

RASPBERRY PI Tutorial 4

Demos

- Meet the new Raspberry Pi Model B+
- How to set up a home theater using a router and an external hard drive

In this fourth tutorial we will explore the Desktop of the Raspbian “wheezy” operating system and learn basic commands on the command line.

Raspberry Pi Model B+

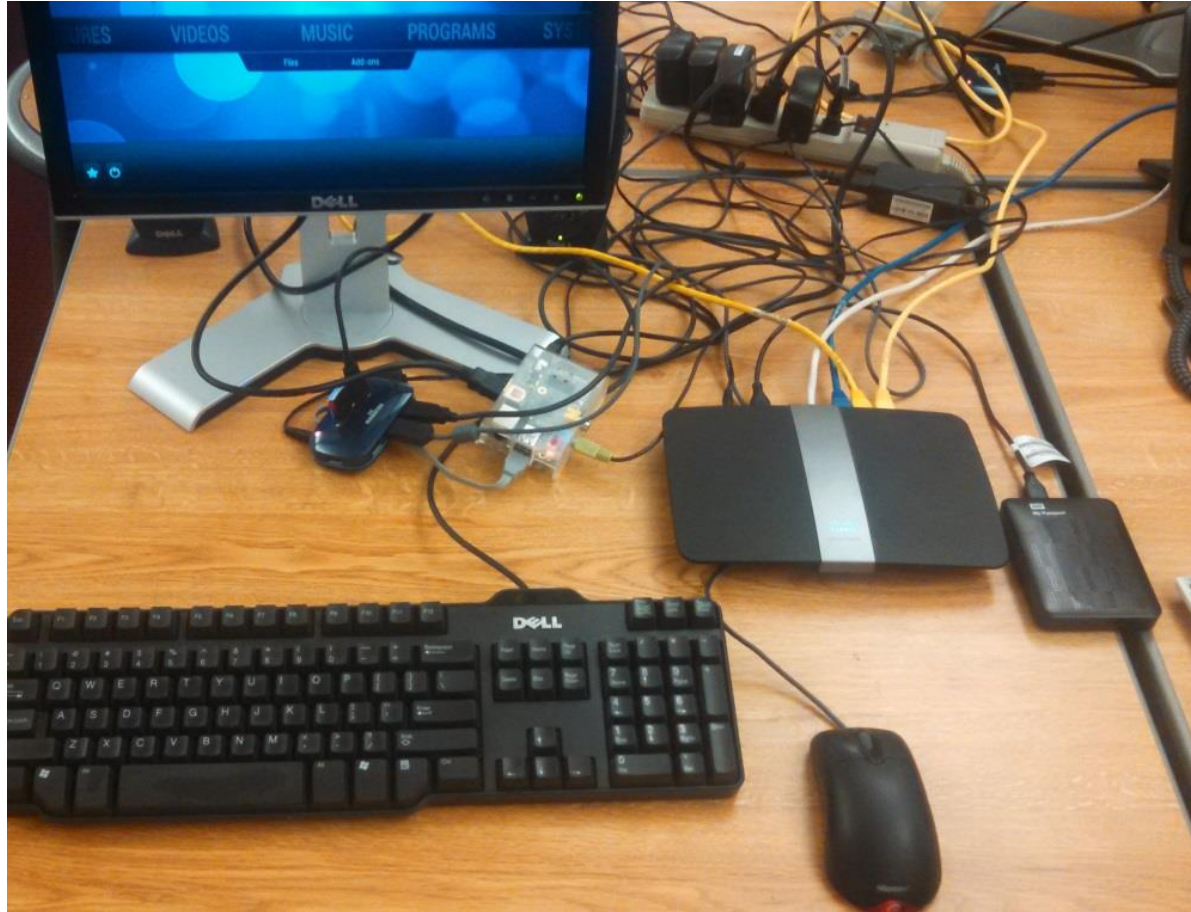


Raspberry Pi Model B+ (continued)

The Model B+ uses the same BCM2835 application processor as the Model B. It runs the same software, and still has 512MB RAM

- **More GPIO.** The GPIO header has grown to 40 pins, while retaining the same pinout for the first 26 pins as the Model B.
- **More USB.** We now have 4 USB 2.0 ports, compared to 2 on the Model B, and better hotplug and overcurrent behavior.
- **Micro SD.** The old friction-fit SD card socket has been replaced with a much nicer push-push micro SD version.
- **Lower power consumption.** By replacing linear regulators with switching ones we've reduced power consumption by between 0.5W and 1W.
- **Better audio.** The audio circuit incorporates a dedicated low-noise power supply.
- **Neater form factor.** We've aligned the USB connectors with the board edge, moved composite video onto the 3.5mm jack, and added four squarely-placed mounting holes.

Home Theater with Router and External Hard drive



Raspian “wheezy”--Desktop

- How to search for software:

```
pi@raspberrypi ~ $ sudo apt-cache search <search term>
```

- Install Chromium (Google Chrome browser)

```
pi@raspberrypi ~ $ sudo apt-get install chromium -y
```

- Create desktop shortcuts for Chromium

Raspbian “wheezy”—Desktop (cont.)

Use ssh to log on to another computer, for example:

```
pi@raspberrypi ~ $ ssh pi@student x
```

```
pi@studentx ~ $ echo 'Greetings from student x' > hello.txt
```

```
pi@studentx ~ $ exit
```

Raspbian “wheezy” – Command Line

- Common commands

ls, ls -l, whoami, cd, mkdir, rmdir, df -h, cp, mv, cat, touch, find, pwd

Resources

Raspberry Pi official website

<http://www.raspberrypi.org/>

Raspberry Pi Foundation

<http://www.raspberrypi.org/about>

Raspberry Pi Wiki

<http://elinux.org/RaspberryPiBoard>

Learning

<http://learn.adafruit.com/category/raspberry-pi>

Raspberry Pi SD Card Setup

http://elinux.org/RPi_Easy_SD_Card_Setup