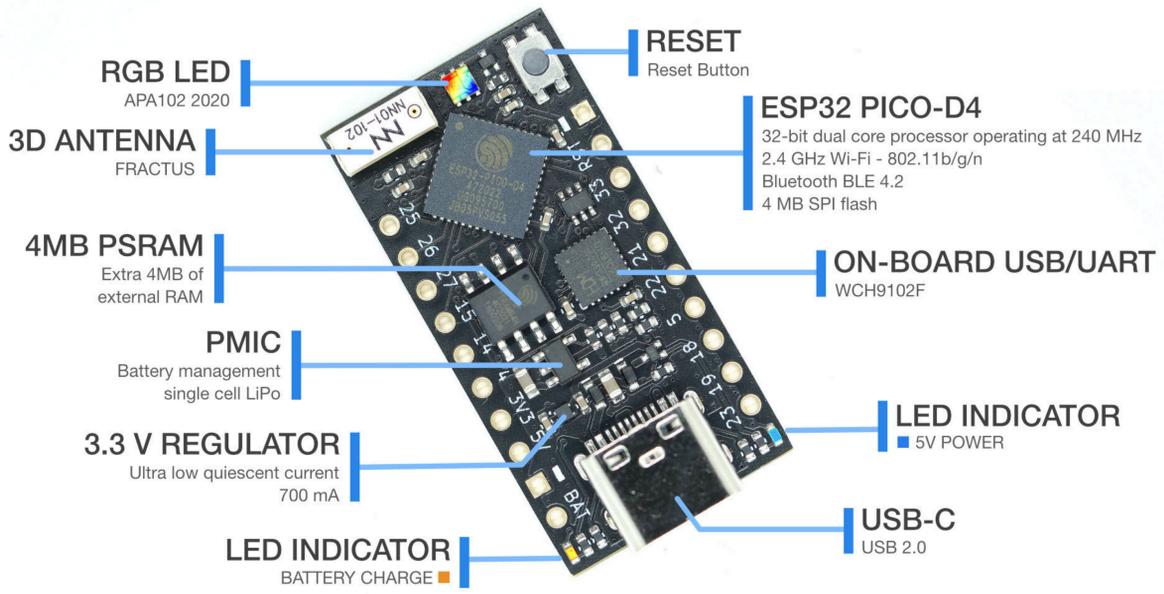


TinyPICO from Unexpected Maker



TinyPICO is the Original "Tiny" ESP32 development board!

TinyPICO is a TINY, fully-featured ESP32 development board, designed to give you access to the power of the ESP32's dual core 240 MHz processor and internet connectivity, all in a package smaller than your thumb!

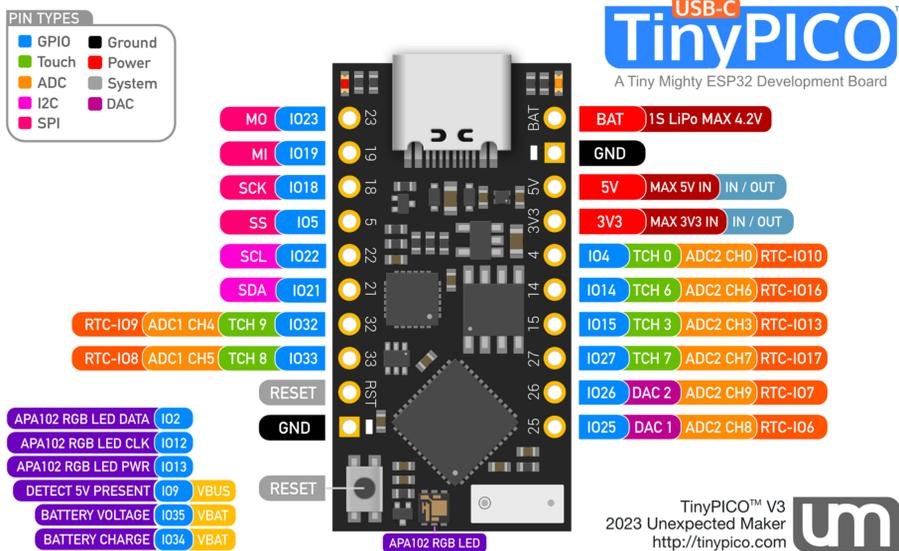


Features & Specifications

- 32Bit Dual Core 240MHz
- 2.4GHz Wifi - 802.11b/g/n
- Bluetooth BLE 4.2
- 4MB SPI Flash
- 4MB Extra PSRAM
- APA102 RGB LED
- 700mA 3.3V LDO Regulator
- USB + Serial/UART for programming
- LIPO Battery Management
- Optimised power path for low power battery usage
- JST pads on the bottom supports PH & MicroBlade
- 14x GPIO broken out
- Breadboard friendly

Two antenna options

TinyPICO ships in 2 versions. One with an onboard antenna and one with a u.FL connector, so you can connect an external antenna.

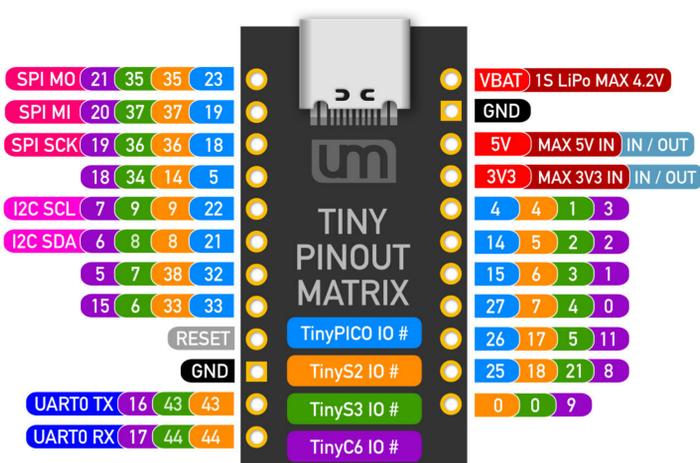


Board Dimensions 35mm x 17.8mm
Max Thickness 4.3mm at the USB-C end

Board Comparison Matrix

| | TinyC6 | TinyS3 | TinyS2 | TinyPICO |
|---------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| MCU | ESP32-C6 | ESP32-S3FN8 | ESP32-S2FN4R2 | ESP32-PICO-D4 |
| Cores | HP + LP RISC-V | 2x Xtensa LX7 | 1x Xtensa LX7 | 2x Xtensa LX6 |
| Speed | Up to 160Mhz | Up to 240Mhz | Up to 240Mhz | Up to 240Mhz |
| ULP | RISC-V 20Mhz | 1x RISC-V, 1x FSM | 1x RISC-V, 1x FSM | 1x FSM |
| SRAM | 512K | 512K | 320K | 520K |
| FLASH | 8MB | 8MB | 4MB | 4MB |
| PSRAM | - | 8MB | 2MB | 4MB |
| GPIO | 17 | 17 | 17 | 14 |
| Native USB | CDC & Serial JTAG | CDC, OTG & USB Serial JTag | CDC & OTG | - |
| USB Conn | USB-C | USB-C | USB-C | USB-C |
| WiFi | 2.4Ghz WiFi 6 802.11ax | 2.4Ghz b/g/n | 2.4Ghz b/g/n | 2.4Ghz b/g/n |
| Bluetooth | BLE 5.3 & Mesh | BLE 5 & Mesh | - | Classic & BLE 4.2 |
| Zigbee/Thread | 802.15.4 | - | - | - |
| DAC | - | - | 2x 8bit | 2x 8bit |
| ADC | 1x 12bit SAR 7 channels | 2x 12bit SAR 20 channels | 2x 12bit SAR 20 channels | 1x 12bit SAR 18 channels |
| UARTs | 2 | 3 | 2 | 3 |
| ETH MAC | - | - | Yes | Yes |
| DMA Cont | 3x TX, 3x RX | 5x TX, 5x RX | - | - |
| SDIO | SLAVE 2.0 | Yes | - | Yes |
| Release Date | Nov 2023 | Feb 2022 | July 2021 | May 2019 |

Pinout Comparison Matrix



Hooking it up!

TinyPICO uses an external SerialUART chip to allow the ESP32 chip on board to communicate with your computer. You will need to make sure you have installed the correct SerialUART driver for your operating system to ensure your computer can detect and enumerate the serial port when the board is plugged in.

Ships with MicroPython pre-installed!

TinyPICO ships with a recent version of MicroPython, but you are free to develop on your TinyPICO however you like. Arduino IDE, PlatformIO, IDF, even CircuitPython are also available for development. Choose which one you prefer and hack away!



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