

# What is a Raspberry Pi?

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Raspberry Pi is a series of small single-board computers. The Raspberry Pi project originally leaned towards the promotion of teaching basic computer science in schools and developing countries. It is widely used in many areas because of its low cost, modularity, and open design.

The Raspberry Pi Foundation provides Raspberry Pi OS, a **Debian-based Linux** distribution for download. It promotes **Python and Scratch** as the main programming languages, with support for many other languages.



## Things you need to know about your Pi

Raspberry Pi comes with a lot of different models and each of them has its own specs. To get started, you first need to know the model of your Pi and look at the specs.

## Things you need to set up your Pi

Raspberry Pi is a single-board computer. You can image it as the core of your computer but has no monitor, keyboard or mouse. It can run automated functions without all those things, but you still need them when you are setting up. All necessary parts are included in the CTH Raspberry Pi's kit.

### 1. Screen

You can use any screen, as long as it has a HDMI port and you have a power supply for the screen.

### 2. HDMI cable

Different models have different types of HDMI ports, you will need to find HDMI cable that matches your Pi.

1. Pi 3: standard HDMI port x1
2. Pi 4 & Pi 5: micro HDMI port x2

### 3. Mouse and with cable

You can also use the Bluetooth with a dongle type of mouse & keyboard.

### 4. Power Supply

Different models have different needs for Power supply. It is not necessary to buy the official power supply. However, you will need to find one that matches the needs of your pi, please refer to the official document.

1. Raspberry Pi Zero 2 / Pi 3: 5V, 2.5A; Micro USB
2. Raspberry Pi 4: 5V, 3A; USB-C
3. Raspberry Pi 5: 5.1V, 5A; USB-C

## 5. SD card

The SD card acts as the hard drive of your Raspberry Pi. The higher storage means your pi can save more things on it. BUT, you have to be aware of the types and sizes of the SD card. There is a **list** for you to check the specific SD card's compatibility with Pi.

In general, I will suggest using one with at least 16GB.

## 6. Good to have

1. Ethernet Cable - In case you cannot log in to the WIFI, especially for non-open networks.
2. Fans - Overheating is a common problem for Pi, especially when running for hours.
3. Cameras - With cameras, you can do a lot of interesting projects with computer vision and images.

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