ECB-960T

SMARC Module

User's Manual 3rd Ed

Last Updated: April 24, 2026

Copyright Notice

Acknowledgement

Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● DVD-ROM for manual (in PDF format) and drivers	
● ECB-960T SMARC Carrier Board	
● 1701090150 UART Cable	2
● 1709070500 SATA Cable	1
● 1702150155 SATA PWR Cable	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Do not cover the openings on the device to ensure optimal heat dissipation.
13. Watch out for high temperatures when the system is running.
14. Do not touch the heat sink or heat spreader when the system is running
15. Never pour any liquid into the openings. This could cause fire or electric shock.
16. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

17. If any of the following situations arises, please the contact our service personnel:
    i. Damaged power cord or plug
    ii. Liquid intrusion to the device
    iii. Exposure to moisture
    iv. Device is not working as expected or in a manner as described in this manual
    v. The device is dropped or damaged
    vi. Any obvious signs of damage displayed on the device
18. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

FCC Statement

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur.
Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON **主板/子板/背板** QO4-381 Rev.A2

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了GB/T 26572的限量要求，然而该部件仍符合欧盟指令2011/65/EU 的规范。

环保使用期限(EFUP (Environmental Friendly Use Period)) : 10年

备注：此产品所标示之环保使用期限，系指在一般正常使用状况下。

China RoHS Requirement (EN)

Name and content of hazardous substances in product

AAEON Main Board/Daughter Board/Backplane QO4-381 Rev.A2

Part Name	Hazardous Substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
PCB Assemblies	×	○	○	○	○	○
Connector and Cable	×	○	○	○	○	○

The table is prepared in accordance with the provisions of SJ/T 11364.

○：Indicates that said hazardous substance contained in all of the homogenous materials for this product is below the limit requirement of GB/T 26572.

×：Indicates that said hazardous substance contained in at least one of the homogenous materials used for this part is above the limit requirement of GB/T 26572. But this product still be compliance with 2011/65/EU Directive (allowed with 2011/65/EU Annex III of RoHS exemption with number 6(c),7(a),7(c)-1).

EFUP (Environment Friendly Use Period) value: 10 years

Notes: This product defined period of use is under normal condition.

Table of Contents

Chapter 1

Product Specifications

1.1 Specifications

System	
Form Factor	Mini-ITX form Factor (170mm x 170mm)
I/O Chipset	N/A (Legacy Support)
Ethernet	10/100/1000Base-TX, RJ-45 x 1 (From CPU Module)
Expansion	PCIe [x1] x 3 via Adapter Card
Power Requirement	+12V DC; +8V – 20V DC-in on separate connector
Board Size (L x W)	6.69" x 6.69" (170mm x 170mm)
Gross Weight	-
Operating Temperature	32°F – 140°F (0°C – 60°C)
Storage Temperature	-4°F – 158°F (-20°C – 70°C)
Operation Humidity	10% – 80% relative humidity, non-condensing
MTBF	80,000

Display	
LVDS	18/24-bit Single-Channel LVDS

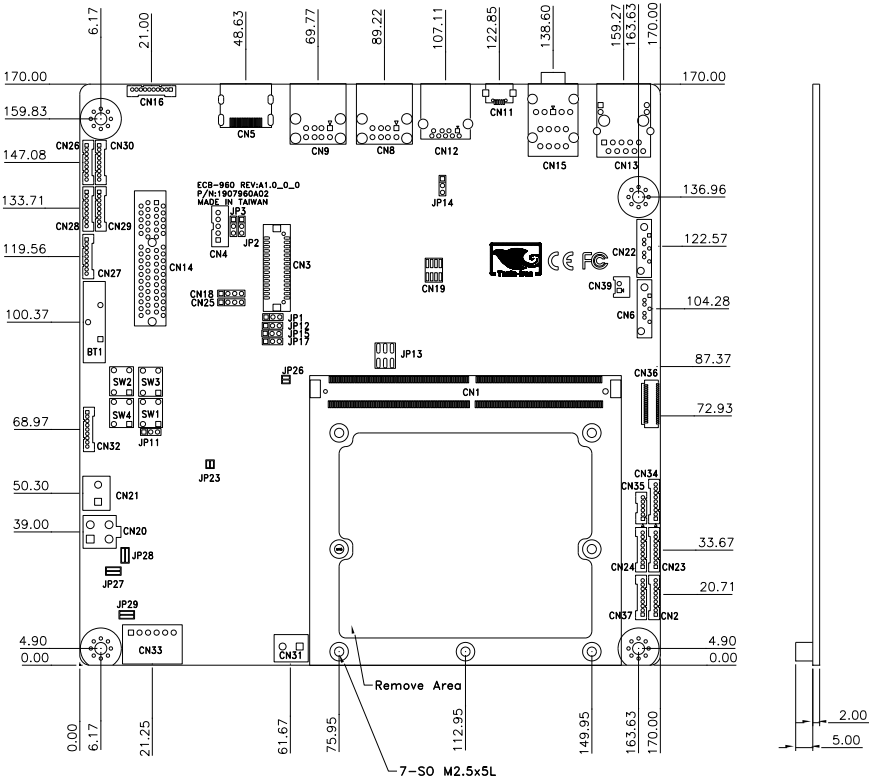
I/O	
Storage	SATA x 1
	Micro SD Card x 1
USB	USB 3.0 x 1
	USB 2.0 x 5 (Port 0 for client only)
Serial Port	2-wire x 1
	4-wire x 1
Audio	Line-in, Line-out, Microphone
I2C	Client Mode

Chapter 2

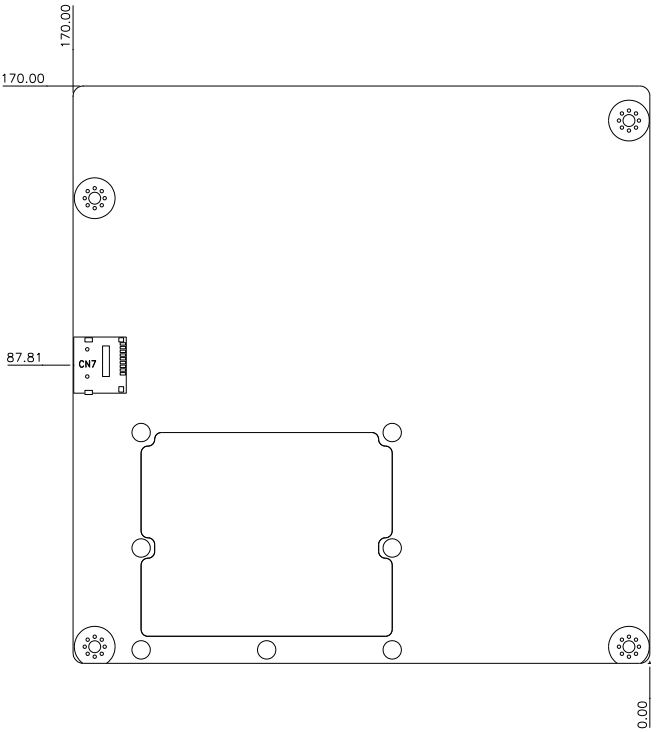
Hardware Information

2.1 Dimensions, Jumpers and Connectors

Top View



Solder Side

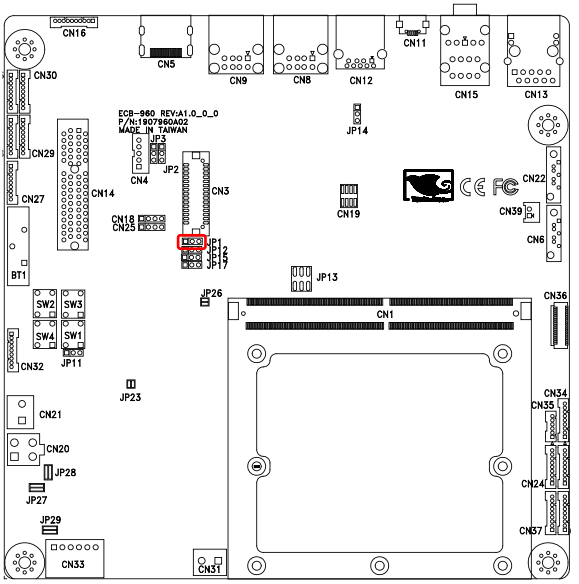


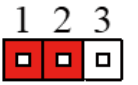
2.2 List of Jumpers

Please refer to the table below for all of the board's jumpers that you can configure for your application.

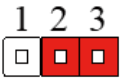
Label	Function
JP1	LVDS Voltage Selection
JP2	Backlight Control Voltage Selection
JP3	Backlight Control
JP11	AT/ATX Selection
JP12	VDD_IO Voltage Selection (System Power)
JP13	Boot Selection
JP14	USB Selection
JP15	VDD_IO Voltage Selection (SBY Power)
JP17	Clear CMOS Selection
SW1	Power Button
SW2	Reset Button
SW3	LID# Button
SW4	Sleep# Button

2.2.1 LVDS Voltage Selection (JP1)



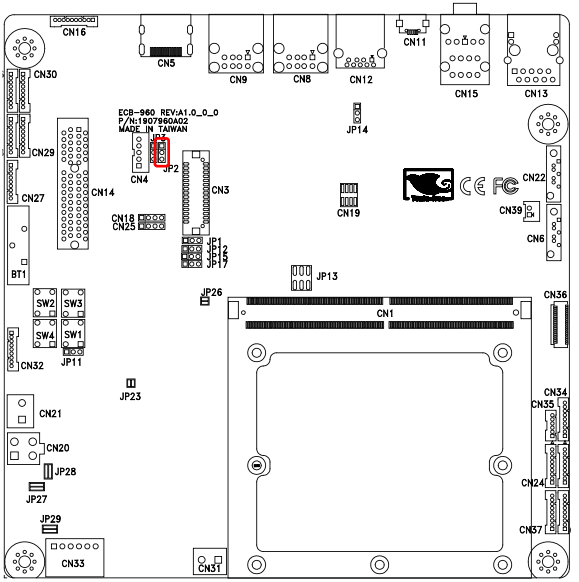


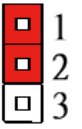
+5V



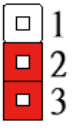
+3.3V (Default)

2.2.2 LVDS Backlight Control Voltage Selection (JP2)



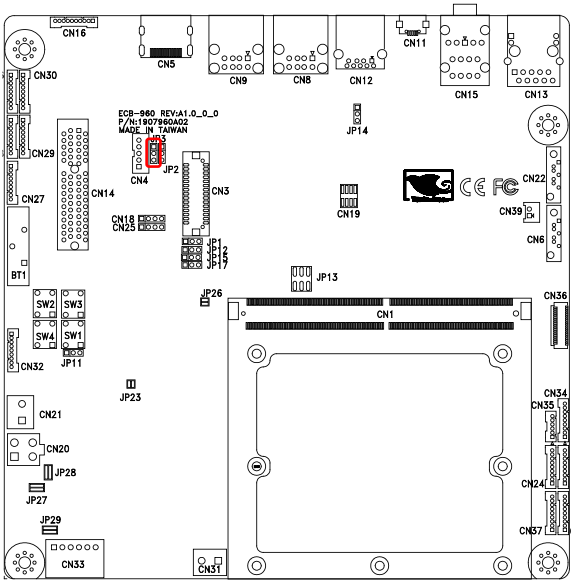


+5V (Default)

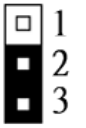


+12V

2.2.3 Backlight Control (JP3)

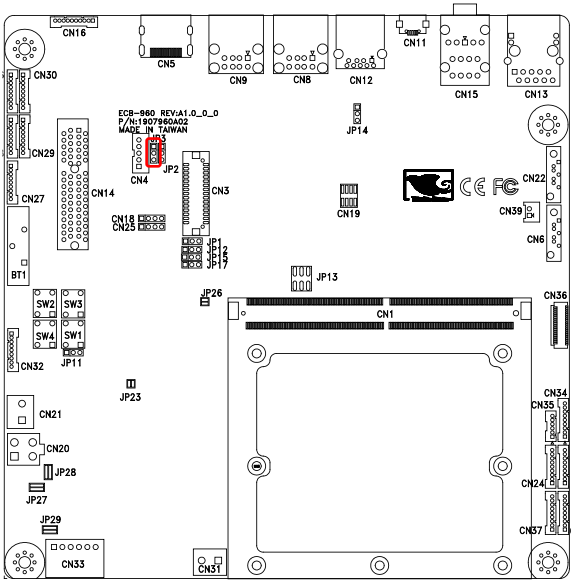


LVD_1ND_VR

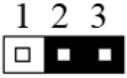


LCD_BKLT_PWM_VIO (Default)

2.2.4 AT/ATX Selection (JP11)

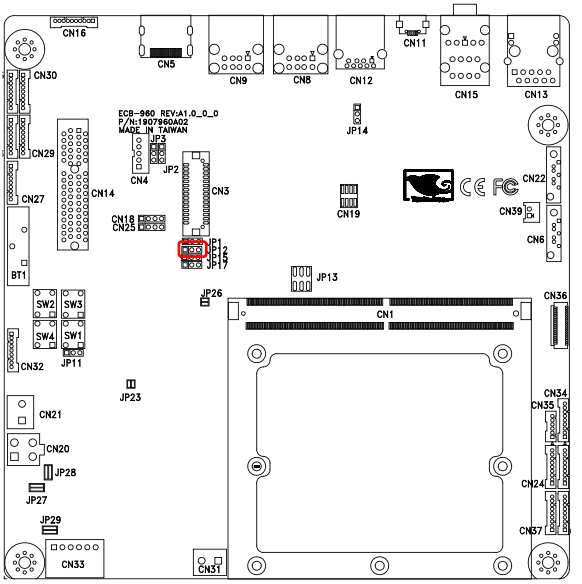


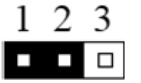
AT



ATX (Default)

2.2.5 VDD_IO Voltage Selection (System Power) (JP12)

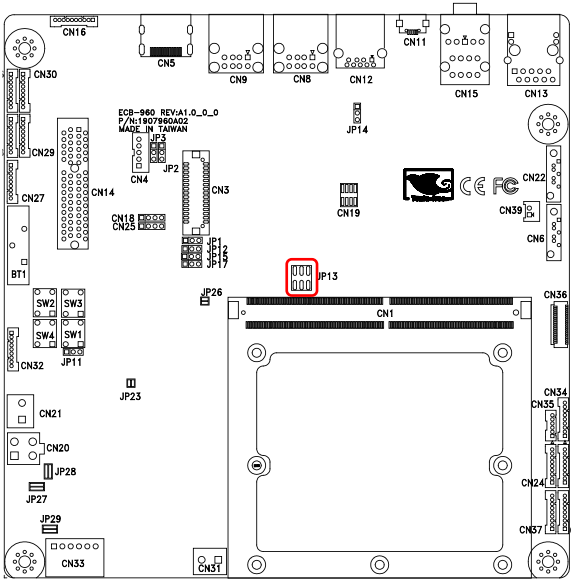


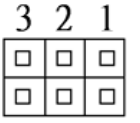


VDD_IO Output +1.8V (Default)

VDD_IO Output +3.3V

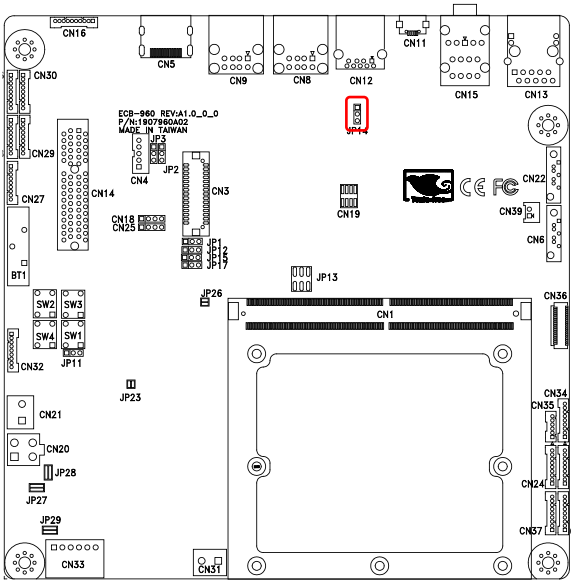
2.2.6 Boot Selection (JP13)

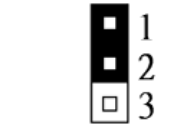




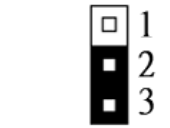
Module SPI (Default, all pins not shorted)			
Carrier Board Connection			Boot Source
Pin 1	Pin 2	Pin 3	
GND	GND	GND	Carrier Board SATA
GND	GND	Float	Carrier Board SD Card
GND	Float	GND	Carrier Board eMMC Flash
GND	Float	Float	Carrier Board SPI
Float	GND	GND	Module Device
Float	GND	GND	Remote Boot
Float	Float	GND	Module eMMC Flash
Float	Float	Float	Module SPI

2.2.7 USB Selection (JP14)



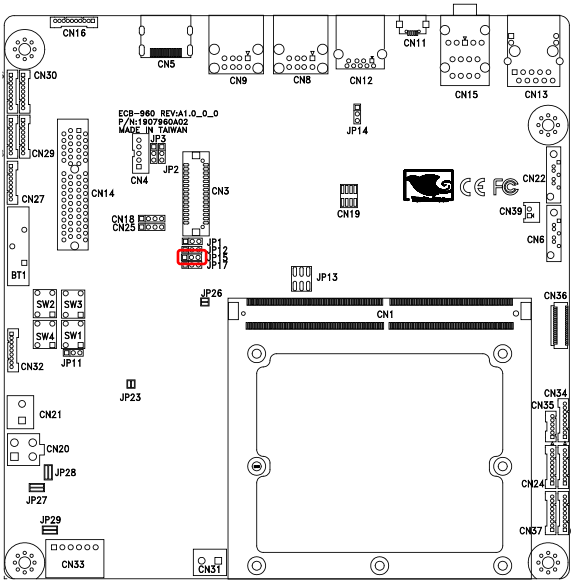


Always ON (Default)



Cable Select

2.2.8 VCC_VIO Voltage Selection (SBY Power) (JP15)



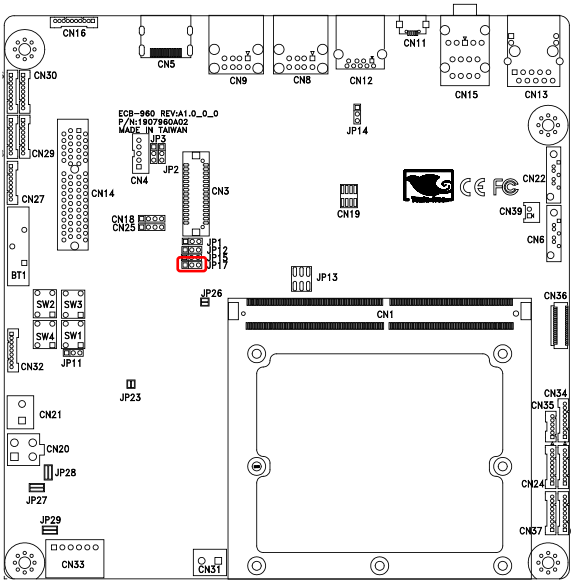
1 2 3

VDD_IO Output +1.8V (Default)

1 2 3

VDD_IO Output +3.3V

2.2.9 Clear CMOS (JP17)



1 2 3

Normal (Default)

1 2 3

Clear CMOS

2.3 List of Connectors

Please refer to the table below for all of the board's jumpers that you can configure for your application

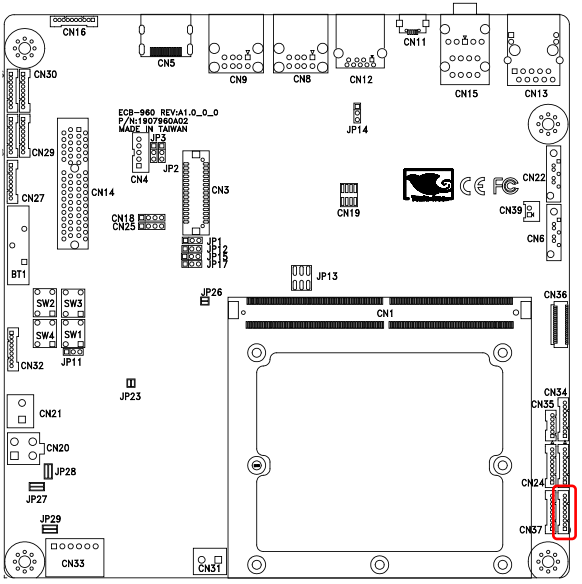
Label	Function
CN1	MXM Connector
CN2	I2C Signal Connector
CN3	Internal LVDS Connector
CN4	LVDS Backlight Connector
CN5	HDMI Port
CN6	SATA Connector
CN7	Micro SD Card Slot
CN8	USB 2.0 Port
CN9	USB 2.0 Port
CN11	Micro USB 2.0 Connector
CN12	USB 3.0 Connector
CN13	LAN Port
CN14	PCIe Slot
CN15	Audio Connector
CN16	Audio Connector
CN18	CANBus Connector
CN19	SPI Flash Connector
CN20	ATX Power-In Connector
CN21	Wide Voltage Input Connector (Not Connected by Default)
CN22	SATA Connector
CN23	I2S0 Signal Connector
CN24	MCSI2 Signal Connector
CN25	CANBus Connector
CN26	UART Connector
CN27	UART Connector
CN28	UART Connector
CN29	DIO Connector
CN30	DIO Connector
CN31	Adapter Power-In Connector
CN32	Signal Information Connector
CN33	Lithium-Ion Battery Connector (Not Connected by Default)
CN34	Signal Information Connector
CN35	SPI1 Connector

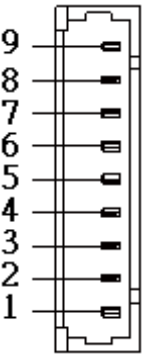
Label	Function
CN36	Camera Connector
CN37	I2S1 Signal Connector
CN39	SATA Power Connector

2.3.1 MXM Connector (CN1)

Please refer to section 2.4

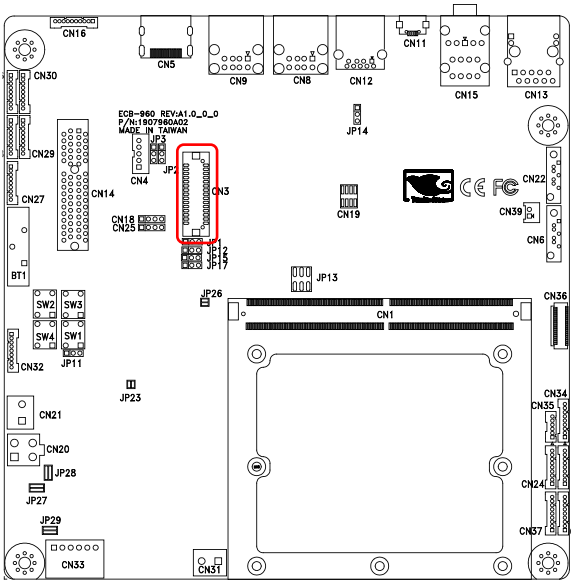
2.3.2 I2C Connector (CN2)

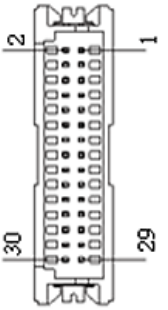




Pin	Pin Name	Signal Type	Signal Level
1	VCC	OUT	+3.3V
2	VCC	OUT	+1.8V
3	I2C_GP_CK_3V		
4	I2C_GP_DTA_3V		
5	I2C_PM_CK_3VSB		
6	I2C_PM_DTA_3VSB		
7	NC		
8	NC		
9	GND	GND	

2.3.3 Internal LVDS Connector (CN3)

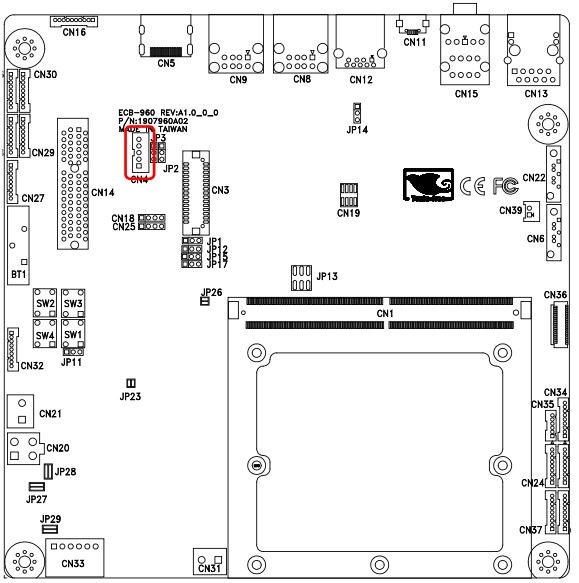


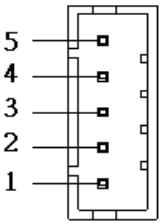


Pin	Pin Name	Signal Type	Signal Level
1	LVD1_BKLTEN	OUT	
2	LVD1_BKLCTL	OUT	
3	VLCD_1ND	PWR	+3.3V OR +5V
4	GND	GND	
5	LVD1_A_CLKN	OUT	
6	LVD1_A_CLKP	OUT	
7	VLCD_1ND	PWR	+3.3V OR +5V
8	GND	GND	
9	LVD1_A_TXN0	I/O	
10	LVD1_A_TXP0	I/O	
11	LVD1_A_TXN1	I/O	
12	LVD1_A_TXP1	I/O	
13	LVD1_A_TXN2	I/O	
14	LVD1_A_TXP2	I/O	
15	LVD1_A_TXN3	I/O	
16	LVD1_A_TXP3	I/O	
17	LVD1_DDC_SDA	I/O	

Pin	Pin Name	Signal Type	Signal Level
18	LVD1_DDC_SCL	I/O	
19	NC	NC	
20	NC	NC	
21	NC	NC	
22	NC	NC	
23	NC	NC	
24	NC	NC	
25	NC	NC	
26	NC	NC	
27	VLCD_1ND	PWR	+3.3V OR +5V
28	GND	GND	
29	NC	NC	
30	NC	NC	

2.3.4 LVDS Backlight Connector (CN4)

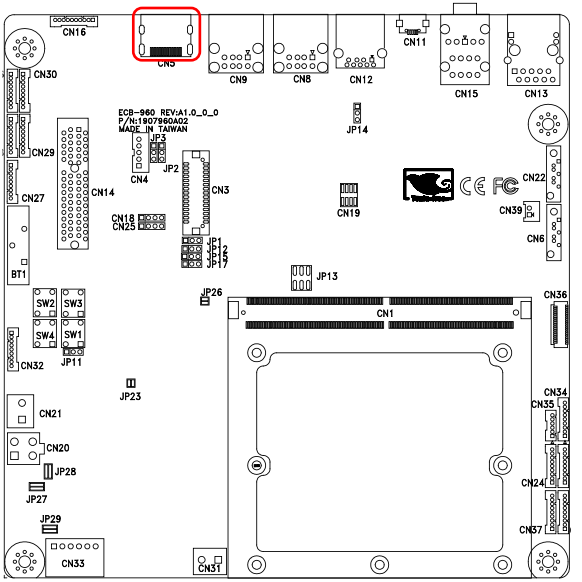


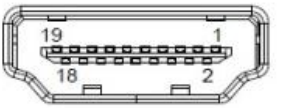


Pin	Pin Name	Signal Type	Signal Level
1	LVDS Voltage select	OUT	

Pin	Pin Name	Signal Type	Signal Level
2	LVDS Backlight control	OUT	
3	GND	GND	
4	GND	GND	
5	LVDS Backlight Enable	OUT	

2.3.5 HDMI Port (CN5)

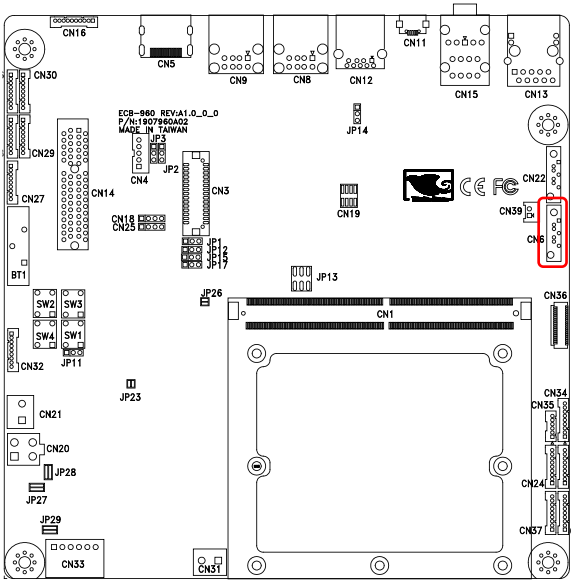


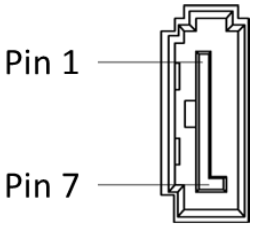


Pin	Pin Name	Signal Type	Signal Level
1	TMDS_DAT2+	DIFF	
2	GND	GND	
3	TMDS_DAT2-	DIFF	
4	TMDS_DAT1+	DIFF	
5	GND	GND	
6	TMDS_DAT1-	DIFF	
7	TMDS_DAT0+	DIFF	
8	GND	GND	
9	TMDS_DAT0-	DIFF	
10	TMDS_CLK+	DIFF	

Pin	Pin Name	Signal Type	Signal Level
11	GND	GND	
12	TMDS_CLK-	DIFF	
13	NC		
14	NC		
15	DDC_CLK	I/O	
16	DDC_DATA	I/O	
17	GND	GND	
18	+5V	PWR	+5V
19	HPLG_DETECT		

2.3.6 SATA Connector (CN6)

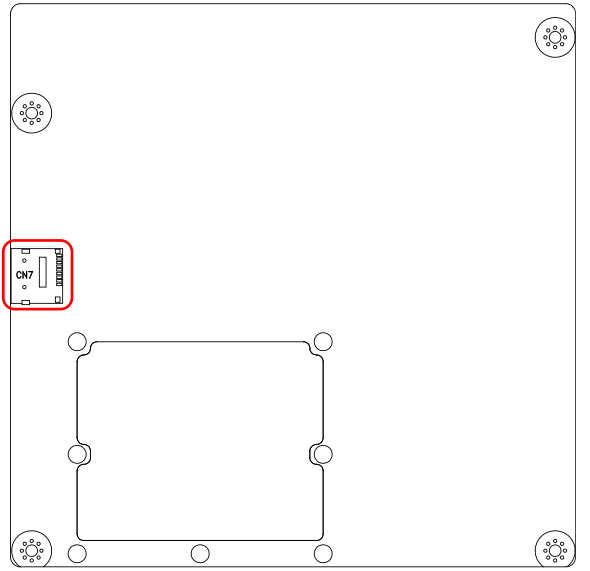


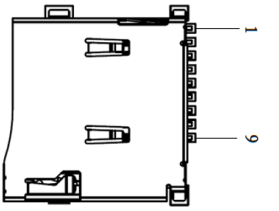


Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	SATA_TXP1_C	I/O	
3	SATA_TXN1_C	I/O	
4	GND	GND	
5	SATA_RXN1_C	I/O	

Pin	Pin Name	Signal Type	Signal Level
6	SATA_RXP1_C	I/O	
7	GND	GND	

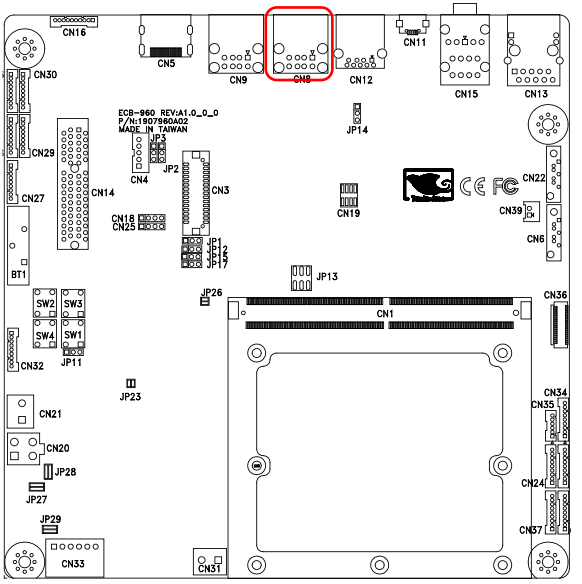
2.3.7 Micro SD Card Slot (CN7)

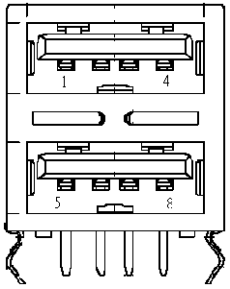




Pin	Pin Name	Signal Type	Signal Level
1	SDIO_D2_3V	I/O	
2	SDIO_D3_3V	I/O	
3	SDIO_CMD_3V	I/O	
4	+3.3V	PWR	+3.3 V
5	SDIO_CK_3V	I/O	
6	GND	GND	
7	SDIO_D0_3V	I/O	
8	SDIO_D1_3V	I/O	
9	SDIO_CD#_3V	I/O	

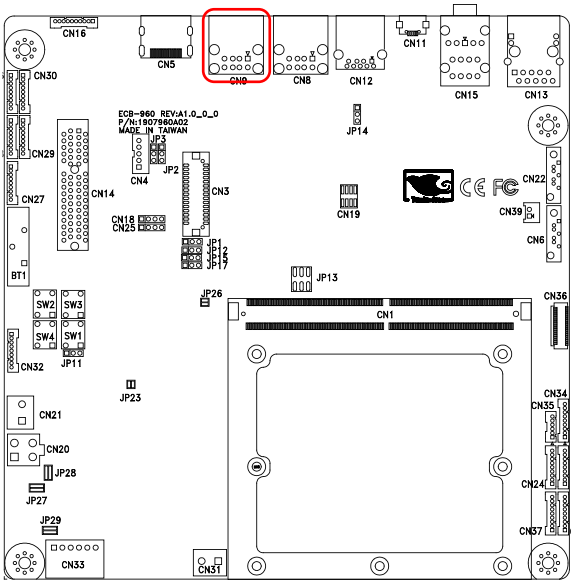
2.3.8 USB 2.0 Connector (CN8)

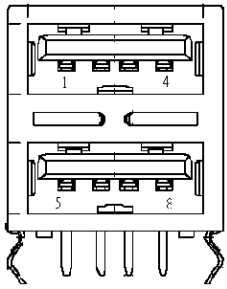




Pin	Pin Name	Signal Type	Signal Level
1	VCC_5V_USB1	PWR	+5V
2	USB1_HUB_N	I/O	
3	USB1_HUB_P	I/O	
4	GND	GND	
5	VCC_5V_USB1	PWR	+5V
6	USB2_HUB_N	I/O	
7	USB2_HUB_P	I/O	
8	GND	GND	

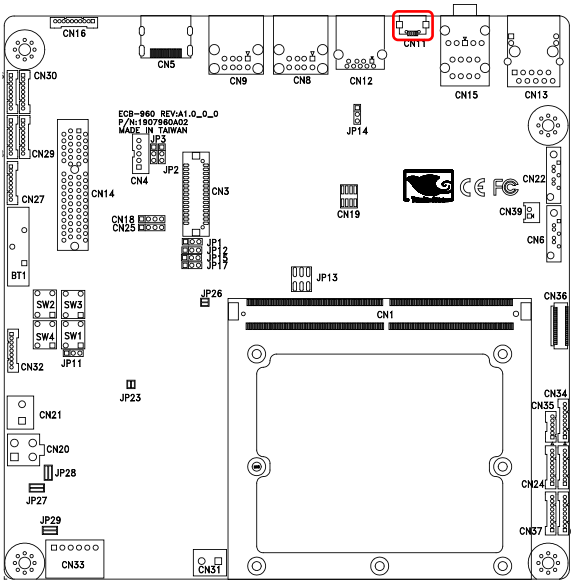
2.3.9 USB 2.0 Connector (CN9)

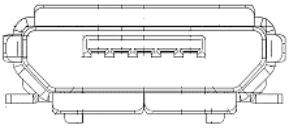




Pin	Pin Name	Signal Type	Signal Level
1	VCC_5V_USB2	PWR	+5V
2	USB3_HUB_N	I/O	
3	USB3_HUB_P	I/O	
4	GND	GND	
5	VCC_5V_USB2	PWR	+5V
6	USB4_HUB_N	I/O	
7	USB4_HUB_P	I/O	
8	GND	GND	

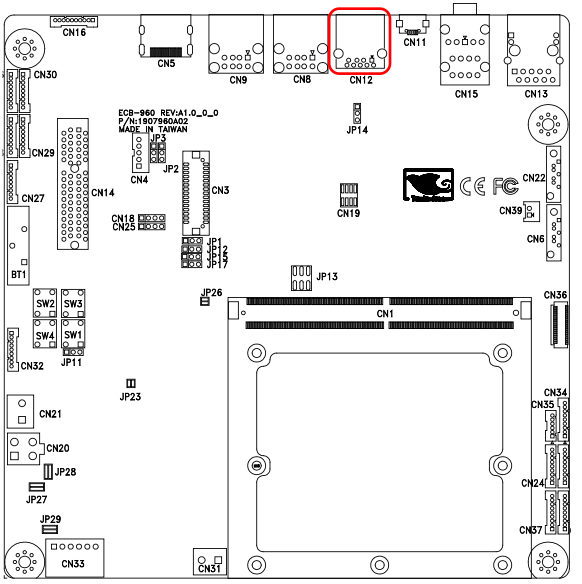
2.3.10 Micro USB 2.0 Connector (CN11)

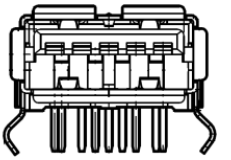




Pin	Pin Name	Signal Type	Signal Level
1	VCC_5V_USB3	PWR	+5V
2	USB0_N	I/O	
3	USB0_P	I/O	
4	USB0_OTG_ID	I/O	
5	GND	GND	

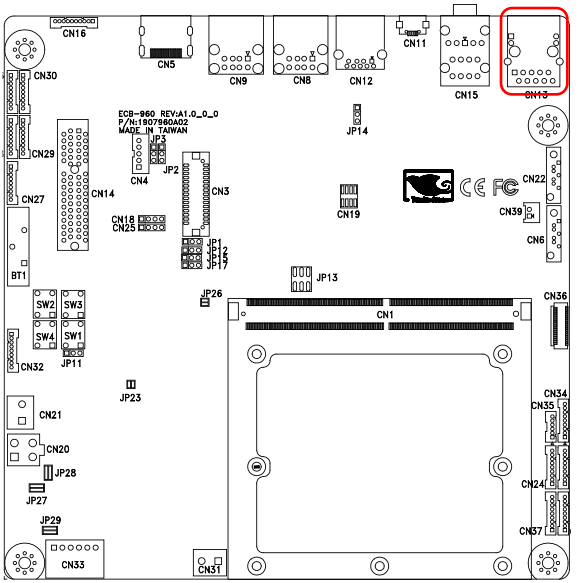
2.3.11 USB 3.0 Connector (CN12)

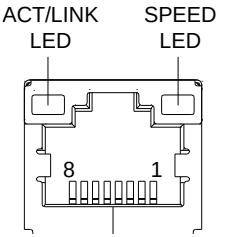




Pin	Pin Name	Signal Type	Signal Level
1	VCC_5V_USB0	PWR	+5V
2	USB2_N	I/O	
3	USB2_P	I/O	
4	GND	GND	
5	USB3_RX0_CON_N	I/O	
6	USB3_RX0_CON_P	I/O	
7	GND	GND	
8	USB3_TX0_CON_N	I/O	
9	USB3_TX0_CON_P	I/O	

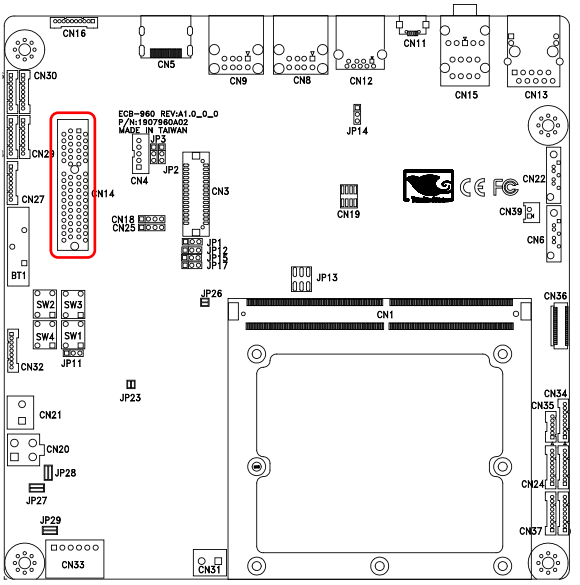
2.3.12 LAN Port (CN13)

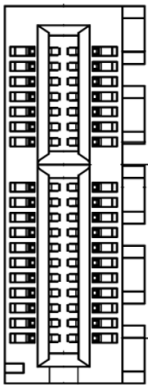




Pin	Pin Name	Signal Type	Signal Level
1	LAN1_MDI0P	I/O	
2	LAN1_MDI0N	I/O	
3	LAN1_MDI1P	I/O	
4	LAN1_MDI1N	I/O	
5	LAN1_MDI2P	I/O	
6	LAN1_MDI2N	I/O	
7	LAN1_MDI3P	I/O	
8	LAN1_MDI3N	I/O	

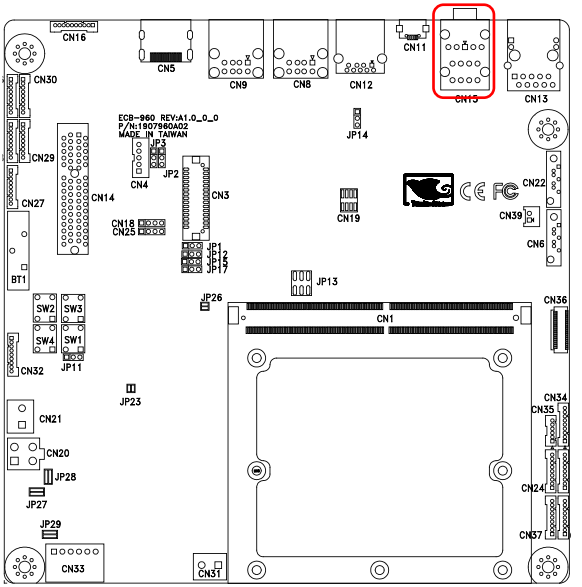
2.3.13 PCIe Slot (CN14)

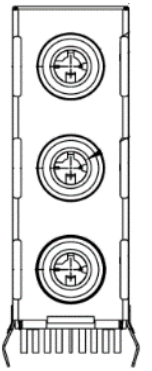




Standard PCIe [x4] Connector with only 3 PCIe [x1] lanes available as defined in SMARC 1.1 pin definitions.

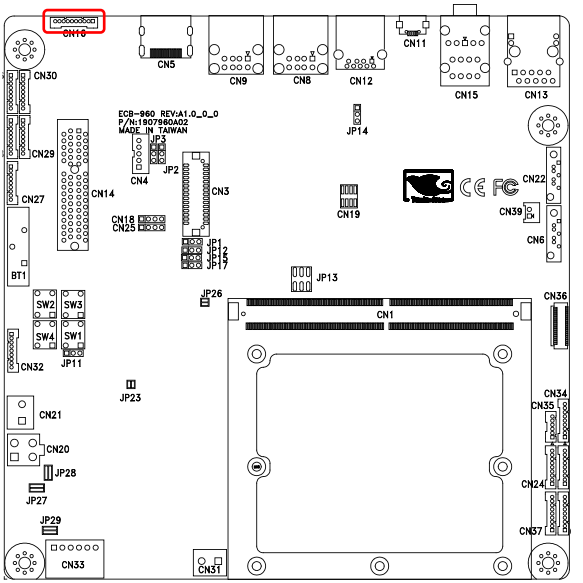
2.3.14 Audio Connector (CN15)

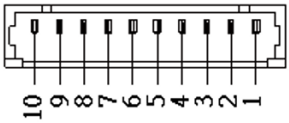




Color	Function
Blue	Line In
Green	Line Out
Pink	Mic In

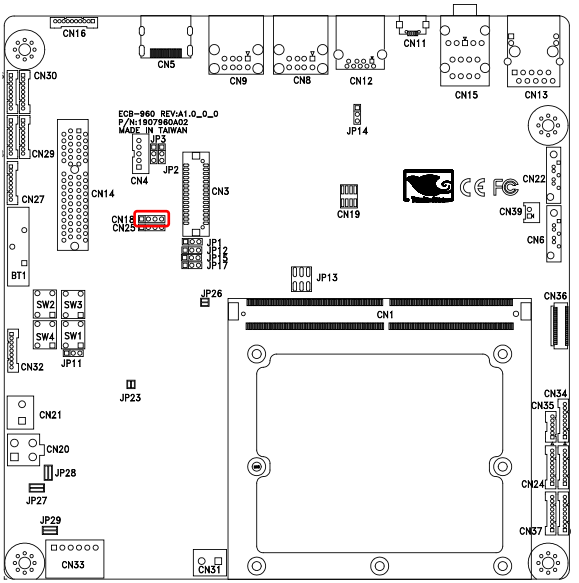
2.3.15 Audio Connector (CN16)

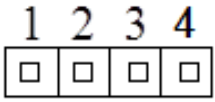




Pin	Pin Name	Signal Type	Signal Level
1	MIC1_P_R	I/O	
2	MIC1_N_R	I/O	
3	GND	I/O	
4	NC	I/O	
5	NC	I/O	
6	GND	I/O	
7	HPO_L_ROUT	I/O	
8	GND	I/O	
9	HPO_R_LOU	I/O	
10	SPKVDD_CDC	I/O	

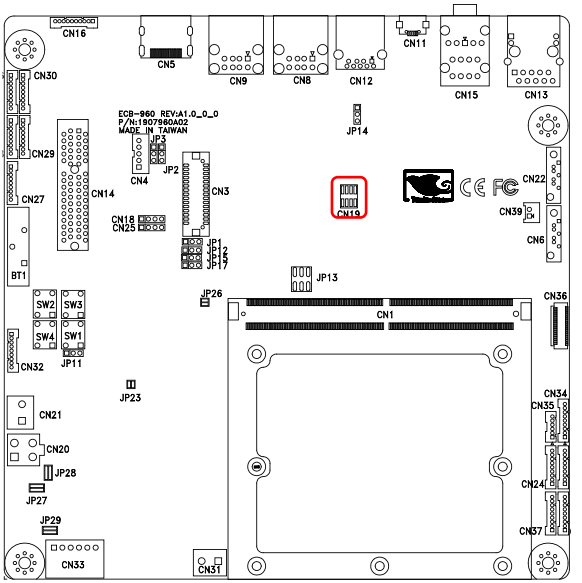
2.3.16 CAN Bus Connector (CN18)

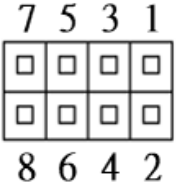




Pin	Pin Name	Signal Type	Signal Level
1	CANH1	I/O	
2	GND	GND	
3	CANL1	I/O	
4	NC		

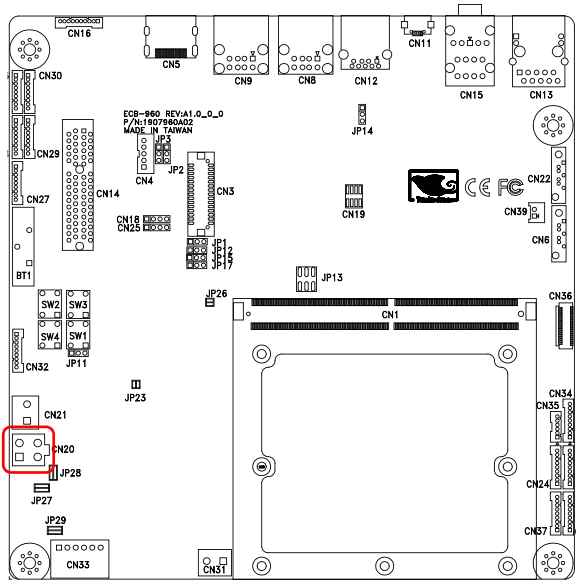
2.3.17 SPI Flash Connector (CN19)

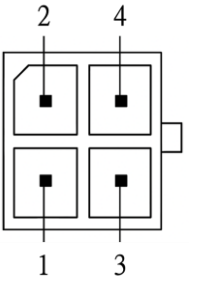




Pin	Pin Name	Signal Type	Signal Level
1	3VSB_SPI	PWR	+3.3V
2	GND	GND	
3	SPI_CE#_F	I/O	
4	SPI_CLK_F	GND	
5	SPI_DI_F	I/O	
6	SPI_DO_F	I/O	
7	NC		
8	NC		

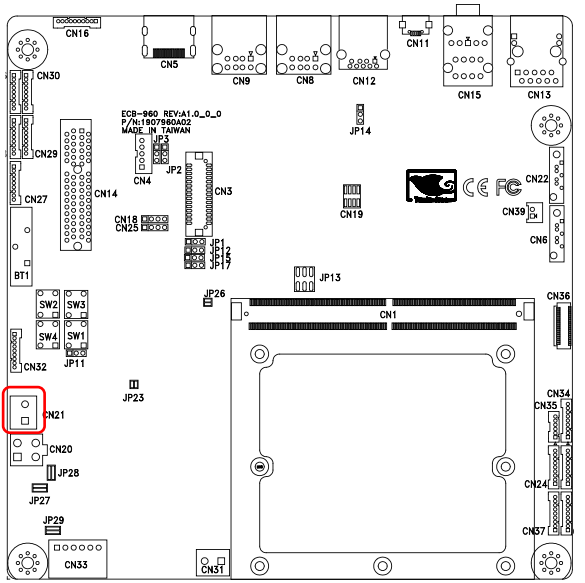
2.3.18 ATX Power-In Connector (CN20)

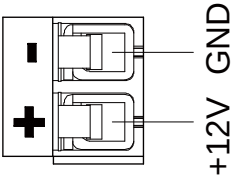




Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	GND	GND	
3	+VIN	PWR	+12 V
4	+VIN	PWR	+12 V

2.3.19 Wide Voltage Input Connector (CN21)

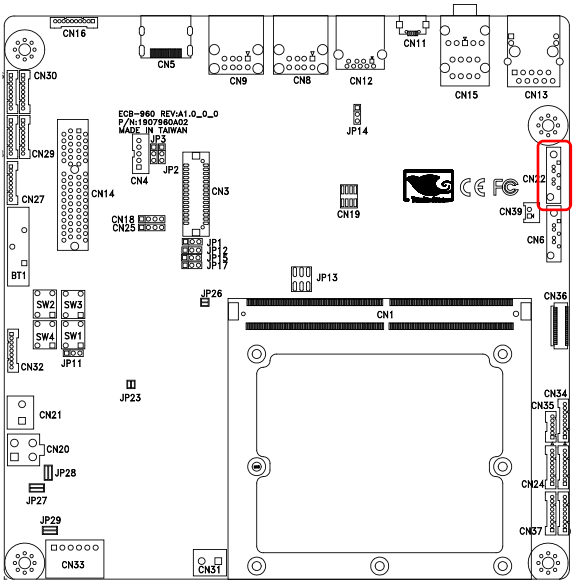


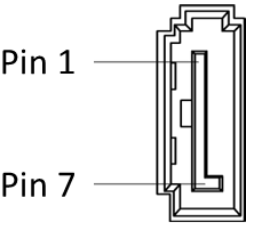


Pin	Pin Name	Signal Type	Signal Level
1	+VIN	PWR	+12V
2	GND	GND	

Note: Wide voltage input support: 8V – 20V (This feature is disabled by default. Please contact AAEON tech support to enable)

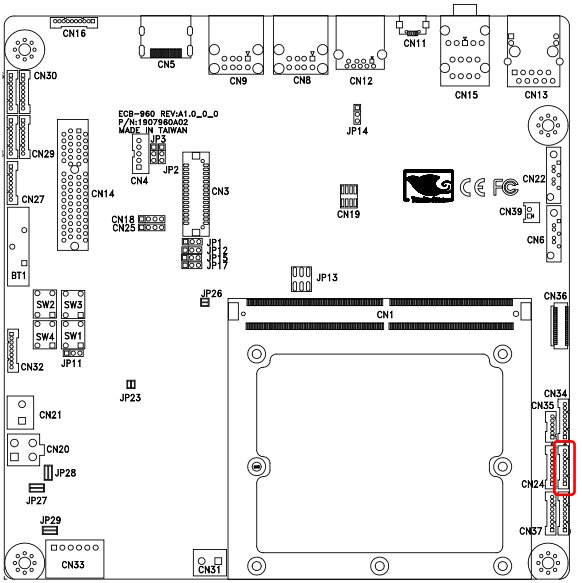
2.3.20 SATA Connector (CN22)

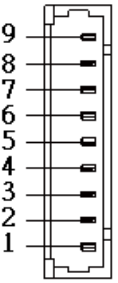




Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	SATA_TXP1_C	I/O	
3	SATA_TXN1_C	I/O	
4	GND	GND	
5	SATA_RXN1_C	I/O	
6	SATA_RXP1_C	I/O	
7	GND	GND	
8	NC		

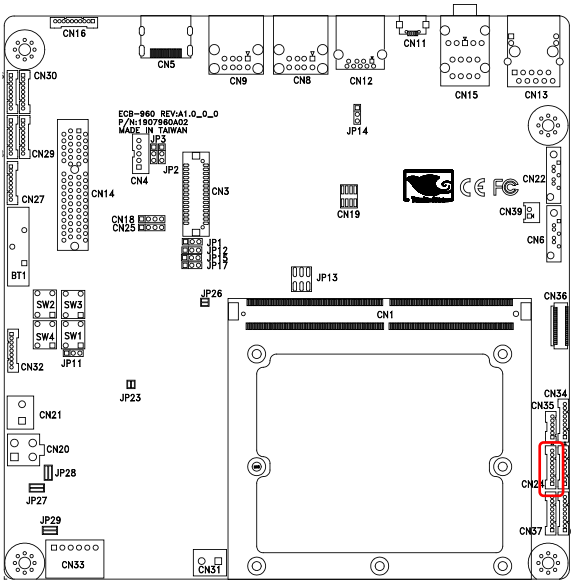
2.3.21 I2S0 Signal Connector (CN23)

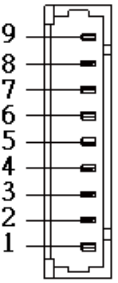




Pin	Pin Name	Signal Type	Signal Level
1	VCC	OUT	+3.3V
2	VCC	OUT	+1.8V
3	AUDIO_MCK	I/O	
4	I2S0_LRCK_3V	I/O	
5	I2S0_SDOUT_3V	I/O	
6	I2S0_SDIN_3V	I/O	
7	I2S0_CK_3V	I/O	
8	NC		
9	GND	GND	

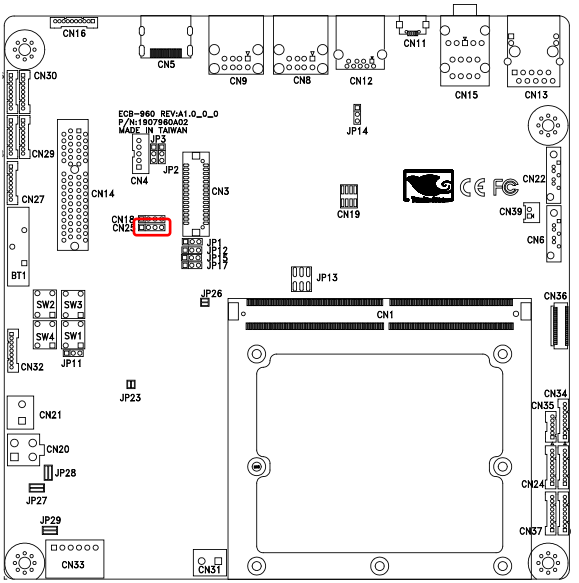
2.3.22 MCSI2 Signal Connector (CN24)

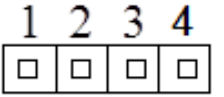




Pin	Pin Name	Signal Type	Signal Level
1	VCC	OUT	+3.3V
2	VCC	OUT	+1.8V
3	MCSI2_CLKP	I/O	
4	MCSI2_CLKN	I/O	
5	MCSI2_DP0	I/O	
6	MCSI2_DN0	I/O	
7	MCSI2_DP1	I/O	
8	MCSI2_DN1		
9	GND	GND	

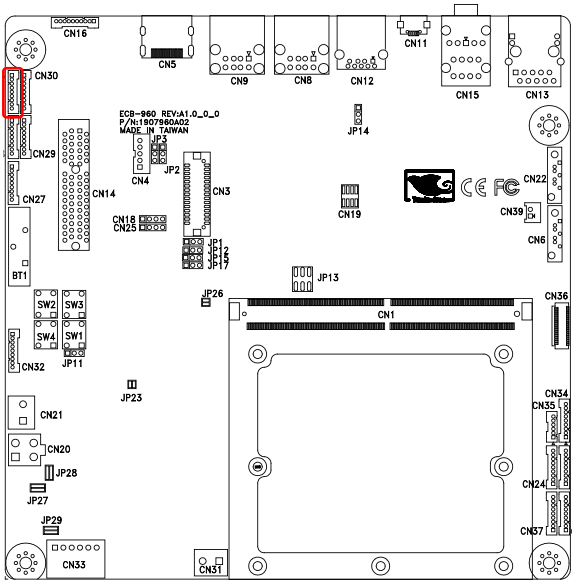
2.3.23 CANBus Connector (CN25)

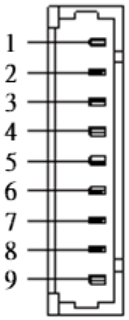




Pin	Pin Name	Signal Type	Signal Level
1	CANH0	I/O	
2	GND	GND	
3	CANL0	I/O	
4	NC		

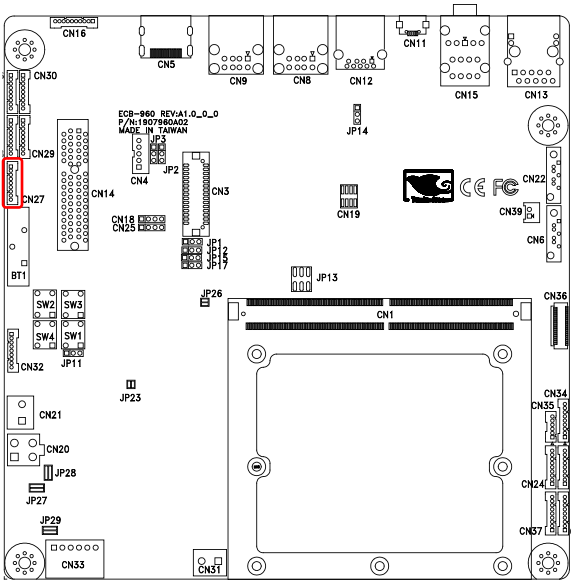
2.3.24 UART Connector (CN26)

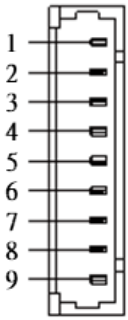




Pin	Pin Name	Signal Type	Signal Level
1	NC		
2	NC		
3	SRXD0	I/O	
4	SRTS#0	I/O	
5	STXD0	I/O	
6	SCTS#0	I/O	
7	NC		
8			
9	GND	GND	

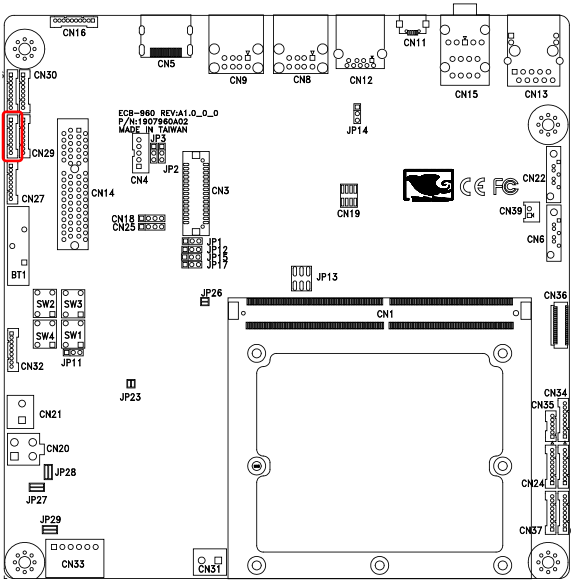
2.3.25 UART Connector (CN27)

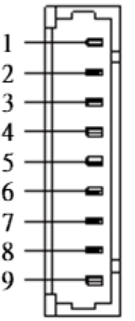




Pin	Pin Name	Signal Type	Signal Level
1	NC		
2	NC		
3	SRXD2	I/O	
4	SRTS#2	I/O	
5	STXD2	I/O	
6	SCTS#2	I/O	
7	NC		
8	NC		
9	GND	GND	

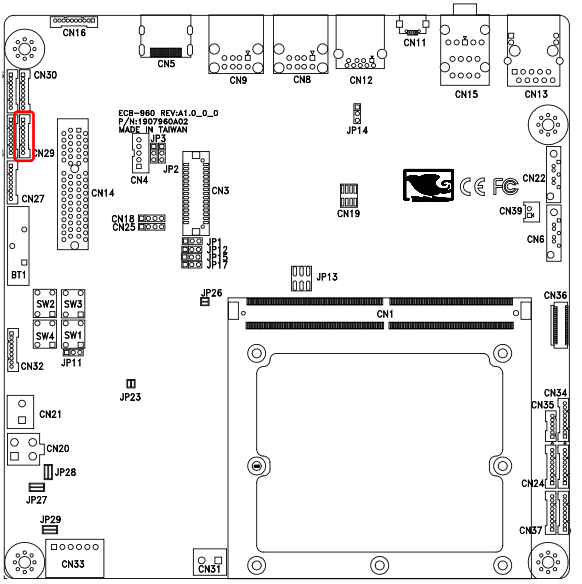
2.3.26 UART Connector (CN28)

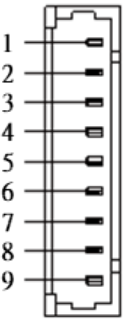




Pin	Pin Name	Signal Type	Signal Level
1	NC		
2	NC		
3	SRXD1	I/O	
4	NC		
5	STXD1	I/O	
6	NC		
7	NC		
8	NC		
9	GND	GND	

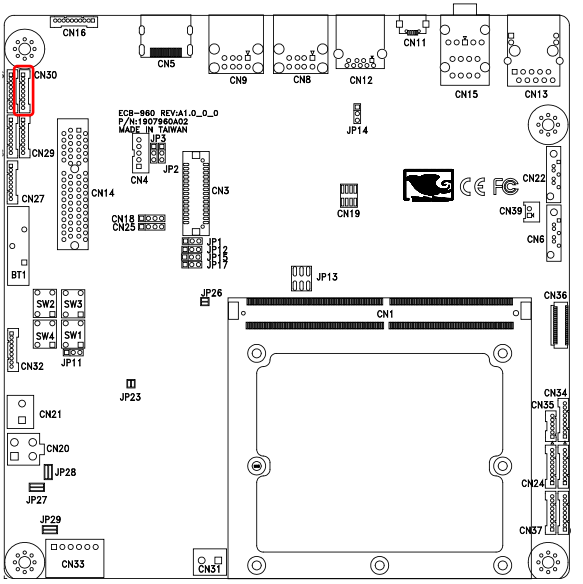
2.3.27 DIO Connector (CN29)

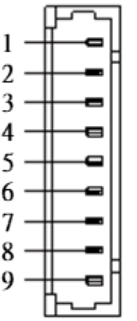




Pin	Pin Name	Signal Type	Signal Level
1	VCC	OUT	+3.3V or +5.0V
2	NC		
3	GPIO0	I/O	
4	GPIO1	I/O	
5	GPIO2	I/O	
6	GPIO3	I/O	
7	GPIO4	I/O	
8	GPIO5	I/O	
9	GND	GND	

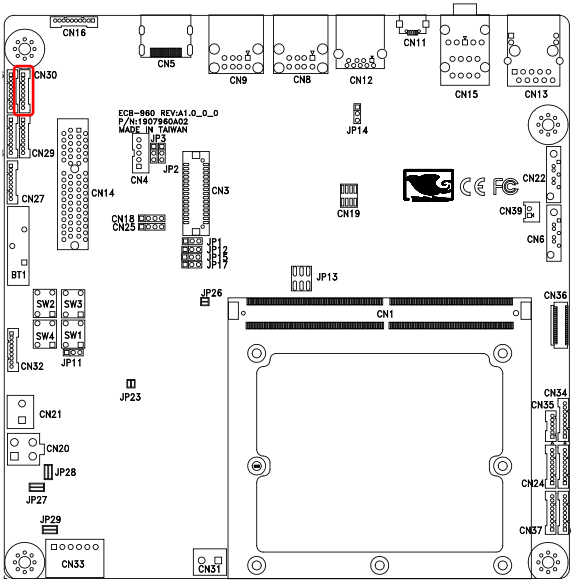
2.3.28 DIO Connector (CN30)

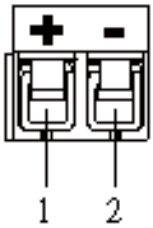




Pin	Pin Name	Signal Type	Signal Level
1	VCC	OUT	+3.3V or +5.0V
2	NC		
3	GPIO0	I/O	
4	GPIO1	I/O	
5	GPIO2	I/O	
6	GPIO3	I/O	
7	GPIO4	I/O	
8	GPIO5	I/O	
9	GND	GND	

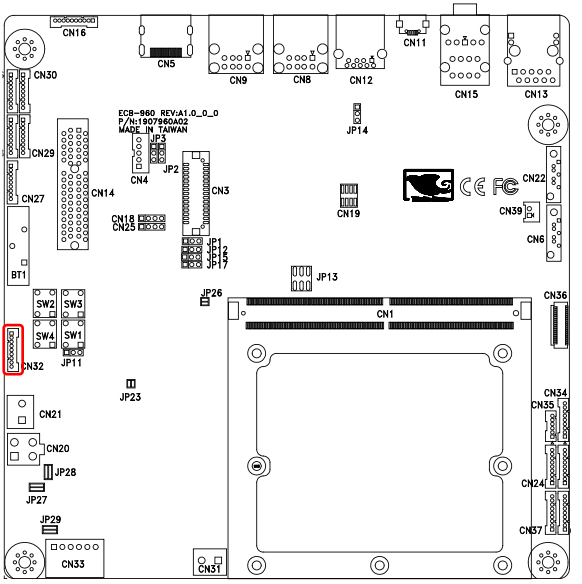
2.3.29 Adapter Power-In Connector (CN31)

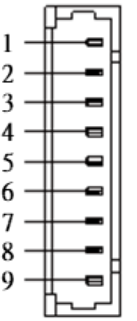




Pin	Pin Name	Signal Type	Signal Level
1	+VIN	PWR	+19V
2	GND	GND	

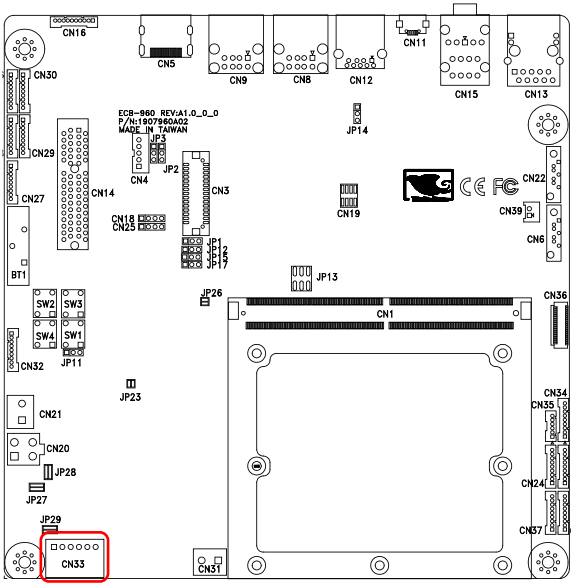
2.3.30 Signal Information Connector (CN32)

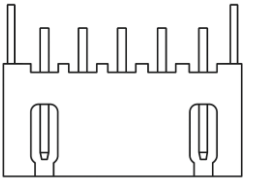




Pin	Pin Name	Signal Type	Signal Level
1	WDT_TIME_OUT#	I/O	
2	LID#	I/O	
3	SLEEP#	I/O	
4	BATLOW#	I/O	
5	TEST#	I/O	
6	NC		
7	NC		
8	NC		
9	GND	GND	

2.3.31 Lithium-Ion Battery Connector (CN33)

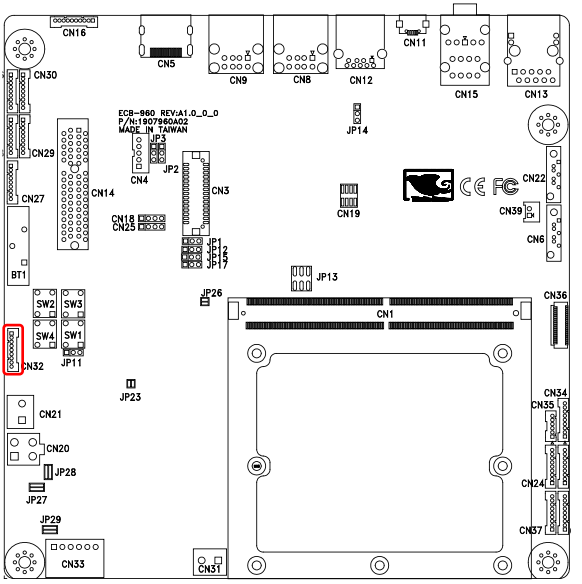


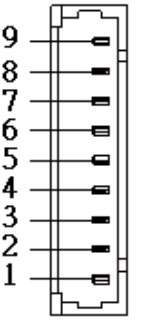


Pin	Pin Name	Signal Type	Signal Level
1	VCC_BAT1	PWR	11.1V Max
2	VCC_BAT1	PWR	11.1V Max
3	I2C_PM_CK_3VSB	I/O	
4	I2C_PM_DTA_3VSB	I/O	
5	GND	GND	
6	GND	GND	

Note: Smart battery connector: 11.1V (This feature is disabled by default. Please contact AAEON tech support to enable).

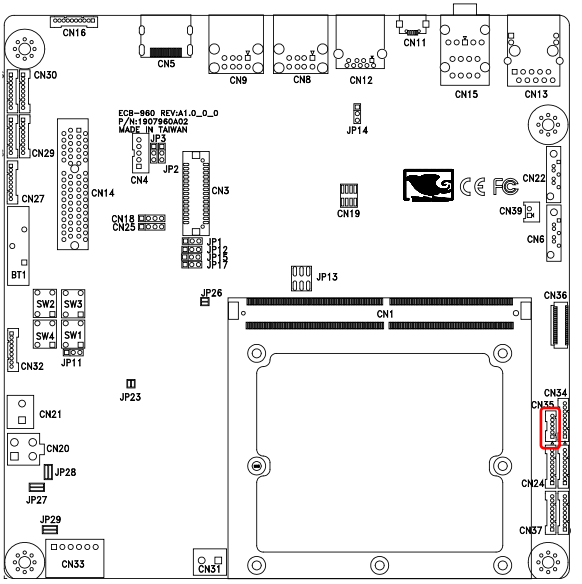
2.3.32 Signal Information Connector (CN34)

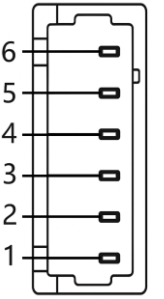




Pin	Pin Name	Signal Type	Signal Level
1	VIN_PWR_BAD#	I/O	
2	CHARGING#	I/O	
3	CHARGER_PRSNT#	I/O	
4	CARRIER_STBY#	I/O	
5	CARRIER_PWR_ON_3VSB	I/O	
6	NC		
7	NC		
8	NC		
9	GND	GND	

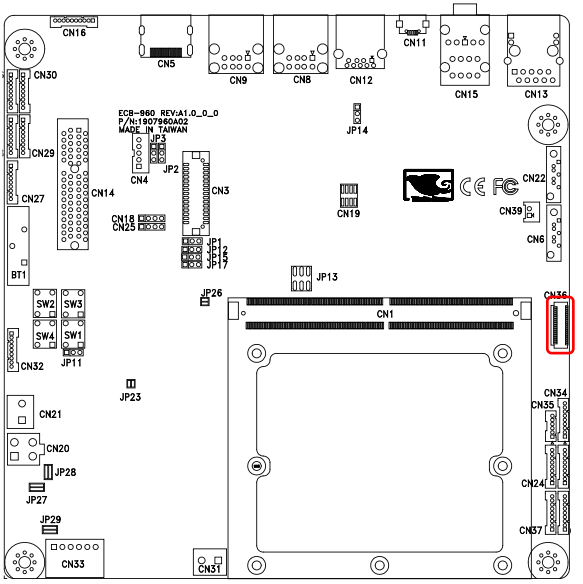
2.3.33 SPI1 Connector (CN35)

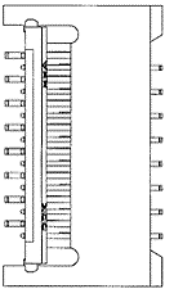




Pin	Pin Name	Signal Type	Signal Level
1	VCC_3V3	PWR	
2	SPI1_CS0#_3V	I/O	
3	SPI1_DIN_3V	I/O	
4	SPI1_CK_3V	I/O	
5	SPI1_DO_3V	I/O	
6	GND	GND	

2.3.34 Camera Connector (CN36)

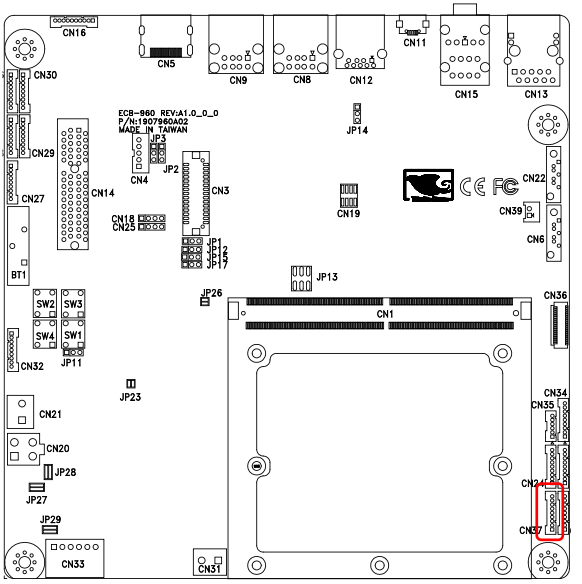


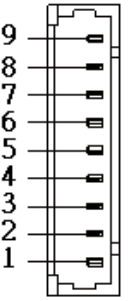


Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	GND	GND	
3	GND	GND	
4	I2C_CAM_CK	I/O	
5	I2C_CAM_DAT	I/O	
6	VCC_1V2_VCM	PWR	+1.2V
7	VCC_2V75_VCM	PWR	+2.75V
8	VCC_2V75_VCM	PWR	+2.75V
9	CAM1_RST#_R	I/0	
10	VCC_1V2_VCM	PWR	+1.2V
11	VCC_1V2_VCM	PWR	+1.2V
12	VCC_1V8	PWR	+1.8V
13	VCC_1V8	PWR	+1.8V
14	VCC_1V8	PWR	+1.8V
15	VCC_2V75_VCM	PWR	+2.75V
16	VCC_2V75_VCM	PWR	+2.75V
17	GND	GND	

Pin	Pin Name	Signal Type	Signal Level
18	PCAM_MCK	I/O	
19	GND	GND	
20	MCSI1_DN1	I/O	
21	GND	GND	
22	MCSI1_DP1	I/O	
23	GND	GND	
24	MCSI1_CLKN	I/O	
25	GND	GND	
26	MCSI1_CLKP	I/O	
27	GND	GND	
28	MCSI1_DN0	I/O	
29	GND	GND	
30	MCSI1_DP0	I/O	
31	GND	GND	
32	MCSI1_DN2	I/O	
33	GND	GND	
34	MCSI1_DP2	I/O	
35	GND	GND	
36	MCSI1_DN3	I/O	
37	GND	GND	
38	MCSI1_DP3	I/O	
39	GND	GND	

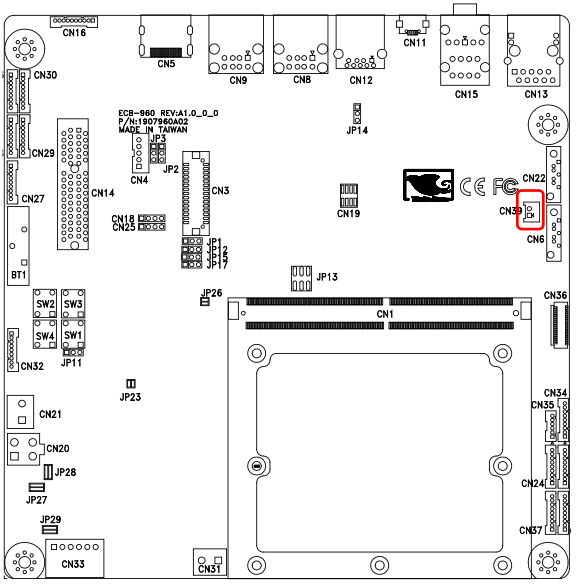
2.3.35 I2S1 Signal Connector (CN37)

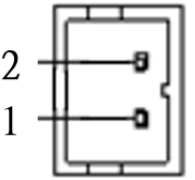




Pin	Pin Name	Signal Type	Signal Level
1	VCC_3V3	PWR	3.3V
2	VCC_1V8	PWR	1.8V
3	AUDIO_MCK	I/O	
4	I2S1_LRCK_3V	I/O	
5	I2S1_SDOUT_3V	I/O	
6	I2S1_SDIN_3V	I/O	
7	I2S1_CK_3V	I/O	
8	NC		
9	GND	GND	

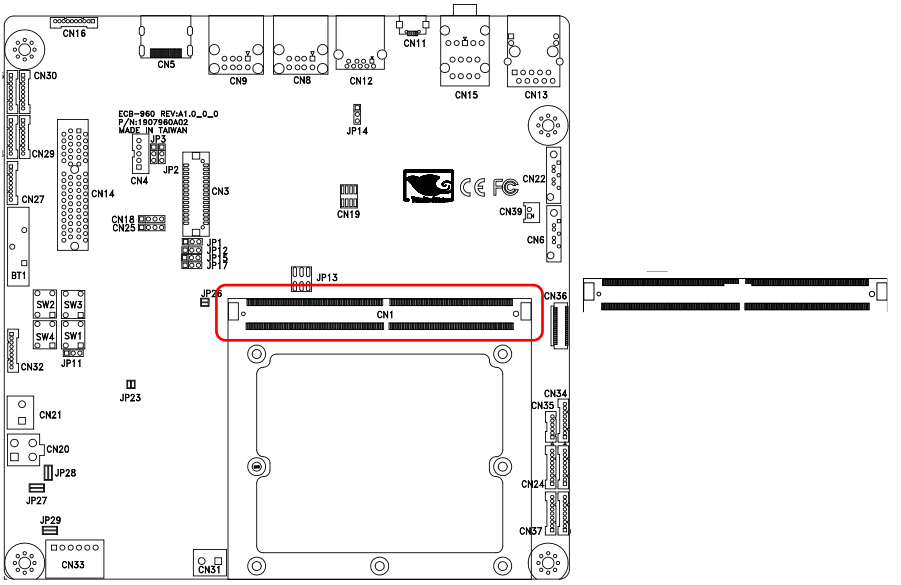
2.3.36 SATA Power Connector (CN39)

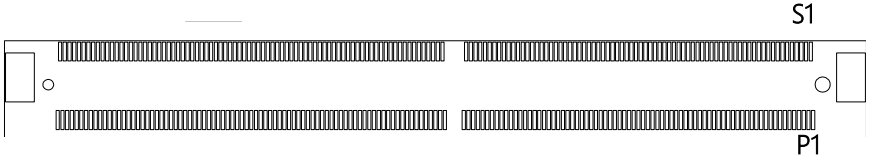




Pin	Pin Name	Signal Type	Signal Level
1	VCC_5V0	PWR	5V
2	GND	GND	

2.4 MXM Connector Pin Definitions (Follow SMARC 1.1)





Pin	Pin Name	Signal
P1	PCAM_PXL_CK1	NC
P2	GND1	GND
P3	CSI1_CK_P/PCAM_D0	CSI1_CK+
P4	CSI1_CK_N/PCAM_D1	CSI1_CK-
P5	PCAM_DE	NC
P6	PCAM_MCK	NC
P7	CSI1_D0_P/PCAM_D2	CSI1_D0+
P8	CSI1_D0_N/PCAM_D3	CSI1_D0+
P9	GND2	GND
P10	CSI1_D1_P/PCAM_D4	CSI1_D1+
P11	CSI1_D1_N/PCAM_D5	CSI1_D1-

Pin	Pin Name	Signal
P12	GND3	GND
P13	CSI1_D2_P/PCAM_D6	CSI1_D2+
P14	CSI1_D2_N/PCAM_D7	CSI1_D2-
P15	GND4	GND
P16	CSI1_D3_P/PCAM_D8	CSI1_D2+
P17	CSI1_D3_N/PCAM_D9	CSI1_D2-
P18	GND5	GND
P19	GBE_MDI3_N	GBE_MDI3-
P20	GBE_MDI3_P	GBE_MDI3+
P21	GBE_LINK100#	GBE_LINK100#
P22	GBE_LINK1000#	GBE_LINK1000#
P23	GBE_MDI2_N	GBE_MDI2-
P24	GBE_MDI2_P	GBE_MDI2+
P25	GBE_LINK_ACT#	GBE_LINK_ACT#
P26	GBE_MDI1_N	GBE_MDI1-
P27	GBE_MDI1_P	GBE_MDI1+
P28	GBE_CTREF	NC
P29	GBE_MDI0_N	GBE_MDI0-
P30	GBE_MDI0_P	GBE_MDI0+
P31	SPI0_CS1#	SPI0_CS1#
P32	GND6	GND
P33	SDIO_WP	SDIO_WP
P34	SDIO_CMD	SDIO_CMD
P35	SDIO_CD#	SDIO_CD#
P36	SDIO_CK	SDIO_CK
P37	SDIO_PWR_EN	SDIO_PWR_EN
P38	GND7	GND
P39	SDIO_D0	SDIO_D0
P40	SDIO_D1	SDIO_D1
P41	SDIO_D2	SDIO_D2
P42	SDIO_D3	SDIO_D3
P43	SPI0_CS0#	SPI0_CS0#
P44	SPI0_CK	SPI0_CK
P45	SPI0_DIN	SPI0_DIN
P46	SPI0_DO	SPI0_DO
P47	GND8	GND
P48	SATA_TX_P	SATA_TX+
P49	SATA_TX_N	SATA_TX-
P50	GND9	GND

Pin	Pin Name	Signal
P51	SATA_RX_P	SATA_TX-
P52	SATA_RX_N	SATA_RX-
P53	GND10	GND
P54	SPI1_CS0#	SPI1_CS0#
P55	SPI1_CS1#	NC
P56	SPI1_CK	SPI1_CK
P57	SPI1_DIN	SPI1_DIN
P58	SPI1_DO	SPI1_DO
P59	GND11	GND
P60	USB0_P	USB0+
P61	USB0_N	USB0-
P62	USB0_EN/USB0_OC#	USB0_EN_OC#
P63	USB0_VBUS_DET	USB0_VBUS_DET
P64	USB0_OTG_ID	GND
P65	USB1_P	USB1+
P66	USB1_N	USB1-
P67	USB1_EN/USB1_OC#	USB1_EN_OC#
P68	GND12	GND
P69	USB2_P	USB2+
P70	USB2_N	USB2-
P71	USB2_EN/USB2_OC#	USB2_EN_OC#
P72	PCIE_C_PRSNT#	PCIE_C_PRSNT#
P73	PCIE_B_PRSNT#	PCIE_B_PRSNT#
P74	PCIE_A_PRSNT#	PCIE_A_PRSNT#
P75	PCIE_A_RST#	PCIE_A_RST
P76	PCIE_C_CKREQ#	PCIE_C_CKR
P77	PCIE_B_CKREQ#	PCIE_B_CKR
P78	PCIE_A_CKREQ#	PCIE_A_CKR
P79	GND25	GND
P80	PCIE_C_REFCK_P	PCIE_C_REFCK+
P81	PCIE_C_REFCK_N	PCIE_C_REFCK-
P82	GND26	GND
P83	PCIE_A_REFCK_P	PCIE_A_REFCK+
P84	PCIE_A_REFCK_N	PCIE_A_REFCK-
P85	GND27	GND
P86	PCIE_A_RX_P	PCIE_A_RX+
P87	PCIE_A_RX_N	PCIE_A_RX-
P88	GND28	GND
P89	PCIE_A_TX_P	PCIE_A_TX+

Pin	Pin Name	Signal
P90	PCIE_A_TX_N	PCIE_A_TX-
P91	GND29	GND
P92	HDMI_D2_P	HDMI_D2+
P93	HDMI_D2_N	HDMI_D2-
P94	GND30	GND
P95	HDMI_D1_P	HDMI_D1+
P96	HDMI_D1_N	HDMI_D1-
P97	GND31	GND
P98	HDMI_D0_P	HDMI_D0+
P99	HDMI_D0_N	HDMI_D0-
P100	GND32	GND
P101	HDMI_CK_P	HDMI_CK+
P102	HDMI_CK_N	HDMI_CK-
P103	GND33	GND
P104	HDMI_HPD	HDMI_HPD
P105	HDMI_CTRL_CK	HDMI_CTRL_CK
P106	HDMI_CTRL_DAT	HDMI_CTRL_DAT
P107	HDMI_CEC	NC
P108	GPIO0/CAM0_PWR#	GPIO0
P109	GPIO1/CAM1_PWR#	GPIO1
P110	GPIO2/CAM0_RST#	GPIO2
P111	GPIO3/CAM1_RST#	GPIO3
P112	GPIO4/HDA_RST#	HDA_RST#
P113	GPIO5/PWM_OUT	GPIO5 / PWM_OUT
P114	GPIO6/TACHIN	GPIO6 / TACHIN
P115	GPIO7/PCAM_FLD	GPIO7
P116	GPIO8/CAN0_ERR#	GPIO8
P117	GPIO9/CAN1_ERR#	GPIO9
P118	GPIO10	GPIO10
P119	GPIO11	GPIO11
P120	GND34	GND
P121	I2C_PM_CK	I2C_PM_CK
P122	I2C_PM_DAT	I2C_PM_DAT
P123	BOOT_SEL0#	BOOT_SEL0#
P124	BOOT_SEL1#	BOOT_SEL1#
P125	BOOT_SEL2#	BOOT_SEL2#
P126	RESET_OUT#	RESET_OUT
P127	RESET_IN#	RESET_IN#
P128	POWER_BTN#	POWER_BTN#

Pin	Pin Name	Signal
P129	SER0_TX	SER0_TX
P130	SER0_RX	SER0_RX
P131	SER0_RTS#	SER0_RTS#
P132	SER0_CTS#	SER0_CTS#
P133	GND35	GND
P134	SER1_TX	SER1_TX
P135	SER1_RX	SER1_RX
P136	SER2_TX	NC
P137	SER2_RX	NC
P138	SER2_RTS#	NC
P139	SER2_CTS#	NC
P140	SER3_TX	NC
P141	SER3_RX	NC
P142	GND36	GND
P143	CAN0_TX	NC
P144	CAN0_RX	NC
P145	CAN1_TX	NC
P146	CAN1_RX	NC
P147	VDD_IN1	VDD_IN
P148	VDD_IN2	VDD_IN
P149	VDD_IN3	VDD_IN
P150	VDD_IN4	VDD_IN
P151	VDD_IN5	VDD_IN
P152	VDD_IN6	VDD_IN
P153	VDD_IN7	VDD_IN
P154	VDD_IN8	VDD_IN
P155	VDD_IN9	VDD_IN
P156	VDD_IN10	VDD_IN

Pin	Pin Name	Signal
S1	PCAM_VSYNC	NC
S2	PCAM_HSYNC	NC
S3	GND13	GND
S4	PCAM_PXL_CK0	NC
S5	I2C_CAM_CK	CAM_I2C_CLK_1P8
S6	CAM_MCK	NC
S7	I2C_CAM_DAT	CAM_I2C_DATA_1P8
S8	CSI0_CK_P/PCAM_D10	CSI0_CK+
S9	CSI0_CK_N/PCAM_D11	CSI0_CK-

Pin	Pin Name	Signal
S10	GND14	GND
S11	CSI0_D0_P/PCAM_D12	CSI0_D0+
S12	CSI0_D0_N/PCAM_D13	CSI0_D0+
S13	GND15	GND
S14	CSI0_D1_P/PCAM_D14	NC
S15	CSI0_D1_N/PCAM_D15	NC
S16	GND16	GND
S17	AFB0_OUT	PM_SLP_S3#
S18	AFB1_OUT	PM_SLP_S3#
S19	AFB2_OUT	NC
S20	AFB3_IN	NC
S21	AFB4_IN	NC
S22	AFB5_IN	NC
S23	AFB6_PTIO	NC
S24	AFB7_PTIO	NC
S25	GND17	GND
S26	SDMMC_D0	NC
S27	SDMMC_D1	NC
S28	SDMMC_D2	NC
S29	SDMMC_D3	NC
S30	SDMMC_D4	NC
S31	SDMMC_D5	NC
S32	SDMMC_D6	NC
S33	SDMMC_D7	NC
S34	GND18	GND
S35	SDMMC_CK	NC
S36	SDMMC_CMD	NC
S37	SDMMC_RST#	NC
S38	AUDIO_MCK	CB_MCLK
S39	I2S0_LRCK	I2S0_LRCK
S40	I2S0_SDOUT	I2S0_SDOUT
S41	I2S0_SDIN	I2S0_SDIN
S42	I2S0_CK	I2S0_CK
S43	I2S1_LRCK	NC
S44	I2S1_SDOUT	NC
S45	I2S1_SDIN	NC
S46	I2S1_CK	NC
S47	GND19	GND
S48	I2C_GP_CK	USBP0P

Pin	Pin Name	Signal
S49	I2C_GP_DAT	GND
S50	I2S2_LRCK	HDA_SYNC
S51	I2S2_SDOUT	HDA_SDO
S52	I2S2_SDIN	HDA_SDI
S53	I2S2_CK	HDA_CK
S54	SATA_ACT#	SATA_ACT#
S55	AFB8_PTIO	NC
S56	AFB9_PTIO	NC
S57	PCAM_ON_CSI0#	NC
S58	PCAM_ON_CSI1#	NC
S59	SPDIF_OUT	NC
S60	SPDIF_IN	NC
S61	GND20	GND
S62	AFB_DIFF0_P	USBP5N
S63	AFB_DIFF0_N	USBP5P
S64	GND21	GND
S65	AFB_DIFF1_P	USB3_TX0_P
S66	AFB_DIFF1_N	USB3_TX0_N
S67	GND22	GND
S68	AFB_DIFF2_P	USB3_RX0_P
S69	AFB_DIFF2_N	USB3_RX0_N
S70	GND23	GND
S71	AFB_DIFF3_P	SATA_TXP1
S72	AFB_DIFF3_N	SATA_TXN1
S73	GND24	GND
S74	AFB_DIFF4_P	SATA_RXP1
S75	AFB_DIFF4_N	SATA_RXN1
S76	PCIE_B_RST#	PCIE_B_RST
S77	PCIE_C_RST#	PCIE_C_RST
S78	PCIE_C_RX_P	PCIE_C_RX+
S79	PCIE_C_RX_N	PCIE_C_RX-
S80	GND37	GND
S81	PCIE_C_TX_P	PCIE_C_TX+
S82	PCIE_C_TX_N	PCIE_C_TX-
S83	GND38	GND
S84	PCIE_B_REFCK_P	PCIE_B_REFCK+
S85	PCIE_B_REFCK_N	PCIE_B_REFCK-
S86	GND39	GND
S87	PCIE_B_RX_P	PCIE_B_RX+

Pin	Pin Name	Signal
S88	PCIE_B_RX_N	PCIE_B_RX-
S89	GND40	GND
S90	PCIE_B_TX_P	PCIE_B_TX+
S91	PCIE_B_TX_N	PCIE_B_TX-
S92	GND41	GND
S93	LCD_D0	NC
S94	LCD_D1	NC
S95	LCD_D2	NC
S96	LCD_D3	NC
S97	LCD_D4	NC
S98	LCD_D5	NC
S99	LCD_D6	NC
S100	LCD_D7	NC
S101	GND42	GND
S102	LCD_D8	NC
S103	LCD_D9	NC
S104	LCD_D10	NC
S105	LCD_D11	NC
S106	LCD_D12	NC
S107	LCD_D13	NC
S108	LCD_D14	NC
S109	LCD_D15	NC
S110	GND43	GND
S111	LCD_D16	NC
S112	LCD_D17	NC
S113	LCD_D18	NC
S114	LCD_D19	NC
S115	LCD_D20	NC
S116	LCD_D21	NC
S117	LCD_D22	NC
S118	LCD_D23	NC
S119	GND44	GND
S120	LCD_DE	NC
S121	LCD_VS	NC
S122	LCD_HS	NC
S123	LCD_PCK	NC
S124	GND45	GND
S125	LVDS0_P	LVDS0+
S126	LVDS0_N	LVDS0-

Pin	Pin Name	Signal
S127	LCD_BKLT_EN	LCD_BKLT_EN
S128	LVDS1_P	LVDS1+
S129	LVDS1_N	LVDS1-
S130	GND46	GND
S131	LVDS2_P	LVDS2+
S132	LVDS2_N	LVDS2-
S133	LCD_VDD_EN	LCD_VDD_EN
S134	LVDS_CK_P	LVDS_CK+
S135	LVDS_CK_N	LVDS_CK-
S136	GND47	GND
S137	LVDS3_P	LVDS3+
S138	LVDS3_N	LVDS3-
S139	I2C_LCD_CK	I2C_LCD_CK
S140	I2C_LCD_DAT	I2C_LCD_DAT
S141	LCD_BKLT_PWM	LCD_BKLT_PWM
S142	LCD_DUAL_PCK	NC
S143	GND48	GND
S144	RSVD\EDP_HPD	NC
S145	WDT_TIME_OUT#	WDT_TIME_OUT#
S146	PCIE_WAKE#	PCIE_WAKE#
S147	VDD_RTC	VDD_RTC
S148	LID#	LID#
S149	SLEEP#	SLEEP#
S150	VIN_PWR_BAD#	VIN_PWR_BAD#
S151	CHARGING#	CHARGING#
S152	CHARGER_PRSNT#	CHARGER_PRSNT#
S153	CARRIER_STBY#	CARRIER_STBY#
S154	CARRIER_PWR_ON	CARRIER_PWR_ON
S155	FORCE_RECOV#	FORCE_RECOV#
S156	BATLOW#	BATLOW#
S157	TEST#	NC
S158	VDD_IO_SEL#	VDD_IO_SEL#