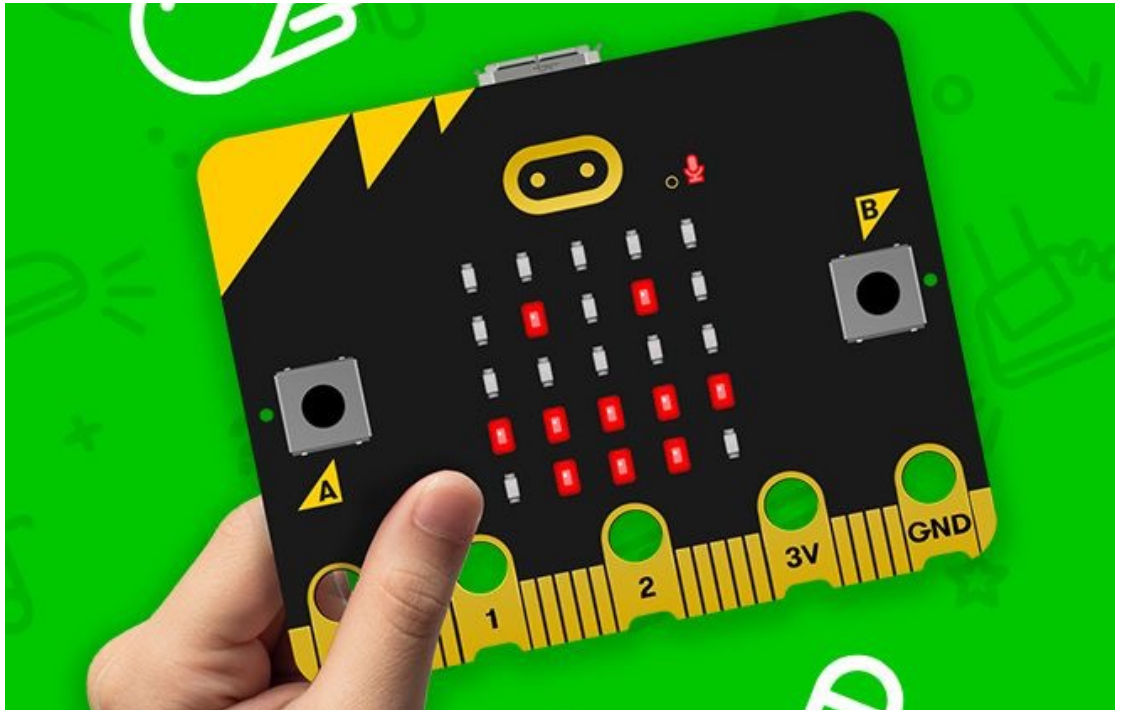

Projects with the BBC micro:bit V2

3 fun projects to show what the device can do

Jonny Austin

CTO Micro:bit Educational Foundation

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© Micro:bit Educational Foundation

Today’s hosts

Jonny Austin

CTO

Micro:bit Educational Foundation

Bjørn Kvaale

Product Marketing Engineer

NORDIC SEMICONDUCTOR

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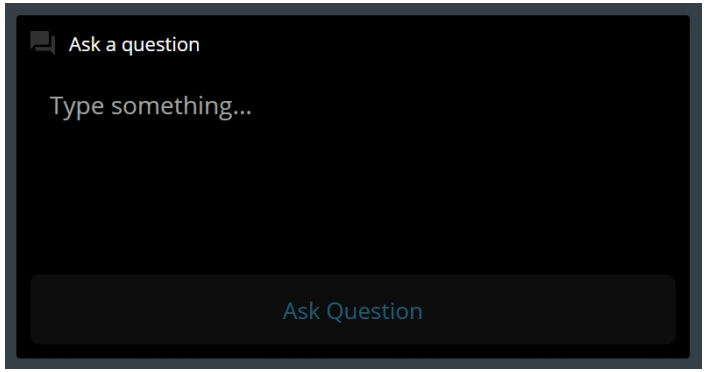
Practicalities

- Duration: 50-60 mins
- Questions are encouraged!
- Please type questions in the top of the right sidebar
  - All questions are anonymous
  - Try to keep them relevant to the topic
- We will answer questions towards the end
- The chat is not anonymous, and should **not** be used for questions
- If you have more questions:
  - Go to DevZone for Nordic related questions
  - Go to support.microbit.org for help with BBC micro:bit
- A recording of the webinar will be available together with the presentation at webinars.nordicsemi.com



{ DevZone

micro:bit

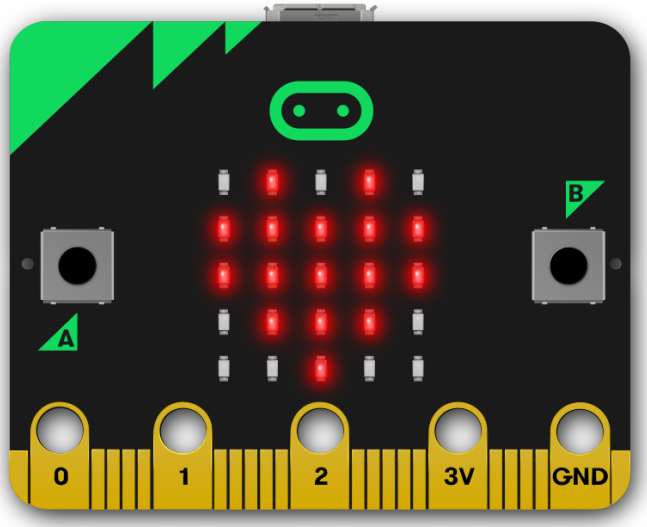
Inspiring every child to create their best digital future

© Micro:bit Educational Foundation 2020

BBC micro:bit

Versatile, programmable IoT device that is **designed for use in the classroom**

Available in 70 countries for ~£10 in volume



Low floor, high ceiling

Designed by a coalition of 29 partners! Including Nordic Semiconductor

Easy to program, no installation or drivers

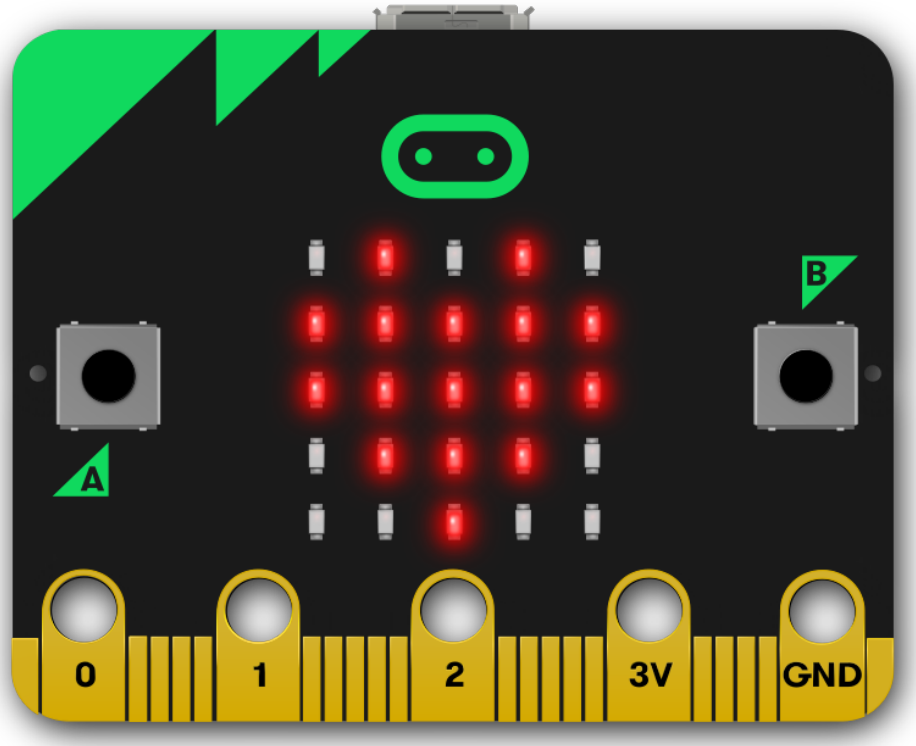
Simple wireless communication

Battery powered

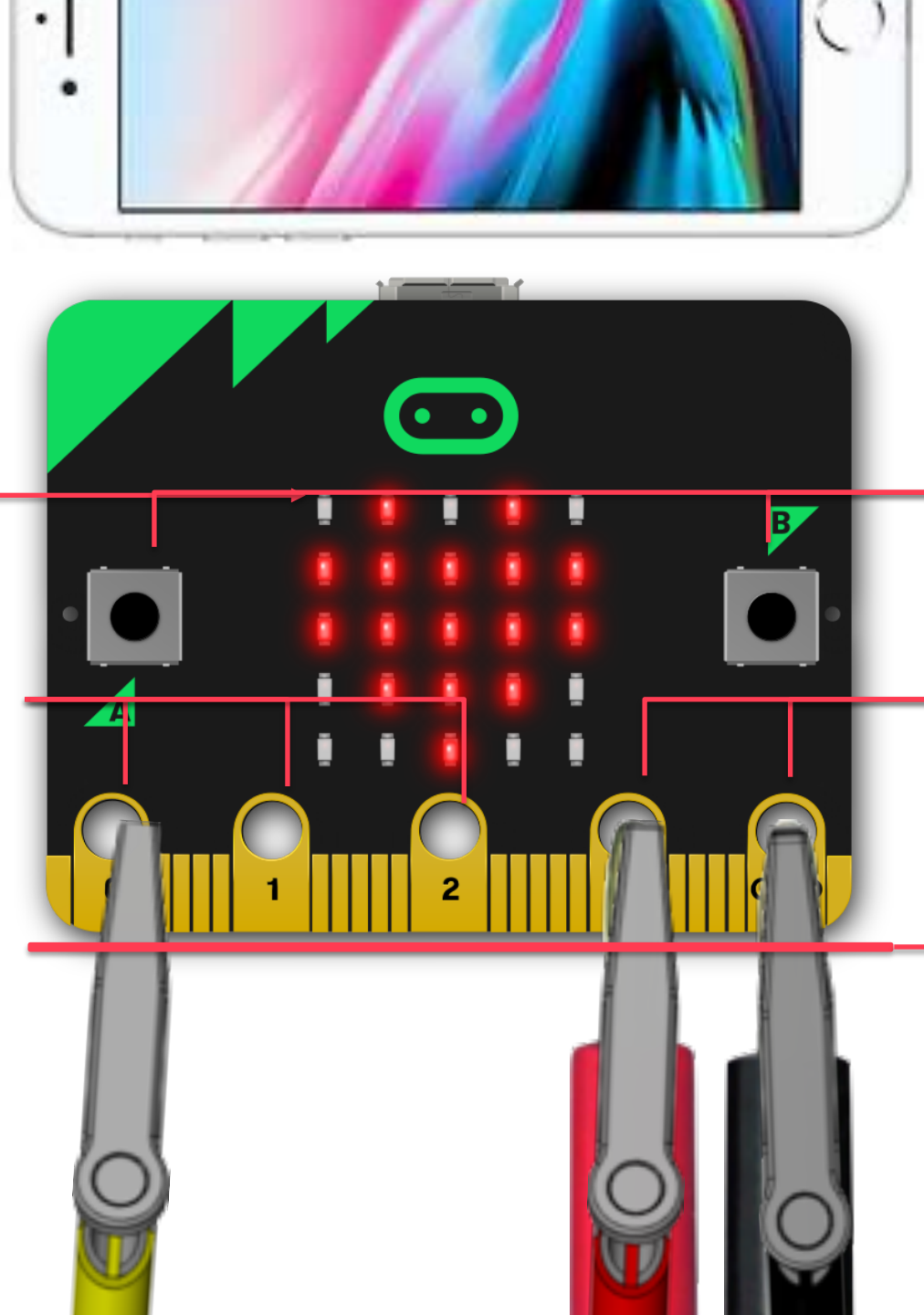
Built-in motion sensors, instantly interactive

Hundreds of sensors and accessories

© Micro:bit Educational Foundation 2020



x 5,000,000


Display
5x5 LED Matrix
Touch and Input/Output Pins
(for connecting other
components and sensors)
Holes for banana plugs
Pads for crocodile clips
Push buttons
External Power supply
3.3V in or battery V out
“Edge Connector"
A
B
1
2

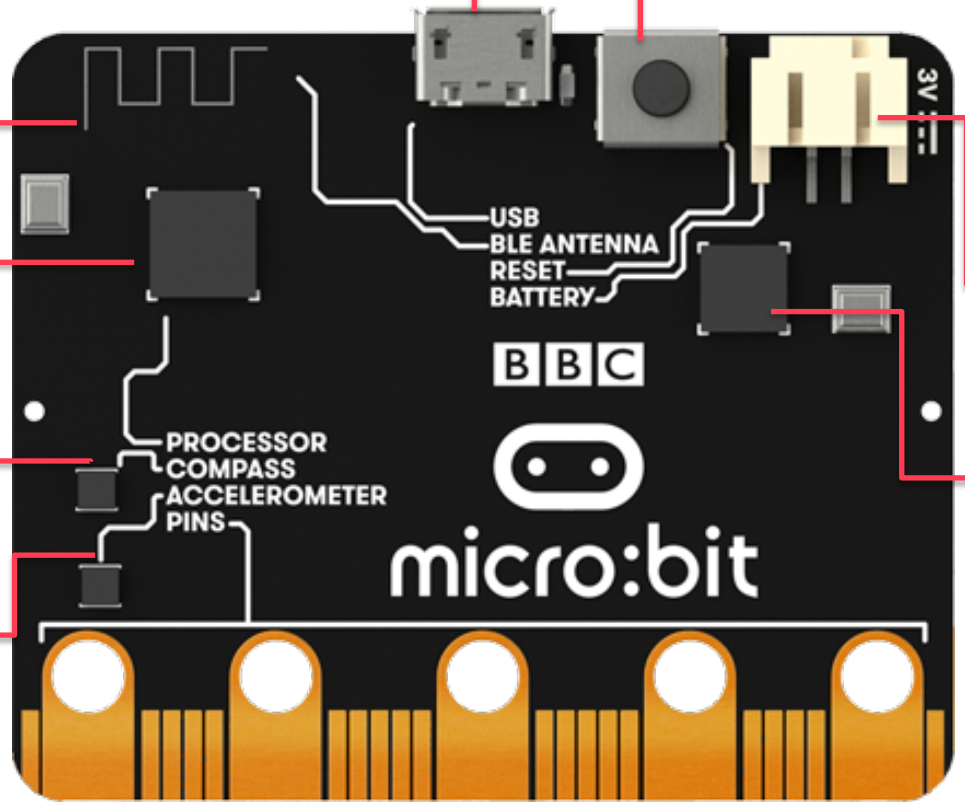
Micro USB
Power and Programming

Antenna (Bluetooth & Custom 2.4GHz radio)

Main Processor
Nordic nRF51822 on V1
Nordic nRF52833 on V2

Magnetometer

Accelerometer



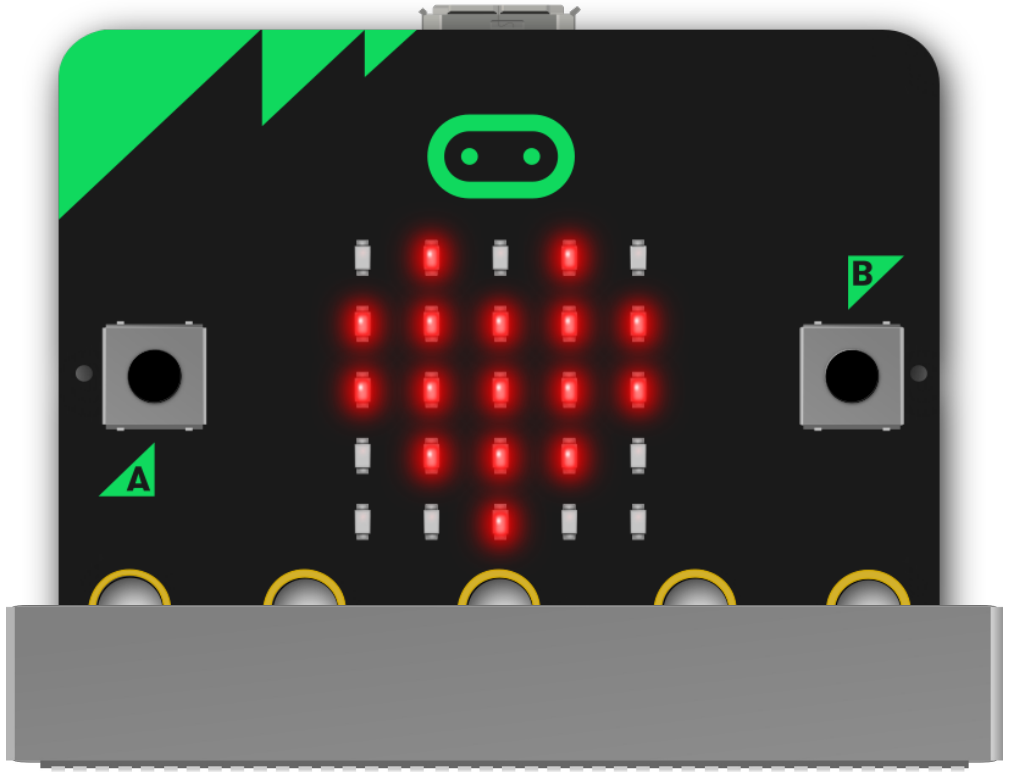
Reset Button

Battery connector
(2xAAA)

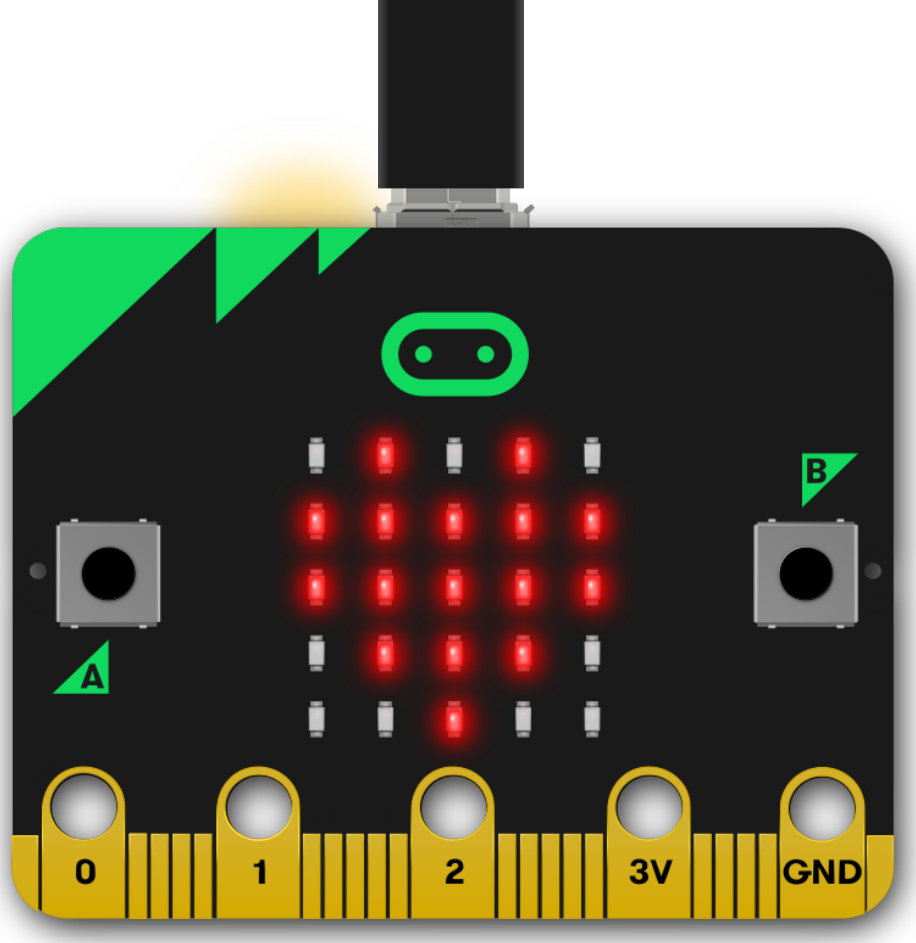
Interface Processor
Provides drag-and-drop

Edge Connector

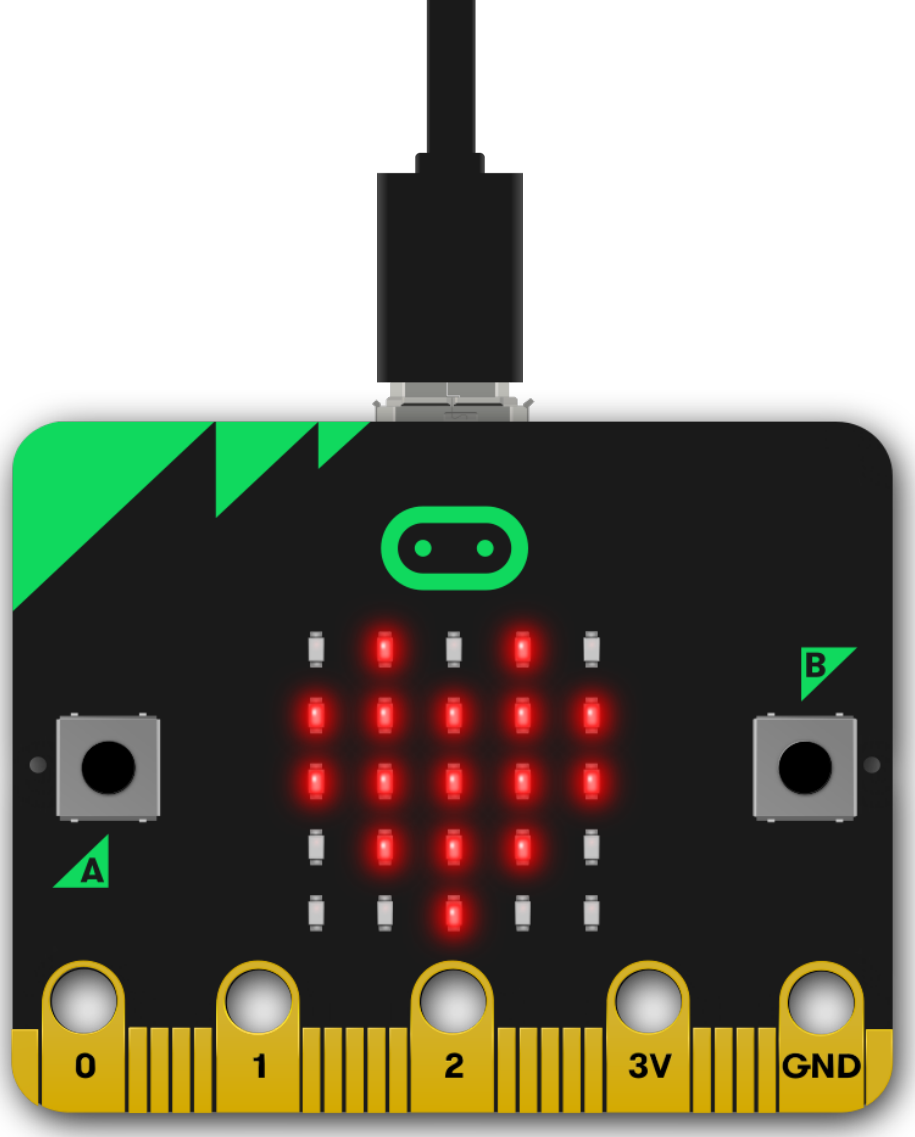
Enables a huge ecosystem of accessories and extensions around the core micro:bit platform

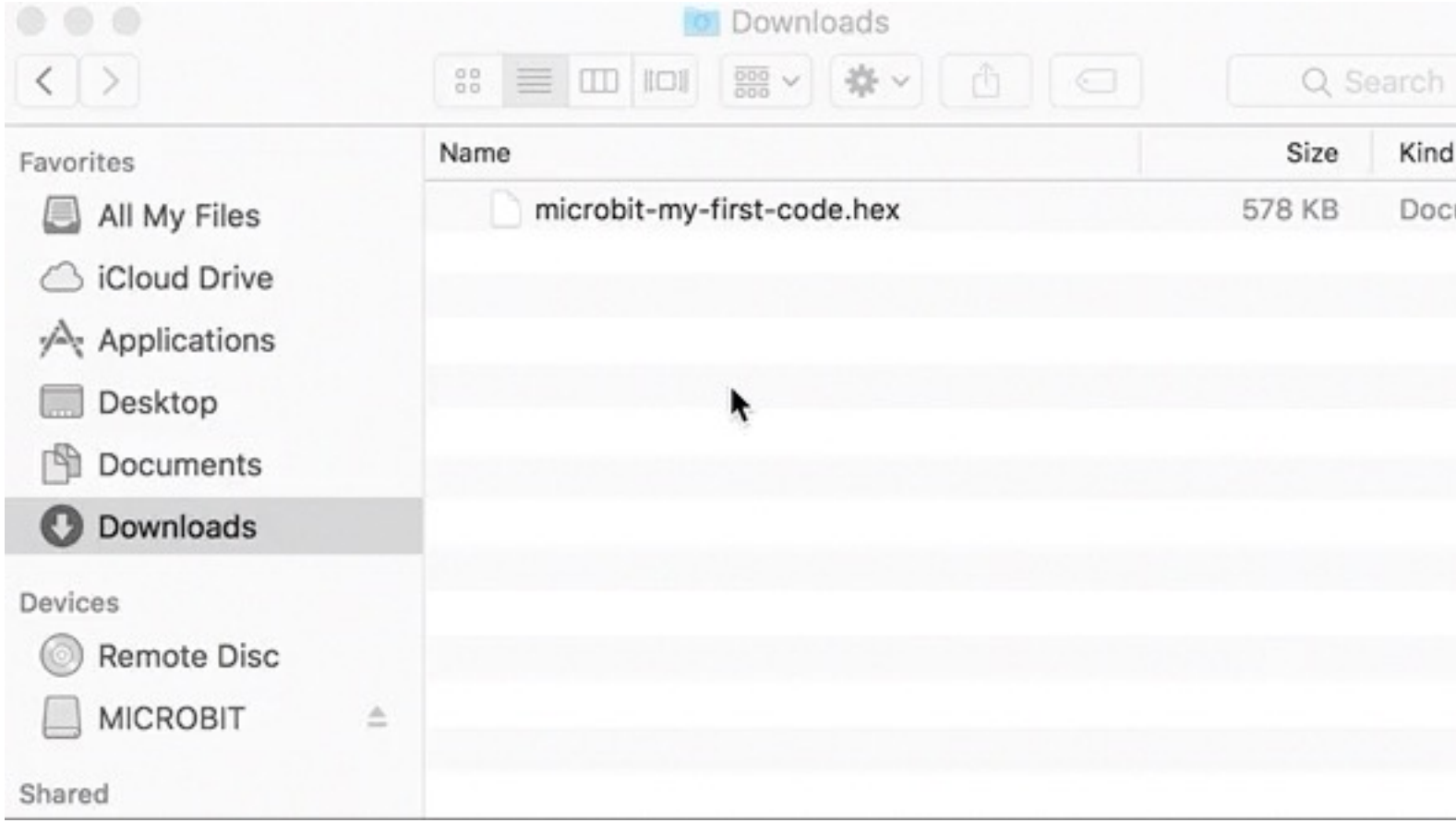


- Innovative
- Robust
- Adaptable
- Easy for kids to use
- Easy to adopt in hardware
- No fragile pins to bend
- No soldering

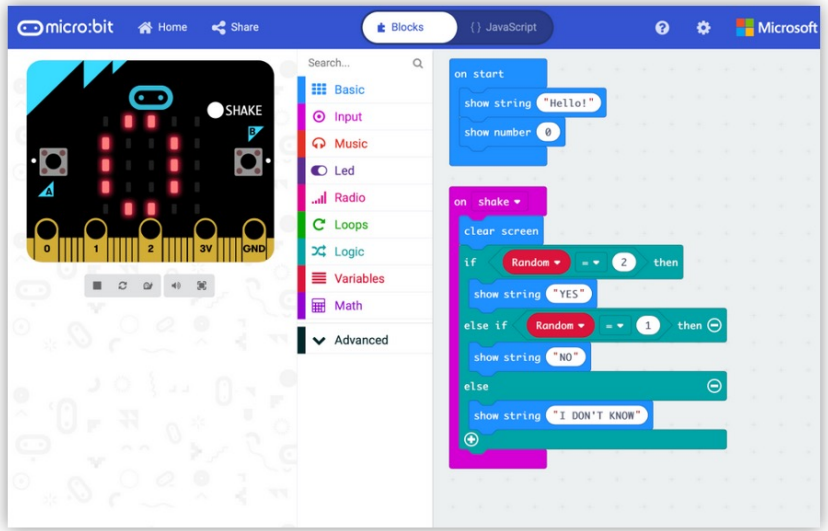


micro:bit ‘is a USB Drive’





micro:bit is a USB Drive



MakeCode Editor

The MakeCode editor provided by Microsoft makes it easy to program your micro:bit with blocks and JavaScript.

We have recently updated the editor, and the previous version is still available for anyone that needs it. If you have any issues accessing the editor, check that it isn't blocked in your school.

Let's Code

Reference

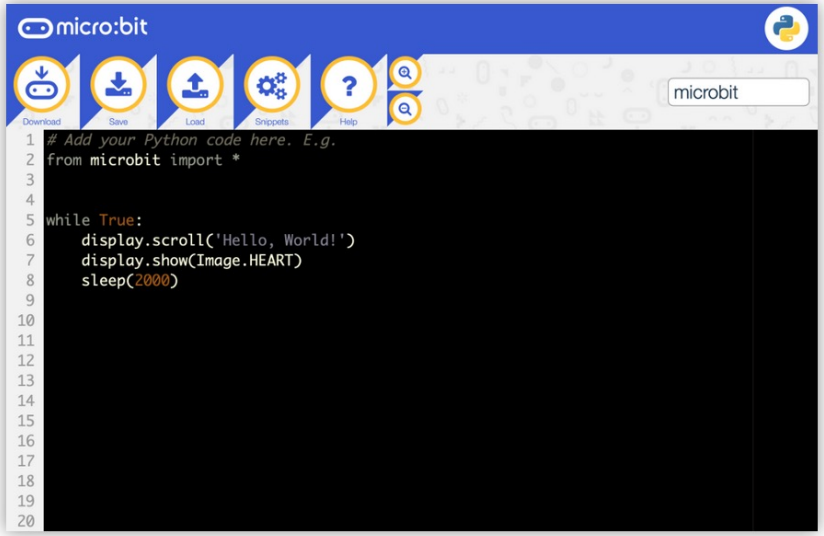
Lessons

Python Editor

Our Python editor is perfect for those who want to push their coding skills further. A selection of snippets and a range of premade images and music give you a helping hand with your code. Powered by the global Python Community.

Let's Code

Reference



Scratch 3.0

With Scratch, you can program your own interactive stories, games, and animations - and share with others. Available for Windows and macOS.

scratch.mit.edu

Bitty Blue

Provides a collection of fun things to do with the micro:bit and Bluetooth. Available for Android and iOS.

bittysoftware.com

EduBlocks

Makes the transition from block-based programming to Python easier. Works in a browser.

microbit.edublocks.org

Firia Labs

CodeSpace provides step-by-step interactive lessons for beginners to learn Python. Works in the Chrome browser.

firialabs.com

Kodu

Kodu let's kids create games via a simple visual programming language. Available for Windows.

kodugamelab.com

Mu

Simple text-based code editor for beginner programmers. It's written in Python and available for Windows, macOS, Linux, and Raspberry Pi.

codewith.mu

MIT App Inventor

MIT App Inventor helps people around the world build mobile apps. Available for Windows, macOS and Linux.

mit.edu

Arduino IDE

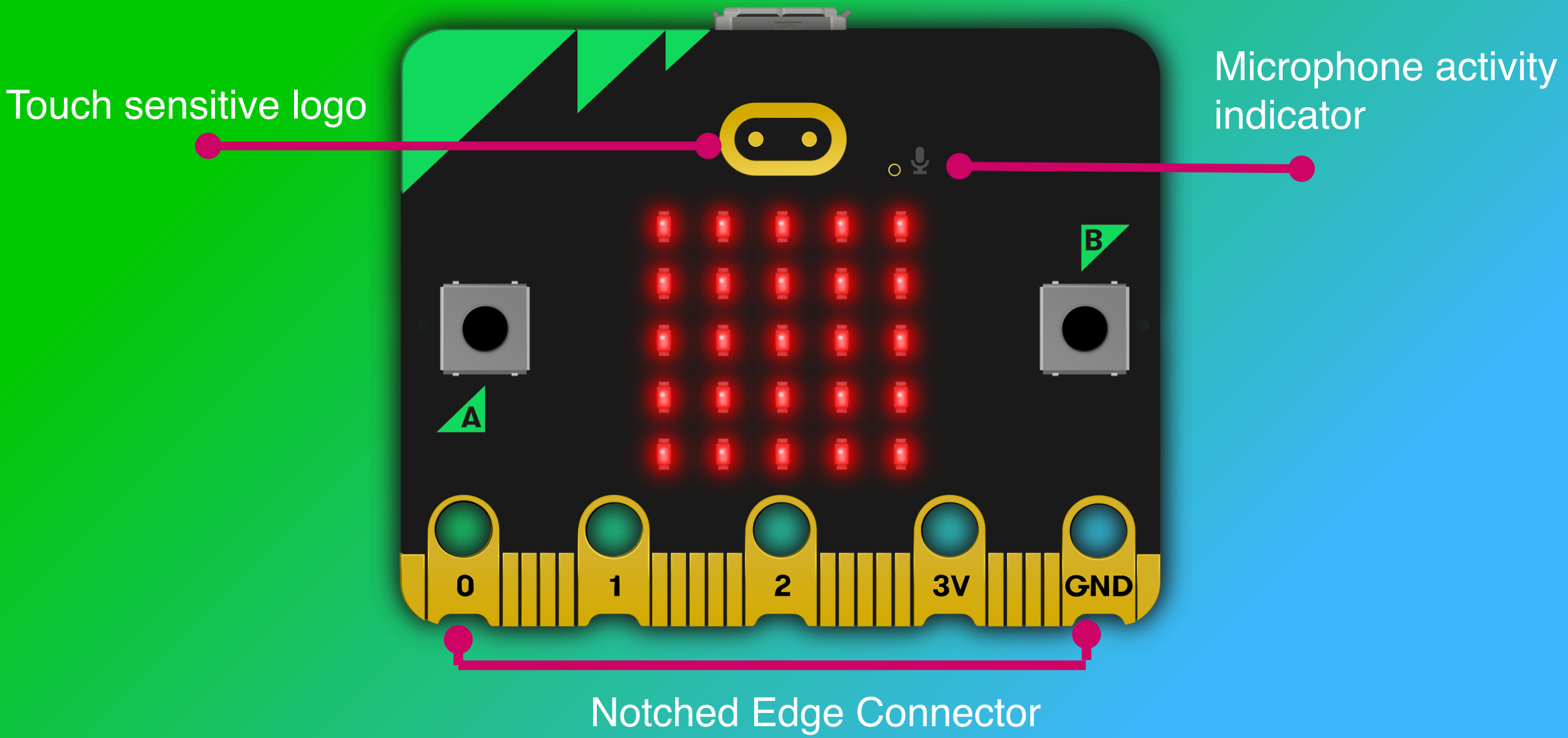
Program the micro:bit with the Arduino editor. Available for Windows, macOS and Linux.

learn.adafruit.com

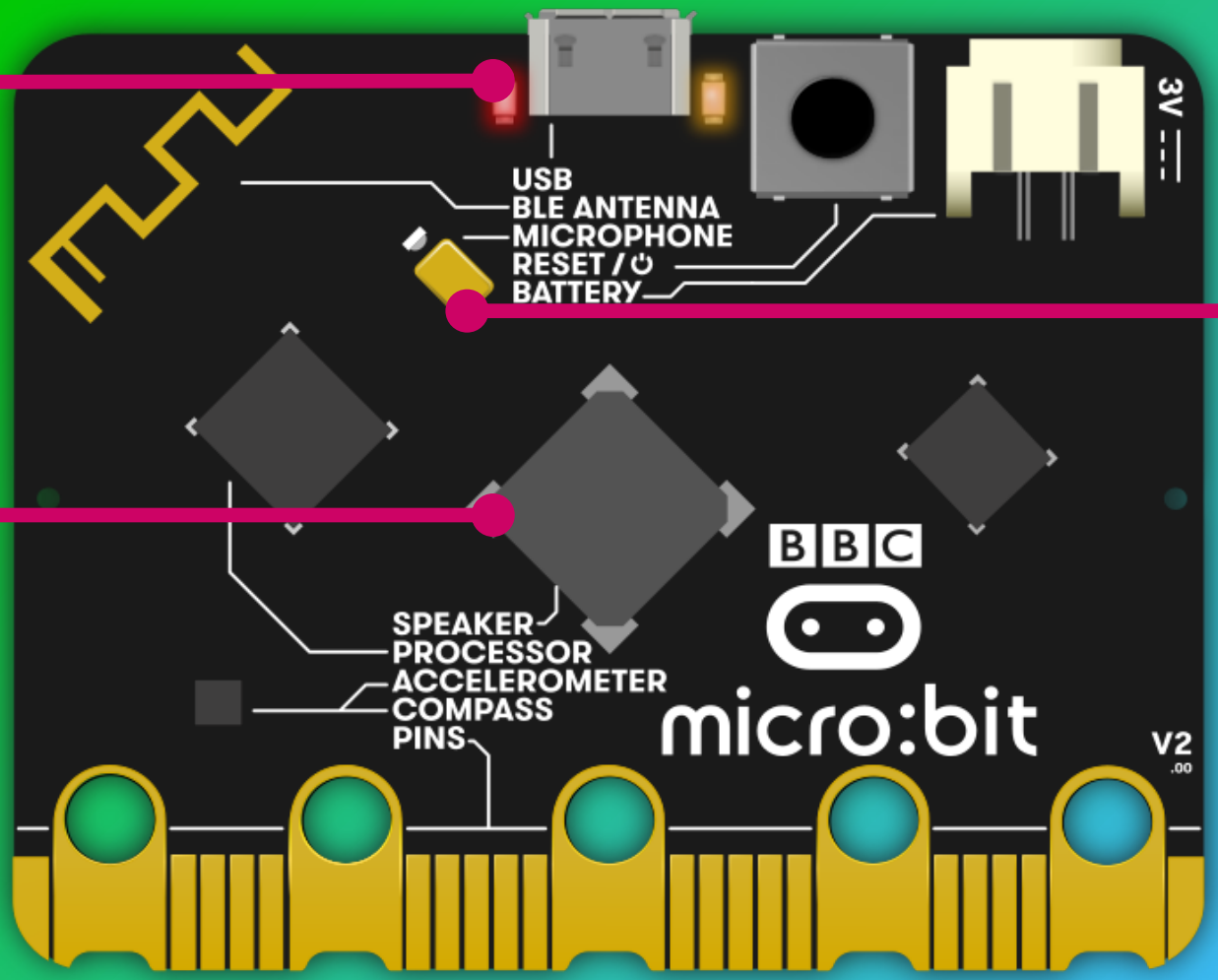
BirdBlox

Program the micro:bit using blocks on touchscreen devices. Available for Android, iOS and Fire OS.

birdbraintechnologies.com


Touch sensitive logo
Microphone activity indicator
A
B
0
1
2
3V
GND
Notched Edge Connector

Power indicator



Microphone

Speaker

Demo 1: quick tour of the V2 features

Demo 2: Chuck-a-duck
(V1 & V2 compatibility)

Demo 3: Lipsync fun!

We’re right at the beginning

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Q&A

Register for upcoming Nordic Tech Webinars

www.nordicsemi.com/webinars