

INSTALLING SSD1351 FOR RASPBERRY PI

Installing

Follow the step-by-step guide below to install the Wheezy version of Linux with the drivers installed.

This library has been updated to support your OLED Breakout Board.

1. Download the latest version of the FBTFT Wheezy Raspbian from <http://tronnes.org/fbtft/download.html>.
2. Use [Win32DiskImager](#) (Windows) or [dd](#) (UNIX) (Guide [here](#)) and select the downloaded file from the previous step and write to a blank SD card.
3. Once the image is on the SD card, plug the SD card into the Raspberry Pi, connect a USB keyboard, HDMI cable from the Raspberry Pi to a TV, an Ethernet cable and then connect the power USB cable.
4. Once the Raspberry Pi has booted up, you'll be presented with the "Raspi-Config" screen. From this menu, select Expand Filesystem and press enter, then "OK". Now select "Finish" and press enter to expand the Filesystem. Once this has completed it'll require a restart, so press enter on "Yes".
5. When asked to log in, first make a note of the IP address just above the login text. It should say "My IP address is xxx.xxx.xxx.xxx". We will need this later.

If you are asked to login at any time, use the default login as:

Login: pi Pass: raspberry

Setting Up

Now that you have Linux installed on the Raspberry Pi, it's time to set it up to use the display as the main display.

Follow the following steps.

1. Type `"sudo nano /etc/modules"` and press enter. This will run the text editor "nano" as a super user and will edit the file modules in the folder etc.
2. Press the down arrow until you are under the text `"snd-bcm2835"` and type the following:
`fbtft_device name=ssd1351fb verbose=0`
`ssd1351fb`
3. Save the file by pressing Control+X then Y and finally enter.
4. Next type `"sudo nano /boot/cmdline.txt"` and press enter to edit cmdline.txt.
5. At the end of the first line, add the following (Note: Make sure there is a space after rootwait and before fbcon):
`fbcon=map:10 fbcon=font:MINI4x6`

This will change the console to the correct framebuffer, and change the font to a smaller font.
6. Save the file by pressing Control+X then Y and finally enter.
7. Finally, restart the Raspberry Pi by using this command `"sudo shutdown -r now"`.

My First Drawing

Now everything should be loaded up and you can see the output on your display. If this is correct, you can now remove the HDMI cable from the Raspberry Pi.

Follow the following guide to do your first drawing to the screen:

1. First make sure you have an Internet connection by typing “ping www.google.co.uk -c 1”, if you see you have sent and received 1 packet, you have an internet connection otherwise, use Google for answers.
2. First, download the sample by typing the following “wget <http://jamjardavies.co.uk/downloads/oled.py>”
3. Connect a mouse.
4. Next, run the file by typing “python oled.py” and press enter.

To close the game, click on the red square.

Now you should see it is drawing, however, some of the items being drawn are currently drawing off screen, so edit the file using “nano oled.py” and change the positions on each of the pygame.draw functions.

You’ll see that the display isn’t ideal for editing code, so read on to find out how to edit files remotely.

For more information about pygame, visit <http://www.pygame.org/docs/>.

Connect Using SSH

Using the display isn't ideal for editing code or setting up your Raspberry Pi. Instead, it's best to use SSH. SSH is like Telnet but secure, and is the best way to connect to Linux.

If you are on Windows, you will require an SSH client like [PuTTY](#). On Linux, just start an SSH connection using "ssh ip.address" changing the ip.address to the IP address of the Raspberry Pi. If using PuTTY, type in the IP address of the Raspberry Pi, make sure SSH is selected and the port is 22 and click "Open".

If this is the first time you have connected to the Raspberry Pi using PuTTY, you'll have a message pop up asking if you accept the secure certificate, press "Yes". Now you will see a window just like the console on the Raspberry Pi.

Note: You can use SSH to run "startx" on the display by using the command "FRAMEBUFFER=/dev/fb1 startx". To stop this you can press Control+C in PuTTY.

Note: Any pygame code or other SDL, you will have to start this on the Pi.

How to Create a Share

To be able to edit the files on your PC via a share, you can follow this guide to easily create and setup a share.

<http://cymplecy.wordpress.com/2012/08/09/auto-install-a-simple-samba-setup/>

Now you can connect to the share in Windows using "\\ip.address\".