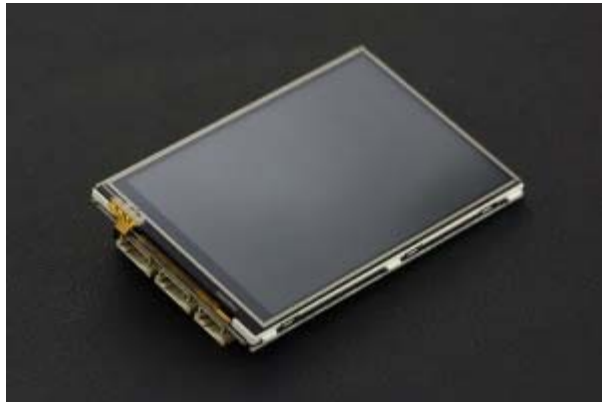




3.5 inches TFT Touchscreen for Raspberry Pi SKU: DFR0428



TFT Touchscreen for Raspberry Pi

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Introduction

Looking for a small screen that is the same size as your Raspberry Pi? This 3.5" resistive touch screen with 480 x 320 resolution will certainly meet your needs. If further combined with a wireless keyboard, It will act as a fully functional computer that fits right in your pocket. Use it to run the Pi's terminal, to play games, or to browse the web.

This item is more than just a screen, it is also a development friendly platform. It is seamlessly compatible with DFRobot Gravity series modules making it easy to connect or even to debug your Pi via the serial port! All the pins of Pi are left unoccupied, giving you more room to connect jumper wires.

This Touchscreen is well designed for the Raspberry Pi 3, 2 or Model B+ (with 40 GPIO Pins). Please note that it is not directly compatible with the old 26 pin GPIO Raspberry Pi.

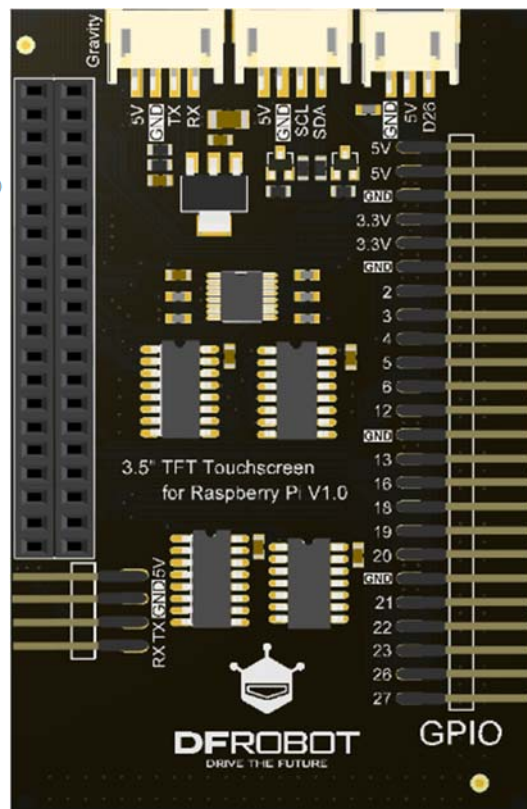
Supports Raspian and Ubuntu systems, compatible with Raspberry Pi B+, Raspberry Pi 2 and the latest Raspberry Pi 3. (any version with 40 GPIO pins)

Technical Specifications

- Operating Voltage: 5V
- Screen resolution: 480 x 320
- Interface: SPI
- GPIO Header Pins: 16
- UART Header Pins: 1
- Gravity I2C Pins: 1
- Gravity UART Pins: 1
- Gravity GPIO Pins: 1
- Dimensions: 86 x 56 mm / 3.38" x 2.24"
- Weight: 70g

Pin Descriptions

1 3v3 Power		2 5v Power
3 GPIO 2 (SDA)		4 5v Power
5 GPIO 3 (SCL)		6 Ground
7 GPIO 4 (GPCLK0)		8 GPIO 14 (TXD)
9 Ground		10 GPIO 15 (RXD)
11 GPIO 17		12 GPIO 18 (PCM_C)
13 GPIO 27 (PCM_D)		14 Ground
15 GPIO 22		16 GPIO 23
17 3v3 Power		18 GPIO 24
19 GPIO 10 (MOSI)		20 Ground
21 GPIO 9 (MISO)		22 GPIO 25
23 GPIO 11 (SCRL)		24 GPIO 8 (CE0)
25 Ground		26 GPIO 7 (CE1)
27 ID_SD		28 ID_SC
29 GPIO 5		30 Ground
31 GPIO 6		32 GPIO 12
33 GPIO 13		34 Ground
35 GPIO 19 (MISO)		36 GPIO 16
37 GPIO 26		38 GPIO 20 (MOSI)
39 Ground		40 GPIO 21 (SCLK)



Raspberry Pi Pin Diagram

Rear View Display

↑ Raspberry Pi Pin "GPIO 2" corresponds to the LCD digital pins "2" ↑

Using the LCD with your Raspberry Pi

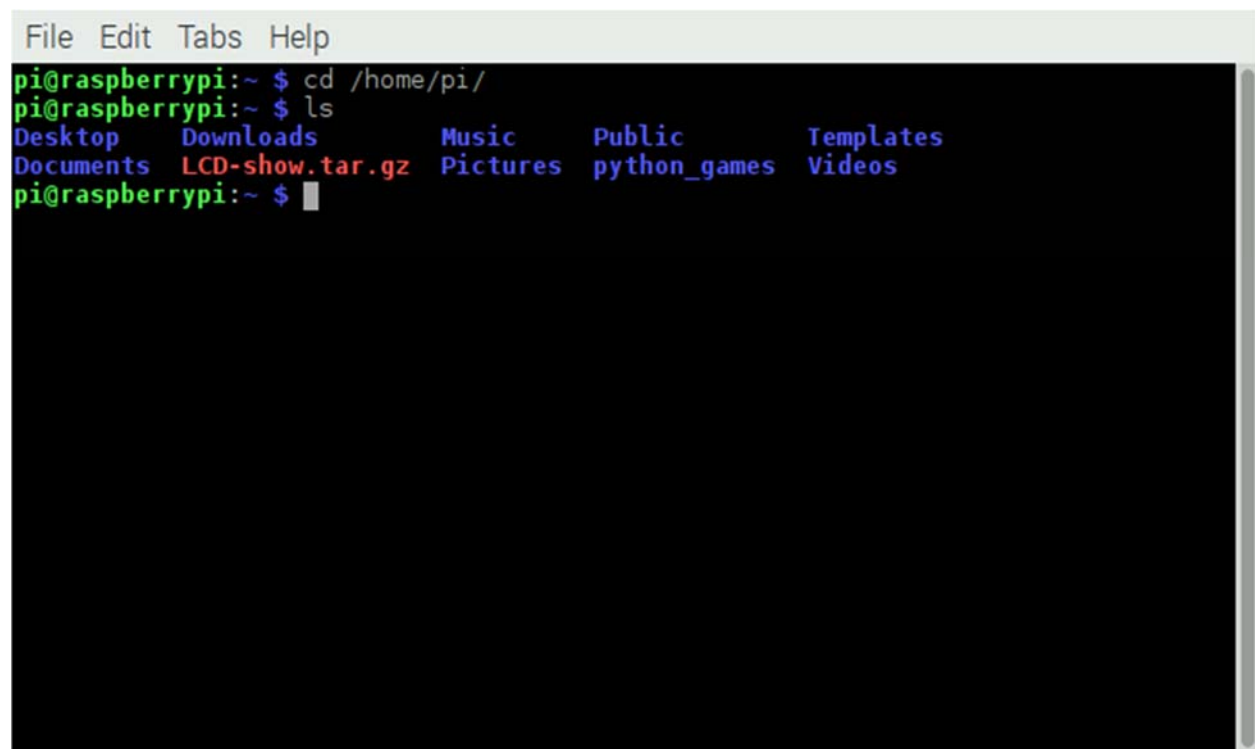
Get Started

Download LCD drivers: [LCD-show-160811.tar.gz](https://raw.githubusercontent.com/DFRobot/WikiResource/master/DFR0428/LCD-show-160811.tar.gz)

<https://raw.githubusercontent.com/DFRobot/WikiResource/master/DFR0428/LCD-show-160811.tar.gz>

- Copy LCD driver onto the USB disk.
- Insert the USB disk into the USB host on your Raspberry Pi
- Copy the LCD drivers into the Pi's filesystem, e.g /home/pi
- Open a terminal and use the cd command to navigate to the directory where the driver is

e.g. if the directory is "/home/pi" then you need to use the command "cd /home/pi"



```
File Edit Tabs Help
pi@raspberrypi:~ $ cd /home/pi/
pi@raspberrypi:~ $ ls
Desktop      Downloads      Music          Public         Templates
Documents    LCD-show.tar.gz Pictures        python_games  Videos
pi@raspberrypi:~ $
```

- Unzip LCD-show.tar.gz:

```
tar -xvf LCD-show.tar.gz
```

- Enter the LCD-show directory

```
cd /home/pi/LCD-show
```

```
ls
```

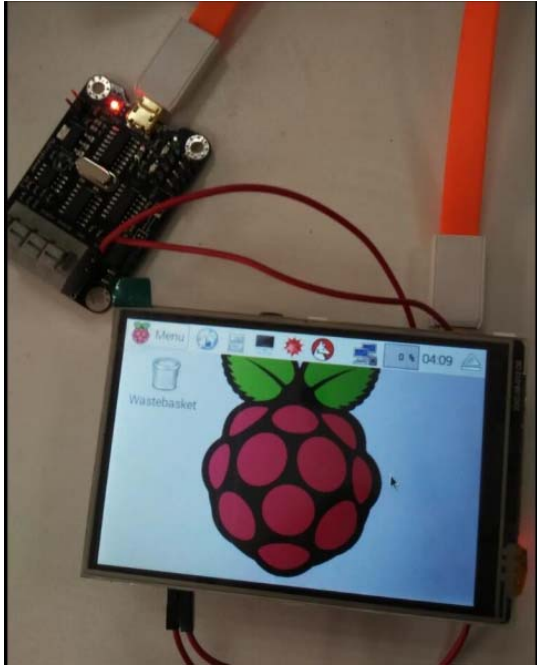
```
File Edit Tabs Help
pi@raspberrypi:~ $ cd /home/pi/LCD-show/
pi@raspberrypi:~/LCD-show $ ls
2016-04-14-065500_655x390_screenshot.png LCD32-show
2016-04-14-065516_655x390_screenshot.png LCD35-show
2016-04-14-065602_655x373_screenshot.png LCD4-show
2016-04-14-065651_655x390_screenshot.png LCD5-show
2016-04-14-065705_943x653_screenshot.png LCD-hdmi
boot usr
cmdline.txt waveshare32b-overlay.dtb
etc waveshare35a-overlay.dtb
inittab xinput-calibrator_0.7.5-1_armhf.deb
pi@raspberrypi:~/LCD-show $
```

- Install driver

```
sudo ./LCD35-show
```

```
File Edit Tabs Help
pi@raspberrypi:~ $ cd /home/pi/
pi@raspberrypi:~ $ ls
Desktop Downloads Music Public Templates
Documents LCD-show.tar.gz Pictures python_games Videos
pi@raspberrypi:~ $ scrot -u
pi@raspberrypi:~ $ tar -xvf LCD-show.tar.gz
LCD-show/
LCD-show/cmdline.txt
LCD-show/usr/
LCD-show/usr/share/
LCD-show/usr/share/X11/
LCD-show/usr/share/X11/xorg.conf.d/
LCD-show/usr/share/X11/xorg.conf.d/99-fbturbo.conf
LCD-show/usr/share/X11/xorg.conf.d/99-fbturbo.conf-HDMI
LCD-show/waveshare35a-overlay.dtb
LCD-show/LCD4-show
LCD-show/LCD5-show
LCD-show/waveshare32b-overlay.dtb
LCD-show/LCD32-show
LCD-show/LCD-hdmi
LCD-show/LCD35-show
LCD-show/etc/
LCD-show/etc/modules-4
LCD-show/etc/X11/
```

After you run the command, the system will automatically restart and switch to the LCD display.



Restore Output to HDMI

```
cd /home/pi/LCD-show/  
sudo ./LCD-hdmi
```

Note: When using the LCD display driver be sure to power off the system using software rather than switching the power off abruptly to avoid damage to the LCD.