

# iW-RainboW-G27S

## i.MX 8 QM/QP SBC Display Daughter Board

### Hardware User Guide



# Display Daughter Board for i.MX 8 QM SBC

## 1. i.MX 8 QM/QP PICO ITX SBC Daughter Board Block Diagram

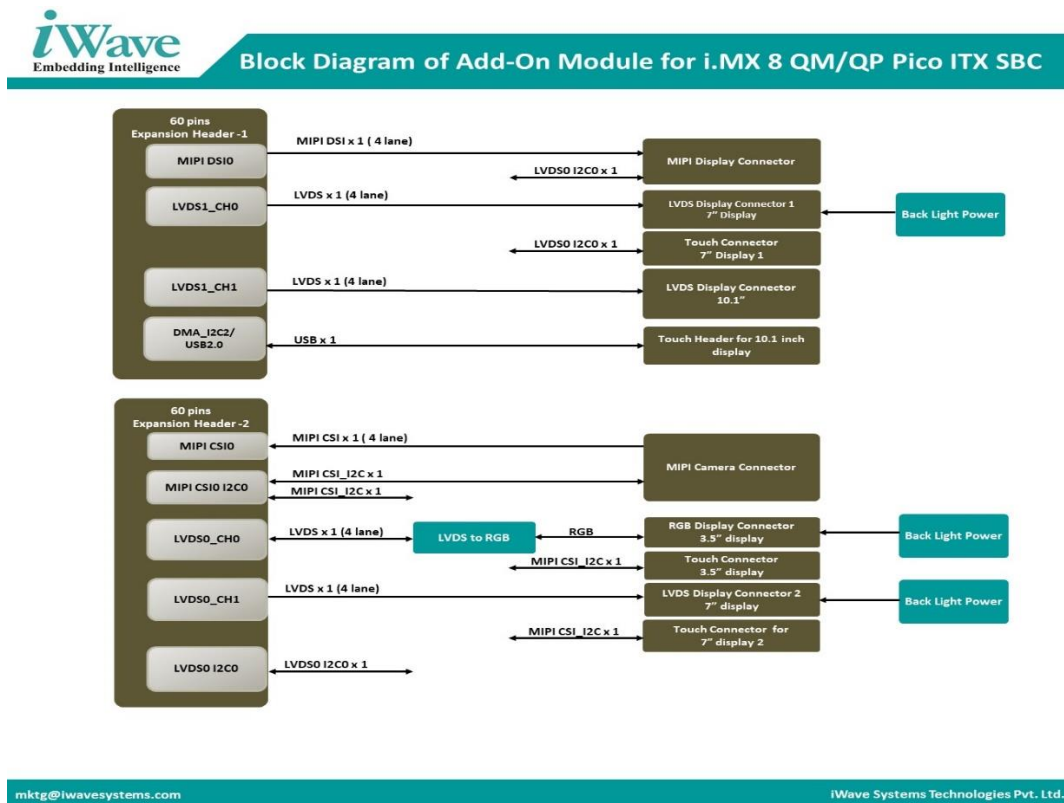


Figure 1: i.MX 8 QM/QP PICO ITX SBC add-on module Block Diagram

## 2. i.MX 8 QM/QP PICO ITX SBC Features

i.MX 8 QM/QP PICO ITX SBC supports the following features.

- **LVDS Display**
  - 10.1" TFT-LCD
  - 7" TFT-LCD x 2
- **RGB Display**
  - 3.5" TFT-LCD
- **MIPI DSI Display**
  - 5.5" TFT-LCD (4 Lane)
- **Camera**
  - 5MP Camera x 2(Each 2 Lane)

## 3. Display and Camera Specification.

### ➤ LVDS Display

#### 📏 LVDS Display – 10.1”

10.1” TFT-LCD	
Interface	8 Bits LVDS
Part Number	PH128800T004-ZHC
Resolution	1280 x 800
Touch Type	Capacitive Touch Panel
Touch Interface	USB
Brightness	up to 800 cd/m <sup>2</sup>
Operating Temperature	-30 to +80 °C
Outline Dimension	254.96(W) * 173.6 (L) * 8.6 (H)

#### 📏 LVDS Display – 7”

7” TFT-LCD	
Interface	6/8 Bits LVDS
Part Number	NMLCD-70M12-CTP
Resolution	1024 x 600
Touch Type	Capacitive Touch Panel
Touch Interface	I2C
Luminance	up to 500 cd/m <sup>2</sup>
Operating Temperature	-20 to +80 °C
Outline Dimension	164.9(W) * 100 (L) * 5.53 (H)

### ➤ RGB Display

#### 📏 RGB Display – 3.5”

3.5” TFT-LCD	
Interface	24 Bits RGB
Part Number	NMLCD-35320240-CTP-GP
Resolution	320 x 240
Touch Type	Capacitive Touch Panel
Touch Interface	I2C
Luminance	up to 500 cd/m <sup>2</sup>
Operating Temperature	-20 to +70 °C
Outline Dimension	76.84(W) * 63.84(L) * 4.52 (H)

## Display Daughter Board for i.MX 8 QM SBC

### ➤ MIPI Display

#### ✚ MIPI DSI Display – 5.5"

5.5" TFT-LCD	
Interface	MIPI DSI With 4 Lane
Part Number	G1548FH107GG-001
Resolution	1080 x 1920
Touch Type	Capacitive Touch Panel
Touch Interface	I2C
Luminance	up to 420 cd/m2
Operating Temperature	-20 to +70 °C
Outline Dimension	70.356(W) * 127.344 (L) * 0.643(H)

### ➤ Camera

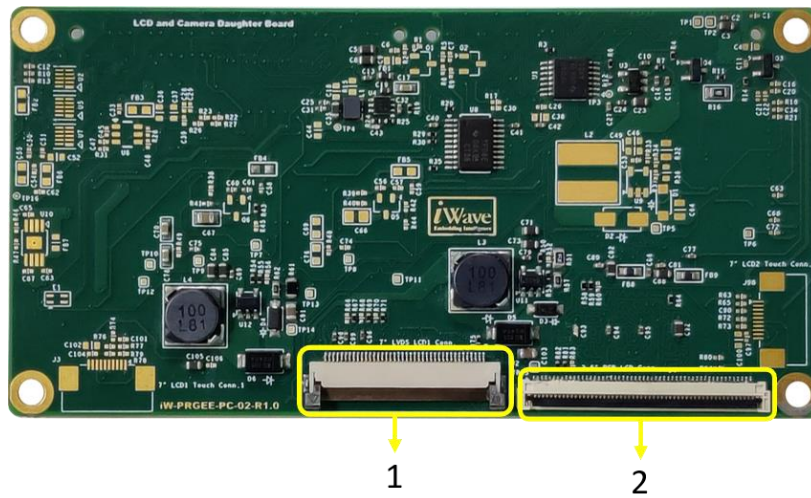
#### ✚ MIPI CSI Camera – 5MP

5MP Camera x 2	
Interface	MIPI CSI With 2 lanes
Part Number	OV5640
Sensor	CMOS
Output format	8/10-bit RGB RAW
Lens Size	1/4 inch
Image area	3673.6 μm x 2738.4 μm
sensitivity	600 mV/Lux-sec
Operating Temperature	-30 to +70 °C

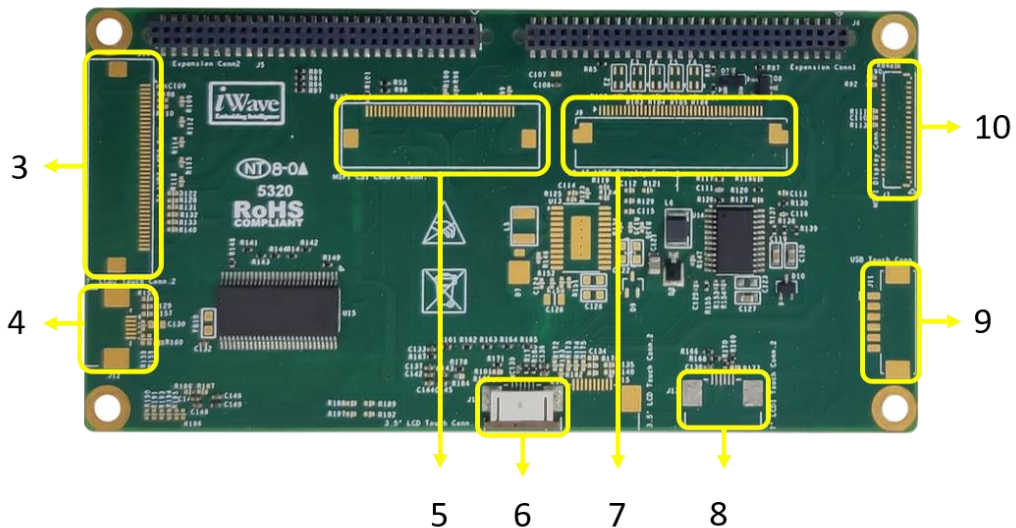
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## 4. Quick View of board

### TOP View



### Bottom View



1. 7" LVDS LCD1 Conn(J2)	7. 10.1" LVDS LCD touch Conn(J9)
2. 3.5" RGB LCD Conn(J4)	8. 7" LCD1 touch Conn(J13)
3. 7" LVDS LCD2 Conn(J10)	9. USB Touch Conn(J11)
4. 7" LCD2 touch Conn(J12)	10. 5.5" MIPI DSI LCD Conn(J7)
5. MIPI CSI Camera Conn(J8)	
6. 3.5" RGB LCD touch Conn(J14)	

**Note:** For customization and/or optional features support, please contact [mktg@iwavesystems.com](mailto:mktg@iwavesystems.com)

