seeed studio

INDUSTRIAL PRODUCT DATASHEET

Seeed Studio XIAO nRF52840 (3PCS)

Seeed Studio XIAO nRF52840 (3PCS) is a thumb-sized, production-ready BLE 5.4 and NFC-enabled microcontroller board for low-power wireless and wearable projects.

SKU	UPDATED	PRICE
102010571	2026-09-20 06:21:24	$25.90(Excl. VAT)



Overview



Seeed Studio XIAO nRF52840 (3PCS) features a Nordic nRF52840 microcontroller with FPU up to 64 MHz, Bluetooth Low Energy 5.4, NFC, and ultra-low power consumption of 5μA in deep sleep, all in a 21 x 17.8 mm thumb-sized design. It supports Arduino, CircuitPython, Micropython, tinyGo, Zephyr, Meshtastic, and more, making it suitable for DIY mechanical keyboards, wearable devices, wireless connectivity, and embedded machine learning projects.

Key Features

- **Versatile Microcontroller:** Incorporate the **Nordic nRF52840** chip with FPU, operating up to 64 MHz, mounted multiple development ports
- **Embracing Open Source**: As an open source hardware, it also supports popular projects of Arduino / CircuitPython / Micropython / tinyGo / Zephyr / Meshtastic / Amazon Sidewalk / QMK / ZMK / ThingSpeak
- **Wireless Capabilities:** Implement Bluetooth Low Energy 5.4, BLE functions with onboard antenna, also provide NFC connectivity
- **Elaborate Power Design:** Provide ultra-low power consumption as 5μA in deep sleep mode while supporting lithium battery charge management
- **Thumb-Sized Design:** 21 x 17.8mm, Seeed Studio XIAO series classic form-factor, suitable for wearable devices
- **Perfect for Production:** Breadboard-friendly with Surface-Mounted SMD design, no components on the back

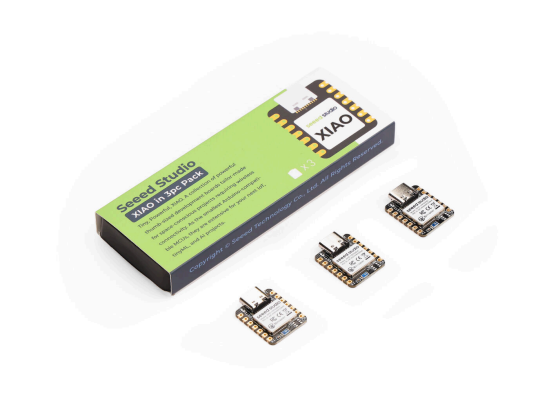
Production-Ready Design with Fusion PCBA Support

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** to see more info.

Product Gallery











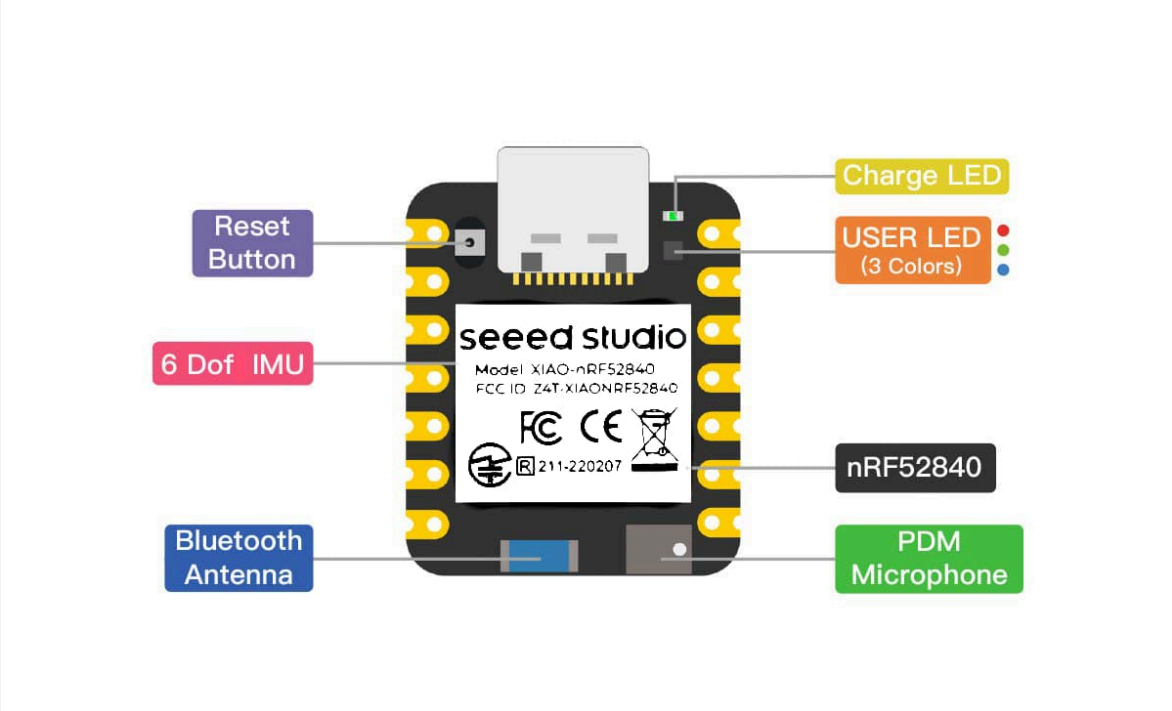


Specification

Item	Seeed Studio XIAO nRF52840	Seeed Studio XIAO nRF52840 Sense

Processor	Nordic nRF52840	
	ARM® Cortex®-M4 with FPU runs up to 64 MHz	
Wireless	Bluetooth Low Energy 5.4/Bluetooth Mesh/NFC	
On-chip Memory	1 MB flash and 256 kB RAM	
Onboard Memory	2 MB QSPI flash	
Interface	1xUART 1xIIC 1xSPI 1xNFC 1xSWD	
	11xGPIO(PWM) 6xADC	
Onboard Sensors	/	1xPDM digital microphone
		1x6-axis IMU
Dimensions	21 x 17.8mm	
Power	Circuit operating voltage: 3.3V@200mA	
	Charging current: 50mA/100mA	
	Input voltage (VIN): 5V Input voltage (BAT): 3.7V	
	Standby power consumption: 5μA	

Hardware Overview



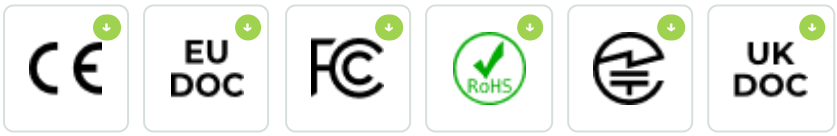
Applications

- **DIY mechanical keyboards:** thanks to its support of QMK and ZMK Firmware
- **Wearable devices**
- **Wireless connect**
- **Embedded machine learning projects**
- **Mini Arduino projects**
- **Tiny Machine Learning application**

Part List

Seeed Studio XIAO nRF52840	x3
7 pin header	x6

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-nRF52840-3PCS-p-5921.html
- 3D Printing "Case" Studies
- Wiki-XIAO nRF52840 Series Resources
- Seeed Studio XIAO nRF52840 BLE Communication Distance Test Report
- Seeed Studio XIAO Use Case

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