1. Module parameters

Name	Description
Types	TFT
Size	3.5inch
Resolution	480x320
LCD drive IC	ILI9488
Module interface type	SPI
Touch screen type	Resistive screen
Touch screen control IC	XPT2046

2. Hardware interface

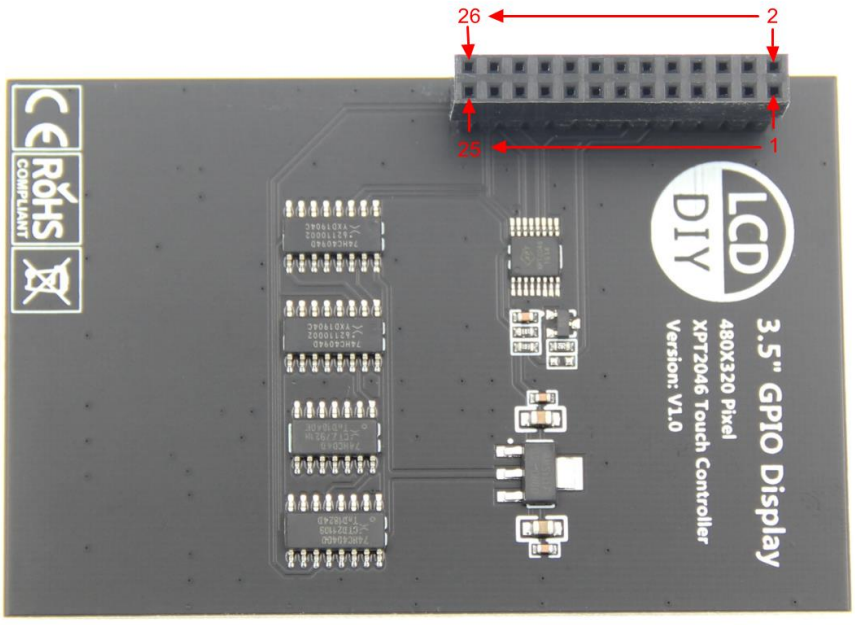


Figure 1. Module interface diagram

Pin number	Function identification	Function Description
1	3.3V	3.3V power input
2	5V	5V power input
3	NC	No need
4	5V	5V power input
5	NC	No need
6	GND	GND
7	NC	No need
8	NC	No need
9	GND	GND
10	NC	No need
11	TP_IRQ	Touch screen interrupt (low level when touch is detected)
12	BL_PWM	LCD screen PWM backlight brightness control
13	NC	No need
14	GND	GND
15	NC	GND
16	NC	GND
17	3.3V	3.3V power input
18	RS	LCD screen command/data input selection (high level: data, low level: command)
19	LCD_SI/TP_SI	LCD screen/touch screen SPI bus data input
20	GND	GND
21	TP_SO	Touch screen SPI bus data output
22	RESET	LCD reset signal
23	LCD_CLK/TP_SCK	LCD screen/touch screen SPI bus clock signal
24	LCD_CS	LCD chip select signal (low level enable)
25	GND	GND
26	TP_CS	Touch screen chip select signal (low level enable)

3. Install the driver

1) Download the latest system image on the Raspberry Pi official website (https://www.raspberrypi.org/downloads/) and unzip it to get the img file;
2) Choose a micro SD card (at least 8GB), insert it into the PC, and use SDFormatter software to format;
3) Open the Win32DiskImager software, first select Device (that is, the micro SD card inserted in the PC.
4) Then select Image File (the unzipped img image file), and finally click write to burn the image;
5) After the writing is completed, create a new ssh file in the root directory of the micro SD card (required for ssh login), then eject the micro SD card and insert it into the Raspberry Pi;
6) Connect the display module to the Raspberry Pi, then power on and start;
7) Open the putty software, enter the IP address of the Raspberry Pi (this IP address can be viewed through the router web page), and log in to the Raspberry Pi terminal via SSH;
8) Enter the following command in the Raspberry Pi terminal to install the driver: (This process needs to ensure that the Raspberry Pi is properly connected network).

```
git clone https://github.com/lcddiy/LCD-show.git
chmod -R 755 LCD-show
cd LCD-show
sudo ./LCD35-show
```

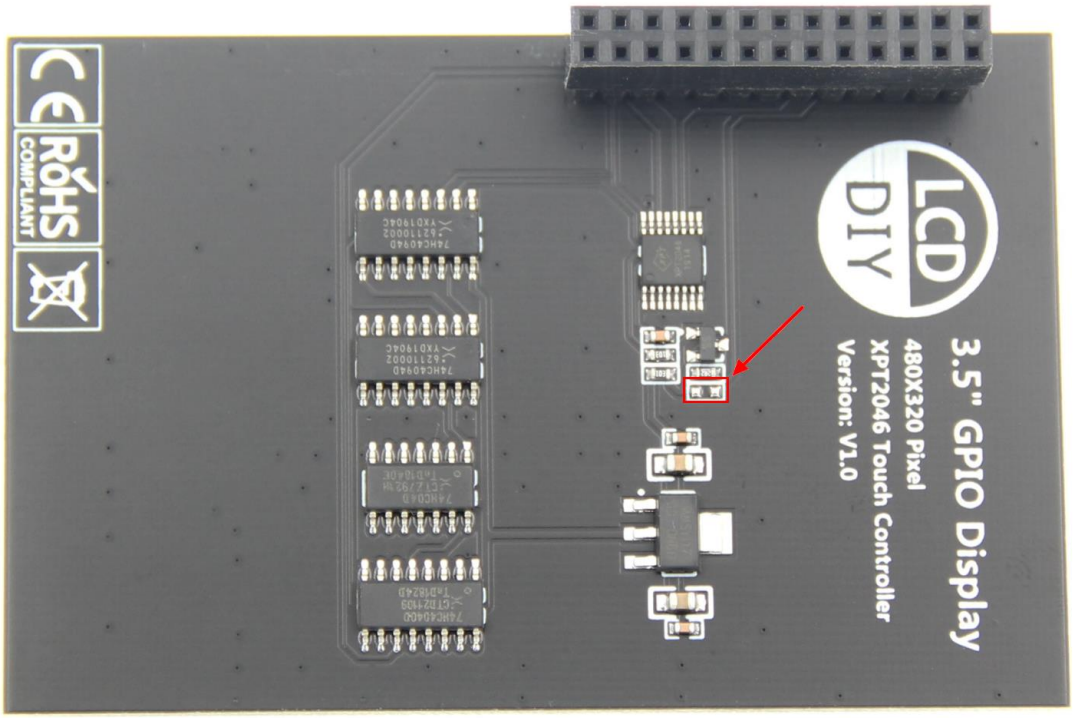
9) After the driver is installed successfully, the Raspberry Pi will restart.

4. PWM control backlight brightness

This display module has the function of PWM to control the brightness of the backlight, and the control accuracy is very accurate.

The hardware modification is shown in the figure below:

Short-circuit the two pads at the red frame (short-circuit with a 0 ohm resistor or directly use solder to short-circuit)



Enter the following command in the Raspberry Pi terminal to control the backlight brightness:

gpio -g pwm 18 1024

gpio -g mode 18 pwm (Occupied pins are PWM pins)

gpio pwmc 1000

gpio -g pwm 18 X (Control brightness, X value is between 0~1024)

Note：

The backlight brightness control on the Raspberry Pi4 will fail.
You need to enter the following command to update the wiringPi GPIO library (this process needs to ensure that the Raspberry Pi is normally connected to the Internet):

cd /tmp

wget https://project-downloads.drogon.net/wiringpi-latest.deb

sudo dpkg -i -B wiringpi-latest.deb