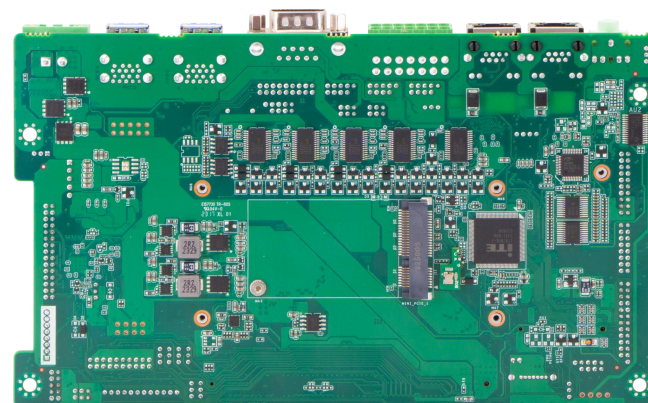
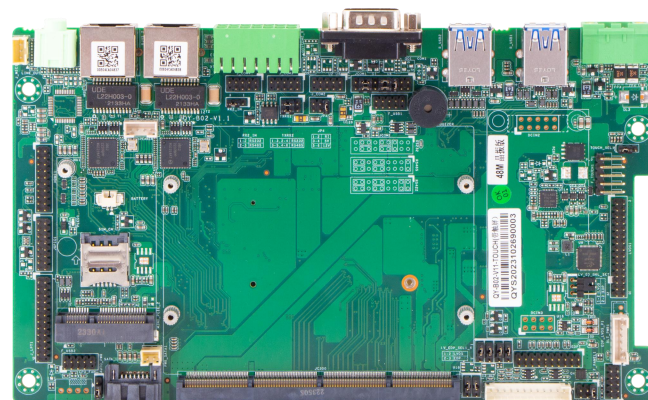


QY-MB-002-S

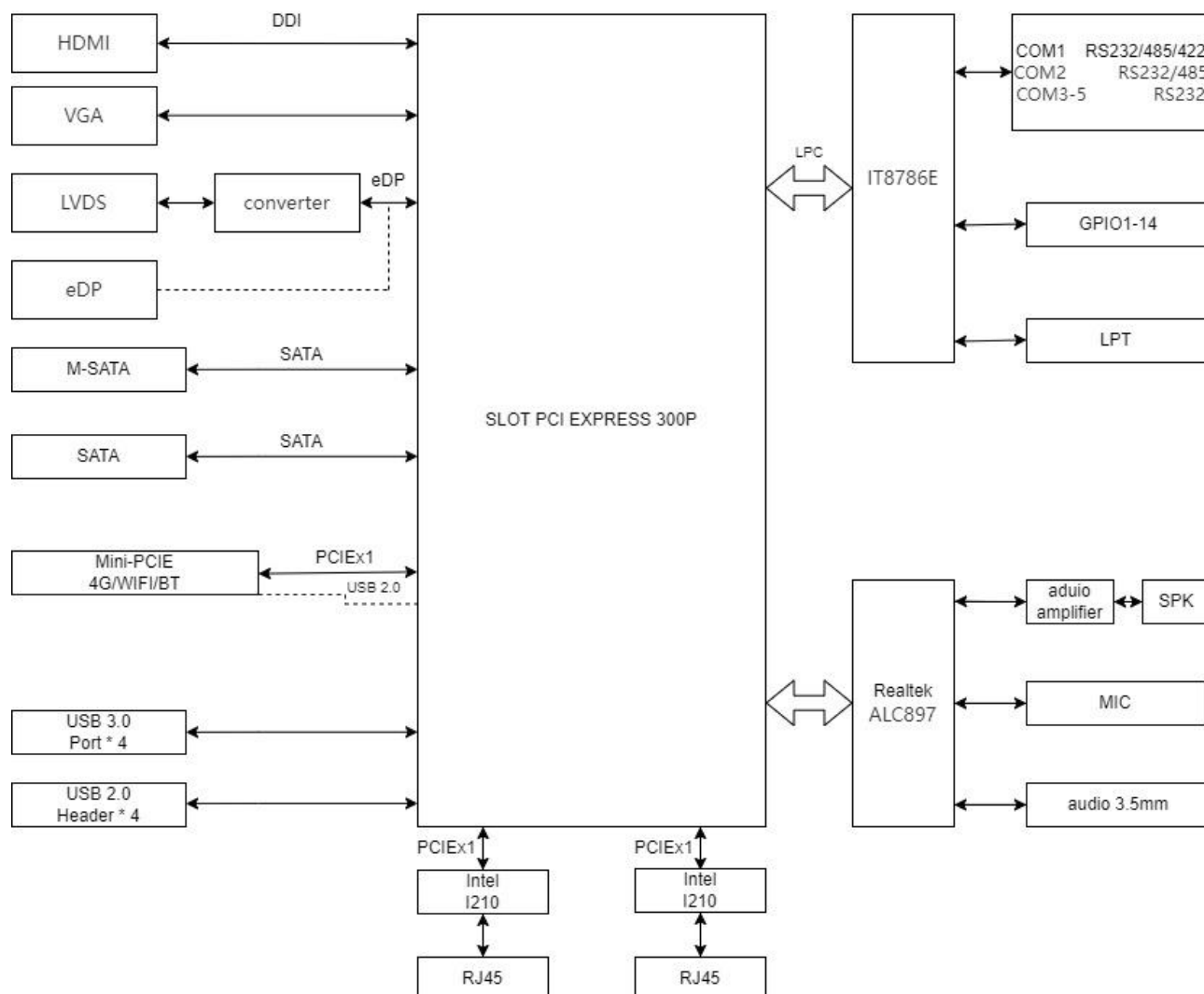
- 6*COM, 4*USB3.0, 4*USB2.0, 2*Gigabit LAN
- 1*LVDS/eDP,
1*HDMI,1*VGA
- 1*Mini-PCle (4G/Wifi/BT)
- 1*M-SATA
- DC 12V Power Input



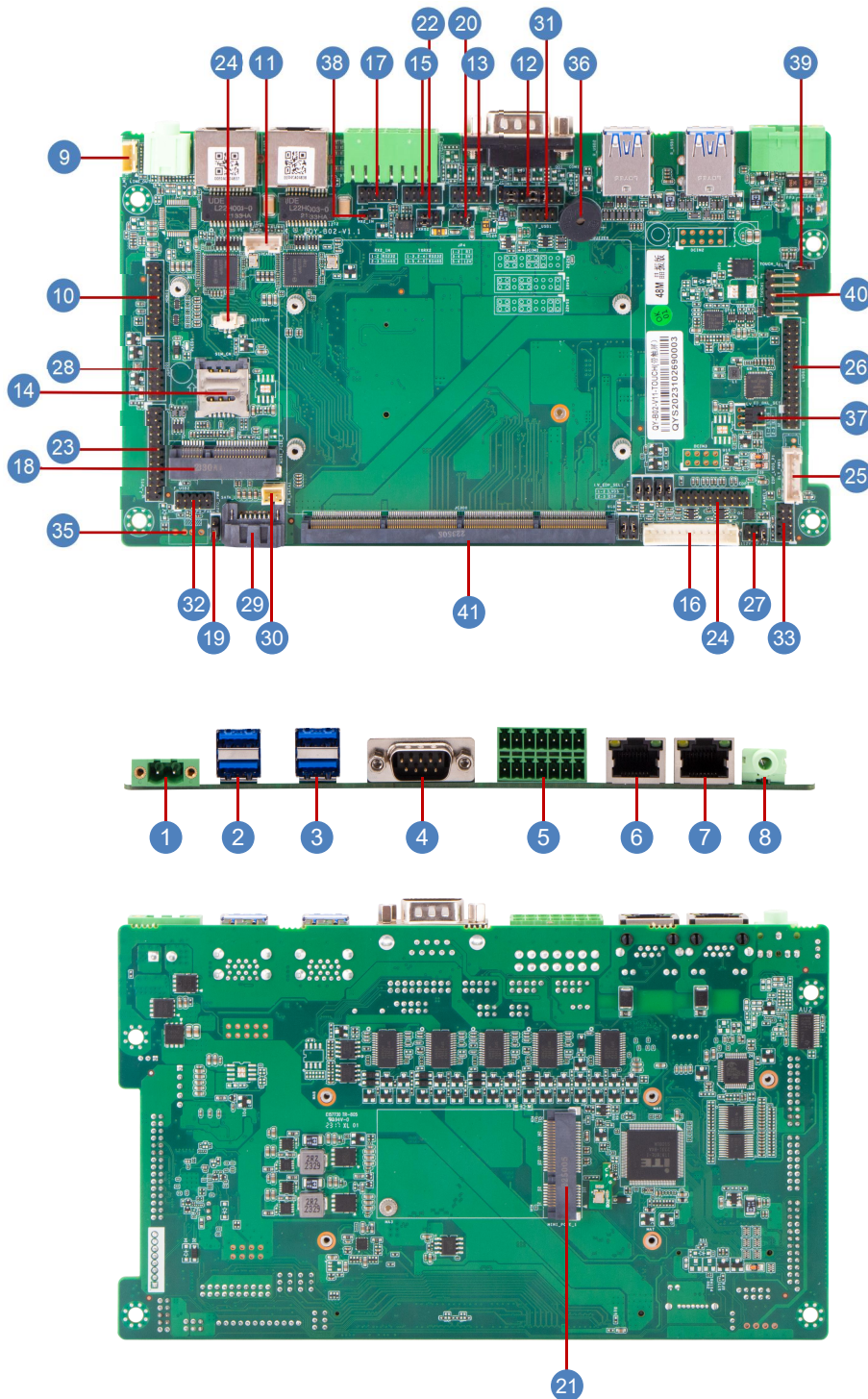
1. Specification

Model	QY-MB-002-S
Storage	1 * SATA3.0 7P Connector 1 * MSATA
Expansion Interface	1 * Mini-PCle (Wifi supported with 4G/BT selectable)
Ethernet	2 * Intel® 1Gbps PCIe Ethernet Controller, RJ45
Audio	Realtek® HDA Codec, with MIC/Line-out and Amplifier 1 * MIC 1 * Line-Out 1 * SPK
COM	4 * RS232 Header 1 * RS232/RS485/RS422 Header 1 * RS232/RS485 Header
USB	4 * USB3.0 (Rear I/O, TYPE-A) 4 * USB2.0 (Internal, Header)
Other Ports	1 * LPT Header 1 * VGA Header 1 * Micro SIM Card Slot 1 * CPU FAN Header 1 * Front Panel Header 1 * GPIO Header 1 * CMOS Clear Jumper
Temperature	Storage: -30~75°C Operating: -20° ~60°C
BIOS	AMI UEFI BIOS
Power Input	DC 12V
Factor	196mm * 115mm

2. Data Flow



3. Marking instruction



Connector&Header

1	DC12V Power Input Connector
2	USB3.0 Connectors
3	USB3.0 Connectors
4	COM1 Connectors
5	COM2-6 Pin Headers
6	LAN Connectors
7	LAN Connectors
8	Line-out Connector
9	MIC Pin Header
10	HDMI Pin Header
11	Amplifier Pin Header
12	COM1 Select Jumper
13	COM2 Pin Headers
14	SIM Card Slot
15	COM3 Pin Headers
16	VGA Pin Headers
17	COM4 Pin Headers
18	Mini PCI-4G_CAN Slot (WIFI/4G/BT)
19	AUTO SW Select Jumper
20	COM1 PWR Select Jumper
21	M-SATA Connector
22	COM2 Select Jumper
23	Parallel 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 Headers
32	USB Pin Headers
33	Front Panel Pin Header
34	CMOS battery Holder
35	CPU FAN Pin Header
36	buzzer
37	eDP/LVDS Signal Select Jumpers
38	COM2 Mode RS232/485 jumper
39	TOUCH_SEL Select Jumper
40	TOUCH Pin Header
41	SLOT PCI EXPRESS 300P

4. Definition

[1] DC12V Power Input Header(1*2 5.0mm spacing)

Power input interface, supporting 9-36V.

[2] 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.

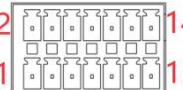
[3] USB3.0 Connectors

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.

[4] COM1 Connectors

No.	Location	Pin	Definition	Pin	Definition
4		1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	COM1_RI		

[5] COM2-6 Pin Headers(2*8Pin 3.81mm spacing)

No.	Location	Pin	Definition	Pin	Definition
5		1	COM2-TX/COM2-485-A	2	COM2-RX/COM2-485-B
		3	COM3-TX	4	COM5-TX
		5	COM3-RX	6	COM5-RX
		7	GND	8	GND
		9	COM4-TX	10	COM6-TX
		11	COM4-RX	12	COM6-RX
		13	GND	14	GND

[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] 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)

[9] MIC Pin Header(1*3 Pin 2.0mm)

No.	Location	Pin	Definition	Pin	Definition
9	J-MIC1	1	MIC-L	2	GND
		3	MIC-R		

[10] HDMI Pin Header (2*10 Pin 2.0mm)

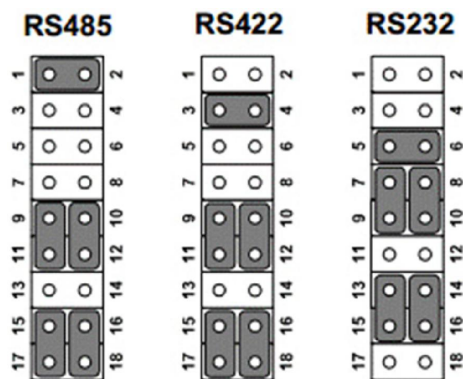
No.	Location	Pin	Definition	Pin	Definition
10	HDMI1	1	CLK-DP	2	D0-DP
		3	CLK-DN	4	D0-DN
		5	GND	6	GND
		7	GND	8	D1-DP
		9	HDMI-I2C-CLK-5V	10	D1-DN
		11	HDMI-I2C-DAT-5V	12	GND
		13	GND	14	D2-DP
		15	HDMI-5V	16	D2-DN
		17	HPD	18	GND
		19	GND	20	GND

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

No.	Location	Pin	Definition	Pin	Definition
11	SPEAKER1	1	SPKR+	2	SPKR-
		3	SPKL-	4	SPKL+

[12] COM1 Select Jumper (2*9 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
12	JCOM1	1	COM1-IN	2	RX-485IN
		3	COM1-IN	4	RX-422IN
		5	COM1-IN	6	RX-232IN(Default)
		7	COM1-DCD	8	COM1-RX
		9	COM1-PIN1(Default)	10	COM1-PIN2(Default)
		11	COM1-422-T+/485-A	12	COM1-422-T-/485-B
		13	COM1-TX(Default)	14	COM1-DTR(Default)
		15	COM1-PIN3	16	COM1-PIN4
		17	COM1-422-R+	18	COM1-422-R-



[13] COM2 Pin Headers (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
13	J-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)

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

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

[16] VGA Pin Headers

No.	Location	Pin	Definition	Pin	Definition
16	J-VGA1	1	GND	2	VSYNC
		3	HSYNC	4	GND
		5	VGA-R	6	GND
		7	VGA-G	8	GND
		9	VGA-B	10	GND
		11	HDMI-I2C-DAT-5V	12	HDMI-I2C-CLK-5V

[17] COM4 Pin Header (2*5 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
17	J-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)

[19] AUTO SW Select Jumper (2*6 Pin 2.00mm)

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

Note:

[1] This jumper function needs the support of the core module, and some modules may not support this jumper function..

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

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] M-SATA Connector

[22] COM2 Select Jumper (2*3 Pin 2.0mm)

No.	Location	Pin	Definition	Pin	Definition
22	TXRX2	1	COM2-TX(Default)	2	COM2-RX(Default)
		3	COM2-TX/COM2_485_A	4	COM2-RX/COM2-485-B
		5	COM2-485-A	6	COM2-485-B

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

No.	Location	Pin	Definition	Pin	Definition
23	J-LPT1	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)

No.	Location	Pin	Definition	Pin	Definition
24	eDP1	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 [37]eDP/LVDS Signal.

[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	LVDS1	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	GND	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 [37]eDP/LVDS Signal.

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

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

[28] GPIO Pin Header (2*8 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
28	GPIO1	1	+5VS	2	GND
		3	IN-GP37 (A02.bit7)	4	OUT -GP46 (A03.bit6)
		5	IN-GP36 (A02.bit6)	6	OUT -GP40 (A03.bit0)
		7	IN-GP23 (A01.bit3)	8	OUT -GP10 (A00.bit0)
		9	IN-GP41 (A03.bit1)	10	OUT -GP47 (A03.bit7)
		11	IN-GP65 (A05.bit5)	12	OUT-GP50 (A04.bit0)
		13	IN-GP64 (A05.bit4)	14	OUT-GP33 (A02.bit3)
		15	IN-GP11 (A00.bit1)	16	OUT -GP67 (A05.bit7)

[29] SATA 3.0 Connector

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

No.	Location	Pin	Definition	Pin	Definition
30	HHD-PWR1	1	GND	2	+ 5V

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

No.	Location	Pin	Definition	Pin	Definition
31	F-USB1	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-USB2	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-PANEL1	1	HDD-LED+	2	PWR-LED+
		3	HDD-LED-	4	GND
		5	GND	6	PWE_SW
		7	RESET	8	GND
		9	+5VSB	10	+VDC

[34] CMOS battery Holder

[35] CPU Fan Header (4*1 Pin 2.54mm)

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

[36] Buzzer

[37] 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.

[38] COM2 Mode RS232/485 jumper (1*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
38	RX2-IN	1	COM2-232 (Default)	2	COM2-RX
		3	COM2-485		

[39] TOUCH-SEL Select Jumper (1*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
38	TOUCH-SEL1	1	N/C	2	Y-
		3	Sense		

[40] TOUCH Pin Header (1*5 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
39	F-TOUCH1	1	Y+	2	X+
		3	Sense	4	Y-
		5	X-		

【 END】