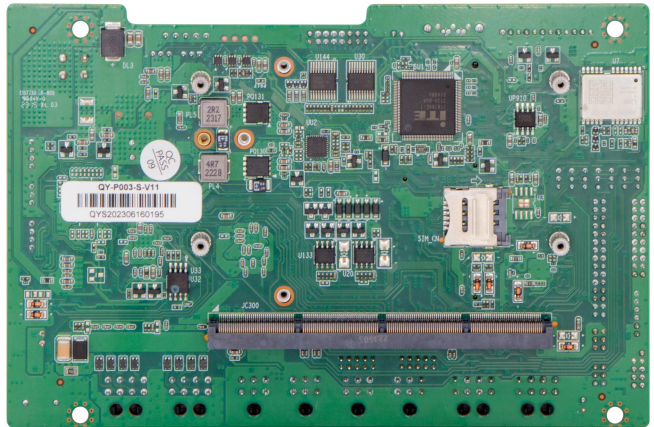
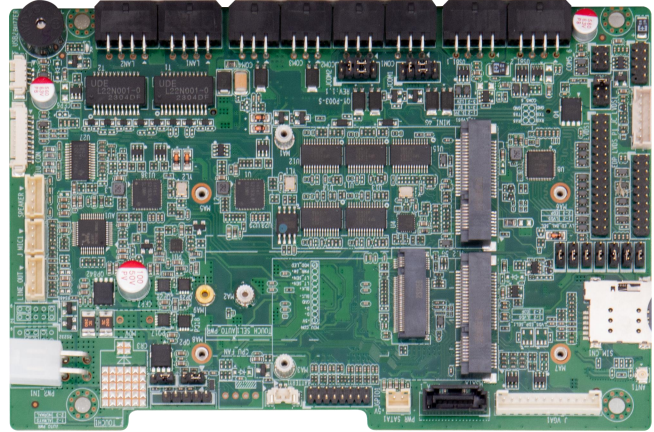


QY-MB-003-S

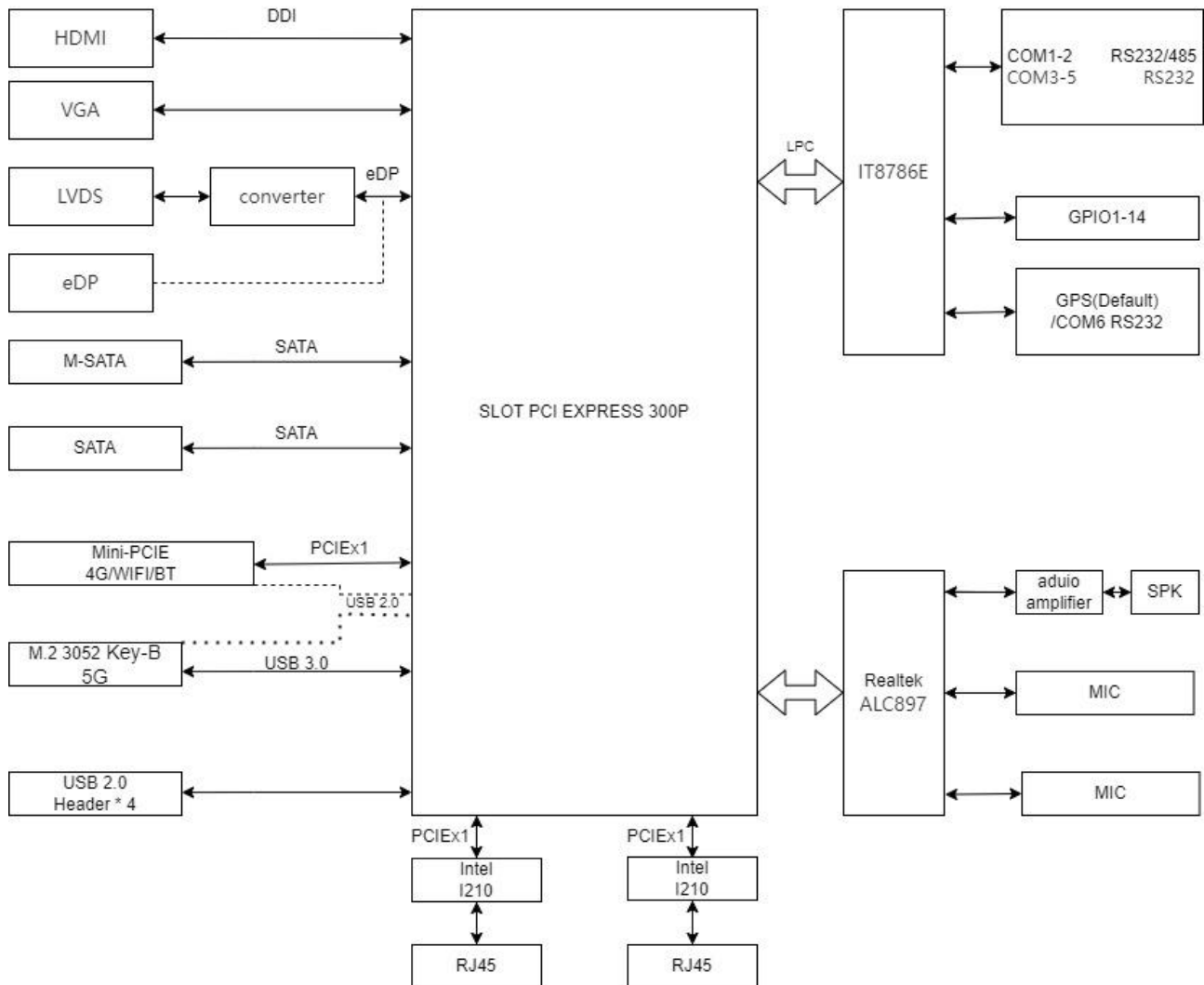
- 5*COM,6*USB2.0, 2*Gigabit LAN
- 1*LVDS/eDP, 1*VGA
- 1*Mini-PCle (4G/Wifi/BT)
- 1*M.2 3052 Key-B
- 1*M-SATA
- DC 12V Power Input



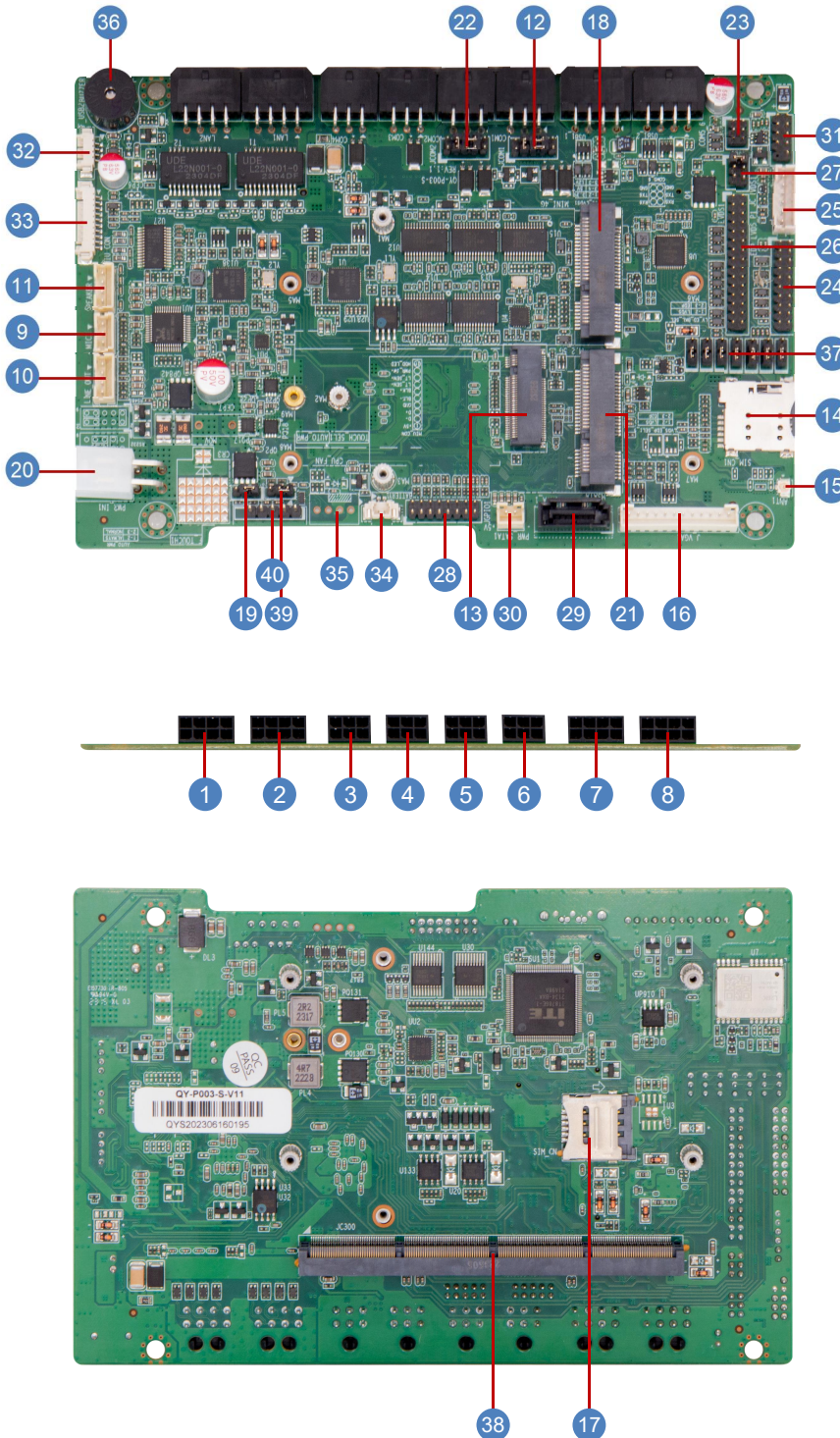
1. Specification

Model	QY-MB-003-S
Storage	1 * SATA3.0 7P Connector 1 * Mini-SATA
Expansion Interface	1 * Mini-PCIe (Wifi supported with 4G/BT selectable) 1 * M.2 3052 Key-B (5G supported)
Ethernet	2 * Intel® 2.5Gbps 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 2 * RS232/RS485 Header
USB	7 * USB2.0 Header)
Other Ports	1 * VGA Header 1 * Micro SIM Card Slot 1 * Front Panel Header 1 * GPIO Header
Temperature	Storage: -30~75°C Operating: -20° ~60°C
BIOS	AMI UEFI BIOS
Power Input	DC 12V
Factor	161mm * 106mm

2. Data Flow



3. Marking instruction

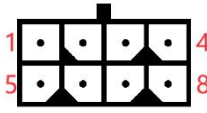


Connector&Header

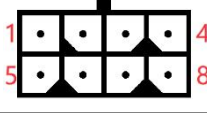
1	USB Pin Header
2	USB Pin Header
3	COM1 Pin Header
4	COM2 Pin Header
5	COM3 Pin Header
6	COM4 Pin Header
7	LAN Pin Header
8	LAN Pin Header
9	MIC Pin Header
10	LINE OUT Pin Header
11	Amplifier Pin Header
12	COM1 Select Jumper
13	M.2 3052 Key-B
14	SIM Card Slot
15	GPS antenna pedestal
16	VGA Pin Headers
17	SIM Card Slot
18	Mini PCI-4G_CAN Slot (WIFI/4G/BT)
19	AUTO SW Select Jumper
20	DC IN Pin Header
21	M-SATA Connector
22	COM2 Select Jumper
23	COM5/6 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	SLOT PCI EXPRESS 300P
39	TOUCH_SEL Select Jumper
40	TOUCH Pin Header

4. Definition

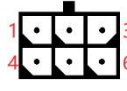
[1] USB Pin Header (2*4 3.0mm spacing)

No.	Location	Pin	Definition	Pin	Definition
1	USB1-2 	1	+V5S	5	+V5S
		2	USB1-D-	6	USB2-D-
		3	USB1-D+	7	USB1-D+
		4	GND	8	GND

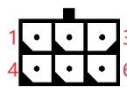
[2] USB Pin Header (2*4 3.0mm spacing)

No.	Location	Pin	Definition	Pin	Definition
2	USB2-2 	1	+V5S	5	+V5S
		2	USB1-D-	6	USB2-D-
		3	USB1-D+	7	USB1-D+
		4	GND	8	GND

[3] COM1 Pin Header (2*3 3.0mm spacing)


No.	Location	Pin	Definition	Pin	Definition
3	COM1 	1	COM1-PIN2	4	GND
		2	COM1-PIN3	5	COM1-DSR
		3	COM1-DTR	6	COM1-RTS

[4] COM2 Pin Header (2*3 3.0mm spacing)


No.	Location	Pin	Definition	Pin	Definition
4	COM2 	1	COM2-PIN2	4	GND
		2	COM2-PIN3	5	COM2-DSR
		3	COM2-DTR	6	COM2-RTS

[5] COM3 Pin Header (2*3 3.0mm spacing)

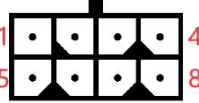
No.	Location	Pin	Definition	Pin	Definition
	COM3	1	COM3-RX	4	GND
		2	COM3-TX	5	COM3_-DSR

5		3	COM3_DTR	6	COM3_RTS
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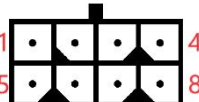
[6] COM4 Pin Header (2*3 3.0mm spacing)

No.	Location	Pin	Definition	Pin	Definition
6	COM4 	1	COM4-RX	4	GND
		2	COM4-TX	5	COM4-DSR
		3	COM4-DTR	6	COM4-RTS

[7] LAN Pin Header (2*4 3.0mm spacing)

No.	Location	Pin	Definition	Pin	Definition
7	LAN1 	1	D0+	5	D2-
		2	D0-	6	D1-
		3	D1+	7	D3+
		4	D2+	8	D3-

[8] LAN Pin Header (2*4 3.0mm spacing)

No.	Location	Pin	Definition	Pin	Definition
8	LAN2 	1	D0+	5	D2-
		2	D0-	6	D1-
		3	D1+	7	D3+
		4	D2+	8	D3-

[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] LINE OUT Pin Header (1*4 Pin 2.0mm)

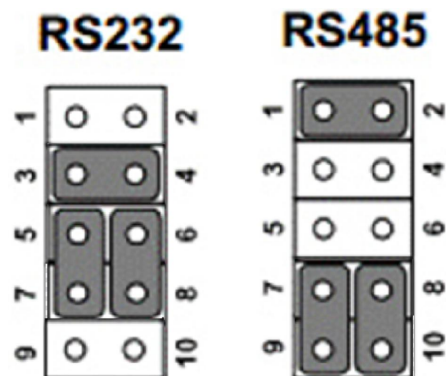
No.	Location	Pin	Definition	Pin	Definition
10	LINE OUT	1	OUT-L	2	Sense
		3	OUT-R	4	GND

[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	COM1-RS485
		3	COM1-IN	4	COM1-RS232(Default)
		5	COM1-TX(Default)	6	COM1-RX(Default)
		7	COM1-PIN3	8	COM1-PIN2
		9	COM1-485-B	10	COM1-485-A



[13] \M.2 3052 Key-B

5G module supporting USB3.0 signal, interface M.2 3052 key-B.

[14] SIM Card Slot (Micro SIM)

This SIM card slot corresponds to the 5G module card slot.

[15] GPS antenna pedestal

[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] SIM Card Slot (Micro SIM)

This SIM card slot corresponds to the 4G module card slot.

[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..

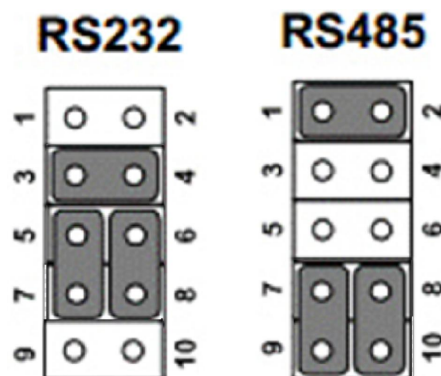
[20] DC IN Pin Header(ATX 4pin)

No.	Location	Pin	Definition	Pin	Definition
20	PWR-IN1	1	GND	2	GND
		3	+12V	4	+12V

[21] M-SATA Connector

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

No.	Location	Pin	Definition	Pin	Definition
22	J-COM2	1	COM2-IN	2	COM2-RS485
		3	COM2-IN	4	COM2-RS232(Default)
		5	COM2-TX(Default)	6	COM2-RX(Default)
		7	COM2-PIN3	8	COM2-PIN2
		9	COM2-485-B	10	COM2-485-A



[23] COM5/6 Pin Header (2*3 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
23	COM5-6	1	COM5-RX	2	COM6-TX
		3	COM5-TX	4	COM6-TX
		5	GND	6	GND

Note:

[1] COM6 is connected with GPS signal by default, and the COM6 signal of this pin is not connected.

[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	N/C
		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	JGPIO1	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	PWR-SATA1	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	Data0-
		3	Data0+	4	GND

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

No.	Location	Pin	Definition	Pin	Definition
33	MIU-CON	1	+5VS	2	USB-Data0-
		3	USB-Data0+	4	GND
		5	BKL-DOWN	6	BKL-UP
		7	BKL-DOWN	8	BKL-UP
		9	PWR-SW	10	HDD-LED(Default)/RTS-SW

Note:

[1] The default configuration of the 10-pin is HDD_LED.

[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] SLOT PCI EXPRESS 300P

Our company specially defines the extension interface, and it is forbidden to use non-core module products.

[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]