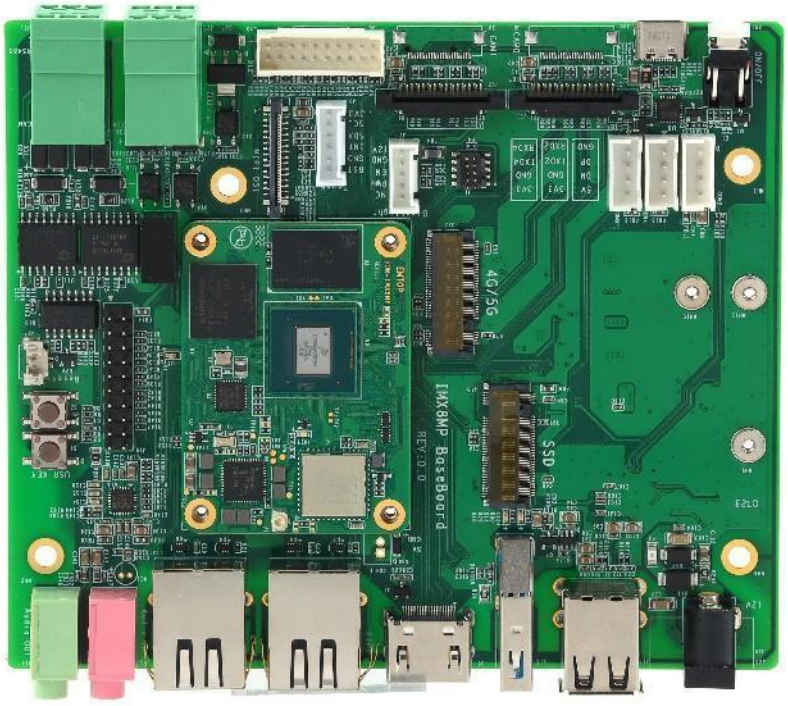
SBC-IMX8MP Hardware User Manual



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Revision History

Date	Version	Description
2023-01-03	V1.0	Initial Release
2023-07-14	V1.1	Check Errors

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1 Introduction

The IMX8MP BaseBoard is a baseboard that design by Emtop tech for the SOM board SOM-IMX8MP. It features a lot of rich and flexible interfaces. Can be used for the customers to develop their user programs, verify their expected functions and shorten product development cycles. The optional that with a box that can be used directly by the customer, or they can be customized a box and use this Kit directly for the productions.

2 Hardware Features

2.1 SOM-IMX8MP

Form Factor	✓ 50mm x 40mm x 7.3 mm
Processor Unit	● NXP Quad core Cortex-A53 (ARM v8) 64-bit SoC ■ @ 1.8GHz for Commercial ■ @1.6GHz for Industry ● 2.3 TOP/s Neural Network performance available for user ɔlications ● ARM Cortex-M7 Core CPU operating up to 800 MHz ● 375 Mpixel/s HDR Image Sensor Processor ISP ● Hifi4 Audio DSP, operating up to 800 MHz ● H.265 / H.264 (up to 1080p60 encode and decode), ● OpenGL ES 3.0 graphics, OpenCL 1.2
Graphics/GPU	● 3D Graphics: GC7000L ● 2D Graphics: GC520L
Video Codec/VPU	● 1080p60 VP9 ● 1080p60 HEVC/H.265 decoder ● 1080p60 AVC/H.264 Baseline, Main, High decoder ● 1080p60 VP8 ● 1080p60 AVC/H.264 encoder ● 1080p60 VP8 ● TrustZone support
Memory	● 2GB LPDDR4 on board (Support Up to 8GB Max)
Storage	● 16GB eMMC on board (Support Up to 64GB Max) ● 64Mb SPI Nor Flash

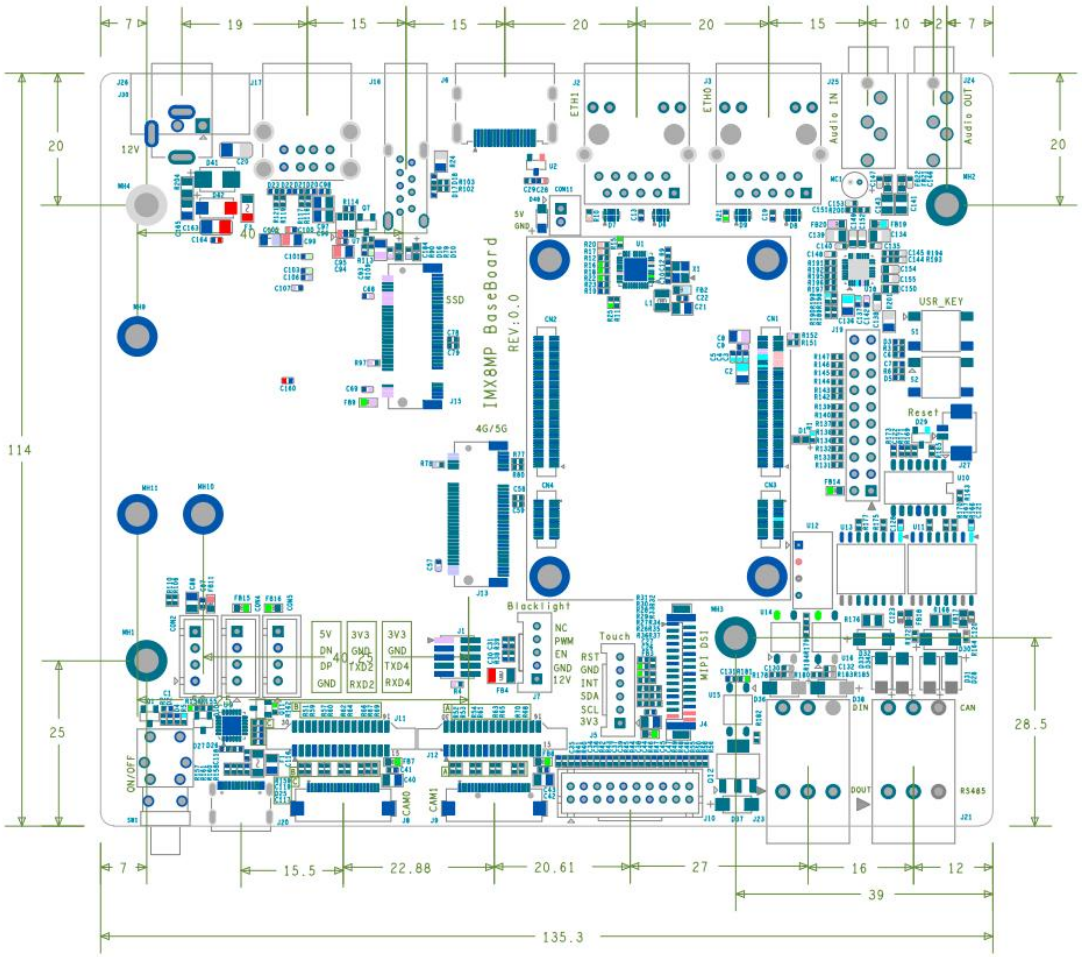
Ethernet/Wireless	● Onboard certified radio module with: ■ 2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac wireless ■ Bluetooth 5.1, BLE ● 2x Gigabit Ethernet controller ■ One Gigabit Ethernet controller with PHY on-board supporting IEEE 1588 ■ One Gigabit Ethernet controller supporting IEEE 1588, PHY is needed on baseboard
Connectivity	● 1× PCIe 1-lane Host, Gen 3 (5Gbps) ● 2× USB 3.0 port (high speed) ● 1x SDIO, eMMC 5.1 ● 66× GPIO supporting: ■ Up to 3× UART ■ Up to 4× I2C ■ Up to 2x SPI ■ 1x SDIO interface ■ 2x CANFD ■ 1x PCM ■ Up to 4 x PWM channels
Display	● 1x HDMI 2.0a ports (up to 1920 x 1080p60 supported) ● 1x 4-lane MIPI DSI (4-lane up to 1920 x 1080 at 60Hz) ● 1x 4-lane LVDS (up to approximately 1366x768p60)
Image Capture	● 2x 4-lane MIPI CSI-2
Audio Interface	● SPDIF input and output ● Five external synchronous audio interface (SAI) modules ● 8-channel PDM microphone input ● SPDIF input and output
Dimensions	● 50mm x 40mm x 7.3 mm
Operating Temperature	● Commercial Version: 0°C-70°C ● Industrial Version: -45°C-85°C
Power	● Single +5V Power supply input.

2.2 IMX8MP BaseBoard

Carrier Board Unit	Connectivity:	● WiFi/BT Combo(on SOM) ● 2x GbE LAN port ● 1x RS485 ● 1x CANFD

		● 2x TTL(Include Debug) ● 1x Debug ● 1x PCIe(M2 Key M) ● 1x I2C(For Touch), 1x PWM(For Backlight), 1xRTC (For Battery)
	I/O Interfaces:	● 14x GPIOs ● 2x DIN ● 2x DO
	USB:	● 2x USB2.0 host ● 1x USB3.0 host ● 1x M2 Key B(USB3.0)
	Display:	● 1x HDMI2.0a(1920 x 1080p60) ● 1x MIPI DSI ● 1x LVDS(single channel)
	Media:	● 2x MIPI CSI ● Audio IN/Out
	Power supply:	● 12V/2A typical
	Mechanical:	● 135.3x113mm

3 Mechanical Dimension

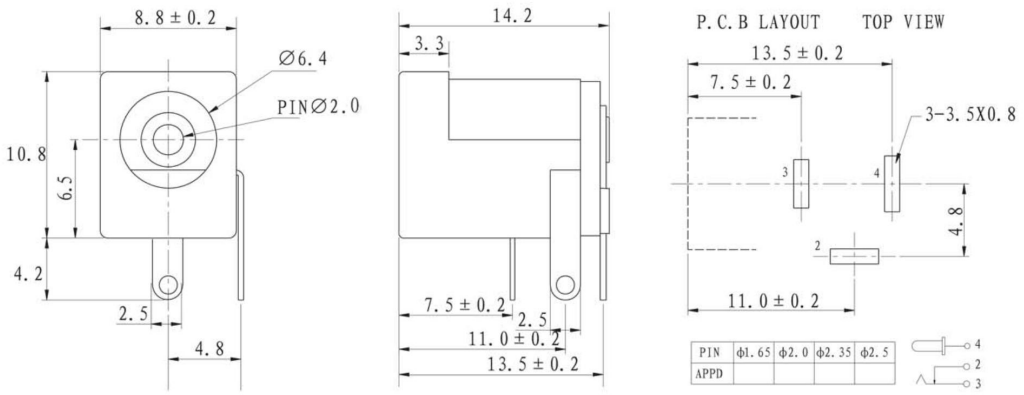


4 Interface Details

4.1 DC Power Input

The IMX8MP BASEBOARD places a DC Jack to feature a 12V power supply input. The recommended power supply is 12V/2A. If some customized features are requested, please contact the sales.

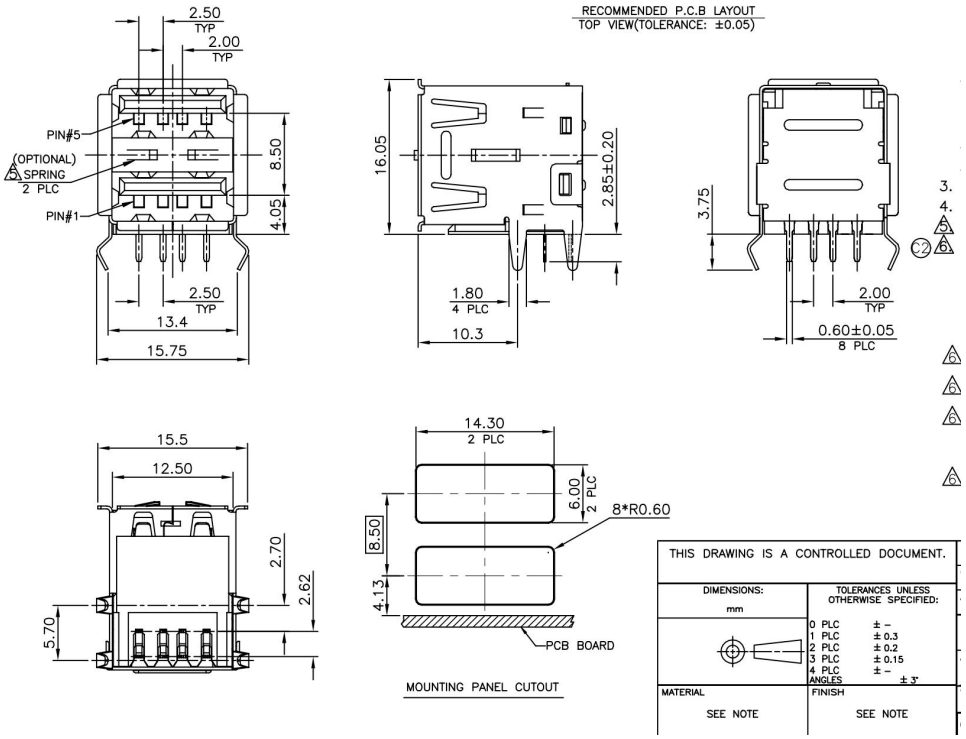
1) Part Reference：J26
2) Not special Pin1 is defined. The center is positive power input, and the negative pole around.
3) Specification for the DC Jack as below:



4.2 USB 2.0 Host

The IMX8MP BASEBOARD order one double-deck USB type A connector to feature 2 USB 2.0 host port for users.

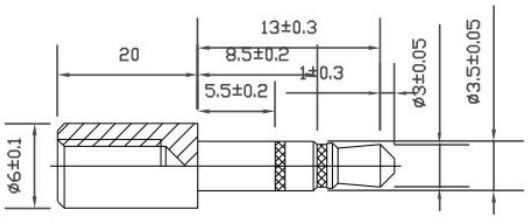
1) Part Reference：J17.
2) Not special Pin1 is defined.
3) Specification for the double-deck USB Host as below:



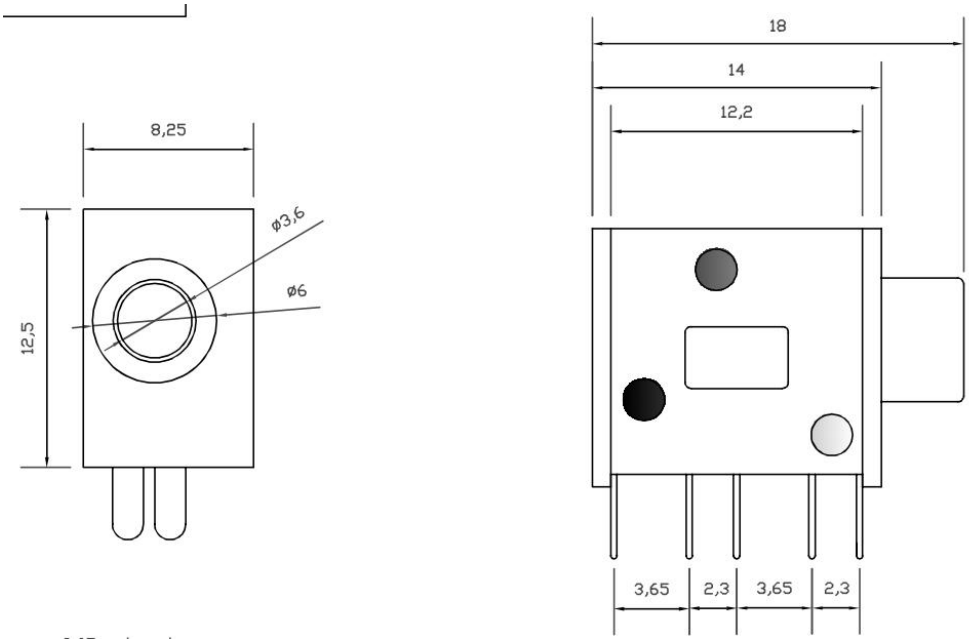
4.3 Audio Input/Output

The IMX8MP BASEBOARD order two 3.5mm audio connector to feature audio input and audio output function. The audio output can drive a headphone directly and the audio input can receive audio signal from microphone.

1) Part Reference：J25 for audio in, J24 for audio out.
2) Not special Pin1 is defined. The specification for the audio plug show as below:



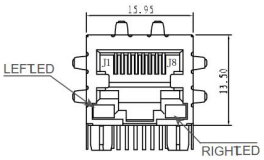
3) Specification for the audio connectors as below:

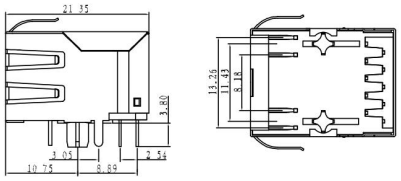


4.4 10/100/1000M Ethernet

The IMX8MP BASEBOARD feature two 10/100/1000M ethernet. These network ports are 10/100/1000M adaptive.

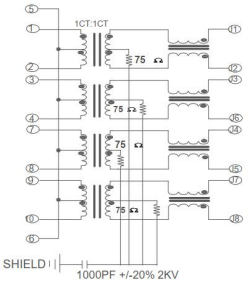
1) Part Reference：J2(ETH0), J3(ETH1).
2) Not special Pin1 is defined.
3) Specification for the RJ45 as below:



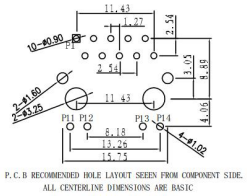


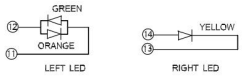
1.Turn Ratio(+/-2%):
TX=1CT:1CT RX=1CT:1CT
2.Inductance OCL:
350uH Min @100KHz/0.1V,8mA DC Bias
3.Insertion Loss:
-1.0dB Max @1.0-100MHz
4.Return Loss:
-20dB Min @1-10MHz
-16dB Min @10-30MHz
-12dB Min @30-60MHz
-10dB Min @60-100MHz
5.Cross talk:
-40dB Min @1-30MHz
-35dB Min @30-60MHz
-30dB Min @60-100MHz
6.Common Mode Rejection:
-30dB Min @1-50MHz
-20dB Min @50-150MHz
7.HIPOT TEST:1500V AC 1mA 6S
8.OPERATING TEMPERATURE RANGE:0-70℃

Schematics



ELECTRICAL SPECIFICATIONS @ 25°C unless otherwise noted:





Connect Material:
Housing:Thermoplastic,PBT,UL 94V-0,Black
Contact/Shield:Cooper alloy
Shield Plating:Nickel
Contact Plating:Selective gold 6u" Min

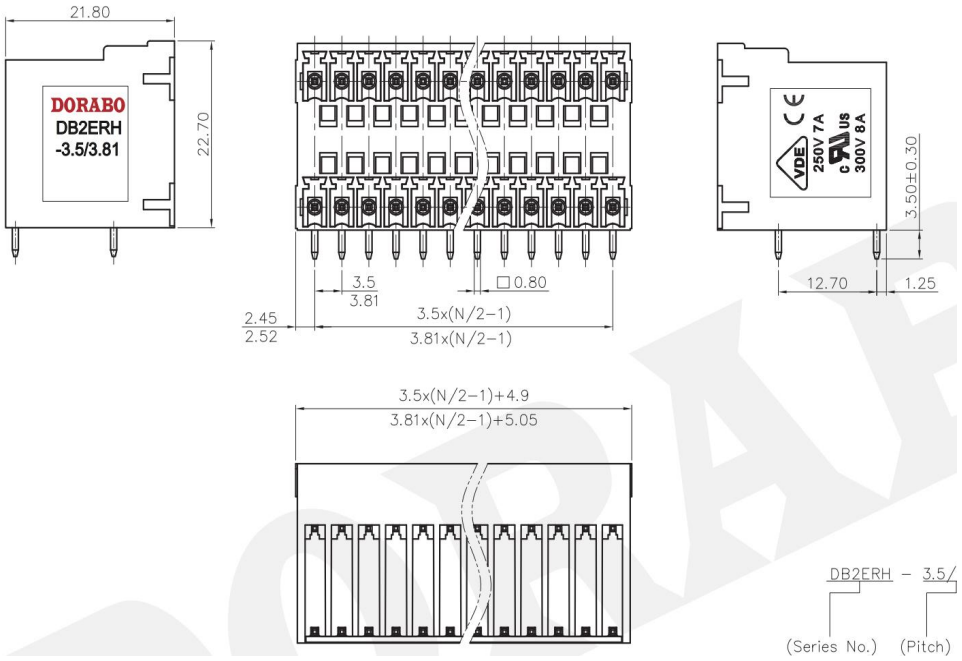
4.5 DIN/DO

The IMX8MP BASEBOARD order a 3.81mm double-deck Terminal Block Header to feature two digital input and digital output. Upper layer features the digital output and the bottom layer features the digital input.

1) Part Reference：J23
2) Not special Pin1 is defined. The pin define for the digital input/output as below:

Upper	DIN1	DIN2	GND
Bottom	DOUT1+	COMMON	DOUT2+

3) Specification for the connector for the digital input/output as below:



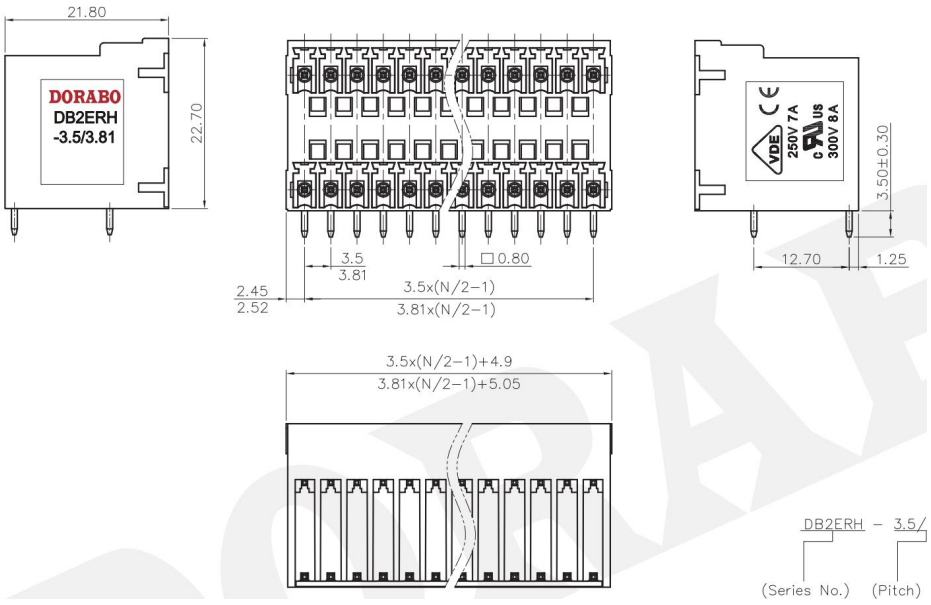
4.6 CAN/RS485

The IMX8MP BASEBOARD order a 3.81mm double-deck Terminal Block Header to feature CAN and RS485 function. Upper layer features the CAN interface and the bottom layer features the RS485 interface.

1) Part Reference：J21
2) Not special Pin1 is defined. The pin define for the CAN/RS485 as below:

Upper	CAN_L	CAN_H	CAN_GND
Bottom	RS485_A	RS485_B	RS485_GND

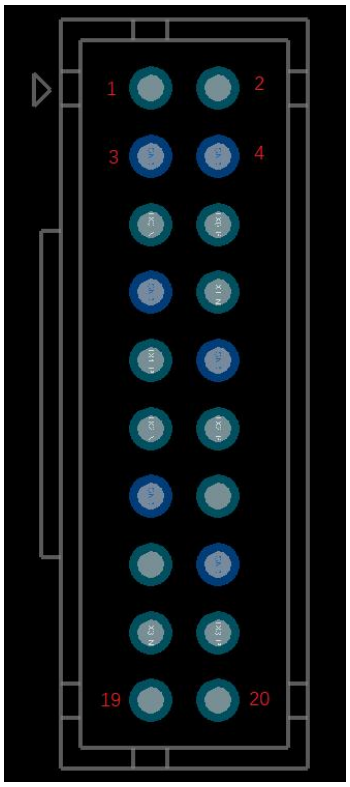
3) Specification for the connector for the digital input/output as below:



4.7 LVDS

The IMX8MP BASEBOARD order a 2.00mm pitch connector to feature the one display interface. It is a single channel LVDS output port.

1) Part Reference：J10
2) The 2.00mm pitch connector has an special Pin1 defined that shows below.

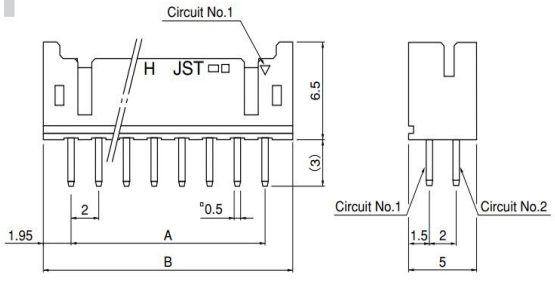


3) The pin defines for the LVDS Connector as below:

Pin Num.	Pin Name	Level	Description
1	PWR_LVDS	--	Power for panel, 3.3/5V optional
2	PWR_LVDS	--	Power for panel, 3.3/5V optional
3	GND	Ground	Ground
4	GND	Ground	Ground
5	LVDS0_TX0_N		Differential signal negative
6	LVDS0_TX0_P		Differential signal positive
7	GND		Ground
8	LVDS0_TX1_N		Differential signal negative
9	LVDS0_TX1_P		Differential signal positive
10	GND		Ground
11	LVDS0_TX2_N		Differential signal negative
12	LVDS0_TX2_P		Differential signal positive
13	GND		Ground
14	LVDS0_CLK_N		Differential signal negative
15	LVDS0_CLK_P		Differential signal positive
16	GND		Ground
17	LVDS0_TX3_N		Differential signal negative
18	LVDS0_TX3_P		Differential signal positive
19	SEL1		10K pull down default
20	SEL2		10K pull down default

4) Specification for the 20pin 2.00mm connector as below:

Top entry type



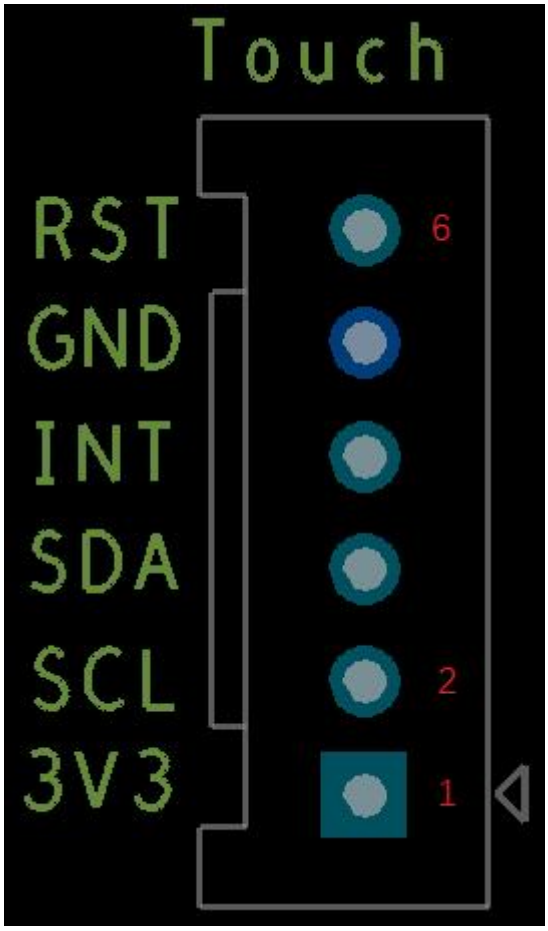
Circuits	Model No.				Dimensions (mm)	
	Glass-filled nylon		Nylon			
	Top entry type	Side entry type	Top entry type	Side entry type	A	B
8	B8B-PHDSS	S8B-PHDSS	—	—	6.0	9.9
10	B10B-PHDSS	S10B-PHDSS	B10B-PHDSS-B	S10B-PHDSS-B	8.0	11.9
12	B12B-PHDSS	S12B-PHDSS	B12B-PHDSS-B	S12B-PHDSS-B	10.0	13.9
14	B14B-PHDSS	S14B-PHDSS	B14B-PHDSS-B	S14B-PHDSS-B	12.0	15.9
16	B16B-PHDSS	S16B-PHDSS	B16B-PHDSS-B	S16B-PHDSS-B	14.0	17.9
18	B18B-PHDSS	S18B-PHDSS	B18B-PHDSS-B	S18B-PHDSS-B	16.0	19.9
20	B20B-PHDSS	S20B-PHDSS	B20B-PHDSS-B	S20B-PHDSS-B	18.0	21.9
22	B22B-PHDSS	S22B-PHDSS	B22B-PHDSS-B	S22B-PHDSS-B	20.0	23.9
24	B24B-PHDSS	S24B-PHDSS	B24B-PHDSS-B	S24B-PHDSS-B	22.0	25.9
26	B26B-PHDSS	S26B-PHDSS	B26B-PHDSS-B	S26B-PHDSS-B	24.0	27.9
28	B28B-PHDSS	S28B-PHDSS	B28B-PHDSS-B	S28B-PHDSS-B	26.0	29.9
30	B30B-PHDSS	S30B-PHDSS	B30B-PHDSS-B	S30B-PHDSS-B	28.0	31.9
32	B32B-PHDSS	S32B-PHDSS	B32B-PHDSS-B	S32B-PHDSS-B	30.0	33.9
34	B34B-PHDSS	S34B-PHDSS	B34B-PHDSS-B	S34B-PHDSS-B	32.0	35.9

Material and Finish

4.8 Touch

The IMX8MP BASEBOARD order a 2.00mm pitch connector to feature the touch interface for LVDS. It can be used for other purpose if not require a touch function. Please note that the touch signals are shared with the MIPI display

1) Part Reference：J5
2) The 2.00mm pitch connector has an special Pin1 defined that shows below.

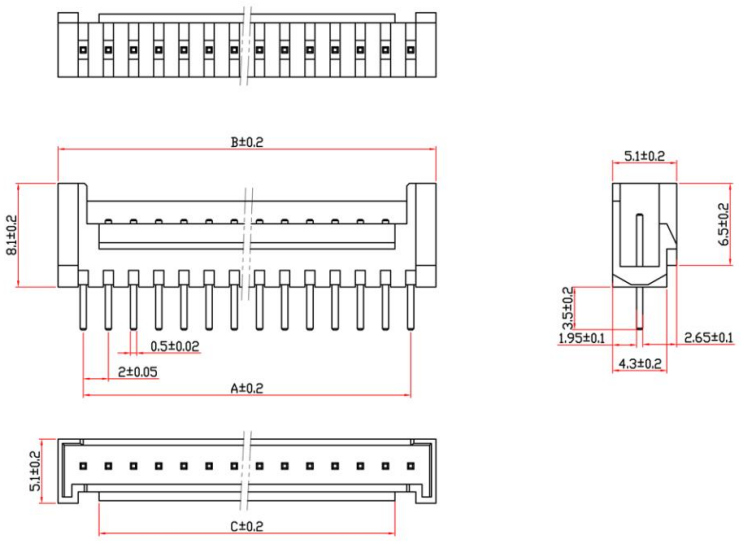


3) The pin defines for the touch Connector as below:

Pin Num.	Pin Name	Level	Description
1	3V3	--	3.3V power output
2	CTP_SCL	--	I2C2 clock
3	CTP_SDA	Ground	I2C2 data
4	CTP_INT	Ground	Interrupt for touch
5	GND		Ground
6	CTP_RST		Reset output for touch

4) Specification for the 20pin 2.00mm connector as below:

连接器

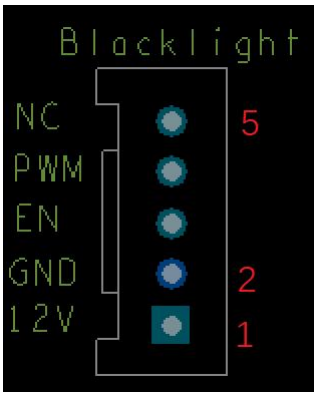


物料名称	物 料 号	A	B	C	物料名称	物 料 号	A	B	C
HY-2A		2	6	2.5	HY- 9A		16.0	20.0	13.5
HY-3A		4.0	8.0	2.5	HY-10A		18.0	22.0	15.5
HY-4A		6.0	10.0	3.5	HY-11A		20.0	24.0	17.5
HY-5A		8.0	12.0	5.5	HY-12A		22.0	26.0	19.5
HY-6A		10.0	14.0	7.5	HY-13A		24.0	28.0	21.5
HY-7A		12.0	16.0	9.5	HY-14A		26.0	30.0	23.5
HY-8A		14.0	18.0	11.5	HY-16A		28.0	32.0	25.5

4.9 Backlight

The IMX8MP BASEBOARD order a 2.00mm pitch connector to feature the backlight interface for LVDS. It can be used for other purpose if not require a backlight.

1) Part Reference：J7
2) The 2.00mm pitch connector has an special Pin1 defined that shows below.

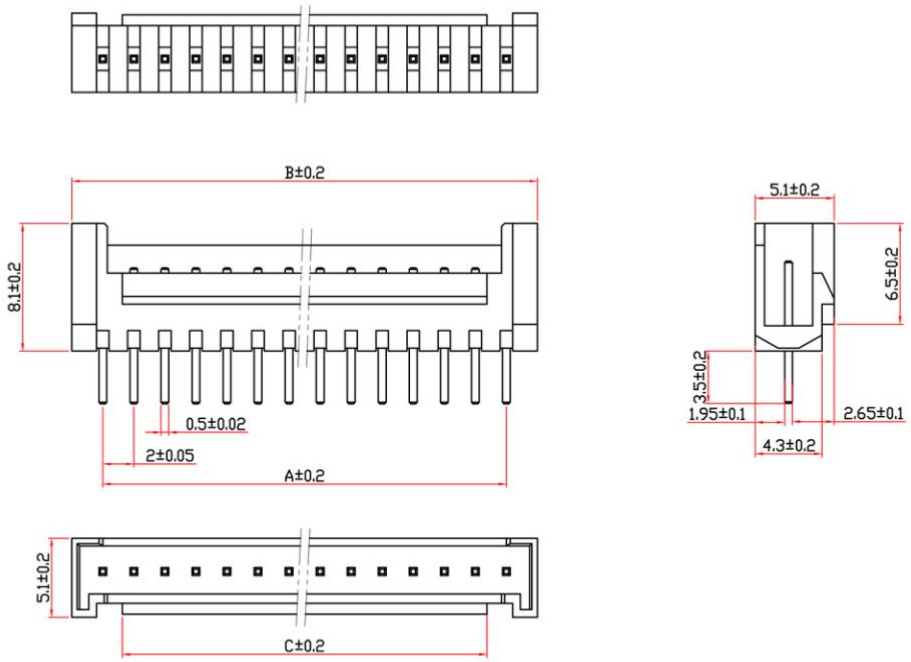


3) The pin defines for the touch Connector as below:

Pin Num.	Pin Name	Level	Description
1	12V	--	12V power output
2	GND		Ground
3	EN	3.3V	Blacklight enable
4	PWM	3.3V	PWM output for backlight
5	NC		No connection

4) Specification for the 20pin 2.00mm connector as below:

连接器

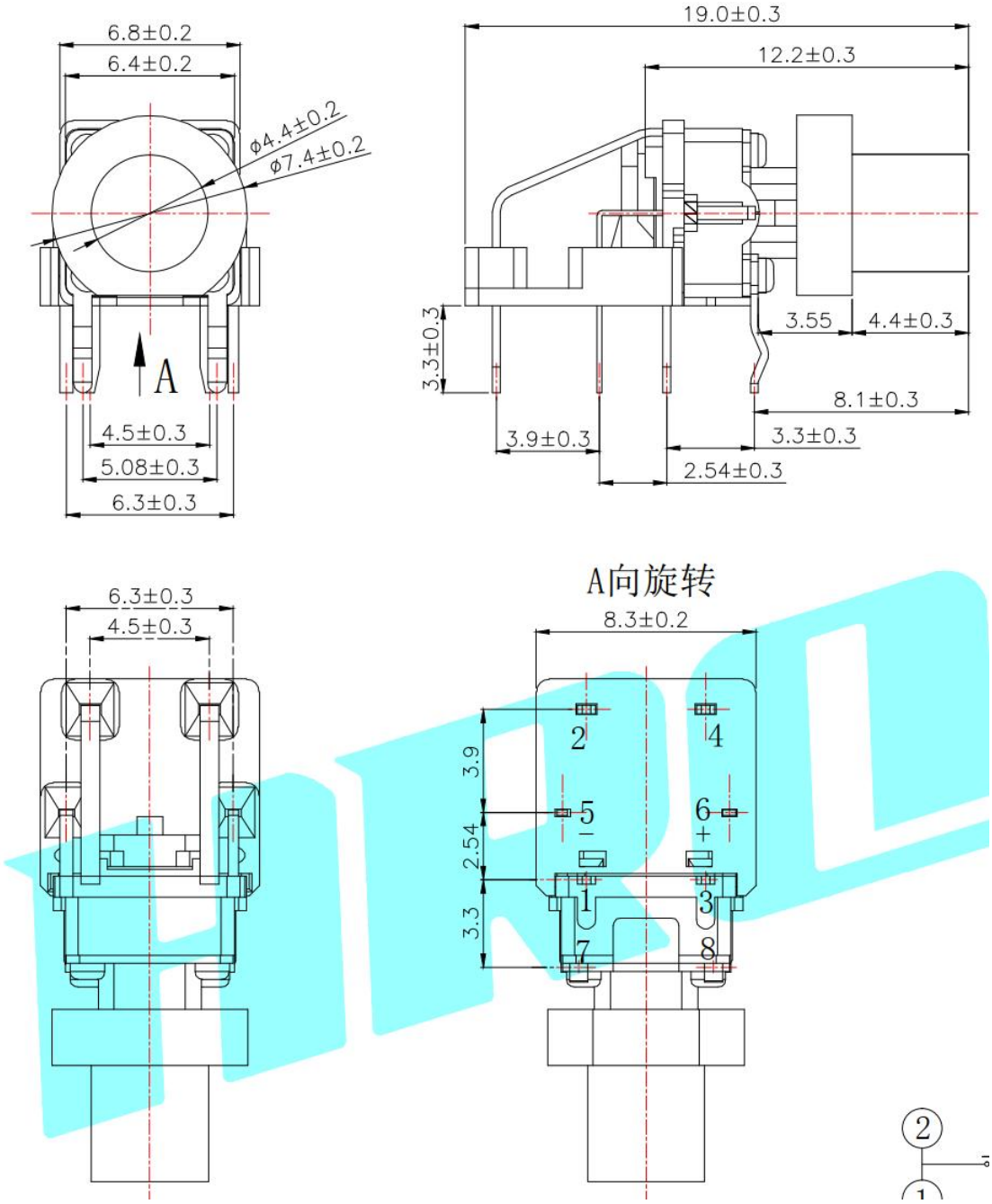


物料名称	物 料 号	A	B	C	物料名称	物 料 号	A	B	C
HY-2A		2	6	2.5	HY- 9A		16.0	20.0	13.5
HY-3A		4.0	8.0	2.5	HY-10A		18.0	22.0	15.5
HY-4A		6.0	10.0	3.5	HY-11A		20.0	24.0	17.5
HY-5A		8.0	12.0	5.5	HY-12A		22.0	26.0	19.5
HY-6A		10.0	14.0	7.5	HY-13A		24.0	28.0	21.5
HY-7A		12.0	16.0	9.5	HY-14A		26.0	30.0	23.5
HY-8A		14.0	18.0	11.5	HY-16A		28.0	32.0	25.5

4.10 Power Button

The IMX8MP BASEBOARD has a button key to for interrupt input or power on/off. Short press the user button will generate an interrupt and long press the user button will turn down the system.

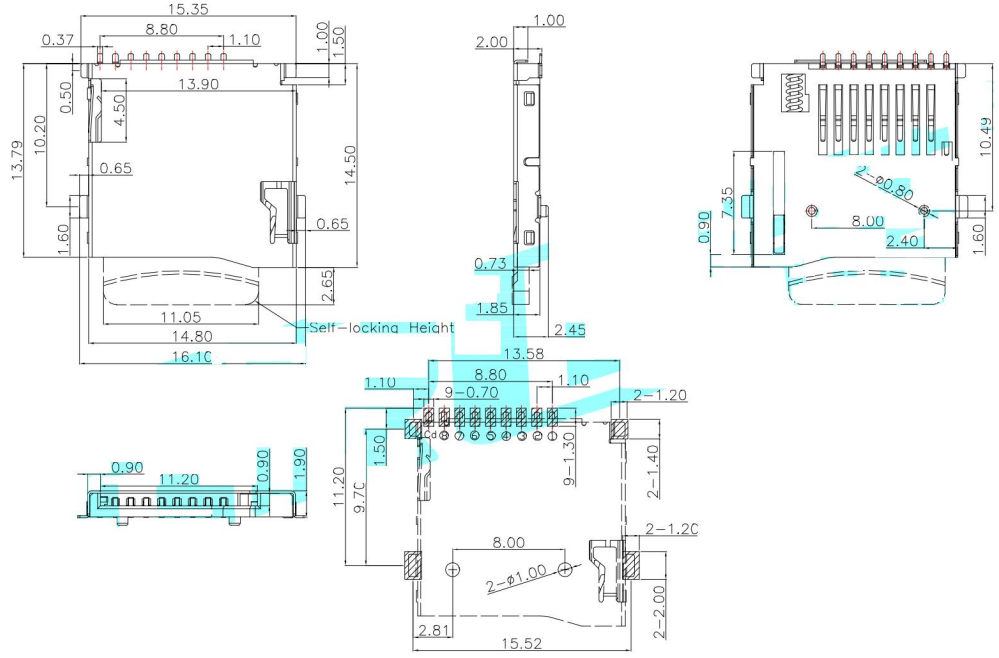
1) Part Reference：SW1
2) Not special Pin1 is defined.
3) Specification for the user button as below:



4.11 TF Card

The IMX8MP BASEBOARD has a TF Card connector to install a media card. This media card can be used for data storage or for firmware.

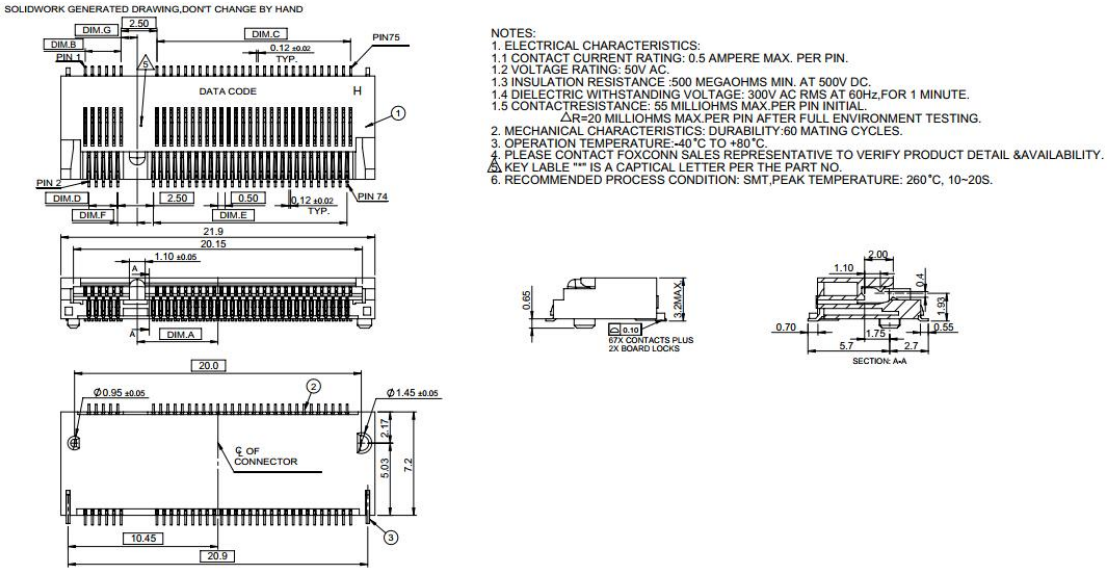
1) Part Reference: J18.
2) Not special Pin1 is defined.
3) Specification for the user button as below:


15.35
8.80
0.37
1.10
1.00
1.50
13.90
0.50
4.50
10.20
13.79
0.65
14.50
0.65
1.60
2.65
11.05
14.80
16.10
Self-locking Height
2.00
1.00
0.73
1.85
2.45
13.58
1.10
8.80
1.10
9-0.70
2-1.20
1.50
9-1.30
2-1.40
11.20
9.70
2-1.20
8.00
2-φ1.00
2-2.00
2.81
15.52
0.90
11.20
0.90
1.90
10.49
2-φ0.80
8.00
2.40
7.35
0.90
1.60

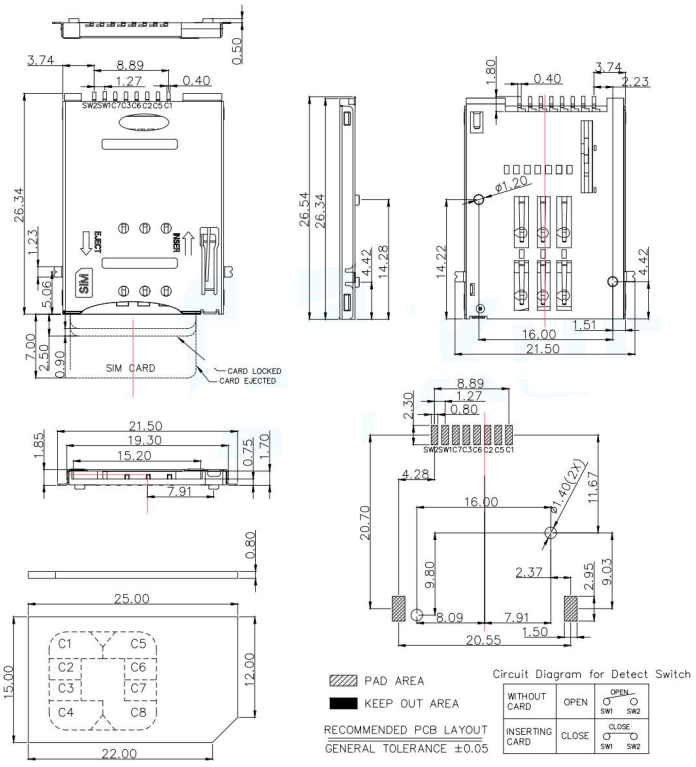
4.12 4G/5G

The IMX8MP BASEBOARD has a MiniPCIe and a SIM card connector used for 4G or 5G module. 4G module is 2242 size and 5G module is 3052.

1) Part Reference：J13 for 4G module and J14 for SIM Card.
2) Not special Pin1 is defined.
3) Specification for the MiniPCIe as below:



4) Specification for the 4G SIM card as below:

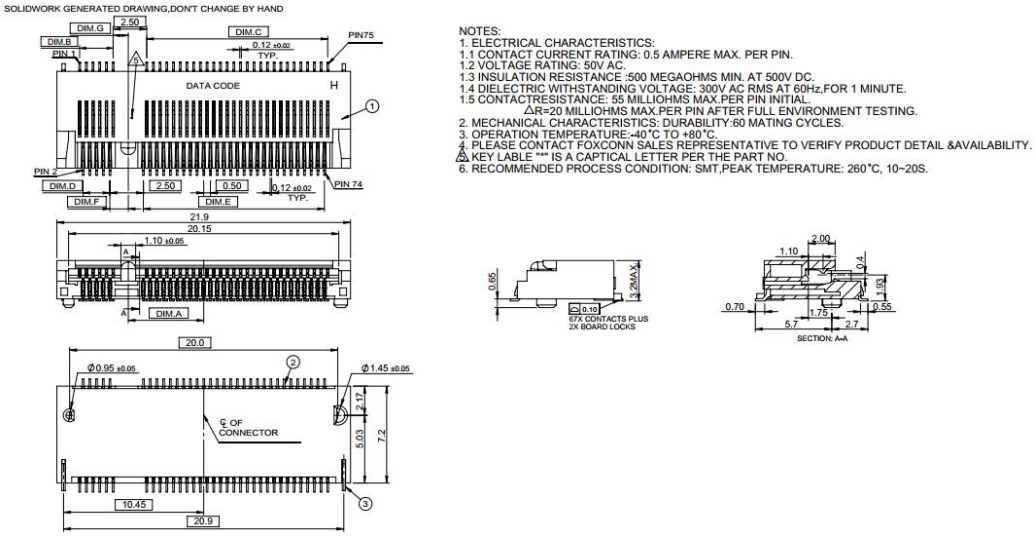


4.13 NVME

The IMX8MP BASEBOARD has a MiniPCIe that is used for NVME SSD storage.

The port can offer the PCIe 3.0 one lane and can install the 2242 SSD expansion.

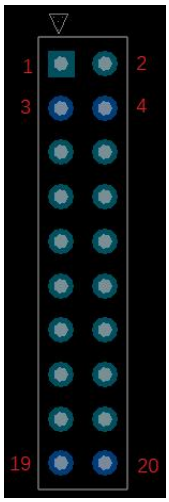
1) Part Reference：J15.
2) Not special Pin1 is defined.
3) Specification for the MiniPCIe as below:



4.14 2.54mm Extension Interface

The IMX8MP BASEBOARD has a 2x10pin 2.54mm pitch pin header for IO extension. A four wire SPI and ten GPIOs through this pin header.

1) Part Reference：J19.
2) Pin1 position shows as below.

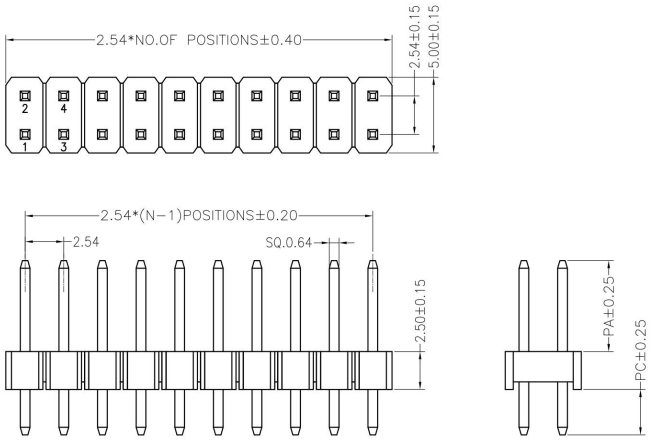


3) The defines for the pin header as below table.

Pin Num.	Pin Name	Level	Description
1	3.3V Output	--	Power Output
2	3.3V Output	--	Power Output
3	GND	--	Ground
4	GND	--	Ground
5	GPIO1_IO09	3.3V	General Purpose Input Output
6	ECSPI2_SCLK	3.3V	General Purpose Input Output
7	GPIO1_IO08	3.3V	General Purpose Input Output
8	ECSPI2_SS0	3.3V	General Purpose Input Output
9	SAI3_RXC	3.3V	General Purpose Input Output
10	ECSPI2_MISO	3.3V	General Purpose Input Output
11	SAI5_RXD0	--	General Purpose Input Output, The level of this pin is related to the input of pin J15 of J3
12	ECSPI2_MOSI	3.3V	General Purpose Input Output
13	SAI2_MCLK	3.3V	General Purpose Input Output
14	SAI1_RXC	--	General Purpose Input Output, The level of this pin is related to the input of pin J15 of J3

15	UART3_CTS	3.3V	General Purpose Input Output
16	SAI5_RXFS	--	General Purpose Input Output, The level of this pin is related to the input of pin J15 of J3
17	SAI2_RXC	3.3V	General Purpose Input Output
18	GPIO1_IO06	3.3V	General Purpose Input Output
19	GND		
20	GND		

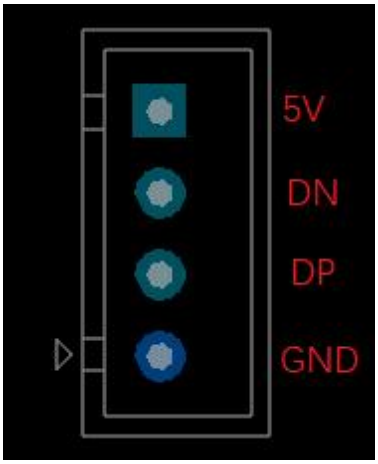
4) Specification for the user button as below:



4.15 USB Extension Interface

The IMX8MP BASEBOARD has a 1x4pin 2.5mm pitch pin header with box for USB expansion. This connector is routed to a 7 ports USB HUB FE2.1 to provide standard USB2. 0 signal.

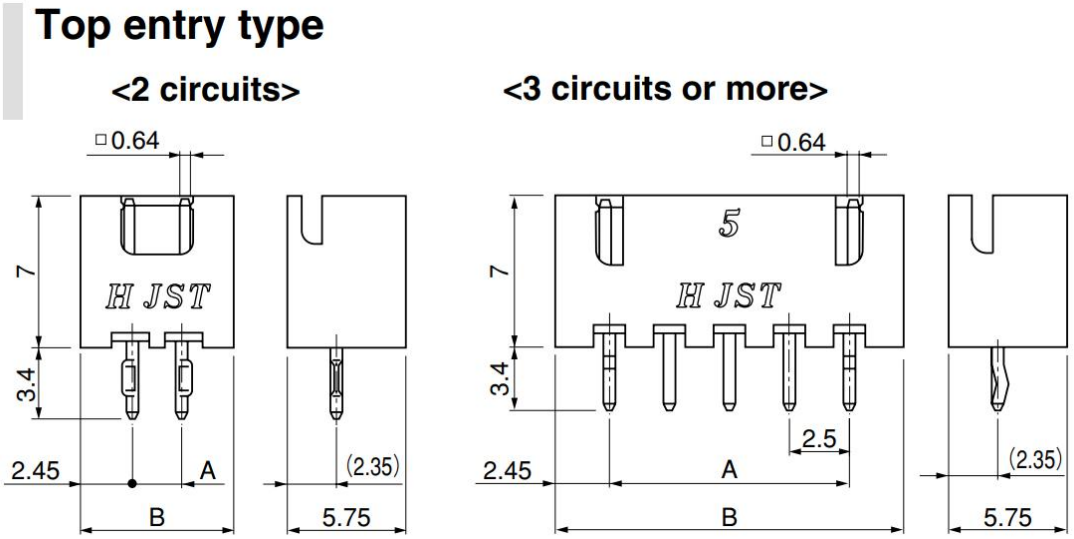
1) Part Reference：CON2.
2) Pin1 position shows as below.



3) The defines for the pin header as below table.

Pin Num	Signal Name
1	5V/500mA Output
2	DN
3	DP
4	GND

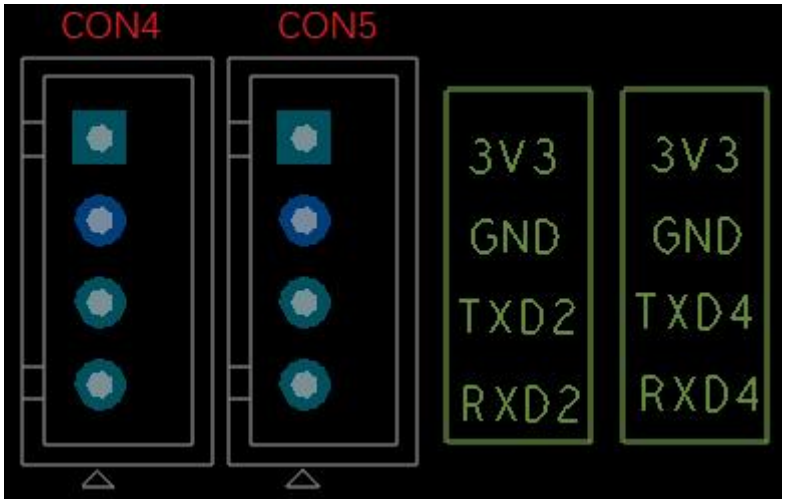
4) Specification for the user button as below:



4.16 Debug Extension

The IMX8MP BASEBOARD has two 1x4pin 2.00mm pitch pin header with box for Debug expansion. These two pin headers are connected to the UART2 and UART4. The UART2 is debug port for A53 and the UART4 is debug port for M7 default. These two headers are connected to the USB to UART chip also.

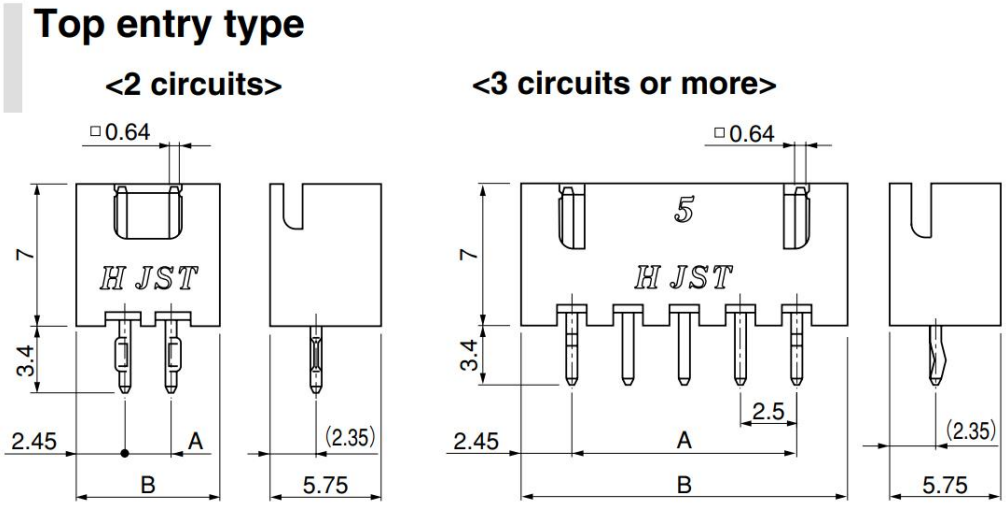
1) Part Reference：CON4, CON5.
2) Pin1 position shows as below.



3) The defines for the pin header as below table.

Pin Num.	Pin Name	Level	Description
1	3.3V Output	--	Power Output
2	GND	--	Power Output
3	TXD*	3.3V	Transmit Data for UART2 or UART4
4	RXD*	3.3V	Receive Data for UART2 or UART4

4) Specification for the user button as below:

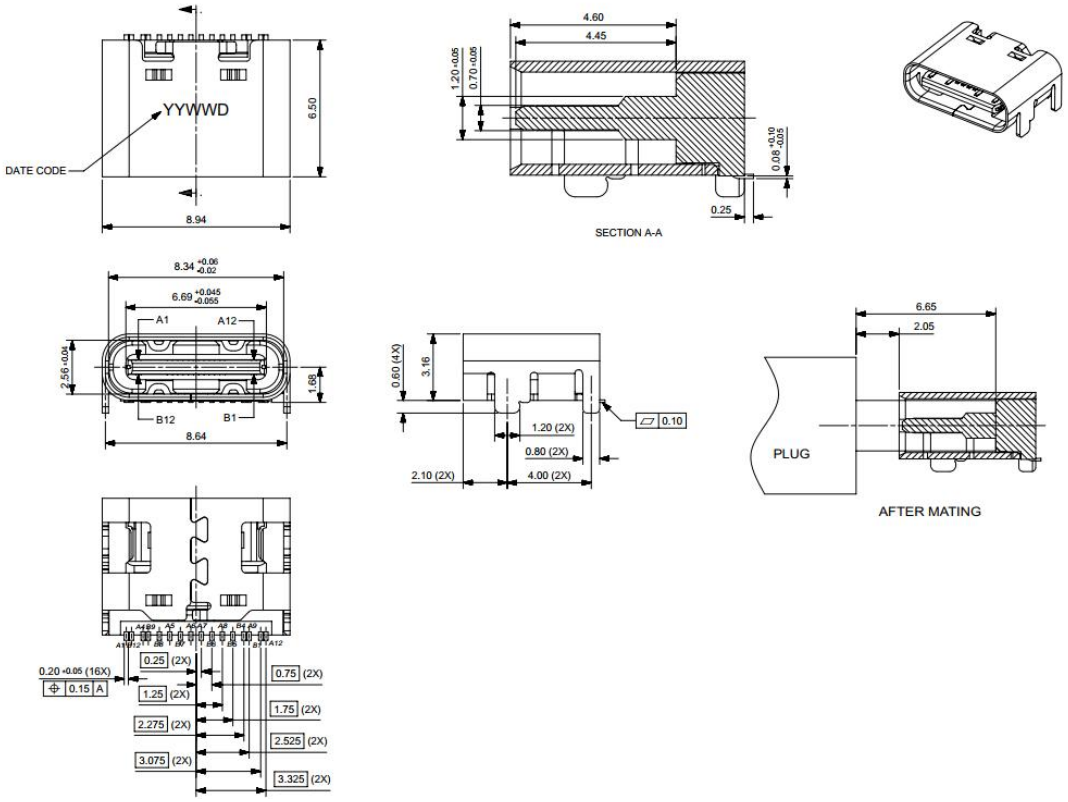


4.17 Debug Port

The IMX8MP BASEBOARD has a USB type C port for debug, The USB port hire a USB to UART chip connect to UART2 and UART4 of the SOM board for debug purpose.

1) Part Reference: J20.
2) Not special Pin1 is defined.

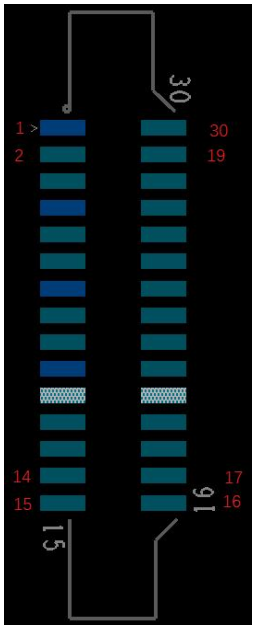
3) Specification for the user button as below:



4.18 Camera CSI0

The IMX8MP BASEBOARD has two 15 pin 1.00mm pitch FPC connector for Camera module. The PHY for this camera is CSI0 and run in 2 lane mode. The port shares the same Power EN controller with CSI1.

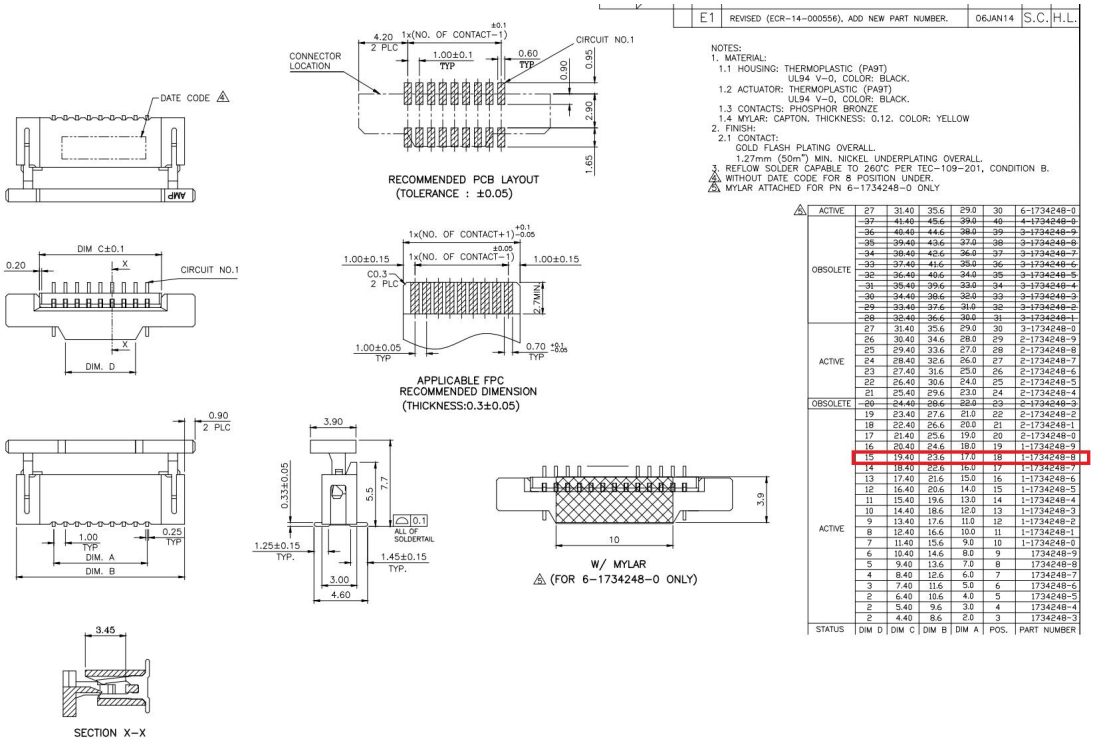
1) Part Reference：J11.
2) Please note that although these is 30 pins in the connector but these is only 15 contactor. Pin1 position shows as below.



3) The defines for the pin header as below table.

Pin Num.	Pin Name	Level	Description
1	GND	--	Ground
2	CAM0_D0_N	--	Differential signal negative
3	CAM0_D0_P		Differential signal positive
4	GND		Ground
5	CAM0_D1_N		Differential signal negative
6	CAM0_D1_P		Differential signal positive
7	GND		Ground
8	CAM0_C_N		Differential signal negative
9	CAM0_C_P		Differential signal positive
10	GND		Ground
11	CAM_PWREN	3.3V	Camera Power Enable
12	NC		No connection
13	I2C5_SCL	3.3V	I2C5 clock
14	I2C5_SDA	3.3V	I2C5 data
15	CAM0_3V3		3.3V power output

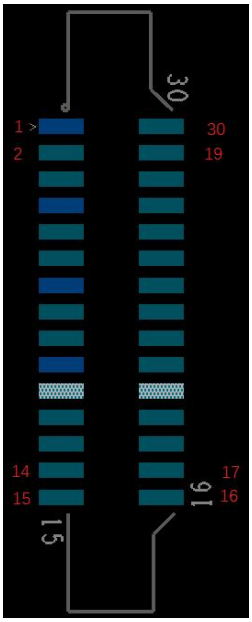
4) Specification for the user button as below:



4.19 Camera CSI1

The IMX8MP BASEBOARD has two 15 pin 1.00mm pitch FPC connector for Camera module. The PHY for this camera is CSI1 and run in 2 lane mode. The port shares the same Power EN controller with CSI0.

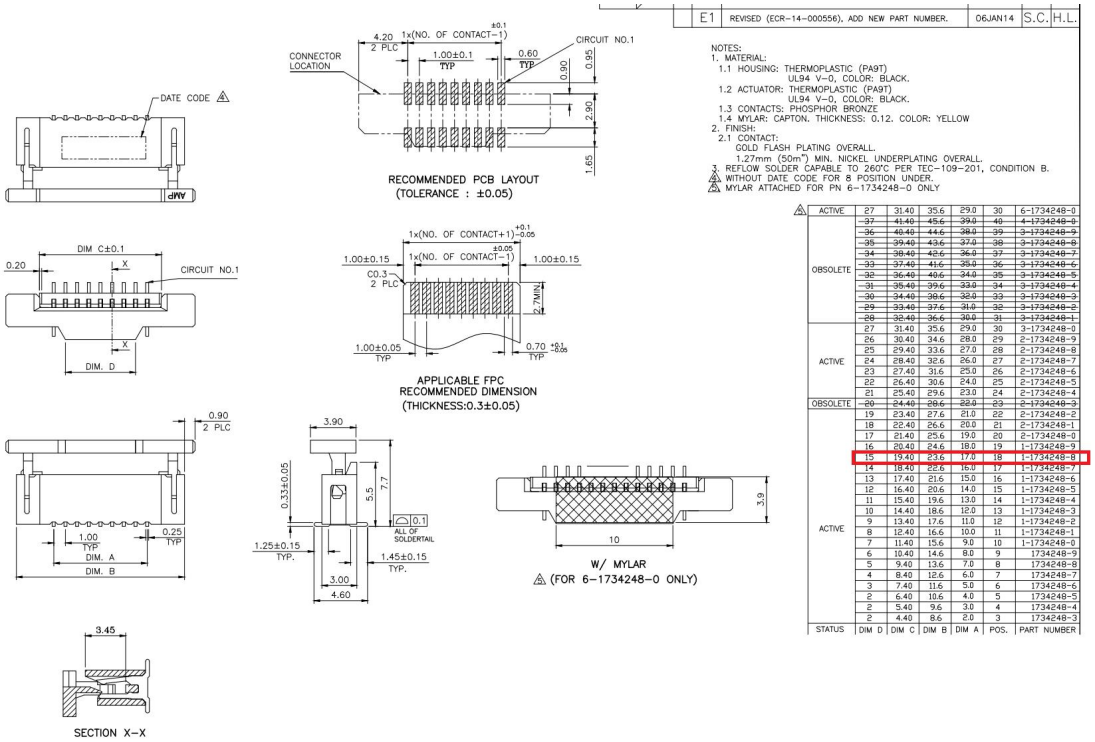
1) Part Reference：J12.
2) Please note that although these is 30 pins in the connector but these is only 15 contactor. Pin1 position shows as below.



3) The defines for the pin header as below table.

Pin Num.	Pin Name	Level	Description
1	GND	--	Ground
2	CAM1_D0_N	--	Differential signal negative
3	CAM1_D0_P		Differential signal positive
4	GND		Ground
5	CAM1_D1_N		Differential signal negative
6	CAM1_D1_P		Differential signal positive
7	GND		Ground
8	CAM1_C_N		Differential signal negative
9	CAM1_C_P		Differential signal positive
10	GND		Ground
11	CAM_PWREN	3.3V	Camera Power Enable
12	NC		No connection
13	I2C3_SCL	3.3V	I2C3 clock
14	I2C3_SDA	3.3V	I2C3 data
15	CAM0_3V3		3.3V power output

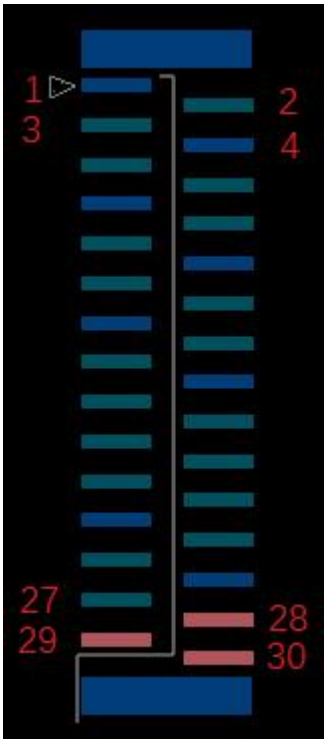
4) Specification for the user button as below:



4.20 MIPI DSI

The IMX8MP BASEBOARD has a 30 pin 0.5mm pitch FPC connector for MIPI panel. The pin definition for this connector also includes the I2C and USB port for touch and PWM for blacklight.

1) Part Reference：J4.
2) Pin1 position shows as below.



3) The defines for the pin header as below table.

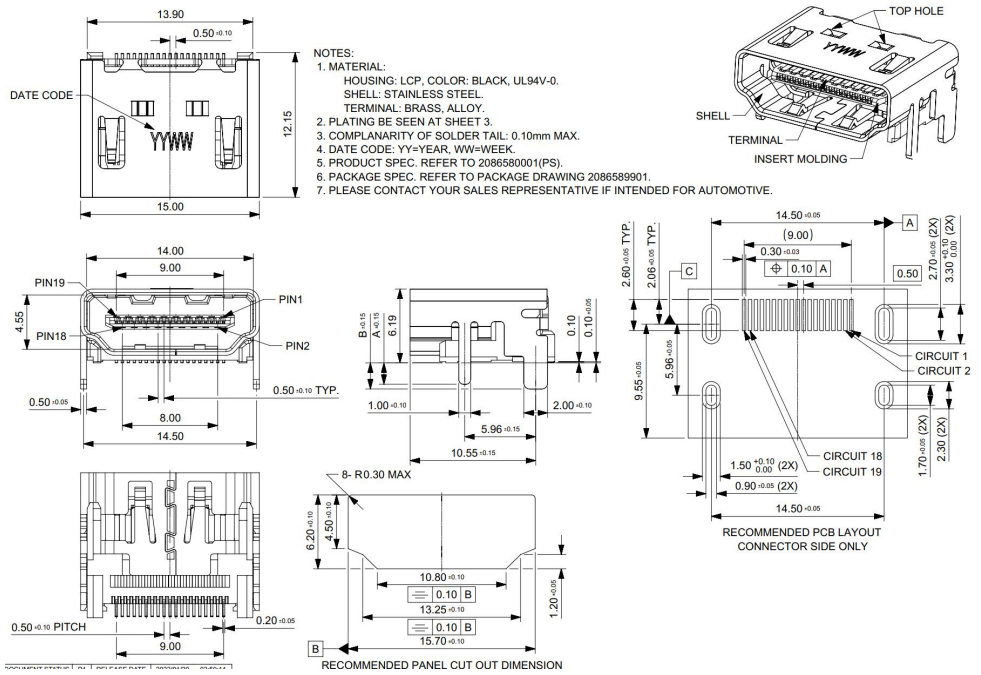
Pin Num.	Pin Name	Level	Description
1	GND		Ground
2	DSI1_D0_N		Differential signal negative
3	DSI1_D0_P		Differential signal positive
4	GND		Ground
5	DSI1_D1_N		Differential signal negative
6	DSI1_D1_P		Differential signal positive
7	GND		Ground
8	DSI1_C_N		Differential signal negative
9	DSI1_C_P		Differential signal positive
10	GND		Ground
11	DSI1_D2_N		Differential signal negative
12	DSI1_D2_P		Differential signal positive
13	GND		Ground
14	DSI1_D3_N	3	Differential signal negative
15	DSI1_D3_P		Differential signal positive
16	GND		Ground
17	CTP_RST		Touch Panel reset output
18	CTP_INT		Touch panel interrupt input
19	I2C2_SDA		I2C2 data
20	I2C2_SCL		I2C2 clock
21	DSI_BK_EN		Backlight enable

22	DSI_BK_PWM		Backlight PWM
23	GND		Ground
24	USB_HUB_DM2		Differential signal negative
25	USB_HUB_DP2		Differential signal positive
26	GND		Ground
27	NC		
28	VDD5V		5V Power Output
29	VDD5V		5V Power Output
30	VDD5V		5V Power Output

4.21 HDMI

The IMX8MP BASEBOARD has a 19pin HDMI type A connector for HDMI 2.0a output. This is the default output for IMX8M Plus.

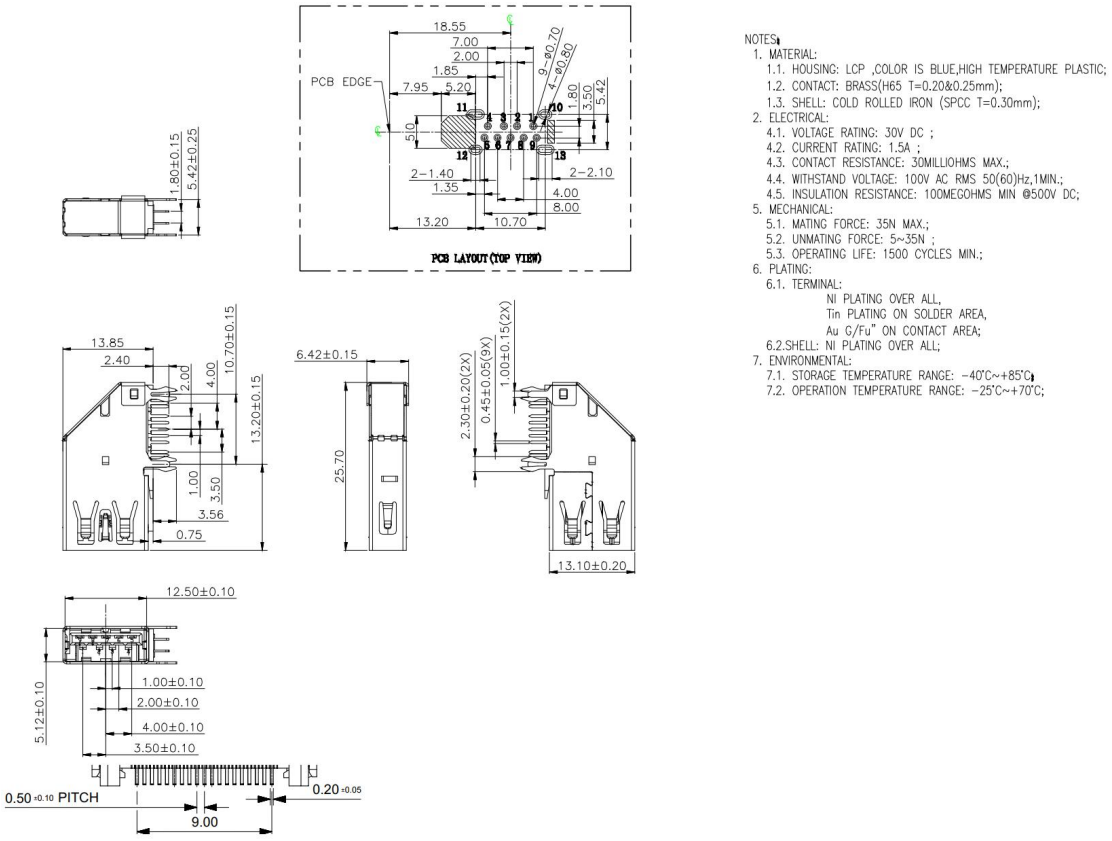
1) Part Reference：J6.
2) Not special Pin1 is defined.
3) Specification for the user button as below:



4.22 USB3.0 Host

The IMX8MP BASEBOARD has a USB3.0 type A connector for USB host.

1) Part Reference：J16.
2) Not special Pin1 is defined.
3) Specification for the user button as below:

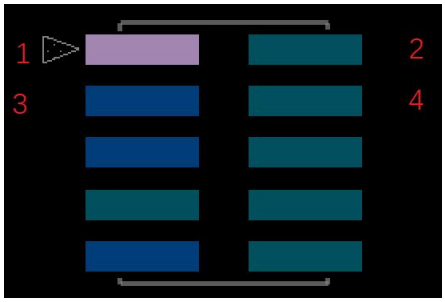


NOTES:
1. MATERIAL:
   1.1. HOUSING: LCP ,COLOR IS BLUE,HIGH TEMPERATURE PLASTIC;
   1.2. CONTACT: BRASS(H65 T=0.20&0.25mm);
   1.3. SHELL: COLD ROLLED IRON (SPCC T=0.30mm);
2. ELECTRICAL:
   4.1. VOLTAGE RATING: 30V DC ;
   4.2. CURRENT RATING: 1.5A ;
   4.3. CONTACT RESISTANCE: 30MILLIOHMS MAX.;
   4.4. WITHSTAND VOLTAGE: 100V AC RMS 50(60)Hz,1MIN.;
   4.5. INSULATION RESISTANCE: 100MEGOHMS MIN @500V DC;
5. MECHANICAL:
   5.1. MATING FORCE: 35N MAX.;
   5.2. UNMATING FORCE: 5~35N ;
   5.3. OPERATING LIFE: 1500 CYCLES MIN.;
6. PLATING:
   6.1. TERMINAL:
   NI PLATING OVER ALL,
   Tin PLATING ON SOLDER AREA,
   Au G/Fu" ON CONTACT AREA;
   6.2.SHELL: NI PLATING OVER ALL;
7. ENVIRONMENTAL:
   7.1. STORAGE TEMPERATURE RANGE: -40°C~+85°C;
   7.2. OPERATION TEMPERATURE RANGE: -25°C~+70°C;

4.23 Jtag

The IMX8MP BASEBOARD has a 10pin pin header with box to offer Jtag function.

1) Part Reference：J1.
2) Pin1 position shows as below.

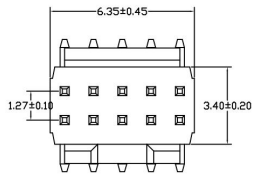


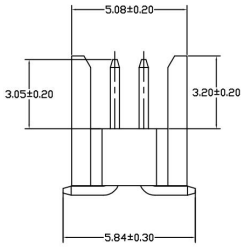
3) The defines for the pin header as below table.

Pin Num.	Pin Name	Level	Description
1	VDD1V8		1.8V power output

2	JTAG_TMS		JTAG function TMS pin
3	GND		Ground
4	JTAG_TCK		TAG function clock pin
5	GND		Ground
6	JTAG_TDO		TAG function TDO pin
7	NC		No connection
8	JTAG_TDI		TAG function TDI pin
9	GND		Ground
10	SYS_nRST		Reset signal for CPU

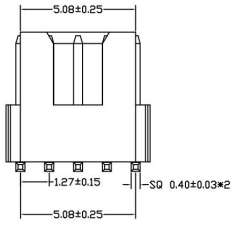
4) Specification for the user button as below:

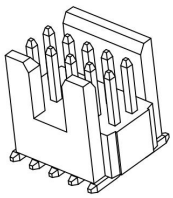


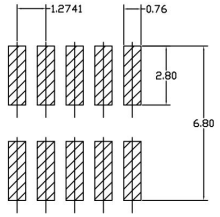


Ñ 技术参数/Technical parameters

2	符合规范/Accord With Norm	:EIA-364C
2	额定电流/Current Rating	:1AMP
2	绝缘阻抗/Insulator Resistance	:500MΩ Min.
2	接触阻抗/Contact Resistance	:20mΩ Max.
2	耐电压值/Voltage Resistance	:AC 500V
2	工作温度/Operating Temperature	:-40℃ To +105℃
2	金属材料/Metallic Material	:Brass
2	金属处理/Metal Treatment	:Ni30U"~50U"+ Gold Flash
2	绝缘材料/Insulator Material	:LCP+30%GF UL94V-0
2	耐焊接热/Resistance To Soldering Heat	:260° C ±5° C 10S MAX







(TOLERANCE:0.05)
Recommended PCB Layout