

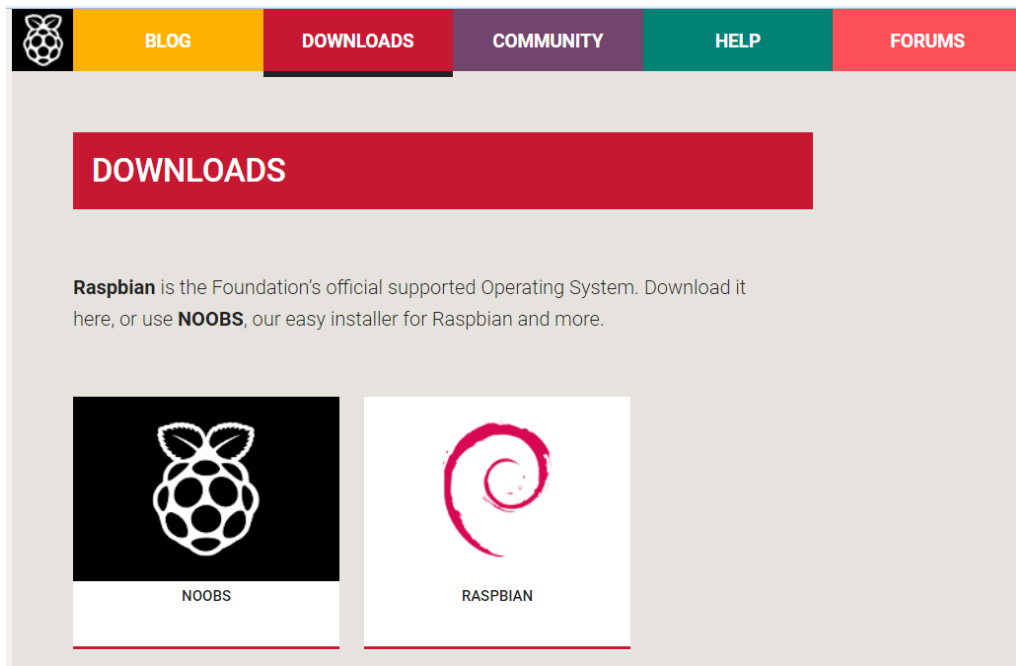
Installing OS for Raspberry-Pi-3

Objectives

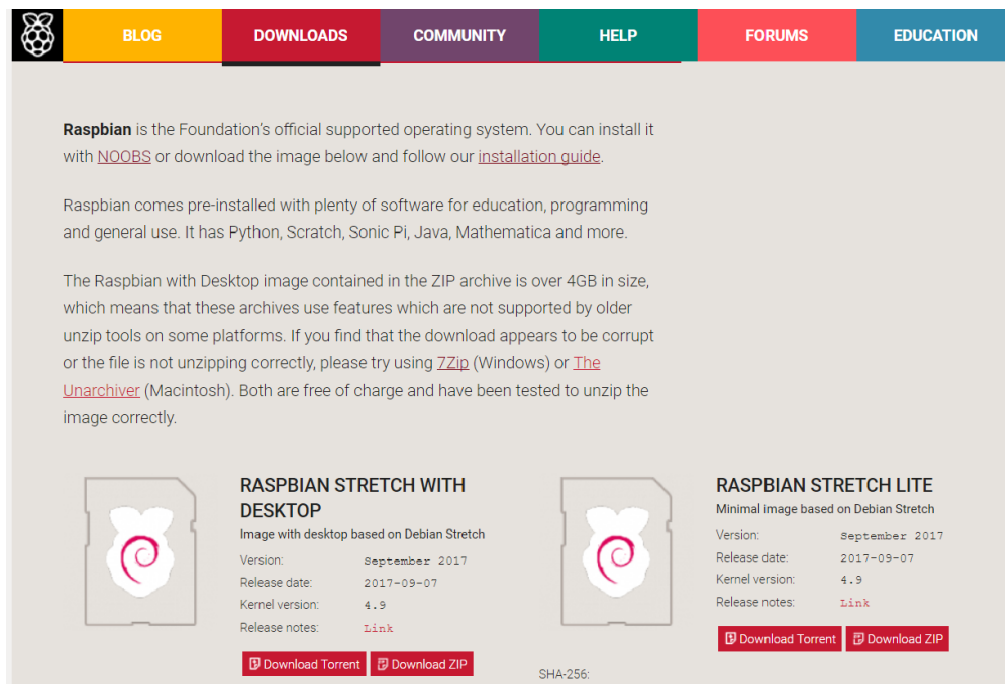
- To understand the OS installation for Raspberry-Pi 3

Process of OS installation on Raspberry Pi Board

- Open the website: www.raspberrypi.org
- Click on the “Downloads” tab

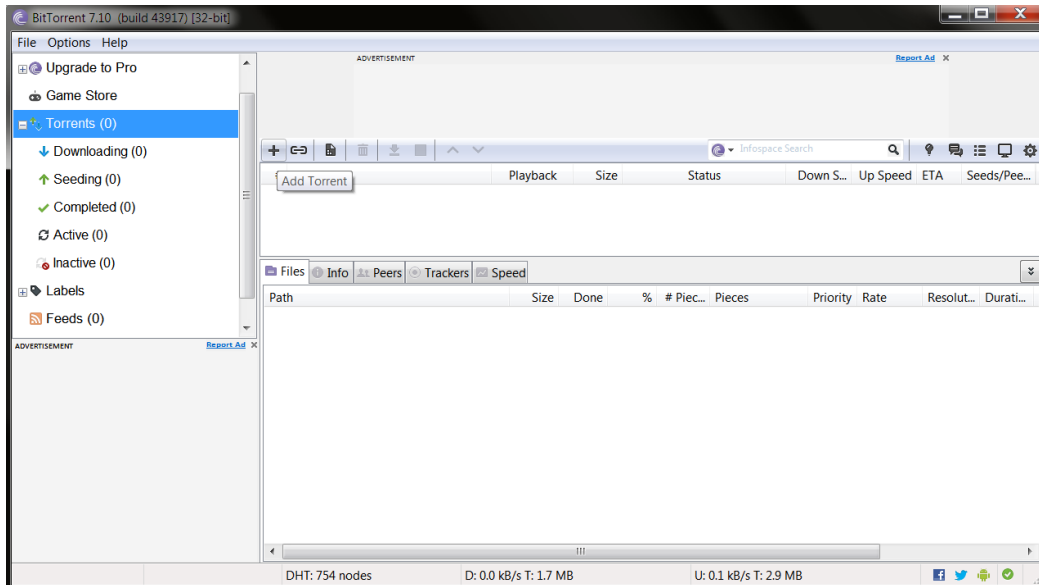


- Click on the “RASPBIAN” option.

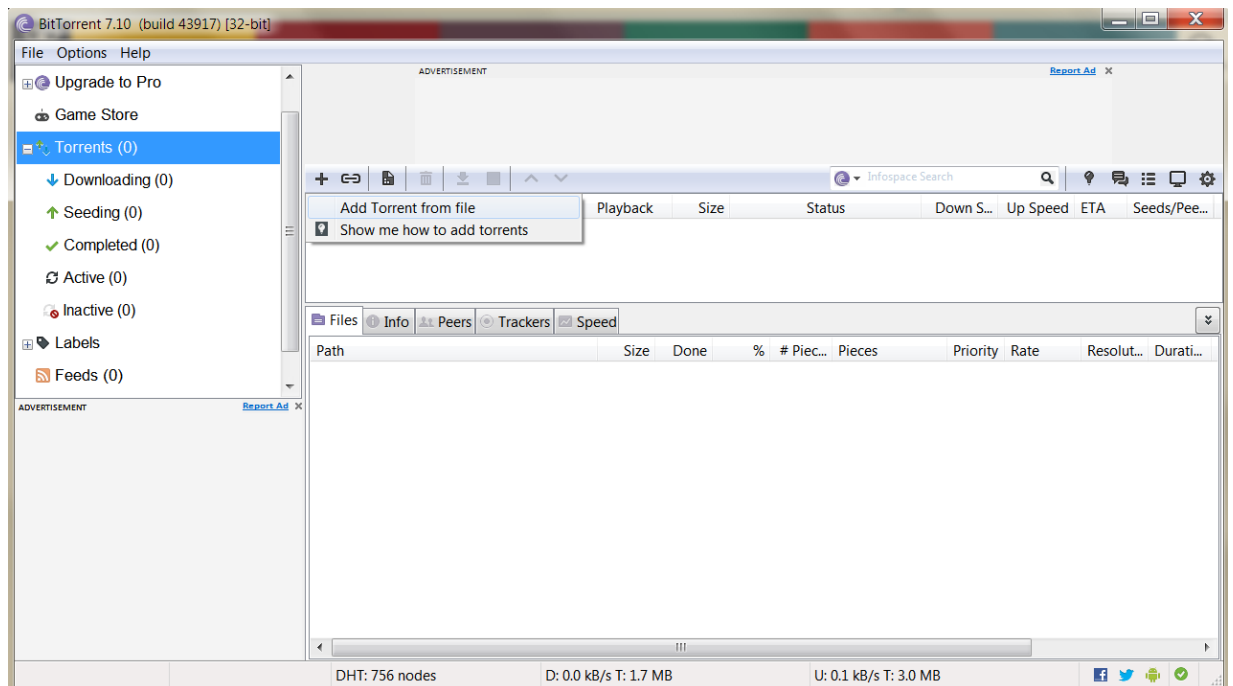


- We require “RASPBIAN STRETCH WITH DESKTOP”.
- So under this heading, click on “Download Torrent” option.

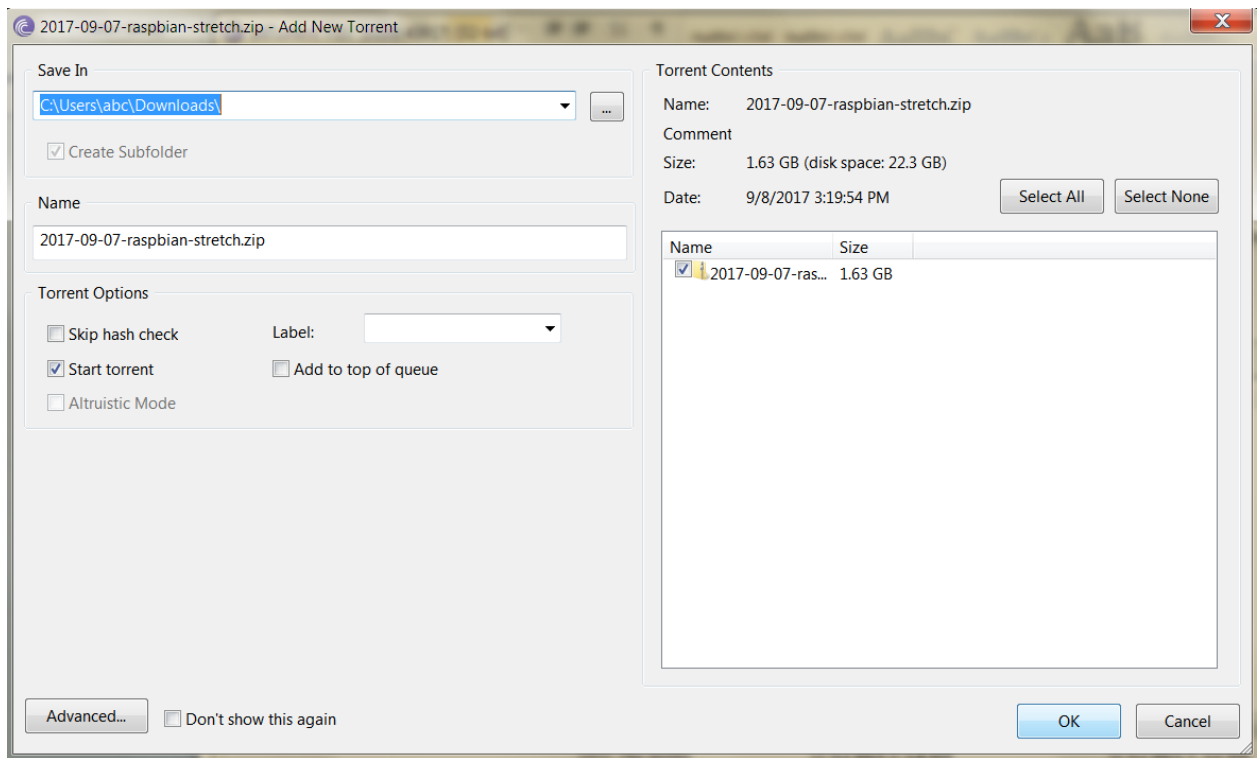
- A “Torrent file” is downloaded.
- Open this file open in “Bit Torrent” software.
- Click on the option “Add Torrent”.



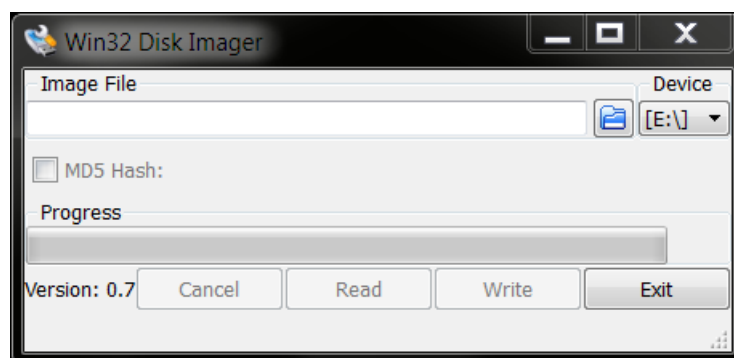
- Select the path of downloaded “Torrent file”.



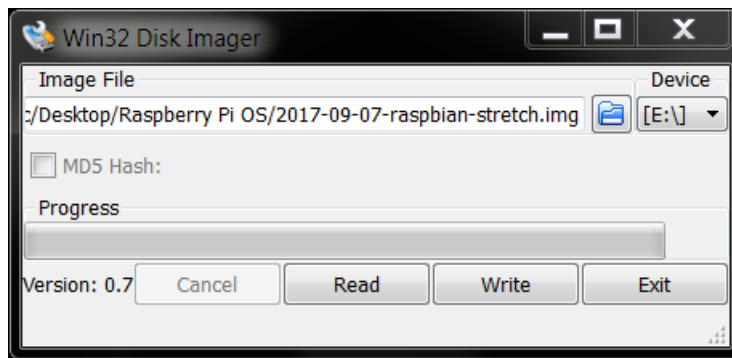
- After selecting the torrent file, following window is opened. Here click on OK



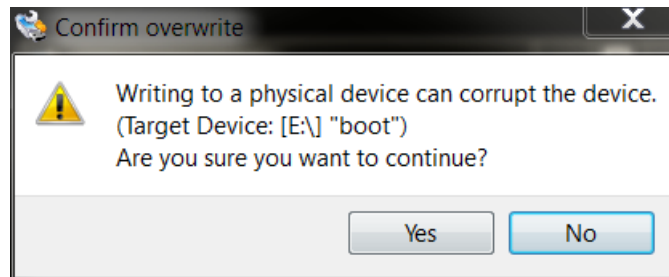
- Then we get the zip file of disk image.
- The size of the Raspbian with Desktop image contained in the ZIP archive is more than 4GB. This means that these archives use features which are not supported by older unzip tools on some platforms.
- If you find that the download appears to be corrupt or the file is not unzipping correctly, please try using [7Zip](#) software for Windows.
- After completion of download file extract on user requirement drive or desktop
- Plug in the SD card reader having SD card inside.
- Download the setup “win32 disk imager” to create the image of the OS setup.
- Install the win32Disk Imager setup. After completion, the following window appears.



- Open the extracted file in it (means import the file)



- Click 'Write' to flash disk image to storage medium.
- Click 'Yes' and Confirm the overwrite



- Image file will be written on SD card.
- After the procedure is completed, it gives "Write Successful" message.
- Then insert this SD card in raspberry pi3.

Connecting Hardware Peripherals to Raspberry-Pi board

Raspberry-Pi setup through SSH (Headless Configuration of Raspberry-Pi-3 (VNC, Putti))

How to Connect a Raspberry-Pi to the Laptop or PC Display

Required devices:

- Raspberry Pi
- Ethernet Cable
- Laptop/ PC
- SD Card with Raspbian
- Micro USB Cable

How does it Work?

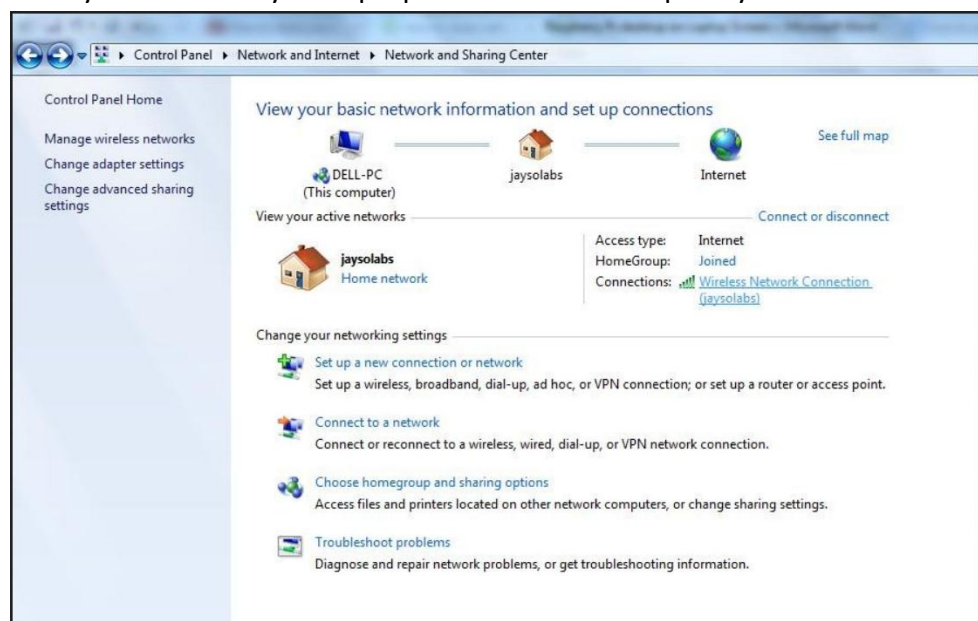
- To connect a Raspberry Pi to a laptop or PC display, you can simply use an Ethernet cable.
- The Raspberry Pi's desktop GUI can be viewed through the laptop or PC display using a 100mbps Ethernet connection between the two.
- We used VNC server software to connect the Raspberry-Pi to our laptop or PC.
- Installing the VNC server on your Raspberry-Pi allows you to see the Raspberry Pi's desktop remotely.

Setting up your Raspberry Pi

- Install Raspbian OS on blank SD card.
- Insert this SD card into Raspberry-Pi board.
- Connect micro USB cable to power the Raspberry-Pi.

Sharing Internet Over Ethernet in Window OS

This step explains how you can share your laptop or PC with the Raspberry Pi via Ethernet cable.



- To share internet with multiple users over Ethernet, go to Network and Sharing Center.
- Then click on the WiFi network
- Double click on Wireless area connection
- Click on Properties (shown below)