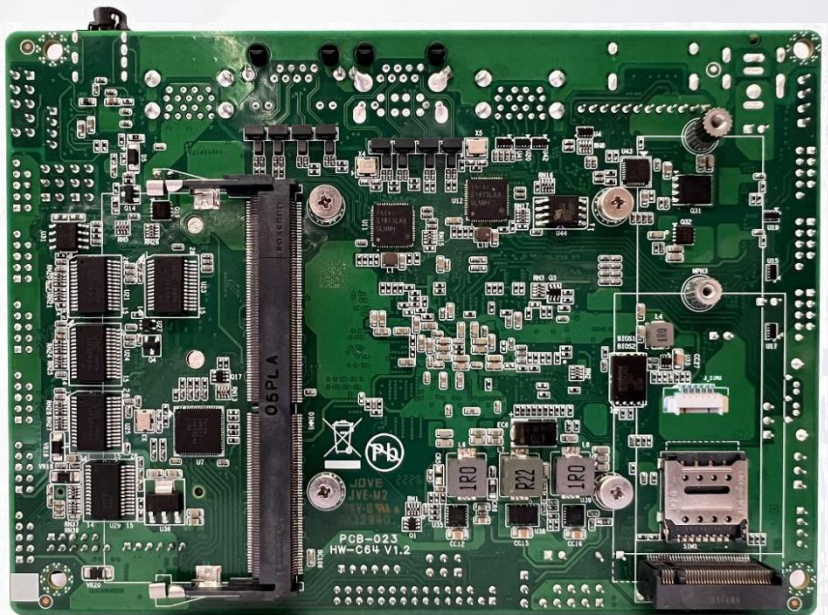
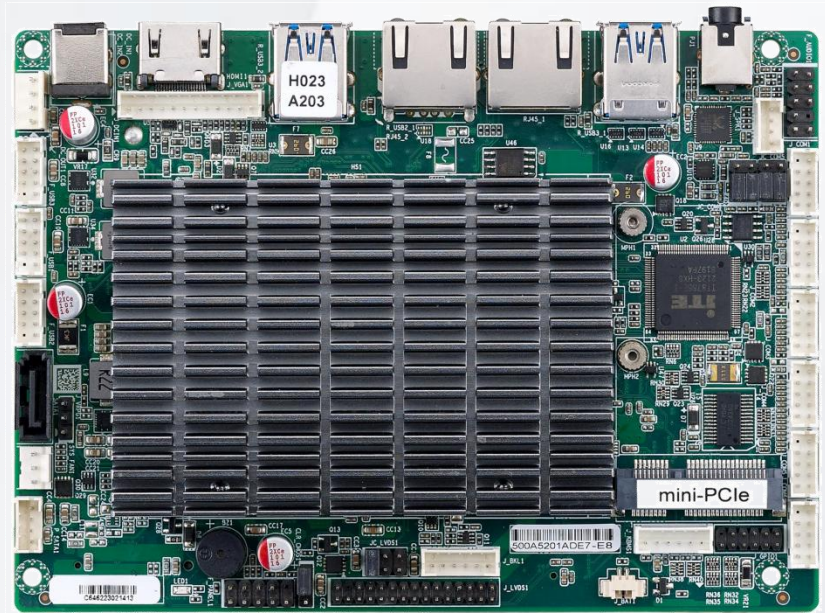


QY-MB-J6412-3.5 inch

- Intel Celeron J6412 CPU
 - 2*Intel 2.5G LAN, 6*USB 2.0, 4*USB 3.0
 - 6*COM
 - 1*VGA, 1*LVDS/eDP, 1*HDMI
- (Support triple display simultaneously)
- 1*Mini-PCIe, support mSATA/ Wifi /4G
 - 1*M.2, support NVMe SSD/5G
 - DC 12V power input
 - 146*105mm



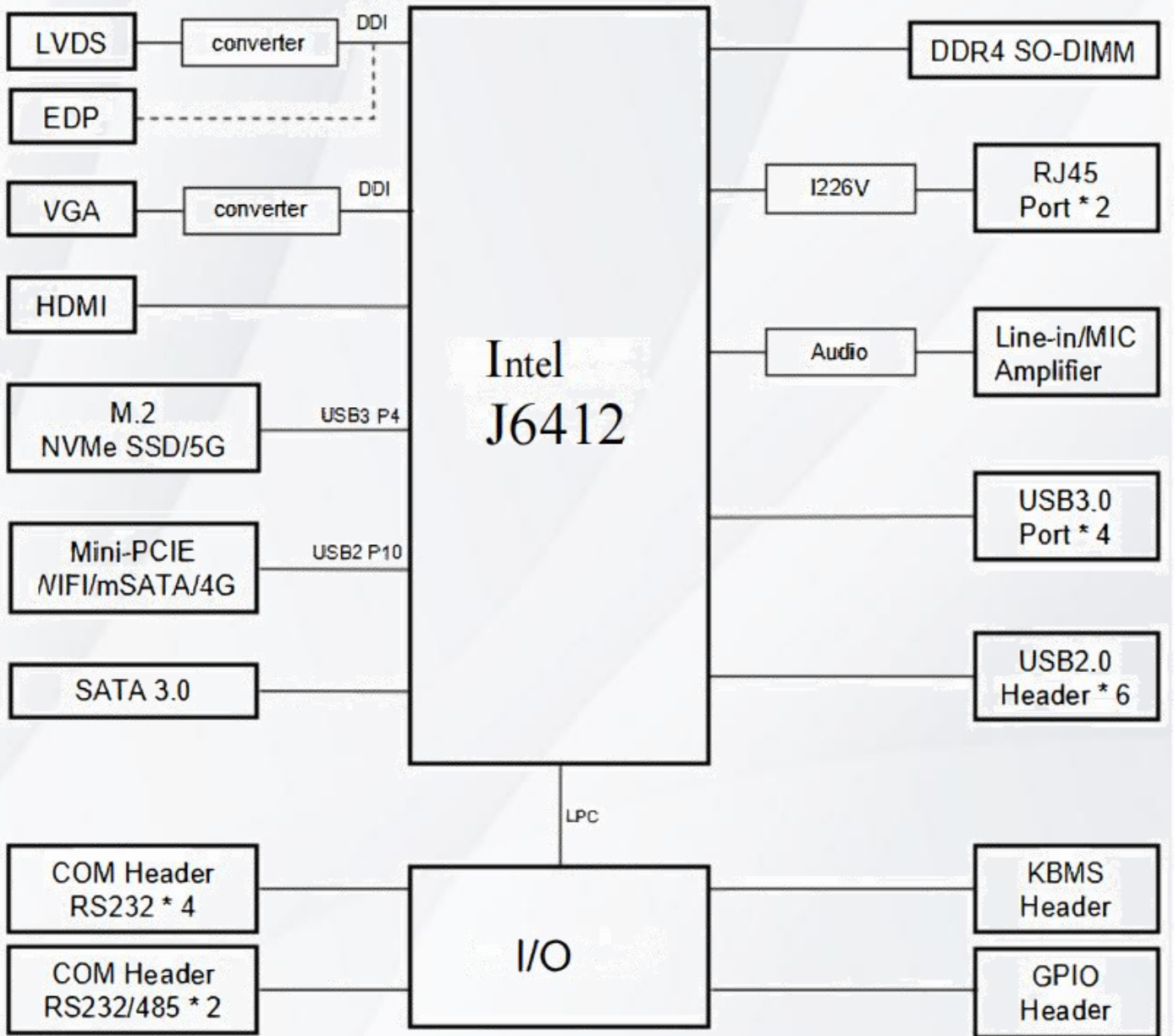
1. Specification:

Model	QY-MB-J6412-3.5 inch
CPU	Intel Celeron J6412, Base Frequency 2.0G, Quad-core, TDP 10W
Display	Support triple display simultaneously: 1 * VGA: max resolution up to 1920 * 1200@60Hz 1 * HDMI: resolution up to 4096 * 2160@24Hz 1 * LVDS/eDP: LVDS, resolution up to 1920 * 1200@60Hz eDP, resolution up to 1920 * 1200@60Hz
Memory	DDR4-3200, 1 * SO-DIMM slot, up to 32GB
Storage	1 * mSATA 1 * SATA3.0 7P Connector 1 * M.2 (NVMe SSD/5G)[1]
Expansion	1 * Mini-PCIe (WIFI supported with mSATA/4G selectable) 1 * M.2 (NVMe SSD/5G)[1]
Ethernet	2 * Intel 2.5Gbps PCIe Ethernet Controller, RJ45
USB	4 * USB3.0 (Rear I/O, TYPE-A) 6 * USB2.0 (Internal, Header)
COM	4 * RS232 (Header) 2* RS232/RS485(Header)
Audio	Realtek HDA Codec, with MIC / Line-out and Amplifier 1*Front Audio Header (Line-out+MIC) 1 * Line-Out/MIC 2 in1 Phone Jack
Other Ports	1 * VGA Header 1 * Micro SIM Card Slot 1 * SYS FAN Header 1 * Front Panel Header 1 * Keyboard&Mouse Header 1 * GPIO Header 1 * CMOS Clear Jumper 1 * DC Output Header 1 * Battery Header
System	Windows 10/ 11, Linux
Temperature	Storage: -20°C ~ 75°C Operating: -15°C ~ 60°C
Power Input	DC 12V 1 * Power Input Connector

Note:

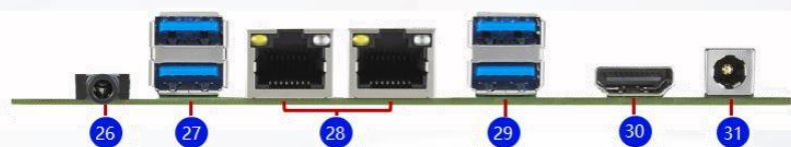
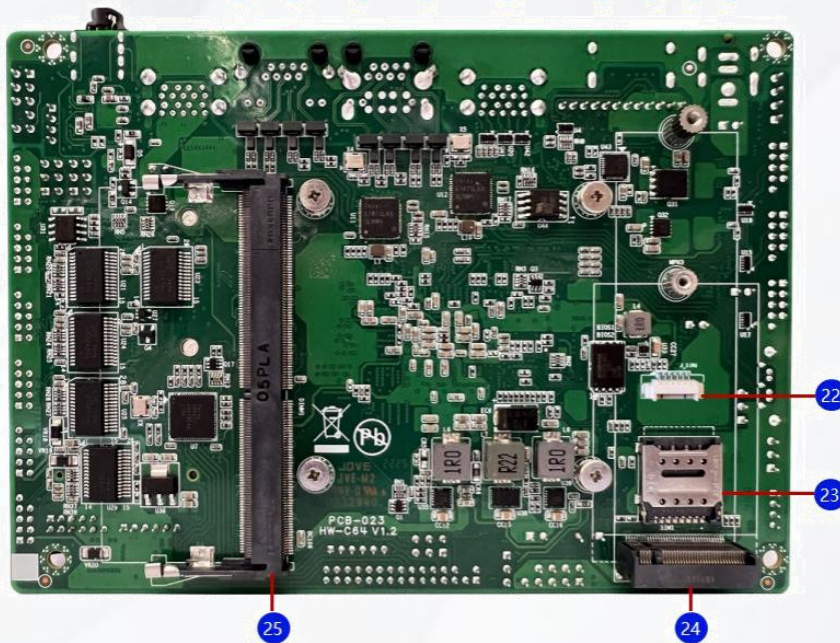
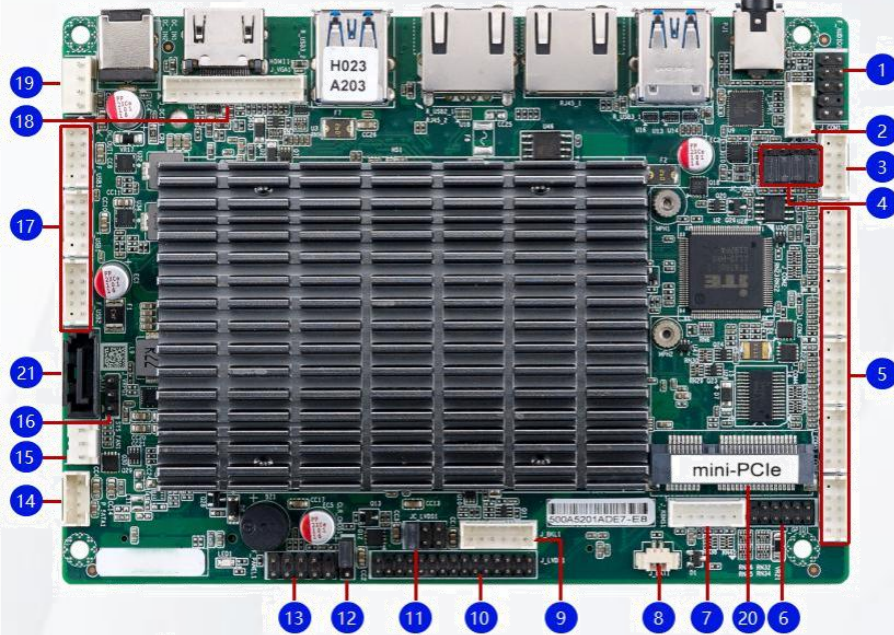
[1]: The signal of USB3 P4 will be invaluable if M.2 support 5G.

2. Date Flow



3. Marking Instruction

Connector&Header



1	Front Audio Pin Header
2	Amplifier Pin Header
3	COM1 Pin Header
4	COM5/6 RS232/RS485 Signal Select Jumper
5	COM2/3/4/5/6 Pin Headers
6	GPIO Pin Header
7	Keyboard&Mouse Pin Header
8	Battery Header
9	LVDS Backlight Control Pin Header
10	LVDS Signal Pin Header
11	LVDS VDD Select Jumper
12	CMOS Clear Jumper
13	Front Panel Pin Header
14	SATA Power Pin Header
15	System Fan Header
16	VRM Power PROGRAM I/F Header
17	Front USB Pin Headers
18	VGA Pin Header
19	DC12V/5V Power Output Header
20	Mini PCI-E1 Slot (WIFI/mSATA/4G)
21	SATA 3.0 Connector
22	SIM Card Pin Header
23	SIM Card Slot
24	M.2 Connector(NVMe SSD/5G)
25	DDR4 SO-DIMM Slot
26	Mic-in/Line-out Connector
27	USB3.0 Connectors
28	LAN Connectors
29	USB3.0 Connectors
30	HDMI Connector
31	DC12V Power Input Connector

4. Definition

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

No.	Location	Pin	Definition	Pin	Definition
1	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

(2)Amplifier Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
2	J-SPK1	1	SPK-L-	2	SPK-L+
		3	SPK-R-	4	SPK-R+

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

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

Note:

[1]: The signal of pin9 is RI# by default, it can also support 5V(BIOS selectable) .

(4) COM5/6 RS232/RS485 Select Jumpers (3*2 Pin 2.54mm)

No.	Location	Setting	Function
4	JC-COM5/6	1-3、 2-4(Default)	RS232
		3-5、 4-6	RS485

(5) COM2/3/4/5/6 Pin Headers (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
5	J-COM2	1	DCD[1]	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[2]		
	J-COM3	1	DCD[3]	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[4]		
	J-COM4	1	DCD	2	RXD
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#[4]		
	J-COM5/6	1	DCD/RS485-[5]	2	RXD/RS485+[5]
		3	TXD	4	DTR#
		5	GND	6	DSR#
		7	RTS#	8	CTS#
		9	RI#		

Note:

[1] Pin1 of J-COM2 also can be 5V(resistor selectable).

[2] Pin9 of J-COM2 also can be 5V(BIOS selectable).

[3] Pin1 of J-COM3 also can be 12V(resistor selectable).

[4] Pin9 of J-COM3/4 also can be 12V(BIOS selectable).

[5] J-COM5/6 support RS232 by default, and also can support RS485 selected by JC-COM5/6 (Location 4).

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

No.	Location	Pin	Definition	Pin	Definition
6	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

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

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

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

No.	Location	Pin	Definition	Pin	Definition
8	J-BAT1	1	GND	2	+3.3V

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

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

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

No.	Location	Pin	Definition	Pin	Definition
10	J-LVDS1[2]	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 11).

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

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

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

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

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

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

No.	Location	Pin	Definition	Pin	Definition
13	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		

(14) SATA Power Pin Headers (4*1 Pin 2.00mm)

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

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

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

(16) VRM Power PROGRAM I/F (3*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
16	J-VRPG1	1	VRM-SCL	2	GND
		3	VRM-SDA		

(17) Front USB Pin Headers (5*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
17	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-
		5	USB+	6	USB+
		7	GND	8	GND
				10	GND
	F-USB3	1	+ 5 V	2	+ 5 V
		3	USB-	4	USB-
		5	USB+	6	USB+
		7	GND	8	GND
				10	GND

Note:

[1] The signal of F-USB2 will be invaluable if MINI-PCIE1 support 4G.

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

No.	Location	Pin	Definition	Pin	Definition
18	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

(19) DC12V/5V Power Output Header (4*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
19	DC-OUT1	1	+ 12V	2	GND
		3	GND	4	+ 5V

(20) SIM Card Pin Header (6*1 Pin 1.25mm)

No.	Location	Pin	Definition	Pin	Definition
22	J-SIM1	1	DAT	2	CLK
		3	VPP	4	RST
		5	GND	6	PWR

Notes:

[1] : If J-SIM1 can be used, SIM Card Slot is not available.

[END]