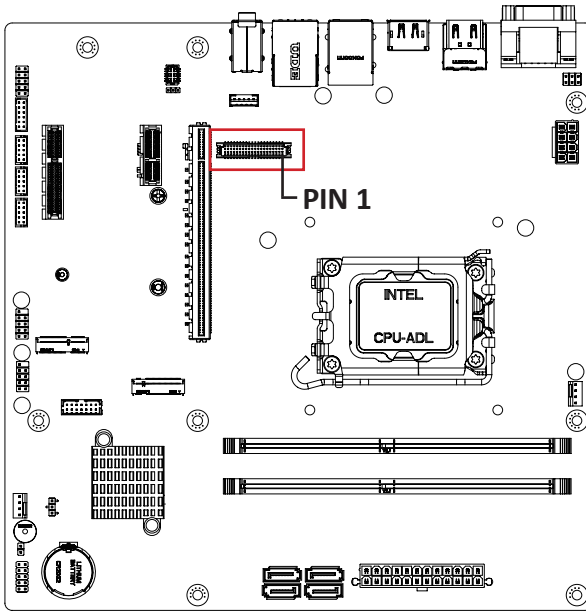
Connector type

1x5pin header, pitch 2.0mm

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

2.2.30 LVDS (LVDS connector)

32



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	SPECO	25	GND
6	SPEDO	26	GND
7	GND	27	A7+
8	GND	28	A6+
9	A1+	29	A7-
10	A0+	30	A6-
11	A1-	31	GND
12	A0-	32	GND
13	GND	33	CLK2+
14	GND	34	CLK1+
15	A3+	35	CLK2-

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

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

Connector type
2x20pin header, pitch 1.25mm

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

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

uATX-H610A (MH610AM)

Micro-ATX Motherboard
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
uATX-H610A (MH610AM)	1
IO Shield	1
SATA cable	2

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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