

# Feather STM32F405 Express Breakout

## Product Overview

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## Description

Adafruit Feather STM32F405 Express Breakout Board is designed to run CircuitPython at a blistering 168MHz. This board features a STEMMA QT/Qwiic port on the end so the user can easily plug and play I<sup>2</sup>C sensors. The CircuitPython basics running on this board makes it fast to get all the drivers working. The user can then use the built-in plotter in Mu to instantly get sensor data displayed within 3 minutes of unboxing. The MicroPython, CircuitPython, or Arduino IDE can be used with this board with some caveats.



The CircuitPython support is currently under development. This board features digital IO, analog in/out, I<sup>2</sup>C, SPI, and PWM working with more items on the way. The Arduino is supported through the STM32duino and there is no auto-reset bootloader support so the user has to pull the BOOT0 pin high and manually reset before uploading. The MicroPython support is very solid, but Adafruit does not provide MicroPython libraries for sensors. This board is an extraordinarily fast Feather and is Adafruit's first foray into the STM32.

## Features

- USB C power and data - Adafruit's first USB C Feather
- LiPo connector and charger
- SD socket on the bottom, connected to SDIO port
- Built-in NeoPixel indicator
- I<sup>2</sup>C, UART, GPIO, ADCs, and DACs
- Qwiic/STEMMA-QT connector for fast I<sup>2</sup>C connectivity
- Uses the built-in USB DFU bootloader to load the firmware (device does not come with a UF2 bootloader)

## Specifications

- STM32F405 Cortex M4 with FPU and 1MB Flash, 168MHz speed
- 192KB RAM total - 128KB RAM for general usage and 64KB program-only/cache RAM
- 3.3V logic, but almost all pins are 5V compliant
- 2MB SPI Flash chip

## Mouser Part Number

[View Part](#)

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