Description

Raspberry Pi Pico is a tiny, fast, and versatile board built using RP2040, a brand new microcontroller chip designed by Raspberry Pi in the UK. It comes with a dual-core Arm Cortex-M0+ processor with 264KB internal RAM and support for up to 16MB of off-chip Flash.

From controlling appliances to operating a light display, Raspberry Pi Pico puts the technology that underpins countless everyday operations into your hands.
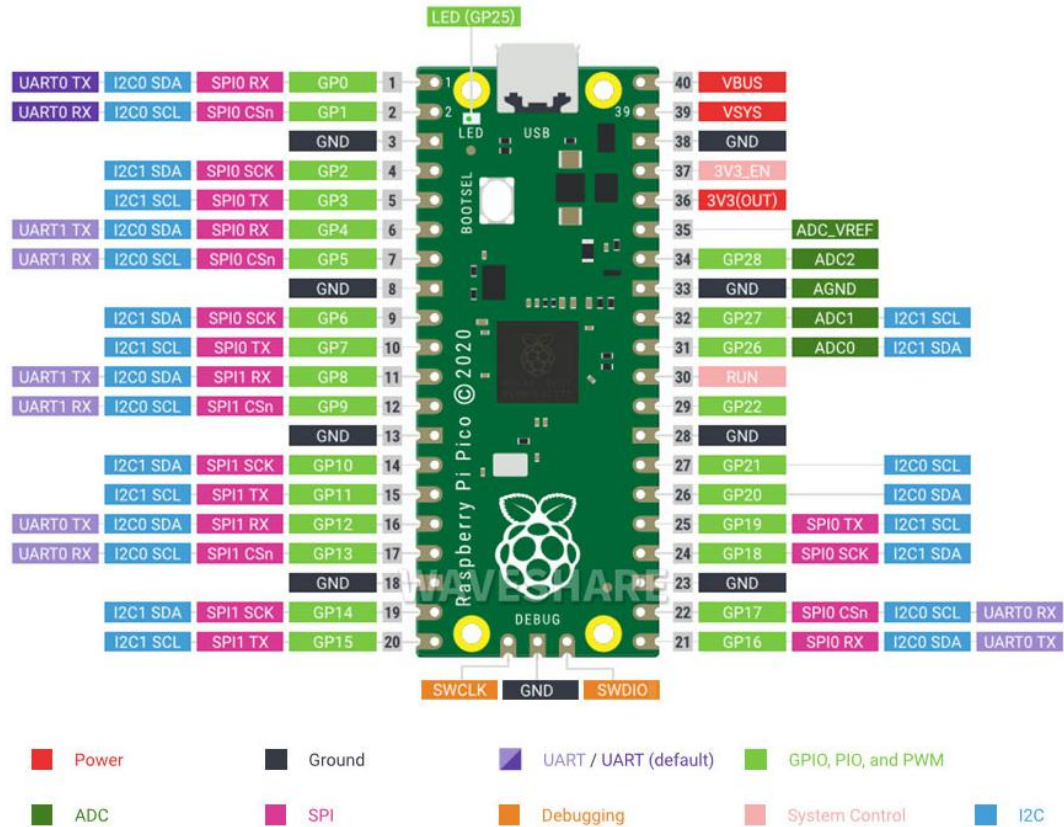
Programmable in C and MicroPython, Pico is adaptable to a vast range of applications and skill levels, and getting started is as easy as dragging and dropping a file.

More experienced users can take advantage of Raspberry Pi Pico's rich peripheral set, including SPI, I2C, and eight Programmable I/O (PIO) state machines for custom peripheral support.

Feature

1. RP2040 microcontroller chip designed by Raspberry Pi in the UK
2. Dual-core ARM Cortex M0+ processor, flexible clock running frequency up to 133Mhz
3. 264KB of SRAM and 2MB of on-board flash memory
4. Castellated module allows soldering direct to carrier boards
5. USB 1.1 with device and host support
6. Low-power sleep and dormant mode
7. Drag-and-drop programming using mass storage over USB
8. 26 x multi-function GPIO pins
9. 2 x SPI, 2 x I2C, 2 x UART, 3 x 12-bit ADC, 16 x controllable PWM channels
10. Accurate clock and timer on-chip
11. Temperature sensor
12. Accelerated floating-point libraries on-chip
13. 8 x Programmable I/O (PIO) state machines for custom peripheral support

Hardware Pins

UART0 TX	I2C0 SDA	SPI0 RX	GP0	1	40	VBUS	
UART0 RX	I2C0 SCL	SPI0 CSn	GP1	2	39	VSYS	
			GND	3	38	GND	
	I2C1 SDA	SPI0 SCK	GP2	4	37	3V3_EN	
	I2C1 SCL	SPI0 TX	GP3	5	36	3V3(OUT)	
UART1 TX	I2C0 SDA	SPI0 RX	GP4	6	35	ADC_VREF	
UART1 RX	I2C0 SCL	SPI0 CSn	GP5	7	34	GP28	ADC2
			GND	8	33	GND	AGND
	I2C1 SDA	SPI0 SCK	GP6	9	32	GP27	ADC1 · I2C1 SCL
	I2C1 SCL	SPI0 TX	GP7	10	31	GP26	ADC0 · I2C1 SDA
UART1 TX	I2C0 SDA	SPI1 RX	GP8	11	30	RUN	
UART1 RX	I2C0 SCL	SPI1 CSn	GP9	12	29	GP22	
			GND	13	28	GND	
	I2C1 SDA	SPI1 SCK	GP10	14	27	GP21	I2C0 SCL
	I2C1 SCL	SPI1 TX	GP11	15	26	GP20	I2C0 SDA
UART0 TX	I2C0 SDA	SPI1 RX	GP12	16	25	GP19	SPI0 TX · I2C1 SCL
UART0 RX	I2C0 SCL	SPI1 CSn	GP13	17	24	GP18	SPI0 SCK · I2C1 SDA
			GND	18	23	GND	
	I2C1 SDA	SPI1 SCK	GP14	19	22	GP17	SPI0 CSn · I2C0 SCL · UART0 RX
	I2C1 SCL	SPI1 TX	GP15	20	21	GP16	SPI0 RX · I2C0 SDA · UART0 TX

Legend:
- Power
- Ground
- UART / UART (default)
- GPIO, PIO, and PWM
- ADC
- SPI
- Debugging
- System Control
- I2C

Size

Unit:mm