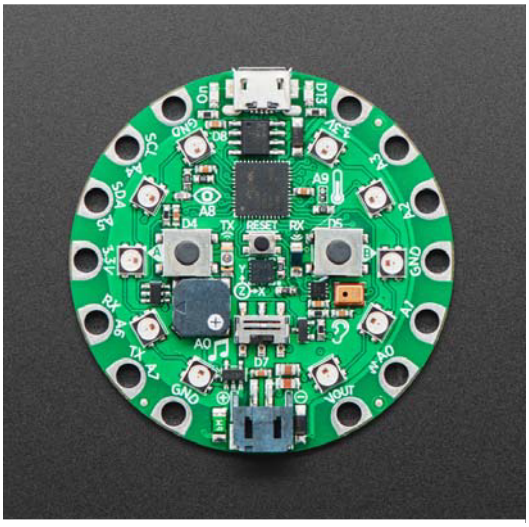

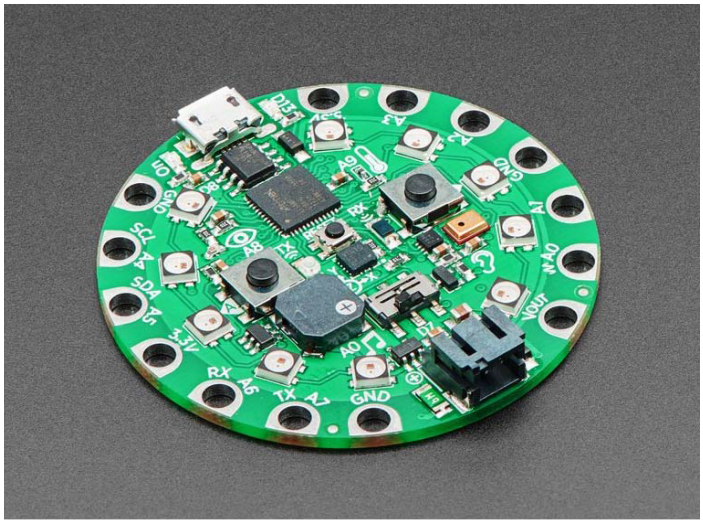

Circuit Playground Express for 4-H

PRODUCT ID: 4180

Circuit Playground Express is the next step towards a perfect introduction to electronics and programming. We've taken the original Circuit Playground Classic and made it even better! Not only did we pack even more sensors in, we also made it even easier to program.

This version is 4-H themed, for use by anyone, but comes in a special green color and with the 4-H emblem on the back, to celebrate the positive youth development and mentoring organization. 4-H's reach and depth are unmatched, reaching kids in every corner of America – from urban neighborhoods to suburban schoolyards to rural farming communities. The 4-H network of 500,000 volunteers and 3,500 4-H professionals provides caring and supportive mentoring to all 6 million 4-H'ers, helping them grow into true leaders today and in lif that has inspired 6 million members.

This version works just like any other Circuit Playground Express, and is great for sensor projects like this soil sensor. Turn it into an alarm, so it beeps when a door is opened, or plot light and temperature in your garden to track your plants as they grow up. There's hundreds of projects to build, learn and adapt.

Start your journey with Microsoft MakeCode block-based or Javascript programming. Then, you can use the same board to try CircuitPython, with the Python interpreter running right on the Express. As you progress, you can advance to using Arduino IDE,

which has full support of all the hardware down to the low level, so you can make powerful projects.You can even use code.org CS Discoveries to learn all about coding right in your browser!

Check out our detailed guide with a tour of Circuit Playground Express and details on getting started using MakeCode, CircuitPython, code.org CS Discoveries or Arduino!

Because you can program the same board in 4 different ways - the Express has great value and re-usability. From beginners to experts, Circuit Playground Express has something for everyone. If you are looking for our original, Arduino-only Circuit Playground, check out the Circuit Playground Classic.

The board is round and has alligator-clip pads around it so you don't have to solder or sew to make it work. You can power it from USB, a AAA battery pack, or with a Lipoly battery (for advanced users). Circuit Playground Express has built-in USB support. Built in USB means you plug it in to program it and it just shows up, no special cable or adapter required. Just program your code into the board then take it on the go!

Here's some of the great goodies baked in to each Circuit Playground Express:

- 10 x mini NeoPixels, each one can display any color
- 1 x Motion sensor (LIS3DH triple-axis accelerometer with tap detection, free-fall detection)
- 1 x Temperature sensor (thermistor)
- 1 x Light sensor (phototransistor). Can also act as a color sensor and pulse sensor.
- 1 x Sound sensor (MEMS microphone)
- 1 x Mini speaker with class D amplifier (7.5mm magnetic speaker/buzzer)
- 2 x Push buttons, labeled A and B
- 1 x Slide switch
- Infrared receiver and transmitter - can receive and transmit any remote control codes, as well as send messages between Circuit Playground Expresses. Can also act as a proximity sensor.
- 8 x alligator-clip friendly input/output pins
- Includes I2C, UART, 8 pins that can do analog inputs, multiple PWM output
- 7 pads can act as capacitive touch inputs and the 1 remaining is a true analog output
- Green "ON" LED so you know its powered
- Red "#13" LED for basic blinking
- Reset button
- ATSAMD21 ARM Cortex M0 Processor, running at 3.3V and 48MHz
- 2 MB of SPI Flash storage, used primarily with CircuitPython to store code and libraries.
- MicroUSB port for programming and debugging
- USB port can act like serial port, keyboard, mouse, joystick or MIDI!

TECHNICAL DETAILS

- Outer Diameter: ~50.6mm / ~2.0"
- Weight: 8.9g

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