

102010551 | Seeed Studio XIAO RA4M1

SKU: 102010551

Product Overview

The XIAO RA4M1 integrates Renesas' RA4M1 chip, a 32-bit ARM Cortex-M4 MCU running up to 48 MHz with FPU, in the classic XIAO form factor. This development board includes 256KB Flash, 32KB SRAM, 8KB EEPROM, a USB 2.0 connector, reset and boot buttons, three LEDs, a 14-bit A/D converter, a 12-bit D/A converter, and a CAN BUS interface. It features onboard charging circuitry and low-power modes as low as 45uA, making it suitable for battery-powered applications. The board shares the same microcontroller as the Arduino Uno R4 and is natively compatible with Arduino IDE.

Features

Popular Microcontroller Onboard: Powered by Renesas RA4M1, an 32-bit ARM® Cortex®-M4 R7FA4M1AB3CNE MCU operating at up to 48 MHz with FPU, 256 KB of Flash memory, and 32 KB of SRAM.

Highlighted Onboard Resources: Equipped with a 14-bit ADC, 12-bit DAC, USB 2.0, and an onboard RGB LED.

Expanded 8 New IOs: Adds 8 new IO pins on the back compared to previous XIAO boards (19 GPIOs in total), enabling more complex applications.

Powerful Security Features: Built-in hardware encryption, secure boot, key storage, and other functions to ensure application security.

Software Compatibility: Fully compatible with Arduino IDE for seamless project development and prototyping.

Efficient Power Design: Offers 4 operating modes with power consumption as low as 45uA in deep sleep, and supports lithium battery charge management.

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 10th member of the Seeed Studio XIAO family, the XIAO RA4M1 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 module 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.

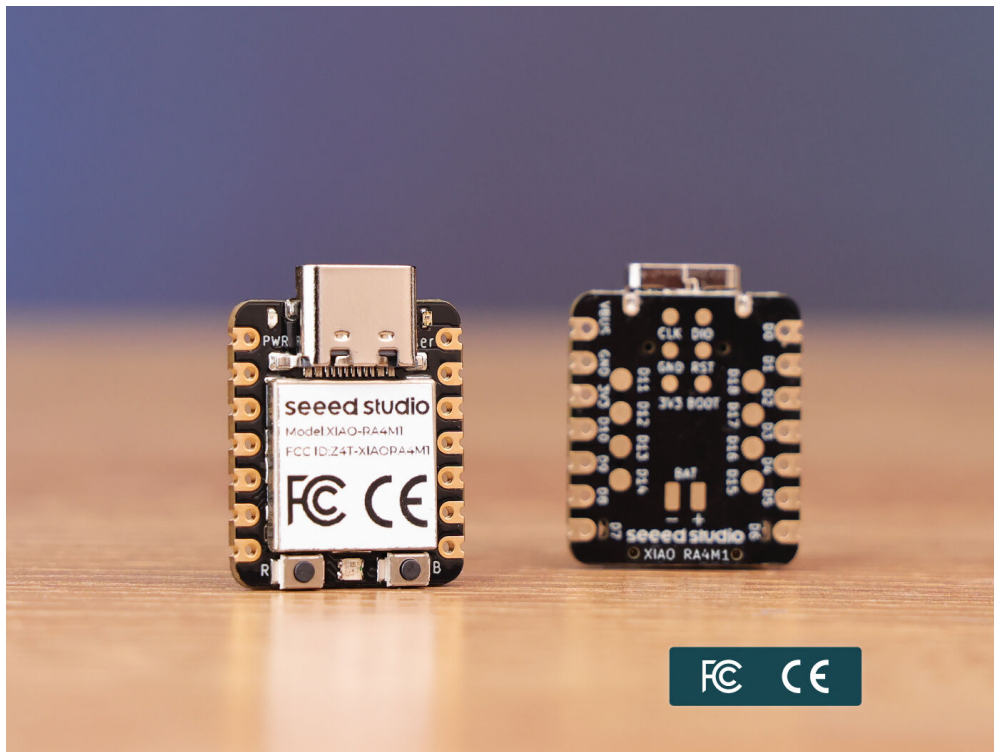
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Product Image



Product image

Specifications

Renesas RA4M1

Product: XIAO RA4M1

Processor:

48-MHz Arm® Cortex®-M4 Core with FPU:

RAM: 32 KB SRAM

Flash: 256KB

LEDs: 1x User LED 1x Power LED 1x RGB LED

Interfaces: 19 IOs: 6x Analog 19x Digital 2x IIC 2x UART 2x SPI

Buttons: 1x RESET Button 1x BOOT Button

Security: AES128/256

Low Power(Typ.): 42.6uA@3.7V

Software Compatibility: Arduino IDE

Working Temperature: -20degC~70degC

Dimensions: 21x17.8 mm

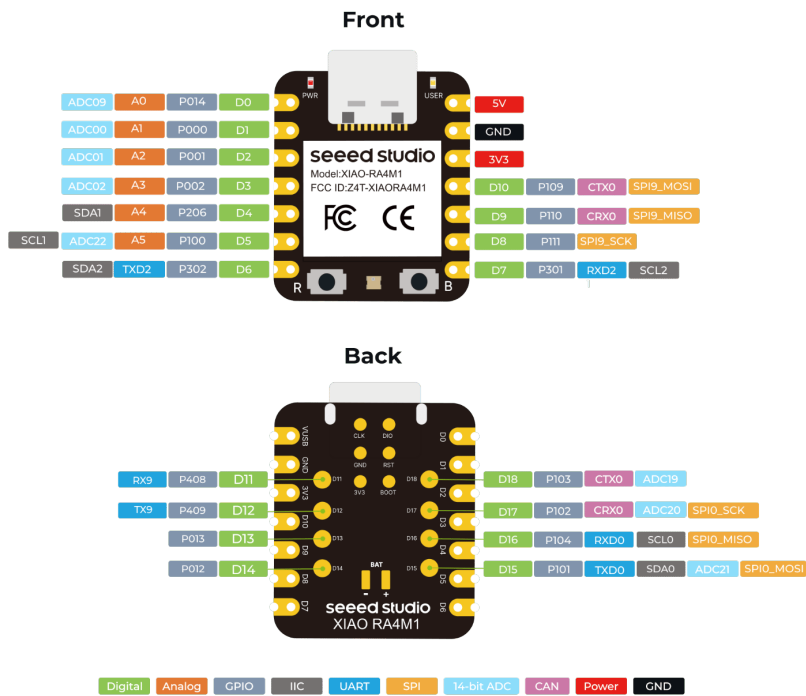
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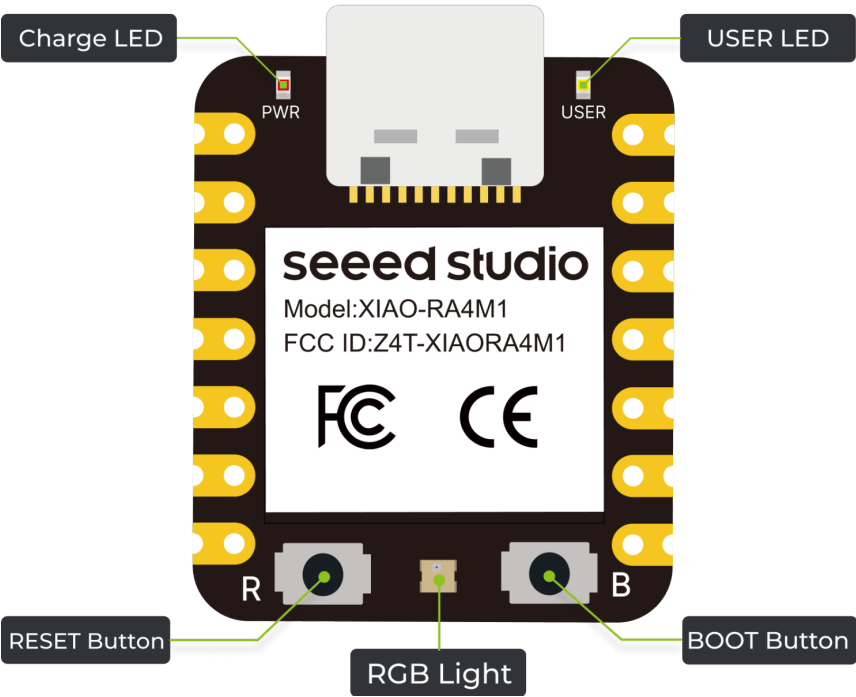
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Hardware Overview



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