

L640

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

V1.0.0

Version History

Version	Time	Description
V1.0.0	2024-07	Initial release

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

1. TLX02V110F014C User Expansion Component



Figure 1.1 TLX02V110F014C Expansion Board

The user expansion component interface adopts the standard USB Type C connector, which includes the power supply interface (5VDC) and one USB 2.0 interface. It also comes with a USB cable, with one end designed to connect to the board's Type C interface and the other end being a standard USB 2.0 interface.

Table1.1 USB2.0-Type C Connector Definition

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

2.TLX02V100F022C User Expansion Component

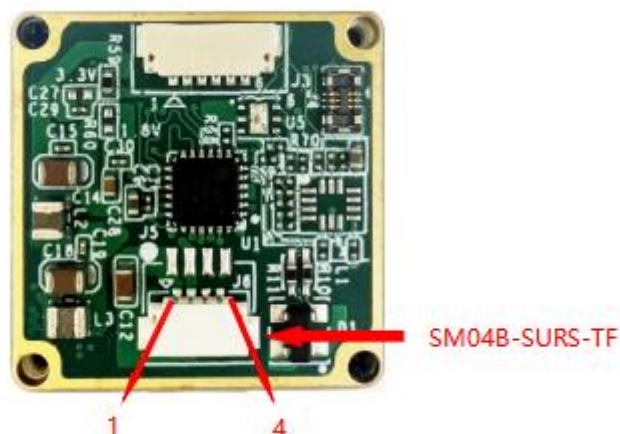


Figure 2.1 TLX02V100F022C Expansion Component

The user extension component interface adopts the JST 4-pin SM04B-SURS-TF connector, which includes the thermal imaging core power supply interface (5VDC) and one USB 2.0 interface. The package also includes a single-ended tinned cable, with one end compatible with the board-end JST 4-pin SM04B-SURS-TF connector, and a cable length of 100mm.

Table2.1 JST 4-Pin SM04B-SURS-TF Connector Definition

Pin No.	Pin Name	Type	Descriptions
1	MAIN_POWER	Power	4.9~5.1VDC
2	GND	GND	Power GND
3	USB_DP	USB_DP	USB
4	USB_DM	USB_DM	

3.TLX02V100F023C User Expansion Component

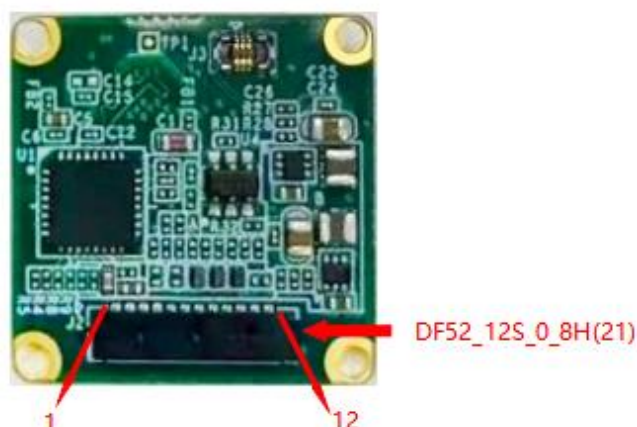


Figure3.1 TLX02V100F023C Expansion Board

The user extension component interface adopts the DF52_12S_0_8H(21) connector, which includes the thermal imaging core power supply interface (5VDC), one RS232 interface, and one PAL analog video interface. The package also includes a single-ended tinned cable, with one end compatible with the board-end DF52_12S_0_8H(21) connector, and a cable length of 100mm.

Table 3.1 DF52_12S_0_8H(21) Connector Definition

Pin No.	Pin Name	Type	Descriptions
1, 2	MAIN_POWER	Power	5VDC
3, 4	P_GND	GND	Power GND
5	RS232_RX	Input/output	RS232 Communication Interface
6	RS232_TX		
11	VIDEO	Output	Analog Video (PAL)
10, 12	V_GND	GND	Analog Video Signal GND
7, 8, 9	—	—	NC

4. 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.