

RPI 3.5INCH OFFICIAL Datasheet

**3.5 inch tftlcd
Resolution 480*320
Spi interface touch
Desinged by KeDei**

RPI 3.5INCH OFFICIAL KeDei TOUCH DISPLAYER for raspberry pi

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SPI_LCD_128M_kedei About 60Hz Suitable for raspberry pi

1. feature

- ✦ spi interface;
- ✦ The refresh frequency about 5HZ;
- ✦ Physical resolution 480*320;
- ✦ Size 8.6*5.55cm;
- ✦ Can rotate 90° ,180° ,270° ;
- ✦ Spi touch of xpt2046 chip;
- ✦ Support raspberry ,kali,ubuntu system and so on;
- ✦ Support all raspberry board including PI3B+, zero w;

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2. Parameter

2.1 Essential information

Item	unit	Min	Typ	Max
Spi speed	M	--	16	--
Size	cm	--	8.6*5.55	--
Physical resolution	--	--	480*320	--
frequency	HZ	--	5	--
vcc	V	4.75	5	5.25
Total curren	ma	--	140	--
Backlight power	mw	500	550	600
Main chip	mw	80	100	150
Distance transmission	cm	-	15	60+

2.2 Pin definition

Pin Number	Pin Name	Descriptions
1,17	3.3v	POWER 3.3V
2,4	5v	POWER 5V
3	NC	Not connect
18	TP_IRQ	Touch interruption
19	SPI_MOSI	Spi interface data output
20,25	GND	ground
21	SPI_MISO	Spi interface data input
22	LCD_CD	LCD display function number
23	SPI_SCLK	Spi interface clock
24	LCD_CS	LCD display spi chip select
26	TP_CS	Touch spi chip select
15	LED_FUNCTION	Control backlight (auto OFF) ,IF CAN,MUST TO ON
Other pin	NC	Not connect

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3. How to use

You can use the IMG system or install the lcd driver, but the two ways can't be used at the same time, or you will have a lot of trouble.

Firstly, you assemble the hardware ;

3.1 USE IMG system

3.2 INSTALL THE DRIVER

Your raspberry pi board must have the latest system from <https://www.raspberrypi.org/downloads/raspbian/> (RASPBIAN STRETCH WITH DESKTOP)

3.2.1 Online install(Recommended)

The raspberry pi is able to surf the Internet, and you can control it through ssh, vnc or the big HDMI display;

2 Open the command terminal, Enter the following commands to download driver;

```
sudo git clone https://github.com/kedei/LCD\_driver
```

3 Change file permissions;

```
sudo chmod -R 777 LCD_driver
```

4 Enter the folder;

```
cd LCD_driver
```

5 Install the driver, and auto reboot ;

```
Direct install ./rpi_35
```

```
Rotate 90° ./rpi_35 90
```

```
Rotate 180° ./rpi_35 180
```

```
Rotate 270° ./rpi_35 270
```

6 If you want to use the auto hdmi output, you can use the follow command;

```
sudo ./LCD_hdmi
```

Touch screen calibration

This LCD can be calibrated using a program called xinput_calibrator

Install it with the commands

```
cd LCD-show/
```

```
sudo dpkg -i -B xinput-calibrator_0.7.5-1_armhf.deb
```

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Click the **Men button** on the task bar, choose **Preference -> Calibrate Touchscreen**.
Finish the touch calibration following the prompts. Maybe rebooting is required to make calibration active.

3.2.2 Off-line install

1 you can control it through ssh,vnc or the big HDMI display,you can must copy the driver to raspberry pi through U disk or other ways;

2Open the command terminal,Enter the following commands to download driver;

```
sudo unzip LCD_driver.zip
```

3Change file permissions;

```
sudo chmod -R 777 LCD_driver
```

4Enter the folder;

```
cd LCD_driver
```

5Install the driver,and auto reboot ;

NOT USE FBCP software:

Direct install `./rpi_35`

Rotate 90° `./rpi_35 90`

Rotate 180° `./rpi_35 180`

Rotate 270° `./rpi_35 270`

6If you want to use the auto hdmi output,you can use the follow command;

```
sudo ./LCD_hdmi
```

4. Advanced course

4.1 how to change display virtual resolution

We must know the physical resolution is 480*320,but why do we use the virtual resolution?This is a pretty good question.Maybe you have been found that when you operate some windows, the window often exceeds the display area, even if magnification is useless;

How to do?firstly,you install the driver(not use the integrated driven IMG,3.2 INSTALL THE DRIVER),of course you have to use fbcp software;Secondly,Open the file(`sudo nano /boot/config.txt`),you will find this parameter(`hdmi_cvt 480 320 60 6 0 0 0`);if you want to change your virtual resolution(The proportion is 3:2),for example,720:480,you just change it to this(`hdmi_cvt 720 480 60 6 0 0 0`),and then ctrl+x,then yes to save,and reboot,you will find changed the resolution of the display.

NOTE:if you want to use the omxplayer software to play video full screen,donot use “-r” parameter,you just use omxplayer “-win 0,0,480,320”.

4.2 QT Develop

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When you use GPU, maybe you must use the fbcp driver(3.2).

5.Product appreciation