

## Feature

- 10.1-inch IPS capacitive touch screen with a hardware resolution of 1280 x 800.
- Adopts optical bonding technique and clearer imaging.
- Support 10-point capacitive touch control, tempered glass touch panel with 6H hardness.
- Can be directly connected to the LCD by the DSI interface of the Raspberry Pi, and its refreshing rate is up to 60Hz.
- When working with Raspberry Pi, we provide the Raspberry Pi OS system driver.
- Support Pi 4B/3B+/3A+, CM3+/4 should work with [DSI cable](#).
- Support backlight adjusted by software.

## Working With Raspberry Pi

### Hardware Connection

#### Method 1: Back Lock Installation

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1. Connect the DSI interface of the LCD to the DSI interface of the Raspberry Pi board.
2. The Raspberry Pi is installed on the display board with the back facing down, and the 5V power supply and I2C communication are connected through the 4PIN.

**The Raspberry Pi 4B back lock installation effect is as follows:**



#### Method 2: Flat Connection

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1. Connect the DSI interface of the display to the DSI port of the Raspberry Pi board with a 15PIN FPC cable.
2. Connect the USB port of the Raspberry Pi to the Type-C port on the display baseboard with a USB cable.

**The Raspberry Pi 4B flat installation effect is as follows:**



**Note: For flat connection, you need to connect the screen power supply first, and then connect the Raspberry Pi power supply.**

**The CM4 IO Board flat installation effect is as follows: (via DSI1 port)**



Software Setting

## Method 1: Install Manually

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1. Download the image of the newest version [Raspberry Pi](#), download the compressed file to the PC and extract the .img file.
2. Connect TF card to PC, use [SDFormatter](#) to format TF card.
3. Open [Win32DiskImager](#) software, select the system image prepared in step 1 and click write to burn the system image.
4. After the programming is completed, connect the TF card to the Raspberry Pi, start the Raspberry Pi, and log in to the terminal of the Raspberry Pi (you can connect the Raspberry Pi to an HDMI display or log in remotely with ssh).

```
#Step 1: Download and enter the Waveshare-DSI-LCD driver folder
git clone https://github.com/waveshare/Waveshare-DSI-LCD
cd Waveshare-DSI-LCD

#Step 2: Enter uname -a in the terminal to view the kernel version and cd to the c
orresponding file directory
#6.1.21 then run the following command
cd 6.1.21

#Step 3: Please check the bits of your system, enter the 32 directory for 32-bit s
ystems, and enter the 64 directory for 64-bit systems
cd 32
#cd 64

#Step 4: Enter your corresponding model command to install the driver, pay attentio
n to the selection of the I2C DIP switch
#10.1inch DSI LCD (C) 1280x800 driver:
sudo bash ./WS_xinchDSI_MAIN.sh 101C I2C0

#Step 5: Wait for a few seconds, when the driver installation is complete and no e
rror is prompted, restart and load the DSI driver and it can be used normally
sudo reboot
```

**Note: The above steps need to ensure that the Raspberry Pi can be connected to the Internet normally.**

5. Wait for the system to restart, it will be able to display and touch normally.

## Method 2: Program Pre-installed Image

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1. Select your corresponding Raspberry Pi version image, download, and decompress it as a ".img" file.

**For Raspberry Pi 4B/CM4 version, download: [Waveshare DSI LCD - Pi4 pre-install image](#).**

**For Raspberry Pi 3B/3B+/CM3 version, download: [Waveshare DSI LCD - Pi3 pre-install image](#).**

2. Connect the TF card to the PC and use [SDFormatter](#) to format the TF card.
3. Open [Win32DiskImager](#) software, choose the system image prepared in the first step, and then click "write" to write the system image.
4. After the programming is finished, open the config.txt file in the root directory of the TF card, add the following code under [all], save and eject the TF card safely.

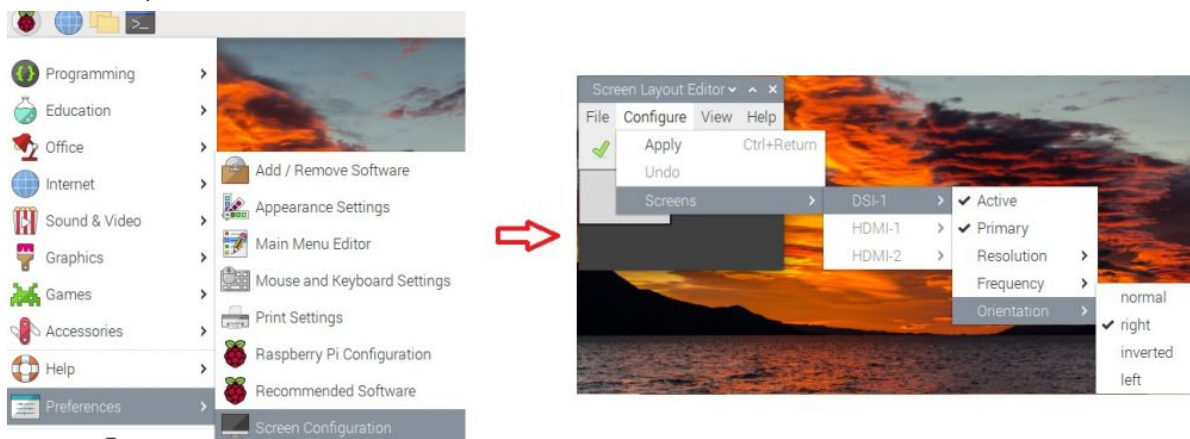
```
dtoverlay=WS_xinchDSI_Screen,SCREEN_type=8,I2C_bus=10
dtoverlay=WS_xinchDSI_Touch,invertedx,swappedxy,I2C_bus=10
```

5. Connect the TF card to the Raspberry Pi, and start the Raspberry Pi, wait for about 30 seconds to display and touch normally.

## Rotation

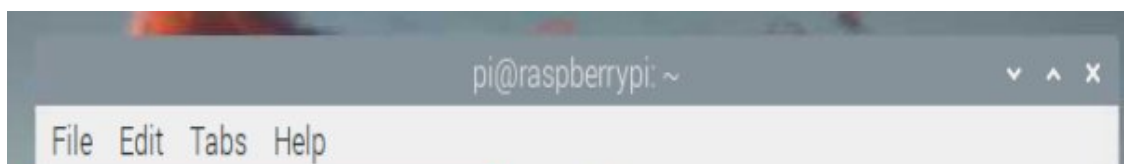
### Method 1: Graphical Interface Rotation

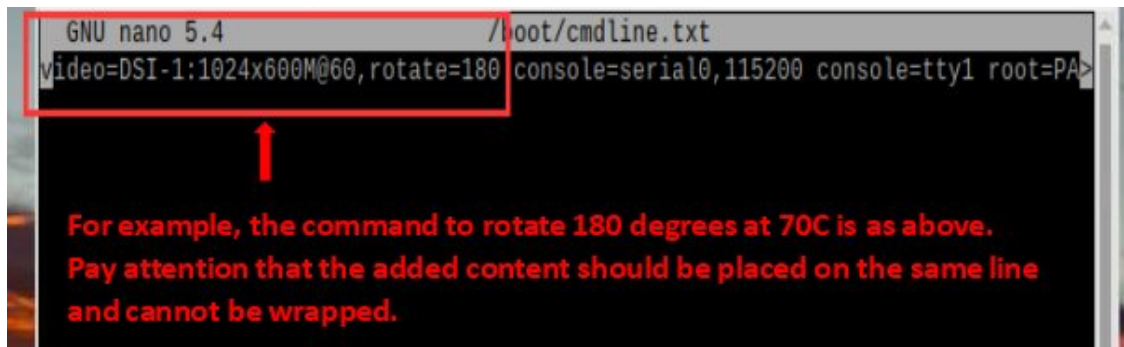
In the start menu, select: Preferences -> Screen Configuration -> Configure -> Screens -> DSI-1 -> Orientation, select the corresponding angle in it, click "√", select Yes, and restart.



### Method 2: Rotation Display In Lite Version

```
sudo nano /boot/cmdline.txt
#Add a command corresponding to the display rotation angle at the beginning of the
cmdline.txt file, save it and restart it to take effect
#display rotated 90 degrees
video=DSI-1:1280x800M@60,rotate=90
#display rotated 180 degrees
video=DSI-1:1280x800M@60,rotate=180
#display rotated 270 degrees
video=DSI-1:1280x800M@60,rotate=270
```





## Touch to Rotate

```
sudo nano /boot/config.txt
#Modify the instruction of the touch rotation angle at the end of the config.txt
file, and it will take effect after restarting (there is a 0° touch direction in
struction by default)
#0°:
dtoverlay=WS_xinchDSI_Touch,invertedx,swappedxy
#90°:
dtoverlay=WS_xinchDSI_Touch,invertedx,invertedy
#180°:
dtoverlay=WS_xinchDSI_Touch,invertedy,swappedxy
#270°:
dtoverlay=WS_xinchDSI_Touch
```

## Backlight Control

### Method 1: Graphical Interface Dimming

Using the application provided by Waveshare:

```
cd Waveshare-DSI-LCD
# Determine the currently used kernel version, such as the 5.15.61 kernel, and r
un the following command
cd 5.15.61
#Check the bits of the system, the 32-bit system enters 32 directory, the 64-bit
system enters 64 directory
cd 32
#cd 64
cd Backlight
sudo ./install.sh
```

After the installation is complete, you can open the program in the Start menu - > Accessories - > Brightness, as shown below:





## Method 2: Lite Version Dimming Command

To adjust the system command of the lite version, after entering the root privilege, execute the following command on the Raspberry Pi terminal:

```
echo X > /sys/waveshare/rpi_backlight/brightness
```

(X value in the range of 0~255.)

For example:

```
sudo su root  
echo 100 > /sys/waveshare/rpi_backlight/brightness
```

## Disable Touching

At the end of the config.txt file, add the following commands corresponding to disabling touch (the config file is located in the root directory of the TF card, and can also be accessed through the command: `sudo nano /boot/config.txt`):

```
disable_touchscreen=1
```

Note: After adding the command, it needs to be restarted to take effect.

## Notes

1. Update the system:

```
sudo apt-get update
sudo apt-get full-upgrade
```

After updating the system, some files of the originally installed driver will be overwritten, in this case, the driver needs to be reinstalled to display normally.

## 2. Replace the board:

If the driver was originally installed on Raspberry Pi 4 Model B, the user replaces the board, such as modifying it to Raspberry Pi 3 Model B+, which will cause the display to fail to display normally. Because Pi4 and Pi3 need to load different driver files.

In this case, the driver needs to be reinstalled on the new board to display normally.

# Document

## 3D Drawing

- [10.1inch DSI LCD \(C\) Drawing](#)

## Pre-installed image

- [Waveshare DSI LCD - Pi4 Pre-installed Image](#)
- [Waveshare DSI LCD - Pi3 Pre-installed Image](#)

# FAQ

### Question:What's the power consumption of 10.1inch DSI LCD (C)?

#### Answer:

With a 5V power supply, the operating current of the backlight is about 520mA, and the operating current of the backlight is about 150mA.

### Question:How to replace the logo image of Raspberry Pi Booting?

#### Answer:

Replace the custom image with the image in this directory  
`/usr/share/plymouth/themes/pix/splash.png`.

# Support

## Technical Support

If you need technical support or have any feedback/review, please click the **Submit Now** button to submit a ticket, Our support team will check and reply to you within 1 to 2 working days. Please be patient as we make every effort to help you to resolve the issue.

Working Time: 9 AM - 6 AM GMT+8 (Monday to Friday)

[Submit Now](#)