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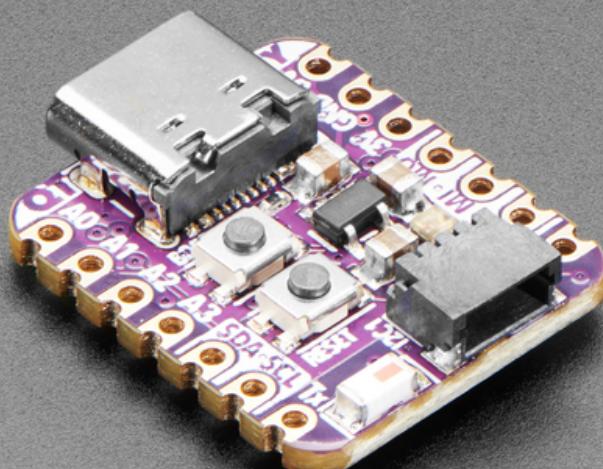


Development Boards / QT Py / XIAO

Adafruit QT Py ESP32 Pico - WiFi Dev Board with STEMMA QT - 8MB Flash 2MB PSRAM

Product ID: 5395

\$14.95



1

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Description

This dev board is like when you're watching a super-hero movie and the protagonist shows up in a totally amazing costume in the third act and you're like 'OMG! That's the hero and they're here to kick some serious butt!' but in this case its a microcontroller.

This QT Py board is a thumbnail-sized PCB that features the **ESP32 Pico V3 02**, an all-in-one chip that has an **ESP32 chip with dual-core 240MHz Tensilica processor, WiFi and Bluetooth® classic + BLE**, adds a bunch of required passives and oscillator, **8 MB of Flash memory** and **2 MB of PSRAM**. We add a USB to serial converter chip, some more passives, an antenna, USB C, buttons, NeoPixel and QT connector to outfit this super-hero chip for any task you want to throw it at.

At the core of ESP32-PICO-V3-02 is the ESP32 (ECO V3) chip, which is a single 2.4 GHz Wi-Fi and Bluetooth® combo chip designed with TSMC's 40 nm low-power technology. ESP32-PICO-V3-02 integrates all peripheral components seamlessly, including a crystal oscillator, flash, PSRAM, filter capacitors, and RF matching links in one single package. This makes it perfect for stuffing into such a small space as the QT Py.

Please note the QT Py ESP32 Pico does not have native USB support - instead there's a USB to serial converter chip. This means it *cannot* act like a USB keyboard or mouse - but it does have BLE and BT classic so you could wireless.

[OLEDs!](#) [Inertial Measurement Units!](#) [Sensors a-plenty](#). All plug-and-play thanks to the innovative chainable design: [SparkFun Qwiic](#)-compatible [STEMMA QT](#) connectors for the I2C bus so you don't even need to solder! Just plug in a compatible cable and attach it to your MCU of choice, and you're ready to load up some software and measure some light. [Seeed Grove I2C boards](#) will also work with this adapter cable.

Pinout and shape are [Seeed Xiao](#) compatible, with castellated pads. In addition to the QT connector, we also added an **RGB NeoPixel** (with controllable power pin to allow for ultra-low-power usage), a **reset button** (great for restarting your program or entering the bootloader), and a button on GPIO 0 for entering the ROM bootloader or for user input

Runs Arduino like a dream, or use the ESP IDF for more control over your projects.

- Same size, form-factor, and pin-out as Seeed Xiao
- **USB Type C connector** - [If you have only Micro B cables, this adapter will come in handy!](#)
- **ESP32 V2 03 Dual Core 240MHz Xtensa processor** - the ESP32 you know and love, with the latest engineering fixes. Massive user base and thousands of existing projects and libraries to use.
- WiFi, Bluetooth® LE and Classic for any IoT project usage
- **8 MB Flash & 2 MB PSRAM**
- USB to Serial converter built in with high speed UART for debugging and uploading.
- Can be used with **Arduino IDE** or **MicroPython**
- **Built-in RGB NeoPixel LED** with power control to reduce quiescent power in deep sleep
- Battery input pads on underside with diode protection for external battery packs up to 6V input
- **13 GPIO pins:**
 - 11 on breakout pads, 2 more on QT connector
 - 10 x 12-bit analog inputs
 - Dual 8-bit analog output DACs on A0/A1
 - PWM outputs on any pin
 - Two I2C ports, one on the breakout pads, and another with STEMMA QT plug-n-play connector
 - Hardware UART in addition to the USB-serial UART
 - Hardware SPI on the high speed SPI peripheral pins
 - Hardware I2S on any pins
 - 8 x Capacitive Touch with no additional components required
- 3.3V regulator with [600mA peak output](#)
- Light sleep at 4mA, deep sleep at ~70uA
- **Reset switch** for starting your project code over, boot 0 button for entering bootloader mode or for user reading
- **Really really small**

Technical Details

Revision History:

- **As of June 24, 2022** - This board may come with a different regulator than AP2112K due to parts shortages. The regulator can provide at least 500mA.
- **As of May 31, 2022** - we have changed from using the SiLabs CP2102N to the CH9102F due to severe parts shortages and price increases. [The Windows driver for the CH9102 is available here](#). [The Mac driver for the CH9102 is available here](#). Linux has drivers built in.

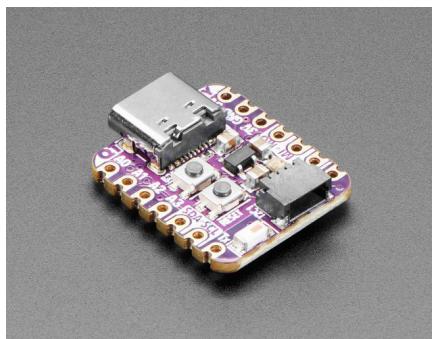
Product Dimensions: 22.0mm x 17.9mm x 5.9mm / 0.9" x 0.7" x 0.2"

Product Weight: 2.3g / 0.1oz

[ESP32 Pico V3 02 Datasheet](#)

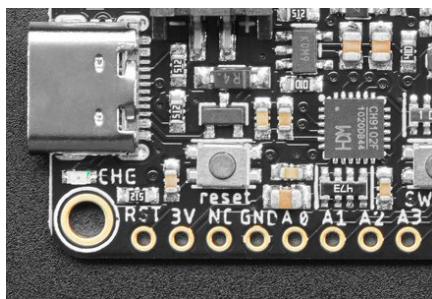


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[Primary Guide: Adafruit QT Py ESP32 Pico](#)

The cutest ESP32!



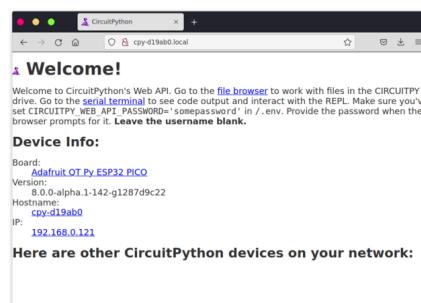
[How To Install Drivers for WCH CH34X / CH340 / CH341 / CH342 / CH343 / CH344 / CH346 / CH347 / CH9101 / CH9102 / CH9103 / CH9104 / CH9111 / CH9114 / CH9143 USB to Serial Chips](#)

Get setup to transfer your serial data over USB



[Video Nub Shank: ESP32 QT Py Composite Video Injector](#)

Drive a CRT or other composite video TV/monitor from a QT Py



[CircuitPython on ESP32 Quick Start](#)

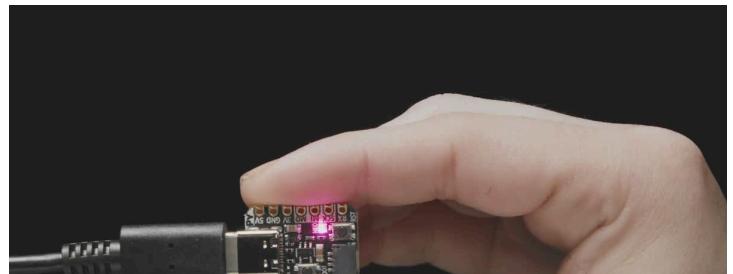
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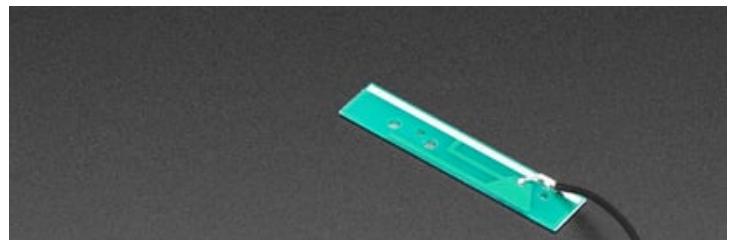
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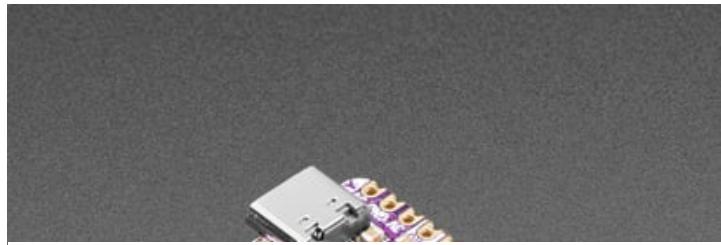
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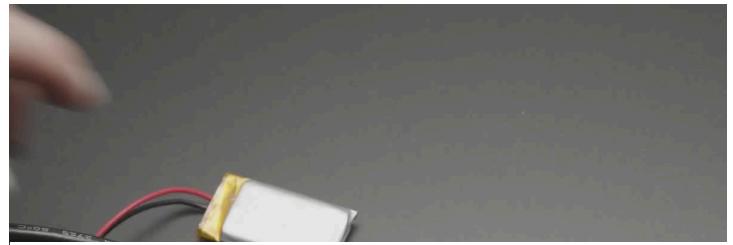
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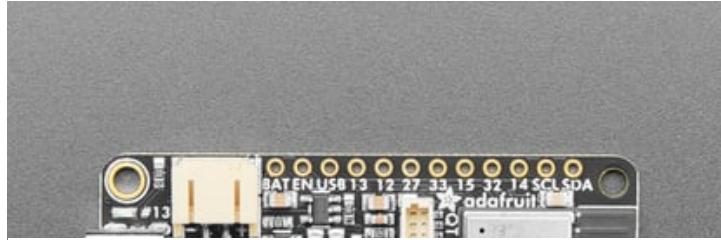
Adafruit QT Py ESP32-S2 WiFi Dev Board with uFL Antenna Port - STEMMA QT



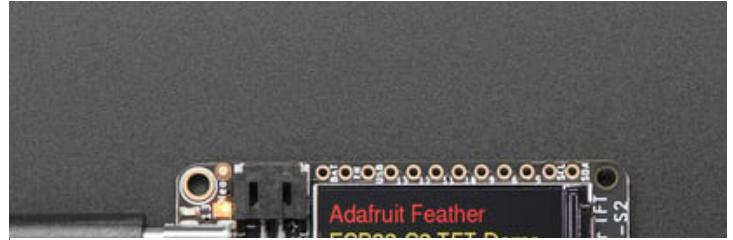
Adafruit QT Py ESP32-C3 WiFi Dev Board with STEMMA QT



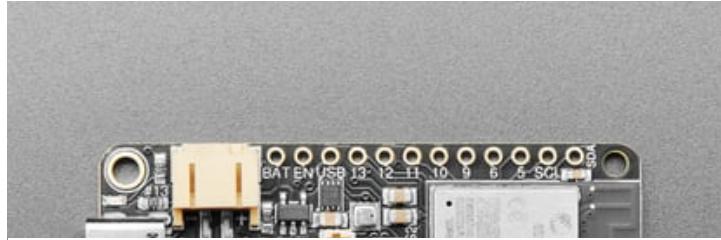
Adafruit Lilon or LiPoly Charger BFF Add-On for QT Py



Adafruit ESP32 Feather V2 - 8MB Flash + 2 MB PSRAM - STEMMA QT



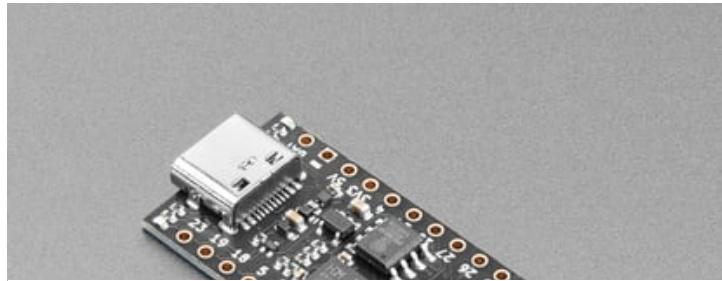
Adafruit ESP32-S2 TFT Feather - 4MB Flash, 2MB PSRAM, STEMMA QT



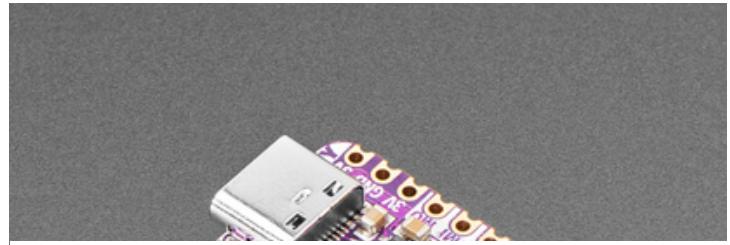
Adafruit ESP32-S2 Feather with BME280 Sensor - STEMMA QT - 4MB Flash + 2 MB PSRAM



Adafruit ESP32-S2 Reverse TFT Feather



TinyPICO V3 USB-C with u.FL by Unexpected Maker



Adafruit QT Py S3 with 2MB PSRAM WiFi Dev Board with STEMMA QT

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