

Darveen Motherboard User's Manual

用户手册

DMB-AQ670Series

Ver 0.2

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1. Models and Attentions

1.1 Models

This manual is applied to following models:

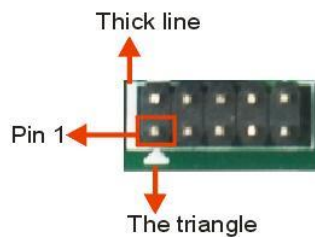
Model	Chipset	COM	LAN	USB	PCIe	PCI	DVI	HDMI	VGA	eDP	M.2 Key-E	M.2 Key-M	SATA 3.0
DMB-AQ670	Q670	6	2	13	2*8X 4*4X	1	1	1	1	1	PCIe+U SB2.0+ CNVi	NVMe/ SATA SSD	4
DMB-AQ670S	Q670	6	2	13	1*16X 4*4X	1	1	1	1	1	PCIe+U SB2.0+ CNVi	NVMe/ SATA SSD	4

1.2 Attentions

1) Notes under a table or figure indicate the difference of models, or alternative definition of specific pin of the header (jumper/connector).

2) How to identify the first pin of a header or jumper

- Usually, there is a thick line or a triangle near the header's or jumper's pin 1.



- Square pad, which you can find on the back of the motherboard, is usually used for pin 1.



2. Specification

Model	DMB-AQ670
CPU	Support Intel® 12/13 th Generation Core / Pentium/ Celeron Desktop CPU, LGA1700 Support MAX CPU TDP: 8+8 Core 125W
Chipset ^[1]	Intel® Alder Lake PCH-S, Q670, TDP 6W
Display ^[2]	1 * DVI-D (DVI-I): Support DVI-D, max resolution up to 1920x1200@60Hz 1 * HDMI 1.4b (TYPE-A): up to 4096x2160@30Hz 1 * VGA (DB15/F): max resolution up to 1920x1200@60Hz 1 * eDP (Header): max resolution up to 4096x2304@60Hz
Memory ^[3]	Support DDR4-3200MHz, 4 * Non-ECC U-DIMM Slot, Up to 128GB
Storage	Supports RST RAID 0,1,5,10, 4 * SATA3.0 7P Upright Connector 1 * M.2 Key-M Slot (PCIe x4 GEN4 NVMe/SATA SSD Auto Detect, 2242/2280)
Ethernet ^[4]	RJ45_USB1 (RJ45): 1 * Intel I219-V GBE LAN Chip (10/100/1000 Mbps) RJ45_USB2 (RJ45): 1 * Intel I225-V 2.5G LAN Chip (10/100/1000/2500Mbps)
Audio	Realtek Audio HDA Codec, 1 * Front Audio Header (Line-Out + MIC) 1 * SPDIF Out Header 1 * Line-out + Line-in + MIC 3.5mm Jack
Expansion Slots	1 * PCI-E 16x Slot (PCIe 8X, GEN4) ^[5] 1 * PCI-E 16x Slot (PCIe 8X, GEN4) ^[5] 3 * PCI-E 4x Slot (PCIe 4X, GEN4) 1 * PCI-E 4x Slot (PCIe 4X, GEN3) ^[6] 1 * PCI Slot 1 * M.2 Key-E Slot (PCIe+USB2.0+ CNVi, support WIFI +Bluetooth Module, 2230) 1 * PCI CLK 66MHz Enable/Disable Select Jumper
COM	1 * RS232 (COM1, DB9/M) 3 * RS232 (COM2/5/6, BOX Header) 1 * RS232/RS422/RS485 (COM3, BOX Header) ^[8] 1 * RS232/RS485 (COM4, BOX Header) ^[8]
USB	6 * USB3.0 (TYPE-A, Rear IO) 2 * USB3.0 (Header, Internal) 1 * USB2.0 (Vertical TYPE-A, Internal) 4 * USB2.0 (Header, Internal))
Other Ports ^[7]	8 * GPIO 1 * PS/2 Connector (Keyboard & Mouse) 1 * Front Panel Header (HDD LED+PWR LED+PWR ON+RESET) 1 * ESPI Header (Debug Only) 1 * SMBUS Header 2 * System FAN Header 1 * CPU FAN Header 1 * Case Open Header 1 * CMOS Clear Jumper 1 * AT or ATX Select Jumper 1 * ME Flash Header 1 * Power Monitor wafer
TPM	SLB 9670VQ2.0, TPM2.0 (Not onboard by default), Support Intel PTT Default

System	Windows 10 IoT Enterprise 2021 LTSC, Windows 10 (21H2), Windows 11 (21H2) or later, Linux Kernel 5.17 or later
Temperature	Storage: -20~75°C Operating: 0~60°C
BIOS	AMI UEFI BIOS (Support Watchdog Timer)
Power Supply	ATX Standard (24P + 8P + 4P) 1 * ATX 4P CPU Power Input Connector 1 * ATX 8P CPU Power Input Connector 1 * ATX 24P Power Input Connector
Factor	ATX Standard (305mm * 244mm)

Notes:

[1]: Chipset can be customized into Intel® Q670E/R680E.

[2]: Intel® Q670 supports four independent displays.

[3]: The maximum memory frequency depends on CPU. Intel® W680E supports ECC.

[4]: RJ45_USB1 (RJ45) I219-V does not support Intel AMT 12.0 and Intel vPro competent by default.

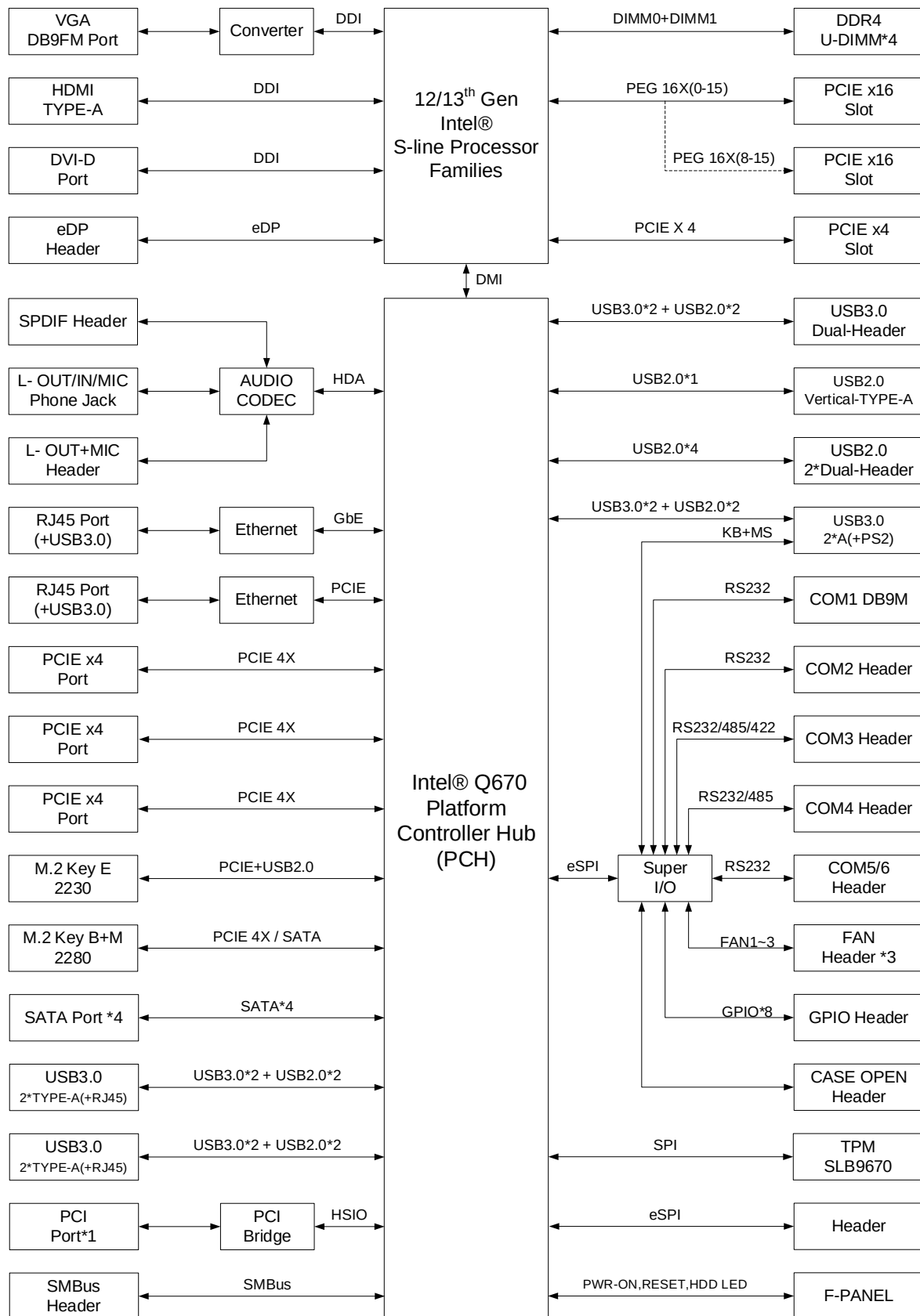
[5]: 2 * PCI-E 16X Slot can support 2*PCIE 8x(default) or 1*PCIE 16X. (BOM selectable)

[6]: PCIE_4X_SLOT2 support the PCIE 4X GEN3 signal.

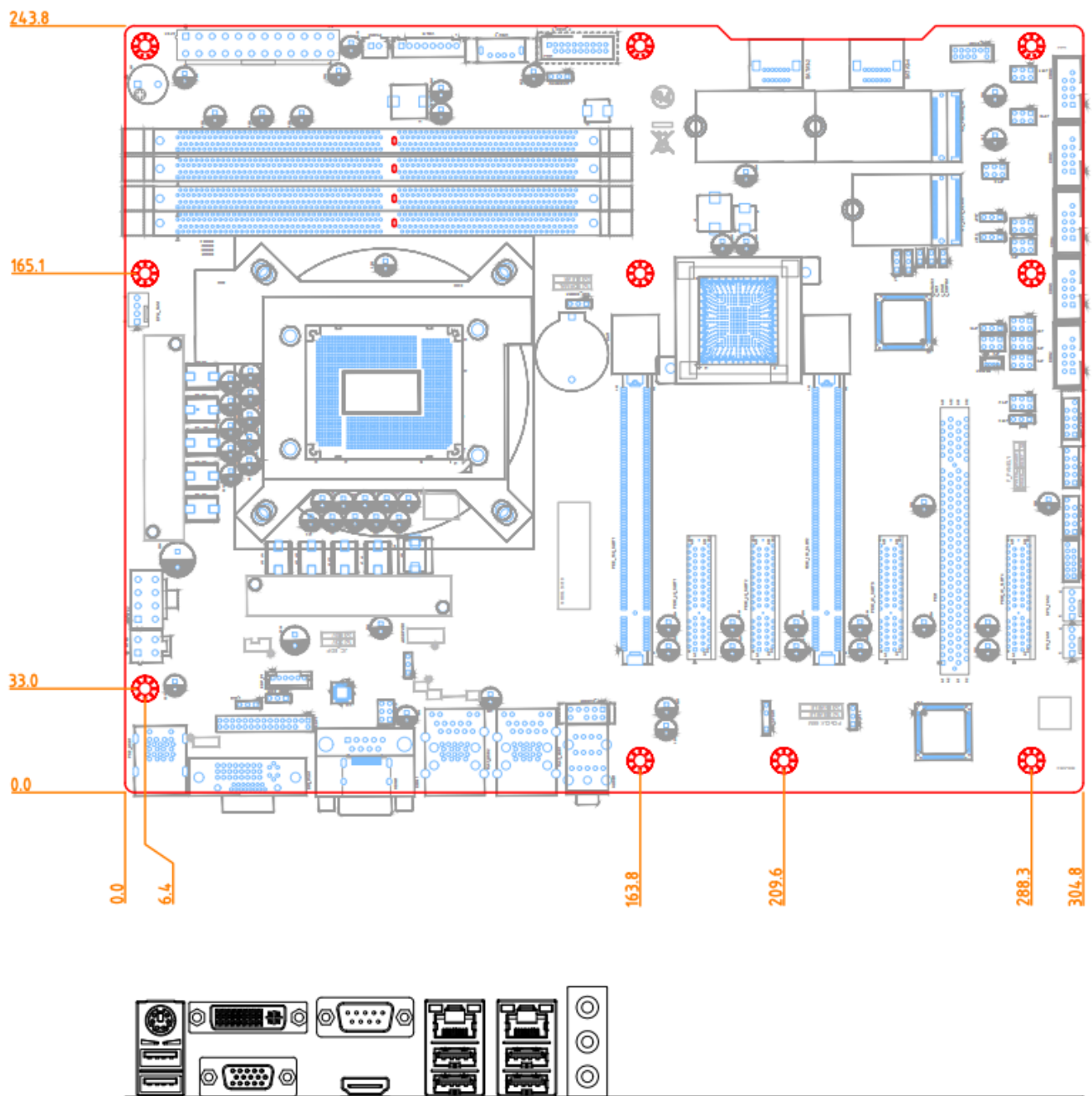
[7]: Intel® Kiosk Peripheral Management Utility (Intel® KPM Utility) function selection support, not on board by default.

[8]: COM3 and COM4 are RS232 by default. COM3 can be RS485 or RS422 selecting by jumper and setting BIOS to RTS mode. COM4 can be RS485 selecting by jumper and setting BIOS to RTS mode.

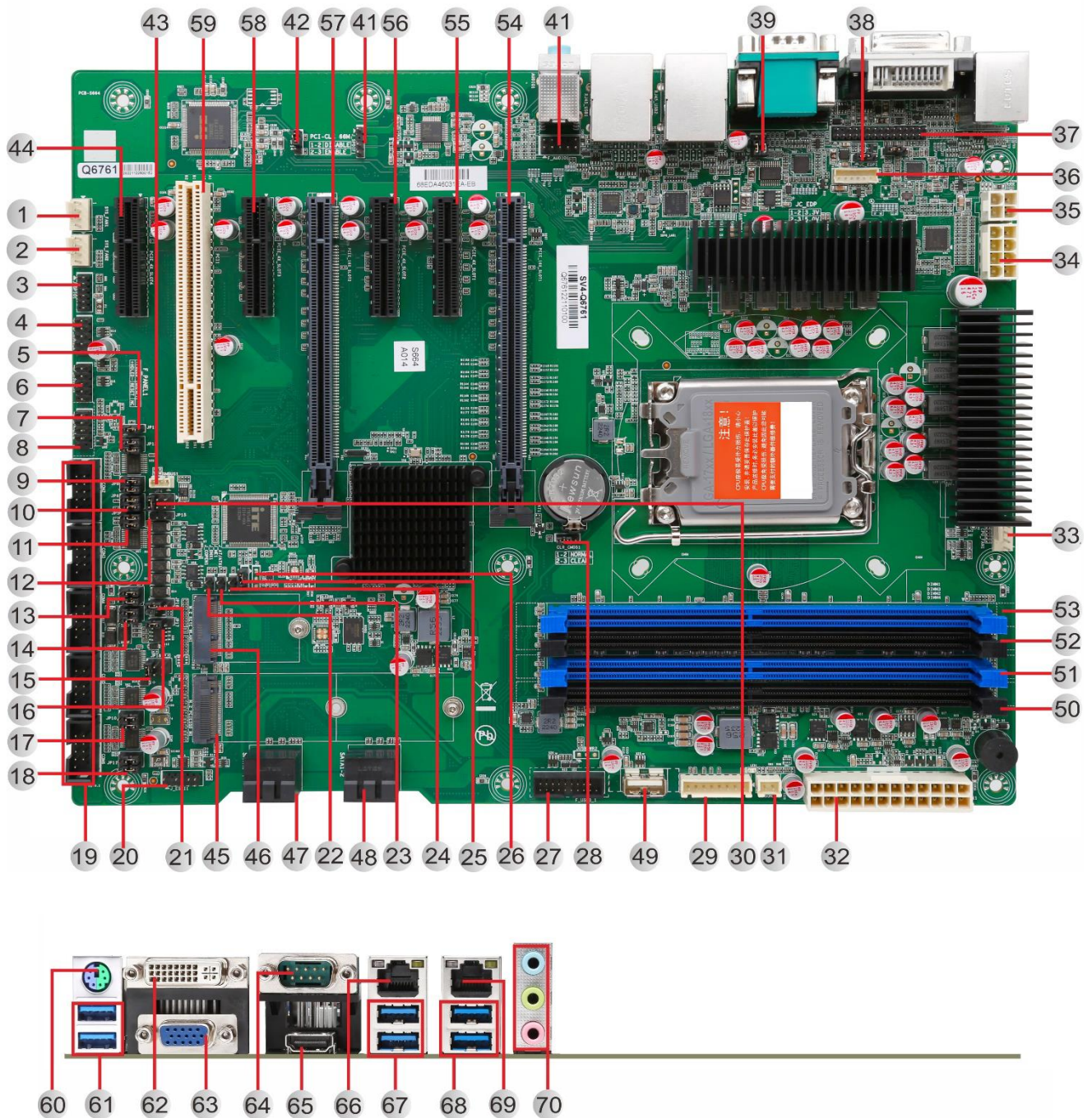
3.Functional Block Diagram

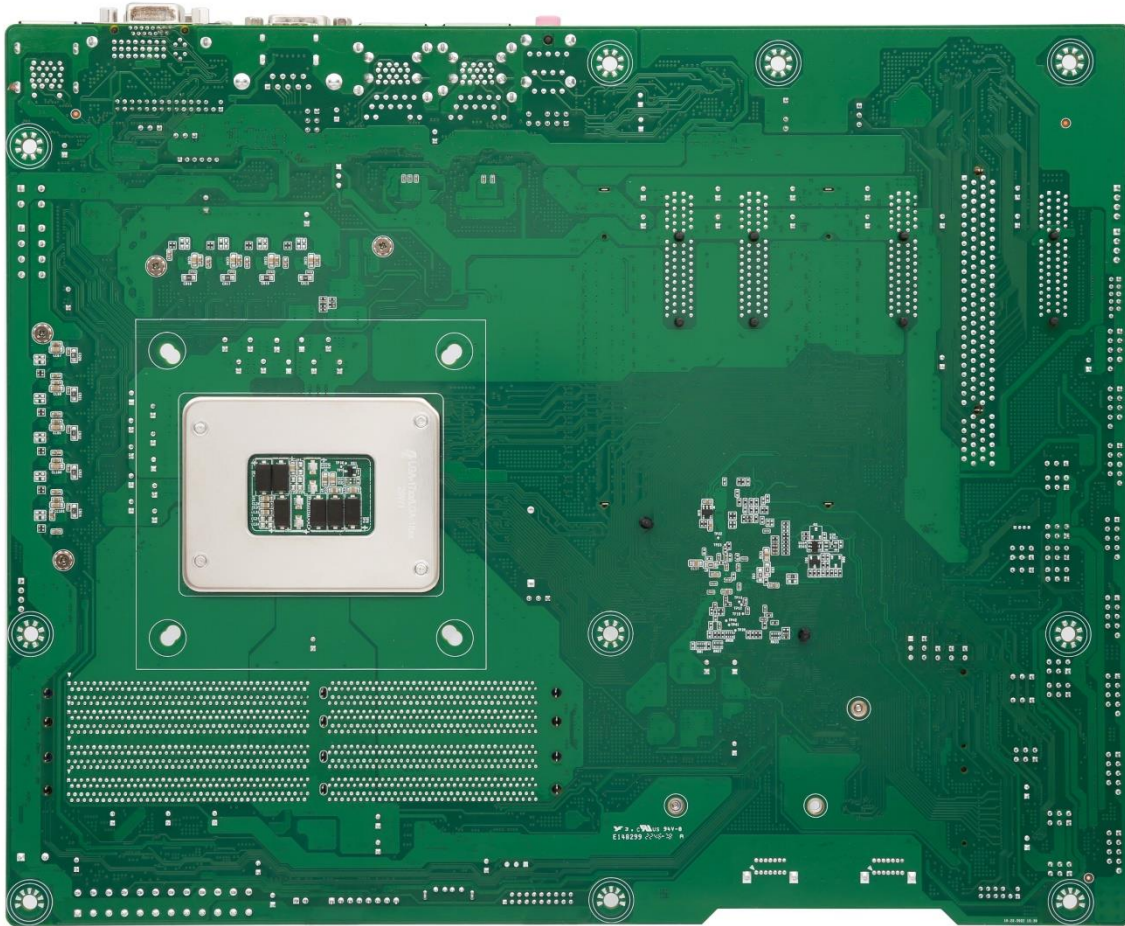


4. Mechanical Drawing



5. Jumpers / Headers and Connectors





Jumpers / Headers and Connectors

1	SYS_FAN1	System FAN Wafer1
2	SYS_FAN2	System FAN Wafer2
3	J_GPIO1	GPIO Header
4	F_USB2_2	Front USB2.0 Header2
5	JP19	Watch Dog Reset Enable/Disable Select Jumper
6	F_USB2_1	Front USB2.0 Header1
7	JP12	COM2 VCC5/DCD+VCC12/RI Select Jumper
8	F_PANEL1	Front Panel Header
9	JP8	COM3 VCC5/DCD+VCC12/RI Select Jumper
10	JP6	COM3 RS232/RS422 Select Jumper2
11	JP5	COM3 RS232/RS422 Select Jumper1
12	JP15	COM3 RS422 RX Signal 120Ω Resistive termination Select Jumper
13	JP9	COM4 VCC5/DCD+VCC12/RI Select Jumper
14	JP7	COM4 RS232/RS485 Select Jumper1
15	JP18	COM4 RS232/RS485 Select Jumper2
16	JP17	COM4 RS485 Signal 120Ω Resistive termination Select Jumper
17	JP10	COM5 VCC5/DCD+VCC12/RI Select Jumper

18	JP11	COM6 VCC5/DCD+VCC12/RI Select Jumper
19	COM2-6	COM2/3/4/5/6 Box Header
20	J_ESPI1	ESPI Header (Debug Only)
21	JP16	COM3 RS422 TX/RS485 Signal 120Ω Resistive termination Select Jumper
22	J_COPEN1	Case Open Header
23	J_DNX1	DNX Force Reload Disable/Enable Select Jumper
24	J_ME1	ME Flash Jumper
25	J_AT/ATX1	AT or ATX Select Jumper
26	J1	MCU Debug Header (Default not onboard)
27	F_USB3_1	Front USB3.0 Box Header
28	CLR_CMOS1	CMOS Clear Select Jumper
29	VOLT1	Power Monitor Wafer
30	JP4	COM3 RS232/422/485 Select Jumper3
31	PSON1	Power On Wafer
32	ATX1	ATX 24P CPU Power Input Connector
33	CPU_FAN1	CPU FAN Wafer
34	ATX2	ATX 8P CPU Power Input Connector
35	ATX3	ATX 4P CPU Power Input Connector
36	EDP_P1	eDP Backlight Control Wafer
37	EDP1	eDP Signal Header
38	JC_EDP1	eDP VDD Select Jumper
39	JP3	COM1 VCC5/DCD+VCC12/RI Select Jumper
40	F_AUDIO1	Front Audio Header (Line-Out + MIC)
41	J_SPDIF1	SPDIF Out Header
42	JP14	PCI CLK 66MHz Enable/Disable Select Jumper
43	SMBUS1	SMBUS Wafer
44	PCIE_4X_SLOT4	PCI-E 4x Slot4 (PCIe 4X)
45	M.2_PCISSD_M1	M.2 Key-M Slot (PCIe x4 GEN4 NVMe/SATA SSD Auto Detect, 2242/2280)
46	M.2_KEYE_WLAN1	M.2 Key-E Slot (PCIE+USB2.0+ CNVi, support WIFI+BT/ CNVi Module, 2230)
47	SATA3-4	SATA3.0 7P Upright Connector3-4
48	SATA1-2	SATA3.0 7P Upright Connector1-2
49	USB2_1	USB2.0 Internal Vertical TYPE-A Connector
50	DIMM4	DDR4 CHB DIMM Slot4
51	DIMM2	DDR4 CHB DIMM Slot3
52	DIMM3	DDR4 CHA DIMM Slot2
53	DIMM1	DDR4 CHA DIMM Slot1
54	PCIE_16X_SLOT1	PCI-E 16x Slot1 (PCIe 16X) ^[1]
55	PCIE_4X_SLOT1	PCI-E 4x Slot1 (PCIe 4X)
56	PCIE_4X_SLOT2	PCI-E 4x Slot2 (PCIe 4X)
57	PCIE_16X_SLOT2	PCI-E 16x Slot2 (PCIe 8X) ^[1]

58	PCIE_4X_SLOT3	PCI-E 4x Slot3 (PCIe 4X)
59	PCI1	PCI Slot
60	PS/2_USB1(PS/2)	PS/2 Connector (Keyboard & Mouse)
61	PS/2_USB1(USB)	Dual USB3.0 TYPE-A Connector
62	DVI_VGA1(DVI)	DVI-I 24+4P/F Connector (Support DVI-D)
63	DVI_VGA1(VGA)	VGA DB15/F Connector
64	COM1	COM1 DB9/M Connector
65	HDMI1	HDMI TYPE-A Connector
66	RJ45_USB2(LAN)	GBE LAN RJ45 Connector2
67	RJ45_USB2(USB)	Dual USB3.0 TYPE-A Connector2
68	RJ45_USB1(USB)	Dual USB3.0 TYPE-A Connector1
69	RJ45_USB1(LAN)	GBE LAN RJ45 Connector1
70	AUDIO1	Line-Out + MIC + Line-In 3.5mm Jack

Notes:

[1]: 2*PCI-E 16X Slot can support 2*PCIE 8x(default) or 1*PCIE 16X. (BOM selectable)

6. Definition of Jumpers /Headers and Connectors

1) SYS_FAN1(System FAN Wafer1 4*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	3	FAN Speed Detection
	2	VCC12	4	FAN Speed Control

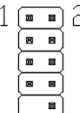
2) SYS_FAN2(System FAN Wafer2 4*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	3	FAN Speed Detection
	2	VCC12	4	FAN Speed Control

3) J_GPIO1(GPIO Header 6*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	SIO_GPI70 (0xA06 Bit0, H ^[1])	2	SIO_GPI71 (0xA06 Bit1, H)
	3	SIO_GPI72 (0xA06 Bit2, H)	4	SIO_GPI73 (0xA06 Bit3, H)
	5	GND	6	SIO_GPO74 (0xA06 Bit4, H)
	7	SIO_GPO75 (0xA06 Bit5, H)	8	SIO_GPO76 (0xA06 Bit6, H)
	9	SIO_GPO77 (0xA06 Bit7, H)	10	VCC5
			12	N/C

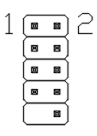
4) F_USB2_2(Front USB2.0 Header2 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	VCC5	2	VCC5
	3	USB2.0_1-	4	USB2.0_2-
	5	USB2.0_1+	6	USB2.0_2+
	7	GND	8	GND
			10	N/C

5) JP19(Watch Dog Reset Enable/Disable Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2	Normal
	2-3(Default)	Reset

6) F_USB2_1(Front USB2.0 Header1 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	VCC5	2	VCC5
	3	USB2.0_1-	4	USB2.0_2-
	5	USB2.0_1+	6	USB2.0_2+
	7	GND	8	GND
			10	N/C

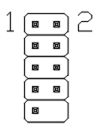
7) JP12(COM2 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM2_PIN1: VCC5 COM2_PIN8: VCC12
	3-5 , 4-6(Default)	COM2_PIN1: DCD COM2_PIN8: RI

Notes:

*: Jumper 1-3/3-5 select the COM2_PIN1 signal. Jumper 2-4/4-6 select the COM2_PIN8 signal.

8) F_PANEL1(Front Panel Header 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	HDD 3.3V LED+	2	POWER 3.3V LED+
	3	HDD 3.3V LED-	4	POWER 3.3V LED-
	5	RESET-	6	POWER+
	7	RESET+	8	POWER-
	9	N/C		

Notes:

[1]: Power on this Pin is VCC3.3S by default, VCC3.3_DUAL is available if specified. (resistor selectable)

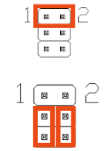
9) JP8 (COM3 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM3_PIN1: VCC5 COM3_PIN8: VCC12
	3-5, 4-6(Default)	COM3_PIN1: DCD/ RS422_TX-/ RS485- COM3_PIN8: RI

Notes:

*: Jumper 1-3/3-5 select the COM3_PIN1 signal. Jumper 2-4/4-6 select the COM3_PIN8 signal.

10) 11)30) JP6/JP5/JP4(COM3 RS232/422/485 Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	JP4: 1-2 JP5: 3-5、 4-6 JP6: 3-5、 4-6 (Default)	COM3: RS232 (COM3_PIN1: DCD COM3_PIN3: RXD COM3_PIN5: TXD COM3_PIN7: DTR)
	JP4: 3-4 JP5: 1-3、 2-4 JP6: 1-3、 2-4	COM3: RS422 (COM3_PIN1: RS422_TX- COM3_PIN3: RS422_TX+ COM3_PIN5: RS422_RX+ COM3_PIN7: RS422_RX-)
	JP4: 5-6 JP5: 1-3、 2-4 JP6 (No Effect)	COM3: RS485 (COM3_PIN1: RS485- COM3_PIN3: RS485+)

12) JP15 (COM3 RS422 RX Signal 120Ω Resistive termination Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	Disable
	2-3	Enable

13) JP9 (COM4 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM4_PIN1: VCC5 COM4_PIN8: VCC12
	3-5, 4-6(Default)	COM4_PIN1: DCD/TX- COM4_PIN8: RI

14) 15) JP7/JP18(COM4 RS232/RS485 Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	JP18: 1-2 JP7: 3-5, 4-6(Default)	COM4: RS232 (COM4_PIN1: DCD COM4_PIN3: RXD)
	JP18: 5-6 JP7: 1-3, 2-4	COM4: RS485 (COM4_PIN1: RS485- COM4_PIN3: RS485+)

16) JP17(COM4 RS485 Signal 120Ω Resistive termination Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	Disable
	2-3	Enable

17) JP10(COM5 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM5_PIN1: VCC5 COM5_PIN8: VCC12
	3-5, 4-6(Default)	COM5_PIN1: DCD COM5_PIN8: RI

Notes:

*: Jumper 1-3/3-5 select the COM5_PIN1 signal. Jumper 2-4/4-6 select the COM5_PIN8 signal.

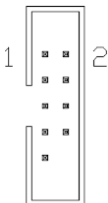
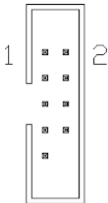
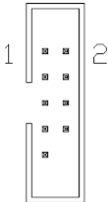
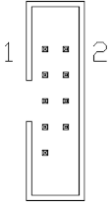
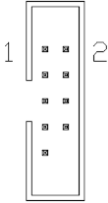
18) JP11(COM6 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM6_PIN1: VCC5 COM6_PIN8: VCC12
	3-5, 4-6(Default)	COM6_PIN1: DCD COM6_PIN8: RI

Notes:

*: Jumper 1-3/3-5 select the COM6_PIN1 signal. Jumper 2-4/4-6 select the COM6_PIN8 signal.

19) COM2-6(COM2/3/4/5/6 Box Header 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
 COM2	1	COM2_PIN1 ^[1]	2	COM2_DSR
	3	COM2_RXD	4	COM2_RTS
	5	COM2_TXD	6	COM2_CTS
	7	COM2_DTR	8	COM2_PIN8 ^[1]
	9	GND		
 COM3	1	COM3_PIN1 ^{[2] [3]}	2	COM3_DSR
	3	COM3_PIN3 ^[3]	4	COM3_RTS
	5	COM3_PIN5 ^[3]	6	COM3_CTS
	7	COM3_PIN7 ^[3]	8	COM3_PIN8 ^{[2] [3]}
	9	GND		
 COM4	1	COM4_PIN1 ^{[4] [5]}	2	COM4_DSR
	3	COM4_PIN3 ^[4]	4	COM4_RTS
	5	COM4_TXD	6	COM4_CTS
	7	COM4_DTR	8	COM4_PIN8 ^[5]
	9	GND		
 COM5	1	COM5_PIN1 ^[6]	2	COM5_DSR
	3	COM5_RXD	4	COM5_RTS
	5	COM5_TXD	6	COM5_CTS
	7	COM5_DTR	8	COM5_PIN8 ^[6]
	9	GND		
 COM6	1	COM6_PIN1 ^[7]	2	COM6_DSR
	3	COM6_RXD	4	COM6_RTS
	5	COM6_TXD	6	COM6_CTS
	7	COM6_DTR	8	COM6_PIN8 ^[7]
	9	GND		

Notes:

[1]: PIN1 of COM2 can be DCD (default) /5V and Pin8 of COM2 can be RI (Default) / 12V, selectable by "COM2 VCC5/DCD+VCC12/RI Select Jumper". (JP12, Location 7)

[2]: PIN1 of COM3 can be DCD (default) /5V and Pin8 of COM3 can be RI(Default) / 12V, selectable by "COM3 VCC5/DCD+VCC12/RI Select Jumper". (JP8, Location 9)

[3]: COM3 can be RS232 (default) / RS422 / RS485 selecting by JP4, JP5, JP6 Jumper, check Location 10/11/30 for detail. COM3 can be RS485 or RS422 selecting by jumper and setting BIOS to RTS mode.

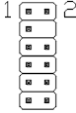
[4]: COM4 can be RS232 (default) / RS485 selecting by JP7, JP18 Jumper, check Location 14/15 for detail. COM4 can be RS485 selecting by jumper and setting BIOS to RTS mode.

[5]: PIN1 of COM4 can be DCD (default) /5V and Pin8 of COM4 can be RI(Default) / 12V, selectable by "COM4 VCC5/DCD+VCC12/RI Select Jumper". (JP9, Location 13)

[6]: PIN1 of COM5 can be DCD (default) /5V and Pin8 of COM5 can be RI(Default) / 12V, selectable by "COM5 VCC5/DCD+VCC12/RI Select Jumper". (JP10, Location 17)

[7]: PIN1 of COM6 can be DCD (default) /5V and Pin8 of COM6 can be RI(Default) / 12V, selectable by "COM5 VCC5/DCD+VCC12/RI Select Jumper". (JP11, Location 18)

20) J_ESPI1(ESPI Header(Debug Only) 6*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	ESPI_IO0	2	VCC3.3_Dual
	3	ESPI_IO1		
	5	ESPI_IO2	6	ESPI_CLK
	7	ESPI_IO3	8	GND
	9	ESPI_CS0	10	VCC3.3S
	11	ESPI_ALERT0_N	12	PLT_RST_N ^[1]

Notes:

[1]: Signal on this Pin is PLT_RST_N by default, ESPI_RST0_N is available if specified. (resistor selectable)

21) JP16(COM3 RS422 TX/RS485 Signal 120Ω Resistive termination Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	Disable
	2-3	Enable

22) J_COPEN1(Case Open Header 2*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2: Connected	Active Case Open
	1-2: Open	Normal

23) J_DNX1(DNX Force Reload Disable/Enable Select Jumper 2*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2: Connected	Enable
	1-2: Open	Disable

24) J_ME1(ME Flash Jumper 2*1 Pin 2.54 mm)

Graphic	Setting	Function
	1-2: Open (Default)	ME Protect Enable
	1-2: Connected	ME Protect Disable

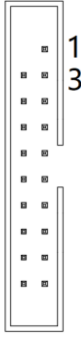
25) J_AT/ATX1(AT or ATX Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	ATX Mode
	2-3	AT Mode

26) J1 (MCU Debug Header 3*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	TTL_RX	3	GND
	2	TTL_TX		

27) F_USB3_1(Front USB3.0 Box Header 10*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
			1	VCC5
	4	VCC5	3	USB3.0_RX1-
	6	USB3.0_RX2-	5	USB3.0_RX1+
	8	USB3.0_RX2+	7	GND
	10	GND	9	USB3.0_TX1-
	12	USB3.0_TX2-	11	USB3.0_TX1+
	14	USB3.0_TX2+	13	GND
	16	GND	15	USB2.0_1-
	18	USB2.0_2-	17	USB2.0_1+
	20	USB2.0_2+	19	N/C

28) CLR_CMOS1(CMOS Clear Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2(Default)	Normal
	2-3	Clear CMOS

29) VOLT1(Power Monitor wafer 8*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	VCC5A	5	VCC5S
	2	GND	6	VCC3.3S
	3	GND	7	VCC12_N
	4	VCC5PS	8	VCC12S

31) PSON1(Power On Wafer 2*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	PSON_N	2	GND

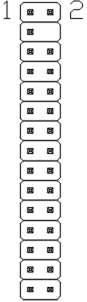
33) CPU_FAN1(CPU FAN Wafer 4*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	3	FAN Speed Detection
	2	VCC12	4	FAN Speed Control

36) EDP_P1(eDP Backlight Control Wafer 6*1 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	4	EDP_BKLT_EN
	2	GND	5	VCC12
	3	EDP_BKLT_CTL	6	VCC12

37) EDP1(eDP Signal Header 15*2 Pin 2.00mm)

Graphic	Pin	Definition	Pin	Definition
	1	VDD_PANEL ^[1]	2	VDD_PANEL ^[1]
	3	VDD_PANEL ^[1]		
	5	GND	6	EDP_HPDP
	7	N/C	8	N/C
	9	N/C	10	N/C
	11	N/C	12	N/C
	13	GND	14	GND
	15	N/C	16	N/C
	17	N/C	18	N/C
	19	EDP_TX0-	20	EDP_TX0+
	21	EDP_TX1-	22	EDP_TX1+
	23	EDP_TX2-	24	EDP_TX2+
	25	GND	26	GND
	27	EDP_TX3-	28	EDP_TX3+
	29	EDP_AUX-	30	EDP_AUX+

Notes:

[1]: Panel Power VDD can be 3.3V (default) /5V selectable by eDP VDD Select Jumper" (JC_EDP1 Location 39).

38) JC_EDP1(eDP VDD Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2(Default)	VCC3.3
	2-3	VCC5

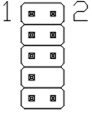
39) JP3(COM1 VCC5/DCD+VCC12/RI Select Jumper 3*2 Pin 2.54 mm)

Graphic	Setting	Function
	1-3, 2-4	COM1_PIN1: + 5V COM1_PIN8: + 12V
	3-5 (Default), 4-6(Default)	COM1_PIN1: DCD COM1_PIN8: RI

Notes:

*: Jumper 1-3/3-5 select the COM1_PIN1 signal. Jumper 2-4/4-6 select the COM1_PIN8 signal.

40) F_AUDIO1(Front Audio Header (Line-Out + MIC) 5*2 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	MIC_IN_L	2	GND
	3	MIC_IN_R	4	VCC3.3
	5	LINE_OUT_R	6	MIC_RET
	7	GND		
	9	LINE_OUT_L	10	LINE_OUT_RET

41) J_SPDIF1(SPDIF Out Header 4*1 Pin 2.54mm)

Graphic	Pin	Definition	Pin	Definition
	1	VCC5	3	SPDIF_OUT
			4	GND

42) JP14(PCI CLK 66MHz Enable/Disable Select Jumper 3*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	Disable PCI CLK 66MHz
	2-3	Enable PCI CLK 66MHz

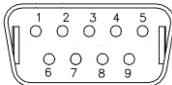
43) SMBUS1(SMBUS Wafer 4*1 Pin 1.25mm)

Graphic	Pin	Definition	Pin	Definition
	1	GND	3	SMB_CLK
	2	SMB_DATA	4	VCC5 ^[1]

Notes:

[1]: Power on this Pin is 5V by default, 3.3V is available if specified. (resistor selectable)

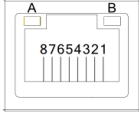
64) COM1(COM1 DB9/M Connector)

Graphic	Pin	Definition	Pin	Definition
	1	PIN1 ^[1]	6	DSR
	2	RXD	7	RTS
	3	TXD	8	CTS
	4	DTR	9	PIN9 ^[1]
	5	GND		

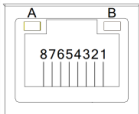
Notes:

[1]: PIN1 of COM1 can be DCD (default) /5V and Pin9 of COM1 can be RI(Default) / 12V, selectable by "COM1

66) RJ45_USB2(LAN) (GBE LAN RJ45 Connector2)

Graphic	Pin	Definition		Pin	Definition	
	1	MDI2_0+		5	MDI2_2+	
	2	MDI2_0-		6	MDI2_2-	
	3	MDI2_1+		7	MDI2_3+	
	4	MDI2_1-		8	MDI2_3-	
	A	Active LED	ACT: Twinkling Green Only LINK: Lights On Stop: Lights Off	B	Speed LED	1000M/2.5G: Turn Orange 100M: Turn Green 10M: Lights Off

69) RJ45_USB1(LAN) (GBE LAN RJ45 Connector1)

Graphic	Pin	Definition		Pin	Definition	
	1	MDI1_0+		5	MDI1_2+	
	2	MDI1_0-		6	MDI1_2-	
	3	MDI1_1+		7	MDI1_3+	
	4	MDI1_1-		8	MDI1_3-	
	A	Active LED	ACT: Twinkling Green Only LINK: Lights On Stop: Lights Off	B	Speed LED	1000M: Turn Orange 100M: Turn Green 10M: Lights Off

7. BIOS setup

See “BIOS Spec for DMB-AQ670S Series” for detail information of BIOS setup.

【End】