

Thing Plus Development Board

DEV-17745

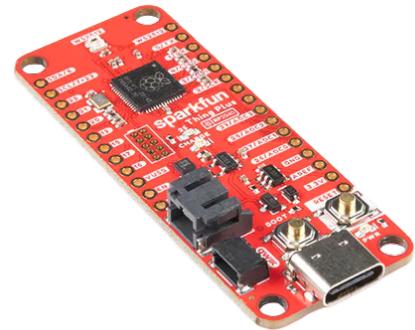
Product Overview

10-14-2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun Thing Plus - RP2040 is a high-performance, low-cost board with flexible digital interfaces that feature the RP2040 microcontroller of the Raspberry Pi foundations. The board contains 16MB (128Mbit) flash memory, an SD card slot, a JST single cell battery connector (with a charging circuit and fuel gauge sensor), JTAG PTH pins, an addressable WS2812 RGB LED signature Qwiic connector, and four (4 - 40 screw) mounting holes.

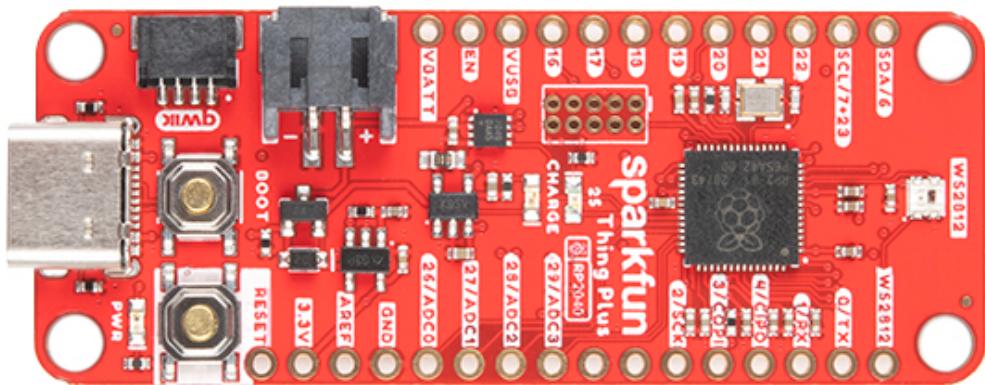


The RP2040 contains up to 133MHz of two ARM Cortex-M0+ processors and features:

- Six dedicated IO for SPI Flash (supporting XIP)
- 264kB of embedded SRAM in six banks
- USB 1.1 Host/Device functionality
- 30 multifunction GPIO:
 - Dedicated hardware for commonly used peripherals
 - Programmable IO for extended peripheral support
 - Four 12-bit ADC channels with an internal temperature sensor (up to 0.5 MSa/s)

This RP2040 supports both MicroPython cross-platform development environments and C/C++, including easy access to runtime debugging. And features floating-point routines and a UF2 boot baked into the chip. The chip includes 16MB of additional external QSPI flash memory to store program code and a large amount of internal RAM.

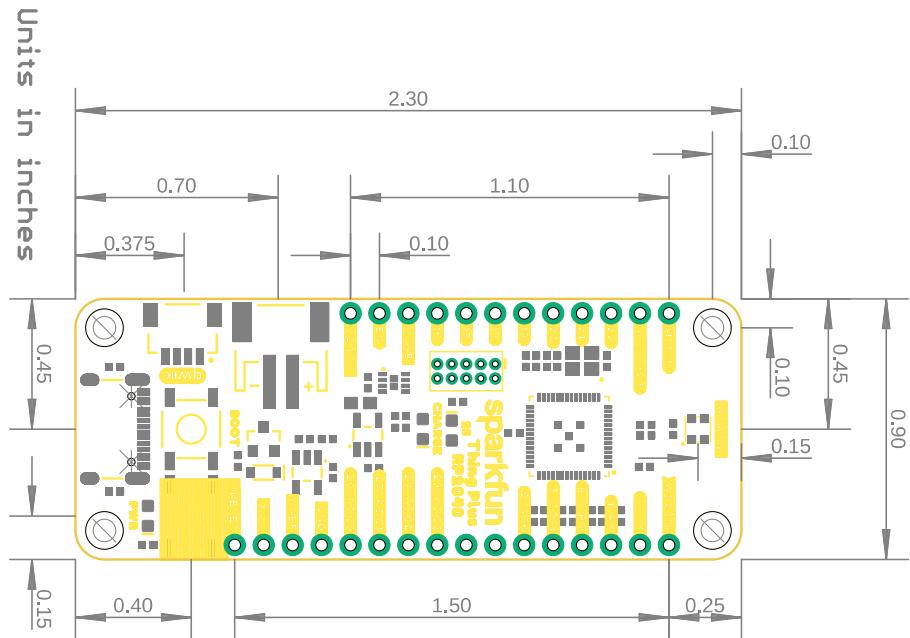
Board Overview



Features

- Raspberry Pi foundation's RP2040 micro-controller
- 16MB QSPI flash memory
- Thing plus (or Feather) form-factor:
 - 18x Multifunctional GPIO Pins:
 - Four available 12-bit ADC channels with an internal temperature sensor (500kSa/s)
 - Up to eight 2-channel PWM
 - Up to two UARTs
 - Up to two I2C buses
 - Up to two SPI buses
- USB-C connector:
 - USB 1.1 host/device functionality
- 2-pin JST connector for a LiPo battery (not included):
 - 500mA charging circuit
- Qwiic connector
- JTAG PTH pins
- Buttons:
 - Boot
 - Reset
- LEDs:
 - PWR - Red 3.3V power indicator
 - CHG - Yellow battery charging indicator
 - 25 - Blue status/test LED (GPIO 25)
 - WS2812 - Addressable RGB LED (GPIO 08)
- Four mounting holes:
 - 4 to 40 screw compatible
 - 2.3inch x 0.9inch board dimensions
- RP2040 General Features:
 - Dual Cortex M0+ processors, up to 133 MHz
 - 30 programmable IO for extended peripheral support
 - SWD interface
 - Timer with four alarms
 - Real-time counter (RTC)
 - Supported programming languages:
 - MicroPython
 - C/C++

Board Dimensions



Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-dev-17745-development-board/>