What is a micro:bit?

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Overview

The BBC micro:bit is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display, buttons, sensors and many input/output features that you can program and physically interact with. The latest micro:bit adds sound sensing and playback capabilities.

### Is the micro:bit a computer or a microcontroller?

You might also hear the micro:bit referred to as a microcontroller. The board contains a microcontroller that can be programmed to perform specific tasks, but it also has input and output devices like buttons and an LED display which makes it more than a microcontroller.

A microprocessor plus memory, storage and physical input/output devices make a computer like the one you are reading this article on. The micro:bit is just a pocket-sized one.

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Images
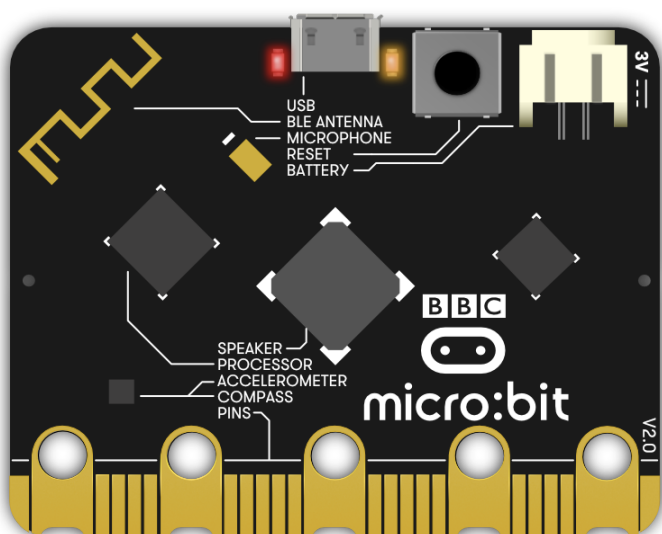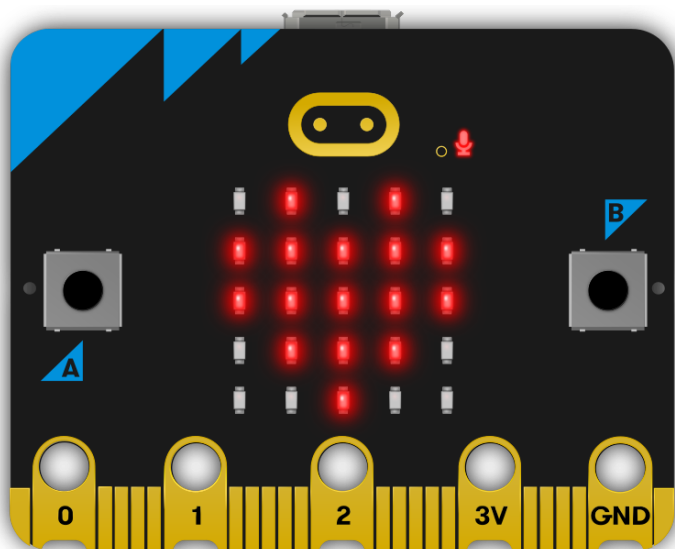
Features

Latest micro:bit

🔊 Speaker to play back sounds and melodies and make some noise!

🎤 Microphone to respond to sounds. A microphone LED, lets you know when the microphone is in use.

All micro:bits

💡 25 red LED lights that can flash messages and be used to create games.

🅰️ 🅱️ Two programmable buttons that can be used to control games or pause and skip songs on a music playlist.

🏃 Accelerometer to detect motion and know when you're on the move.

⏱️ Built-in compass to know which direction you're heading in.

📻 Radio and Bluetooth transmitter and receiver to let you interact with mobile devices wirelessly.

📌 A range of input and output pins to let you connect the micro:bit to other devices via it's Edge Connector

You can find more information on the **hardware in our guide** **(https://www.microbit.org/guide/hardware/)**.

Here is an introduction to the device from the **microbit.org** **(https://microbit.org)** website

Introduction to the BBC micro:bit

Versions

There are two versions of the micro:bit; the latest revision has an onboard speaker and microphone and the previous revision does not.

Both versions work in the same way and you can continue to use the previous revision with all the micro:bit apps and editors as you would expect.

How to tell the difference between micro:bit versions
There are a few easy ways in which you can identify whether you have the latest board revision.

    1. The Version number (V2) is printed clearly in the bottom right corner on the rear of the board

1. On the back of the device you will see that the label now identifies the **MICROPHONE** and **SPEAKER**, and the **BLE ANTENNA** is gold coloured.
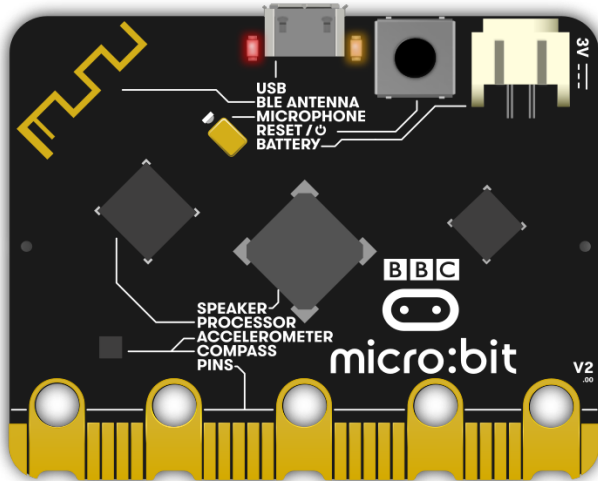
2. The Edge Connector has handy notches to make it easier to use crocodile clips or conductive thread without it slipping between pins.
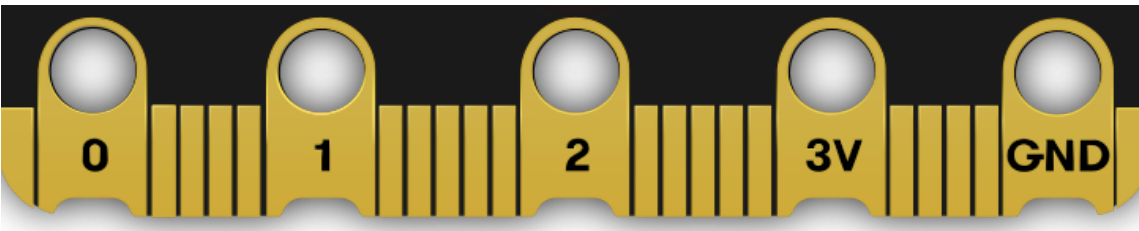
3. On the front of the device the **micro:bit logo** in now gold coloured. This means it can be used as a **touch-sensitive input** pin.

latest micro:bit

previous micro:bit