

L384

**Uncooled Thermal Imaging Module
User Expansion Component Manual**

V1.0.0

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Version History

Version	Time	Description
V1.0.0	2024-08	Initial release

The user expansion components are connected to the rear end of the thermal imaging module, with each user expansion component providing different types of user control interfaces and video output interfaces. The thermal imaging module supports the output of only one type of digital video signal at a time.

1.TLX01V100F026 User Expansion Component

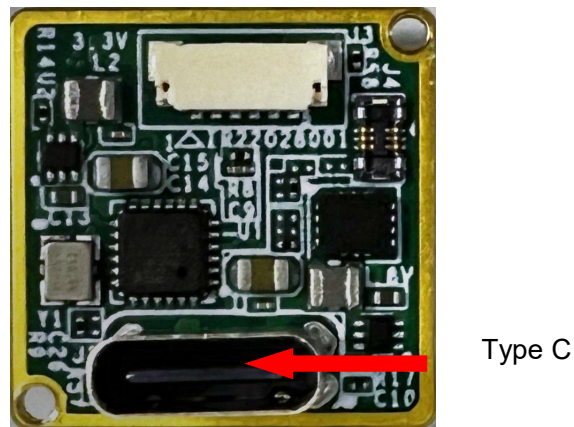


Figure 1.1 TLX01V100F026 User Expansion Component

The user expansion component uses a standard USB Type-C connector, which includes a power supply interface (5VDC) and one USB 2.0 interface. You can use a USB cable to connect the interfaces, with one end connected to the board's Type-C interface and the other end to a standard USB 2.0 interface.

Table 1.1 Pinout of USB2.0 Type Connector

Pin No.	Pin Name	Type	Descriptions
A4,B4,A9,B9	VBUS	Power	Power in (5VDC)
A1,B1,A12,B12	GND	Ground	GND
A6,B6	USB_DP	In/Out	USB2.0
A7,B7	USB_DM	In/Out	

2.TLX01V100F022C User Expansion Component

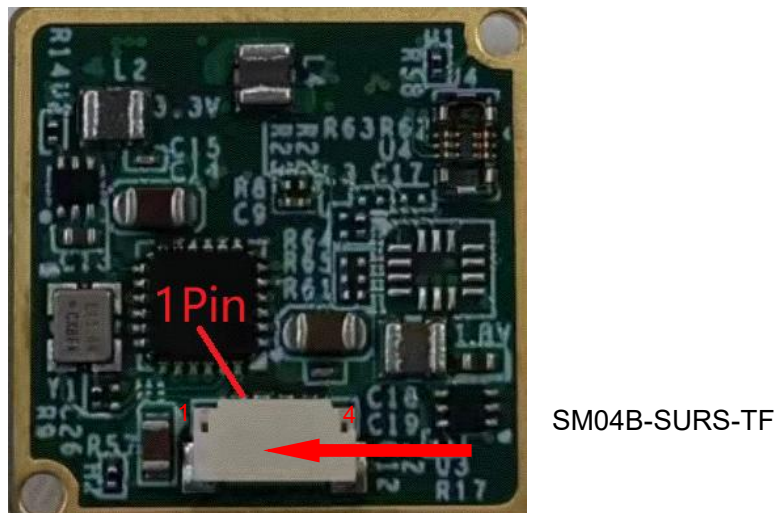


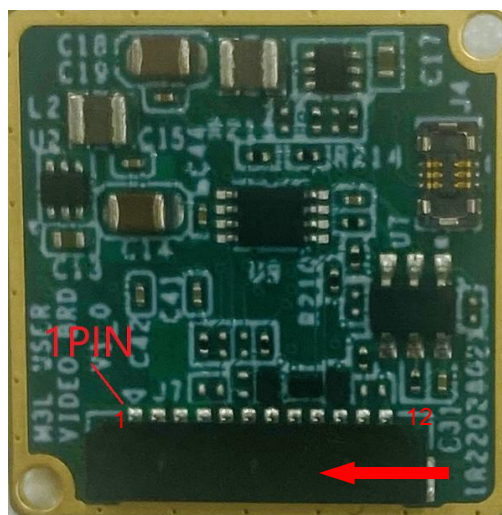
Figure 2.1 TLX01V100F022C User Expansion Component

The user expansion component uses a JST 4-pin SM04B-SURS-TF connector, which includes a power supply interface (5VDC) and one USB 2.0 interface. Additionally, it comes with a single-ended tinned cable.

Table 2.1 Pinout of JST 4-pin SM04B-SURS-TF Connector

Pin No.	Pin Name	Type	Descriptions
1	MAIN_POWER	Power (In)	Input voltage range:4.9V~5.1V, typical value 5V
2	GND	GND	Power GND
3	USB_DP	In/Out	/
4	USB_DM	In/Out	/

3.TLX01V100F023C User Expansion Component



DF52_12S_0_8H(21)

Figure 3.1 Analog Video User Expansion Component

The user expansion component uses a DF52_12S_0_8H(21) connector, which includes a power supply interface (5VDC), one RS232 interface, and one PAL analog video interface. Additionally, it comes with a single-ended tinned cable.

Table 3.1 Pinout of DF52_12S_0_8H(21) Connector

Pin No.	Pin Name	Type	Descriptions
1, 2	MAIN_POWER	Power	DC:3.8V~5.2V, typical value:5VDC
3, 4	P_GND	GND	Power GND
5	RS232_RX	In/Out	RS232 communication interface
6	RS232_TX		
11	VIDEO	Out	Analog video (PAL)
10, 12	V_GND	GND	Analog video signal ground
7, 8, 9	—	—	NC

4.TLX01V100F025C User Expansion Component

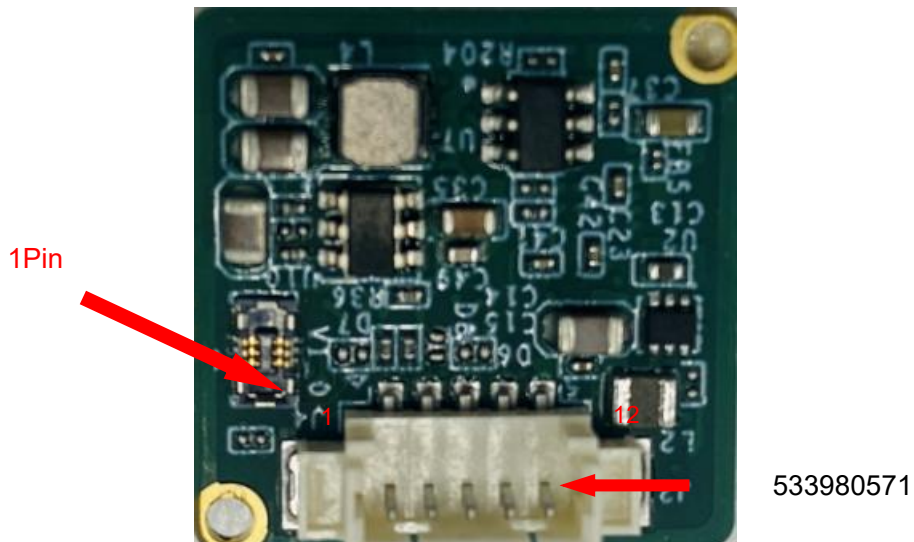


Figure 4.1 Analog Video User Expansion Component

The user expansion component uses a 533980571 (MOLEX) connector, which includes a power supply interface, one UART (3.3V) interface, and one PAL analog video interface. Additionally, it comes with a single-ended tinned cable.

Table 4.1 Pinout of 533980571 Connector

Pin No.	Pin Name	Type	Descriptions
1	UART_RX	In	Voltage level:3.3V
2	UART_TX	Out	Voltage level:3.3V
3	VIDEO	Out	Analog video (PAL)
4	GND	GND	Ground
5	POWER_IN	Power	DC:5V~20V

5.Precautions

To protect you and others from injury or to protect your equipment from damage, please read all of the following information before using your equipment.

1. The product should not be made towards the sun directly and other high-intensity radiation sources;
2. The optimal environment temperature for operating is - 20°C to 50°C;
3. Do not touch or hit the detector window with hands or other objects;
4. Do not touch the equipment and cables with wet hands;
5. Please do not bend or damage cables;
6. Do not scrub your equipment with diluents;
7. Should not unplug and plug other cables without disconnecting the power supply;
8. Wrong cable should not be connected in case that brings damages to the equipment;
9. Please pay attention to prevent static electricity;
10. Please do not disassemble the equipment. If there is any fault, please contact our company, and professional personnel will carry out maintenance.