seeed studio

INDUSTRIAL PRODUCT DATASHEET

Seeed Studio XIAO MG24 Sense (Pre-Soldered)

Seeed Studio XIAO MG24 Sense (Pre-Soldered) combines Matter over Thread and Bluetooth 5.3, low-power sensors, and a classic thumb-size XIAO design for smart home, remote control, TinyML, and environmental monitoring...

SKU	UPDATED	PRICE
102010691	2026-09-20 06:26:34	$11.90(Excl. VAT)



Overview



The Seeed Studio XIAO MG24 Sense (Pre-Soldered) is a Matter-native, low-power development board built on Silicon Labs' EFR32MG24 SoC with a 32-bit 78 MHz ARM Cortex-M33, onboard antenna, analog microphone, 6-axis IMU, 4MB flash, and 19 GPIOs in a classic 21 x 17.8mm XIAO form factor. It supports smart home devices, remote controls, TinyML applications, and environmental monitoring with Bluetooth Low Energy 5.3 and Thread connectivity.

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.

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 either space-limitedapplications of smart home, or a production-ready unit for your PCBA designs. (check out our **Fusion one-stop prototyping, producing and promoting services** to explore how to scale up your XIAO-based designs).

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.

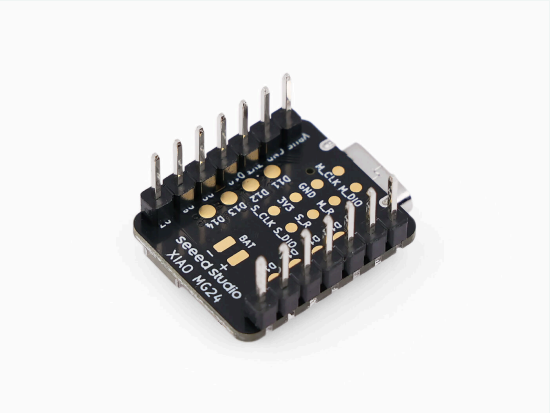
Product Gallery

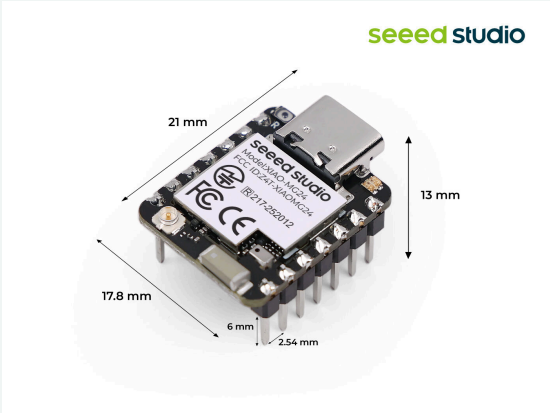










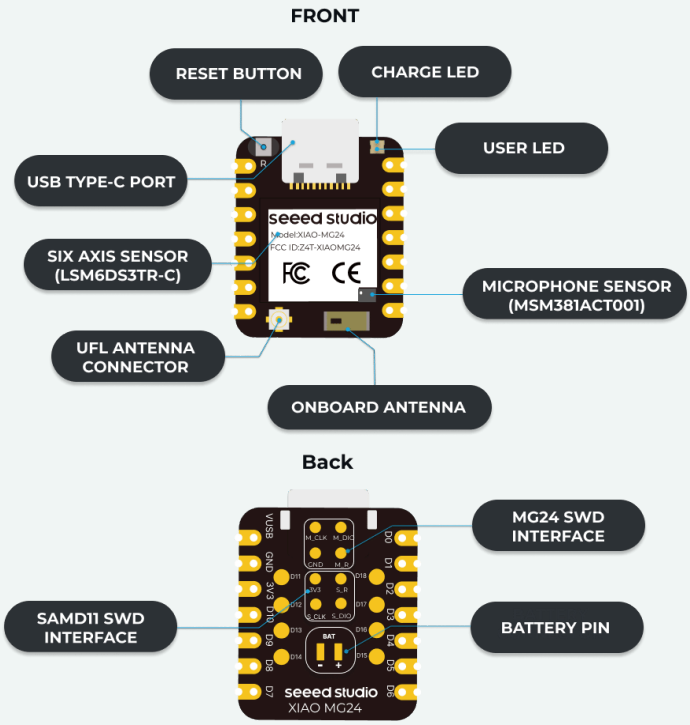


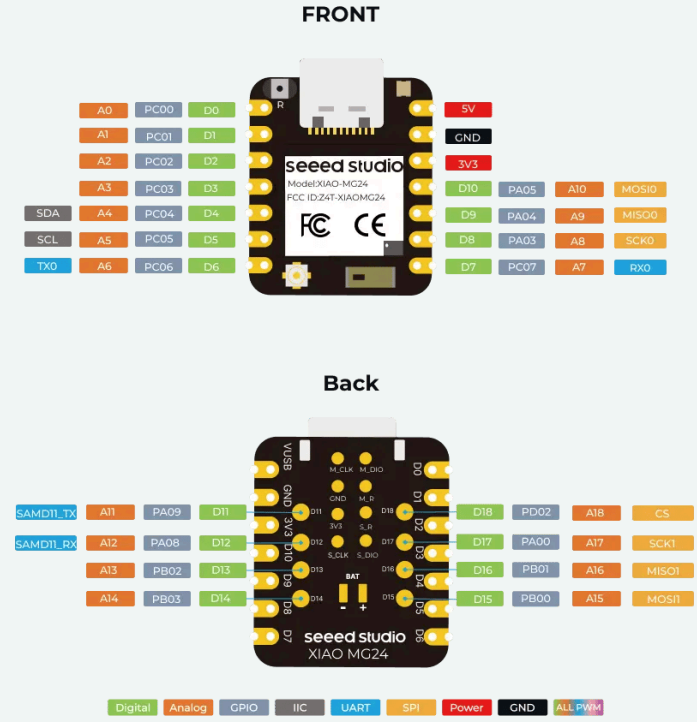
Specification

Product	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	1xUser LED 1x Power LED	1x User LED 1x Power LED
Sensors	-	1x Onboard Analog Microphone 1x Onboard 6-Axis IMU
Interfaces	22 Pins(All PWM): 19x Analog 19x Digital 1x I²C 2x UART 2x SPI	22 Pins(All PWM): 19x Analog 19x Digital 1x I²C 2x UART 2x SPI
Buttons	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

Seeed Studio XIAO MG24 Sense (Pre-Soldered)	x1

Compliance & Logistics

HSCODE	8543709990
USHSCODE	8517180050
UPC	
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/Seeed-Studio-XIAO-MG24-Sense-Pre-Soldered-p-6382.html
- PCN-XIAO Series Packaging Upgrade.pdf
- Wiki-XIAO MG24 Series Resources
- Seeed Studio XIAO Use Case

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