

RSC-IMX8M

3.5" NXP IMX8M SBC

User's Manual

2nd Ed – 17 May, 2023

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.

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

Notice

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

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1. Collect all the information about the problem encountered. (For example, CPU type and speed, Avalue's products model name, hardware & BIOS revision number, other hardware and software used, etc.) Note anything abnormal and list any on-screen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information available.
3. If your product is diagnosed as defective, obtain an RMA (return material authorization) number from your dealer. This allows us to process your good return more quickly.
4. Carefully pack the defective product, a complete Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

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1. Getting Started

1.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

Before you begin installing your single board, please make sure that the following materials have been shipped:

- 1 x RSC-IMX8M



If any of the above items is damaged or missing, contact your retailer.

1.3 Document Amendment History

Revision	Date	Comment
1 st	June 2021	Initial Release
2 nd	May 2023	Update System Specifications

1.4 Manual Objectives

This manual describes in detail the Avalue Technology RSC-IMX8M Single Board.

We have tried to include as much information as possible but we have not duplicated information that is provided in the standard IBM Technical References, unless it proved to be necessary to aid in the understanding of this board.

We strongly recommend that you study this manual carefully before attempting to interface with RSC-IMX8M series or change the standard configurations. Whilst all the necessary information is available in this manual we would recommend that unless you are confident, you contact your supplier for guidance.

If you have any suggestions or find any errors concerning this manual and want to inform us of these, please contact our Customer Service department with the relevant details.

1.5 System Specifications

RSC-IMX8M	
Component	
Mother Board	RSC-IMX8M
CPU	NXP® i.MX8M Quad ARM Cortex A53 Quad Core Up to 1.5GHz; Cortex-M4 core processor NXP Consumer CPU P/N : MIMX8MQ6DVAJZAB , 0~95 (°C) NXP Industry CPU P/N : MIMX8MQ7CVAHZAA , -40~105 (°C)
Memory Storage	8GB eMMC (DVT Version) 16GB eMMC (MP Version)
Power Supply	DC in12V~24V
Display	
Chipset	NXP i.MX8M
Resolution	Up to 4Kp60 resolution on the HDMI 2.0a output and 1080p60 resolution on the MIPI-DSI (4-lanes) interface.
Multiple Display	(HDMI / LVDS / MIPI DSI)
LCD Interface	Dual channel 24bit LVDS
Ethernet	
LAN	Giga Lan
Ethernet Interface	2 x RJ45 Industry Version : 2pcs(Default) Consumer Version : 1pcs
Internal I/O	
Front Panel	1 x 2x5P Header
MIPI CSI	2 x DF13 20P Header
DC in	1 x 1x2P same as Phoenix connector with lock Header
TAG	1 x TAG Header
MIPI DSI	1 x DF13 20P Header
LVDS	1 x DF13 40P Header
Back Light	1 x 1x5P Header
I2C	1 x 1x5P Header
USB	1 x 1x5P Header
M.2	1 x 2230 M.2 for WiFi/BT (PCIe& USB Channel) 1 x 3042 M.2 for 3G/4G Module (USB Only)
SIM	1 x SIM Socket
Extend	1 x 2x20P Header

	<p>Pin Header 2x20pin</p> <p>1) UART1 TTL (RX,TX,CTS,RTS) =>4pin</p> <p>2) UART2 TTL (RX,TX,CTS,RTS) => 4pin</p> <p>3) UART3 TTL (RX,TX,CTS,RTS)(overlap with CSPI1) =>4pin</p> <p>4) UART4 TTL (RX,TX,CTS,RTS)(overlap with CSPI2) => 4pin</p> <p>5) PWM1/PWM2 (overlap with I2C4) => 6pin</p> <p>6) GPIO x 8 (overlap with SAI3 RXD/TXD/TXFS/TXC/MCLK) => 8pin</p>
Speaker	<p>1 x 1x2P Header (R)</p> <p>1 x 1x2P Header (L)</p> <p>Support 2W Speaker</p>
Line	1 x Line-Out Header with 12V out
MIC	1 x Mic-In Header
External I/O	
USB	1 x USB 3.0 Type A(Vertical type)
LAN	<p>2x RJ45 connector with indicate LED</p> <p>Industry Version : 2pcs(Default)</p> <p>Consumer Version : 1pcs</p>
HDMI	1 x HDMI connector (Vertical type)
OTG	1 x USB 3.0 Type C
Micro SD	1 x Micro SD socket
Hand Phone	1 x Hand Phone
Reset	1 x Reset
LED	1 x Power LED (Green)
Audio	
I2S Codec	Wolfson WM8960
Mechanical & Environmental	
Power Type	12V~24V wide voltage DC input
Power Connector Type	DC Jack
Operating Temp.	<p>Industry Operating temperature : -40~85 Degree</p> <p>Consumer Operating temperature : 0~85 Degree(Default)</p>
Storage Temp.	-40_85 Degree
Operating Humidity	95%
Size (L x W) (Please consult product engineers for	<p>3.5"</p> <p>146mm x 102mm</p>

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the production feasibility if the size is larger than 410x360mm or smaller than 80x70mm)	
Weight	TBD
Random Vibration Operation	<ol style="list-style-type: none"> 1. PSD: 0.00454G²/Hz , 1.5 Grms 2. operation mode 3. Test Frequency : 5-500Hz 4. Test Axis : X,Y and Z axis 5. 30 minutes per each axis 6. IEC 60068-2-64 Test:Fh 7. Storage : CF or SSD
Random Vibration Non-Operation	<ol style="list-style-type: none"> 1 Test Acceleration : 3G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode 7. Reference IEC 60068-2-64 Testing procedures
Bump Test	<ol style="list-style-type: none"> 1. Wave form : Half Sine wave 2. Acceleration Rate : 10g for operation mode 3. Duration Time : 11ms 4. No. of Shock : Z axis 1000 times 5. Test Axis: Z axis 6. Operation mode 7. Reference IEC 60068-2-29 Testing procedures <p>Test Eb : Bump Test</p>
OS Information	<p>Android Version 10-kernel 5.4.70 (coming soon)</p> <p>Linux Yocto Version sumo 2.5-kernel 4.14.98 (Default and first)</p>

Expansion I/O board-1	
Component	
RS232/485	4 x DB9 Connector
Extend	1 x 2 x 20P Header
<p>The diagram shows a rectangular expansion board. At the top center, there is a 2x20 pin header. Below the header, there are four DB9 RS232/485 connectors arranged horizontally across the board.</p>	

Expansion I/O board-2	
Component	
RS232/485	2 x DB9 Connector
Isolate GPIO	1 x 1 x 8P DB9 Connector
CAN Bus	1 x 1 x 4P DB9 Connector
Extend	1 x 2 x 20P Header

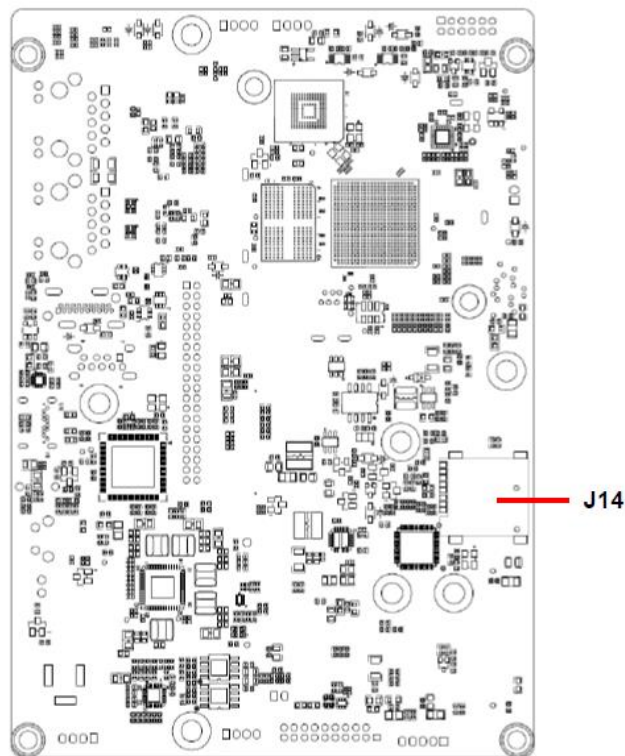
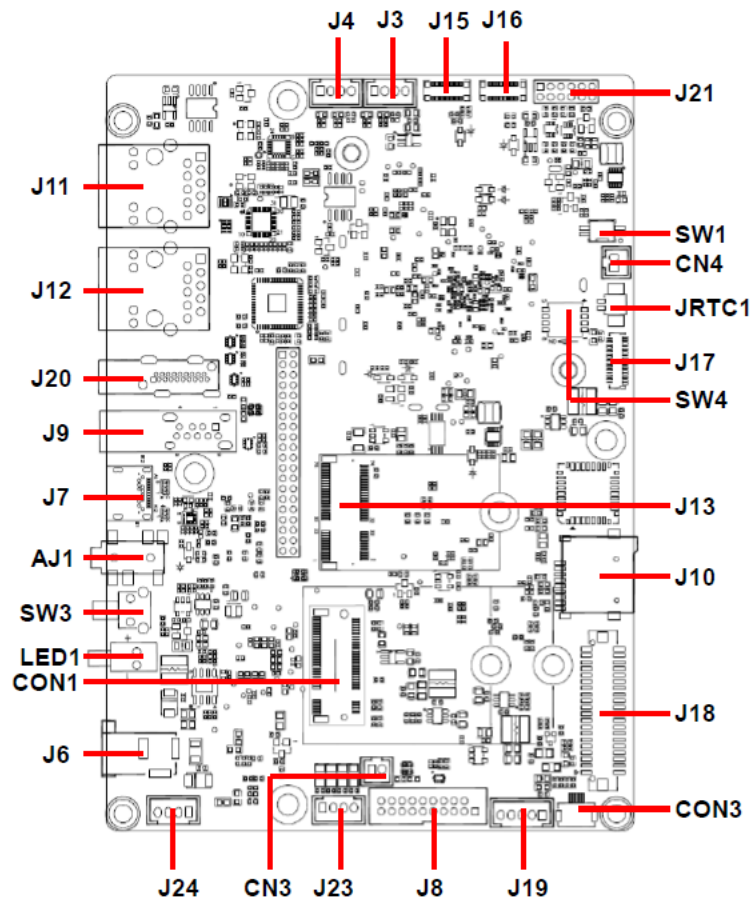
Expansion I/O board-3	
Component	
RS232/485	3 x DB9 Connector
Isolate GPIO	1 x 1x8P DB9 Connector
Extend	1 x 2x20P Header



Note: Specifications are subject to change without notice.

2. Hardware Configuration

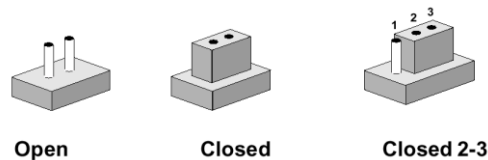
2.1 RSC-IMX8M Product Overview



2.2 RSC-IMX8M Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board’s jumpers and connectors.

Jumpers

Label	Function	Note
SW1	Boot Mode selector 1	
SW4	Boot Mode selector 2	

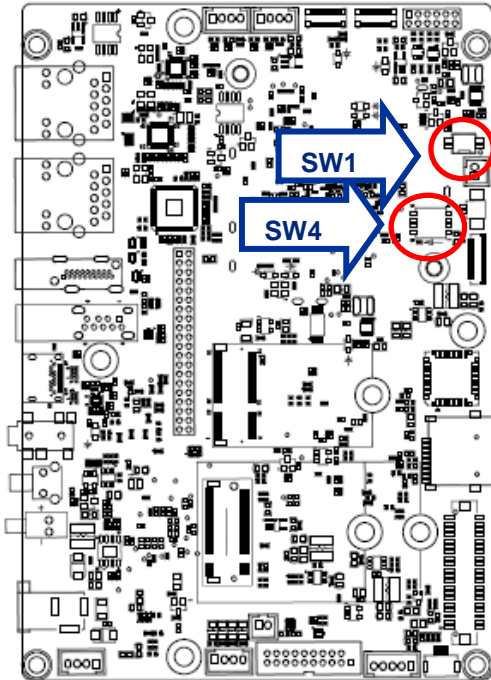
Connectors

Label	Function	Note
J15	MIPI CSI Screen connector 1	2 x 15 wafer, pitch 2.00mm
J16	MIPI CSI Screen connector 2	2 x 15 wafer, pitch 2.00mm
J21	Front Panel connector	2 x 6 header, pitch 2.00mm
J19	LCD Backlight connector	5 x 1 wafer, pitch 2.00mm
J18	LVDS connector	DIN 40-pin wafer, pitch 1.25mm Matching Connector: Hirose DF13-40DS-1.25C

CON1	M.2 Key B for 3G/4G Module	
J13	M.2 Key E for WIFI /BT	
CON3	Touch panel connector	6 x 1 wafer, pitch 0.50mm
J17	MIPI DSI connector	31 x 1 wafer, pitch 0.30mm
J3	UART Debug connector	4 x 1 wafer, pitch 2.00mm
J4	UART Debug connector	4 x 1 wafer, pitch 2.00mm
JRTC1	RTC connector	2 x 1 wafer, pitch 1.25mm
SW3	RESET KEY	
LED1	POWER LED	
J6	DC-IN power connector	2 x 1 wafer, pitch 5.08mm
J10	Micro SD slot	
CN4	Power Button	2 x 1 wafer, pitch 2.00mm
J7	OTG USB3.0-Type C connector	
J8	USB3.0 connector	2 x 10 wafer, pitch 2.00mm
J9	USB3.0-Type A connector	
J11/J12	2 x RJ-45 Ethernet	
J20	HDMI-A connector	
AJ1	HP Jack connector	
CN3	MIC IN connector	2 x 1 wafer, pitch 2.00mm
J23	Speaker connector	4 x 1 wafer, pitch 2.00mm
J14	SIM Card socket	
J24	DC-IN power connector	4 x 1 wafer, pitch 2.00mm
J22	Extend connector	2 x 20 wafer, pitch 2.00mm

2.3 Setting Jumpers & Connectors

2.3.1 Boot Mode selector 1/2 (SW1/SW4)



Programming mode

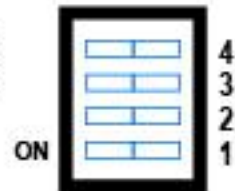
SW1: 01 SW4: XX

X=don't care

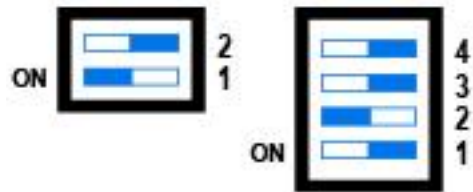
SW1



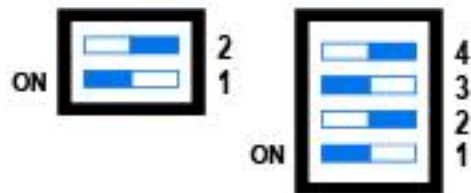
SW4



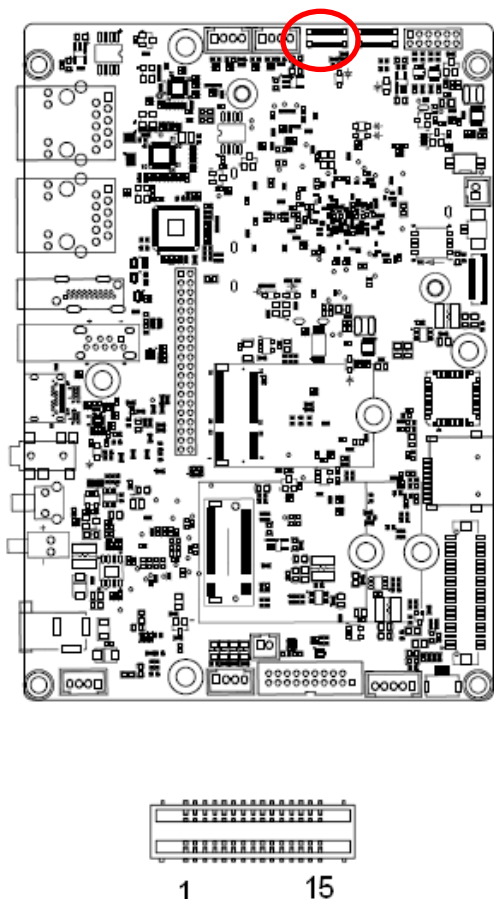
eMMC boot



SD boot

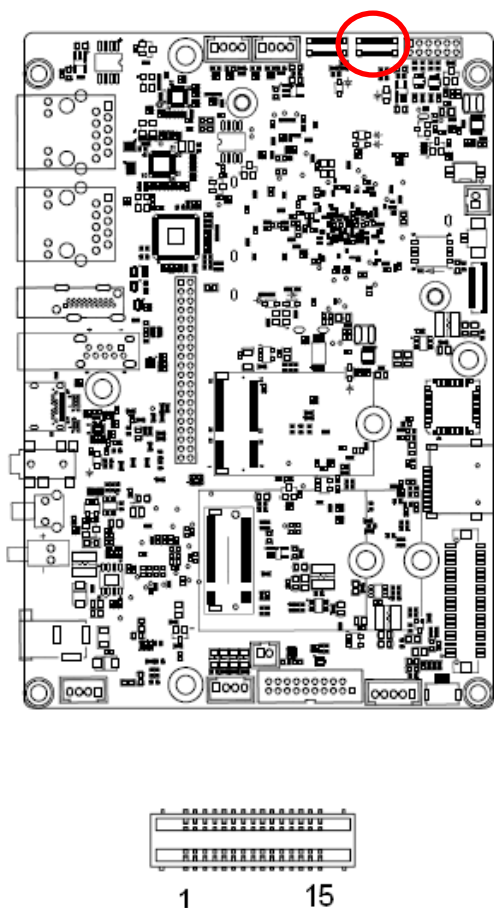


2.3.2 MIPI CSI Screen connector 1 (J15)



Signal	PIN	PIN	Signal
GND	1	30	CSI1_CKN
CSI1_DP0	2	29	CSI1_CKP
CSI1_DN0	3	28	GND
GND	4	27	CSI1_DP1
CSI1_DP2	5	26	CSI1_DN1
CSI1_DN2	6	25	GND
GND	7	24	VCC18_DVP
CSI1_DP3	8	23	GND
CSI1_DN3	9	22	VCC1.5_DVP
GND	10	21	CSI1_I2C_SDA
CSI1_MCLK	11	20	CSI1_I2C_SCL
CSI1_RST	12	19	GND
GND	13	18	VCC28_DVP
CSI1_PWDN	14	17	AVDD28_DVP
GND	15	16	GND

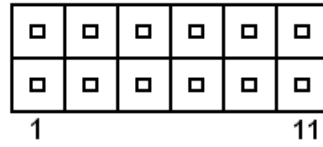
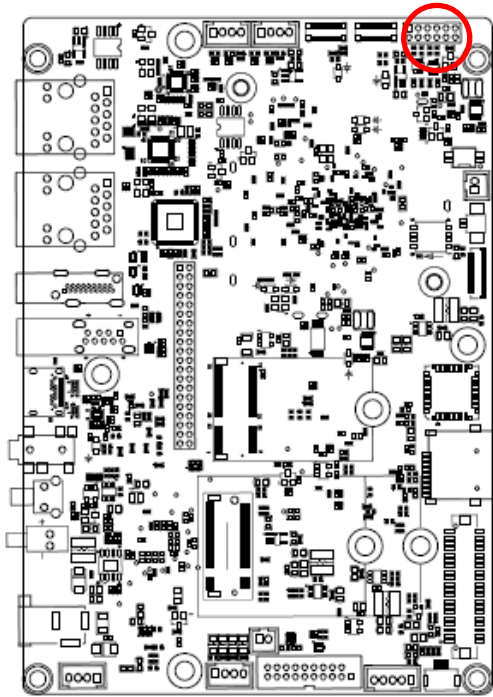
2.3.3 MIPI CSI Screen connector 2 (J16)



Signal	PIN	PIN	Signal
GND	1	30	CSI2_CKN
CSI2_DP0	2	29	CSI2_CKP
CSI2_DN0	3	28	GND
GND	4	27	CSI2_DP1
CSI2_DP2	5	26	CSI2_DN1
CSI2_DN2	6	25	GND
GND	7	24	VCC18_DVP
CSI2_DP3	8	23	GND
CSI2_DN3	9	22	VCC1.5_DVP
GND	10	21	CSI2_I2C_SDA
CSI2_MCLK	11	20	CSI2_I2C_SCL
CSI2_RST	12	19	GND
GND	13	18	VCC28_DVP
CSI2_PWDN	14	17	AVDD28_DVP
GND	15	16	GND

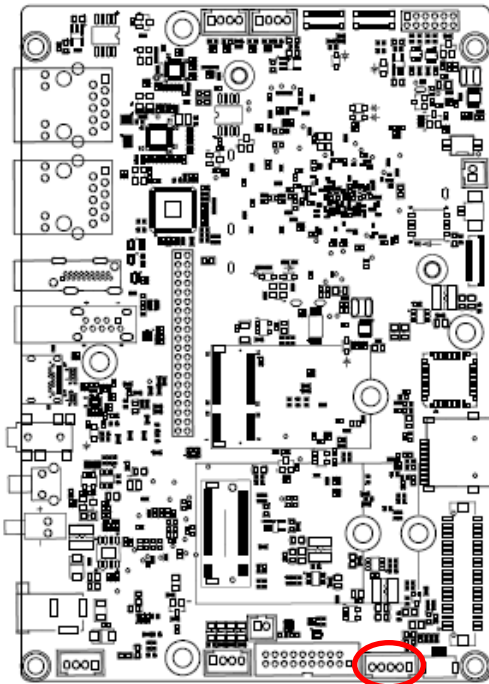
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2.3.4 Front Panel connector (J21)



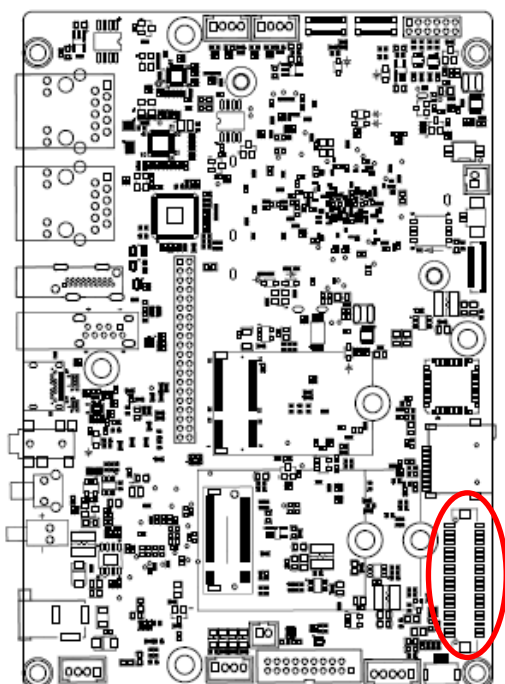
Signal	PIN	PIN	Signal
DCDC_5V	1	2	GND
FB0603	3	4	BU1
VOL_UP	5	6	VOL_DN
ON_OFF	7	8	BR_UP
BR_DN	9	10	BU7
LED_GRN	11	12	LED_ORG

2.3.5 LCD Backlight connector (J19)



Signal	PIN
VCC_12V	1
GND	2
BL_EN	3
LCD_BL_PWM	4
LCD_5V	5

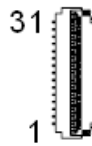
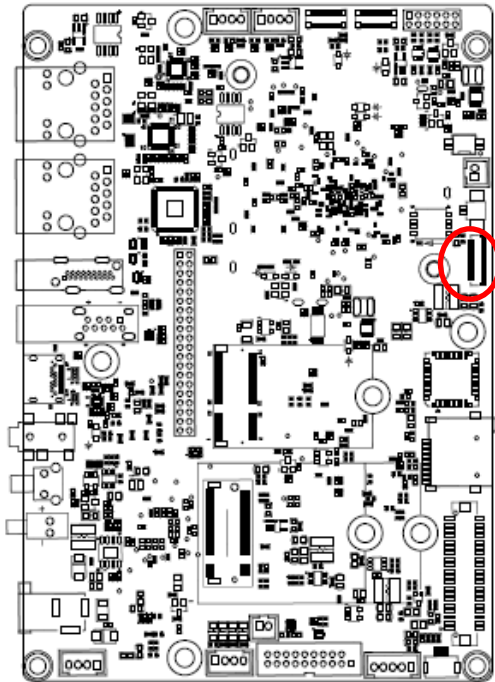
2.3.6 LVDS connector (J18)



Signal	PIN	PIN	Signal
+12V	39	40	+12V
GND	37	38	GND
LBCN_D8	35	36	LACN_D17
LBCP_D7	33	34	LACP_D16
GND	31	32	GND
LB3N_D6	29	30	LB2N_D9
LB3P_D5	27	28	LB2P_DCK
GND	25	26	GND
LB1N_D11	23	24	LB0N_D13
LB1P_D10	21	22	LB0P_D12
GND	19	20	GND
LA3N_D15	17	18	LA2N_D19
LA3P_D14	15	16	LA2P_D18
GND	13	14	GND
LA1N_D21	11	12	LA0N_D23
LA1P_D20	9	10	LA0P_D22
GND	7	8	GND
LVDS_DDC_CLK	5	6	LVDS_DDC_DAT
+3.3V	3	4	+5V
+3.3V	1	2	+5V

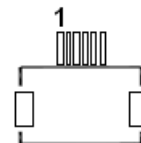
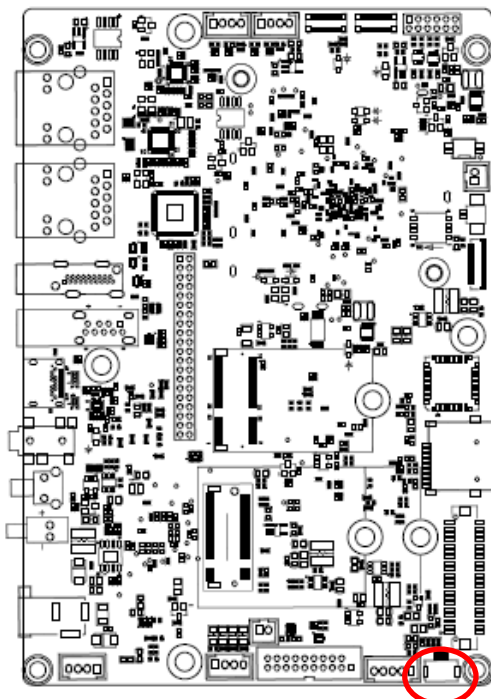
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2.3.7 MIPI DSI connector (J17)



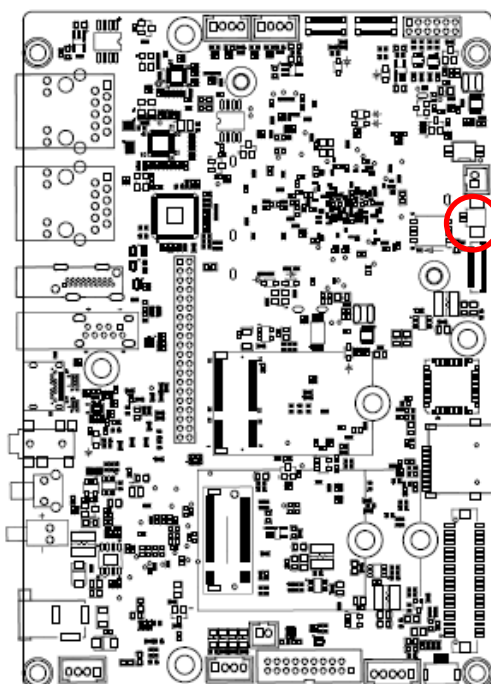
Signal	PIN
VLED+	31
VLED+	30
NC	29
VLED-	28
VLED-	27
VLED-	26
NC	25
GND	24
MIPI_DSI2_D3N	23
MIPI_DSI2_D0N	22
MIPI_DSI2_D3P	21
MIPI_DSI2_D0P	20
GND	19
GND	18
MIPI_DSI2_CN	17
MIPI_DSI2_D1N	16
MIPI_DSI2_CP	15
MIPI_DSI2_D1P	14
GND	13
GND	12
MIPI_DSI2_D2N	11
NC	10
MIPI_DSI2_D2P	9
NC	8
NC	7
MIPI_RST	6
MIPI_1V8	5
MIPI_1V8	4
LCD_3V3	3
LCD_3V3	2
LCD_3V3	1

2.3.8 Touch Panel connector (CON3)



Signal	PIN
VDD_3V3	1
GND	2
TP_INT	3
TP_SCL	4
TP_SDA	5
TP_RST0	6

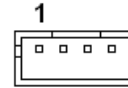
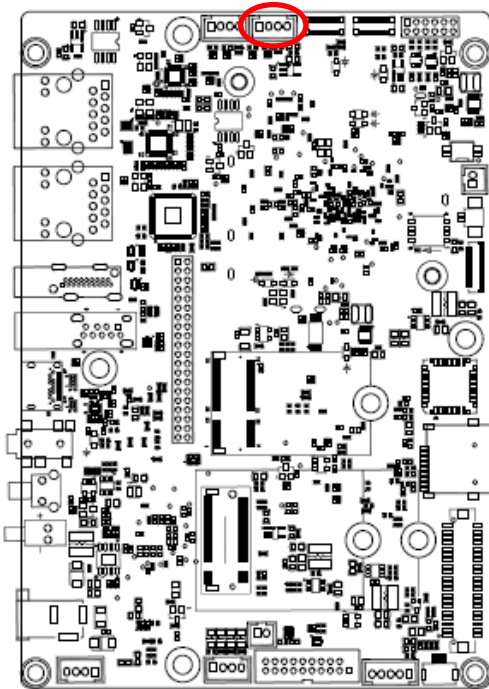
2.3.9 RTC connector (JRRTC1)



Signal	PIN
DCDC_3V3	1
GND	2

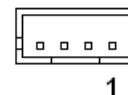
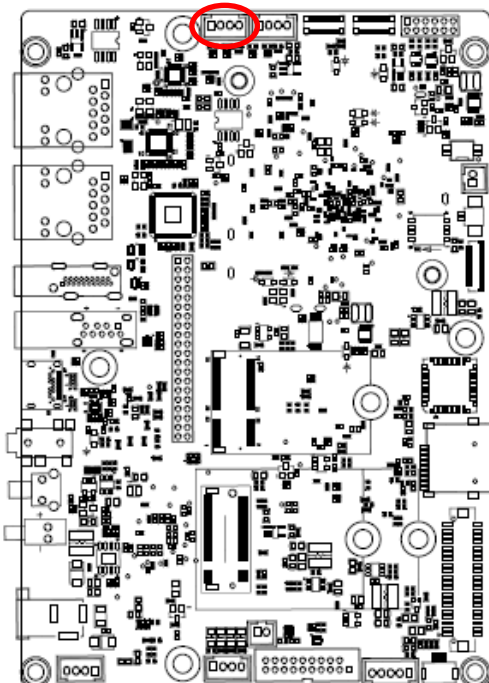
RSC-IMX8M

2.3.10 UART Debug connector (J3)



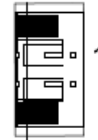
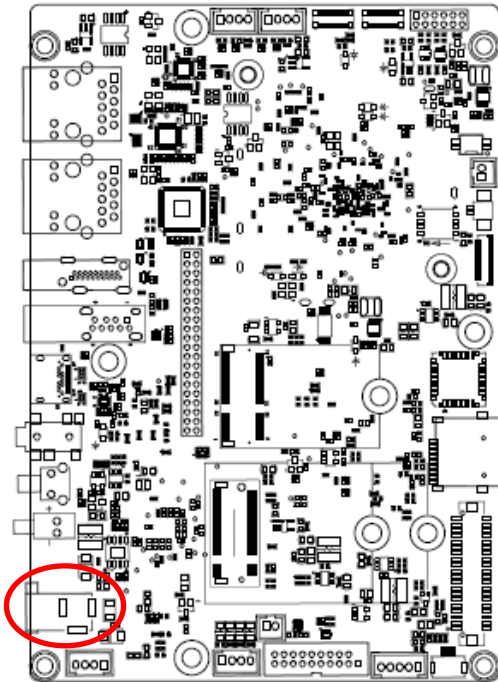
Signal	PIN
UART1_RXD	1
GND	2
UART1_TXD	3
VDD_3V3	4

2.3.11 UART Debug connector (J4)



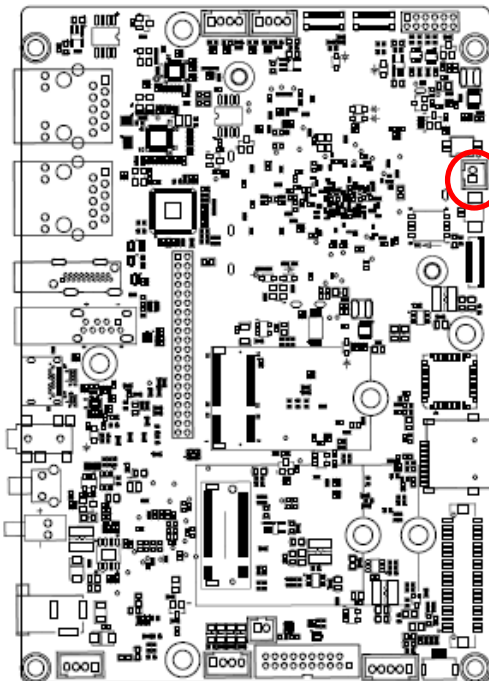
Signal	PIN
UART2_RXD	1
GND	2
UART2_TXD	3
VDD_3V3	4

2.3.12 DC-IN power connector (J6)



Signal	PIN
VCC_12V	1
GND	2

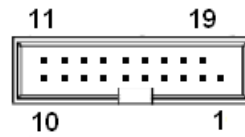
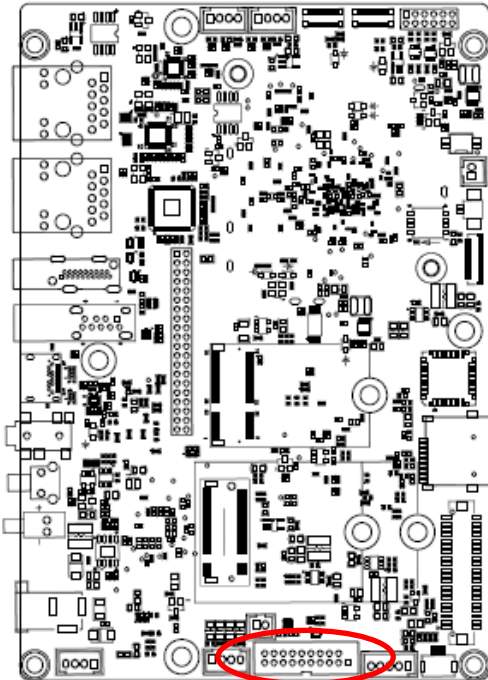
2.3.13 Power Button (CN4)



Signal	PIN
GND	2
ONOFF_1	1

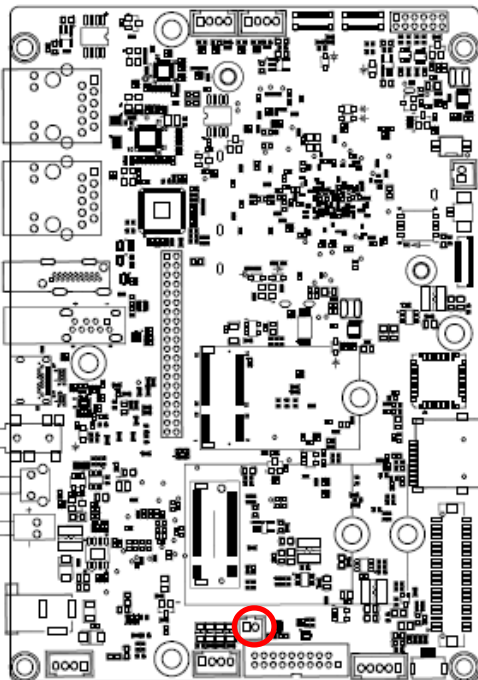
RSC-IMX8M

2.3.14 USB3.0 connector (J8)



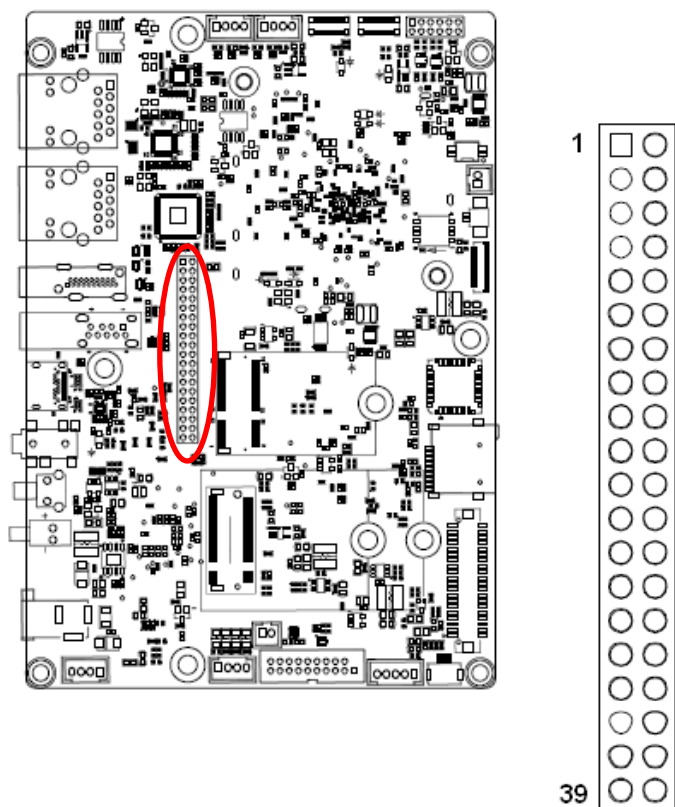
Signal	PIN	PIN	Signal
USB1_3.0_POWER	1		
USB3_HOST_RXN	2	19	USB1_3.0_POWER
USB3_HOST_RXP	3	18	USB4_HOST_RXN
GND	4	17	USB4_HOST_RXP
USB3_HOST_TXN	5	16	GND
USB3_HOST_TXP	6	15	USB4_HOST_TXN
GND	7	14	USB4_HOST_TXP
USB3_HOST_DN	8	13	GND
USB3_HOST_DP	9	12	USB4_HOST_DN
NC	10	11	USB4_HOST_DP

2.3.15 MIC IN connector (CN3)



Signal	PIN
MIC_IN_P	1
GND	2

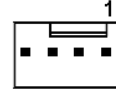
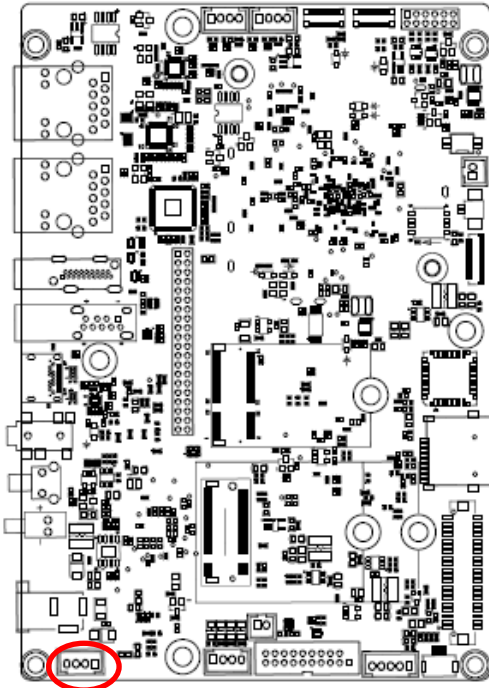
2.3.16 Extend connector (J22)



Signal	PIN	PIN	Signal
DCDC_3V3	1	2	DCDC_5V
I2C3_SDA	3	4	DCDC_5V
I2C3_SCL	5	6	GND
UART2_RXD	7	8	UART1_RXD
GND	9	10	UART1_TXD
UART2_TXD	11	12	GPIO3.IO[10]
UART2_CTS	13	14	GND
UART2_RTS	15	16	UART1_CTS
E_3V3	17	18	UART1_RTS
ECSPI1_SCLK	19	20	GND
ECSPI1_MOSI	21	22	GPIO4_IO21
ECSPI1_MISO	23	24	ECSPI2_MISO
GND	25	26	ECSPI2_MOSI
NC	27	28	NC
ECSPI1_SS0	29	30	GND
GPIO4_IO20	31	32	ECSPI2_SCLK
GPIO5_IO04	33	34	GND
GPIO4_IO00	35	36	PWM1_OUT
GPIO4_IO01	37	38	ECSPI2_SS0
GND	39	40	GPIO4_IO11

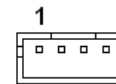
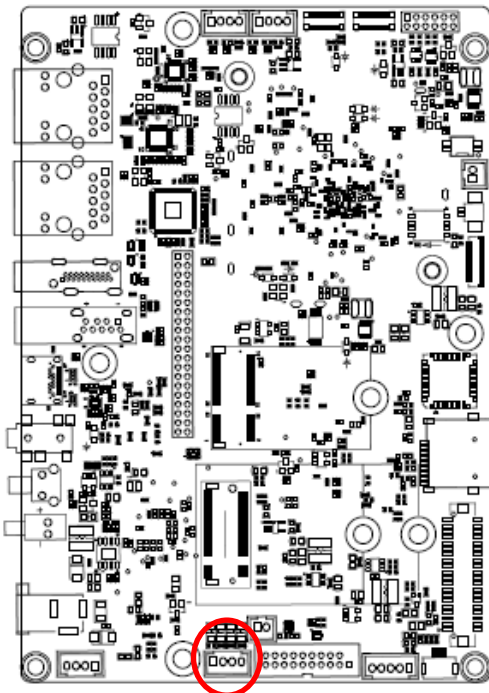
RSC-IMX8M

2.3.17 DC-IN power connector (J24)



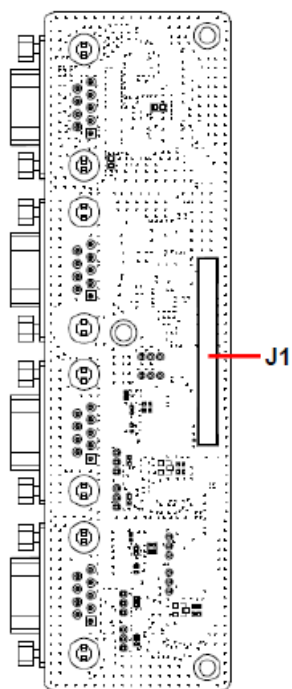
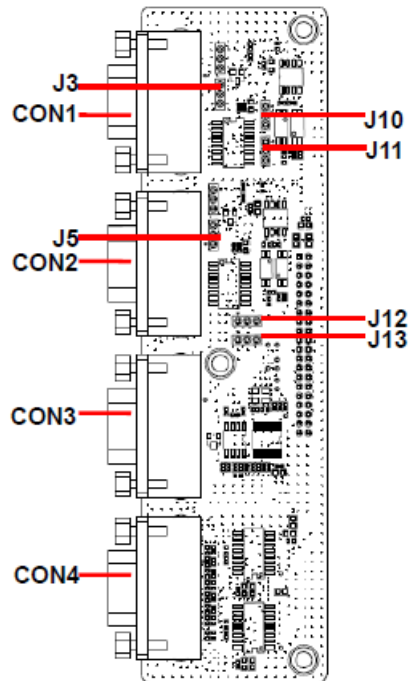
Signal	PIN
12V_DCIN	1
GND	2
GND	3
GND	4

2.3.18 Speaker connector (J23)



Signal	PIN
SPK_L+	1
SPK_L-	2
SPK_R+	3
SPK_R-	4

2.4 Expansion I/O board-1 & board-2 Product Overview



2.5 Expansion I/O board-1 & board-2 Jumper and Connector List

The following tables list the function of each of the board's connectors.

Jumpers

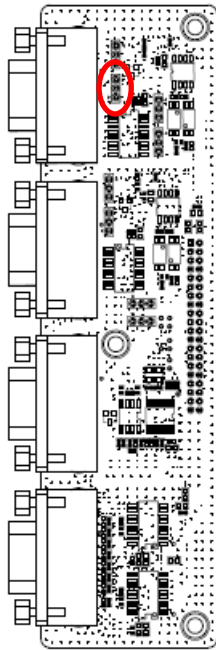
Label	Function	Note
J3	Serial port 1 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J5	Serial port 2 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J10	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J11	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J12	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J13	RS-232/485 mode select	3 x 1 header, pitch 2.00mm

Connectors

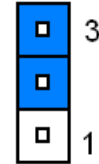
Label	Function	Note
CON1/2	RS232/485 connector 1/2	
CON3	CAN Bus connector	
CON4	GPIO connector	

2.6 Setting Jumpers

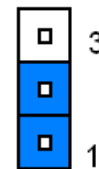
2.6.1 Serial port 1 in RS-232/485 mode select (J3)



RS-485*

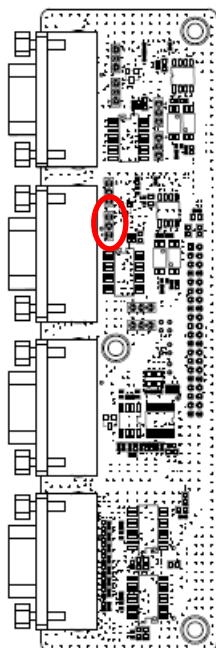


RS-232

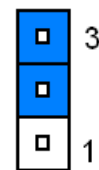


* Default

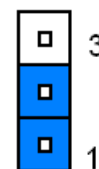
2.6.2 Serial port 2 in RS-232/485 mode select (J5)



RS-485*



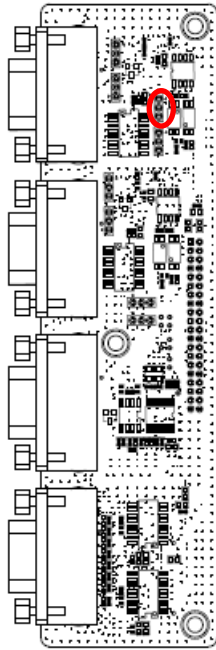
RS-232



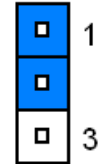
* Default

RSC-IMX8M

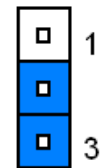
2.6.3 RS-232/485 mode select (J10)



RS-232*

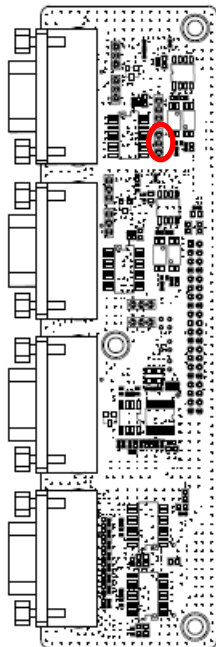


RS-485

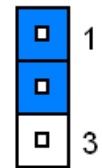


* Default

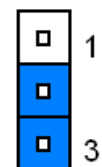
2.6.4 RS-232/485 mode select (J11)



RS-232*

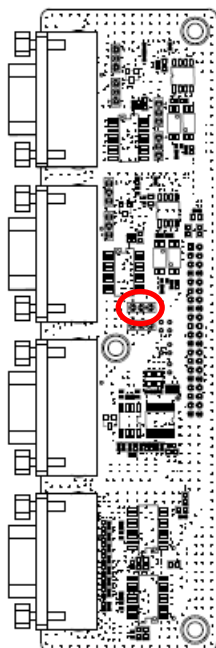


RS-485

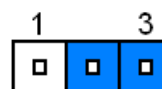


* Default

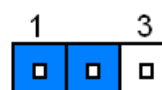
2.6.5 RS-232/485 mode select (J12)



RS-485*

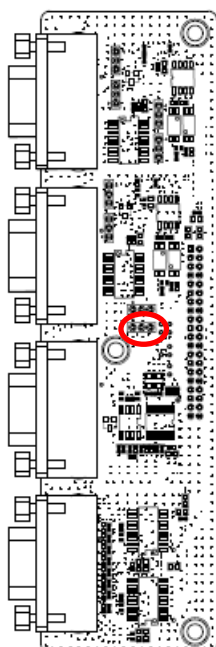


RS-232

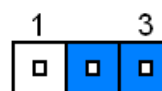


* Default

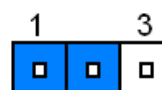
2.6.6 RS-232/485 mode select (J13)



RS-485*

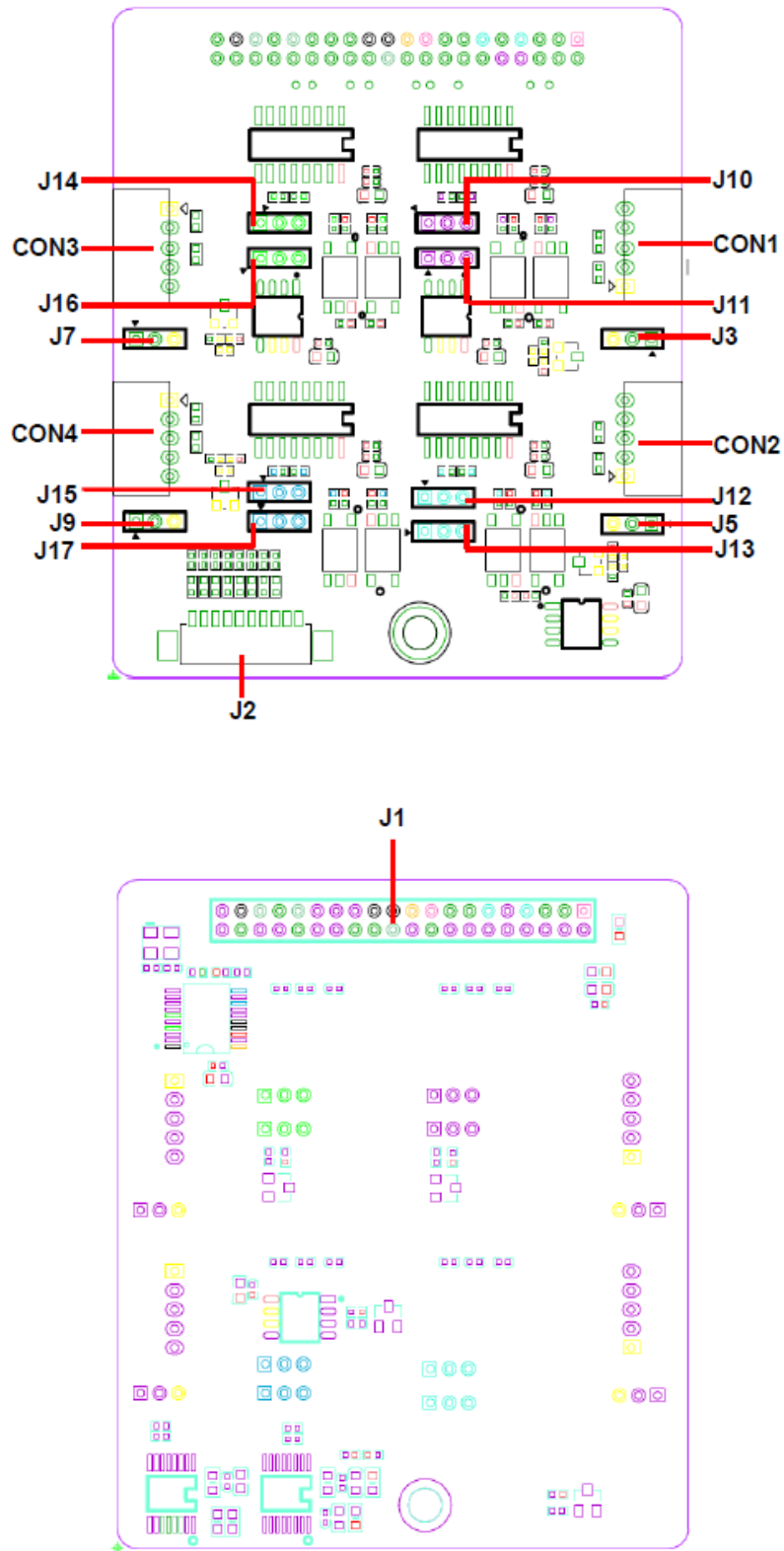


RS-232



* Default

2.7 RSC-IMX8M-C Overview



2.8 RSC-IMX8M-C Jumper and Connector List

The following tables list the function of each of the board's connectors.

Jumpers

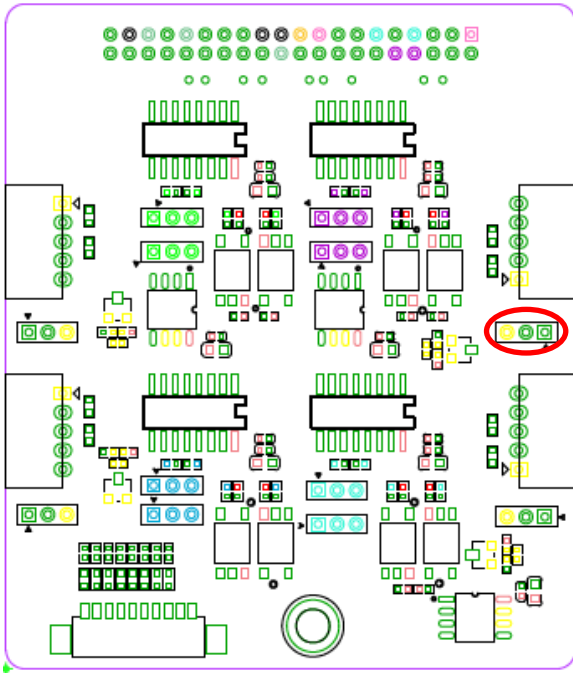
Label	Function	Note
J2	General purpose I/O connector	3 x 1 header, pitch 2.00mm
J3	Serial port 1 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J5	Serial port 2 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J7	Serial port 3 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J9	Serial port 4 in RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J10	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J11	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J12	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J13	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J14	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J15	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J16	RS-232/485 mode select	3 x 1 header, pitch 2.00mm
J17	RS-232/485 mode select	3 x 1 header, pitch 2.00mm

Connectors

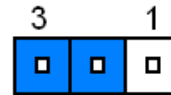
Label	Function	Note
CON1/2/3/4	Serial port 1/2/3/4 connector	5 x 1 wafer, pitch 2.00mm
J1	Extend connector	2 x 20 header, pitch 2.00mm
J2	General purpose I/O connector	10 x 1 wafer, pitch 1.25mm

2.9 Setting Jumpers & Connectors

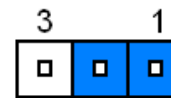
2.9.1 Serial port 1 in RS-232/485 mode select (J3)



RS-485*

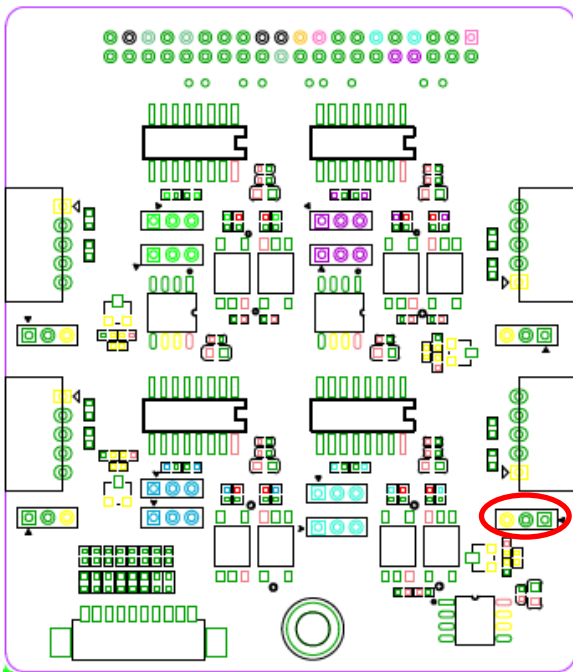


RS-232

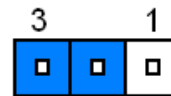


* Default

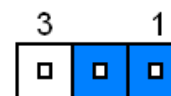
2.9.2 Serial port 2 in RS-232/485 mode select (J5)



RS-485*

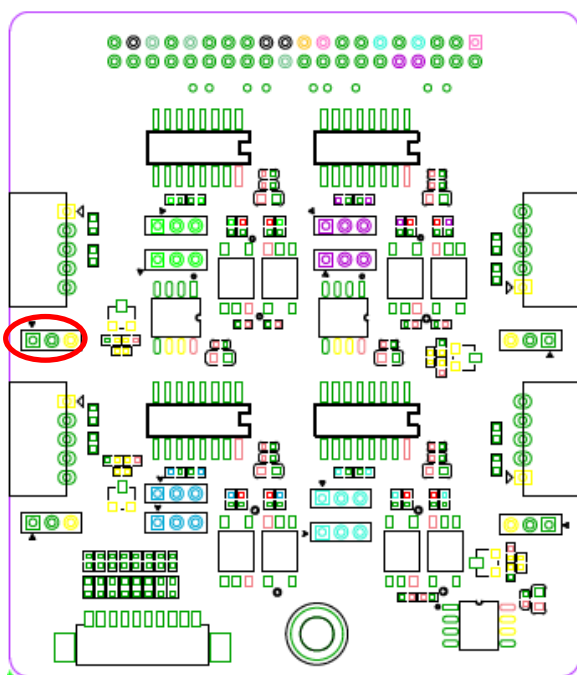


RS-232

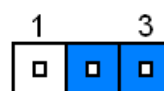


* Default

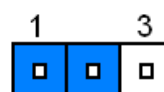
2.9.3 Serial port 3 in RS-232/485 mode select (J7)



RS-485*

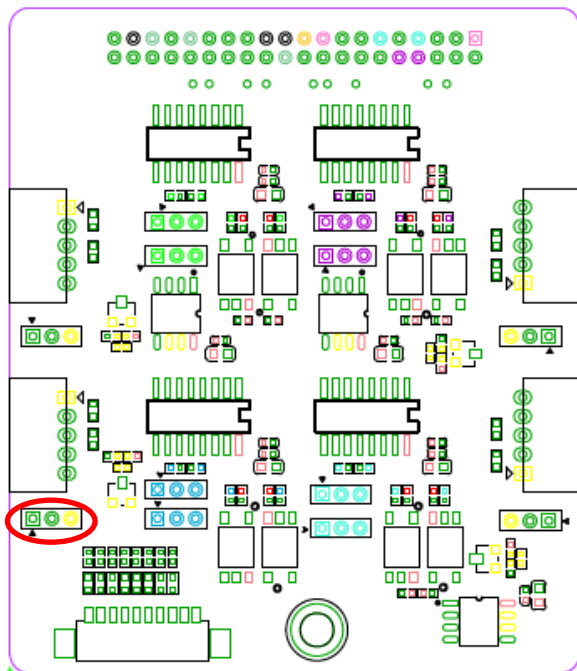


RS-232

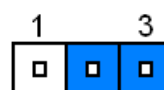


* Default

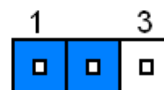
2.9.4 Serial port 4 in RS-232/485 mode select (J9)



RS-485*



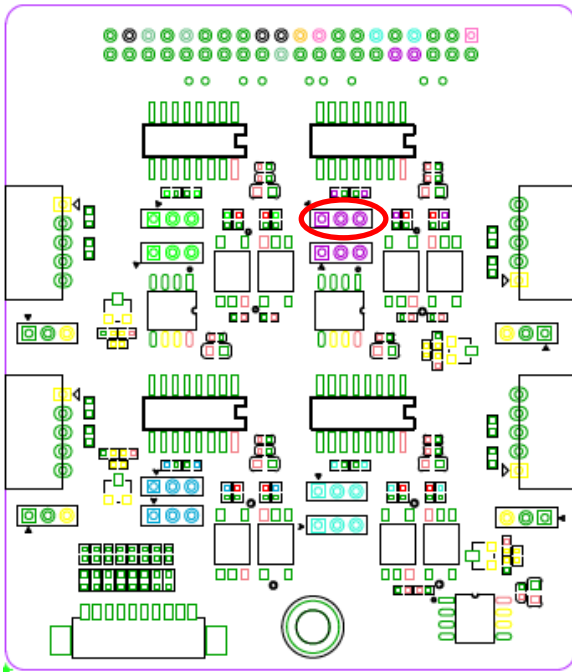
RS-232



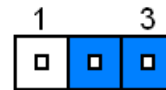
* Default

RSC-IMX8M

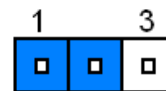
2.9.5 RS-232/485 mode select (J10)



RS-485*

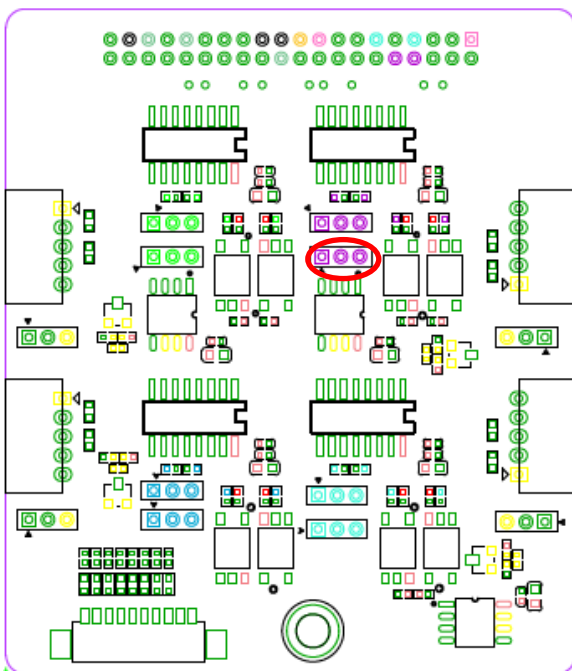


RS-232

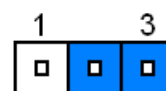


* Default

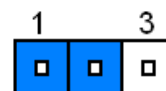
2.9.6 RS-232/485 mode select (J11)



RS-485*

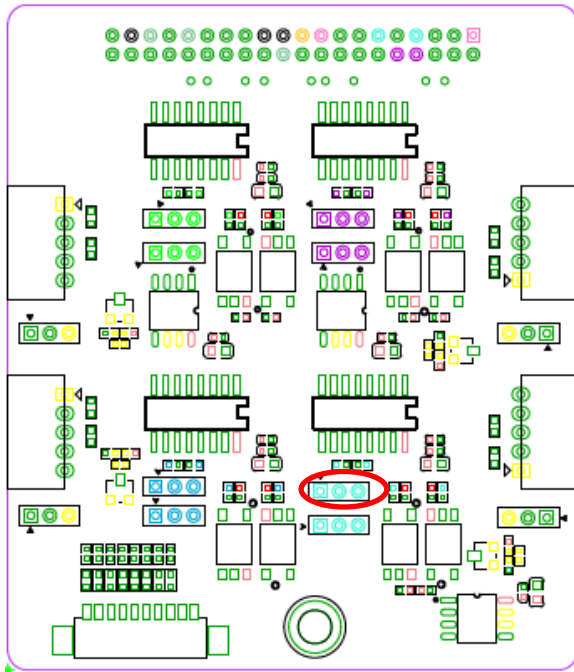


RS-232

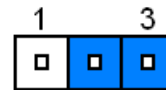


* Default

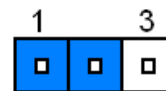
2.9.7 RS-232/485 mode select (J12)



RS-485*

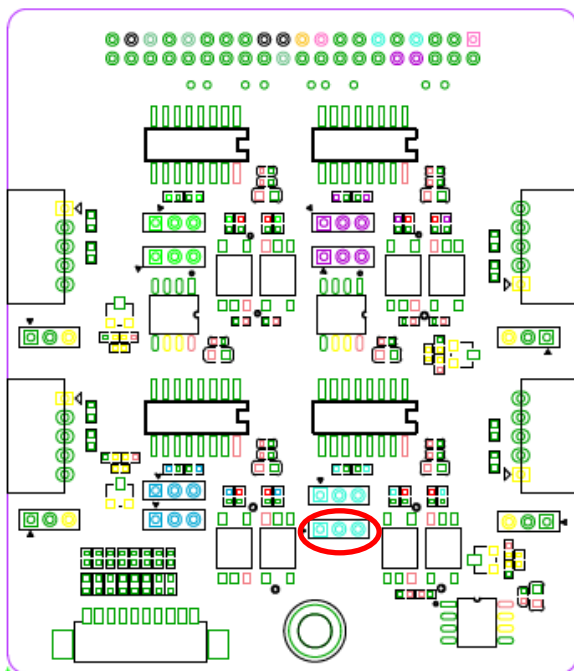


RS-232

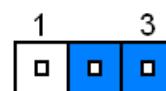


* Default

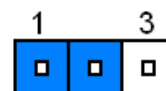
2.9.8 RS-232/485 mode select (J13)



RS-485*



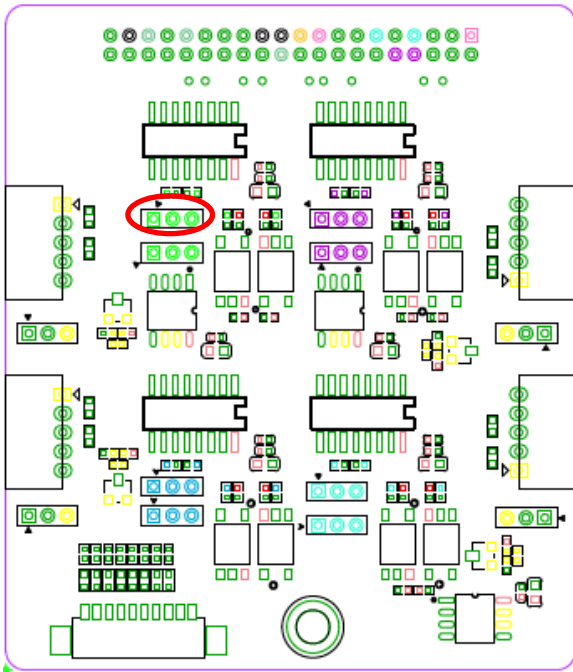
RS-232



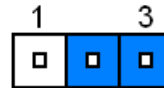
* Default

RSC-IMX8M

2.9.9 RS-232/485 mode select (J14)



RS-485*

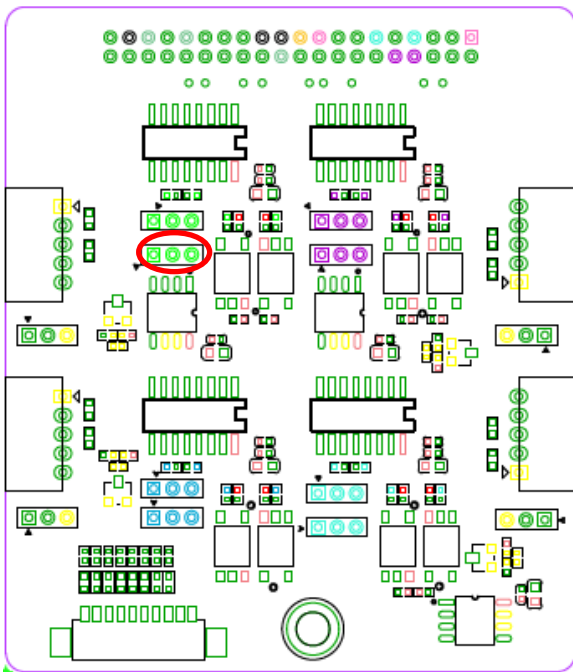


RS-232

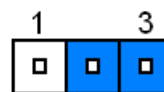


* Default

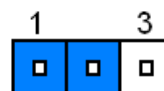
2.9.10 RS-232/485 mode select (J16)



RS-485*

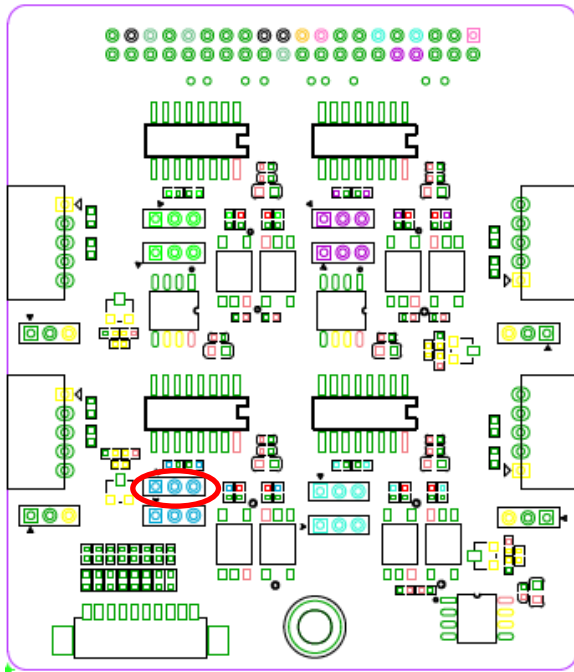


RS-232

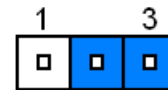


* Default

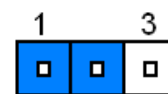
2.9.11 RS-232/485 mode select (J15)



RS-485*

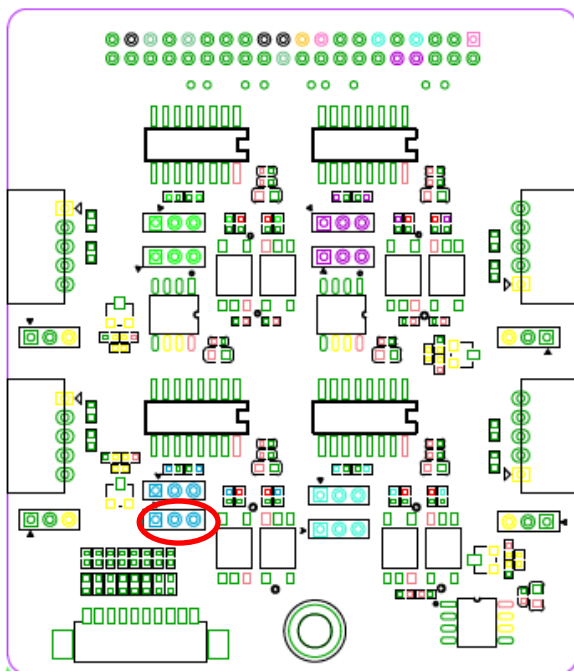


RS-232

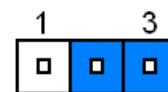


* Default

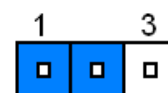
2.9.12 RS-232/485 mode select (J17)



RS-485*



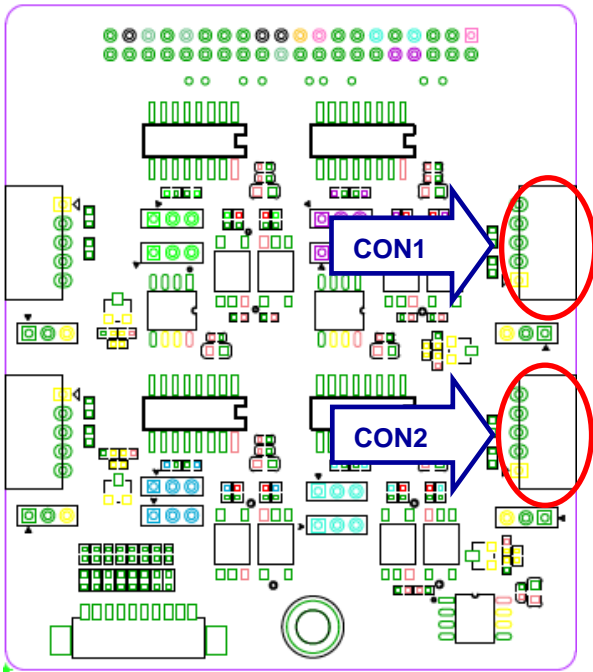
RS-232



* Default

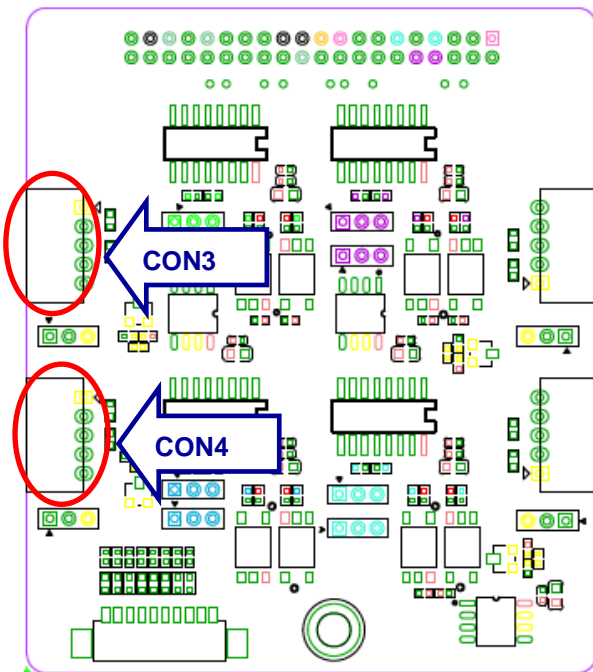
RSC-IMX8M

2.9.13 Serial port connector 1/2 (CON1/2)



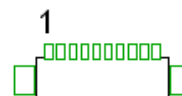
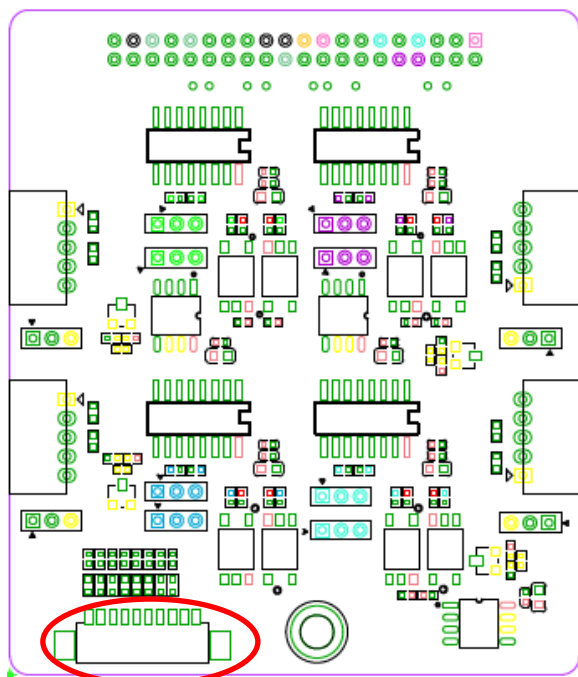
Signal	PIN
NC	5
GND	4
RS232_TX_OUT	3
RS232_RX_OUT	2
RS485_A	1

2.9.14 Serial port connector 3/4 (CON3/4)



Signal	PIN
RS485_A	1
RS232_RX_OUT	2
RS232_TX_OUT	3
GND	4
NC	5

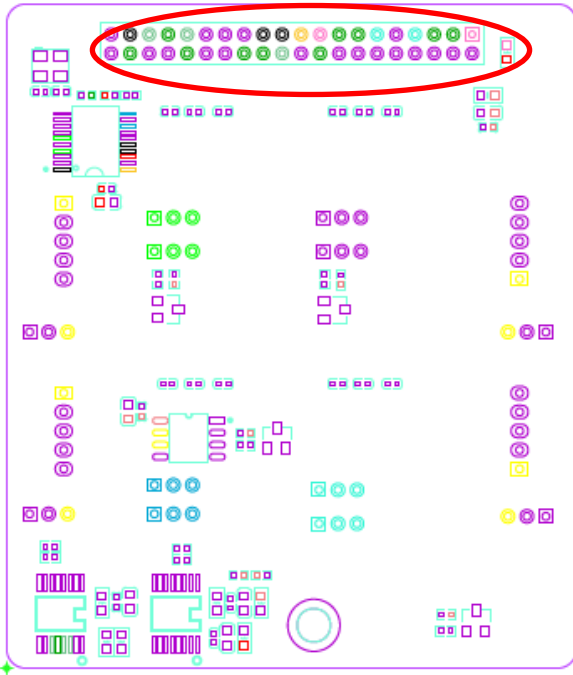
2.9.15 General purpose I/O connector (J2)



Signal	PIN
GP4_IO21	1
GP4_IO20	2
GP1_IO01	3
GP5_IO05	4
GP5_IO04	5
GP4_IO00	6
GP4_IO11	7
GP5_IO26	8
EXT_5V	9
GND	10

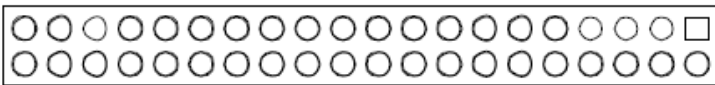
RSC-IMX8M

2.9.16 Extend connector (J1)



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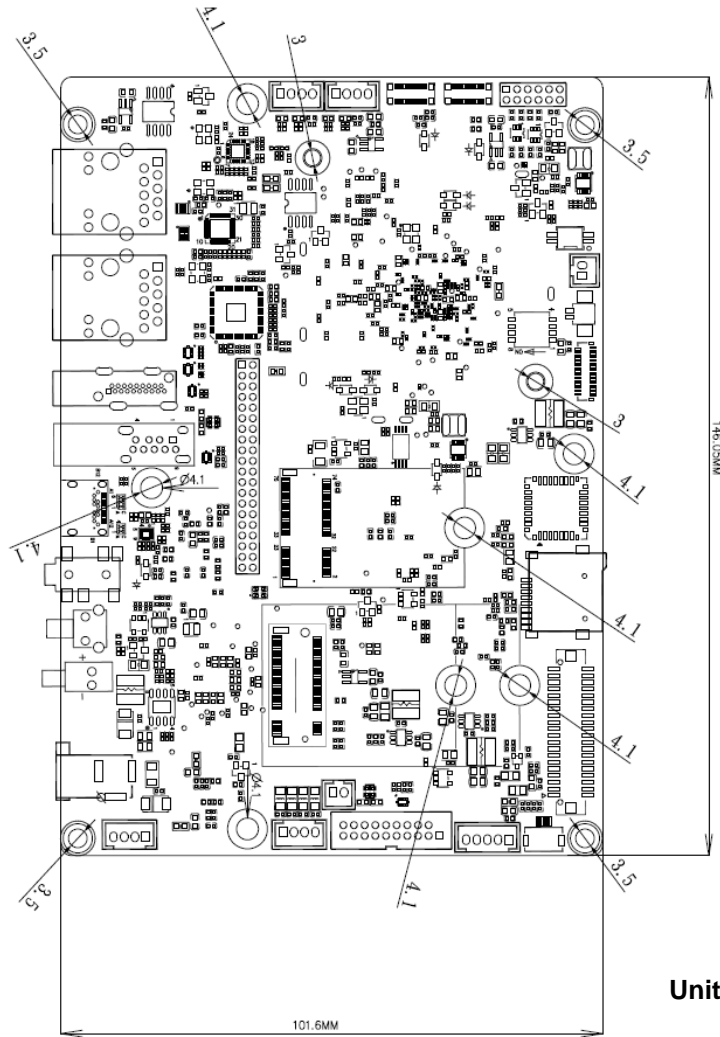
1



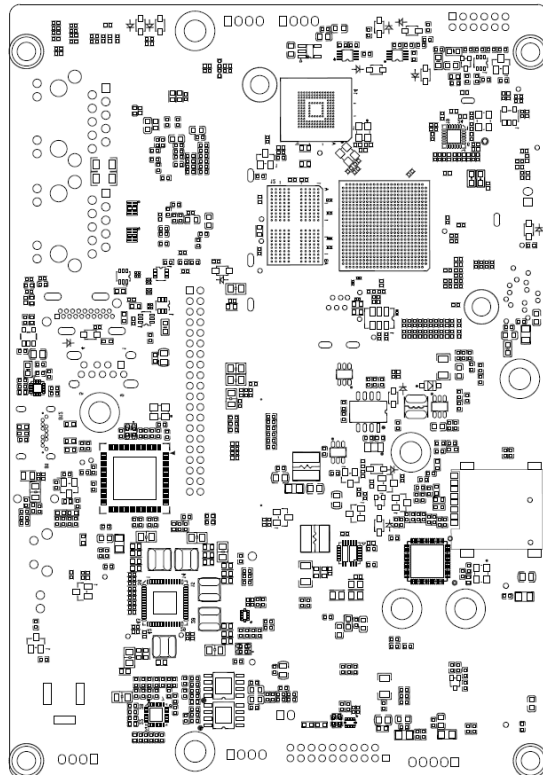
Signal	PIN	PIN	Signal
RS232_3V3	1	2	RS485_3V3
GPIO5_IO19	3	4	RS485_3V3
GPIO5_IO18	5	6	GND
GPIO5_IO24	7	8	GPIO5_IO22
GND	9	10	GPIO5_IO23
GPIO5_IO25	11	12	GPIO3_IO10
GPIO5_IO28	13	14	GND
GPIO5_IO29	15	16	GPIO5_IO26
E_3V3	17	18	GPIO5_IO27
GPIO5_IO06	19	20	GND
GPIO5_IO07	21	22	GPIO4_IO21
GPIO5_IO08	23	24	GPIO5_IO12
GND	25	26	GPIO5_IO11
NC	27	28	NC
GPIO5_IO09	29	30	GND
GPIO4_IO20	31	32	GPIO5_IO10
GPIO5_IO04	33	34	GND
GPIO4_IO00	35	36	GPIO5_IO05
GPIO4_IO01	37	38	GPIO5_IO13
GND	39	40	GPIO4_IO11

3. Mechanical Drawing

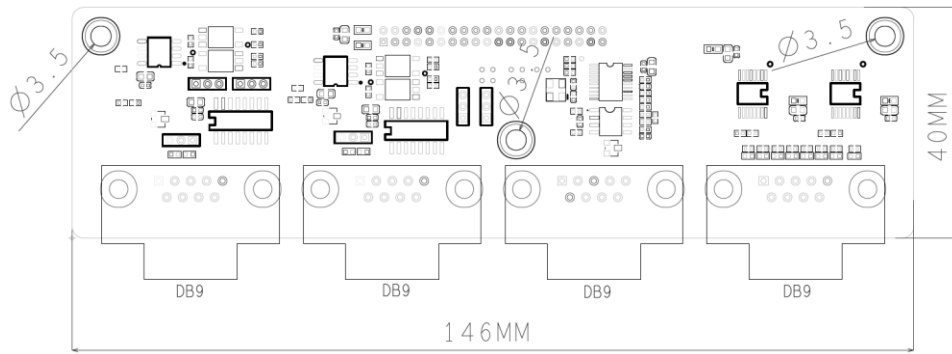
RSC-IMX8M



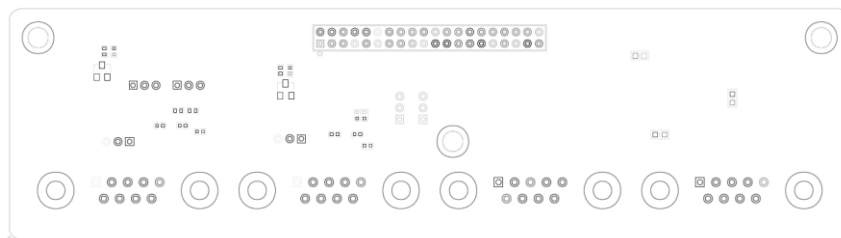
Unit: mm



Unit: mm



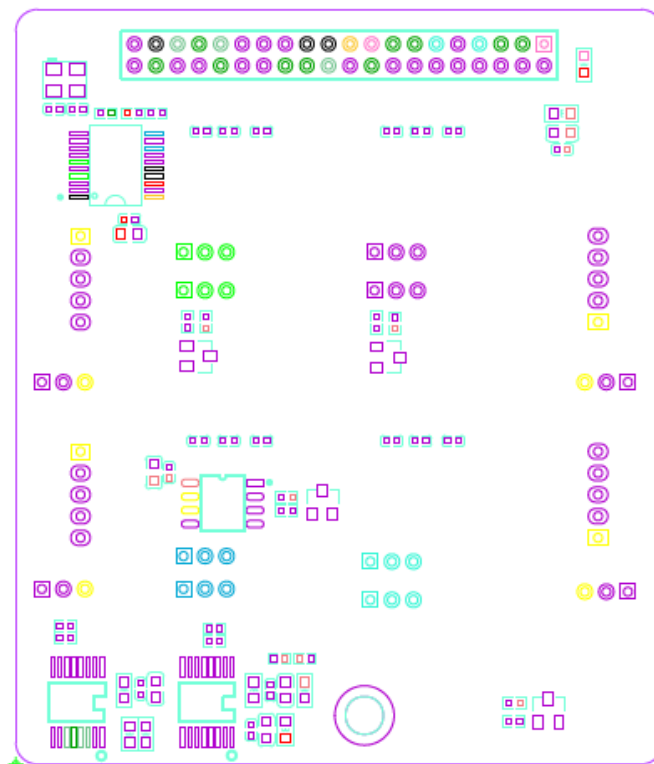
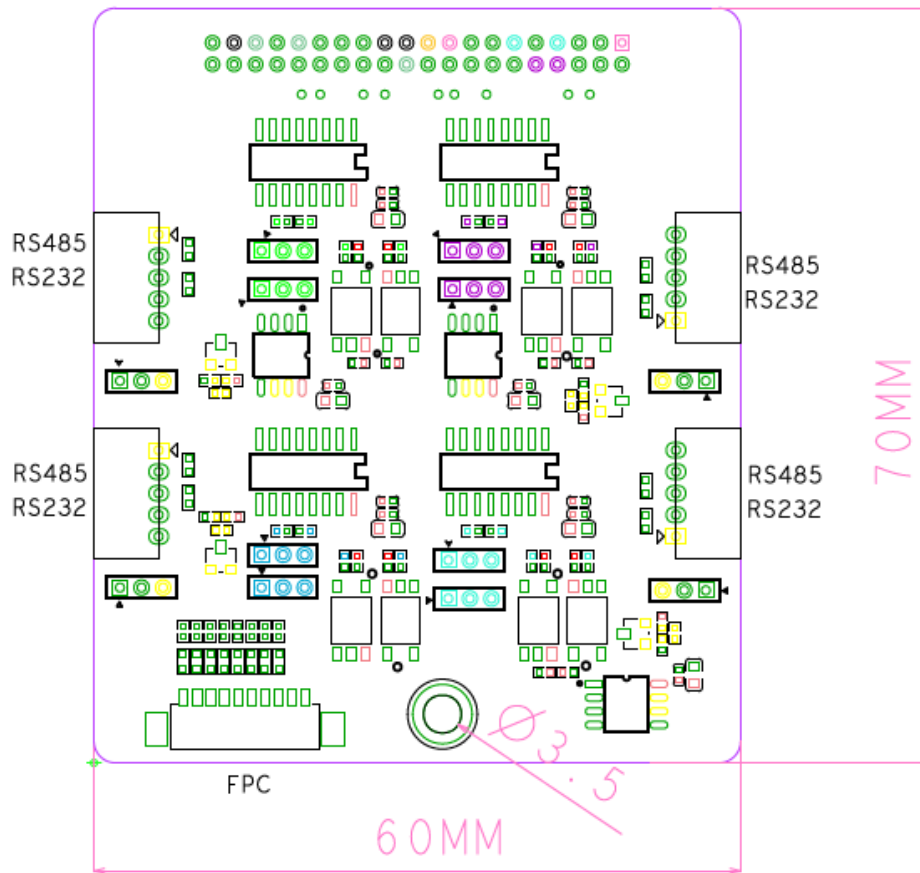
Unit: mm



Unit: mm

RSC-IMX8M

RSC-IMX8M-C



Unit: mm

