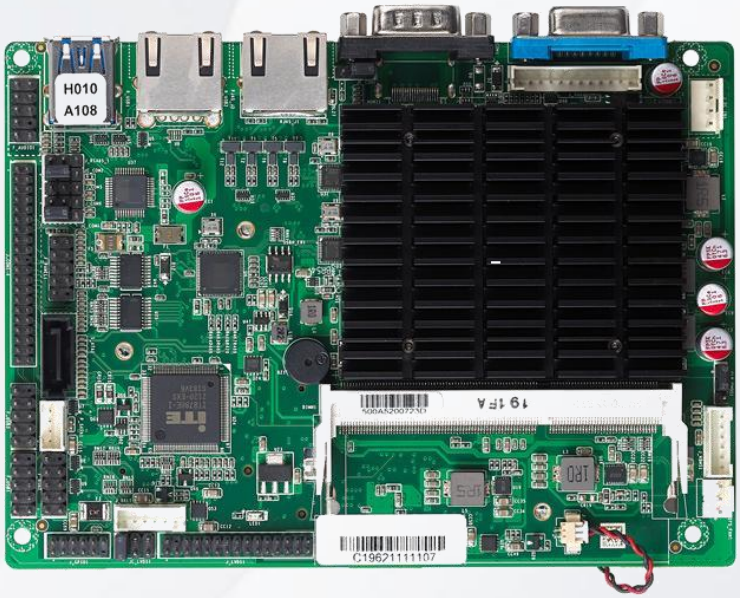
Mother Board

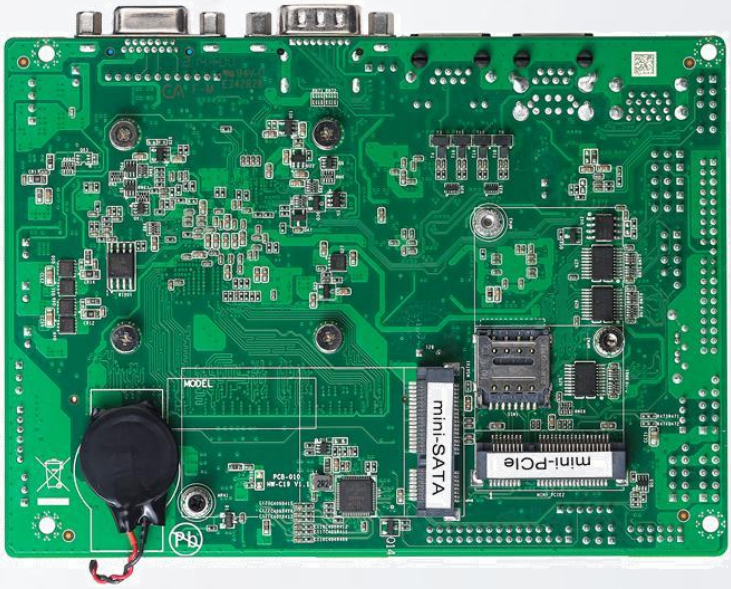
QY-MB-J1900-3.5 inch

- Intel Bay Trail Celeron J1900 CPU
- 2*Gigabit LAN, 6*USB 2.0, 2*USB 3.0, 6*COM
- 1*VGA, 1*LVDS/eDP

(Support dual display simultaneously)

- 2*Mini-PCIe, support mSATA and Wifi/4G/BT
- DC 12V power input
- 146*105mm



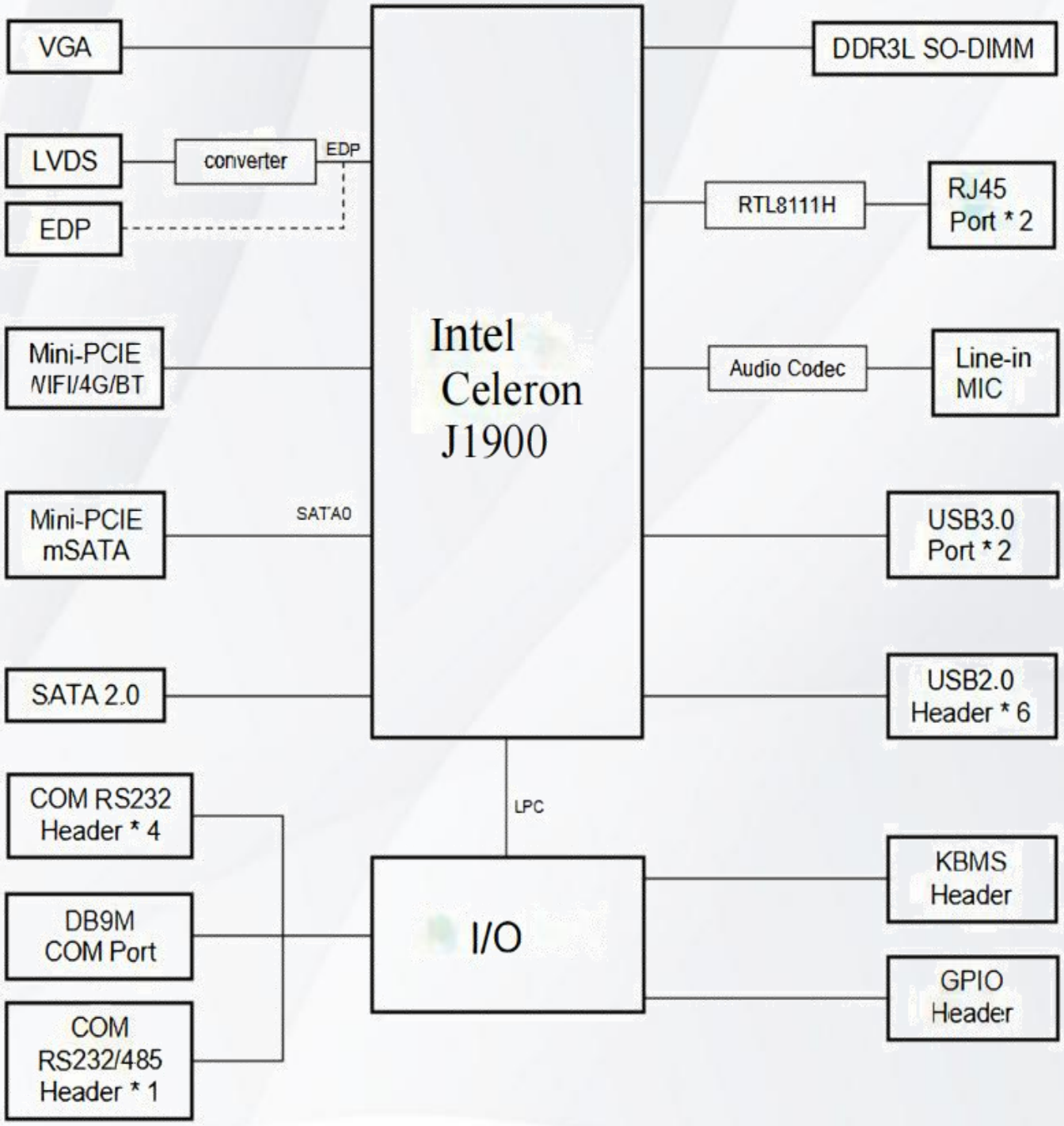


QY-MB-J1900-3.5 inch

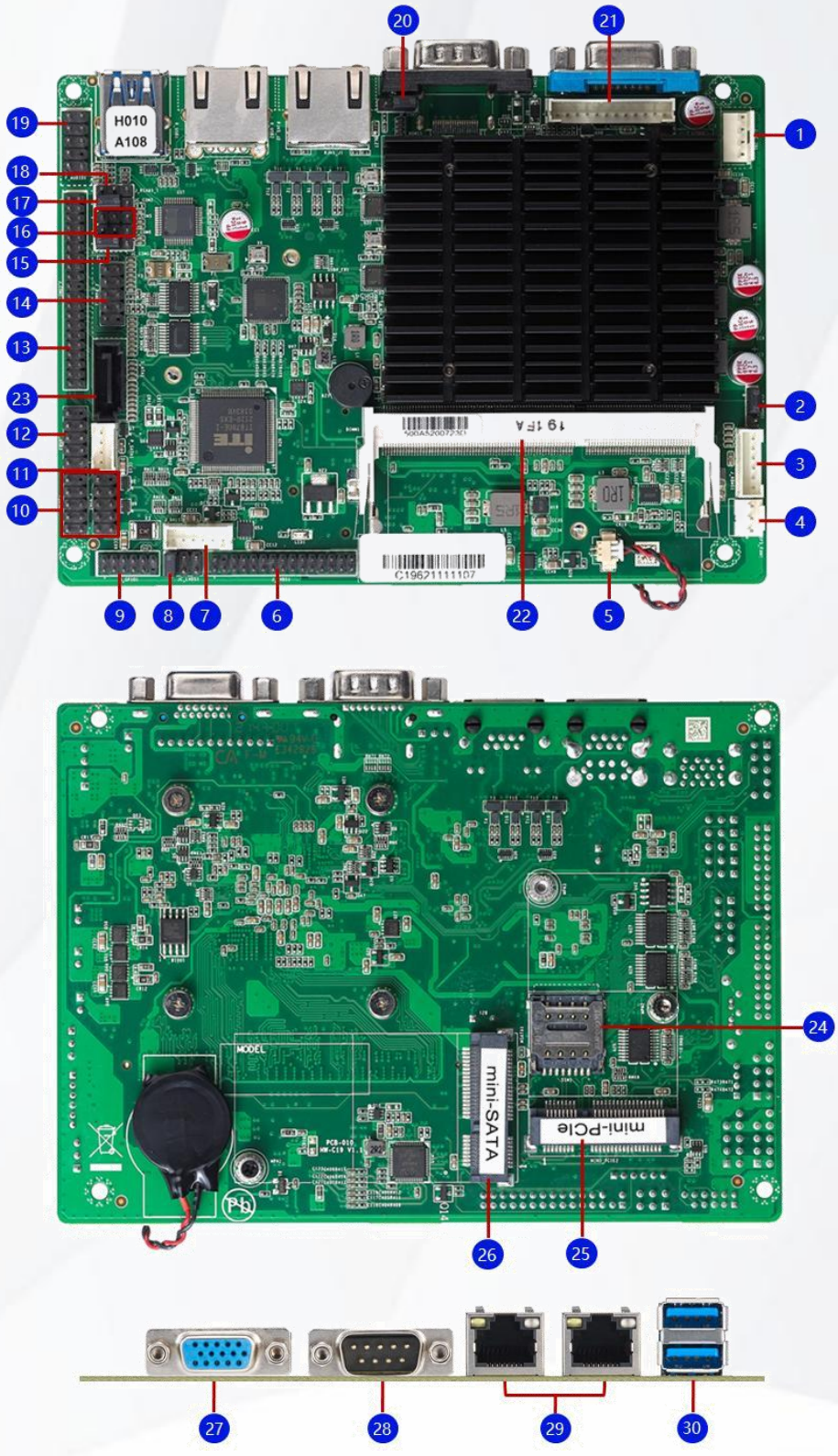
1. Specification:

Model	QY-MB-J1900-3.5 inch
CPU	Intel Celeron J1900, Base Frequency 2.00G, Quad-core, TDP 10W
Display	1 * LVDS/eDP: LVDS, resolution up to 1920 * 1200@60Hz eDP: resolution up to 1920 * 1200@60Hz 1 * VGA: max resolution up to 1920 * 1200@60Hz
Memory	DDR3L-1333 MHz, 1 * SO-DIMM slot, up to 8GB
Storage	1 * SATA2.0 7P Connector 1 * mSATA
Expansion	2*Mini-PCIe slot(1 * WIFI/4G/BT, 1 * mSATA)
Ethernet	2*Realtek 1Gbps PCIe Ethernet Controller, RJ-45 type
USB	2 * USB3.0 (Rear I/O, TYPE-A) 6 * USB2.0 (Internal, Header)
COM	5 * RS232 (1*Connector &4*Header) 1 * RS232/RS485(Header)
Audio	Realtek HDA Codec, with MIC+ Line-out 1*Front Audio Header
Other Ports	1 * Keyboard&Mouse Header 1 * Battery Header 1 * VGA Header 1 * Micro SIM Card Slot 1 * SYS FAN Header 1 * Front Panel Header 1 * GPIO Header 1 * CMOS Clear Jumper
System	Windows 7 /8.1/ 10, Linux
Temperature	Storage: -20℃ ~ 75℃ Operating: -15℃ ~ 60℃
Power Input	DC 12V

2. Date Flow


VGA
LVDS
converter
EDP
EDP
Mini-PCIE
WIFI/4G/BT
Mini-PCIE
mSATA
SATA0
SATA 2.0
COM RS232
Header * 4
DB9M
COM Port
COM
RS232/485
Header * 1
Intel
Celeron
J1900
LPC
I/O
DDR3L SO-DIMM
RTL8111H
RJ45
Port * 2
Audio Codec
Line-in
MIC
USB3.0
Port * 2
USB2.0
Header * 6
KBMS
Header
GPIO
Header

3. Marking Instruction



Connector&Header

1	DC12V Power Input Header
2	CMOS Clear Jumper
3	Keyboard&Mouse Pin Header
4	System Fan Header
5	Battery Header
6	LVDS Signal Pin Header
7	LVDS Backlight Control Pin Header
8	LVDS VDD Select Jumper
9	GPIO Pin Header
10	Front USB Pin Headers
11	SATA Power Pin Header
12	Front USB Pin Header
13	COM1/2/3/4 Pin Headers
14	Front Panel Pin Header
15	COM6 RS232/RS485 Signal Select Jumper
16	COM5/6 Pin Headers
17	COM2 Pin9 Signal Select Jumper
18	RS485 Signal Pin Header
19	Front Audio Pin Header
20	COM1 Pin9 Signal Select Jumper
21	VGA Pin Header
22	DDR3 SO-DIMM Slot
23	SATA 2.0 Connector
24	SIM Card Slot
25	Mini PCI-E2 Slot (WIFI/4G/BT)
26	Mini PCI-E1 Slot (mSATA)
27	VGA Connector
28	COM1 Connector
29	LAN Connectors
30	USB3.0 Connectors

4. Definition

(1)DC12V Power Input Header (4*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
1	J-DC-IN1	1	+12V	2	+12V
		3	GND	4	GND

(2)CMOS Clear Jumper (3*1 Pin 2.54mm)

No.	Location	Setting	Function
2	CLR-CMOS1	1-2(Default)	Normal
		2-3	Clear CMOS

(3)Keyboard&Mouse Pin Header (6*1 Pin 2.0mm)

No.	Location	Pin	Definition	Pin	Definition
3	J-KBMS1	1	KB-CLK	2	KB-DAT
		3	MS-CLK	4	GND
		5	+ 5V	6	MS-DAT

(4) System Fan Header (3*1 Pin 2.54mm)

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

(5) Battery Header (2*1 Pin 1.25mm)

No.	Location	Pin	Definition	Pin	Definition
5	J-BAT1	1	GND	2	+3V

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

No.	Location	Pin	Definition	Pin	Definition
6	J-LVDS1	1	VDD [1]	2	VDD [1]
		3	VDD [1]		
		5	LVDS-Detect#/ EDP-HPD#	6	LVDS-Detect#/ EDP-HPD#
		7	LVDS-A-DATA0-	8	LVDS-A-DATA0+
		9	LVDS-A-DATA1-	10	LVDS-A-DATA1+
		11	LVDS-A-DATA2-	12	LVDS-A-DATA2+
		13	GND	14	GND
		15	LVDS-A-CLK-	16	LVDS-A-CLK+
		17	LVDS-A-DATA3-	18	LVDS-A-DATA3+
		19	LVDS-B-DATA0-/ EDP-TX0-	20	LVDS-B-DATA0+/ EDP-TX0+
		21	LVDS-B-DATA1- EDP-TX1-	22	LVDS-B-DATA1+ EDP-TX1+
		23	LVDS-B-DATA2-	24	LVDS-B-DATA2+
		25	GND	26	GND
		27	LVDS-B-CLK-	28	LVDS-B-CLK+
		29	LVDS-B-DATA3-/ EDP-AUX-	30	LVDS-B-DATA3+/ EDP-AUX+

Notes:

[1]: Panel Power VDD is 3.3V by default, 5V or 12V is selectable by " LVDS VDD Select Jumper " (JC-LVDS1, Location 8).

[2]: It also can support eDP if specified(resistor selectable).

(7)LVDS Backlight Control Pin Header (6*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
7	J-BKL1	1	GND	2	GND
		3	LVDS-BKL-CTL	4	LVDS-BKL-EN
		5	+12V	6	+12V

(8) LVDS VDD Select Jumper (3*2 Pin 2.54mm)

No.	Location	Setting	Function
8	JC-LVDS1	1-2(Default)	+3.3V
		3-4	+5V
		5-6	+12V

(9) GPIO Pin Header (6*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
9	J-GPIO1	1	SIO-GPI80 (0xA07 Bit0)	2	SIO-GPI81 (0xA07 Bit1)
		3	SIO-GPI82 (0xA07 Bit2)	4	SIO-GPI83 (0xA07 Bit3)
		5	GND	6	SIO-GPO84 (0xA07 Bit4)
		7	SIO-GPO85 (0xA07 Bit5)	8	SIO-GPO86 (0xA07 Bit6)
		9	SIO-GPO87 (0xA07 Bit7)	10	+ 3.3V
				12	N/C

(10)Front USB Pin Headers (5*2 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
10	F-USB1	1	+ 5 V	2	+ 5 V
		3	USB-	4	USB-
		5	USB+	6	USB+
		7	GND	8	GND
				10	GND
	F-USB2	1	+ 5 V	2	+ 5 V
		3	USB-	4	USB-[1]
		5	USB+	6	USB+[1]
		7	GND	8	GND
				10	GND

Note:

[1] The signal of F-USB2 will be invaluable if MINI-PCIE2 support 4G/BT.

(11)SATA Power Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
11	P-SATA1	1	+ 12V	2	GND
		3	GND	4	+ 5V

(12) Front USB Pin Header (5*2 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
12	F-USB3	1	+ 5 V	2	+ 5 V
		3	USB-	4	USB-
		5	USB+	6	USB+
		7	GND	8	GND
				10	GND

(13) COM1/2/3/4 Pin Headers (20*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
13	J-COM1-4	1	COM1-DCD	2	COM1-RXD
		3	COM1-TXD	4	COM1-DTR
		5	GND	6	COM1-DSR
		7	COM1-RTS	8	COM1-CTS
		9	COM1-RI#[1]	10	GND
		11	COM2-DCD	12	COM2-RXD
		13	COM2-TXD	14	COM2-DTR
		15	GND	16	COM2-DSR
		17	COM2-RTS	18	COM2-CTS
		19	COM2-RI#[2]		
		21	COM3-DCD	22	COM3-RXD[1]
		23	COM3-TXD	24	COM3-DTR
		25	GND	26	COM3-DSR
		27	COM3-RTS	28	COM3-CTS
		29	COM3-RI#	30	GND
		31	COM4-DCD	32	COM4-RXD
		33	COM4-TXD	34	COM4-DTR
		35	GND	36	COM4-DSR
		37	COM4-RTS	38	COM4-CTS
		39	COM4-RI#	40	GND

Note:

[1] : Pin9 of J-COM1 also can be 5V selected by Jumper (JC-COM1, Location 20).

[2] : Pin9 of J-COM2 also can be 5V selected by Jumper (JC-COM2, Location 17) and 12V selected by resistor.

(14) Front Panel Pin Header (5*2 Pin 2.54 mm)

No.	Location	Pin	Definition	Pin	Definition
14	F-PANEL1	1	HD LED+	2	Power LED+
		3	HD LED-	4	Power LED-
		5	RESET-	6	PWR+
		7	RESET+	8	PWR-
		9	N/C		

(15) COM6 RS232/RS485 Signal Select Jumper (3*1 Pin 2.54mm)

No.	Location	Setting	Function
15	JC-COM6	1-2(Default)	RS232
		2-3	RS485

(16) COM5/6 Pin Headers (3*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
16	J-COM5	1	COM-RXD	2	COM-TXD
		3	GND		
	J-COM6	1	COM-RXD/RS485+[1]	2	COM-TXD/RS485-[1]
		3	GND		

Note:

[1]: J-COM6 is support RS232 by default, it also can support RS485 selected by Jumper (JC-COM6, Location 15)

(17) COM2 Pin9 Signal Select Jumper (3*1 Pin 2.54mm)

No.	Location	Setting	Function
17	JC-COM2	1-2(Default)	COM2-Pin9: RI#
		2-3	COM2-Pin9: 5V[1]

Note:

[1]: Pin9 of JC-COM2 also can support 12V if specified(resistor selectable).

(18) RS485 Signal Pin Header (3*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
18	J-RS485-1	1	RS485+	2	RS485-
		3	GND		

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

No.	Location	Pin	Definition	Pin	Definition
19	F-AUDIO1	1	FP-MIC-L	2	GND
		3	FP-MIC-R	4	+ 3.3V
		5	FP-OUT-R	6	MIC-Detect
		7	GND		
		9	FP-OUT-L	10	LINE-Detect

(20) COM1 Pin9 Signal Select Jumper (3*1 Pin 2.54mm)

No.	Location	Setting	Function
20	JC-COM1	1-2(Default)	COM1-Pin9: RI#
		2-3	COM1-Pin9: 5V

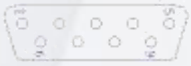
(21) VGA Pin Header (12*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
21	J-VGA1	1	GND	2	VSYNC
		3	HSYNC	4	GND
		5	RED	6	GND
		7	GREEN	8	GND
		9	BLUE	10	GND
		11	DDC data	12	DDC clock

Note:

[1]: VGA (DB15) Connector and J-VGA1 share the same signal and can’ t be accessed simultaneously.

(22) COM1 Connector

No.	Location	Pin	Definition	Pin	Definition
28	COM1[2] 	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI#[1]		

Note:

[1] Pin9 of COM1 also can be 5V selected by Jumper (JC-COM1, Location 20).

[2] COM1 (DB15) Connector and J-COM1 share the same signal and can’ t be accessed simultaneously.

[END]