

Seeed Studio XIAO MG24 Sense

Seeed Studio XIAO MG24 Sense: thumb-sized, Matter-native board with advanced sensors and ultra-low power for smart home and TinyML applications.

SKU

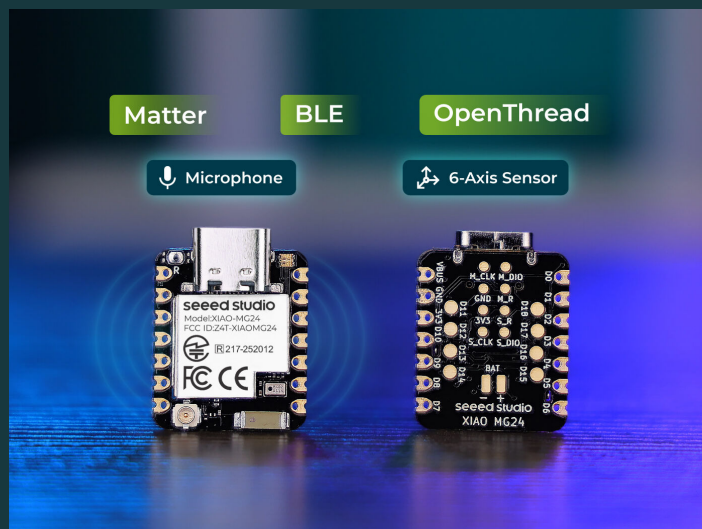
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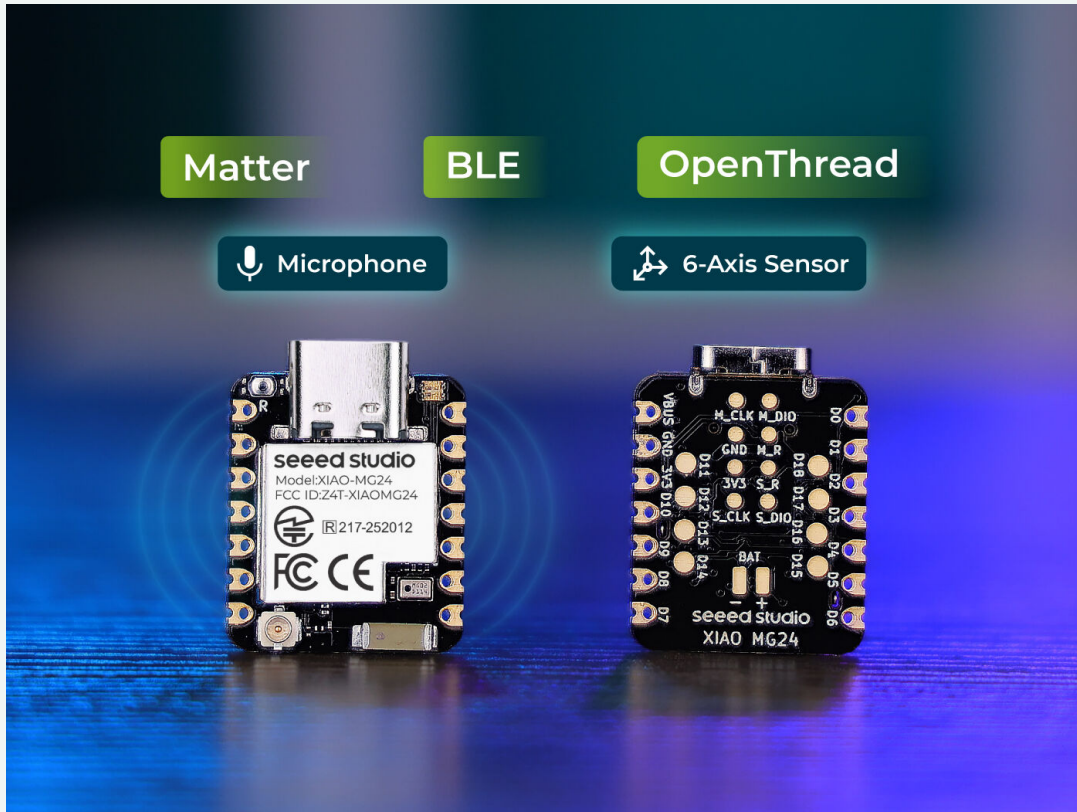
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PRICE

\$10.90(Excl. VAT)



Overview



The Seeed Studio XIAO MG24 Sense is a thumb-sized (21x17.8mm) development board based on the Silicon Labs EFR32MG24 SoC, featuring a 78 MHz ARM Cortex-M33, Matter over Thread/Bluetooth 5.3, and ultra-low power consumption ($<1.95\mu\text{A}$ sleep). It includes an analog microphone, 6-axis IMU, 4MB Flash, and supports applications in smart home, remote controls, TinyML, and environmental monitoring.

Key Features

- **High Performance MCU:** [Silicon Labs' EFR32MG24 SoC](#), 32-bit 78 MHz ARM Cortex®-M33 with DSP instruction
- **Matter Native:** Compatible with Matter® over Thread® and Bluetooth® Low Energy 5.3, Supported by the Arduino® Core
- **Outstanding RF Performance:** Equipped with an on-board antenna with BLE range up to 50m in an open location with no signal interference, while reserving an interface for external UFL antenna
- **Super-Low Power Design:** Power consumption less than 1.95µA in sleep mode, ideal for battery-powered home automation application
- **Advanced Onboard Sensors:** Features additional analog microphone and 6-axis IMU for TinyML and edge AI applications such as pose perception for more responsive automation.
- **Security Encrypted On-Chip:** A dedicated hardware secure engine containing its own CPU enables the Secure Vault functions.
- **Rich On-Board Resources:** Additional 4MB Flash on board, on-board battery charging circuit, 19 GPIOs, LED
- **Classic XIAO Design:** Remains the classic XIAO design of the thumb-size form factor of 21 x 17.8mm, and single-sided mount, making it perfect for space-limited projects such as wearables
- **XIAO Accessory Add-ons and Kits Compatibility:** Natively compatible with all the XIAO accessory add-ons and kits of Grove Expansion, CAN-Bus, LED Matrix, Vision AI Sensor, Round Display, GSP Module, 2-Mic Array, ePaper Display, mmWave sensor, LoRa Module and many more.

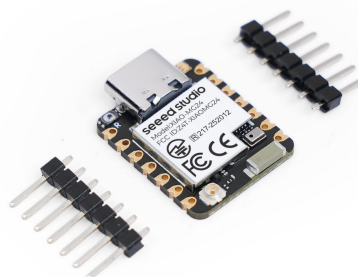
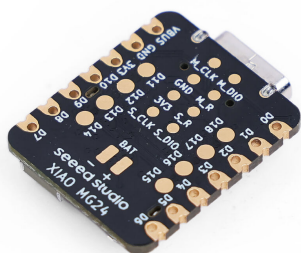
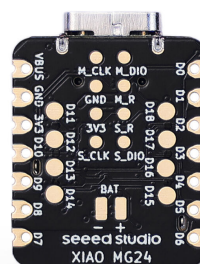
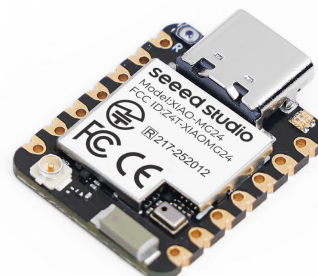
Production-Ready Design with Fusion PCBA Support

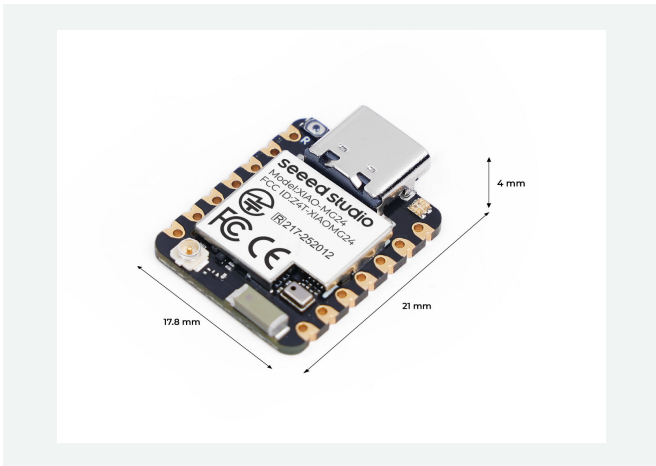
Being the 12th member of the [Seeed Studio XIAO family](#), the XIAO MG24 Sense remains the classic XIAO design (thumb-size, SMD, stamp holes). All these features make it a perfect fit for commercial PCBA (Printed Circuit Board Assembly) integration. Through our [Fusion PCBA Sponsorship program](#), 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](#) to see more info.

Product Gallery

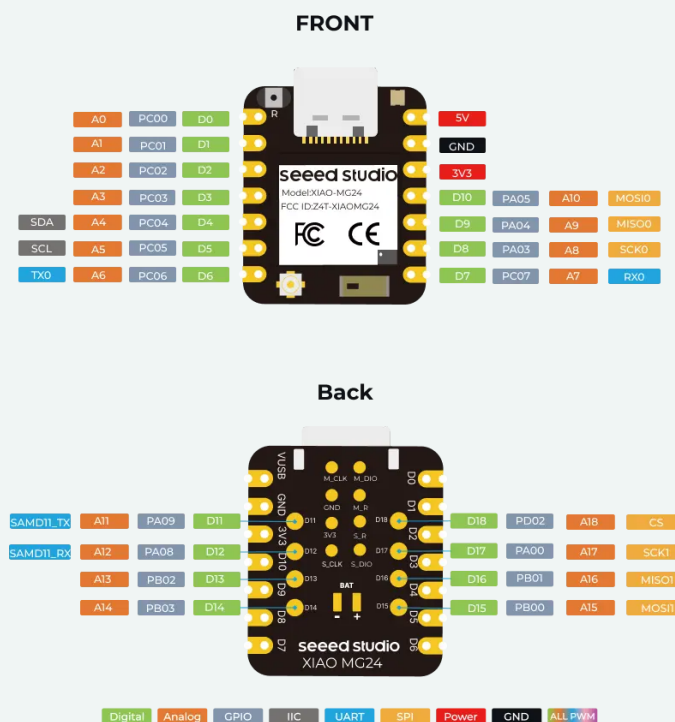
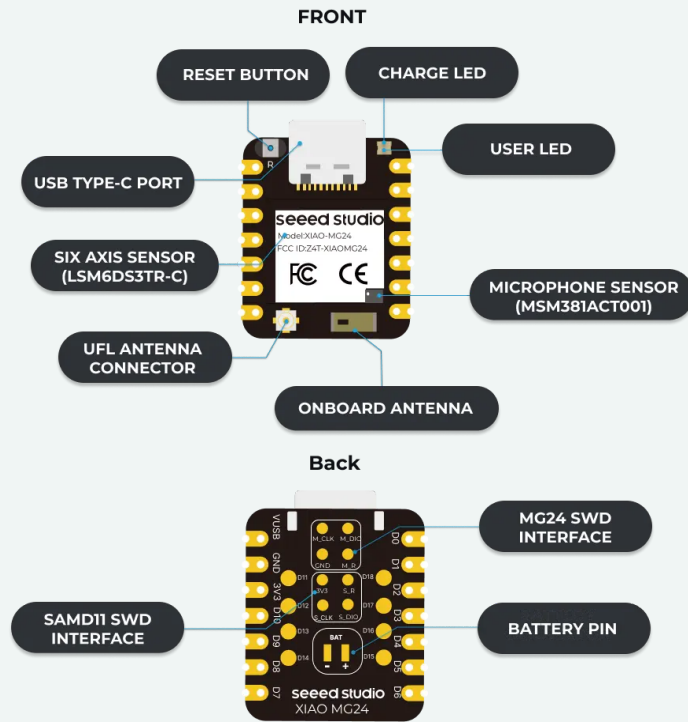




Specification

Product	XIAO MG24	XIAO MG24 Sense
Processor	Silicon Labs EFR32MG24	Silicon Labs EFR32MG24
	ARM Cortex-M33 @ 78MHz	ARM Cortex-M33 @ 78MHz
RAM	256kB	256kB
Flash	1536KB + 4MB Onboard	1536KB + 4MB Onboard
LEDs	1x User LED 1x Power LED	1x User LED 1x Power LED
Sensors	-	1x Onboard Analog Microphone 1x Onboard 6-Axis IMU
Interface	22 Pins(All PWM): 19x Analog 19x Digital 1x I ² C 2x UART 2x SPI	22 Pins(All PWM): 19x Analog 19x Digital 1x I ² C 2x UART 2x SPI
Button	1x RESET Button	1x RESET Button
Security	Hardware Cryptographic Acceleration, True Random Number Generator, ARM® TrustZone®, Secure Boot, Secure Debug Unlock etc.	Hardware Cryptographic Acceleration, True Random Number Generator, ARM® TrustZone®, Secure Boot, Secure Debug Unlock etc.
Low power (Typ.)	1.95μA	1.95μA
Normal (Typ.)	6.71mA	6.71mA
Sleep (Typ.)	1.91mA	1.91mA
Software Compatibility	Arduino IDE	Arduino IDE
Working Temperature	-20°C-70°C	-20°C-70°C
Dimensions	21x17.8 mm	21x17.8 mm

Hardware Overview



Applications

- **Smart Home Devices:** Using Matter® for devices like smart locks, sensors, and lighting.
- **Remote Controls:** Low-power remotes for home automation systems
- **TinyML Applications:** On-device machine learning for gesture recognition and voice commands.
- **Environmental Monitoring:** Battery-powered sensors for temperature, humidity, and air quality.

Part List

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Compliance & Logistics

Seeed Studio XIAO MG24 Sense	x1
7 Pin Header	x2

Resource Links

- <https://www.seeedstudio.com/Seeed-XIAO-MG24-Sense-p-6248.html>
- [PCN-XIAO Series Packaging Upgrade.pdf](#)
- [Wiki-XIAO MG24 Series Resources](#)
- [Seeed Studio XIAO Use Case](#)

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