

Releases

Tags

Latest release

2.1.0
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2.1.0

 **dhalbert** released this 22 hours ago · **17 commits** to master since this release

We're pleased to bring you CircuitPython 2.1.0, with many new features and many bugfixes. Notably, Trinket M0 and Gemma M0 now include `pulseio` (PWM) support.

Thanks

Thank you to all who used, tested, [contributed](#), helped out, and participated on GitHub and/or discord: [@asherlie](#), [@kattni](#), [@caternuson](#), [@KurticusMaximus](#) (Kurt H), [@jerryneedell](#), Sigafoos, [@fabitencourt](#), [@hukuzatuna](#), scruffynerf, Janisku7, ogredrew, [@mrmcwethy](#), NorthernPike, cascade, [@ntoll](#), CGrover, Pyrrhis Productions, TitiMoby, dastels, jramsdale, [@tdicola](#), brad, Surrend, microwattbott, Becky Button, [@dglaude](#), ATMakers, Instinctive, histo, Wolf, siddacious, [@deshipu](#), caitlinsdad, smartRF, HappyDay, [@deanm1278](#), [@jedgarpark](#), Noe, Andon, adafruit, [@ladyada](#), [@tannewt](#), [@dhalbert](#), dobra-dobra, Factory Factory, Mr. Certainly, and surely more we have missed. Join us on the [Discord chat](#) to collaborate.

Notable New Features

- All boards, including Trinket M0, Gemma M0, and Feather M0 Basic, now support `pulseio`, which provides PWM and other other pulse based input/output.
- The touch/no-touch threshold computation for `TouchIn` pins has been adjusted to be more sensitive. Added `.raw_value` and `.threshold` value access. Thanks to [@ladyada](#) for finding and testing.
- ESP8266: Updated built-in neopixel support and library to match M0 boards. Thanks [@jerryneedell](#).
- The Circuit Playground Express release now includes several libraries built into the firmware. This saves considerable RAM when they are imported. To enable, remove the library `.mpy` files from your `sys.path` (e.g., from your `lib/` directory). To override, put a newer version on your `sys.path`. The modules included are:
 - [NeoPixel](#)
 - [adafruit_thermistor](#)
 - [adafruit_lis3dh](#) (accelerometer)
 - [adafruit_bus_device](#) (base library for many drivers)
- New [gamepad](#) module scans pins for debounced button presses regularly in the background. Thanks to [@deshipu](#).
- Added names for analog pins on Trinket M0. Update by [@jerryneedell](#).
- M0 boards: Turned on higher current drive capability for `DigitalOut` pins.
- Status NeoPixel or DotStar brightness is now adjustable ([#246](#)). Thanks to [@asherlie](#).
- Switched to using a smaller version of the math library to make room for other features. Complex number support is also turned off on non-Express boards to make room.
- Support added for hacked Trinket M0 with added SPI flash (Trinket M0 Haxpress). Thanks to [@deshipu](#).

Notable Bugfixes

- Pin `A0` is no longer available as a `TouchIn` pin on Circuit Playground Express. It is unreliable because it is also connected to the on-board speaker
- All `...io` objects (`AnalogIn`, `DigitalIn`, etc.) now raise an exception if you try to reuse them after they are deinitialized (`deinit()`). Previously, reuse might cause crashes. Thanks to

[@tdicola](#) for uncovering.

- Reset PDIMIn pins after `deinit()` . Thanks [@tdicola](#) for finding this problem.
- ESP8266: Fixed problems with SPI.
- Reinitialize the ADC before every use. Thanks [@ladyada](#) for reporting erratic ADC results.
- If CircuitPython restarts in safe mode, it does not attempt to re-create the SPI or internal flash filesystem if it appears to be damaged or missing. [@tdicola](#) noticed that this may occur when a battery runs down.

Documentation

Documentation is available [here](#).

Here are all the [changes since 2.0.0](#).

This release is based on [MicroPython 1.9.2](#). Support upstream MicroPython by purchasing a [PyBoard](#) (from Adafruit [here](#)).

Installation

Have a [Feather M0 Express](#), [Metro M0 Express](#), [Gemma M0](#), [Trinket M0](#) or [Circuit Playground Express](#)? [Download a .uf2](#) and follow [these instructions](#). To install our libraries:

- For Express boards, simply download [the bundle for your release](#) and copy the `lib` folder onto your `CIRCUITPY` drive. A new 2.1.0 bundle will be available shortly, with updated and additional libraries. The current 2.0.0 bundle is completely compatible with CircuitPython 2.1.0.
- For Gemma M0 and Trinket M0, the library bundle is too large. Download a smaller set of 2.0.0 libraries and files that are shipped with the boards: [Gemma M0 files](#); [Trinket M0 files](#).

To install on legacy boards, [download a .bin file](#) and follow the guide [here for M0](#) and [here for ESP8266](#).

Downloads

 adafruit-circuitpython-arduino_zero-2.1.0.bin	180 KB
 adafruit-circuitpython-circuitplayground_express-2.1.0.uf2	442 KB
 adafruit-circuitpython-feather_huzzah-2.1.0.bin	581 KB
 adafruit-circuitpython-feather_m0_adalogger-2.1.0.bin	180 KB
 adafruit-circuitpython-feather_m0_basic-2.1.0.bin	180 KB
 adafruit-circuitpython-feather_m0_express-2.1.0.uf2	414 KB
 adafruit-circuitpython-gemma_m0-2.1.0.uf2	361 KB
 adafruit-circuitpython-metro_m0_express-2.1.0.uf2	415 KB
 adafruit-circuitpython-trinket_m0-2.1.0.uf2	361 KB
 Source code (zip)	
 Source code (tar.gz)	