BC680R

Intel® R680E ATX Motherboard supports LGA1700 Alder Lake CPU

ATX Motherboard

User's Quick Start Card Version 0.01

http://www.bcmcom.com

• Inspect the Package:

One **BC68R Motherboard**

One **I/O Shield**

• Responsibility:

This manual is provided "As-Is" with no warranties of any kind, it will neither expressed or implied, including, but not limited to the implied warranties or conditions of this product's fitness for any particular purpose. In no event shall we be liable for any loss of profits, loss of business, loss of data, interruption of business, or indirect, special, incidental, or consequential damages of any kind, even the possibility of such damages arising from any defect or error in this manual or product. We reserve the right to modify and update the user manual without prior notice.

WARNING: CMOS Battery Damage

Replace your system's CMOS RAM battery only with the identical CR-2032 3V Lithium-Ion coin cell (or equivalent) battery type to avoid risk of personal injury or physical damage to your equipment. Always dispose of used batteries according to the manufacturer's instructions, or as required by the local ordinance (where applicable). The damage due to not following this warning will void your motherboard's manufacturer warranty.

Perchlorate Material- Special Handling May Apply.

See http://www.dtsc.ca.gov/hazardouswaste/perchlorate/

ATTENTION: Incorrect BIOS Setup

If you do not know how to handle BIOS setup or how to set it up properly, it is strongly advisable that you do not modify any of the settings than otherwise instructed in the User's Quick Start Card. Even a seemingly small incorrect adjustment or modification in the BIOS setup can render your system unstable or unusable. The incorrect BIOS setup is not covered by your motherboard's manufacturer warranty.

• Additional Information:

Additional information on setting this board up can be found in the User's Manual in the provided CD-ROM. The Online User's Manual and FAQ/Knowledge Base can be found on our website by visiting our website: **http://www.bcmcom.com**. If your question is not answered in our FAQ/Knowledge Base, visit our forums and post your messages or submit a new FAQ through FAQ Submittal form for us to add your question in our FAQ with our answer.

WARNING: Electrostatic Sensitive Device (ESD)

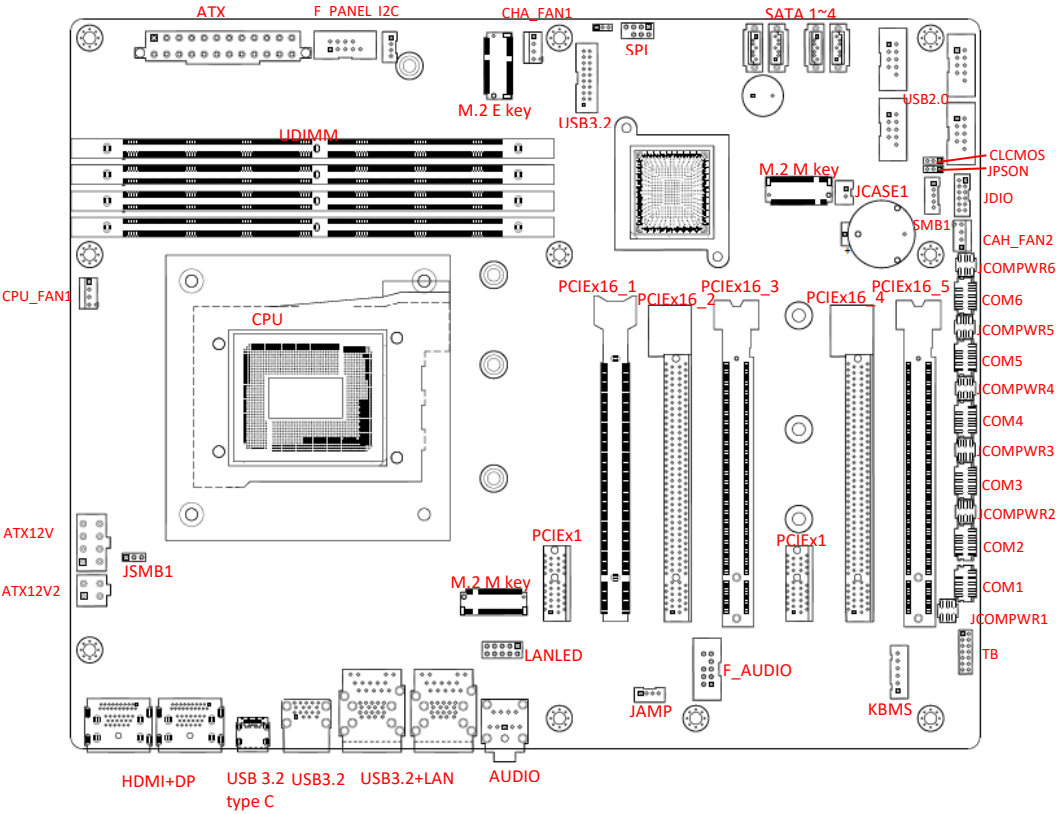
Static electricity can easily damage your motherboard and will void your motherboard warranty. Keep the motherboard and other system components in their anti-static packaging until you are ready to install them. Touch a grounded surface before you remove any system component from its protective anti-static packaging. Unpacking and installation should be done on a grounded, anti-static mat. The operator should be wearing an anti-static wristband, grounded at the same points as the anti-static mat. During configuration and installation touch a grounded surface frequently to discharge any static electrical charge that may have built up in your body. Avoid touching the components when handling the motherboard or a peripheral card. Handle the motherboard and peripheral cards either by the edges or by the peripheral card case-mounting bracket.

WARNING: Misplaced Jumper Damage

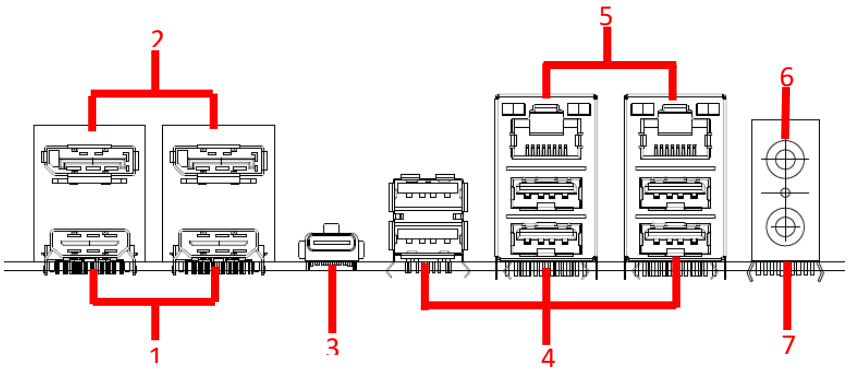
Incorrect setting jumpers and connectors may lead to damage to your motherboard and will void your motherboard warranty. Please pay special attention not to connect these headers in wrong directions. DO NOT change ANY jumpers while the motherboard has the power!

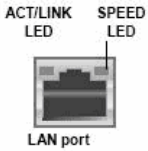
Motherboard Layout:

• Board Layout:


ATX
F_PANEL
I2C
CHA_FAN1
SPI
SATA 1~4
M.2 E key
USB3.2
USB2.0
UDIMM
M.2 M key
CLCMOS
JPSON
JCASE1
JDIO
SMB1
CAH_FAN2
COMPWR6
CPU_FAN1
CPU
PCIEx16_1
PCIEx16_2
PCIEx16_3
PCIEx16_4
PCIEx16_5
COM6
COMPWR5
COM5
COMPWR4
COM4
COMPWR3
COM3
COMPWR2
ATX12V
JSMB1
PCIEx1
PCIEx1
COM2
ATX12V2
M.2 M key
COM1
JCOMPWR1
TB
LANLED
F_AUDIO
JAMP
KBMS
HDMI+DP
USB 3.2 type C
USB3.2
USB3.2+LAN
AUDIO

• Back Panel:

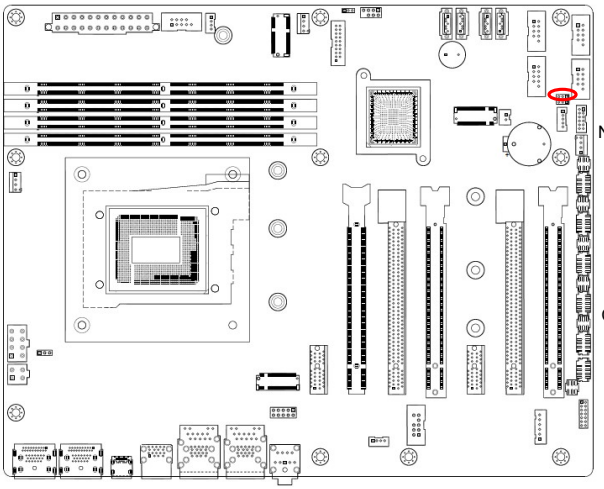


Item	Name	Function	Description
1	HDMI	HDMI Port	The HDMI port Connector
2	DP	Display Port	These two display port connectors are available for connecting display port devices.
3	USB3.2 Type C	USB 3.2 Connectors(TypeC)	This is USB 3.2 Type-C connector
4	USB3.2 Type A	USB 3.2 Connectors(TypeA)	These six Universal Serial Bus (USB) ports are available for connecting USB 3.2 devices.
5	LAN2.	2.5G LAN (RJ-45) Connectors 	This port allows 2.5G connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications.
6	AUDIO	Line-out port (Lime)	This port connects a headphone or a speaker.
7	AUDIO	Microphone port (Pink)	This port connects a microphone.

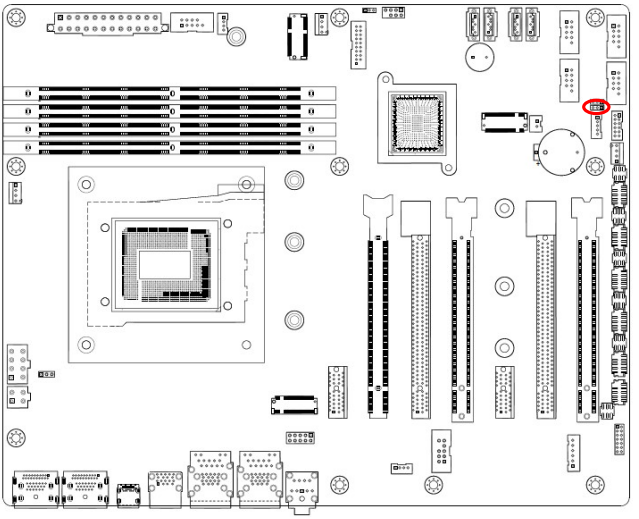
ACT/Link LED		Speed LED	
Status	Description	Status	Description
OFF	No link	OFF	10/100Mbps connection
Orange	Linked	Green	1Gbps connection
Blinking	Data activity	Orange	2.5Gbps connection

Jumpers, Connectors, & Headers:

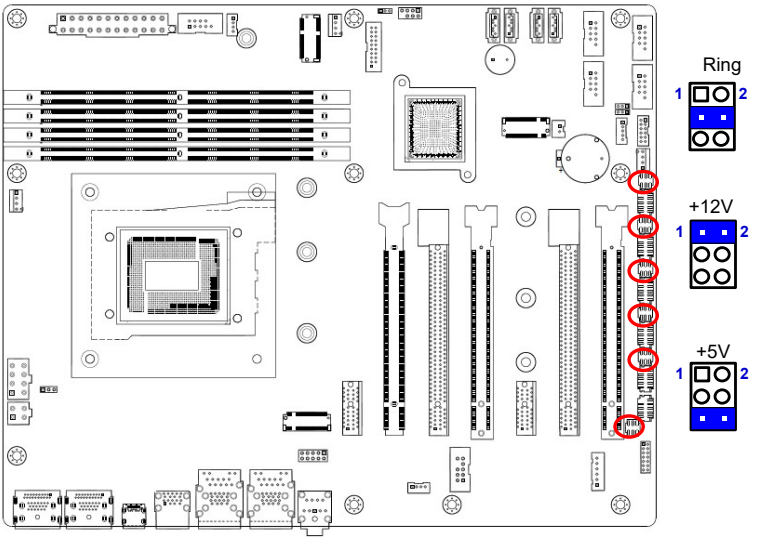
• Clear CMOS Jumper: CLCMOS



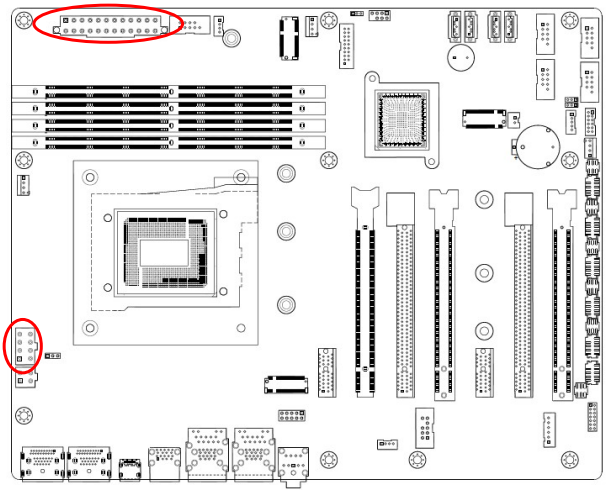
• ATX/AT Mode Selection: JPSON



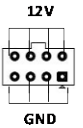
• COM POWER SETTING (JCOMPWR1~6)



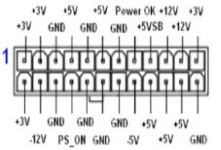
• ATX Power Connectors: ATX & ATX12V1



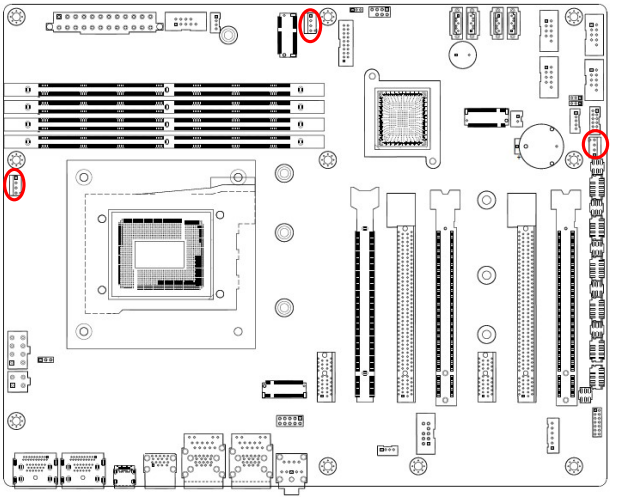
ATX12V1



ATX



• Fan Connectors: CPU_FAN1, CHA_FAN1, CHA_FAN2



CPU_FAN1

4. FAN_PWM1
3. FAN_SPEED2
2. +V12
1. GND

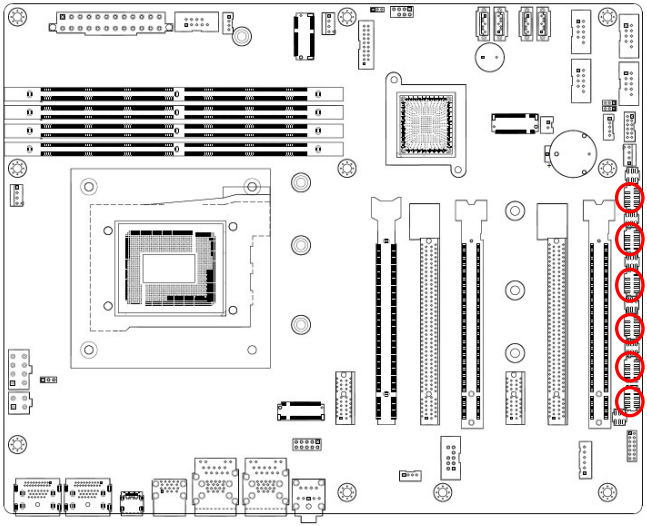
CHA_FAN1

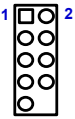
4. FAN_PWM2
3. FAN_SPEED2
2. +V12
1. GND

CHA_FAN2

4. FAN_PWM3
3. FAN_SPEED3
2. +V12
1. GND

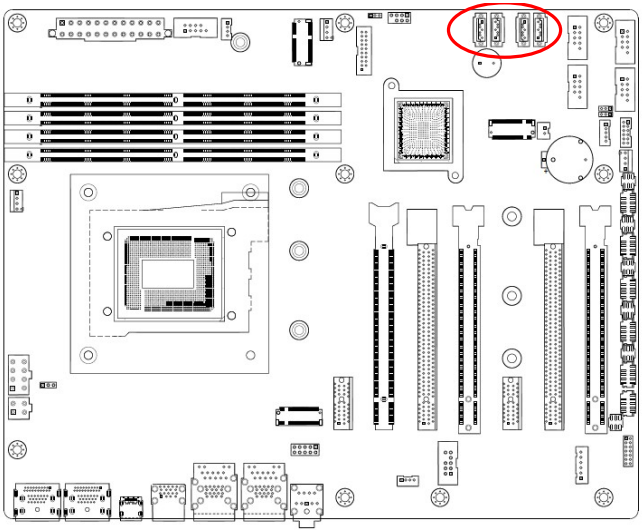
• Serial Port Connectors: COM1~6





1. DCD#	2. RX
3. TX	4. DTR#
5. GND	6. DSR#
7. RTS#	8. CTS#
9. RI3xPOWERxJMP	

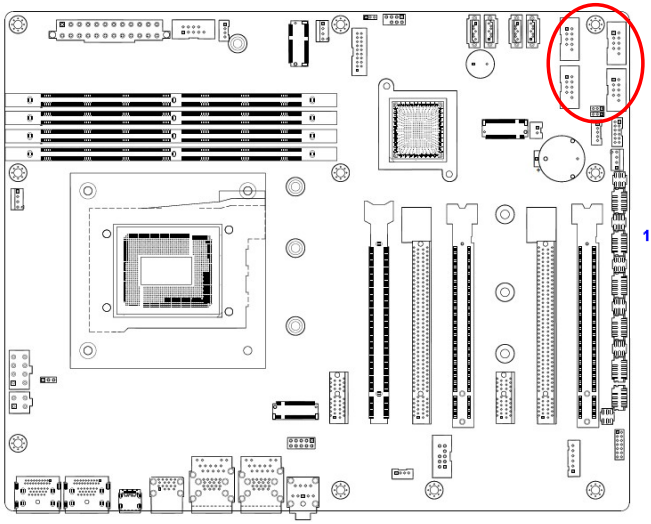
• SATA 3.0 Ports: SATA1~4



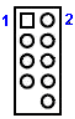
SATA

1. GND
2. TX+
3. TX-
4. GND
5. RX-
6. RX+
7. GND

• Front USB 2.0 Headers: USB2.0

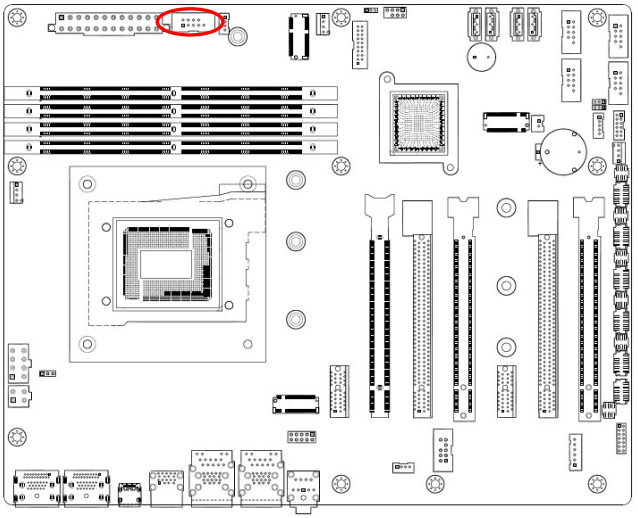


USB



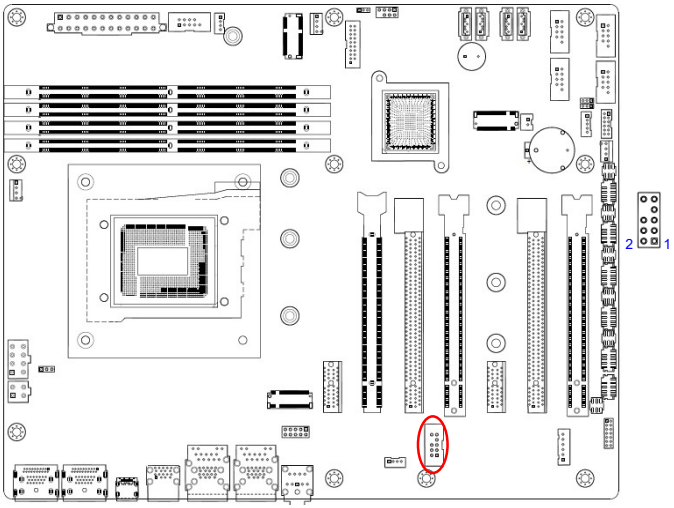
1. USB+5V	2. USB+5V
3. USB -	4. USB -
5. USB +	6. USB +
7. GND	8. GND
	9. NC

• Front Panel Connector: F_PANEL



1. HDD LED+	2. +5VSB
3. HDD LED#	4. PWR LED#
5. GND	6. PANSWIN#
7. RST	8. GND
9. N/A	

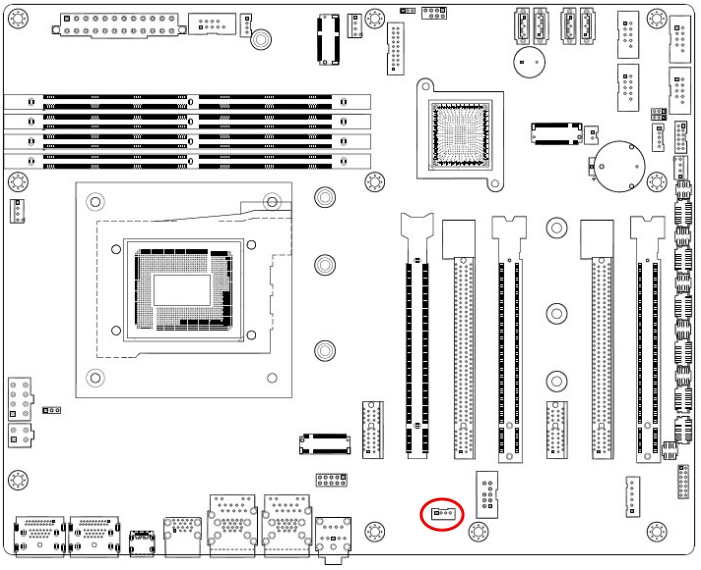
• Front Panel Audio Connector: F_AUDIO

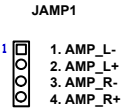


FP_AUDIO1

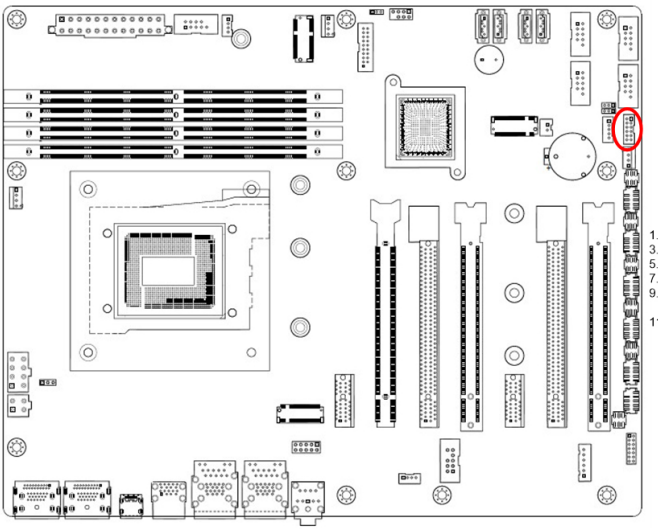
10. LINE2-JD	9. LINE2L
8. NC	7. SENSEB
6. MIC2-JD	5. LINE2R
4. +3.3	3. MIC2R
2. GND	1. MIC2L

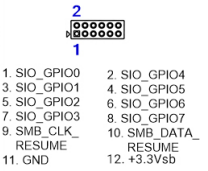
• Amplifier Connector: JAMP1



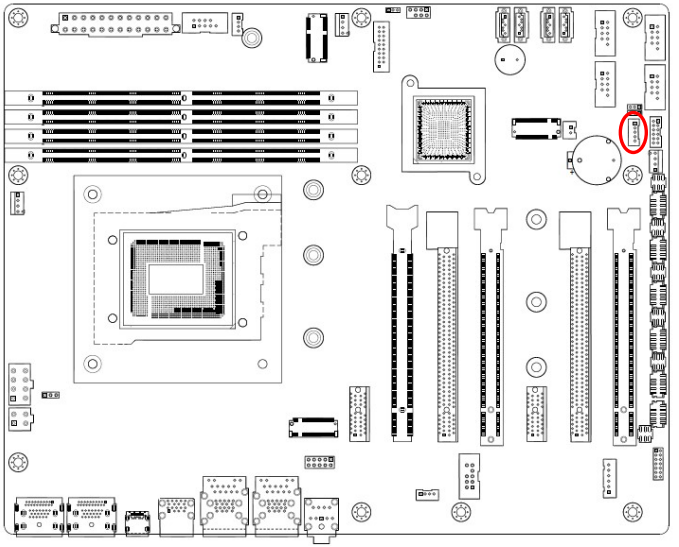


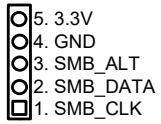
• Digital I/O Connector: JDIO



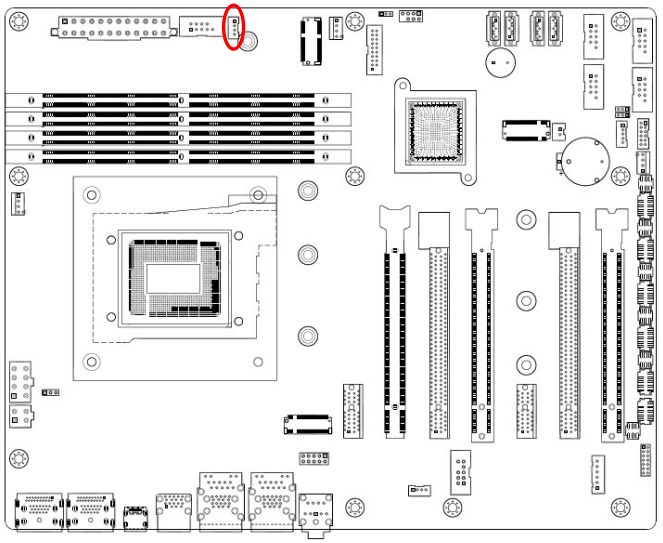


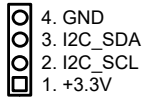
• SM bus connector: SMB1



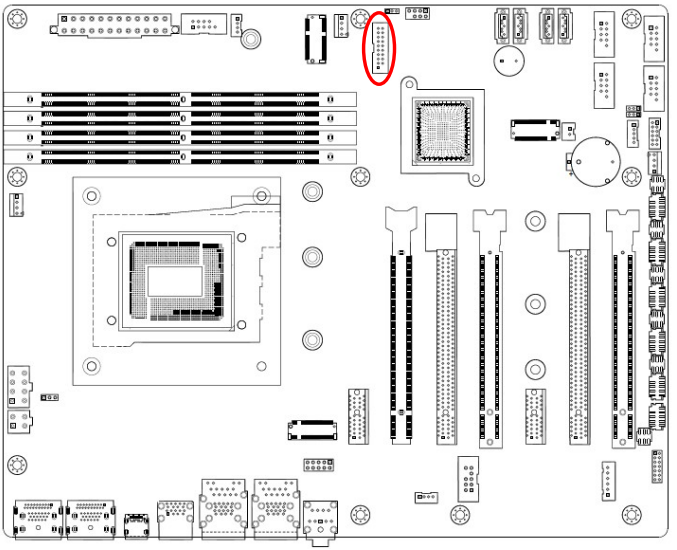


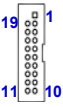
• I2C connector: I2C





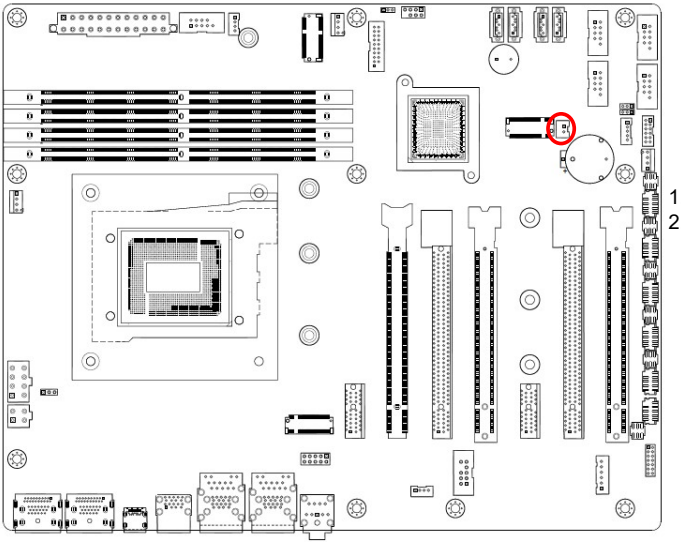
• Front USB 3.2 Headers:





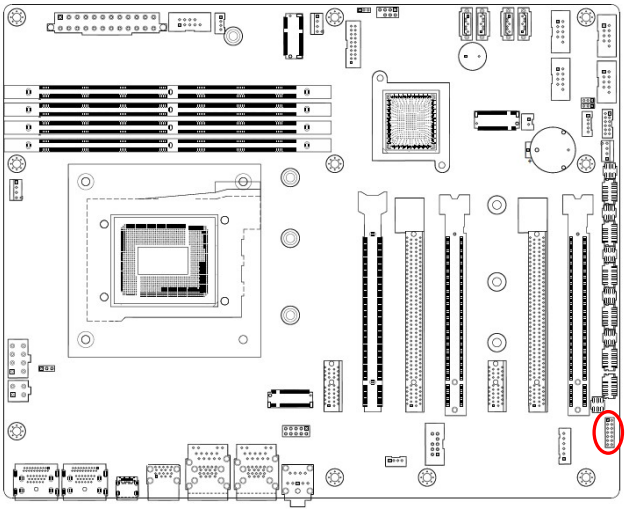
19. +5V	1. +5V
18. USB3_RX-	2. USB3_RX-
17. USB3_RX+	3. USB3_RX+
16. GND	4. GND
15. USB3_TX-	5. USB3_TX-
14. USB3_TX+	6. USB3_TX+
13. GND	7. GND
12. USB-	8. USB-
11. USB+	9. USB+
	10. NC

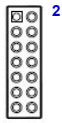
•Chassis Intrusion Connector: JCASE1



1. SIO_CASEOPEN#
2. GND

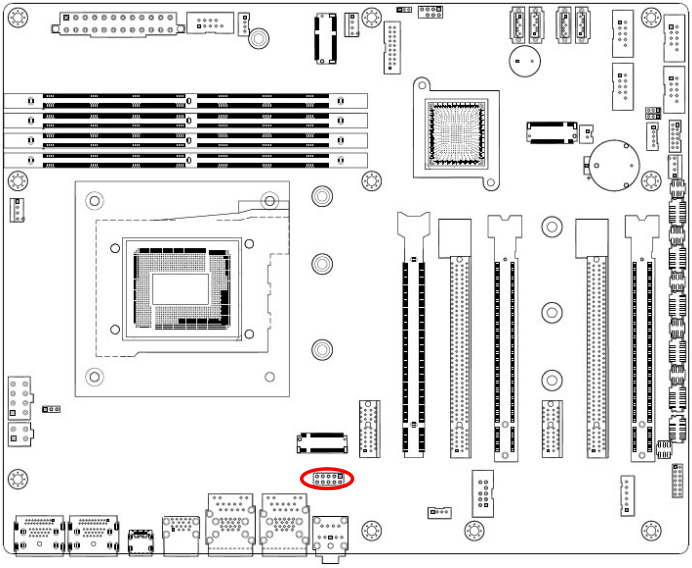
• Thunderbolt Connector: TBT





1. PCH_WAKE#	2. RTD3_SW
3. PCIE_RST#	4. NC
5. SLP_S0_IDLE#	6. GND
7. RTD3_PWR_EN	8. SLP_S5#
9. I2C_ALERT#	10. SLP_S3#
11. SDAT	12. CIO_PLUG_EVENT
13. SCLK	14. FRC_PWR

• LAN LED status Connector: LANLED1



1.+3V_Dual
2.+3V_Dual
3.LAN1_LED
4.GND
5.+3V_Dual
6.+3V_Dual
7.GND
8. GND
9.+3V_Dual
10.+3V_Dual