Raspberry Pi Pico W:

Description :

This is the Raspberry Pi Pico W, the newest board from the Raspberry Pi Pico series. The W stands for Wireless, so it offers a 2,4GHz wireless internet (WiFi) connection.

Like the standard Pico, the Pico W is a microcontroller board that is based on the RP2040 chip. You get 2MB flash memory which can be programmed via the built-in micro USB port. The Pico can also be powered via this micro USB port.

On the board are 40 pin connection. Here you can solder Pin headers so that you can connect the Pico W to a Breadboard can place. You can also build it directly into a project.

There are 26 multifunctional GPIO pins available. Of these, 23 are exclusively for digital use. 3 are ADC capable.

As with the first Pico, there is a 3 pin ARM SWD (debug) port. This has been moved to the center of the board.

The RP2040 chip contains a Dual-core cortex M0+ operating at 133MHz and 264kByte SRAM.

The Pico W can be programmed in C & Micro Python. This board is great fun for beginners, but also for advanced users.

Specifications :

RP2040 Microcontroller with 2 MB flash memory

Un-board single-band 2,4 GHz wireless interfaces (802.11n)

Micro USB B port for power and data (and for reprogramming the flash)

40 pin 21mmx 51mm 'dip' style 1mm thick PCB with 0,1" through pin holes also with castellated edge

26 Multifunction 3.3V General Purpose I/O (GPIO)

23 GPIO are digital only, with three also ADC capable

Can be surface mounted as a module

3-pin ARM serial wire debug (SWD) port

Simple yet highly flexible power architecture

Various options to easily power the device from micro USB, batteries or external

High quality, low cost, high availability

Comprehensive SDK, software samples and documentation

See the RP2040 datasheet for full details of the RP2040 microcontroller. Key features include:

Dual-core cortex M0+ up to 133 MHz

On-Chip PLL Allows Variable Core Frequency

264kbyte multi-bank high performance SRAM

External quad-spi flash with eXecute in place (XIP) and 16Kbyte on-chip cache

High-quality full-crossbar bus

Un-board USB1.1 (device or host)

30 multi-function general I/O (four can be used for ADC)

1.8-3.3VI/O voltage

12-bit 500KSPS Analog to Digital Converter (ADC)

Various digital peripherals

2 × UART, 2 × I2C, 2 × SPI, 16 × PWM channels

1 × timer with 4 alarms, 1 × real-time clock

2 × programmable I/O (PIO) blocks, 8 state machines in total

-Flexible, user-programmable high-speed I/O

Can emulate interfaces such as SD card and VGA