



Internet of Things (IoT)

SLQ Wiki Fabrication Lab 2024/06/04 04:17

Internet of Things (IOT)

What is IOT

IOT or Internet of Things is defined by [wikipedia](#) as the extension of the internet into physical devices and everyday objects. Traditionally, IOT devices are basic devices that contain a sensor monitoring an element and reporting the result back to an internet server where it can be graphed and analysed.

IOT Devices

Devices can be purchased full constructed off-the-shelf, as whole kits or from scratch with the components purchased from stores such as [Jaycar Electronics](#), [LittleBird Electronics](#) and [The IOT Store](#).

Kits from scratch are a great way to introduce users into the world of coding and electronics and building a device is not difficult. Breaking it down to some basic steps you will need:

1. A sensor to measure an element such as temperature, humidity or air pressure sensor
2. A small PC to control, or be the brains of the device. Most IoT devices use either a Raspberry Pi or an Arduino
3. A way to output the sensor reading. Traditionally IoT devices will connect to the internet and upload the data to a server (see below). Alternatively you can connect a LCD display to the Raspberry Pi or Arduino to display the data

IOT Servers

Devices need a place to store its findings and users need a place to review, graph and analyse the data. There are services available with a wide range of features and prices dependant on your needs. Pricing is typically dependant on how many devices to connect, the frequency of recording (data sent every second or every 10 minutes) and how long to save the data historically. A few places to start are the [Microsoft Azure IoT Hub](#), [Google Cloud IoT](#) and [thinger.io](#).