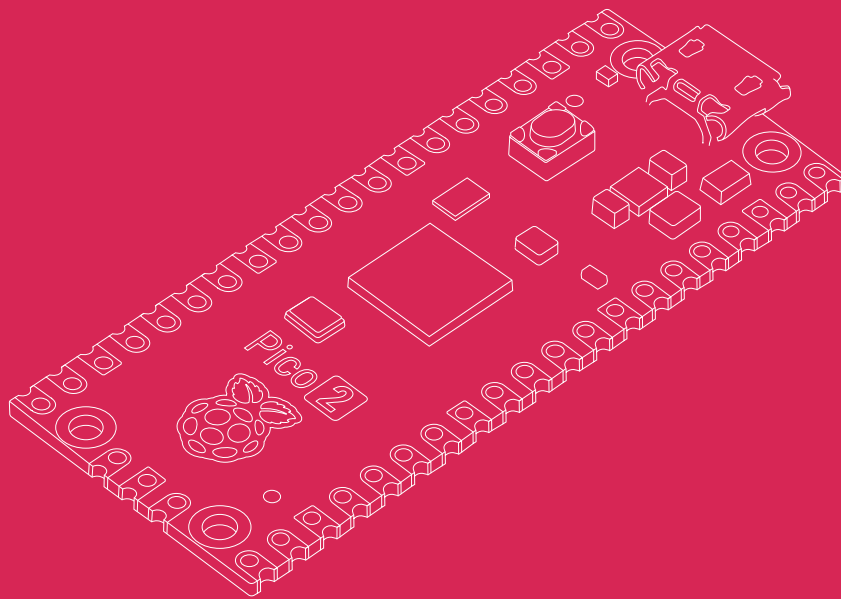


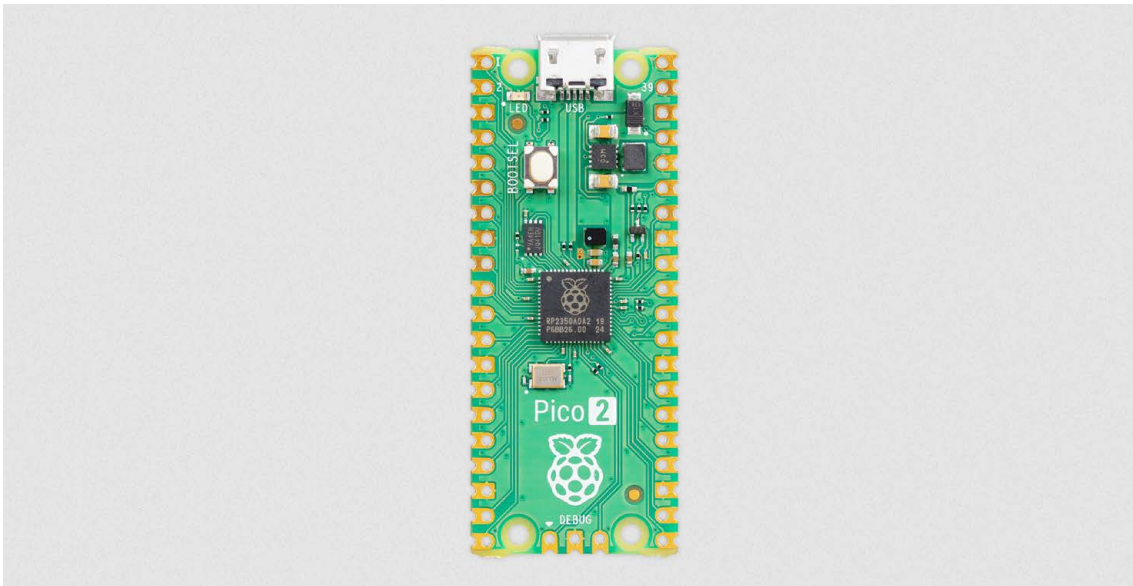


Raspberry Pi Pico 2

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Overview



Raspberry Pi Pico 2 is our new \$5 microcontroller board, built on RP2350: our new high-performance, secure microcontroller. With a higher core clock speed, double the on-chip SRAM, double the on-board flash memory, more powerful Arm cores, optional RISC-V cores, new security features, and upgraded interfacing capabilities, Raspberry Pi Pico 2 delivers a significant performance and feature boost, while retaining hardware and software compatibility with earlier members of the Raspberry Pi Pico series.

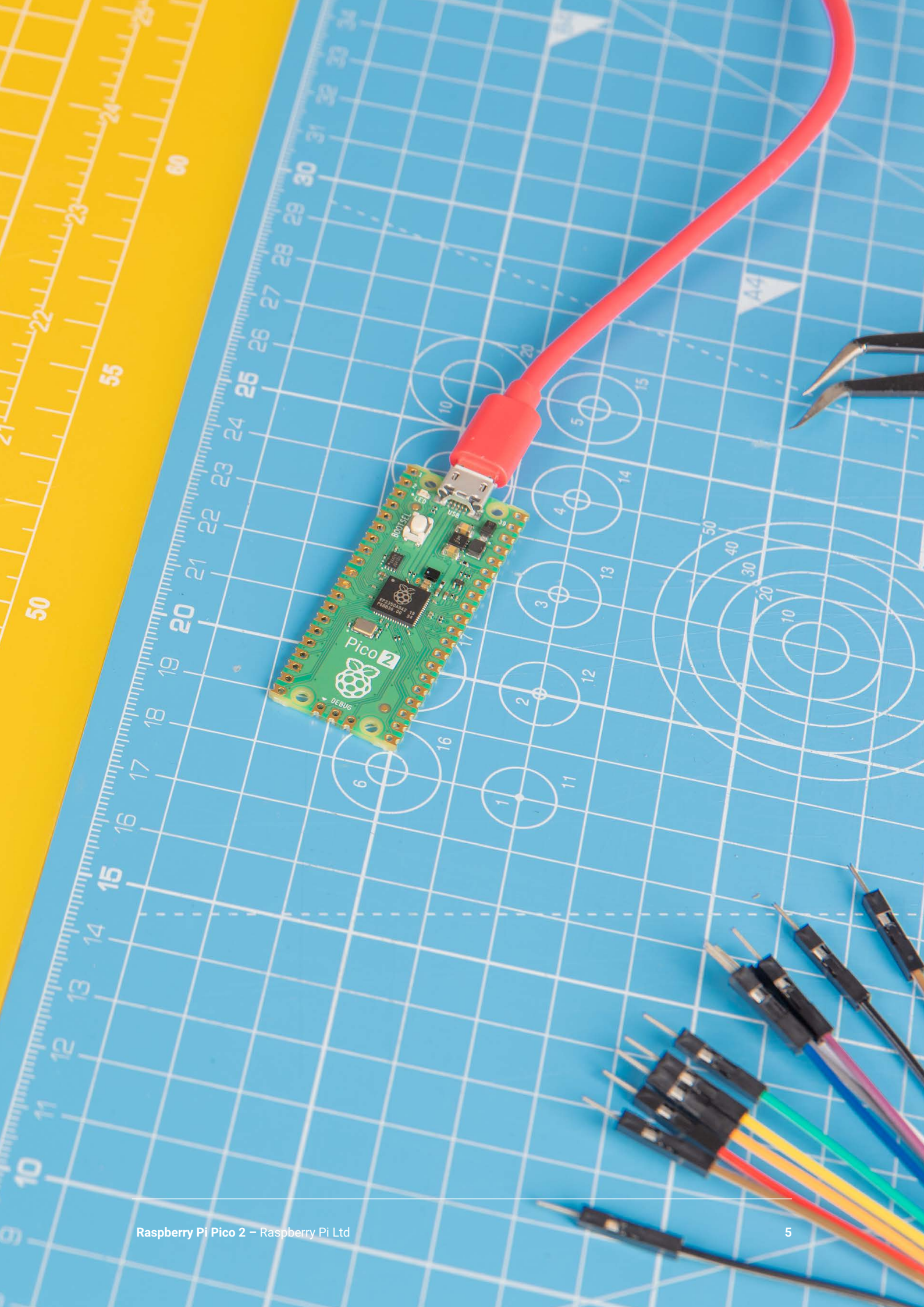
RP2350 provides a comprehensive security architecture, built around Arm TrustZone for Cortex-M, and incorporating signed boot, 8KB of antifuse OTP for key storage, SHA-256 acceleration, a hardware TRNG, and fast glitch detectors. These features, including the secure boot ROM, are extensively documented and available to all users without restriction: this transparent approach, which contrasts with the “security through obscurity” offered by legacy vendors, allows professional users to integrate RP2350, and Raspberry Pi Pico 2, into products with confidence.

The unique dual-core, dual-architecture capability of RP2350 allows users to choose between a pair of industry-standard Arm Cortex-M33 cores, and a pair of open-hardware Hazard3 RISC-V cores. Programmable in C / C++ and Python, and with detailed documentation, Raspberry Pi Pico 2 is the ideal microcontroller board for enthusiasts and professional developers alike.

Raspberry Pi Pico 2 is available as an individual unit, or in 480-unit reels.

Specification

Form factor:	21 mm × 51 mm
CPU:	Dual Arm Cortex-M33 or dual RISC-V Hazard3 processors @ 150MHz
Memory:	520 KB on-chip SRAM; 4 MB on-board QSPI flash
Interfacing:	26 multi-purpose GPIO pins, including 4 that can be used for ADC
Peripherals:	<ul style="list-style-type: none">• 2 × UART• 2 × SPI controllers• 2 × I2C controllers• 24 × PWM channels• 1 × USB 1.1 controller and PHY, with host and device support• 12 × PIO state machines
Input power:	1.8–5.5V DC
Operating temperature:	-20°C to +85°C
Production lifetime:	Raspberry Pi Pico 2 will remain in production until at least January 2040
Compliance:	For a full list of local and regional product approvals, please visit pip.raspberrypi.com





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