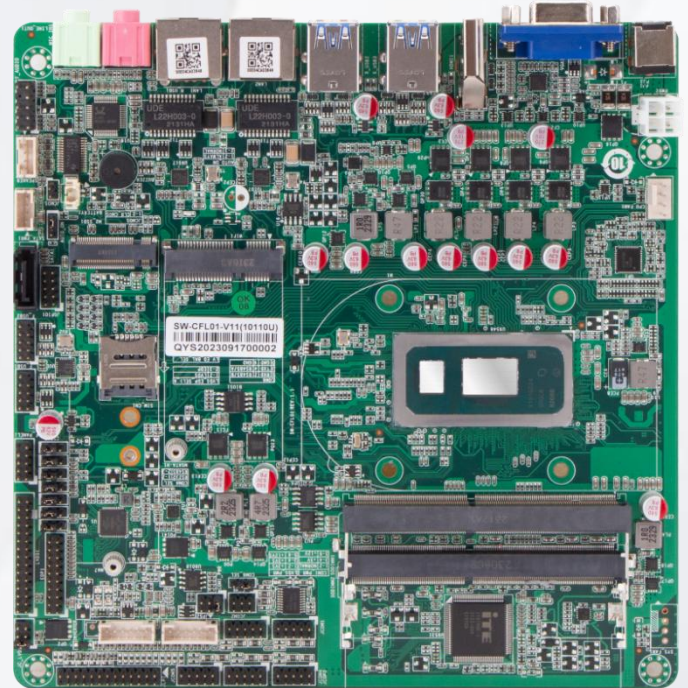


QY-MB-10110U-MITX

- Intel Core i3-10110U CPU
- 6*COM, 4*USB3.0, 4*USB2.0, 2*Gigabit LAN
- 1*LVDS/eDP, 1*HDMI, 1*VGA

(Support triple display simultaneously.)

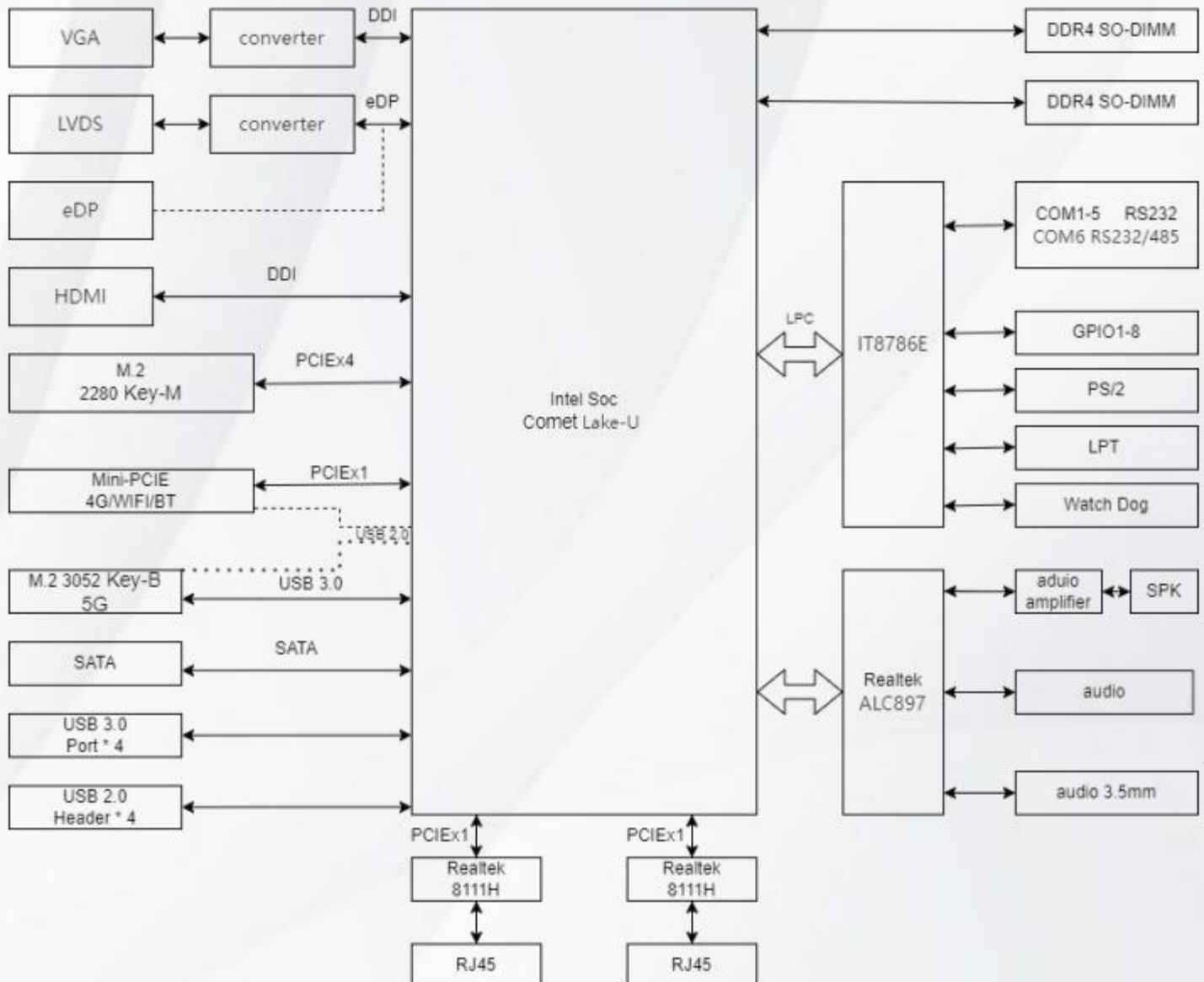
- 1*Mini-PCle (4G/Wifi/BT)
- 1*M.2 2280 Key-M, Support PCIe 3.0 x4
- M.2 3052 Key-B
- Mini-ITX, DC 12V Power Input



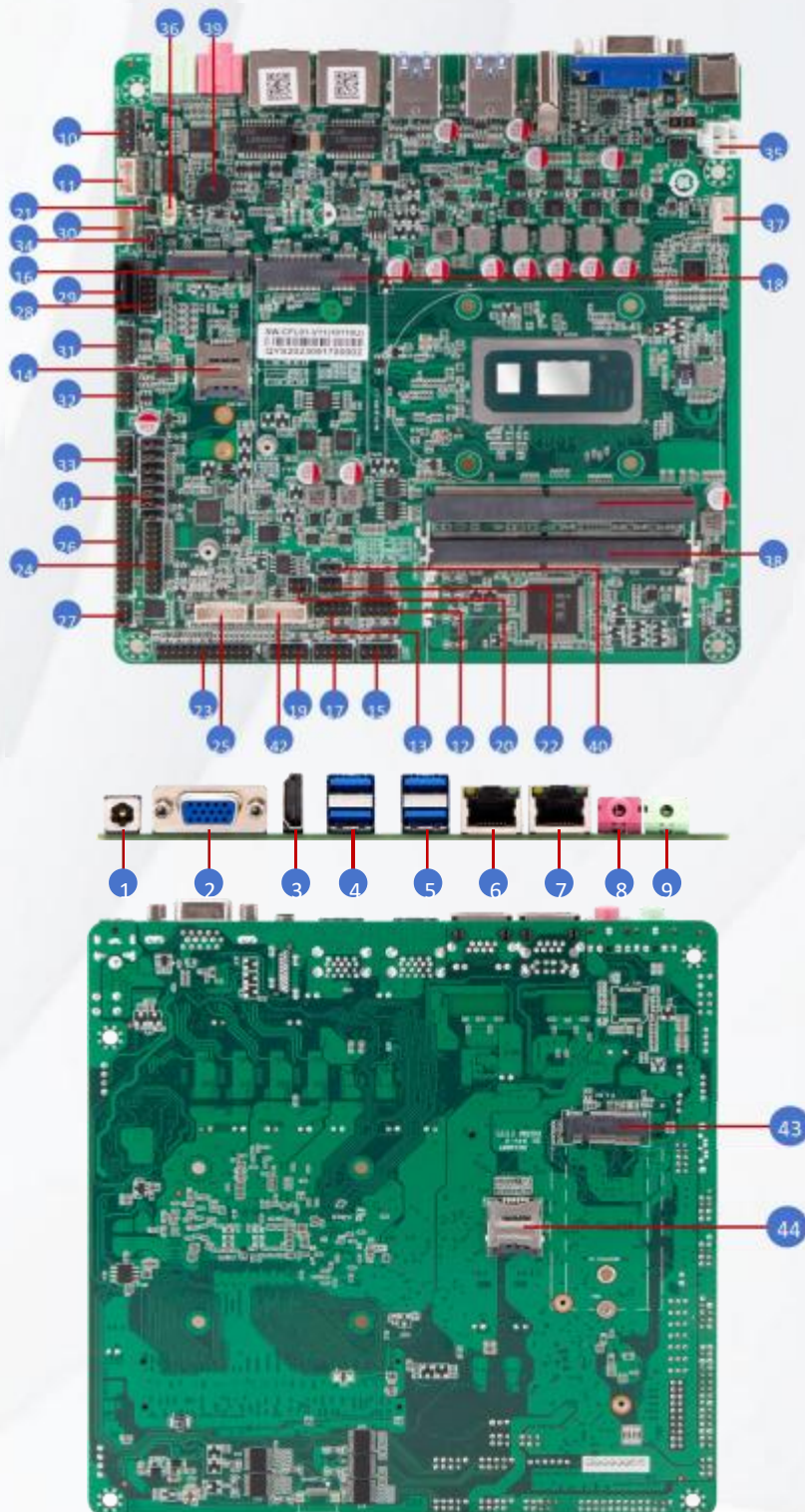
1. Specification:

Model	QY-MB-10110U-MITX
CPU	Intel Core i3-10110U, up to 4.10G, Dual-core
Display	Support quad display simultaneously: 1 * HDMI: resolution up to 4096*2304@24Hz 1 * VGA: resolution up to 1920*1080@60Hz 1 * LVDS/eDP:LVDS, resolution up to 1920 * 1080@60Hz eDP, resolution up to 4096 * 2304@60Hz
Memory	DDR4-2466, 2 * SO-DIMM, up to 64GB *Note:Due to the limitation of Windows 32-bit operating system, if more than 4 GB of memory is installed, it is actually. The memory capacity displayed on will be less than 4 GB.
Storage	1 * SATA3.0 7P Connector 1 * M.2 2280 Key-M PCIE3.0 x4
Expansion	1 * Mini-PCle (Wifi supported with 4G/BT selectable) 1 * M.2 3052 Key-B (5G supported)
Ethernet	2 * Realtek 1Gbps PCIe Ethernet Controller, RJ45
USB	4 * USB3.0 (Rear I/O, TYPE-A) 4 * USB2.0 (Internal, Header)
COM	5 * RS232 Header 1 * RS232/RS485 Header
Audio	Realtek HDA Codec, with MIC/Line-out and Amplifier 1 * Front Audio Header (Line-Out + MIC) 1 * Line-Out/MIC Jack 1 * SPK
Other Ports	1 * LPT Header 1 * PS/2 Header 1 * Micro SIM Card Slot 1 * CPU FAN Header 1 * Front Panel Header 1 * GPIO Header 1 * PS/2 Header
System	Windows 10/11, Linux
Temperature	Storage: -30~75°C Operating: -20° ~60°C
Power Input	DC 12V

1. Data Flow



2. Marking Instruction



40	COM6 RS232/RS485 Signal Select Jumpers
41	eDP/LVDS Signal Select Jumpers
42	PS/2 Pin Header
43	M.2 3052 Key-B
44	SIM Card Slot(SIM)

Connector&Header

1	DC 12V power input connector
2	VGA connector
3	HDMI connector
4	USB 3.0 connector
5	USB 3.0 connector
6	LAN connectors
7	LAN connectors
8	Mic-in connector
9	Line-out connector
10	Front Audio Pin Header
11	Amplifier Pin Header
12	COM-1 Pin Headers
13	COM-2 Pin Headers
14	SIM Card Slot(SIM CN1)
15	COM-3 Pin Headers
16	M.2 2280 Key-M
17	COM-4 Pin Headers
18	Mini PCI-4G_CAN Slot (WIFI/4G/BT)
19	COM-5 Pin Headers
20	COM1 PWR Select Jumper
21	CMOS Clear Jumper
22	COM6 Pin Headers
23	Parallel Port Pin Header
24	eDP Signal Pin Header
25	eDP/LVDS Backlight Control Pin Header
26	LVDS Signal Pin Header
27	eDP/LVDSVDD Select Jumper
28	GPIO Pin Header
29	SATA 3.0 Connector
30	SATA Power Pin Header
31	USB Pin Headers
32	USB Pin Headers
33	Front Panel Pin Header
34	AUTO-ON Pin Headers
35	DC12V Power Input Header
36	CMOS Battery Holder
37	CPU Fan Header
38	DDR4 SO-DIMM Slot
39	buzzer

3. Definition

(1) DC12V Power Input Header(5.5*2.5mm)

Positive inside and negative outside, 5.5mm outer diameter and 2.5mm inner diameter DC power head

(2) VGA Connector

This socket supports VGA(D-Sub) specification and can support the resolution up to 1920x1080@60 Hz (the actual supported resolution will be depending on the monitor you use), you can connect a monitor that supports VGA(D-Sub) interface to this socket.

(3) HDMI Connector

This socket supports HDMI specifications and can support resolutions up to 1920x1080@60 Hz (the actual supported resolutions will be Depending on the monitor you use), you can connect a monitor that supports HDMI interface to this socket.

(4) USB3.0 Connectors

Two USB3.0 Type-A™ interfaces are on the rear panel, supporting 5Gbps. And can be compatible with USB 2.0 specification. You can connect USB devices to this interface.

(5) USB3.0 Connectors

Two USB3.0 Type-A™ interfaces are on the rear panel, supporting 5Gbps. And can be compatible with USB 2.0 specification. You can connect USB devices to this interface.

(6) LAN Connectors

This network cable interface is an ultra-high-speed Ethernet, which provides connection to the Internet with the highest transmission rate per second. Up to 1 GB (1 Gbps)

(7) LAN Connectors

This network cable interface is an ultra-high-speed Ethernet, which provides connection to the Internet with the highest transmission rate per second. Up to 1 GB (1 Gbps).

(8) Mic-in Connector (pink)

This jack is a microphone connection hole.

(9) Line-out Connector(green)

This jack is an audio output hole and supports audio amplification function. It is recommended to connect headphones and speakers to this jack for better performance. Output audio (the actual effect may vary depending on the device you use).

(10) Front Audio Pin Header (2*5 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
10	F-AUDIO1	1	MIC-L	2	GND
		3	MIC-R	4	+ 3.3VS
		5	LINE-R	6	MIC- Sense
		7	GND		
		9	LINE-L	10	LINE-Sense

(11)Amplifier Pin Header (1*4 Pin 2.00mm Wafer Header)

No.	Location	Pin	Definition	Pin	Definition
11	J-BKL1	1	SPKR-	2	SPKR+
		3	SPKL+	4	SPKL-

(12) COM1 Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
12	COM1	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI-PWR		

Note: Pin9 of COM-1 also can be 0/5/12V (COM-1 PWR Select Jumper)

(13) COM2 Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
13	COM2	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

(14) SIM Card Slot (Micro SIM specification Location:SIM-CN1)

(15) COM3 Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
15	COM3	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

(16) M.2 22 80 Key- M

The M.2 socket can support M.2 PCIe SSD and PCIe 3.0x4.

(17) COM 4 Pin Header (2*5 Pin 2. 00 mm)

No.	Location	Pin	Definition	Pin	Definition
17	COM4	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

(18) Mini PCI-4G-CAN Slot (WIFI/4G/BT)

Note: the 4G module of this interface is connected with the SIM card on the SIM CN1.

(19) COM5 Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
19	COM5	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

(20) COM1 PWR Select Jumper (2*3 Pin 2.00 mm)

No.	Location	Pin	Definition	Pin	Definition
20	COM1 PWR	1	COM1-RI-PW(Default)-	2	RI
		3	COM1-RI-PW-	4	+ 5VS
		5	COM1-RI-PW-	6	+ 12VS

Note:

[1] Pin9 of COM1 also can be 0/5/12V(COM1 PWR Select Select Jumper)

(21) CMOS Clear Jumper

No.	Location	Pin	Definition	Pin	Definition
21	JCMOS1	1	Clear CMOS	2	GND

(22) COM6 Pin Headers (2*3 Pin 2.0mm)

No.	Location	Pin	Definition	Pin	Definition
22	COM6	1	COM6-RXD	2	RS485-B
		3	COM6-TXD	4	RS485-A
		5	GND	6	GND

(23) Parallel Port Pin Header (2*13 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
23	LPT1	1	STB	2	AFD
		3	D0	4	ERR
		5	D1	6	IN IT
		7	D2	8	SLINT
		9	D3	10	GND
		11	D4	12	GND
		13	D5	14	GND
		15	D6	16	GND
		17	D7	18	GND
		19	ACK	20	GND
		21	BUSY	22	GND
		23	PE	24	GND

(24) eDP Signal Pin Header (2*10 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
24	eDP	1	LCD-VDD	2	LCD-VDD
		3	GND	4	GND
		5	AUX-CH-N	6	AUX-CH-P
		7	GND	8	GND
		9	N/C	10	N/C
		11	N/C	12	N/C
		13	LANE1-N	14	LANE1-P
		15	LANE0-N	16	LANE0-P
		17	GND	18	GND
		19	N/C	20	HPD

Note:

[1] LV-EDP-SEL is the function switching jumper of EDP or LVDS. And only one of them can be used simultaneously. See [41]eDP/LVDS Signal Jumper.

(25) eDP/LVDS Backlight Control Pin wafer Header (1*6 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
25	BLT-PWR1	1	INVT-PWR	2	INVT-PWR
		3	BLK-EN	4	BLK-PWM
		5	GND	6	GND

(26) LVDS Signal Pin Header (2*15 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
26	LVDS	1	LCD-VDD	2	LCD-VDD
		3	LCD-VDD	4	N/C
		5	GND	6	GND
		7	TA0N-	8	TA0P+
		9	TA1N-	10	TA1P+
		11	TA2N-	12	TA2P+
		13	N/C	14	GND
		15	CLK-TAN-	16	CLK-TAP+
		17	TA3N-	18	TA3P+
		19	TB0N-	20	TB0P+
		21	TB1N-	22	TB1P+
		23	TB2N-	24	TB2P+
		25	GND	26	GND
		27	CLK-TBN-	28	CLK-TBP+
		29	TB3N-	30	TB3P+

Note:

[1] LV-EDP-SEL is the function switching jumper of EDP or LVDS. And only one of them can be used simultaneously. See [41]eDP/LVDS Signal Jumper.

(27) eDP/LVDS VDD Select Jumper (2*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
25	JC-LVDS1	1	LCD-VDD(Default)	2	+V3.3S
		3	LCD-VDD	4	+V5S
		5	LCD-VDD	6	+V12S

(28) GPIO Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
28	GPIO1	1	+5VS	2	GND
		3	IN-GP37 (A02.bit7)	4	OUT-GP47 (A03.bit7)
		5	IN-GP36 (A02.bit6)	6	OUT -GP40 (A03.bit0)
		7	IN-GP23 (A01.bit3)	8	OUT -GP33 (A02.bit3)
		9	IN-GP10 (A00.bit0)	10	OUT -GP67 (A05.bit7)

(29) SATA 3.0 Connector

The SATA socket supports SATA 3.0 specifications and is compatible with SATA 2.0 and SATA 1.0 specifications. A SATA socket can only be connected to one SATA device.

(30) SATA Power Pin wafer Header (1*4 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
30	SATA-PWR1	1	+12V	2	GND
		3	GND	4	+ 5V

(31) USB Pin Headers (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
31	F-USB2	1	+5VS	2	+5VS
		3	Data0-	4	Data1+
		5	Data0+	6	Data1+
		7	GND	8	GND
				10	N/C

(32) USB Pin Headers (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
32	F-USB1	1	+5VS	2	+5VS
		3	Data0-	4	Data1+
		5	Data0+	6	Data1+
		7	GND	8	GND
				10	N/C

(33) Front Panel Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
33	F-PANEL	1	HDD-LED+	2	PWR-LED+
		3	HDD-LED-	4	GND
		5	GND	6	PWE-SW
		7	RESET	8	GND
		9	N/C		

(34) AUTO-ON Pin Headers (1*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
34	AUTO-ON1	1	AUTO(Default)	2	PWR-SW
		3	+V3.3S		

(35) DC12V Power Input Header (ATX-4PIN)

No.	Location	Pin	Definition	Pin	Definition
35	PWR-IN	1	GND	2	GND
		3	DC-IN-12V	4	DC-IN-12V

(36) CMOS battery Holder (1*2 1.25mm wafer)

(37) CPU Fan Header (4*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
37	CPU-FAN1	1	GND	2	+ 12V
		3	FAN Speed Detection	4	FAN Speed Control

(38) DDR4 SO-DIMM Slot

(39) Buzzer

(40) COM6 RS232/RS485 Signal Select Jumpers (1*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
40	COM6-SEL	1	COM6-RS232 (Default)	2	COM6-RXD
		3	COM6-RS485		

(41) eDP/LVDS Signal Select Jumpers (1*3 Pin 2.00mm*7 pairs)

Jump 1-2pin for LVDS signal output, and jump 2-3pin for eDP signal output. Default 1-2pin LVDS signal output.

(42) PS/2 Pin Header (1*6 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
35	PWR-IN	1	KB-CLK	2	KB-DATA
		3	MS-CLK	4	GND
		5	+V5S	6	MS-DATA

(43) M.2 3052 Key-B

The socket supports the 5G module of M.2 3052 key-B and the USB3.0 protocol. Please install the SIM on SIM1 for use.

(44) SIM Card Slot(Micro SIM specification Location:SIM1)

The socket supports the 5G module of M.2 3052 key-B and the USB3.0 protocol. Please install the SIM on SIM1 for use.

【 END】

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Safety tips

1. Please be sure to read the safety manual before using this product.
2. When you power the device, make sure the voltage meets the device requirements.
3. To avoid electric shock to the human body or damage to the product, be sure to turn off the power when cleaning the motherboard.
4. Please use special motherboard cleaner to clean the motherboard.
5. Please ensure that any liquid flows or splashes into the motherboard to avoid short circuit or fire.
6. For equipment that uses a power cord, there must be an easily accessible power outlet near the equipment.
7. Please do not use the device in a humid environment.
8. Accidental dropping or tipping may cause equipment malfunction or damage.
9. Please turn off the power before connecting, plugging or unplugging any signal cables.
10. After shutting down, please wait at least 30 seconds before turning it on again.
11. If you do not use the device for a long time, please turn off the power.



12. If you need to upgrade or disassemble the motherboard, you must ensure that the operating station is an electrostatic discharge working point, because precision devices are very sensitive to electrostatic discharge.

13. Please ensure that the device has good ventilation and heat dissipation environment.

14. Please do not disassemble the motherboard by yourself. For safety reasons, this motherboard can only be operated by professional technicians.