

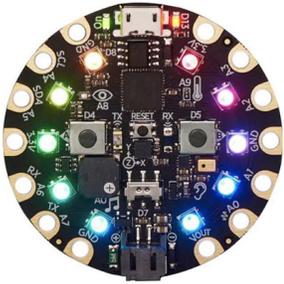
MicroBlocks Info Sheet

MicroBlocks: <http://microblocks.fun>

Download: <http://microblocks.fun/download>

MicroBlocks is a new programming language inspired by Scratch that runs right inside microcontroller boards such as the AdaFruit Circuit Playground Express and BBC Micro:bit. With MicroBlocks, you can build your own “real world” digital instruments, interactive jewelry, electronic games and measuring devices, all by using blocks.

Adafruit Circuit Playground Express



This is one of the boards we used for the Spark workshop at MIT. It has 10 colorful NeoPixel LEDs, as well as two buttons, a tilt sensor, a built-in speaker, and IR remote receiver, and many other features. You can connect external servo motors or NeoPixel strips to the pads around the edge of the board.

- [Board only \(\\$25\) from Adafruit](#)

- [Board with battery pack and USB Cable \(\\$30\) from Adafruit](#)

Note you can also purchase the base kit at at [MicroCenter in Cambridge](#) and [Amazon](#).

BBC Micro:bit



This board is cheaper than the CircuitPlayground, but it doesn't have the colorful LEDs, speaker, or IR receiver. It also has fewer connections that can be used with alligator clips. You can get just the board, but I recommend the “micro:bit Go Bundle” which comes with a USB cable and battery pack for only \$1.50 extra. You can purchase this kit at [MicroCenter in Cambridge](#) (on sale for \$10 right now), on [Adafruit's website \(\\$17.50\)](#), [Sparkfun \(\\$16.50\)](#), as well as on [Amazon](#).

Servo Motors



Servo motors are used to make things move. Here's a good tutorial:

<https://learn.sparkfun.com/tutorials/hobby-servo-tutorial>. They can be connected to either the Circuit Playground Express or micro:bit, although to make them work with the micro:bit you will probably need to plug in the battery pack. Servos range in size and price.

- Microservo (\$6): <https://www.adafruit.com/product/169>

- Continuous rotation servo (\$12): <https://www.adafruit.com/product/154>

- Alligator clips for servo connection (\$8): <https://www.adafruit.com/product/3255>

- Other servos: <https://www.sparkfun.com/categories/245>

NeoPixel Strips & Rings



Another fun addition to these devices are programmable NeoPixels. Adafruit has a huge selection. Here are some we recommend:

- Strip of 30 (\$12.50): <https://www.adafruit.com/product/3811>

- Ring of 12 (\$7.50): <https://www.adafruit.com/product/1643>

- Ring of 16 (\$10): <https://www.adafruit.com/product/1463>

Note that you'll need to solder some wires onto the rings in order to use them.

For more information, please contact interest@microblocks.fun!