1. Introduction to Raspberry Pi Pico 2

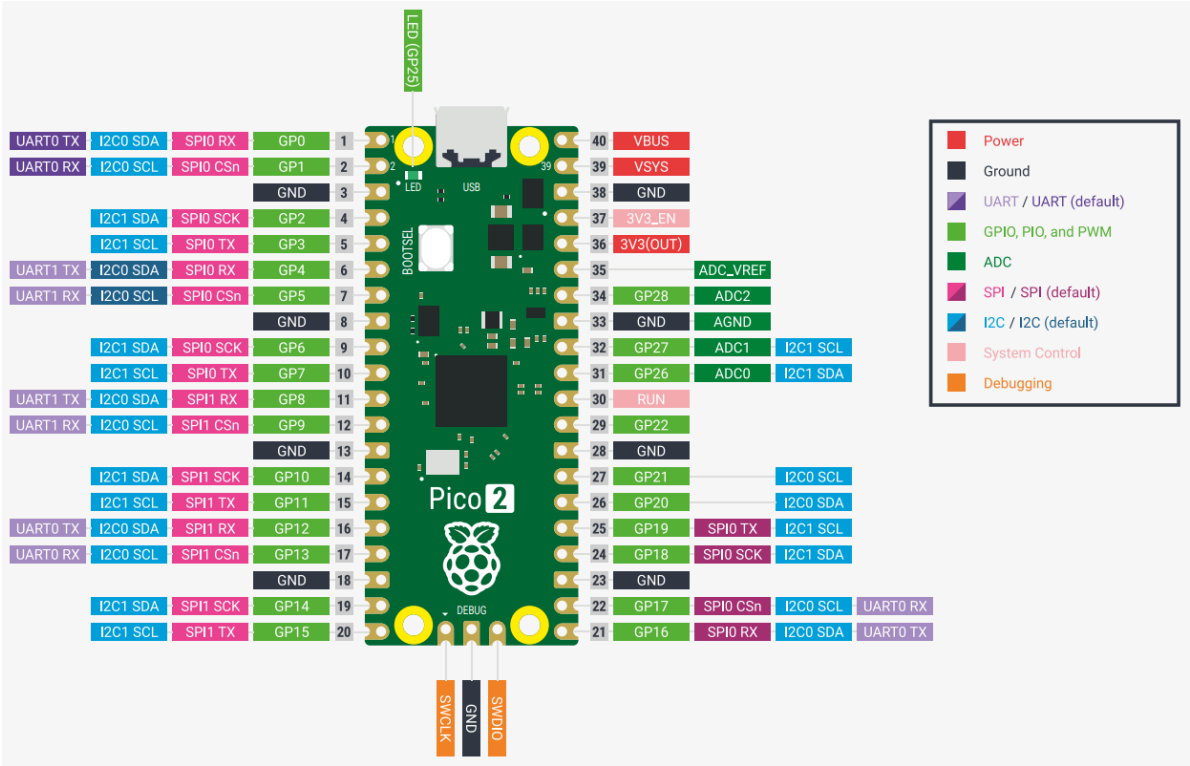
Product Introduction

Raspberry Pi Pico 2 is a low-cost, high-performance microcontroller development board designed by Raspberry Pi with flexible digital interfaces. In terms of hardware, it uses the RP2350 microcontroller chip independently developed by Raspberry Pi, equipped with dual ARM Cortex M33 or Hazard3 processors, up to 150MHz operating frequency, built-in 520KB SRAM and 4MB memory, and up to 26 multi-function GPIO pins on board. In terms of software, you can choose the C/C++ SDK provided by Raspberry Pi, or use MicroPython for development, and it is equipped with a complete development material tutorial, which can facilitate quick entry and development, and embed the application into the product.

Product Features

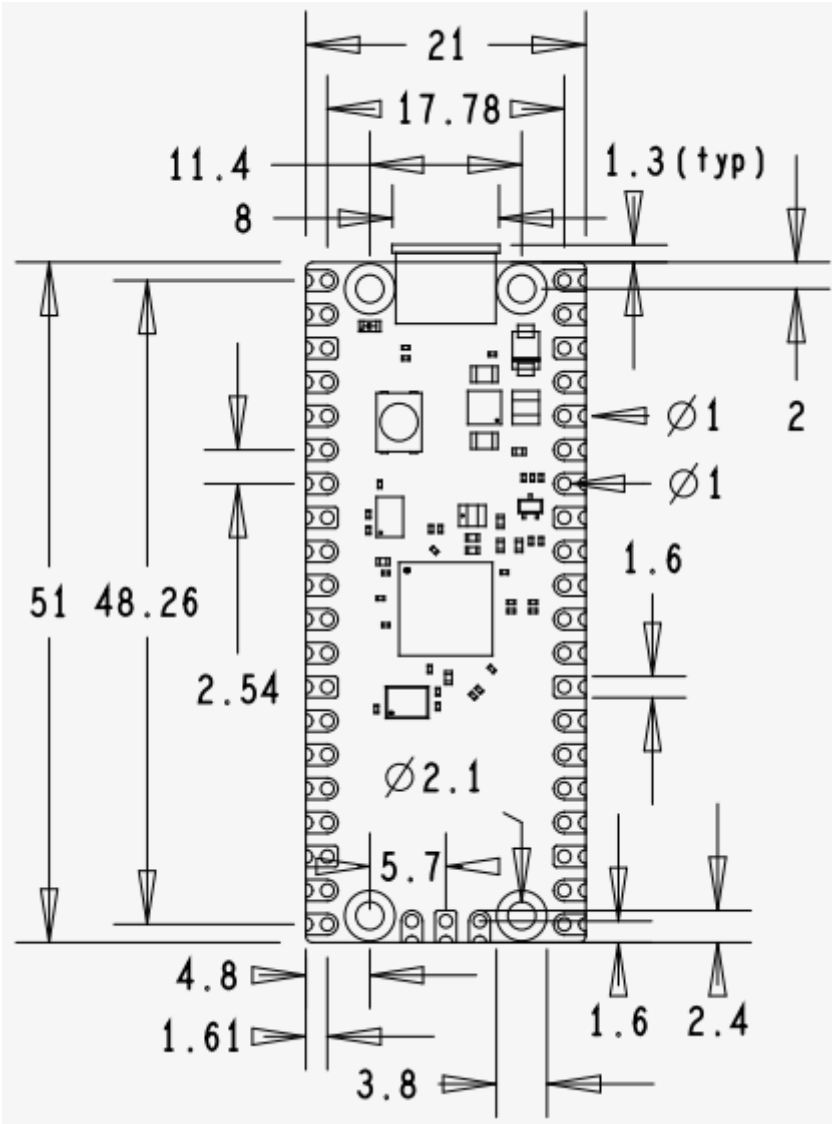
- Adopts the RP2350 microcontroller chip designed by Raspberry Pi
- Dual-core Arm Cortex-M33 or dual-core Hazard3 processor, running at up to 150MHz
- 520KB on-chip SRAM and 4MB on-chip Flash
- Software and hardware compatible with Raspberry Pico 1st generation
- Drag-and-drop programming using mass storage via USB
- Stamp hole design, can be directly soldered and integrated into the user-designed baseboard
- 2 × UART, 2 × SPI controller, 2 × I2C controller, 24 × PWM channels, 3 ADC channels
- 1 × USB 1.1 controller and PHY, supporting host and device
- 12 × PIO state machine
- Open source C/C++ SDK, MicroPython support
- Operating temperature -20°C to +85°C
- Supported input voltage 1.8–5.5V DC

Pinout



Product size

Unit: mm



Comparison with Pico

	Pico 2	**Pico**
Control chip	RP2350	RP2040
Onboard flash	4 MB	2 MB
Operating frequency	150 MHz	133 MHz
On-chip SRAM	520 kb	264 kb
Core	Dual-core Arm Cortex-M33 or dual-core Hazard3 processor	Dual-core ARM Cortex M0+ processor