

1. To fix “Bad line starting with...” error:

```
sudo apt-get update && sudo apt-get install fix-w1-blacklist
```

2. Now make sure your device is fully updated by running these one by one:

```
sudo apt-get update
sudo apt-get dist-upgrade
sudo apt-get upgrade
```

3. Then run a couple of modprobes (should be two lines, NOT THREE):

```
sudo modprobe spicc
sudo modprobe fbtft_device name=odroidc_tft32 rotate=270 gpios=reset:116,dc:115 speed=32000000
cs=0
```

4. Then, to run Xwindow create a file in `/usr/share/X11/xorg.conf.d/99-odroidc-tftlcd.conf` containing:

```
Section "Device"
    Identifier      "C1 fbdev"
    Driver          "fbdev"
    Option          "fbdev" "/dev/fb2"
EndSection
```

5. (Optional) Run a startx:

```
sudo startx
```

6. Disable Xorg by editing `/etc/init/lightdm.override` to say:

```
manual
```

7. Reboot:

```
sudo reboot
```

8. Now run `con2fbmap`:

```
con2fbmap 1 2
```

9. Now add these lines to `/etc/modules`:

```
spicc
fbtft_device name=odroidc_tft32 rotate=270 gpios=reset:116,dc:115 speed=32000000 cs=0
```

10. Add at the end of `/media/boot/boot.ini`:

```
fbcon=map:22
```

11. Now add this to `/etc/rc.local` before the exit command at the end:

```
startx &
```

12. Now reboot once more for good measure.

13. Now to test your touchscreen, create a file under `/etc/udev/rules.d/95-ads7846.rules` saying (in one line, NOT THE TWO SHOWN):

```
SUBSYSTEM=="input", ATTRS{name}=="ADS7846 Touchscreen", ENV{DEVNAME}=="*event*",
SYMLINK+="input/touchscreen"
```

14. Now apply the module with these commands:

```
sudo modprobe spicc
sudo modprobe -r ads7846
sudo modprobe ads7846
```

15. Now check to see if a touchscreen node exists using:

```
ls /dev/input/touchscreen
```

16. Now install the event and touchscreen libraries using:

```
sudo apt-get install evtest tslib libts-bin
```

17. Now you can run a test to see if your touchscreen responds to touch using (exiting the test once you're done is accomplished with CTRL-C):

```
sudo evtest /dev/input/touchscreen
```

18. Now wipe the old calibration using:

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

19. Now calibrate your device one of two ways: There's the manual (recommended) way, and the automatic way. We had trouble with the auto one. Here's manual:

a. First, make a directory:

```
sudo mkdir /etc/X11/xorg.conf.d/
```

b. Next, edit these lines into `/etc/X11/xorg.conf.d/99-calibration.conf`:

```
Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "ADS7846 Touchscreen"
    Option "Calibration"    "215 3836 4020 336"
EndSection
```

c. For automatic, see [http://odroid.com/dokuwiki/doku.php?id=en:c1\\_tft\\_touch](http://odroid.com/dokuwiki/doku.php?id=en:c1_tft_touch)

Now you can reboot, and you should be done!