SparkFun Thing Plus - ESP32 WROOM

WRL-14689 Open Source Hardware

The SparkFun ESP32 Thing Plus is the next step to get started with Espressif IoT ideations while still enjoying all the amenities of the original ESP32 Thing. Espressif's ESP32 WROOM is a powerful WiFi and Bluetooth MCU module that targets a wide variety of applications. At the core of this module is the ESP32-D0WDQ6 chip which is designed to be both scalable and adaptive. To make the Thing Plus even easier to use, we've moved a few pins around to make the board Feather compatible and it utilizes our handy Qwiic Connect System which means no soldering or shields are required to connect it to the rest of your system!

Why the name? We lovingly call it the "Thing" because it's the perfect foundation for your Internet of Things project. The Thing does everything from turning on an LED to posting data with your chosen platform, and can be programmed just like any microcontroller. You can even program the Thing through the Arduino IDE by installing the updated ESP32 Arduino Core.

The ESP32 Thing plus integrates a rich set of peripherals, ranging from capacitive touch sensors, Hall sensors, SD card interface, Ethernet, high-speed SPI, UART, I²S and I²C. Thanks to the onboard ESP32 WROOM module, the SparkFun Thing Plus features 16MB of flash memory, 520kB of internal SRAM, an integrated 802.11 BGN WiFi transceiver and dual-mode Bluetooth capabilities, and a JST connector to plug in a LiPo battery

The SparkFun Qwiic Connect System is an ecosystem of I²C sensors, actuators, shields and cables that make prototyping faster and less prone to error. All Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector. This reduces the amount of required PCB space, and polarized connections mean you can't hook it up wrong.

FEATURES

- Xtensa® dual-core 32-bit LX6 microprocessor
- Up to 240MHz clock frequency
- 16MB of flash storage
- 520kB internal SRAM
- Integrated 802.11 BGN WiFi transceiver
- Integrated dual-mode Bluetooth (classic and BLE)
- 2.3 to 3.6V operating range
- 21 GPIO
- 8-electrode capacitive touch support
- Hardware accelerated encryption (AES, SHA2, ECC, RSA-4096)
- 2.5 µA deep sleep current