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INDUSTRIAL PRODUCT DATASHEET

XIAO ESP32S3 & Wio-SX1262 Kit with 3D case for Meshtastic & LoRa

Compact, pre-flashed Meshtastic kit with ESP32-S3, LoRa, Wi-Fi, and BLE, ideal for mesh networking, LoRaWAN gateway, and IoT sensor applications.

SKU	UPDATED	PRICE
113110064	2026-06-09 03:07:38	$17.90(Excl. VAT)

Overview

The XIAO ESP32S3 & Wio-SX1262 Kit is a thumb-sized, dual-wireless board featuring a powerful ESP32-S3 MCU and long-range LoRa (862–930 MHz) plus Wi-Fi/BLE connectivity, pre-flashed with Meshtastic firmware for immediate mesh networking. Its versatile hardware also supports use as a single-channel LoRaWAN gateway or a LoRa/LoRaWAN sensor, with integrated battery charging and USB-C for flexible deployment.

Key Features

Note:

The SX1262 in the "Xiao nRF52840 & Wio-SX1262 Kit" **IS NOT COMPATIBLE** with the Xiao ESP32S3.

The product comes pre-flashed with LoRa single-channel gateway firmware, allowing you to start using it through the SenseCraft app in just three steps.If you're a Meshtastic user, please **Flash the Firmware** before using it.

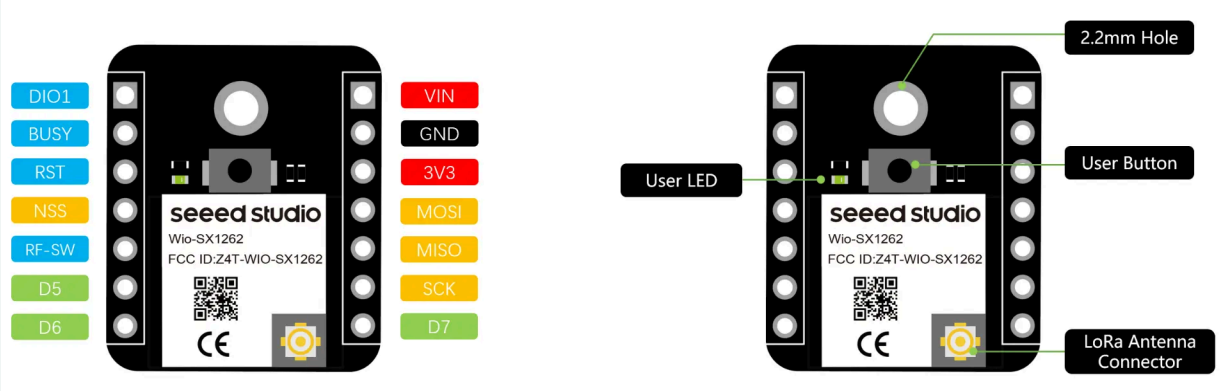
- **Ready for Meshtastic：** Pre-flashed with Meshtastic firmware, the kit works out of the box and can quickly join or create a Meshtastic mesh network.
- **Dual Wireless Connectivity：** Supports long-range LoRa communication (862–930 MHz) along with 2.4 GHz Wi-Fi and BLE 5.0. When used with a U.FL antenna, it can achieve 2–5 km LoRa communication and 100 m+ Wi-Fi/BLE range.
- **Thumb-Sized Compact Design：** With a compact size of just 21 × 18 mm and the classic XIAO form factor, it is ideal for space-constrained projects such as wearables and embedded devices.
- **Powerful ESP32-S3 MCU：** Powered by the ESP32-S3 dual-core Xtensa processor running up to 240 MHz. The board includes multiple expansion interfaces and supports Arduino and MicroPython development.
- **Integrated Power Management：** Equipped with a USB Type-C interface and built-in lithium battery charging management for flexible power options.
- **Flexible for Multiple Applications：** The same hardware can be used as a Meshtastic node or router, a single-channel LoRaWAN gateway, or a LoRa/LoRaWAN sensor platform.

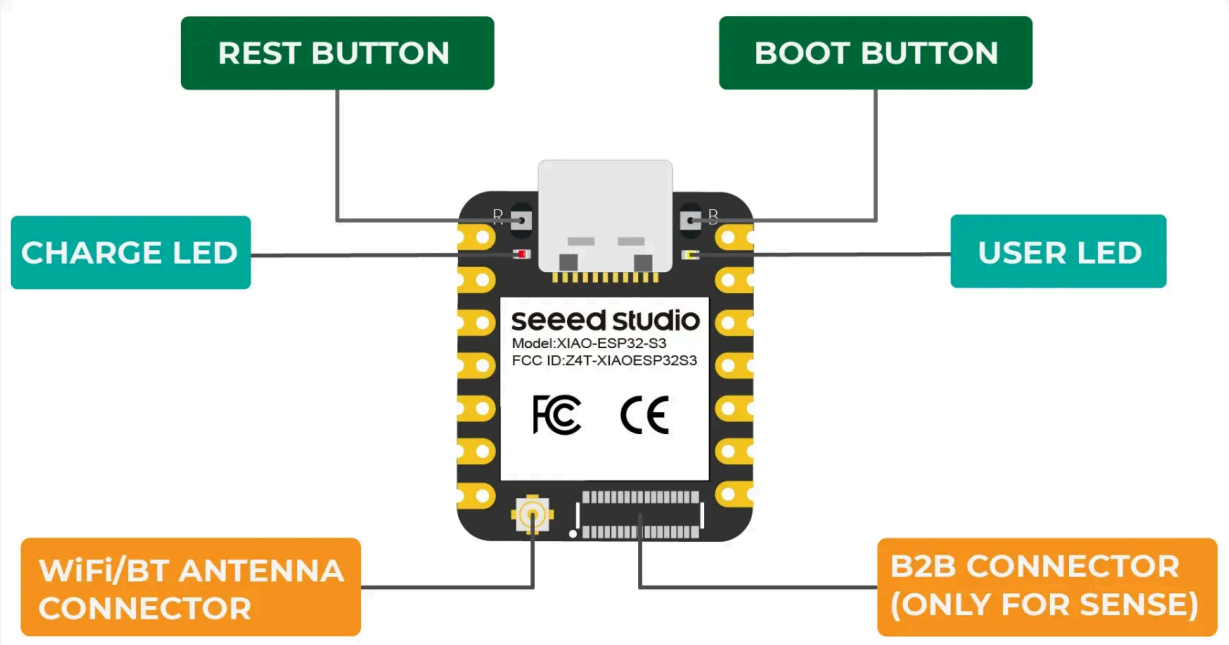
Product Gallery

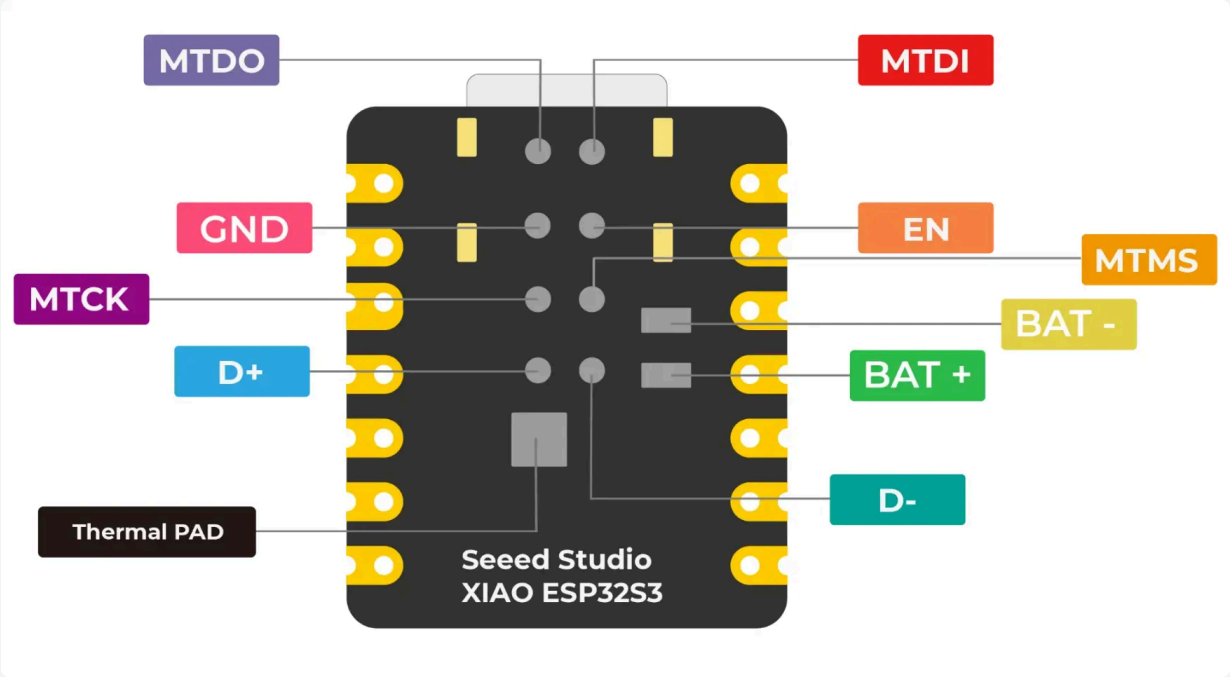
Specification

Specification	Parameter
Basic	
Processor	ESP32-S3R8, Xtensa LX7 dual-core, 32-bit processor running up to 240 MHz
Memory	On-chip 8M PSRAM & 8MB Flash
Wireless	Complete 2.4GHz Wi-Fi subsystem BLE: Bluetooth 5.0, Bluetooth mesh, LoRa: Based on Semtech SX1262, supports 862-930MHz
Interface	1x UART, 1x IIC, 1x IIS, 1x SPI, 11x GPIOs (PWM), 9x ADC, 1x User LED, 1x Charge LED 1x Reset button, 1x Boot button
Power	Input voltage (Type-C): 5V Input voltage (BAT): 4.2V
	Charging battery current: 100mA
Operating Temperature	-40 ~ 65°C
Antenna	
Type	SMA to I-PEX External Antenna
Max Gain	2 dBi
Dimension	13.0x195mm
Installation	Install on the outside of the enclosure
Distance	2~5km in open environment
Application	Suitable for most scenarios, designed for indoor and outdoor
Mechanical	
Dimension	22x23x57mm
Material	ABS
Weight	37.1g

Hardware Overview






MTDO
MTDI
GND
EN
MTMS
MTCK
BAT -
D+
BAT +
D-
Thermal PAD
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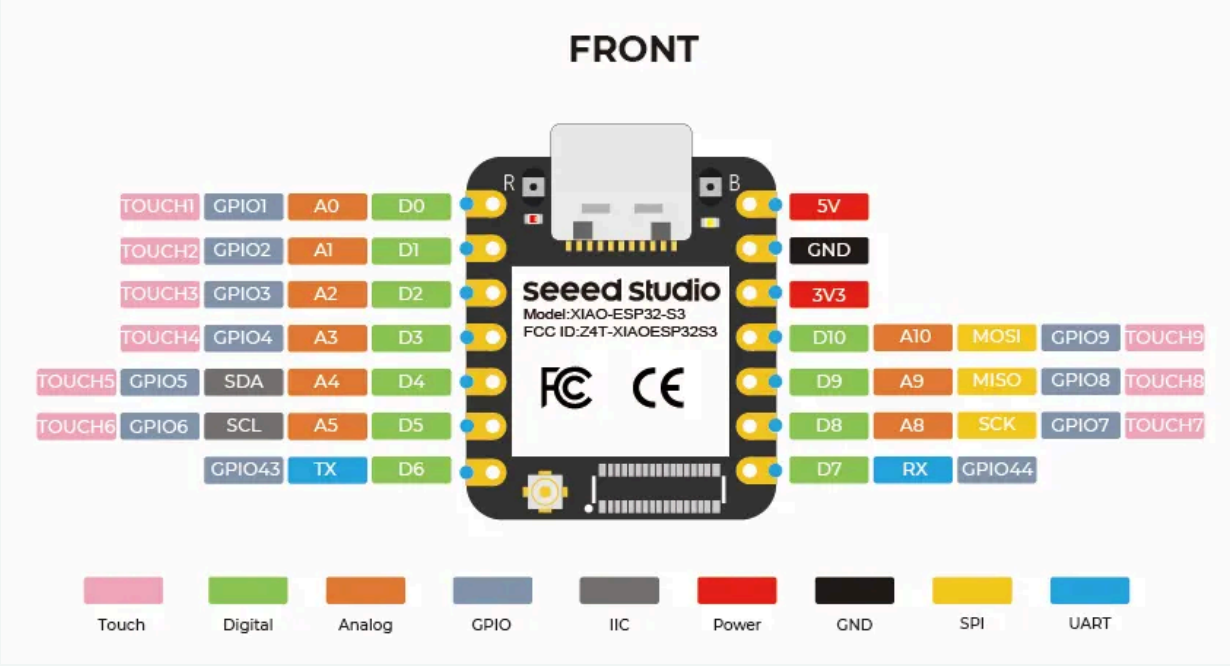
XIAO ESP32S3


FRONT
R
B
TOUCH1 GPIO1 A0 D0
TOUCH2 GPIO2 A1 D1
TOUCH3 GPIO3 A2 D2
TOUCH4 GPIO4 A3 D3
TOUCH5 GPIO5 SDA A4 D4
TOUCH6 GPIO6 SCL A5 D5
GPIO43 TX D6
5V
GND
3V3
D10 A10 MOSI GPIO9 TOUCH9
D9 A9 MISO GPIO8 TOUCH8
D8 A8 SCK GPIO7 TOUCH7
D7 RX GPIO44
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Model:XIAO-ESP32-S3
FCC ID:Z4T-XIAOESP32S3
Touch
Digital
Analog
GPIO
IIC
Power
GND
SPI
UART

Applications

- **LoRaWAN Single Channel Gateway:** The most cost-effective single-channel LoRaWAN gateway for connecting multiple LoRaWAN sensors and transmitting data to LoRaWAN Network Servers such as The Things Network (https://www.thethingsnetwork.org/) and Chirpstack (https://www.chirpstack.io/).
- **LoRa/LoRaWAN Sensor:** A mini LoRaWAN sensor, ideal for beginners exploring LoRa/LoRaWAN. It can be used with the XIAO extension board and Grove sensors for rapid prototyping.
- **Meshtastic Node&Router:** What is Meshtastic? Meshtastic is an open-source wireless communication project designed to create a mesh network system using low-power LoRa devices. This allows devices to communicate flexibly and cost-effectively without relying on traditional mobile networks or Wi-Fi. It's suitable for use in various extreme environments and outdoor activities. If you're interested in Meshtastic, you can explore it by following the firmware flashing tutorial (https://wiki.seeedstudio.com/wio_sx1262_xiao_esp32s3_for_meshtastic/).

Part List

Wio-SX1262 and XIAO ESP32S3 kit with 3D-Printed Enclosure	x 1
2dBi-868-915MHZ-SMA Antenna	x 1
20cm USB type C cable	x 1

Compliance & Logistics

HSCODE	8517629990
USHSCODE	8517620010
UPC	
EUHSCODE	8517180000
COO	CHINA

Resource Links

- https://www.seeedstudio.com/XIAO-ESP32S3-for-Meshtastic-LoRa-with-3D-Printed-Enclosure-p-6314.html
- Wio-SX1262 for XIAO 3D file
- Schematic Diagram Wio-SX1262 for XIAO
- Wio-SX1262 Module Datasheet
- Github One-Channel Hub project
- Casing 3D file

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com