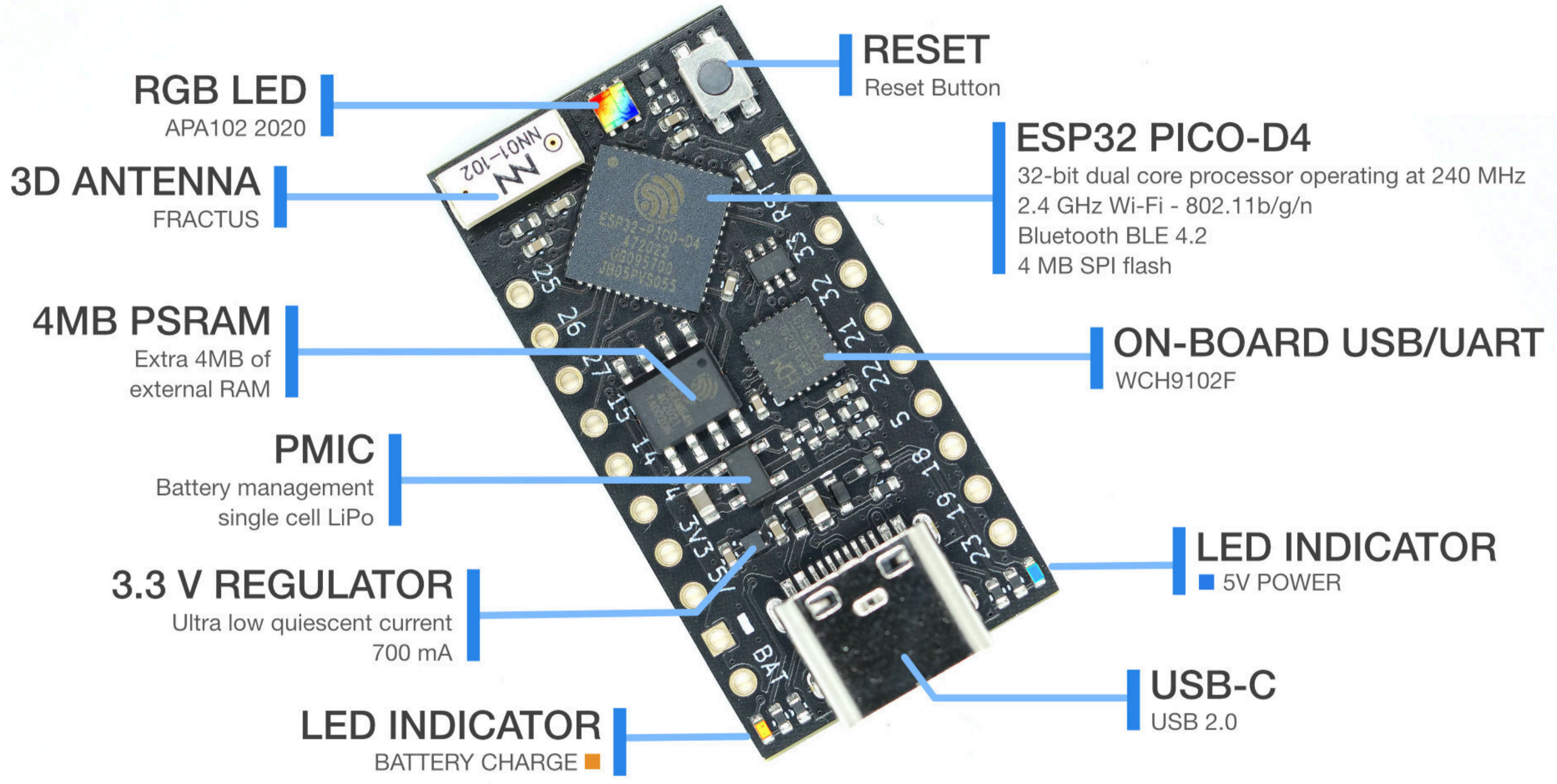


TinyPICO from Unexpected Maker



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!

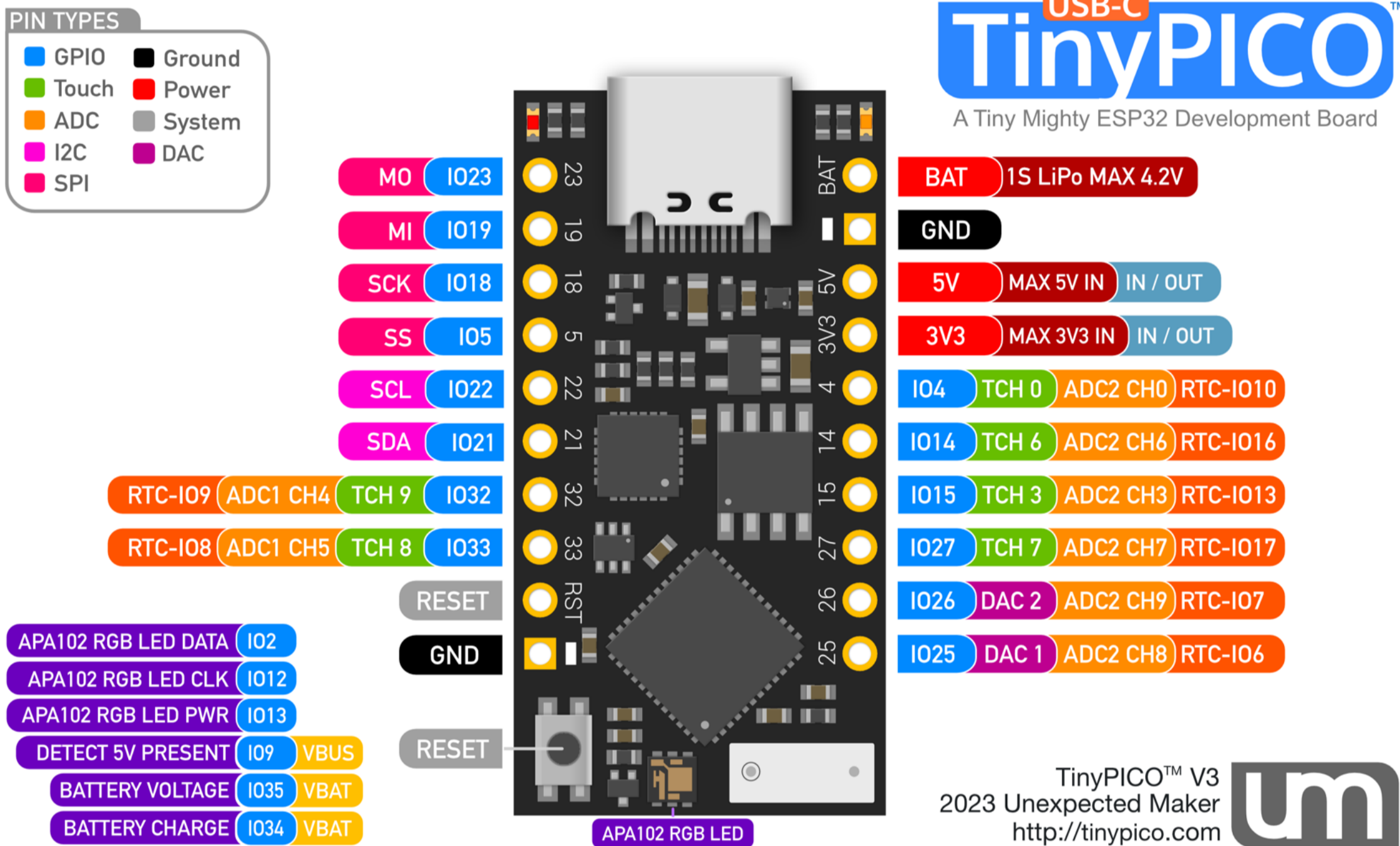


Features & Specifications

- 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.

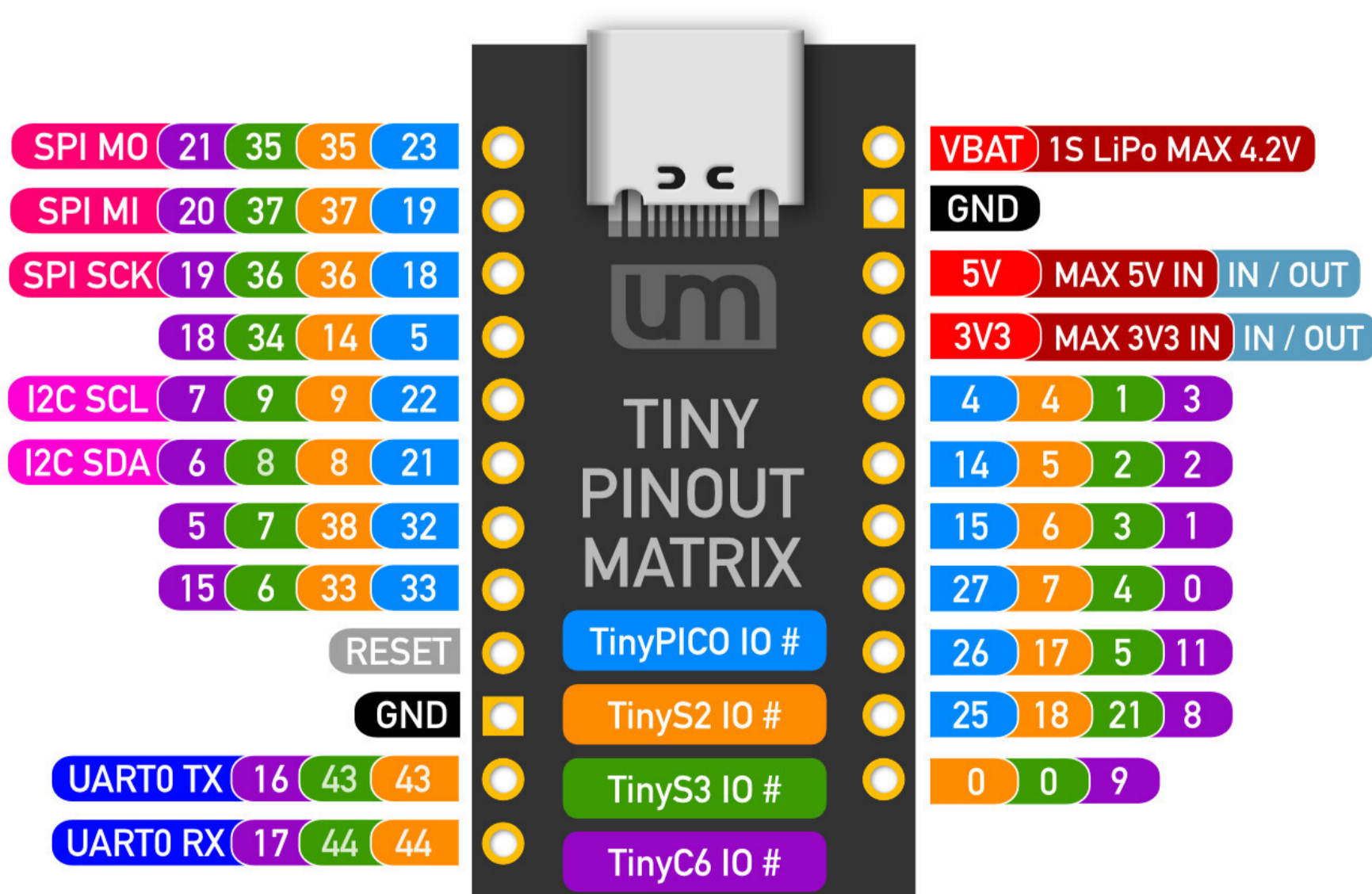


Board Dimensions 35mm x 17.8mm
Max Thickness 4.3mm at the USB-C end

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!

