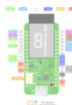
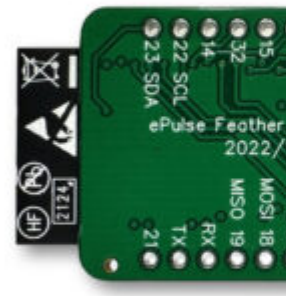
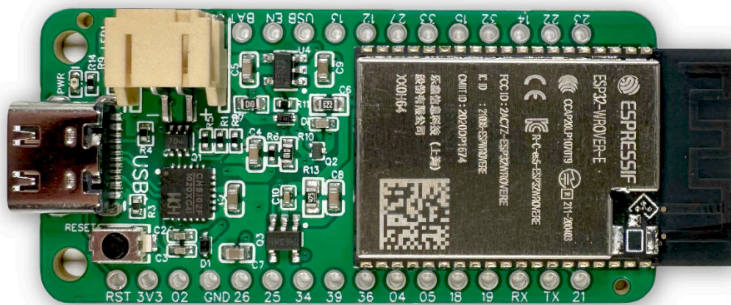


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SALE!



ESP32 ePulse Feather - Low Power development board

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Low power ESP32 development board. The ePulse from ThingPulse is the perfect companion for your battery-powered projects.

- 12-27uA in deep sleep
- VIN: 3.3 – 6V
- ESP32-WROVER-E
- 8MB PSRAM
- 8MB Flash
- Access to 20 GPIO pins
- LiPo charging circuit
- Follows Adafruit Feather [form factor specification](#)
- Includes male header pins (1×12 and 1×16)

😊 Only 45 left in stock (can be backordered)

1

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SKU: B0BSC1PVL4

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★ Reviews (0)

Description

Low power ESP32 development board. The ePulse from ThingPulse is *the* perfect companion for your battery-powered IoT projects.

Technical Specifications

Microcontroller	ESP32-D0WD-V3 or ESP32-D0WDR2-V3
ESP32 Module	ESP32-WROVER-E-N8R8
Input Voltage (VIN pin)	3V3 – 6V
Power Consumption Deep Sleep	~12uA (at 3.3V), ~27uA (at 4.2V)
GPIO Pins	20
Flash	8MB (Quad SPI)
PSRAM	8MB (Quad SPI)
UART	CH9102F



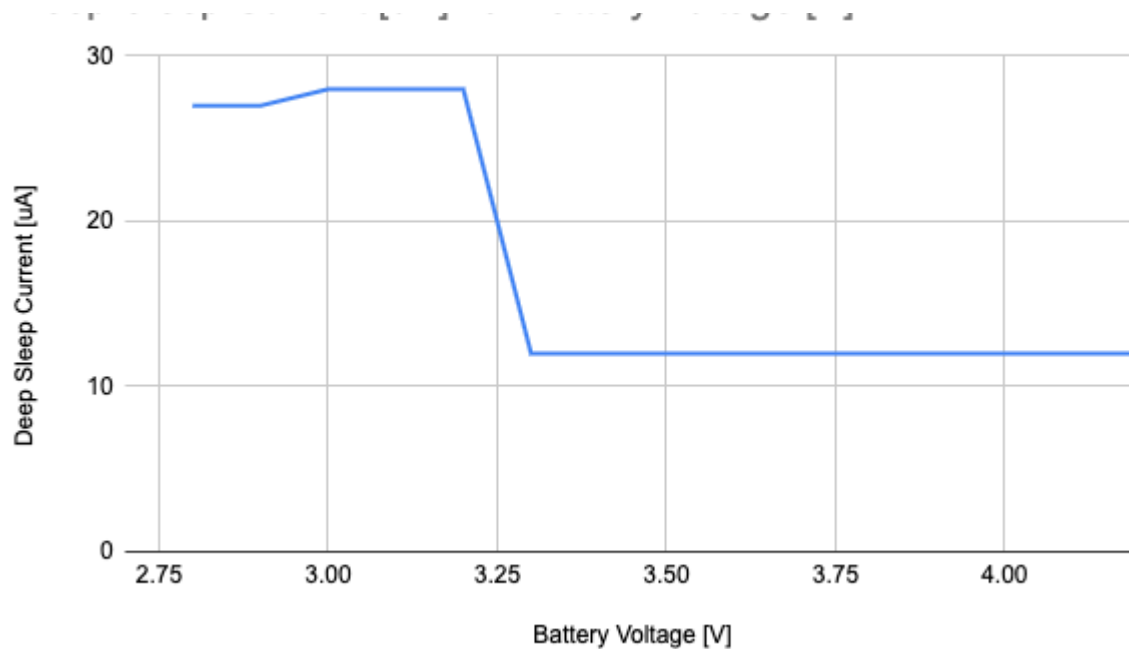
Microcontroller	ESP32-D0WD-V3 or ESP32-D0WDR2-V3
LDO	XC6220B33
Battery	TP4056 for LiPo PH2.0-2PWB
Board Dimensions	50.8 x 24.4mm (PCB) 58.3 x 24.4mm (incl ESP32 + USB-C)

Optimized for Low Power Consumption

ePulse Feather, the low power ESP32 development board, is optimized for applications where a low sleep current and LiPo battery support is required. The VIN pin accepts voltages between 3V3 and 6V. When the ePulse board is in deep sleep it only consumes between **12uA (above 3.3V) and 27uA (below 3.3V)**. Most ESP32 and ESP8266 board consume around 100 – 130uA.

This low sleep consumption is perfect for applications where the device sleeps most of the time and only wakes up from time to time to complete a task. For instance, a WiFi remote control for home automation can sleep until the user presses one of the buttons. The device wakes up, connects to WiFi, sends the command over MQTT and goes back to sleep until the next time a button is pressed.





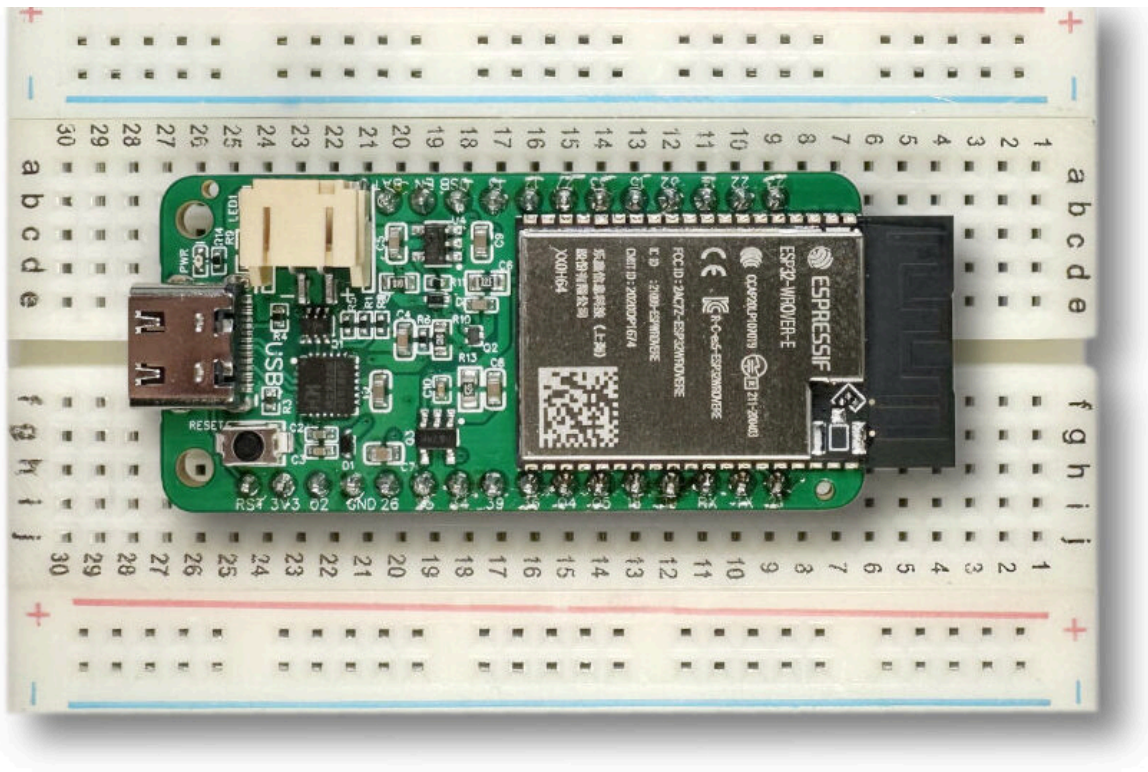
The ePulse Feather consumes between 12 – 27uA depending on the input voltage.

We also made sure that the integrated serial-2-usb chip is only consuming power when the device is powered through the USB port. Please note that to reduce standby power consumption this module comes only with a LED indicating charging status. No other status LEDs are included.

Ideal Form Factor for Prototyping

The size of the ePulse dev board is perfect to fit into a breadboard and leave one row of pins free for prototyping your circuit. We also took care that the dev board's PCB doesn't block the antenna of the ESP32 module. This leads to better signal strength for transmission and reception.





Easy Programming

The onboard UART CH9102F by WCH lets you easily program the ESP32 from your Windows, Mac or Linux computer. In our tests, we could use the highest transmission rates of 921600 bauds to re-program the chip within seconds. Regular ESP32 upload programs can automatically set the module into flashing mode.

Note: please make sure that you have the latest driver installed for the CH9102F UART chip: <http://www.wch-ic.com/downloads/category/30.html>

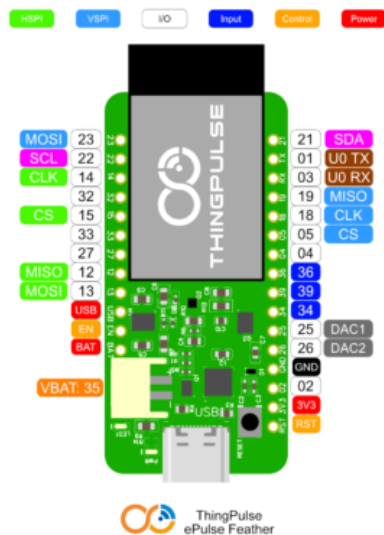
Powerful ESP32 Module

This board takes advantage of the ESP32-WROVER-E module which breaks out many of the ESP32's pins. It also comes with 8MB PSRAM which enables you to implement



programs like **FCC** and **CE**.

The ePulse development board gives you access to no less than 20 GPIO pins.



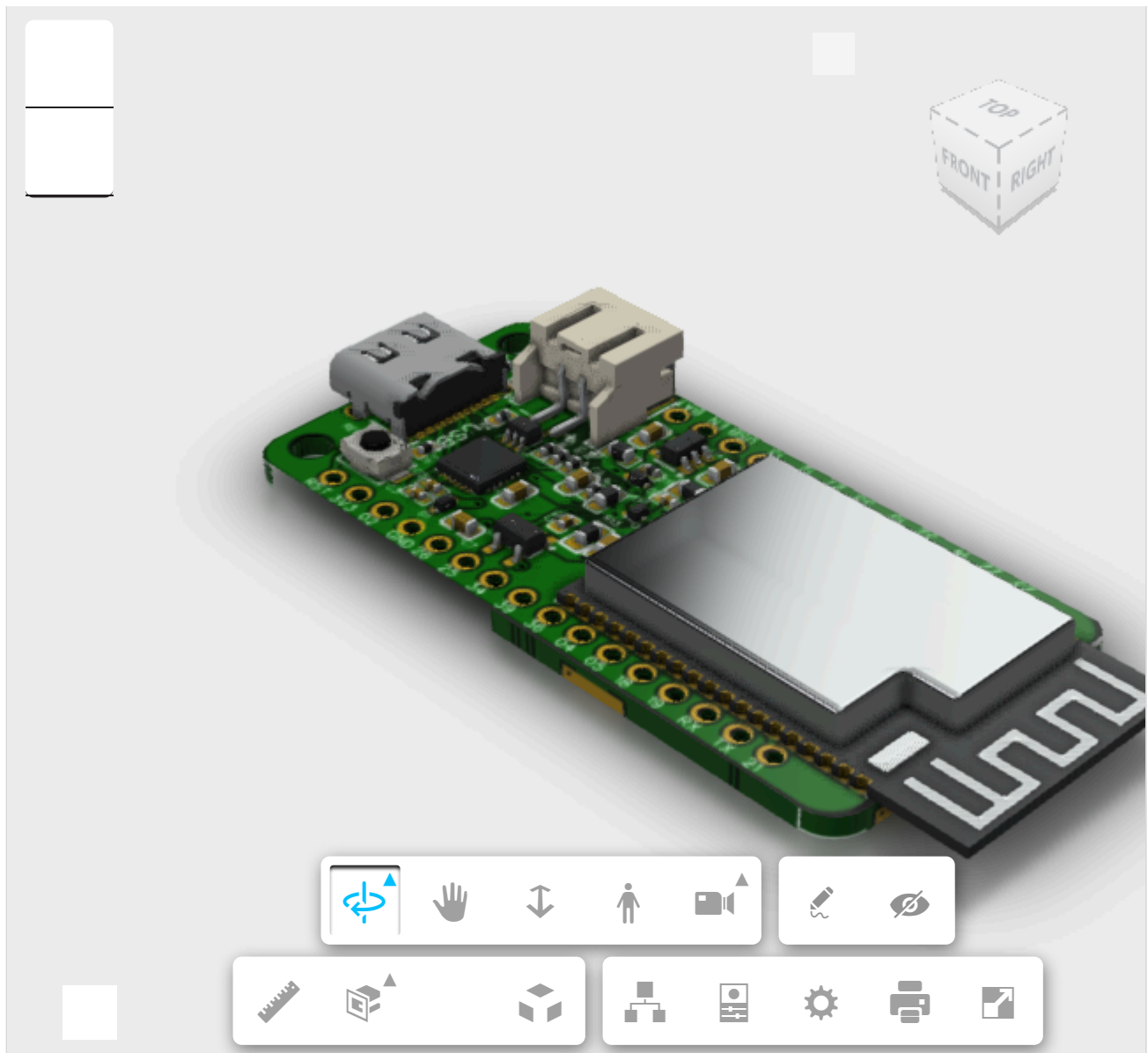
Integrated LiPo Battery Circuitry

The ePulse Feather is perfect for your battery powered projects. The TP4056 chip charges your LiPo batteries for which the ePulse Feather features a standard JST connector. The board itself does not have a circuitry for over-discharging protection, we assume that you use batteries that have the protection built-in. To measure battery voltage we added a voltage divider.

From Makers For Makers

We are makers and we want to make your life as easy and fun as possible. We often integrate our dev boards into other projects and we also design enclosures with the

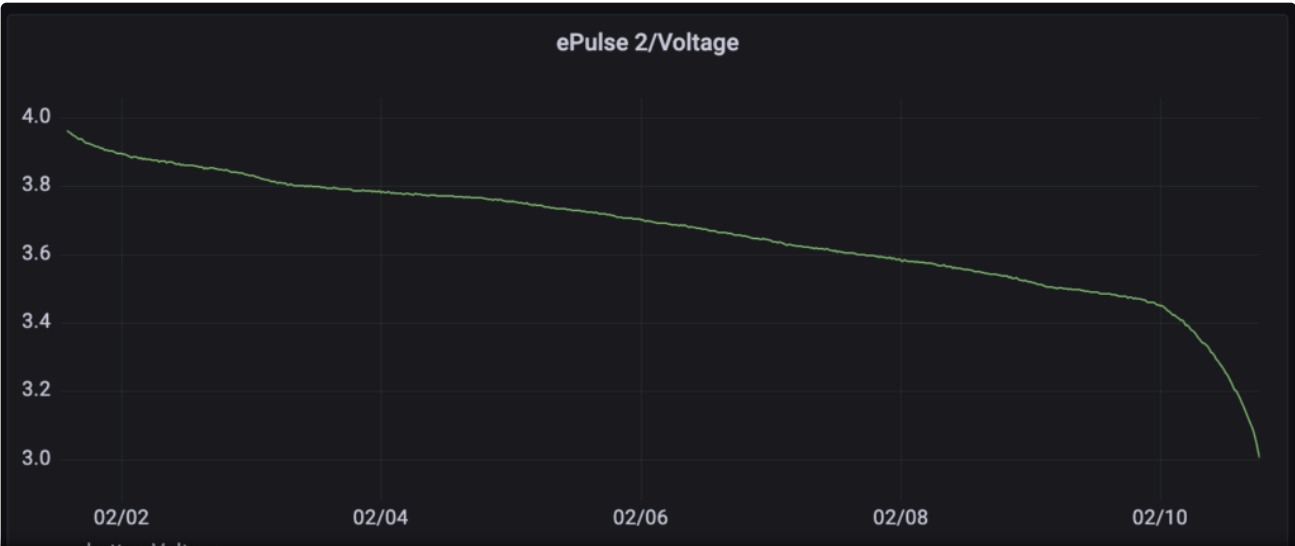
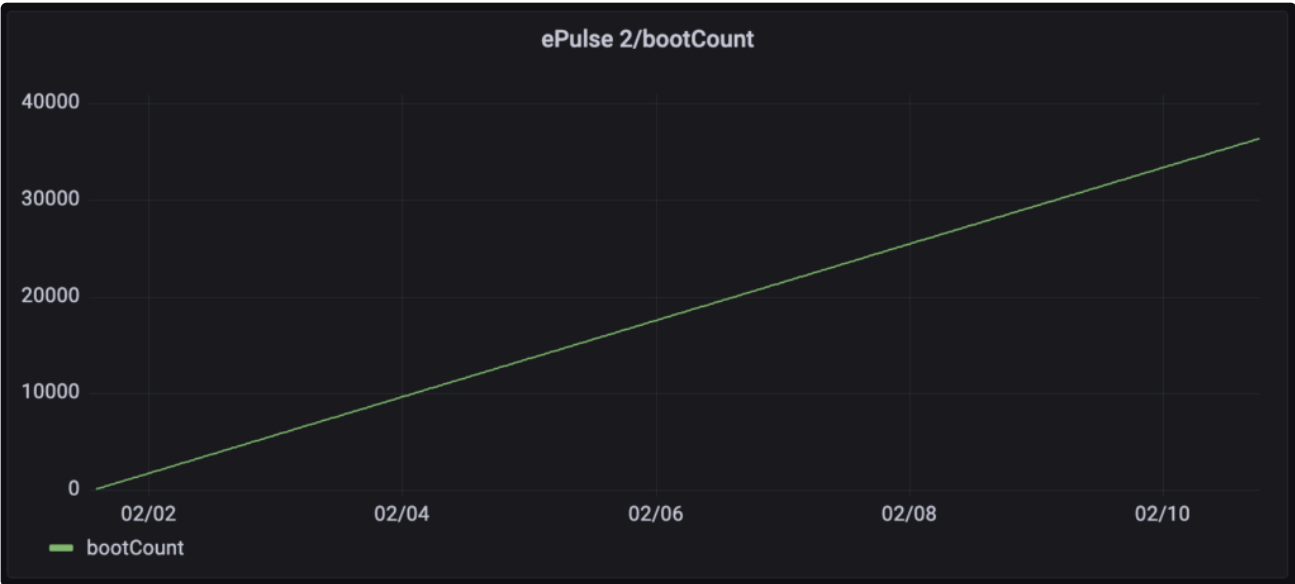
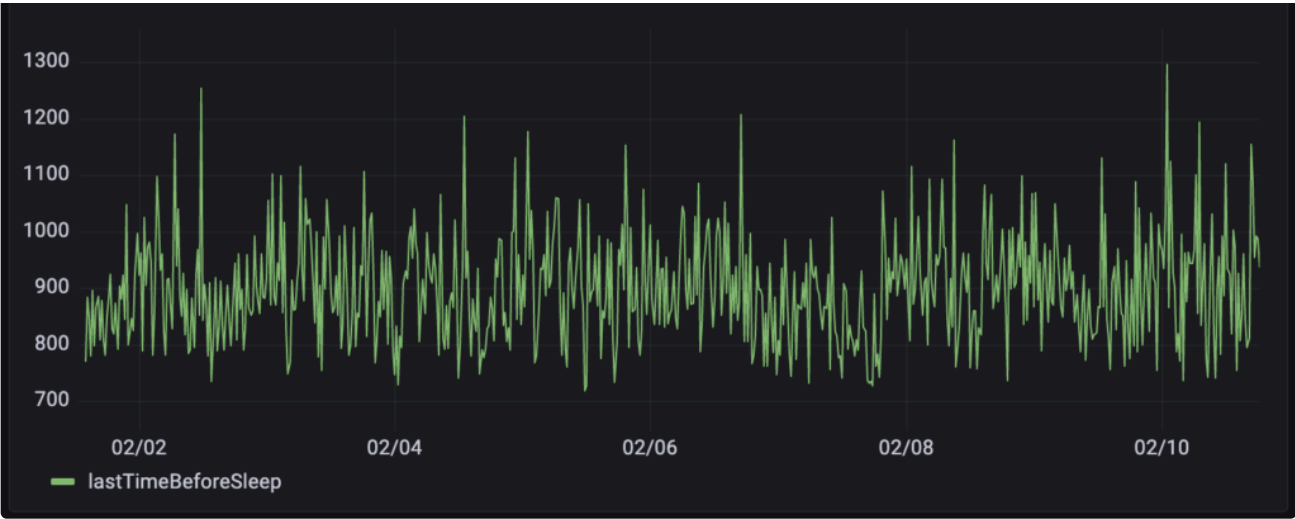




Example Use Cases

The following charts were recorded by a ePulse Feather sleeping for 20 seconds, waking up, measuring battery voltage, connecting to WiFi and MQTT and pushing the voltage, uninterrupted boot count and time of the last duty cycle to InfluxDB. The 2.5Ah battery could reach 36'000 duty cycles before running out of sufficient energy





- [ePulseFeather_Schematic_20221230](#)
- [ePulse Feather STEP file \(3D object\)](#)
- Latest driver for the CH9102F UART chip: <http://www.wch-ic.com/downloads/category/30.html>

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ESP32 WiFi Color Display Kit Grande

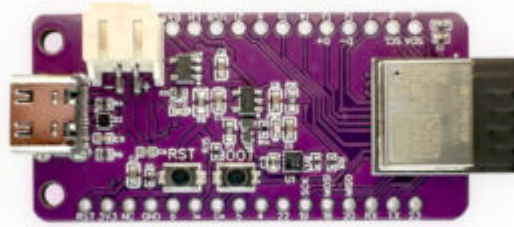


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ESP32-C6: ePulse Feather C6 – Zigbee, WiFi, BLE, Thread Matter Board

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