

INDUSTRIAL PRODUCT DATASHEET

Seeed Studio XIAO ESP32-C3 (Tape & Reel)

Seeed Studio XIAO ESP32-C3 (Tape & Reel): compact SMD module with ESP32-C3 RISC-V, Wi-Fi/BLE 5.0, and deep sleep at 44 μ A.

SKU

101991467

UPDATED

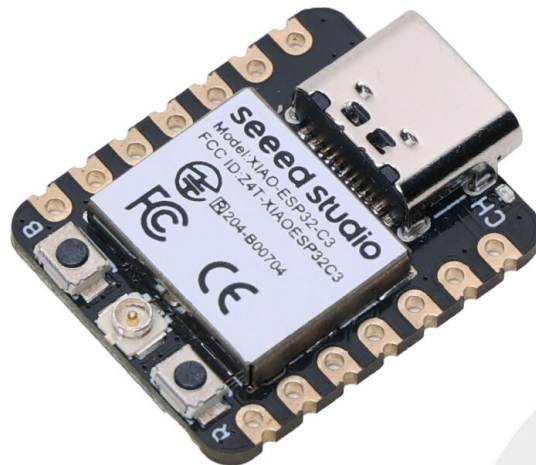
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PRICE

\$4.49(Excl. VAT)



Overview



Tape & Reel

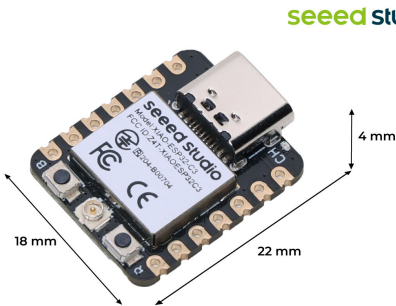
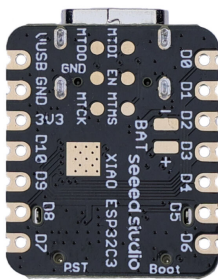
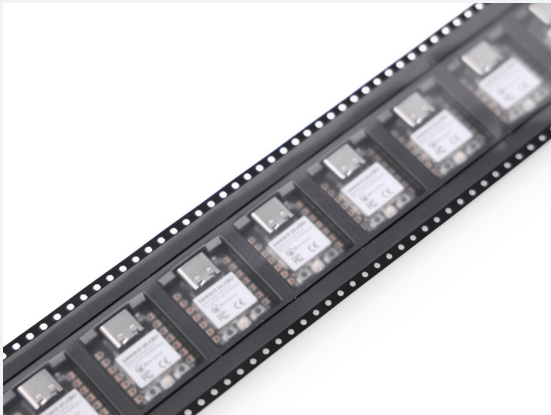
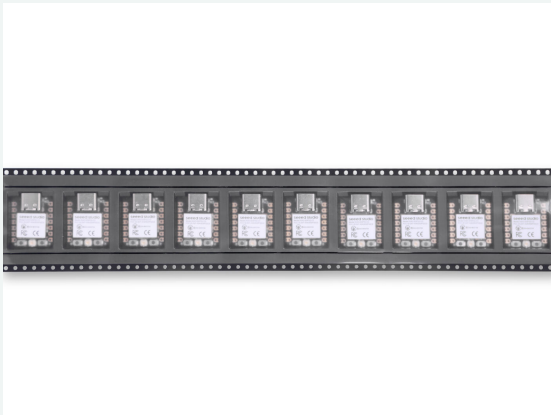
The Seeed Studio XIAO ESP32-C3 (Tape & Reel) is a flexible MCU module featuring the ESP32-C3 32-bit RISC-V chip up to 160 MHz in a single-sided SMD design, supporting Arduino and CircuitPython. It provides complete Wi-Fi and Bluetooth LE 5.0, U.FL antenna connectivity over 100m, deep sleep current as low as 44 μ A with lithium battery charge management, making it ideal for IoT, wearable devices, health monitoring, education, and rapid prototyping.

Key Features

Note:

1. No pin headers included.
 2. This product does not include the external antenna. If you require an external antenna, please refer to the [FPC Antenna](#) & [Rod Antenna](#)
- **Flexible MCU Module:** Incorporates the ESP32-C3 32-bit RISC-V chip operating up to 160 MHz, mounted as a single-sided SMD module without through-hole headers, supported by Arduino/CircuitPython
 - **Outstanding RF performance:** Implement complete Wi-Fi functions and Bluetooth Low Energy 5.0, while supporting communication over 100m with a U.FL antenna
 - **Elaborate Power Design:** Provide 4 working modes as low as 44 μ A in deep sleep mode, while supporting lithium battery charge management
 - **Perfect for Production:** Breadboard-friendly & SMD design, no components on the back

Product Gallery

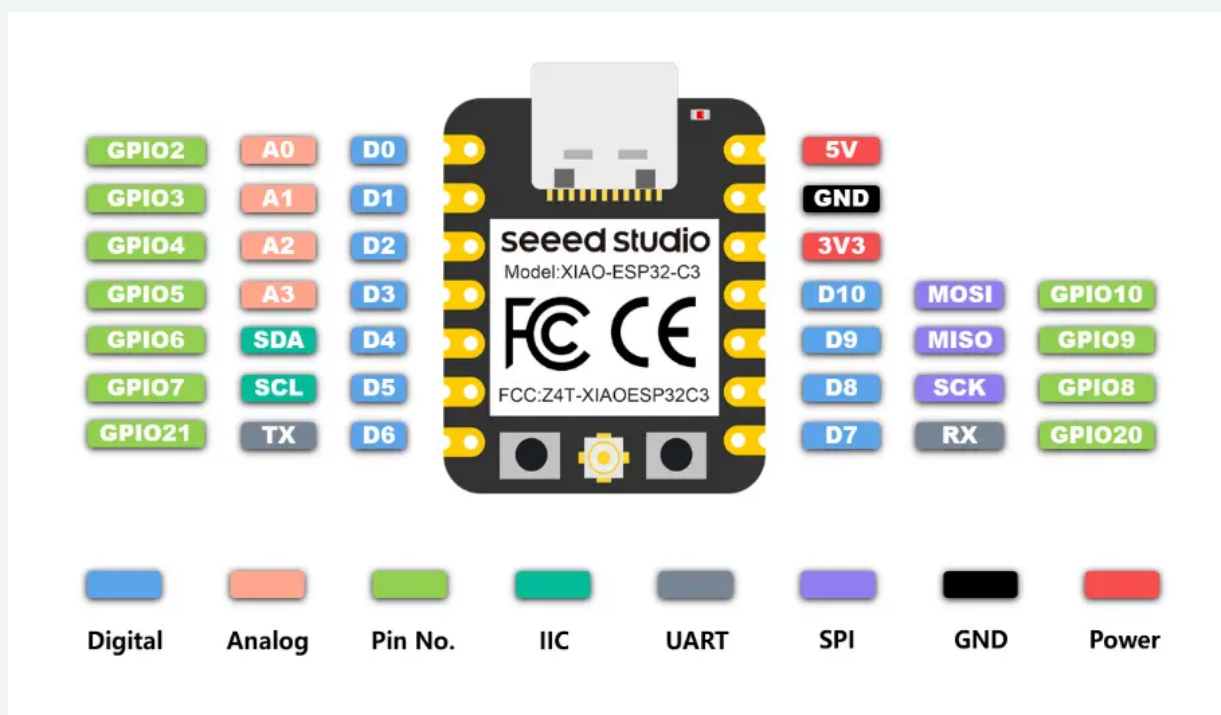
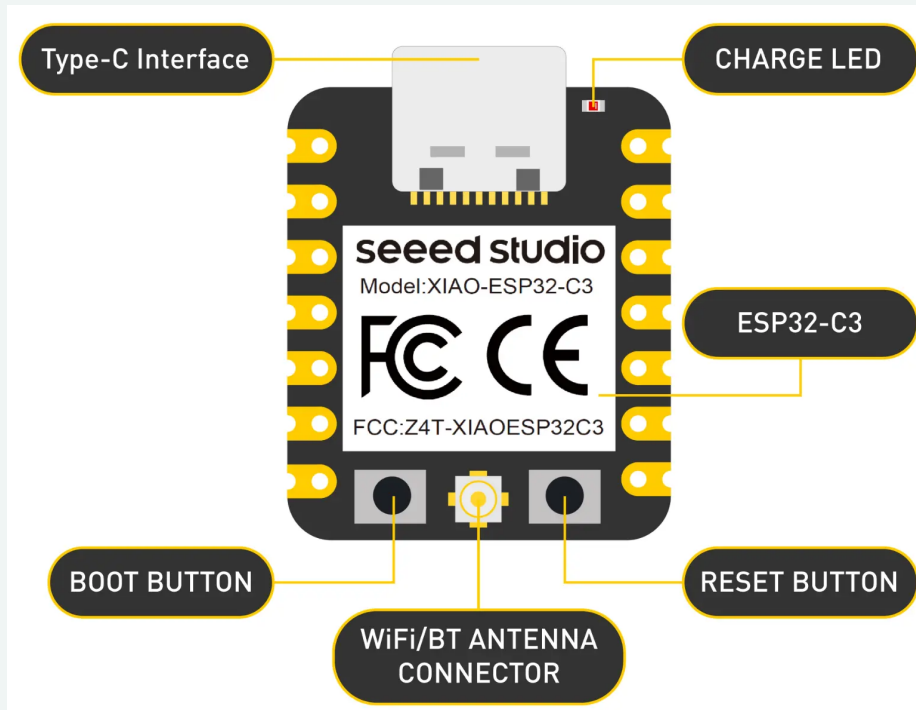


Specification

Parameter	Description
Processor	ESP32-C3 SoC
	RISC-V single-core 32-bit chip processor with a four-stage pipeline that operates at up to 160 MHz

Wireless	Complete 2.4GHz Wi-Fi subsystem
	Bluetooth Low Energy 5.0/ Bluetooth Mesh
On-chip Memory	400KB SRAM & 4MB Flash
Interface	1x UART 1x IIC 1x SPI 11x GPIO(PWM) 4x ADC
	1x Reset button 1x Boot button
Dimensions	21 x 17.8mm
Power(Typ.)	Max 3.3V Output Current: 500mA Test Condition: BAT Pin Input @ 3.8V Source Capability: 3A
	Charging current: 380mA(Fast) / 40mA(Trickle)
	Input voltage (VIN): 5V Input voltage (BAT): 3.7V
Deep Sleep Power Consumption	Deep Sleep Mode: 44 μ A
Wi-Fi Enabled Power Consumption	Active Mode: 75 mA
	Modem-sleep Mode: 25 mA
	Light-sleep Mode: 4 mA
BLE Enabled Power Consumption	Modem-sleep Mode: 27 mA
	Light-sleep Mode: 10 mA
Working Temperature	-40°C ~ 85°C

Hardware Overview



Applications

- **Internet of Things**
- **Wearable devices**
- **Health monitoring**
- **Education**
- **Low-Power(LP) networking**
- **Rapid prototyping**
- **Smart Private Garage:** This is a peer-to-peer WiFi communication application, since two XIAOs detect each other via Wifi, the garage door will open or keep opening, and vice versa.
- **Remote Forest Tracker:** Thanks to the tiny size of the XIAO series, it is suitable to make the wearable devices, such as a small pet trackers. This wearable device can be used as a simple GPS-Tracker which will lock its current location and publish other data via LoRa.

Part List

Seeed Studio XIAO ESP32C3(Tape & Reel)	x1
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Compliance & Logistics

HSCODE	8543709990
USHSCODE	8517180050
UPC	
EUHSCODE	8543709099
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/Seeed-Studio-XIAO-ESP32C3-Tape-Reel-p-6471.html>
- [3D Printing "Case" Studies](#)
- [Wiki-XIAO ESP32-C3 Resources](#)
- [Report of XIAO ESP32-C3 Low Power Consumption](#)
- [Seeed Studio XIAO Use Case](#)

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