

# SURENOO DSI DISPLAY for RaspBerry Pi

## SDSR070A\_800480 LCD MODULE USER MANUAL

#### Please click the following image to buy the sample









Shenzhen Surenoo Technology Co.,Ltd. www.surenoo.com

Surenoo DSI Display Selection Guide



## 1. Overview

- 800x480 resolution capacitive touch display screen
- Raspberry Pi MIPI DSI interface for direct output, plug and play, without the need for driver installation
- Support Raspberry Pi OS, the official system of Raspberry Pi, with 2-finger zoom for web pages
- Support Ubuntu-Mate/Kali, single touch
- Support RetroPie
- Equipped with backlight brightness adjustment button

### 2. Parameter

Name	Explain		
LCD Size	7inch		
LCD Resolution	800x480		
Screen Material	IPS		
LCD Interface	RGB888		
Module Interface	Raspberry Pi MIPI DSI		
Refresh rate	60Hz		
Touch screen type	Capacitive		
Viewing Angle	Full perspective		
Working Voltage	5V		
Maximum operating current	510mA		
Maximum Brightness	400cd/m <sup>2</sup>		
Working Temperature	-20℃-70℃		
Module Size	164.89*102.00*12.25(mm)		
Active Area	154.68*87.02(mm)		
Packaging Size	212*149*54(mm)		
Module Weight (net weight)	221g		
Packaging Weight	330g		



## 3. Dimensional Drawing



Side view

**Rear view** 





# 4. Hardware Description



Figure 1. Hardware Interface

#### Detailed explanation:

- Backlight brightness adjustment button: Short press backlight change 10%, long press 3 seconds to close backlight; short press to open backlight.
- (2) MIPI DSI interface: The specification is 15PIN with a spacing of 1.0MM; MIPI DSI interface for connecting Raspberry Pi through FPC flexible ribbon cable
- (3) **+5V Pogo pin:** Used to power from below the Raspberry Pi pin (Raspberry Pi needs to be fixed to the module with screws and copper pillars)
- (4) **+5V Connector**: Used to power from above the raspberry pie pin through the DuPont cable







## 5. How to use it?

 $(1)\,$  Install Raspberry Pi OS according to the official tutorial steps, and put the Micro SD

card into the Raspberry Pi.

Raspberry Pi Imager v1.8.1			
👸 Raspberry Pi			
Raspberry Pi Device	Operating System	Storage	
CHOOSE DEVICE	CHOOSE OS	CHOOSE STORAGE	

(2) Fix the Raspberry Pi to the copper pillar with 4 screws (M2.5), then connect the FFC flexible ribbon cable to the screen (as shown in Figures 3 and 4), connect it to the Raspberry Pi MIPI DSI interface (as shown in Figure 5), and finally connect the Raspberry Pi to the power cord;

After the Raspberry Pi motherboard is powered on, the display and touch functions are normal.



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Figure 3. Installing copper pillars



Figure 4. Connecting FFC





Figure 5 Connecting Raspberry Pi

**Attention:** The copper pillars, screws, and 15 PIN FPC cables mentioned above are all included in the product accessories.

#### How to connect Raspberry Pi, Method 2

Attention: When using this method of connection, a 2P custom DuPont cable must be used to connect pins 4 and 6 of the Raspberry Pi to power the module, otherwise it may damage the module!!!

If you do not want the Raspberry Pi to be fixed on the module, you can also connect it using the following method:





编码	编码	功能名	BOAF	RD编码	功能名	编码	编码
		3.3V	1	2	RV		
8	2	SDA.1	3	4	5V		
9	3	SCL.1	5	6	GND	1.1	
7	4	GPIO.7	7	8	IXU	14	15
		GND	9	10	RXD	15	16
0	17	GPIO.0	11	12	GPIO.1	18	1
2	27	GPIO.2	13	14	GND		
3	22	GPIO.3	15	16	GPIO.4	23	4
		3.3V	17	18	GPIO.5	24	5
12	10	MOSI	19	20	GND		
13	9	MISO	21	22	GPIO.6	25	6
14	11	SCLK	23	24	CE0	8	10
		GND	25	26	CE1	7	11
30	0	SDA.0	27	28	SCL.0	1	31
21	5	GPIO.21	29	30	GND		
22	6	GPIO.22	31	32	GPIO.26	12	26
23	13	GPIO.23	33	34	GND		
24	19	GPIO.24	35	36	GPIO.27	16	27
25	26	GPIO.25	37	38	GPIO.28	20	28
		GND	39	40	GPI0.29	21	29

Figure 6 Connecting Raspberry Pi



## 6. How to adjust brightness?

With each press of the button, the backlight brightness increases by 10%, reaching a maximum of 100%, and then cycles from 10% onwards; Long press for 3 seconds to turn off the backlight, then short press once to activate the backlight.

## 7. Display direction rotation

Following the method below, both the display and touch are rotated 90° clockwise. (Only for official systems after 2023-12-05, older versions of the system are not applicable)











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	File Layout View He	lp la
	DSI-2	
	Close Undo	Apply







### 8. How to install a virtual key board?

Execute the following command:

sudo apt-get install matchbox-keyboard





## 9. Packing List



### Packaging List:

- 1 7 inch LCD x1
- **②** FFC-1.0-15P-10cm (reverse) x1 **⑥** Screw (M2.5x12) x2
- **③ FFC-1.0-15P-5cm (reverse) x1**
- ④ Screw (M2.5x4) x4

- **⑤** Copper Pillar (M2.5x4+4) x4
- **⑦** Support x2
- (8) 2P Wire Rod x2