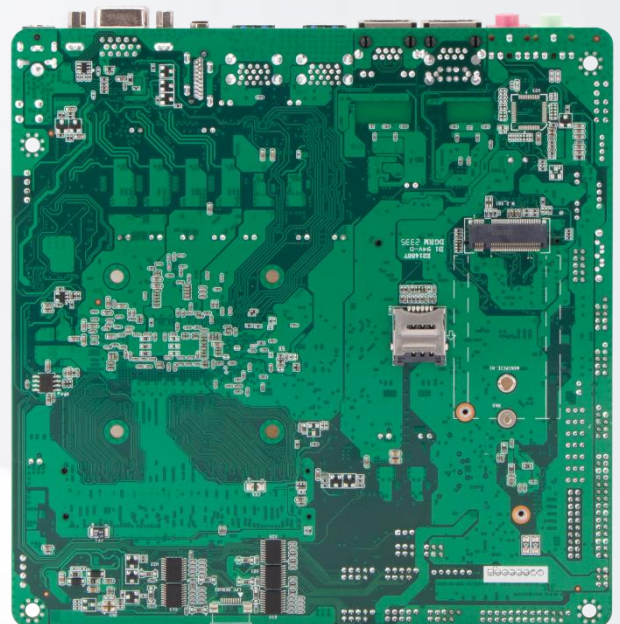
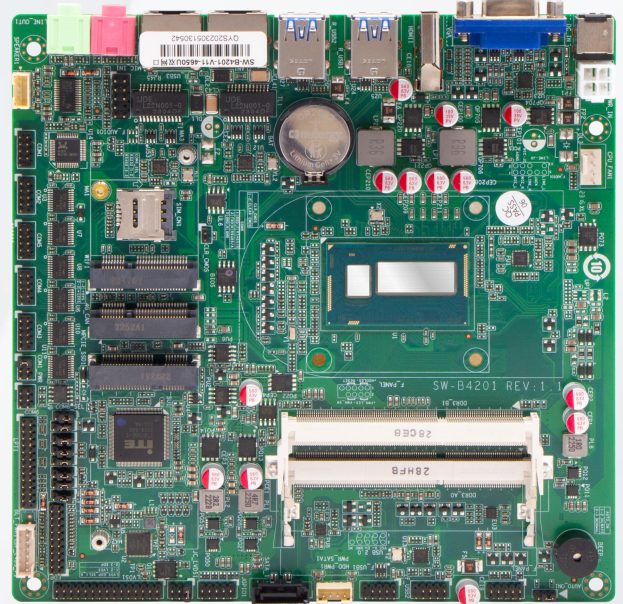


QY-MB-4010U-MITX

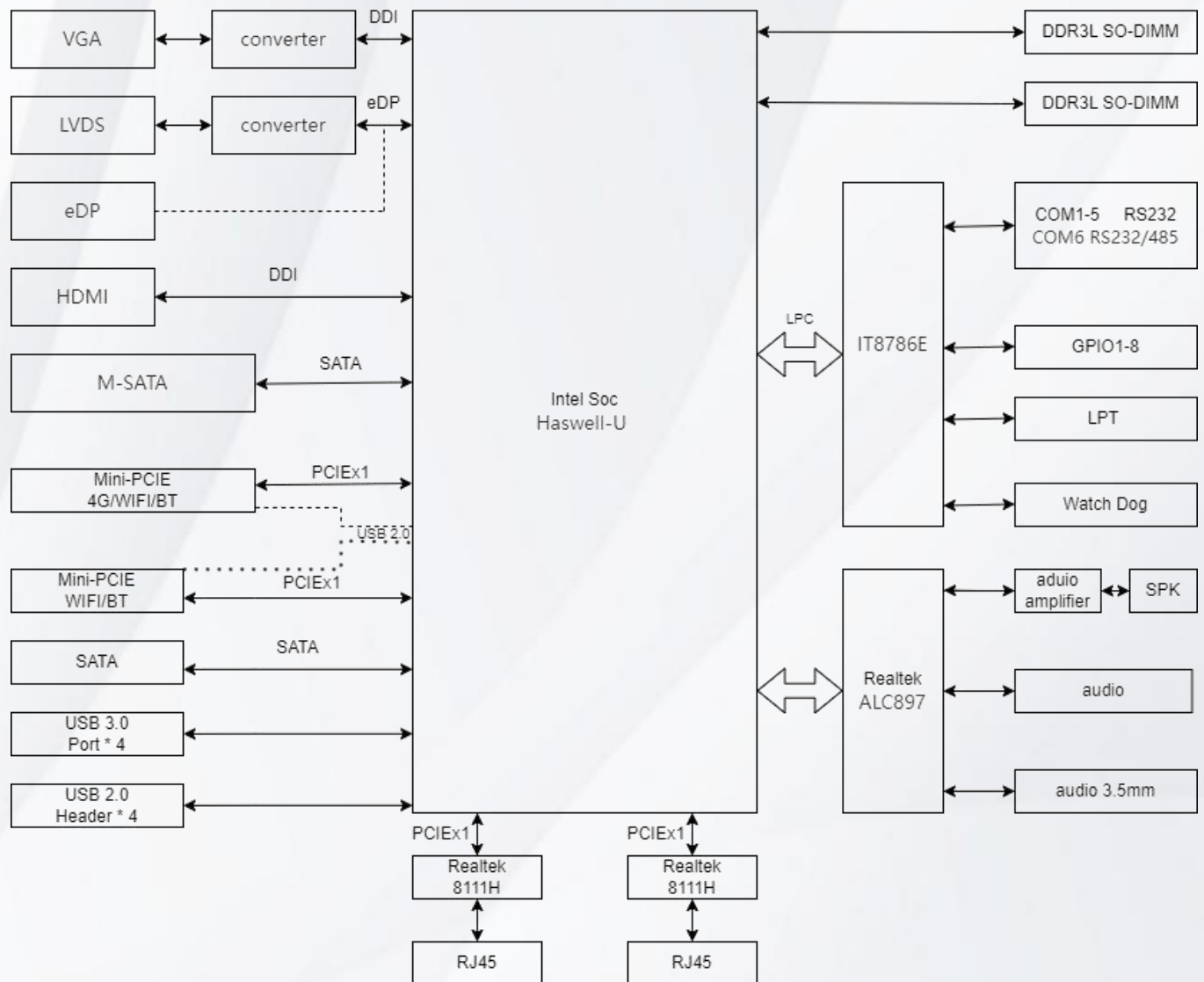
- Intel Haswell 4th Core i3 CPU
- 2*Gigabit LAN,4*USB 2.0,4*USB 3.0,6*COM
- 1*HDMI,1*VGA,1*LVDS,1*eDP
- 2*DDR III RAM slot
- 1*MSATA SSD slot,1*SATA SSD slot
- 2*Mini PCIE slot (GSM / WIFI)
- DC 12V power input
- Mini-ITX type board, 17*17 cm
- 1*Mic-in,1*Line-out connector



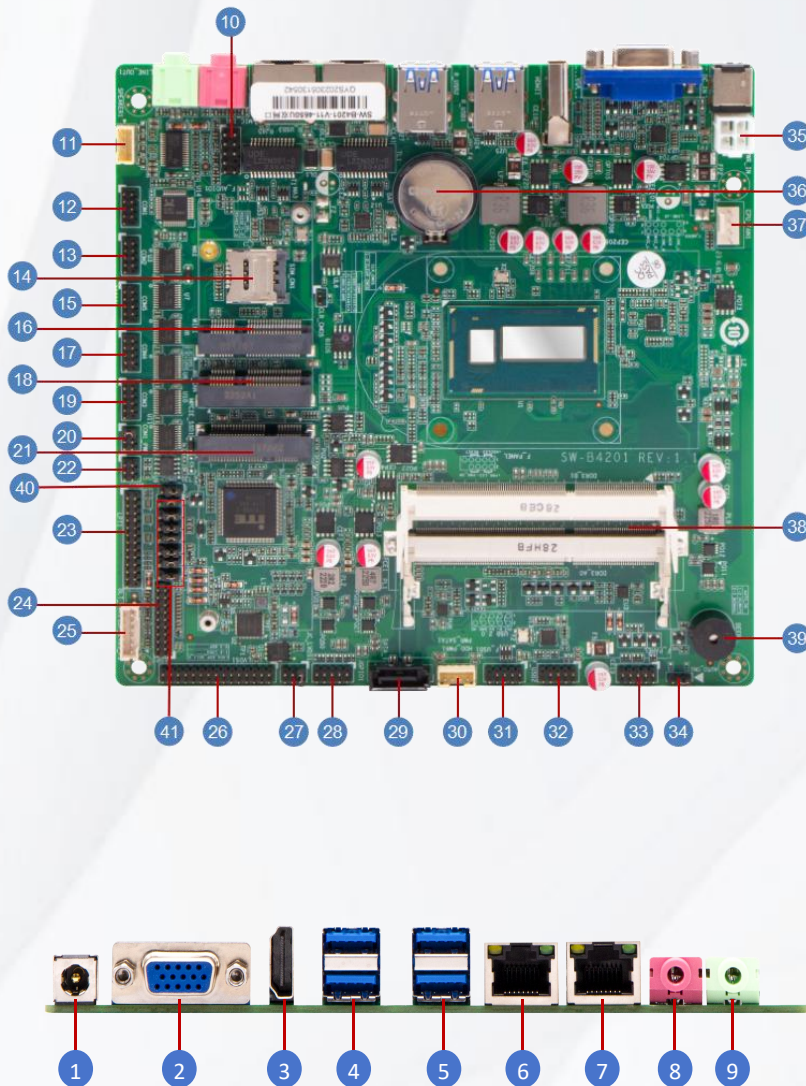
1. Specification:

Model	QY-MB-4010U-MITX
CPU	Intel Core i3-4010U 2 core, 4 total threads, 1.70 GHz, 3 MB cache
Display	Support dual display simultaneously: 1*HDMI: resolution up to 3000*2000@60Hz 1*VGA: resolution up to 1920*1080@60Hz 1*LVDS: resolution up to 1920*1080 1*eDP: resolution up to 1920*1080@60Hz
Memory	DDR 3L-1333,2*SO-DIMM,up to 16GB 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*SATA 3.0 7P connector 1*MSATA
Expansion	2*Mini-PCIE slot,support WIFI or GSM
Ethernet	2*Realtek 1Gbps PCIE Ethernet controller, RJ-45 type
USB	4*USB 3.0 (Rear I/O,Type-A) 4*USB 2.0 (Internal,header type)
COM	5*RS-232, header type 1*RS-485 / 232, header type
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*Micro SIM card slot 1*CPU Fan header 1*front panel header 1*GPIO header 1*COMS clear jumper
System	Windows 7 / 10, Linux
Temperature	Storage: -30°C ~ 70°C Operating: -20°C ~ 60°C
Power Input	DC 12V

2. Data Flow



3. Marking Instruction



36	CMOS battery holder
37	CPU fan header
38	DDR III SO-DIMM slot
39	Buzzer
40	COM-6 RS-485/232 signal select jumper
41	eDP/LVDS signal select jumper

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 connector
7	LAN connector
8	Mic-in connector
9	Line-out connector
10	Front Audio pin header
11	Amplifier pin header
12	COM-1 pin header
13	COM-2 pin header
14	SIM card slot
15	COM-3 pin header
16	Mini-PCIE connector
17	COM-4 pin header
18	Mini-PCIE connector
19	COM-5 pin header
20	COM-1 PWR select jumper
21	MSATA connector
22	COM-6 pin header
23	Paraller port pin header
24	eDP signal pin header
25	eDP / LVDS backlight control pin header
26	LVDS signal pin header
27	eDP/LVDS VDD select jumper
28	GPIO pin header
29	SATA 3.0 connector
30	SATA power pin header
31	USB pin header
32	USB pin header
33	Front panel pin header
34	Auto-on pin header
35	DC-12V power input header

4. Definition

(1) DC-12V 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 support VGA (D-Sub) specification and can support the resolution up to 1920*1080@60Hz (the actual supported resolution will be depending on the monitor you use), you can connect a monitor that supports VGA interface to this socket.

(3) HDMI connector

This socket supports HDMI specification and can support resolution up to 3000*2000@60Hz (the actual supported resolution will be depending on the monitor you use), you can connect a monitor that supports HDMI interface to this socket.

(4) USB 3.0 connector

Two USB 3.0 type-A interfaces are on the rear panel, support 5Gbps. And can be compatible with USB 2.0 specification. You can connect USB devices to this interface.

(5) USB 3.0 connector

Two USB 3.0 type-A interfaces are on the real panel, support 5Gbps. And can be compatible with USB 2.0 specification. You can connect USB devices to this interface.

(6) LAN connector

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 1Gbps.

(7) LAN connector

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 1Gbps.

(8) Mic-in connector

This jack is microphone connection hole.

(9) Line-out connector

This jack is an Audio hole and supports Audio amplification function. It is recommended to connect headphones and speakers to this jack for better performance. Output Audio (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	Audio-1	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	BKL-1	1	SPKR-	2	SPKR+
		3	SPKL+	4	SPKL-

(12) COM-1 pin header (2*5 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
12	COM-1	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 jumppt)

(13) COM-2 pin header (2*5 pin 2.00mm header)

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

(14) SIM card slot (Micro SIM)

(15) COM-3 pin header (2*5 pin 2.00mm header)

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

(16) Mini-PCIE connector

(17) COM-4 pin header (2*5 pin 2.00mm header)

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

(18) Mini-PCIE connector

(19) COM-5 pin header (2*5 pin 2.00mm header)

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

(20) COM-1 PWR select jumptr (2*3 pin 2.00 header)

No.	Location	Pin	Definition	Pin	Definition
20	COM-1 PWR	1	COM-1-RI-PW-	2	RI
		3	COM-1-RI-PW-	4	+ 5VS
		5	COM-1-RI-PW-	6	+12VS

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

(21) MSATA connector

(22) COM-6 pin header (2*3 pin header 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
22	COM-6	1	COM-6 RXD	2	RS-485-B
		3	COM-6 TXD	4	RS-485-A
		5	GND	6	GND

(23) Paraller port pin header (2*13 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
23	LPT-1	1	STB	2	AFD
		3	D0	4	ERR
		5	D1	6	INIT
		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
		25	SLCT		

(24) eDP signal pin header (2*10 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
24	eDP-1	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	LANE-1-N	14	LANE-1-P
		15	LANE-0-N	16	LANE-0-P
		17	GND	18	GND
		19	N/C	20	HPD

Note: LV-eDP-SEL is the function switching jumper of eDP or LVDS. And only one of them can be used simultaneously.

(25) eDP / LVDS backlight control pin wafer header (1*6 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
25	BLT-PWR-1	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 header)

No.	Location	Pin	Definition	Pin	Definition
26	LVDS-CON	1	LCD-VDD	2	LCD-VDD
		3	LCD-VDD	4	N/C
		5	GND	6	GND
		7	TA0N-	8	TA0P+
		9	TA1N-	10	TA10+
		11	TA2N-	12	TA2P+
		13	LVDS-DETECT	14	GND
		15	CLK-TAN-	16	CLK-TAP+
		17	TA3N-	18	TA3P+
		19	TA0N-	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.

2.When the LCDS function is nit used and LVDS is turned off under the system, it is necessary to set the display mode to eDP model through eDP/LVDS jumper.

(27) eDP / LVDS VDD select jumper (2*3 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
27	JC-LVDS-1	1	LCD-VDD	2	+ V3.3S
		3	LCD-VDD	4	+ V5S
		5	LCD-VDD	6	+ V12S

(28) GPIO pin header (2*5 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
28	GPIO	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

(30) SATA power pin wafer header (1*4 pin 2.00mm header)

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

(31) USB pin header (2*5 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
31	USB-1	1	+ 5VS	2	+ 5VS
		3	Data 0-	4	Date 1+
		5	Data 0+	6	Date 1+
		7	GND	8	GND
				10	N/C

(32) USB pin header (2*5 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
32	USB-2	1	+ 5VS	2	+ 5VS
		3	Data 0-	4	Date 1+
		5	Data 0+	6	Date 1+
		7	GND	8	GND
				10	N/C

(33) Front panel pin header (2*5 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
33	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) Audio-on pin header (1*3 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
34	Audio-on	1	AUDIO	2	PWR-SW
		3	+ V3.3S		

(35) DC-12V power input header (ATX-4 pin)

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

(36) COMS battery holder

(37) CPU fan header (4*1 pin 2.54mm header)

No.	Location	Pin	Definition	Pin	Definition
37	CPU-FAN	1	GND	2	+ 12V
		3	FAN speed detection	4	FAN speed control

(38) DDR III SO-DIMM slot

(39) Buzzer

(40) COM-6 RS-485 / 232 signal select jumper (1*3 pin 2.00mm header)

No.	Location	Pin	Definition	Pin	Definition
40	COM-6-SEL	1	COM-6 RS-232	2	COM-6-RXD
		3	COM-6 RS-485	4	

(41) eDP / LVDS signal select jumper (1*3 pin 2.00mm*7 pairs)

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

Disclaimer

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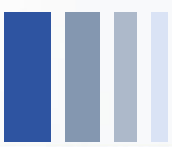
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Safety tips

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.