

# MX4305UE

8th Gen Intel® Whiskey Lake 4305UE Processor Onboard

## Mini ITX Motherboard

### User's Quick Start Card

Version 0.01

<http://www.bcmcom.com>

#### • Inspect the Package:

One **MX4305UE Motherboard**  
One **SATA power Cable**  
One **I/O Shield (high profile)**  
One **I/O Shield (low profile)**

#### • 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)**

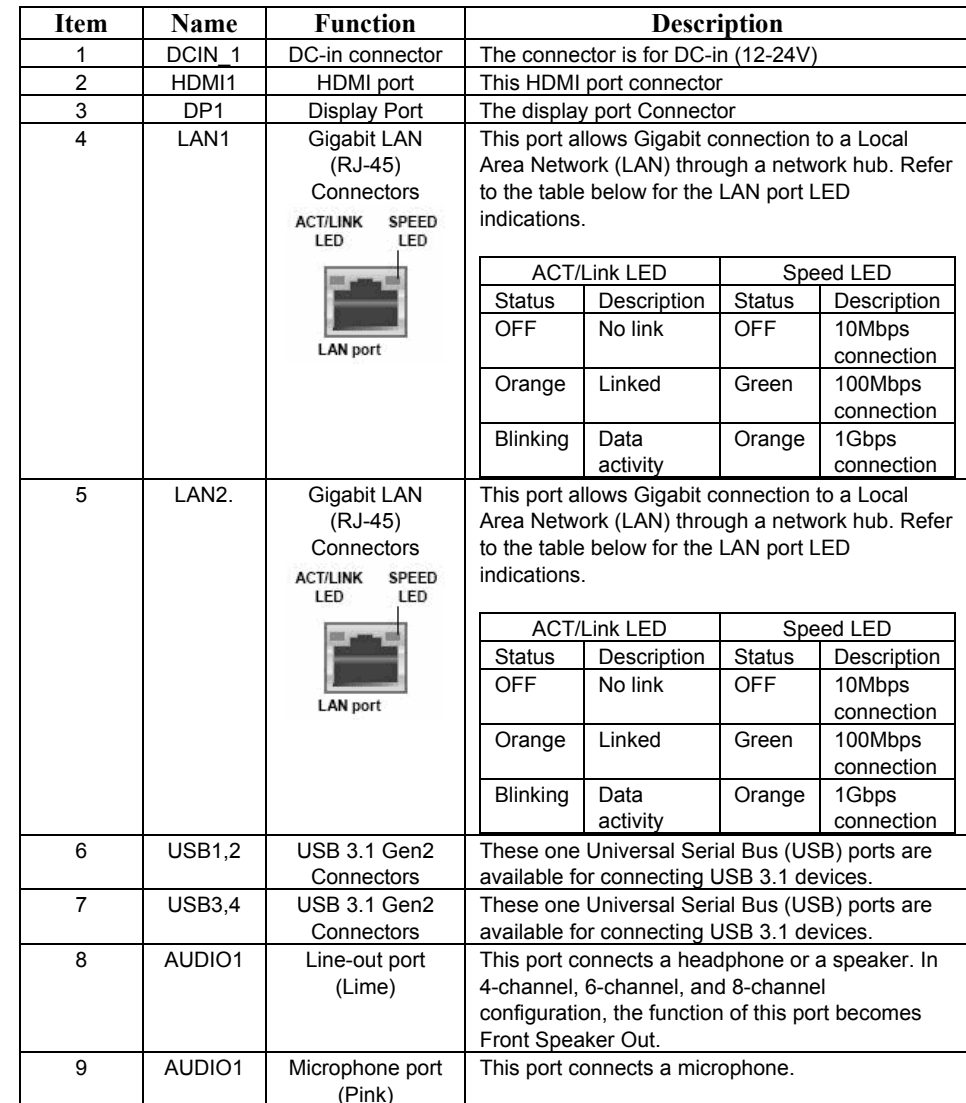
Static electricity can easily damage your motherboard and will void your motherboard warranty. Keep the motherboard and other system components in their anti-static packaging until you are ready to install them. Touch a grounded surface before you remove any system component from its protective anti-static 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**

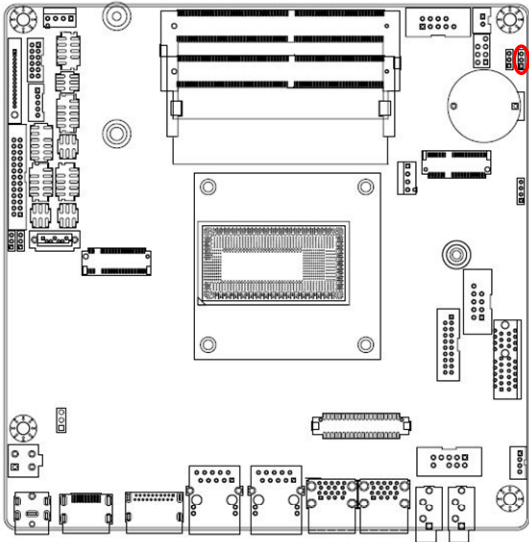
Incorrect setting jumpers and connectors may lead to damage to your motherboard and will void your motherboard warranty. Please pay special attention not to connect these headers in wrong directions. DO NOT change ANY jumpers while the motherboard has the power!

- **Board Layout:**



Jumpers, Connectors, & Headers:

- Clear CMOS Jumper: CLCMOS1



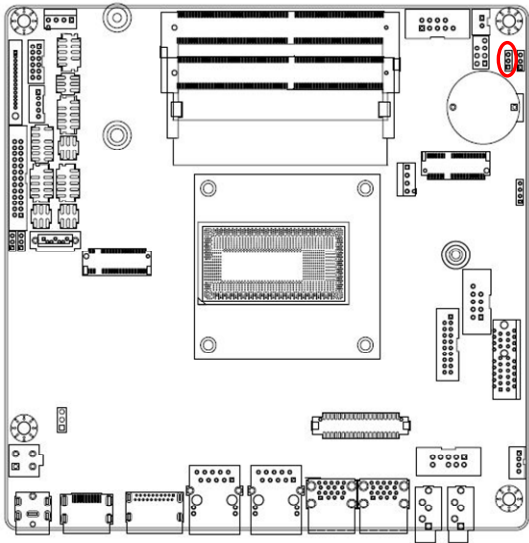
Normal (Default)



Clear CMOS



- ATX/AT Mode Selection: JPSON1



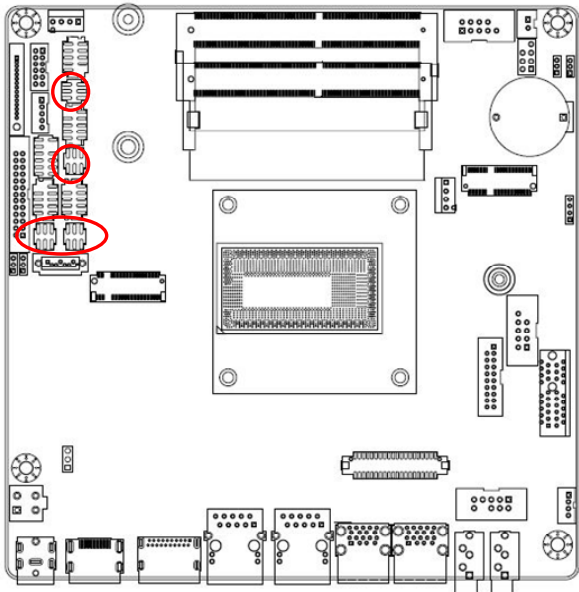
AT mode



ATX mode  
(Default)



- COM1&2 Ring-In/ +12V/ +5V Select: JCOMPWR1, JCOMPWR2



Ring (Default)



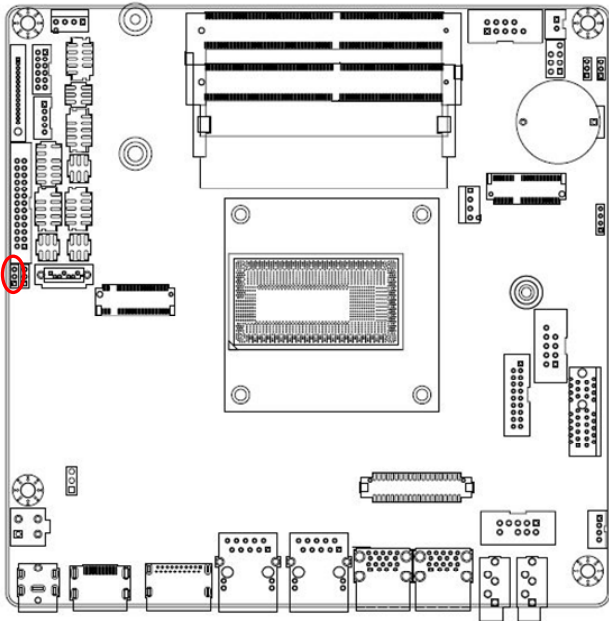
+12V



+5V



- LVDS panel voltage Selection: JBKLVOL1



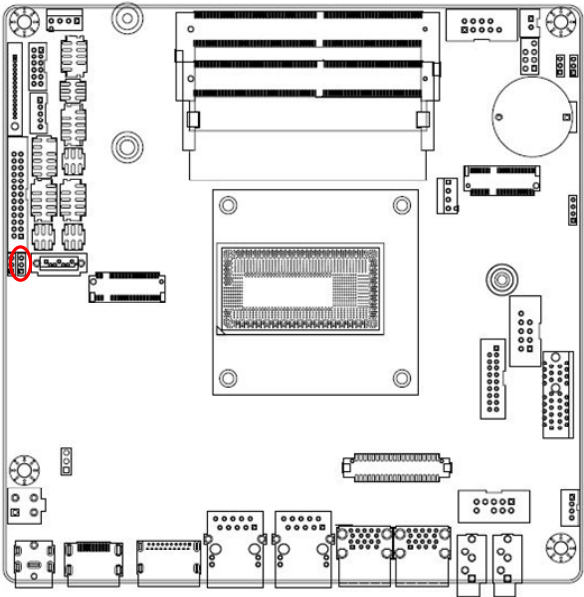
+5V



+3V



• LVDS brightness control mode Selection: JLVDS\_BKL1



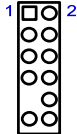
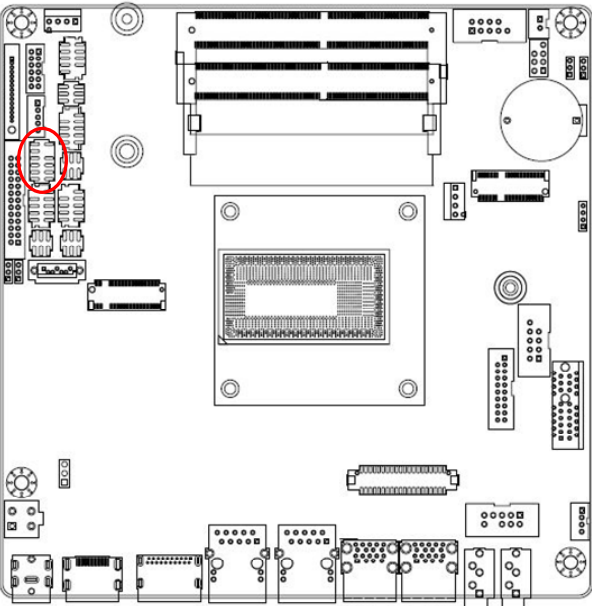
PWM mode



DC mode

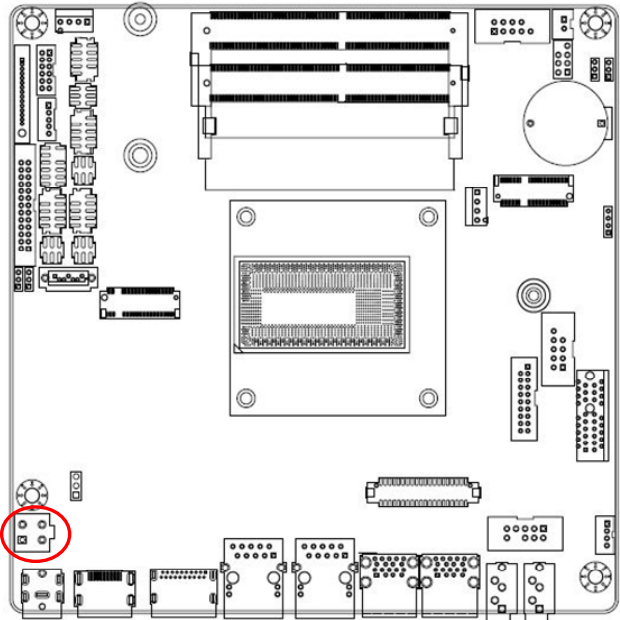


• LPC Connectors: JLPC1

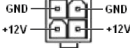


- |                |                |
|----------------|----------------|
| 1. NC          | 2. +3.3V       |
| 3. LPC_AD3     | 4. PLTRST_LPC# |
| 5. LPC_AD1     | 6. LPC_AD2     |
| 7. LPC_FRAME#  | 8. LPC_AD0     |
|                | 10. GND        |
| 11. CK_24M_LPC | 12. GND        |

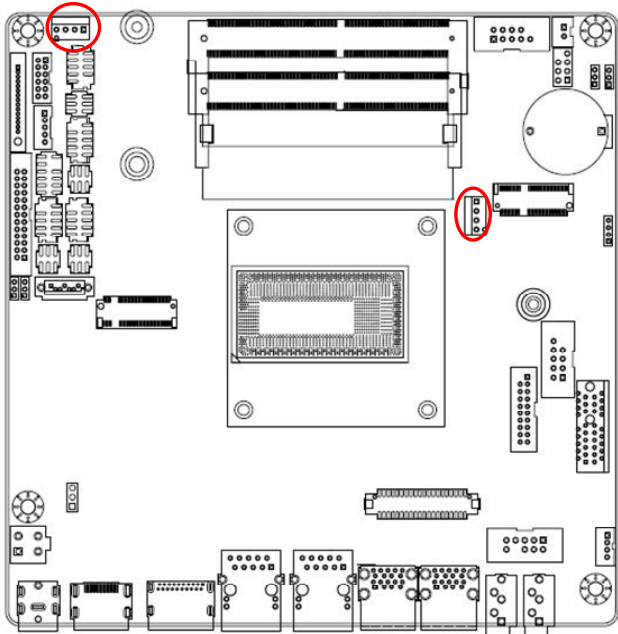
• Processor Power Supply Connector: ATX12V1 (4-pin)



ATX12V1



Fan Connectors: CPU\_FAN1, SYS\_FAN1



CPU\_FAN1

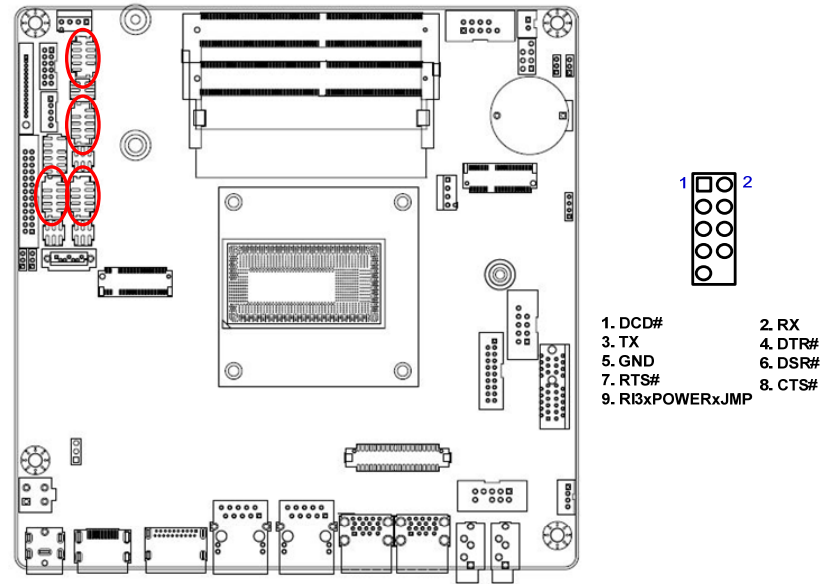
- |               |
|---------------|
| 4. FAN_PWM1   |
| 3. FAN_SPEED2 |
| 2. +V12       |
| 1. GND        |

SYS\_FAN1

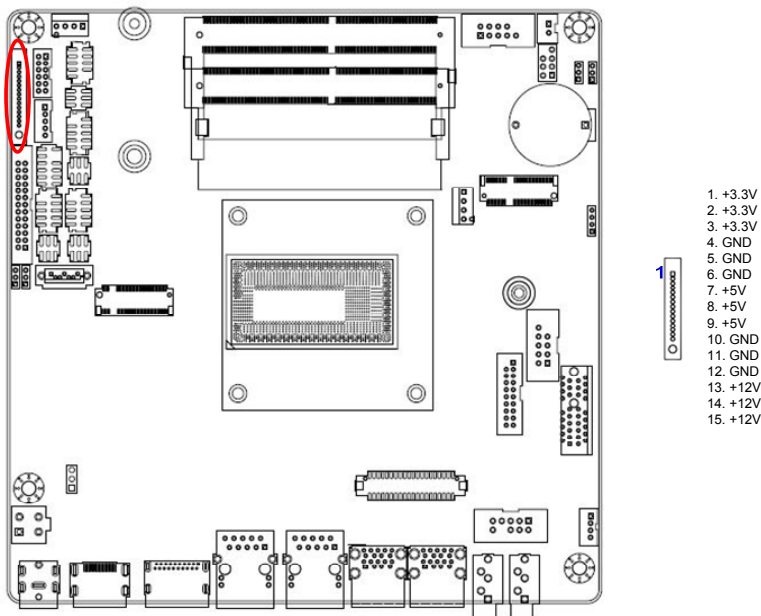
- |               |
|---------------|
| 4. FAN_PWM2   |
| 3. FAN_SPEED2 |
| 2. +V12       |
| 1. GND        |



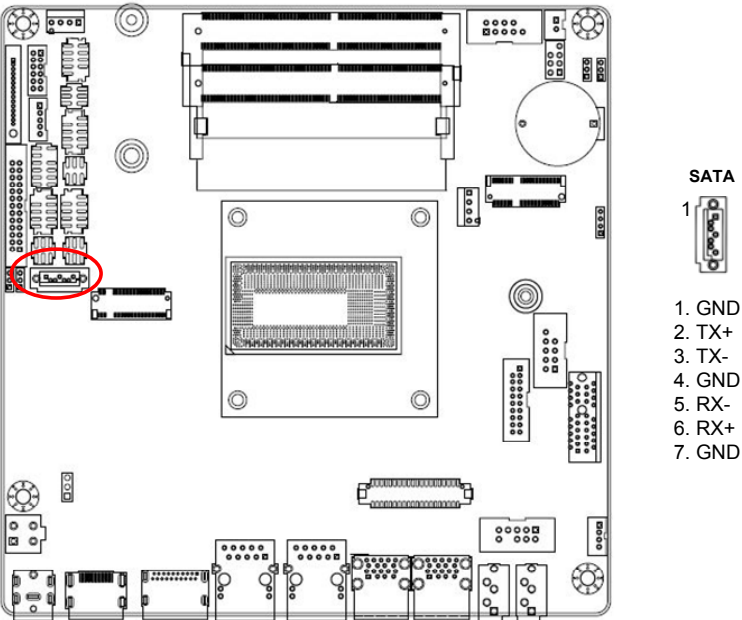
• Serial Port Connectors: COM1, COM2, COM3, COM4



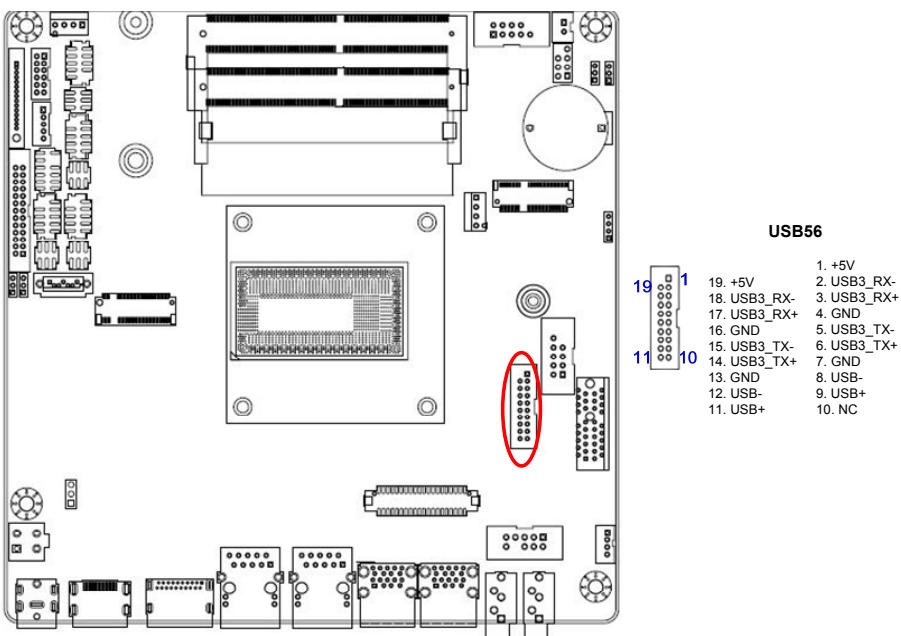
SATA power connectors: SATAPW1



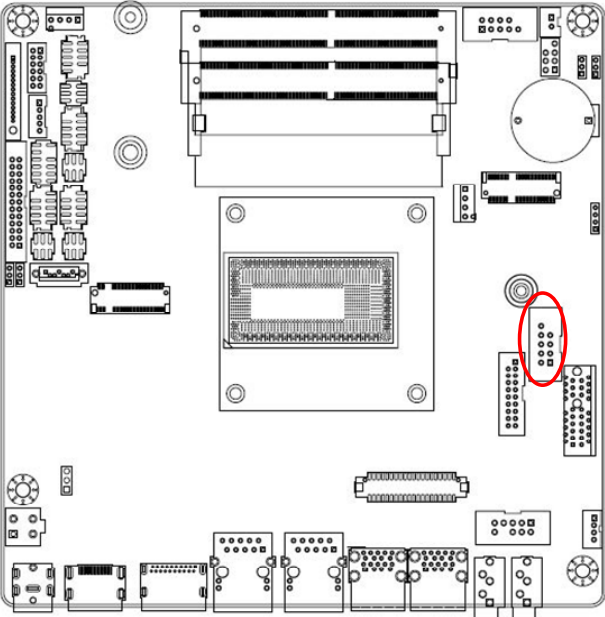
• SATA Connector: SATA1



• Front USB 3.0 Headers: USB56

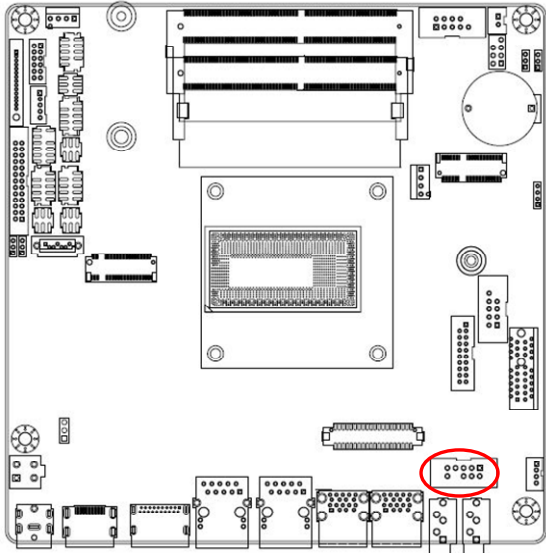


• Front USB 2.0 Headers: USB78



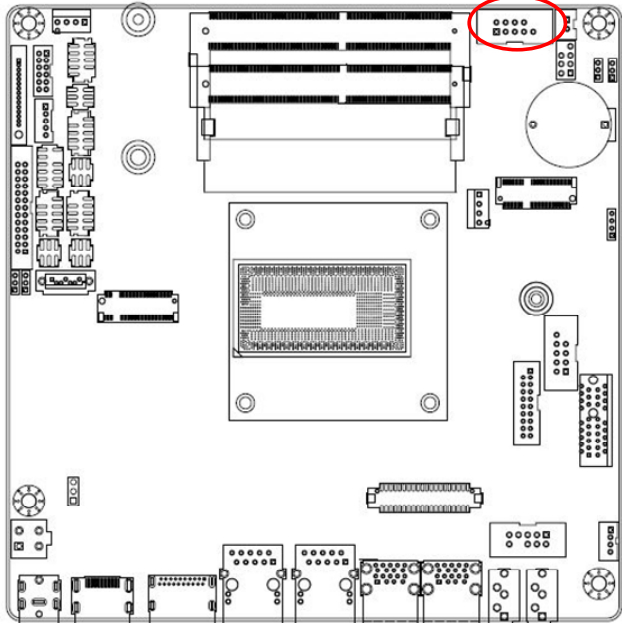
- USB
- |   |   |          |          |
|---|---|----------|----------|
| 1 | 2 | 1.USB+5V | 2.USB+5V |
|   |   | 3.USB -  | 4.USB -  |
|   |   | 5.USB +  | 6.USB +  |
|   |   | 7.GND    | 8.GND    |
|   |   |          | 9.NC     |

• Front Panel Audio Connector: AAFP1



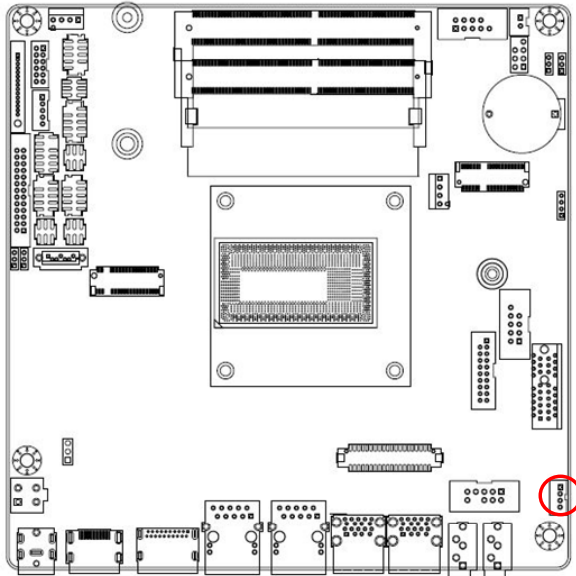
- |              |           |
|--------------|-----------|
| 2            | 1         |
|              |           |
| 10. LINE2-JD | 9. LINE2L |
| 8. NC        | 7. SENSEB |
| 6. MIC2-JD   | 5. LINE2R |
| 4. NC        | 3. MIC2R  |
| 2. GND       | 1. MIC2L  |

• Front Panel Connector: F\_PANEL1



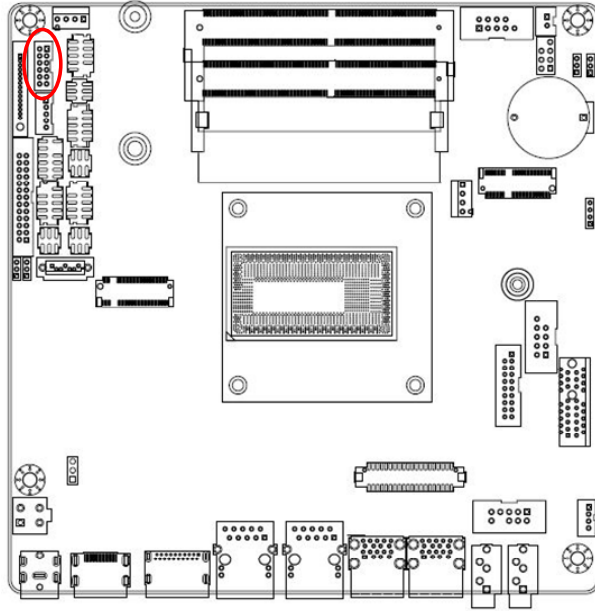
- |   |  |
|---|--|
| 1 |  |
|   |  |
| 2 |  |
- |             |             |
|-------------|-------------|
| 1. HDD LED+ | 2. +3.3V    |
| 3. HDD LED# | 4. PWR LED# |
| 5. GND      | 6. PANSWIN# |
| 7. RST      | 8. GND      |
| 9. N/A      |             |

• Amplifier Connector: JAMP1



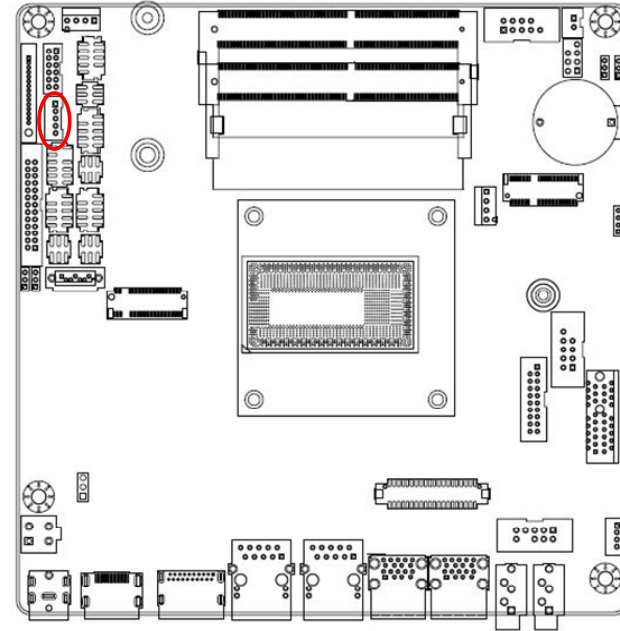
- |   |  |
|---|--|
| 1 |  |
|   |  |
|   |  |
|   |  |
- |           |
|-----------|
| 1. AMP_L- |
| 2. AMP_L+ |
| 3. AMP_R- |
| 4. AMP_R+ |

• Digital I/O Connector: JDIO1



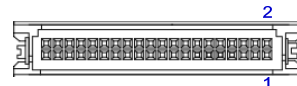
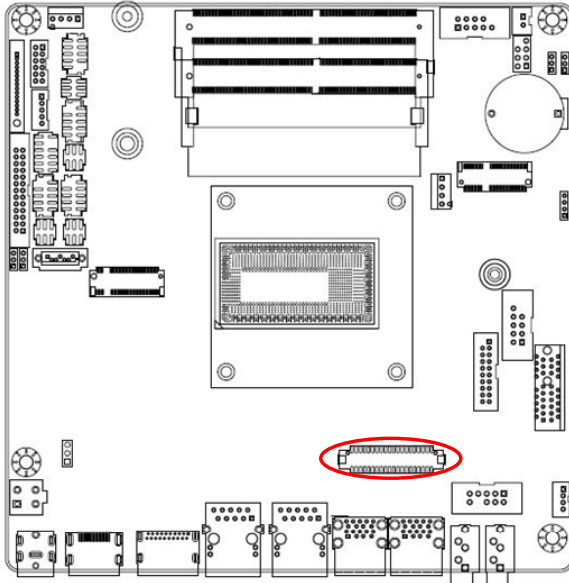
- |                   |               |
|-------------------|---------------|
| 1. SIO_GPIO0      | 2. SIO_GPIO4  |
| 3. SIO_GPIO1      | 4. SIO_GPIO5  |
| 5. SIO_GPIO2      | 6. SIO_GPIO6  |
| 7. SIO_GPIO3      | 8. SIO_GPIO7  |
| 9. SMB_CLK_RESUME | 10. SMB_DATA_ |
| 11. GND           | 12. +5Vsb     |

• LVDS Inverter Power connector: JBKL1



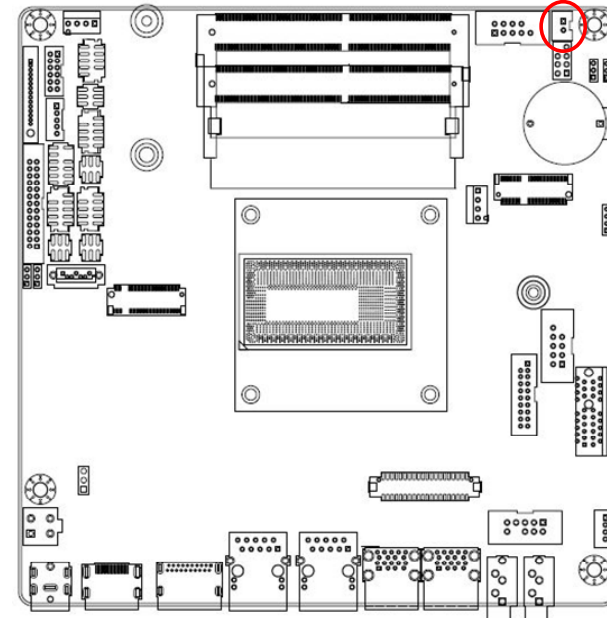
1. +12V\_BL
2. GND
3. BL\_EN
4. BRIGHT1
5. +5V\_BL

• LVDS panel connector: LVDSEDP1



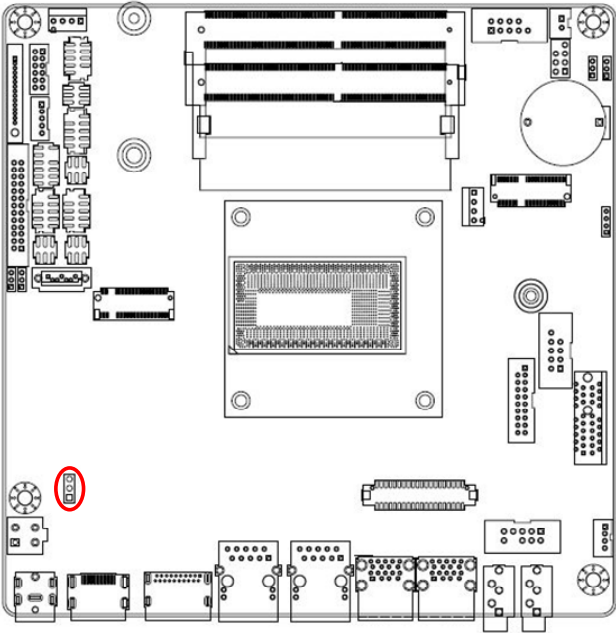
- |                 |                 |
|-----------------|-----------------|
| 39. VDD_+12V    | 40. VDD_+12V    |
| 37. GND         | 38. GND         |
| 35. LVDS_B_CLK- | 36. LVDS_A_CLK- |
| 33. LVDS_B_CLK+ | 34. LVDS_A_CLK+ |
| 31. GND         | 32. GND         |
| 29. LVDS_B3-    | 30. LVDS_B2-    |
| 27. LVDS_B3+    | 28. LVDS_B2+    |
| 25. GND         | 26. GND         |
| 23. LVDS_B1-    | 24. LVDS_B0-    |
| 21. LVDS_B1+    | 22. LVDS_B0+    |
| 19. GND         | 20. GND         |
| 17. LVDS_A3-    | 18. LVDS_A2-    |
| 15. LVDS_A3+    | 16. LVDS_A2+    |
| 13. GND         | 14. GND         |
| 11. LVDS_A1-    | 12. LVDS_A0-    |
| 9. LVDS_A1+     | 10. LVDS_A0+    |
| 7. GND          | 8. GND          |
| 5. DDC_CLK      | 6. DDC_DATA     |
| 3. VDD_+3.3V    | 4. VDD_+5V      |
| 1. VDD_+3.3V    | 2. VDD_+5V      |

• Chassis Intrusion Connector: JCASE1



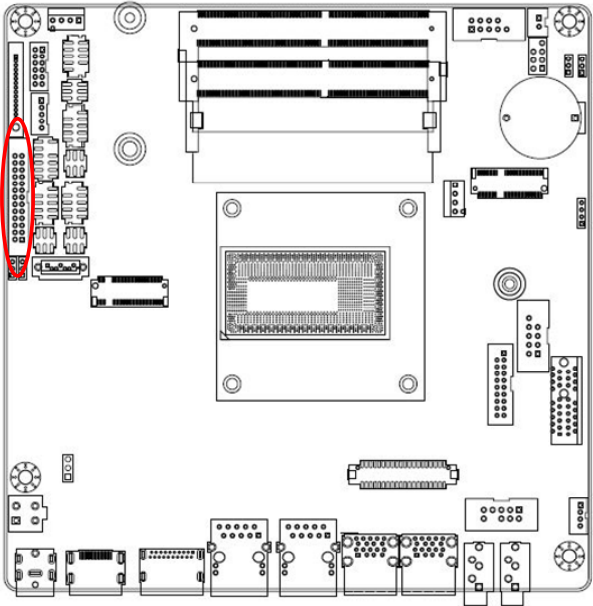
1. SIO\_CASEOPEN#
2. GND

• SM Bus connector: JSMB1



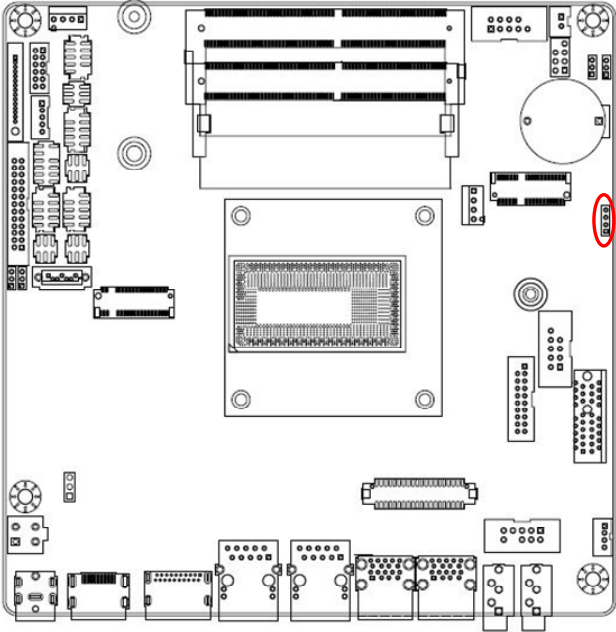
- 1. SMBCLK
- 2. SMBDATA
- 3. GND

• LPT port connector: LPT1



- |              |              |
|--------------|--------------|
| 1. LPT_STB#  | 2. LPT_AFD#  |
| 3. LPT_PD0   | 4. LPT_ERR#  |
| 5. LPT_PD1   | 6. LPT_INIT# |
| 7. LPT_PD2   | 8. LPT_SLIN# |
| 9. LPT_PD3   | 10. GND      |
| 11. LPT_PD4  | 12. GND      |
| 13. LPT_PD5  | 14. GND      |
| 15. LPT_PD6  | 16. GND      |
| 17. LPT_PD7  | 18. GND      |
| 19. LPT_ACK# | 20. GND      |
| 21. LPT_BUSY | 22. GND      |
| 23. LPT_PE   | 24. GND      |
| 25. LPT_SLCT | 26. NC       |

• I2C connector: I2C1



- 4. GND
- 3. I2C\_SDA
- 2. I2C\_SCL
- 1. +3.3V