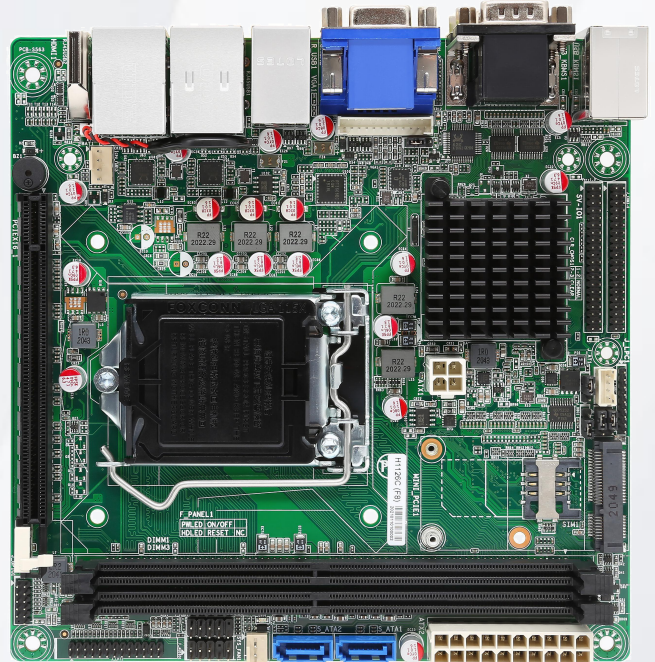


QY-MB-H110-MITX

- Intel H110 chipset
- Support Pentium/Celeron/6-9th-i3/i5/i7 CPU
- 2*Gigabit LAN,8*USB 2.0,2*USB 3.0,6*COM
- 1*HDMI,1*VGA
- 2*DDR III RAM slot
- 1*MSATA SSD slot,2*SATA SSD slot
- 1*Mini PCIE slot
- 1*PCIE 16X slot
- DC 12V power input
- Mini-ITX type board, 17*17 cm
- 1*Mic-in,1*Line-out connector



1. Specification:

Model	QY-MB-H110-MITX
CPU	Intel Pentium / Celeron / 6-9th Generation Core i3/i5/i7 CPU, LGA1151 Intel H110 chipset, TDP 6W
Display	Support dual display simultaneously: 1*HDMI: resolution up to 1920*1080@60Hz 1*VGA: resolution up to 1920*1080@60Hz ^[1]
Memory	Support DDR4 2133 MHz, 2*DIMM Slots, Up to 32GB ^[2]
Storage	2*SATA 3.0 Ports 1*MSATA
Expansion	1*Mini-PCIE slot,support WIFI
Ethernet	1 * Realtek GBE LAN Chip (10/100/1000 Mbps, RJ45) 1 * Intel GBE LAN Chip (10/100/1000 Mbps, RJ45)
USB	8*USB 2.0 (Rear I/O) 2*USB 3.0 (Rear I/O)
COM	6*RS-232
Audio	Realtek ALC897 5.1 Channel HDA Codec, Support MIC/Line-out Ports
Other Ports	8 * GPIO 1 * PS/2 (keyboard) 1 * Front Audio 1 * SIM Card Slot 1 * PCI-E X16 slot 1 * Parallel Pin Header 1 * SMBUS Pin Header 1 * VGA Pin Header ^[1] 1 * Front Pannel 1 * Pin Header ^[4] 1 * Smart Fan Pin Header
System	Windows 7 / 10, Linux, Server 2008/2012
Temperature	Storage: -20°C ~ 75°C Operating: 0°C ~ 60°C
BIOS	AMI UEFI BIOS
Factor	Mini-ITX (17cm*17cm)

Note:

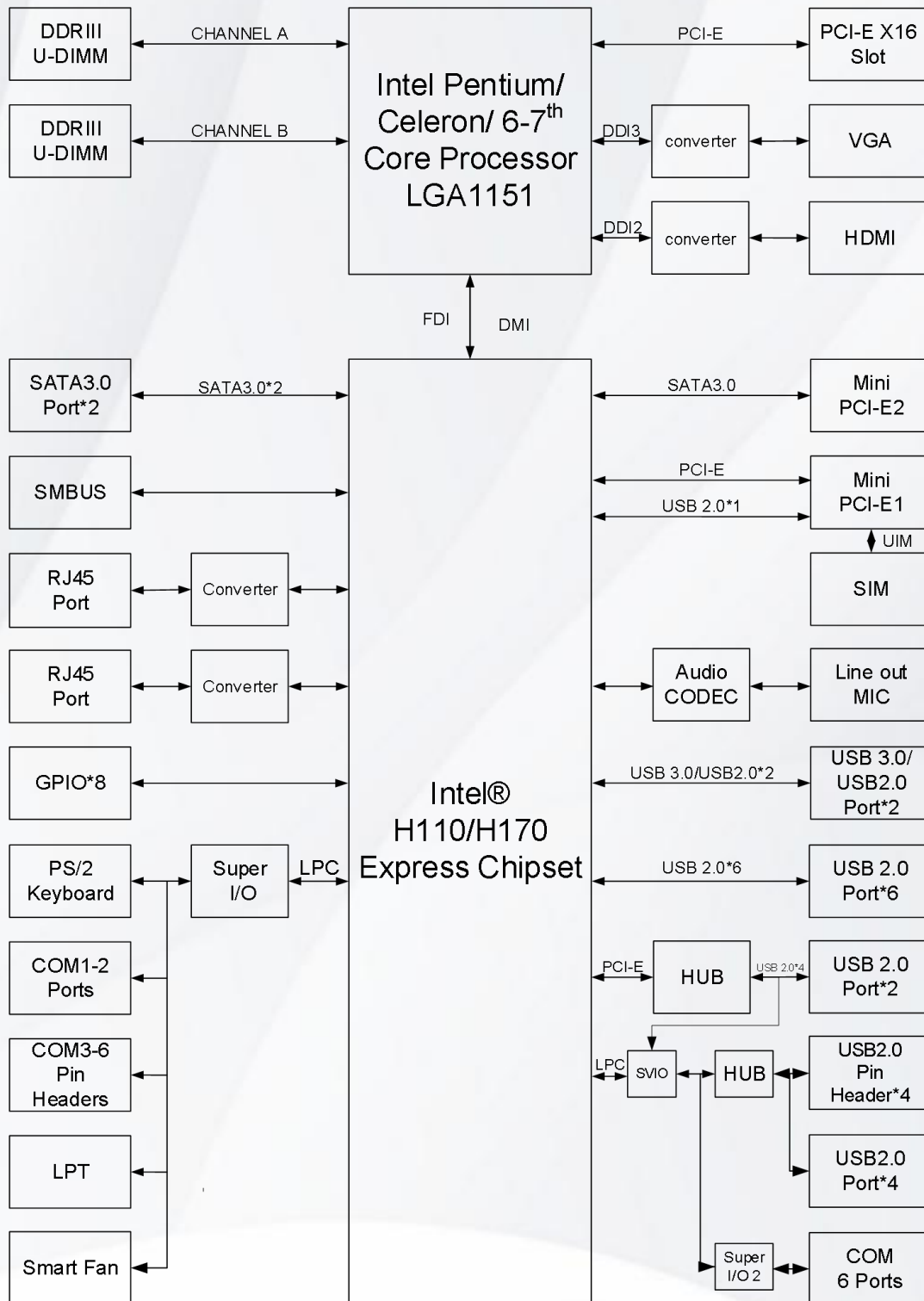
[1]: The VGA1 (DB15) and J_VGA1 share the same signal and cannot be accessed simultaneously.

[2]: 6th Generation CPU support DDR4 2133

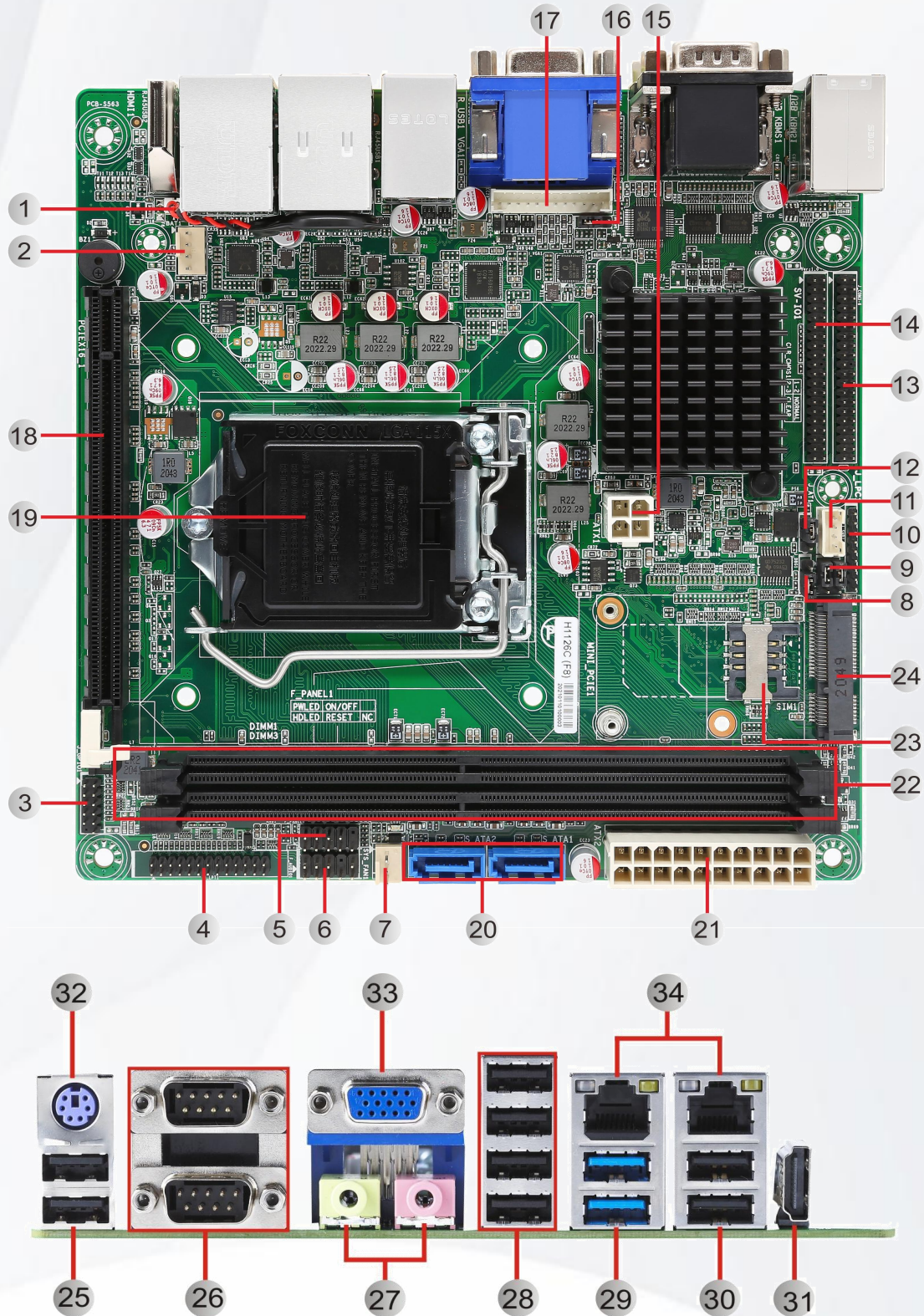
[3]: Mini PCI-E1 supports WIFI and 3G. Mini PCI-E2 supports MSATA

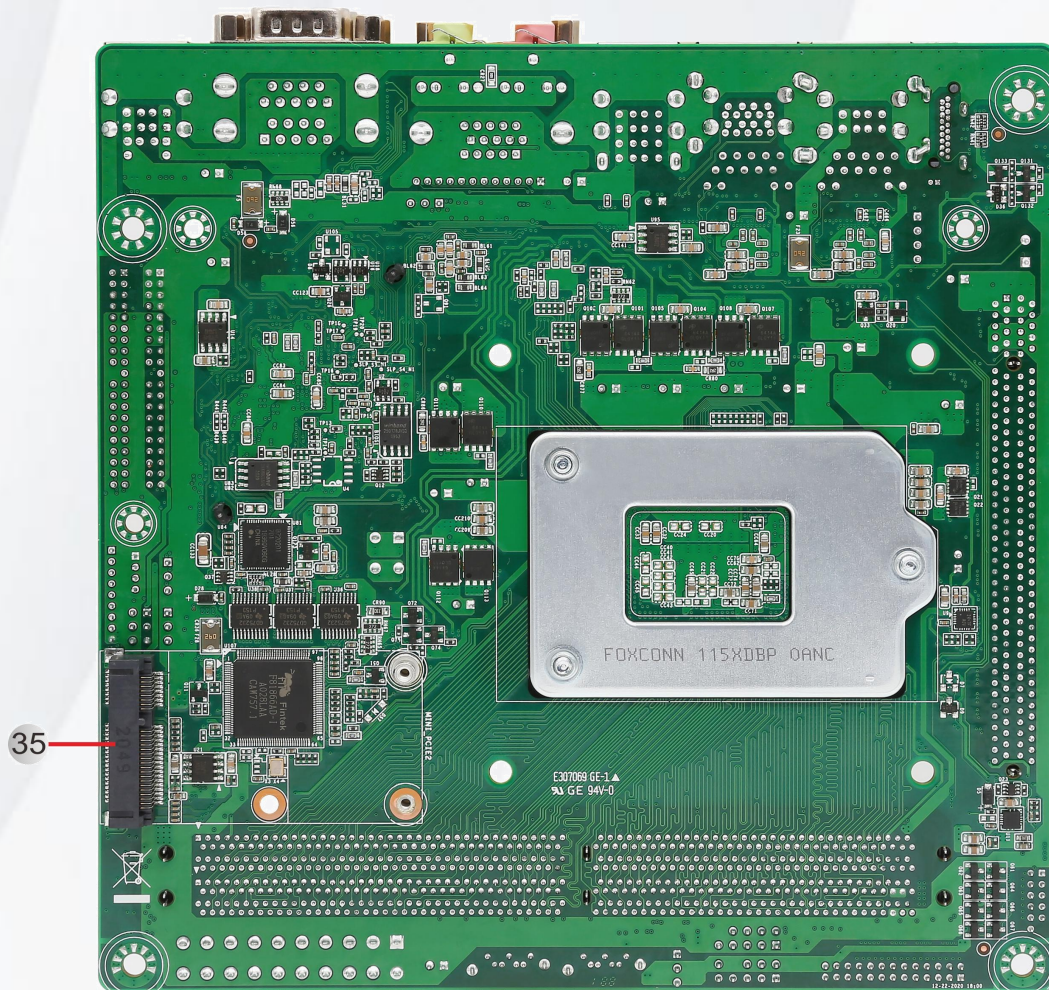
[4]: When used in combination with the daughter card, it can support 17*USB2.0 (14*TYPE-A + 3*Header), 12*COM (10*DB9M + 2*Header), and 1*WIFI+BT Module. And when used in combination with the EXCU daughter card, it can support 18*USB2.0 (14*TYPE-A + 4*Header), and 12*COM (10*DB9M + *Header).

2. Date Flow

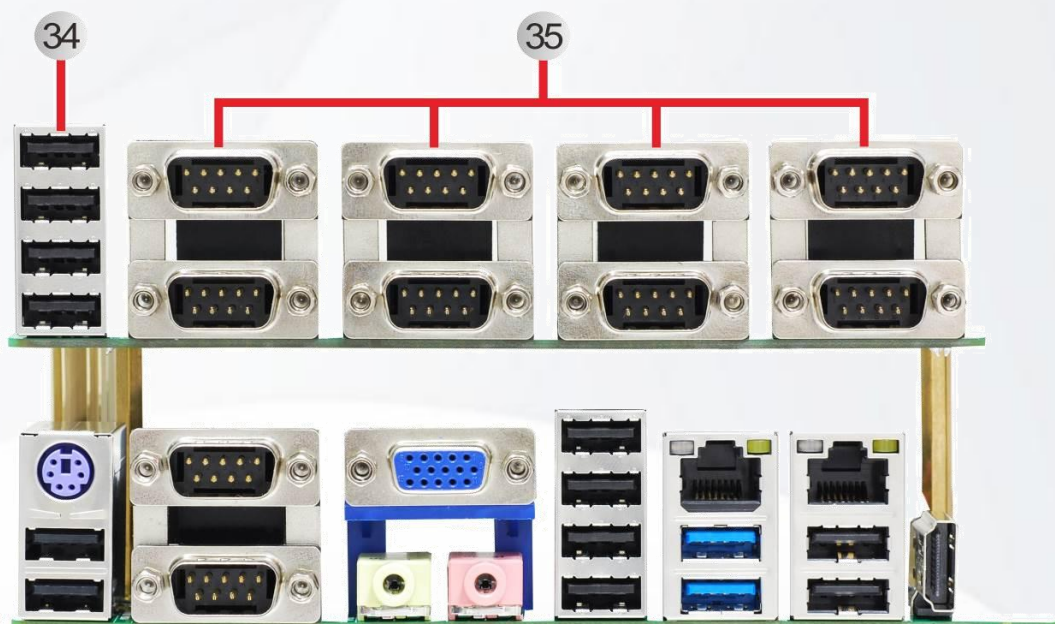


3. Jumpers / Headers and Connectors





With Daughter Board:



1	BAT Pin Header	19	CPU Slot
2	CPU FAN Pin Header	20	SATA 3.0 Connectors
3	GPIO Pin Header	21	ATX2 Power Input Connector
4	Parallel Pin Header	22	DIMM Slots
5	Front Panel Pin Header	23	SIM Card Slot
6	Front Audio Pin Header	24	Mini PCI-E1 Slot
7	System Fan Connector	25	USB 2.0 Connector
8	ME Select Jumper	26	COM Connectors
9	COM3/4 Pin1 Signal Select Jumper	27	Audio Connectors
10	Debug Pin Header	28	USB 2.0 Connectors
11	SMBUS Pin Header	29	USB 3.0 Connectors
12	AT or ATX Select Jumper	30	USB 2.0 Connectors
13	COM3~6 Pin Headers	31	HDMI Connector
14	Pin Header	32	PS/2 Connector
15	ATX1 12V Power Input Connector	33	VGA Connector
16	VGA Pin Header	34	LAN Connectors
17	ATX 1 Power Input Connector	35	Mini PCI-E2 Slot
18	PCI-E 16X Slot		

With Daughter Board:

36	USB 2.0 Connectors	37	COM 3-10 Connectors
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4. Definition

(1) BAT Pin Header (2*1 Pin 1.25mm)

No.	Location	Pin	Definition	Pin	Definition
1	BAT1	1	GND	2	+3.3V_SB

(2) CPU FAN Pin Header (4*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
2	CPU_FAN1	1	GND	2	+12V
		3	FAN Speed Detection	4	FAN Speed Control

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

No.	Location	Pin	Definition	Pin	Definition
3	J_GPIO1	1	PCH_GPO0 (0xFDAE06A8 Bit0, H ^[1])	2	PCH_GPO1 (0xFDAE06B0 Bit0, H ^[1])
		3	PCH_GPO2 (0xFDAE06B8 Bit0, H ^[1])	4	PCH_GPO3 (0xFDAE06C0 Bit0, H ^[1])
		5	GND	6	PCH_GPI8 (0xFDAE06E8 Bit1, H ^[1])
		7	PCH_GPI9 (0xFDAE06F0 Bit1, H ^[1])	8	PCH_GPI10 (0xFDAE06F8 Bit1, H ^[1])
		9	PCH_GPI11 (0xFDAE0700 Bit1, H ^[1])	10	+ 5V ^[2]

Note:

[1]: "H" or "L" means the default voltage is High or Low level.

[2]: Power on this Pin and GPIO output is 5V signaling by default, 3.3V is available if specified (resistor selectable).

(4) Paraller Pin Header (13*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
4	J_LPT1	1	STROBE#	2	AUTOFEED#
		3	DATA0	4	ERROR#
		5	DATA1	6	INIT#
		7	DATA2	8	SLCTIN#
		9	DATA3	10	GND
		11	DATA4	12	GND
		13	DATA5	14	GND
		15	DATA6	16	GND
		17	DATA7	18	GND
		19	ACKNLG#	20	GND

		21	BUSY	22	GND
		23	PE	24	GND
		25	SLCT	26	N/C

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

No.	Location	Pin	Definition	Pin	Definition
5	F_PANEL1	1	HD LED+	2	Power LED+
		3	HD LED-	4	Power LED-
		5	GND	6	PWR+
		7	RESET#	8	PWR -
		9	N/C	10	

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

No.	Location	Pin	Definition	Pin	Definition
6	F_AUDIO1	1	FP_MIC_L	2	GND
		3	FP_MIC_R	4	+ 3.3V
		5	FP_OUT_R	6	MIC_Detect
		7	GND	8	
		9	FP_OUT_L	10	OUT_Detect

(7)System Fan Connector (3*1 Pin 2.54mm)

No.	Location	Pin	Definition	Pin	Definition
7	SYS_FAN1	1	GND	2	+ 12V
		3	FAN Speed Detection		

(8)ME Select Jumper (3*1 Pin 2.54mm)

No.	Location	Setting	Definition
8	J_DBG1	1-2	ME programmable
		2-3(Default)	ME protect

(9)COM3/4 Pin1 Signal Select Jumper (3*2 Pin 2.54mm)

No.	Location	Setting	Definition
9	J_COM3-4_P1	1-3、 2-4(Default)	COM3_PIN1 : DCD COM4_PIN1 : DCD
		3-5、 4-6	COM3_PIN1 : 5V COM4_PIN1 : 5V

(11) SMBUS Pin Header (4*1 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
11	J_SMB1	1	+3.3V	2	SMB_DATA
		3	SMB_CLK	4	GND

(12) AT or ATX Select Jumper (4*1 Pin 2.00mm)

No.	Location	Setting	Definition
12	J_AT1	1-2 (Default)	ATX Mode
		2-3	AT Mode

(13) COM3-6 Pin Headers (20*2 Pin 2.00mm)

No.	Location	Pin	Definition	Pin	Definition
13	J_COM3-6	1	J_COM3-4_P1 ^[1]	2	COM3_RXD
		3	COM3_TXD	4	COM3_DTR
		5	GND	6	COM3_DSR
		7	COM3_RTS	8	COM3_CTS
		9	COM3_RI	10	GND
		11	J_COM3-4_P1 ^[1]	12	COM4_RXD
		13	COM4_TXD	14	COM4_DTR
		15	GND	16	COM4_DSR
		17	COM4_RTS	18	COM4_CTS
		19	COM4_RI	20	
		21	DCD	22	COM5_RXD
		23	COM5_TXD	24	COM5_DTR
		25	GND	26	COM5_DSR
		27	COM5_RTS	28	COM5_CTS
		29	COM5_R	30	GND
		31	DCD	32	COM6_RXD
		33	COM6_TXD	34	COM6_DTR
		35	GND	36	COM6_DSR
		37	COM6_RTS	38	COM6_CTS
		39	COM6_RI	40	GND

Note:

[1]: Pin1 of JCOM3/4 can be 5V or signal DCD (selected via J_COM3-4_P1, Location 9).

(15) ATX 12V Power Input Connector (4*1 Pin)

No.	Location	Pin	Definition	Pin	Definition
15	ATX1	1	GND	2	GND
		3	+12V	4	+12V

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

No.	Location	Setting	Definition
16	CLR_CMOS1	1-2 (Default)	Normal
		2-3	Clear CMOS

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

No.	Location	Pin	Definition	Pin	Definition
17	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 CLK

Note:

[1]: VGA (DB15) Connector and J_VGA1 share the same signal and they can't be accessed simultaneously.

[END]