

seeed studio

INDUSTRIAL PRODUCT DATASHEET

Seeed Studio XIAO SAMD21(Seeeduino XIAO)

The Seeed Studio XIAO SAMD21 is a compact Arduino board perfect for beginners and rapid prototyping, backed by a rich ecosystem and production-ready design.

SKU

102010328

UPDATED

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PRICE

\$5.40(Excl. VAT)



Overview



The Seeed Studio XIAO SAMD21 (Seeeduino XIAO) is a compact 21 x 17.8mm Arduino-compatible board ideal for electronics beginners, with native Arduino IDE support, free courses, and the Grove system for plug-and-play prototyping, suitable for wearables, IoT, and mini projects. It features a production-optimized SMD design with stamp holes, supported by the comprehensive XIAO Add-on ecosystem for scaling from prototype to production with Fusion PCBA.

Key Features

The Perfect Arduino Board for Electronics Beginners

XIAO SAMD21 (aka. Seeeduino XIAO) is your ideal gateway to electronics and programming, featuring native Arduino IDE compatibility and a complete beginner-friendly ecosystem. With comprehensive free courses, step-by-step tutorials, and extensive community projects as references, your learning journey is fully guided. The compatible XIAO Starter Kit, Grove expansion boards for XIAO, and Grove system (400+ compatible modules) enable quick prototyping without prior electronics knowledge or soldering skills. Progress naturally from basic concepts to creating complex projects like wearables and IoT devices. Whether you're new to electronics or expanding your maker skills, XIAO's combination of plug-and-play hardware and rich learning resources makes it the perfect platform to bring your creative ideas to life.

Classic Form Factor and Extensive Seeed Studio XIAO Ecosystem

First launched in 2019, XIAO SAMD21's compact 21 x 17.8mm design set the standard for miniature development boards. Its native compatibility with the comprehensive XIAO Add-on ecosystem - from expansion boards, sensors and displays to connectivity modules and actuators (Grove Expansion, CAN-Bus, LoRa module, LED Matrix, Vision AI Sensor, Round Display, L76K GSP module, 2-Mic Array, ePaper Displays, mmWave sensor, AC relay, Bus Servo Driver and many more) - makes it versatile for any project, no matter how simple or complex.

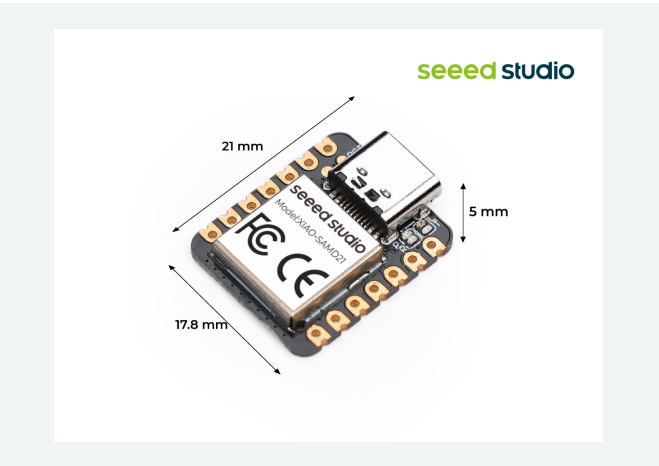
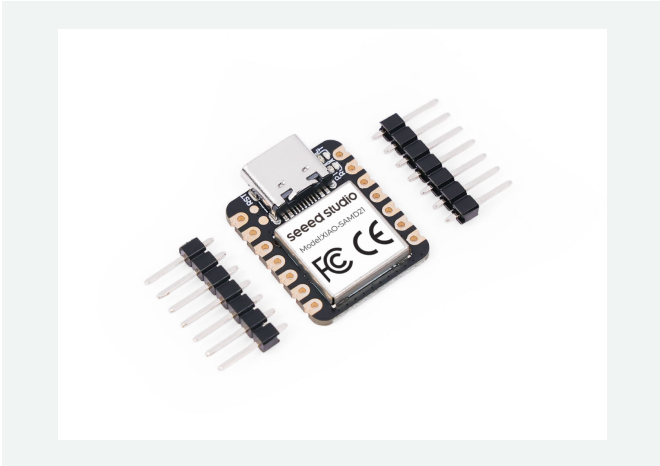
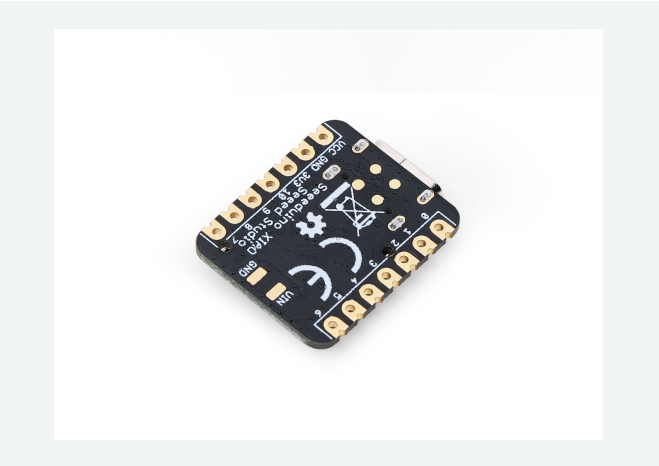
Production-Ready Design with Fusion PCBA Support

All Seeed Studio XIAO dev boards feature a production-optimized SMD (Surface Mount Device) design with standardized stamp holes, making it perfect 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.

Note:

XIAO SoM User Manual open-sources all hardware and software materials of XIAO, providing professional product design guidelines to help you accelerate ideas off the ground, streamline product design, providing a seamless experience from module selection to mass production. You can check [here](#) more info.

Product Gallery

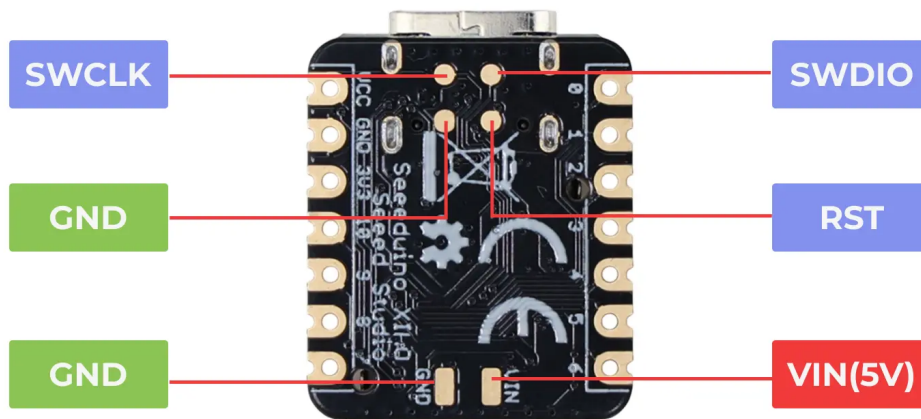
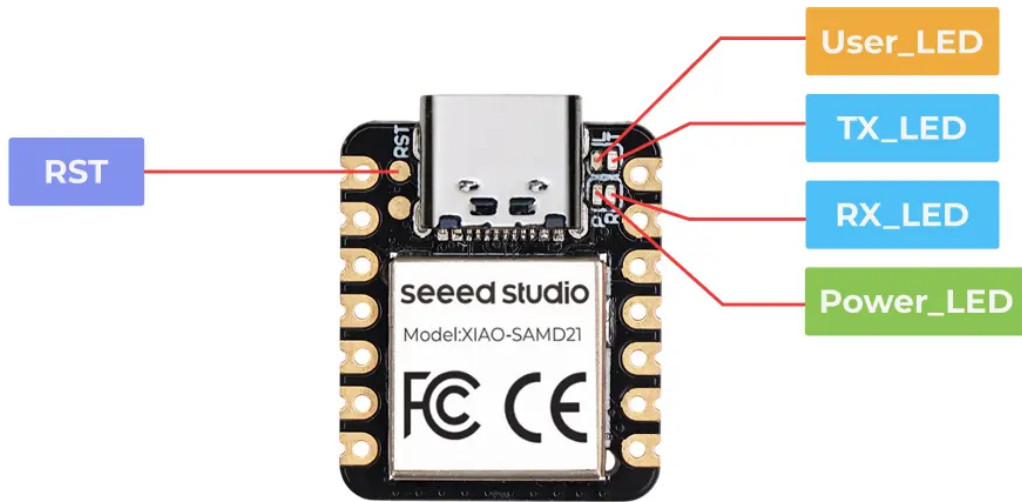


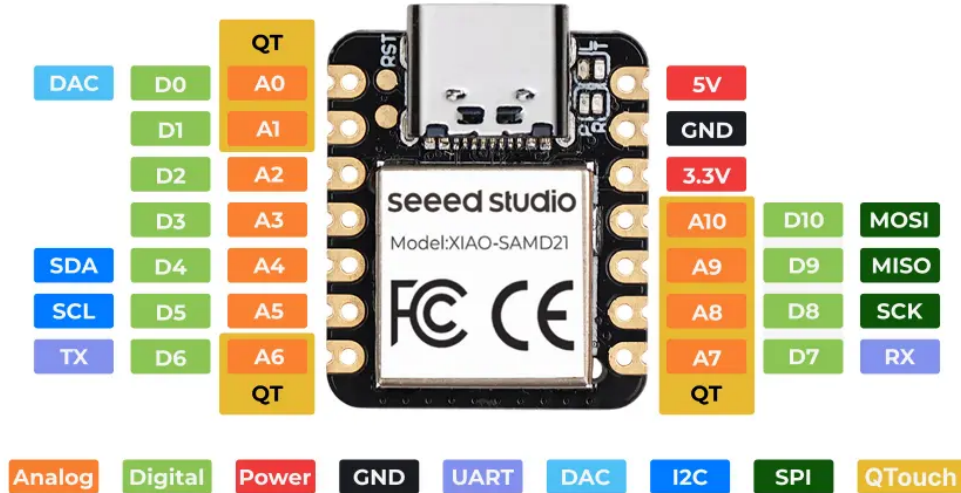
Specification

Product Name	Seeed Studio XIAO SAMD21
Chipset	Microchip SAMD21G18
Processor	ARM Cortex-M0+ processor running at up to 48 MHz.

RAM	32KB SRAM
Flash	256KB Flash
Interface	GPIO Pin x14 Digital Pin x11 Analog Pin x11 DAC x1 I2C x1 UART x1 SPI x1
Onboard	User LED x1 Power LED x1 Status LEDs for Serial Communication (TX/RX Indicators) x2
Wireless Connectivity	/
Power	Input voltage (Type-C): 5V Input voltage (BAT): 5V
Max Output	5V@500mA 3.3V@200mA
Software Compatibility	Arduino, PlatformIO, MicroPython, CircuitPython, Zephyr, and more to come
Working Temperature	-40 to 85°C
Dimensions	21x17.8mm
Varients	• XIAO SAMD21 (Pre-Soldered) • XIAO SAMD21 3PCS Pack

Hardware Overview





Applications

- **Learning & Education:** Arduino, MicroPython, basic electronics and prototyping
- **Wearable devices:** health monitoring, interactive clothing, compact fitness trackers
- **IoT & Sensor Projects:** Environmental monitoring, data collection devices, smart home sensors, small automation systems
- **Space-Constrained Mini Arduino Projects:** Miniature robots, portable devices, small electronics gadgets, embedded control systems
- **Rapid prototyping:** Quick proof-of-concept builds, hardware testing, product prototypes, embedded system development
- **HID devices:** DIY keyboard, USB to multi-channel TTL/USB host mode, etc.

Part List

Seeed Studio XIAO SAMD21	X1
7-Pin Header (2.54mm)	X2

Compliance & Logistics



HSCODE	8517180050
USHSCODE	8517180050
UPC	841454122890
EUHSCODE	8543709099
COO	CHINA

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- <https://www.seeedstudio.com/Seeeduino-XIAO-Arduino-Microcontroller-SAMD21-Cortex-M0+-p-4426.html>
- [Wiki-XIAO SAMD21 Resources](#)
- [3D Printing "Case" Studies](#)
- [Seeed Studio XIAO Use Case](#)
- [PCN-XIAO Series Packaging Upgrade.pdf](#)

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