

102010550 | Seeed Studio XIAO RP2350

SKU: 102010550

Product Overview

The XIAO RP2350 features the Raspberry Pi RP2350 processor with dual Arm Cortex-M33 cores running at 150MHz and FPU, as well as dual open-hardware Hazard3 RISC-V cores. It measures 21x17.8mm and includes 19 multifunction GPIOs, an RGB LED, and a Battery Management System for battery power supply and voltage measurement. Compatible with various add-ons like displays, Grove modules, CAN Bus sensors, and Vision AI sensors, it supports MicroPython, C, and C++ for developing compact, battery-powered applications in smart control, wearables, and DIY projects.

Features

Powerful MCU Board: Equipped with a Raspberry Pi RP2350 chip featuring dual-core, dual-architecture capability, allowing developers to switch between the dual industry-standard Arm Cortex-M33 cores @ 150MHz with FPU, and a pair of open-hardware Hazard3 RISC-V cores

Enhanced Security Features: Built-in secure boot and encrypted bootloader ensure application security.

Software Support: Compatible with C/C++ and MicroPython, ensuring easy project development and prototyping.

Rich Onboard Resources: Integrates an RGB LED, 2MB Flash, 520kB SRAM, and 19 multifunction GPIOs (Analog, Digital, I2C, UART, SPI, PWM).

Expanded 8 New IOs: Compared to previous XIAO MCUs, the addition of 8 IO pins on the back supports more complex applications.

Efficient Power Design: Ultra-low power consumption of just 27uA in sleep mode, enabling battery power supply. Direct battery voltage measurement via internal IO enhances the battery management system (BMS).

Compact Thumb-Sized Design: Measuring 21 x 17.8mm, adopting Seeed Studio's classic XIAO form factor, ideal for space-conscious applications.

Production-friendly: Surface Mount Device (SMD) design with all components on the front and stamp holes on both sides, facilitating efficient mass production. Production-Ready Design with Fusion PCBA Support Being the 9th member of the Seeed Studio XIAO family, the XIAO RP2350 remains the classic XIAO design (thumb-size, SMD, stamp holes). All these features make it a perfect fit for either space-limited projects such as wearables, or a production-ready unit for commercial PCBA (Printed Circuit Board Assembly) integration. Through our Fusion PCBA Sponsorship program, you can not only enjoy the lowest unit prices for all XIAO modules from our Fusion Open Parts Library, but also fabricate and scale your XIAO-based PCBA designs at low cost (30% off) with FREE Design for Manufacturing consulting services, streamlining your journey from prototype to production.

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Product Image



Product image

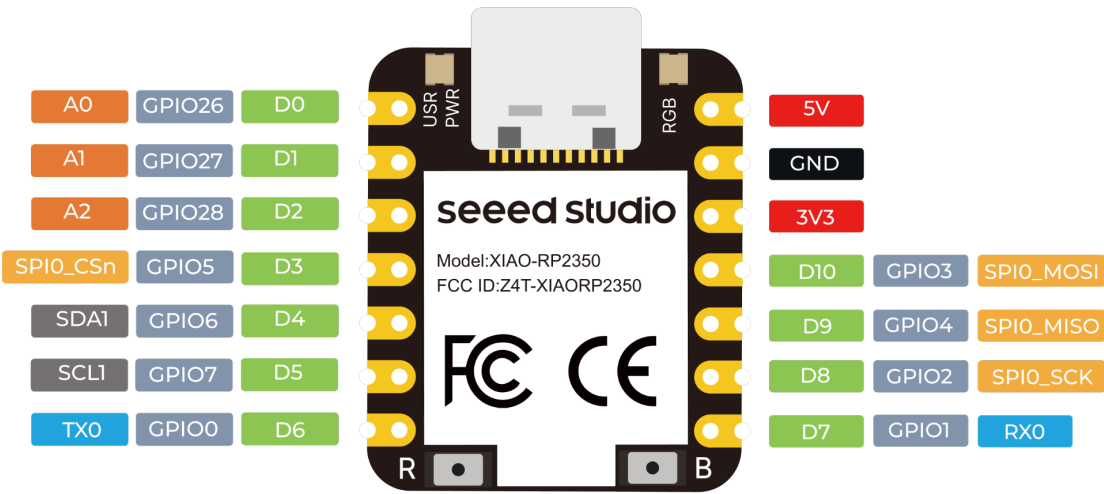
Specifications

XIAO RP2040

Product		XIAO RP2350
Processor	Raspberry Pi RP2040	Raspberry Pi RP2350
Dual Cortex-M0+ @ 133MHz	Dual Cortex-M33 @ 150MHz, FPU	
RAM	264kB SRAM	520kB SRAM
Flash	2MB Onboard	2MB Flash
LEDs	1x user LED1x power LED 1x RGB LED	1x user LED1x power LED1x RGB LED
Interface	11 Pins(All PWM):4x Analog11x Digital1x I2C1x UART1x SPI	19 Pins(All PWM):3x Analog19x Digital 2x I2C 2x UART2x SPI
Button	1x RESET button1x BOOT button	1x RESET button1x BOOT button
Security		OTP, Secure Boot, Arm TrustZone
Software compatibility	Support Micropython / Arduino / CircuitPython	Support Micropython / Arduino / C,C++
Working Temperature	20degC-70degC	20degC-70degC
Dimensions	21x17.8 mm	21x17.8 mm

Hardware Overview

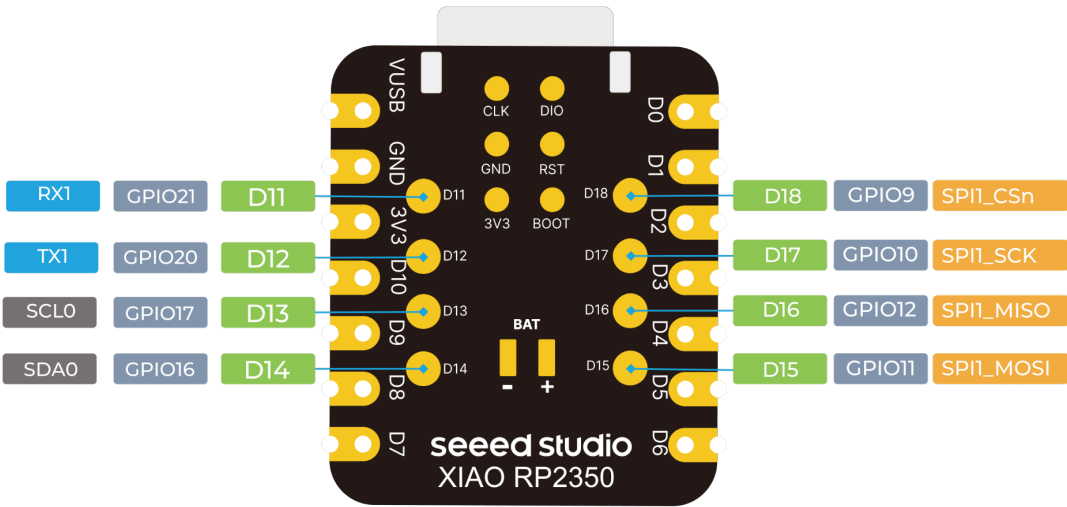
Front



Digital Analog GPIO IIC UART SPI Power GND ALL PWM

Hardware overview image

Back



Digital Analog GPIO IIC UART SPI Power GND ALL PWM

Hardware overview image