ElecLab

7" DSI Touchscreen Display

USER GUIDE

Users need to prepare a Raspberry Pi , a TF card above 8G, a power supply above 4A@5V, and a Buster or Bullseye system image.

Any suggestions, Please contact ElecLab_US@163.com

Quick To Use

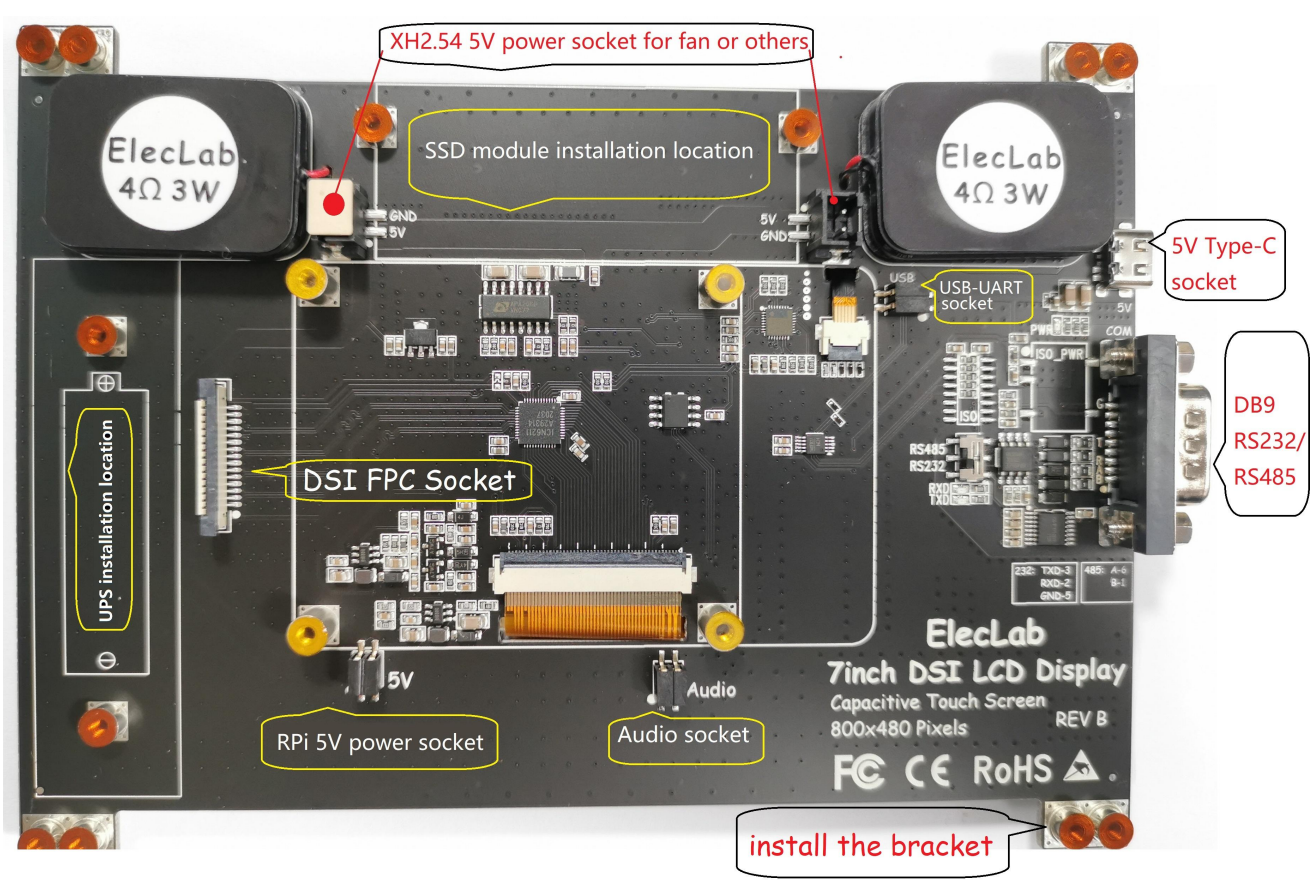
1. Burn the Buster or Bullseye system to the TF card, and insert the card into the Raspberry Pi.

If using RPI4 please comment out dtoverlay=vc4-fkms-v3d in /boot/config.txt.

```
[pi4]
# Enable DRM VC4 V3D driver on top o
#dtoverlay=vc4-fkms-v3d
max_framebuffers=2
```

2. Remove the protective film on the 4 screw posts on the back of the display, and fix the Raspberry Pi on the back of the display with 4 M2.5x5 screws.
3. Use RPI4 PWR Board, Audio Board, DSI FPC to connect Raspberry Pi 4 to the display. For Raspberry Pi 1, 2, 3, use RPI3 PWR Board, Audio Board and DSI FPC.
4. If you have an ElecLab NGFF SSD board, use two M2.5x5 screws to fasten it to the back of the display, plug the USB 3.0 FPC board into the Raspberry Pi 4's USB 3.0 socket, and connect them with the FPC cable.
5. Plug the power supply above 5V4A into the type-c socket.
6. If you want to use RS232/RS485 communication port, please prepare your device and DB9 female connector, and connect them to the display.

Function introduction



Detailed installation steps (Raspberry Pi 4 as an example)

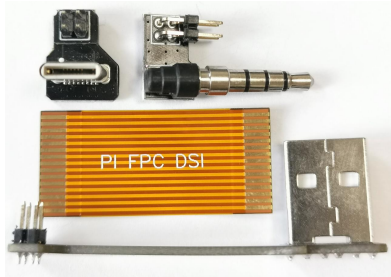
1. Prepare the following components：

RPI4 TYPE-C board -> Display power supply to raspberry

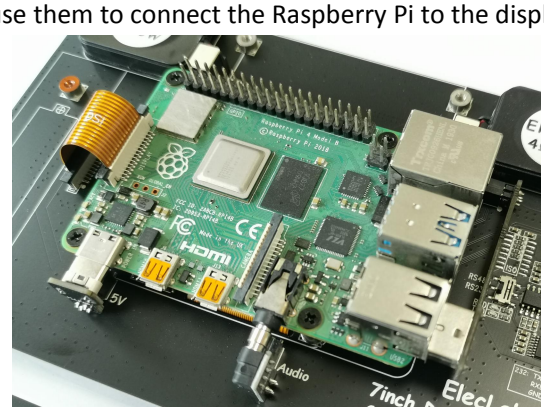
Audio Board -> Raspberry Pi audio output to display

DSI FPC Cable -> Connect display signal to Raspberry Pi

RPI4 USB Board -> Connect RS232/RS485 to Raspberry Pi

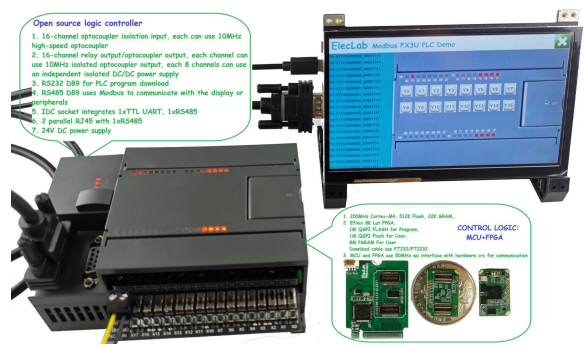


2. The Raspberry Pi is fixed on the back of the display and then use them to connect the Raspberry Pi to the display.



3. TheThen install the bracket, it has 2 angle installation methods.

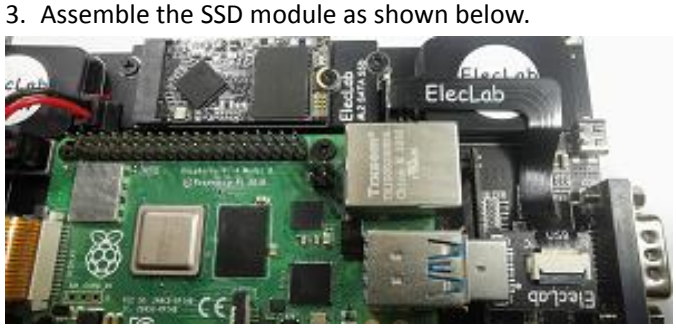
4. If necessary, connect RS232/RS485 device to DB9 male socket



5. insert the Type-C power cable to the display, And then start running.

NGFF SSD Installation

1. If users have large storage requirements, Such as Volumio or LibreELEC, ElecLab M.2 2242 NGFF SSD USB3.0 adapter for raspberry pi 4 module can be selected, and SM2246EN+DDR chip SSD is recommended.
2. The user prepares 2242 SSD and SSD USB3.0 adapter.
3. Assemble the SSD module as shown below.

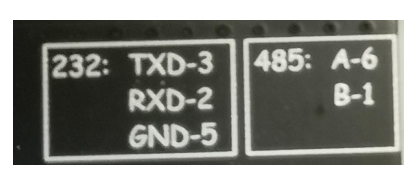


UPS Board Installation

1. The display has reserved a mounting socket for the ElecLab 18650x1 UPS board, just use M2.5x10 screws to fasten it to the back of the display, then use an XH2.54 cable to connect it to the XH2.54 socket on the display.

Connect RS232/RS485 External Device

1. Please refer to eleclab-rpi/7INCH_DSI_DISPLAY/7inch_ RS232_RS485_UserGuide.pdf on github.
2. The signal pins on DB9 can see the silkscreen under the DB9 socket on the PCB



Volume Adjustment

Adjust the volume of the sound directly in Raspbian or other systems such as Volumio.

Birghtness Adjustment

Install rpi-backlight in the Raspberry and add it to the Launch Bar to adjust the screen brightness directly.

If you need to adjust in software, you can use the command (X:0~255):

bash -c "echo X > /sys/class/backlight/rpi_backlight/brightness"