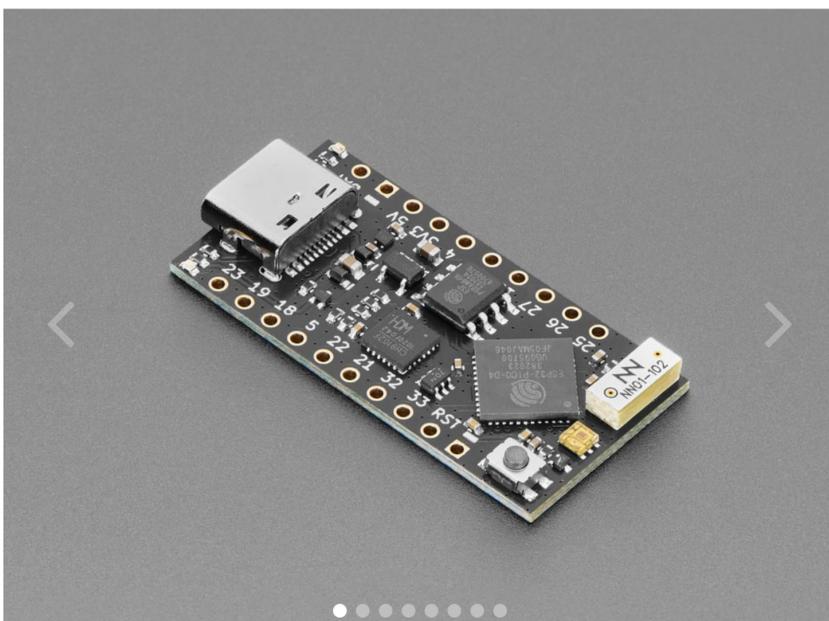




# TinyPICO ESP32 Development Board with USB-C

Product ID: 5028



## Description

**TinyPICO** is the world's smallest, fully-featured ESP32 development board, designed to unlock the power of the ESP32's dual-core 240MHz and internet connectivity, in a package smaller than your thumb!

Your very own TinyPICO V3 with USB-C and with MicroPython pre-installed. Comes with unassembled male headers and a JST PH battery connector.

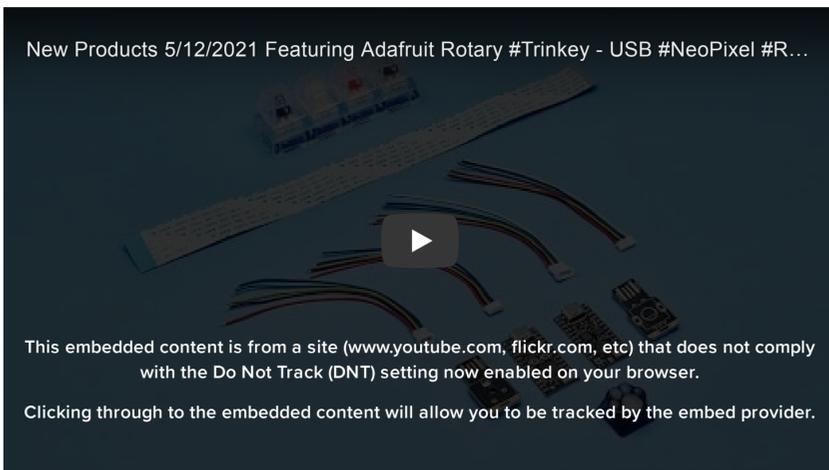
**Please:** This is the **USB-C** version of the **TinyPICO V3**. [TinyPICO V1 with Micro-B is still available over here!](#)

The developers behind **UnexpectedMaker** have filled every nook on this board, packing a massive 700mA 3.3V regulator, on-board battery management, an RGB LED, 4MB of extra PSRAM, and 14 GPIO!

- TinyPICO is tuned for ultra-low current use, dropping as low as 20uA when in deepsleep.
- Optimized power path and power management: TinyPICO has been designed with two isolated power paths: a 5V path and a 3.3V path. Any components that are not needed for operation via battery or via the 3.3 V power pin are isolated within the 5V power path and are totally shut down when no USB cable is plugged in. In fact, even the power & charge LEDs are shut down when no 5 V power source is present.
- Deep sleep has been optimized for all development platforms, and though they have seen it go as low as 10 uA, their official current rating in deep sleep is 20 uA.
- Built-in USB-to-Serial converter chip may be [CP210x based](#) or [CH9102F](#) depending on chip availability.

TinyPICO includes an onboard APA102 RGB LED that has a quiescent current of 1 mA. Thankfully there is a solution for deep sleep. GPIO13 controls the power to the APA102 using a P-Channel MOSFET via a high-side switch that can (along with smoother IO settings) shut down the power to the APA102 for you. It's essential to do this before going into deep sleep to ensure the lowest current draw possible.

UM have created some helper functions for you in their TinyPICO MicroPython & Arduino helper libraries to make this easy. Please check the code in the platform you use to understand how to shut down the APA102 correctly as just pulling GPIO13 high is not enough.



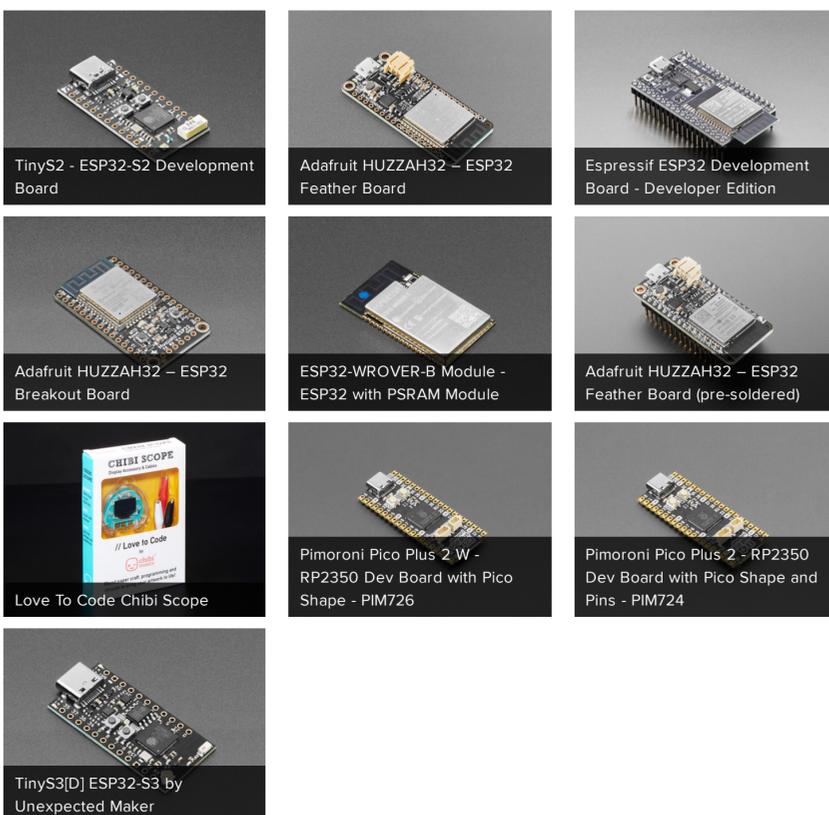
## Technical Details

- If you are looking for **technical support** for an **Unexpected Maker** product, you can either use [this form](#) or join the [discord server](#) and post in the #um-hardware support channel, where you can get more real-time help from UM or other people on the server.
- [GitHub repository](#)
- For additional specs, coding examples, and more, please visit [the official TinyPICO website](#)

### Revision History:

- **As of November 16, 2022** - We are now stocking the TinyPICO V3 which uses a new Serial UART chip - the CH9102F. [These are functionally identical to the V2 boards but you will want to install the CH9102F driver.](#)

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