

How to modify the display orientation

1. GPIO interface type LCD rotating display method:

Suitable for GPIO interface type LCD (2.4" 2.8" 3.2" 3.5").

Run command at Terminal:

```
sudo nano /boot/config.txt
```

if you are using 2.4" , 2.8" or 3.2" , then find line "dtoverlay=tft9341" and add

rotate parameter value as format following :

```
dtoverlay=tft9341:rotate=value
```

if it is LCD 3.5" , then find line "dtoverlay=tft35a" and add rotate parameter value as

format following :

```
dtoverlay=tft35a:rotate=value
```

Take LCD 3.5" as example:

To rotate 0 degrees (vertical screen display), the corresponding parameter value:

```
dtoverlay=tft35a:rotate=0
```

To rotate 90degrees (horizontal screen display), the corresponding parameter value:

```
dtoverlay=tft35a:rotate=90
```

To rotate 180degrees (vertical screen display), the corresponding parameter value:

```
dtoverlay=tft35a:rotate=180
```

To rotate 270degrees (horizontal screen display), the corresponding parameter value:

```
dtoverlay=tft35a:rotate=270
```

Press Ctrl + X, choose Y, save and exit; and re-start to achieve..

2, HDMI Interface type LCD rotating display method:

Suitable for HDMI Interface type LCD (such as a 3.97", 4.3", 5", 7" version B, 7" version C, 10.1")

Run command at Terminal:

```
sudo nano /boot/config.txt
```

Find "display rotate" parameter; if not have it, then add it.

Meanings of the parameters for display_rotate show as in the table below

display_rotate	result
0	no rotation
1	rotate 90 degrees clockwise
2	rotate 180 degrees clockwise
3	rotate 270 degrees clockwise
0x10000	horizontal flip
0x20000	vertical flip

To rotate 0 degrees, the corresponding parameter value:

```
display_rotate=0
```

To rotate 90 degrees, the corresponding parameter value:

```
display_rotate=1
```

To rotate 180 degrees, the corresponding parameter value:

```
display_rotate=2
```

To rotate 270 degrees, the corresponding parameter value:

```
display_rotate=3
```

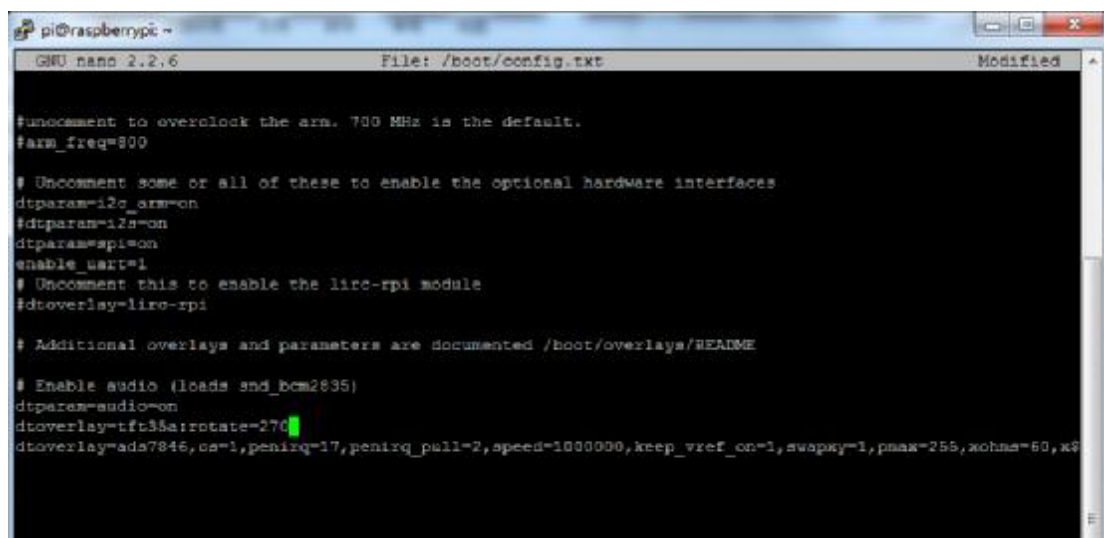
To flip the display horizontally, the corresponding parameter value:

```
display_rotate=0x10000
```

To flip the display vertically, the corresponding parameter value:

```
display_rotate=0x20000
```

Press the key Ctrl + X, choose Y, save and exit.



```

pi@raspberrypi ~
GNU nano 2.2.6 File: /boot/config.txt Modified
# Uncomment to overclock the arm. 700 MHz is the default.
#arm_freq=800

# Uncomment some or all of these to enable the optional hardware interfaces
dtparam=i2c_arm=on
#dtparam=i2s=on
dtparam=spi=on
enable_uart=1
# Uncomment this to enable the lirc-rpi module
#dtoverlay=lirc-rpi

# Additional overlays and parameters are documented /boot/overlays/README

# Enable audio (loads snd_bcm2835)
dtparam=audio=on
dtoverlay=tft35a:rotate=270
dtoverlay=ads7846,cs=1,penirq=17,penirq_pull=2,speed=1000000,keep_vref_on=1,swapxy=1,pmax=255,xohms=60,x9

```

3, modify the touch parameters

After display direction changes, still need to do the touch settings by modifying the

"99-calibration.conf" file. Execute command:

```
sudo nano /etc/X11/xorg.conf.d/99-calibration.conf
```

Take 5" HDMI LCD as example:

The default parameter is 0 degrees, that is "display_rotate = 0" , correspondingly

the touch calibration parameters are:

```

Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "ADS7846 Touchscreen"
    Option "Calibration" "140 3951261 3998 "
    Option "SwapAxes" "0"
EndSection

```

To rotate the display 90degrees, that is "display_rotate = 1" , the touch parameters

should be revised correspondingly as follows:

```

Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "ADS7846 Touchscreen"
    Option "Calibration" "2613998 3951 140"
    Option "SwapAxes" "1"
EndSection

```

To rotate the display 180degrees, that is "display_rotate = 2" , the touch parameters should be revised correspondingly as follows:

```
Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "ADS7846 Touchscreen"
    Option "Calibration"  "3951140 3998261"
    Option "SwapAxes"    "0"
EndSection
```

To rotate the display 270degrees, that is "display_rotate = 3" , the touch parameters should be revised correspondingly as follows:

```
Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "ADS7846 Touchscreen"
    Option "Calibration"  "3998261 1403951"
    Option "SwapAxes"    "1"
EndSection/
```

After the modification, re-start to see the effect of the modification

```
sudo reboot
```