

# Setting up the SD card

The operating system used by the Raspberry Pi can be one of several specially optimized versions of the Linux operating system. These are known as “distributions”, or “distros” for short. Each available distro is offered as a disk image which must be written onto the Micro SD card to be inserted into the Raspberry Pi. The choice of currently available distros are listed for free download at [raspberrypi.org/downloads](http://raspberrypi.org/downloads)

At the time of writing, the list includes these distros:



Raspbian is a free operating system based on Debian Linux and optimized for Raspberry Pi hardware.

- **Raspbian** – recommended for beginners, this distro provides a comprehensive system with a graphical desktop, web browser, and development tools to get you started programming.
- **Ubuntu MATE** – regular Ubuntu desktop distro optimized for Raspberry Pi 2 and Raspberry Pi 3.
- **OSMC** – Open Source Media Center that allows media playback from your local network, attached storage, or the web.
- **OpenELEC** – embedded operating system that provides an open source media hub.
- **PiNet** – classroom operating system that provides centralized student accounts and file storage.
- **RISC OS** – non-Linux alternative operating system.
- **Windows10 IoT** – Microsoft system for Core devices.



The Micro SD card should be at least 8GB capacity and at least Class 4 speed.

## Formatting the SD card

It is recommended that you format the Micro SD card before writing any distro onto the card to ensure best performance:

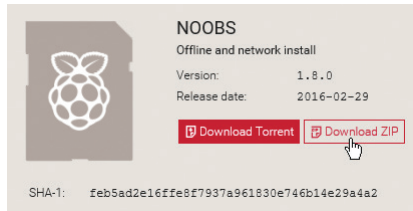
- 1 Visit [sdcard.org/downloads/formatter\\_4](http://sdcard.org/downloads/formatter_4) to download a free SD Formatter for Windows or Mac
- 2 Follow the instructions to install the SD Formatter, then insert your Micro SD card into your card reader and make a note of the drive letter allocated to it, e.g. **E:**
- 3 Run the SD Formatter then select the drive letter of your Micro SD card and format the card

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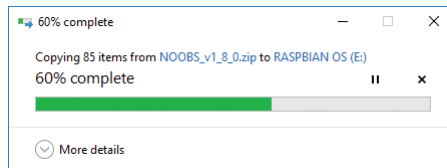
## Installing the Raspbian operating system

This book demonstrates the officially recommended Raspbian distro that can be written onto your Micro SD card using the “NOOBS” (New **O**ut **O**f the **B**ox **S**oftware) easy installer.

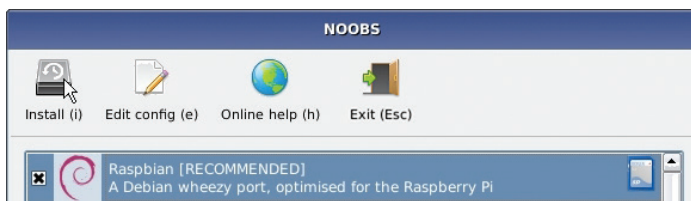
- 1 Go to [raspberrypi.org/downloads/noobs](http://raspberrypi.org/downloads/noobs) and click the **Download ZIP** button to download the installer



- 2 Extract all contents in the downloaded ZIP file to your Micro SD card to copy the installer



- 3 Remove the Micro SD card from the card reader and insert it into your Raspberry Pi
- 4 Plug in your keyboard, mouse and monitor cables
- 5 Now, plug in the USB power cable to your Raspberry Pi to see it boot to a window offering a list of operating systems you can install
- 6 Check the box next to the “Raspbian” option, then click the **Install** button to install the operating system



- 7 When the installation process has completed, you can turn the power off, then back on, to start the operating system



You can alternatively purchase a pre-installed NOOBS Micro SD card from Raspberry Pi retailers.



The drive letter assigned to the SD card on your system may be different to the one shown here.