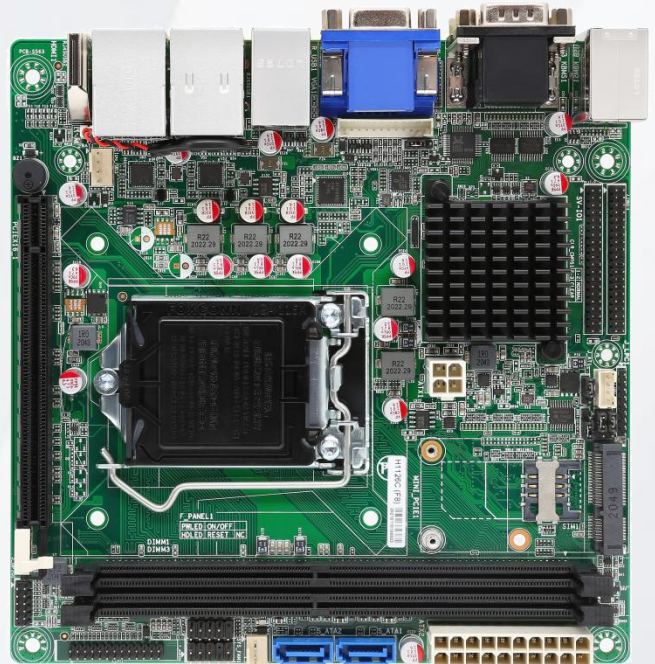


QY-MB-H310-MITX

- Intel H310 chipset
- Support Pentium/Celeron/8-9th-i3/i5/i7/i9 CPU
- 2*Gigabit LAN,8*USB 2.0,4*USB 3.1,10*COM
- 1*HDMI,1*VGA
- 2*DDR III RAM slots
- 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-H310-MITX
CPU	Intel Pentium / Celeron / 8-9th Generation Core i3/i5/i7/i9 CPU, LGA1151 Intel H310 ^[1] chipset, TDP 6W
Display	Support dual display simultaneously: 1*HDMI: resolution up to 4096*2160@30Hz 1*VGA: resolution up to 1920*1080@60Hz
Memory	Support DDR4 2400 MHz, 2*U-DIMM Slots, Up to 32GB ^[2]
Storage	2*SATA 3.0 Ports 1*MSATA
Expansion	1*Mini-PCIE slot,support WIFI+4G 1*PCIE 16x
Ethernet	2 * Realtek GBE LAN Chip (10/100/1000 Mbps, RJ45)
USB	6*USB 2.0 (Rear I/O) 4*USB 3.1 (Rear I/O) 2*USB 2.0 (Header)
COM	2 * RS232 (COM1-2, Header) 8 * RS232 (COM3-10, Header)
Audio	Realtek ALC662 5.1 Channel HDA Codec Support Line-out/MIC Ports, Line-out/MIC Header
Other Ports	1 * PCI-E X16 slot 1 * Mini PCI-E Slot (WIFI+4G) 8 * GPIO 1 * PS/2 Connector (Keyboard+Mouse 2in1) 1 * SIM Card Slot 1 * Power Button Connector 1 * Front Panel Pin Header 2 * Smart Fan 1 * System+HDD LED 1 * CPU 12V Power Input Connector (ATX 4P) 1 * ATX 20P Power Input Connector
System	Windows 10, Linux
Temperature	Storage: -20°C ~ 75°C Operating: 0°C ~ 60°C
BIOS	AMI UEFI BIOS
Factor	Mini-ITX (17cm*17cm)

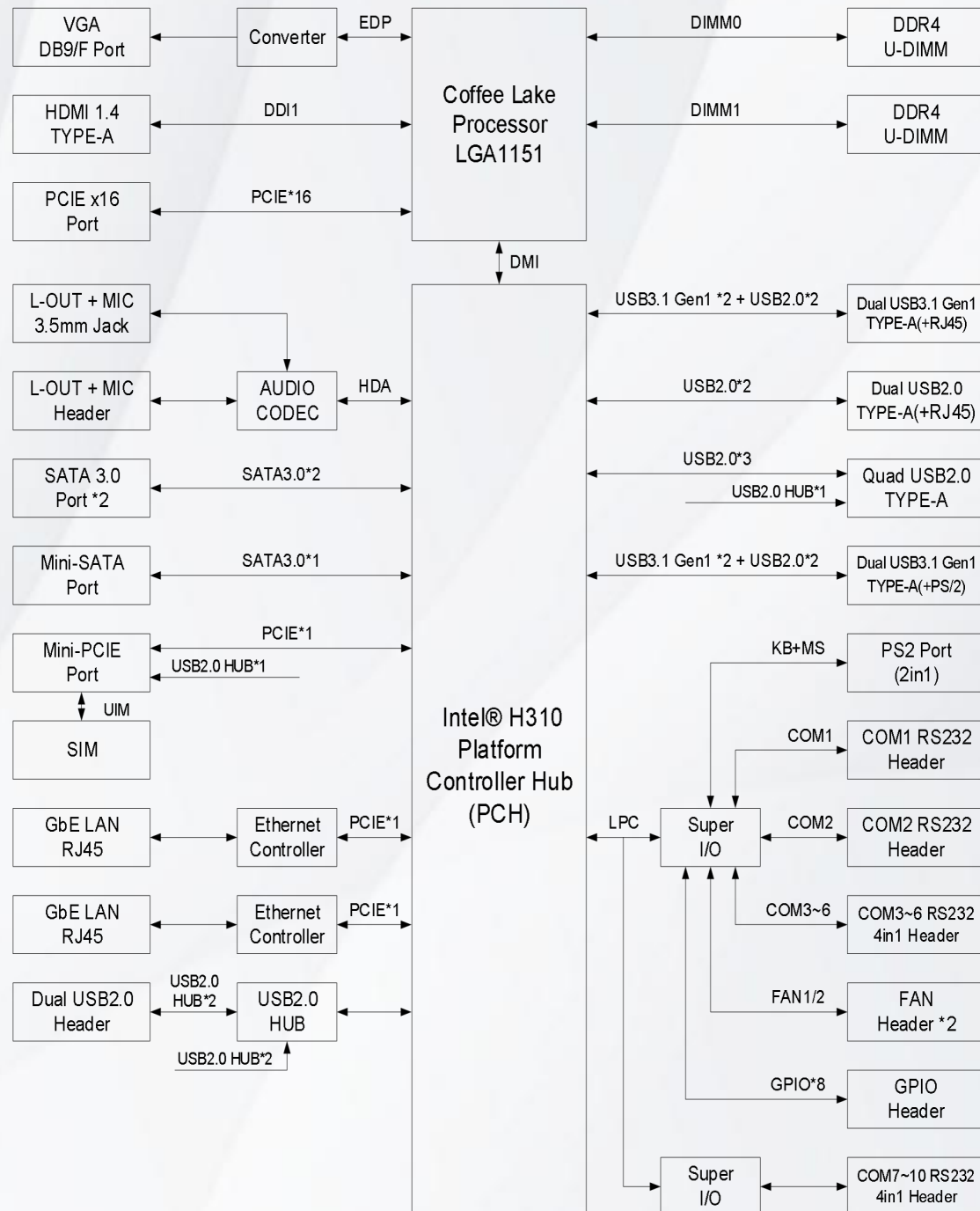


Note:

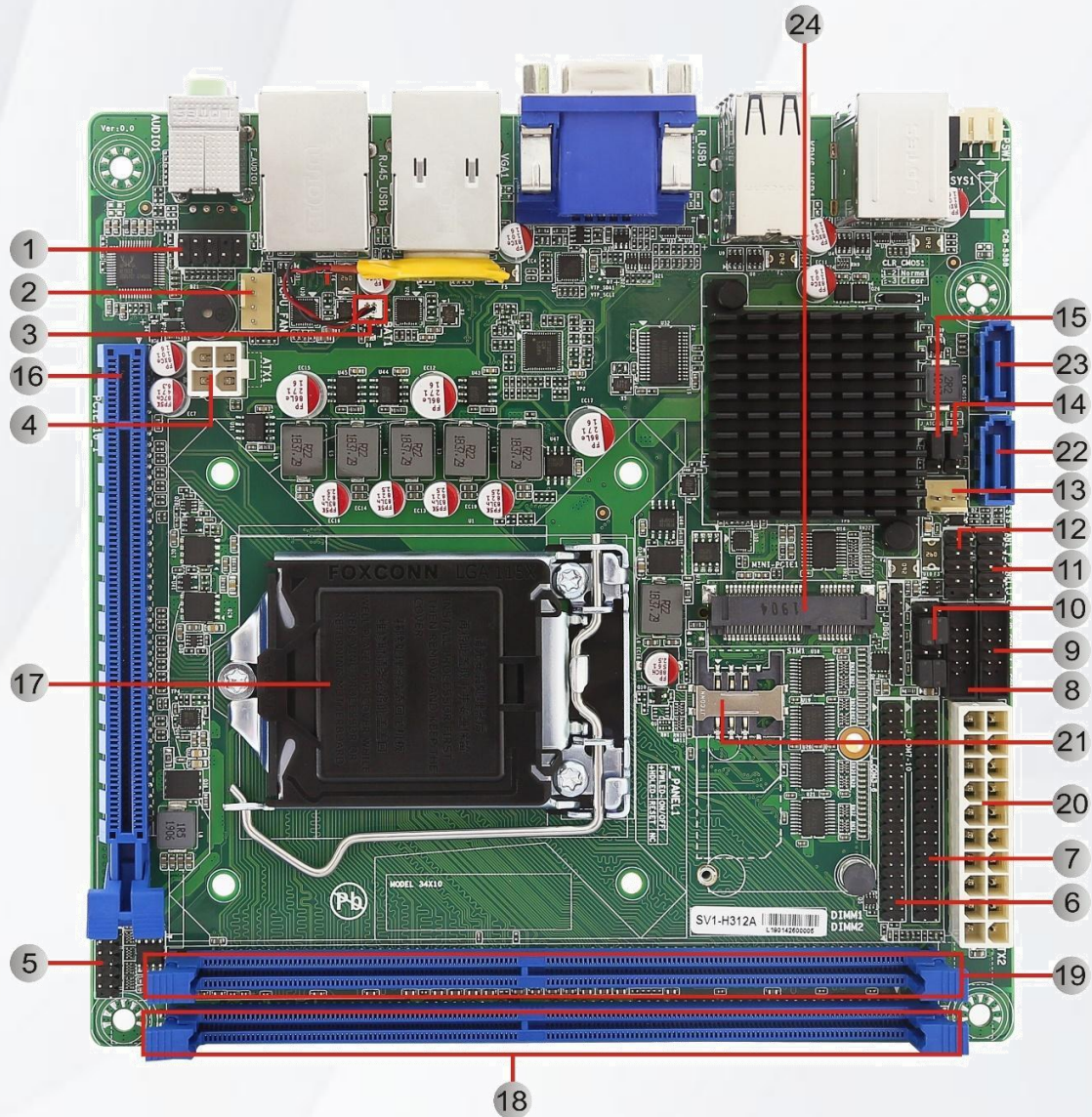
[1]: Chipset can be customized into Intel® Q370 or H310. Up to two displays can be activated at the same time.

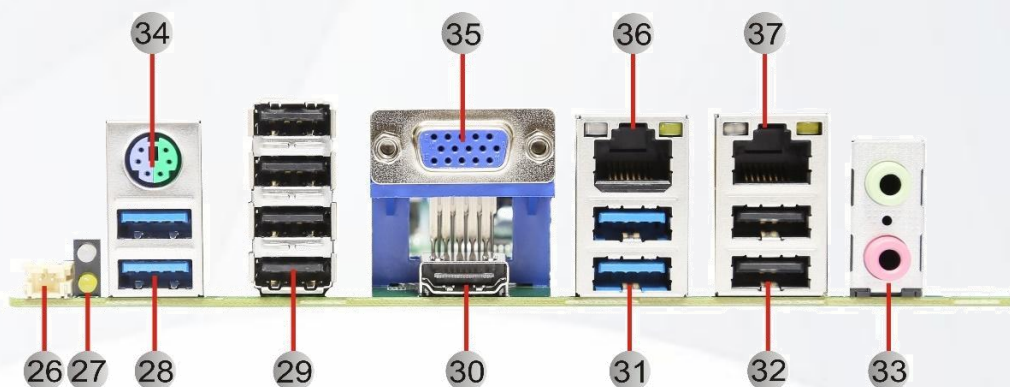
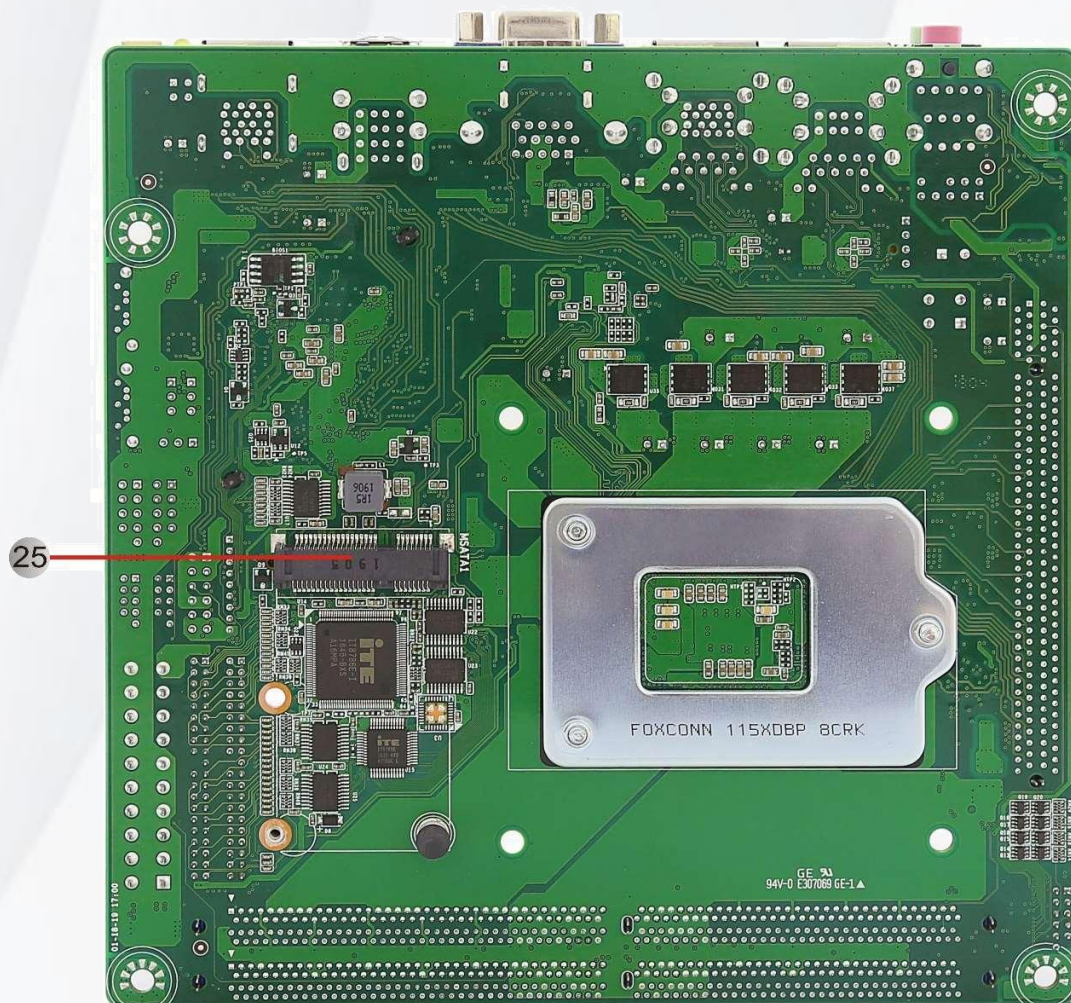
[2]: Supported memory frequency is determined by the CPU and PCH, supports up to 2666MHz.

2. Date Flow



3. Jumpers / Headers and Connectors





1	Front Audio Pin Header	20	ATX2 20P Power Input Connector
2	CPU FAN Connector	21	SIM Card Slot
3	Battery Connector	22	SATA 3.0 Connector2
4	CPU 12V Power Input Connector	23	SATA 3.0 Connector1
5	GPIO Pin Header	24	Mini PCI-E Slot (WIFI+4G)
6	COM3-6 Pin Header	25	Mini PCI-E Slot (mSATA)
7	COM7-10 Pin Header	26	Power Button Connector
8	COM1 Pin Header	27	System+HDD LED
9	COM2 Pin Header	28	USB 3.0 Dual TYPE-A Connector
10	COM3-6 Pin1 Signal Select Jumper	29	USB 2.0 Quad TYPE-A Connector
11	Front Panel Pin Header	30	HDMI 1.4 TYPE-A Connector
12	Front USB1 Pin Header	31	USB 3.0 Dual TYPE-A Connector
13	System Fan Connector	32	USB 2.0 Dual TYPE-A Connector
14	CMOS Clear Jumper	33	Line-out + MIC 3.5mm Jack
15	AT or ATX Select Jumper	34	PS/2 Connector
16	PCI-E 16X Slot	35	VGA DB15/F Connector
17	CPU Socket	36	LAN Connector1
18	DDR4 U-DIMM2 Slot	37	LAN Connector2
19	DDR4 U-DIMM1 Slot		

4. Definition

(1) F-AUDIO1 (Front Audio Pin Header 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	MIC_IN_L	2	GND
	3	MIC_IN_R	4	+ 3.3V
	5	LINE_OUT_R	6	MIC_IN_RET
	7	GND		
	9	LINE_OUT_L	10	LINE_OUT_RET

(2) CPU-FAM1 (CPU FAN Connector 4*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	2	+ 12V
	3	FAN Speed Detection	4	FAN Speed Control

(4) ATX1 (CPU 12V Power Input Connector 4Pin ATX)

Graphic	Pin	Definition	Pin	Definition
	1	GND	2	GND
	3	+12V	4	+12V

(5) J-GPIO1 (GPIO Pin Header 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	SIO_GPI80 (0xA07 Bit0, H) ^[1]	2	SIO_GPI81 (0xA07 Bit1, H)
	3	SIO_GPI82 (0xA07 Bit2, H)	4	SIO_GPI83 (0xA07 Bit3, H)
	5	GND	6	SIO_GPO84 (0xA07 Bit4, H)
	7	SIO_GPO85 (0xA07 Bit5, H)	8	SIO_GPO86 (0xA07 Bit6, H)
	9	SIO_GPO87 (0xA07 Bit7, H)	10	+ 3.3 V ^[1]

Note:

[1]: “H” or “L” means the default voltage is High or Low level, and GPIO output is 3.3V(default) 5V if specified.

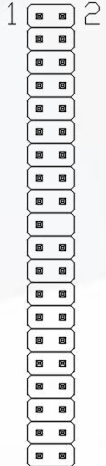
(6) J-COM3-6 (COM3-6 Pin Header 20*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	COM3_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	COM4_P1 ^[1]	12	COM4_RXD
	13	COM4_TXD	14	COM4_RXD
	15	GND	16	COM4_DSR
	17	COM4_RTS	18	COM4_CTS
	19	COM4_RI	20	
	21	COM5_P1 ^[1]	22	COM5_RXD
	23	COM5_TXD	24	COM5_DTR
	25	GND	26	COM5_DSR
	27	COM5_RTS	28	COM5_CTS
	29	COM5_RI	30	GND
	31	COM6_P1 ^[1]	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:

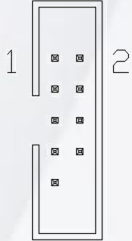
[1]: Pin1 of JCOM3/4/5/6 can be 5V or signal DCD (selected via JP_COM3-1, Location 10).

(7) J-COM7-10 (COM7-10 Pin Header 20*2 Pin 2.00mm)

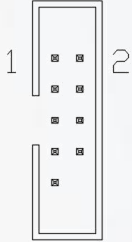
Graphic	Pin	Definition	Pin	Definition
	1	COM7_DCD	2	COM7_RXD
	3	COM7_TXD	4	COM7_DTR
	5	GND	6	COM7_DSR
	7	COM7_RTS	8	COM7_CTS
	9	COM7_RI	10	GND
	11	COM8_DCD	12	COM8_RXD
	13	COM8_TXD	14	COM8_RXD
	15	GND	16	COM8_DSR
	17	COM8_RTS	18	COM8_CTS
	19	COM8_RI	20	
	21	COM9_DCD	22	COM9_RXD
	23	COM9_TXD	24	COM9_DTR

25	GND	26	COM9_DSR
27	COM9_RTS	28	COM9_CTS
29	COM9_RI	30	GND
31	COM10_DCD	32	COM10_RXD
33	COM10_TXD	34	COM10_DTR
35	GND	36	COM10_DSR
	COM10_RTS	38	COM10_CTS
39	COM10_RI	40	GND

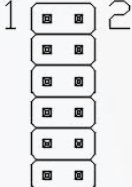
(8) J-COM1 (COM1 Pin Header 5*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	COM1_DCD#	2	COM1_SIN
	3	COM1_SOUT	4	COM1_DTR#
	5	GND	6	COM1_DSR#
	7	COM1_RTS#	8	COM1_CTS#
	9	COM1_RI#		

(9) J-COM2 (COM2 Pin Header 5*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	COM2_DCD#	2	COM2_SIN
	3	COM2_SOUT	4	COM2_DTR#
	5	GND	6	COM2_DSR#
	7	COM2_RTS#	8	COM2_CTS#
	9	COM2_RI#		

(10) JP-COM3-6 (COM3-6 Pin1 Signal Select Jumper 6*2 Pin 2.54mm)

Graphic	Settings	Settings
	3-5(default)	COM3_P1: DCD
	4-6(default)	COM4_P1: DCD
	9-11(default)	COM5_P1: DCD
	10-12(default)	COM6_P1: DCD
	1-3	COM3_P1: + 5V
	2-4	COM4_P1: + 5V
	7-9	COM5_P1: + 5V
	8-10	COM6_P1: + 5V

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

Graphic	Pin	Definition	Pin	Definition
	1	HD LED+	2	Power LED+
	3	HD LED-	4	Power LED-
	5	GND	6	PWR+
	7	RESET#	8	PWR -
	9	N/C	10	

(12) J-USB1 (Front USB Pin Header1 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	+ 5 V	2	+ 5 V
	3	USB1-	4	USB2-
	5	USB1+	6	USB2+
	7	GND	8	GND
	9	N/C	10	

(13) SYS-FAN1 (System Fan Connector 3*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	2	+ 12 V
	3	FAN Speed Detection		

(14) CLOR-CMOS1 (CMOS Clear Jumper 3*1 Pin 2.54mm)

Graphic	Settings	Settings
	1-2 (Default)	Normal
	2-3	Clear CMOS

(15) J-ATCFG1 (AT or ATX Select Jumper 3*1 Pin 2.54mm)

Graphic	Settings	Settings
	1-2 (Default)	ATX Mode
	2-3	AT Mode

(26) J-PSW1 (Power Button Connector 2*1 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	PANSW#	2	GND

(27) LED-SYS1 (System+HDD LED)

Graphic	Settings	Settings
	Upside	HDD LED
	Below	System LED

[END]