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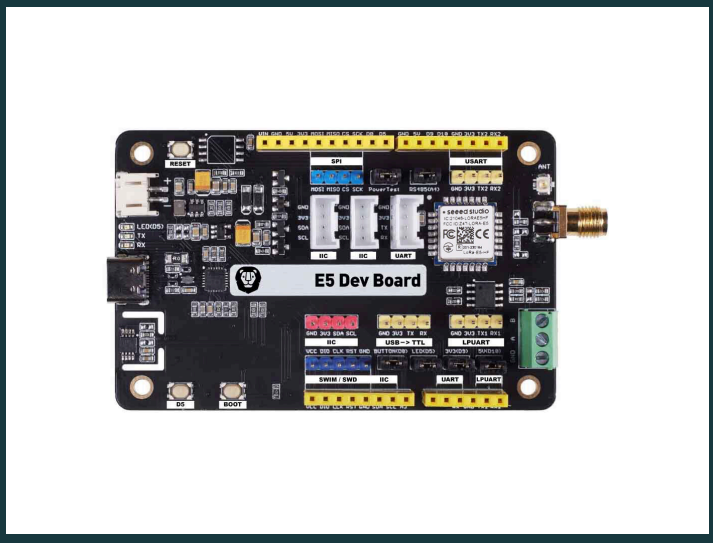
INDUSTRIAL PRODUCT DATASHEET

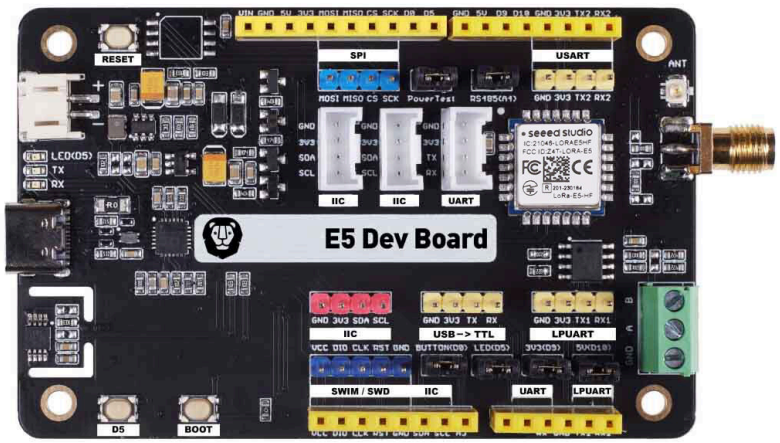
# Wio-E5 Dev Kit - STM32WLE5JC, ARM Cortex-M4 and SX126x embedded, supports LoRaWAN on EU868 & US915

The Wio-E5 Dev Kit is an ultra-compact development board based on the STM32WLE5JC LoRa module with ARM Cortex-M4 and embedded SX126x, supporting LoRaWAN on EU868 and US915 for low-power long-range IoT...

| SKU | UPDATED | PRICE |
| --- | --- | --- |
| 113990934 | 2026-09-21 10:00:50 | $26.90(Excl. VAT) |



# Overview




The Wio-E5 Dev Kit features the STM32WLE5JC LoRa module with ARM Cortex-M4 and embedded SX126x, delivering up to 22 dBm transmit power at 868/915 MHz, -136.5 dBm sensitivity for SF12 with 125 kHz BW, and a 158 dB link budget. It supports global Long Range frequency plans and LoRaWAN protocols via built-in AT command firmware, with fully lead-out GPIOs, RS-485, Grove interfaces, and on-board RESET/BOOT buttons for applications such as solar-powered outdoor air quality monitoring, low-power snow depth sensing, stream runoff monitoring, smart city indoor air pollutant detection, WiLoBIlno, and Loko GPS tracking.

# Key Features

**Note**

The **Wio-E5 LoRa module** on the board is now IC certified for Canada! New and old products will be shipped randomly.

LoRa-E5 Dev Kit is an easy-to-use compact development toolset for you to unlock the powerful performance of the **Wio-E5 STM32WLE5JC LoRa module**. It provides a broader range of access protocols and superabundant types of interfaces. Thus you are able to test and prototype the module rapidly with RS485, Grove interfaces, and rich GPIOs.

This ultra-compact development board has an extremely low power consumption and is capable of supporting both (G)FSK and Long Range. With its built-in AT command firmware, makes it easy for developers to build their prototypes or applications. It can easily support LoRaWAN® protocols and a variety of frequency plans, making it an ideal solution for Long Range sensor nodes and a range of wireless communication applications. Whether you need to set up Wireless Meter Reading, IoT Nodes, or a Sensor Network, the Wio-E5 is perfectly suited for low power wide area IoT scenarios.

With this module, you can connect to different LoRaWAN server platforms like TheThingsStack, Chirpstack, and others.

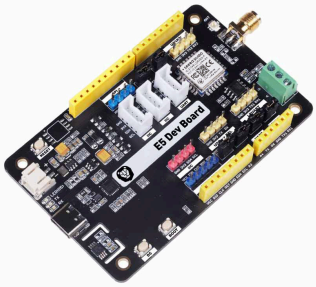
**Note**

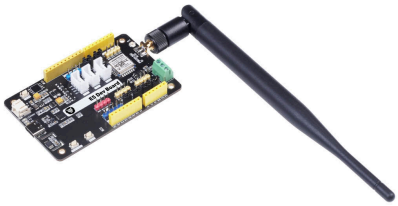
If you have a large quantity request or need any further information on Seeed IIoT products and services, please don't hesitate to contact us directly at **order@seeed.cc** or click **here**. We'll be happy to offer you our best discount price. We are excited to see you can scale up and expand your business with our products and services.

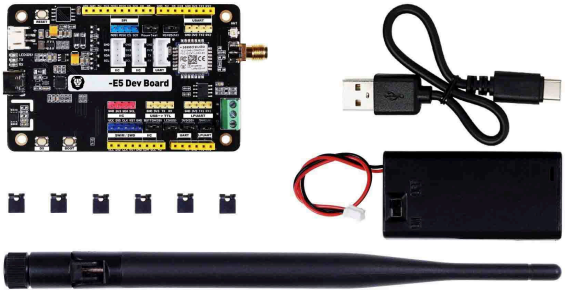
- **High Performance:** The transmit power up to 22dBm @868/915MHz; -136.5dBm sensitivity for SF12 with 125KHz BW.
- **Long Distance Use:**158dB link budget
- **Wireless Connectivity:** Embedded Long Range protocol, AT command, support global Long Range frequency plan
- **Use-friendly:** It features fully lead out GPIOs, rich interfaces including RS-485, Grove, and etc, as well as convenient RESET and BOOT buttons on board.
- **FCC, CE, IC and Telec Certified**

# Product Gallery



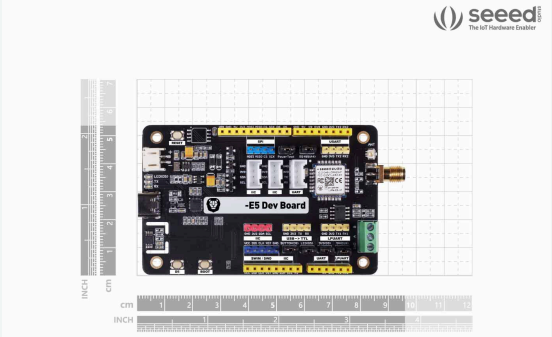









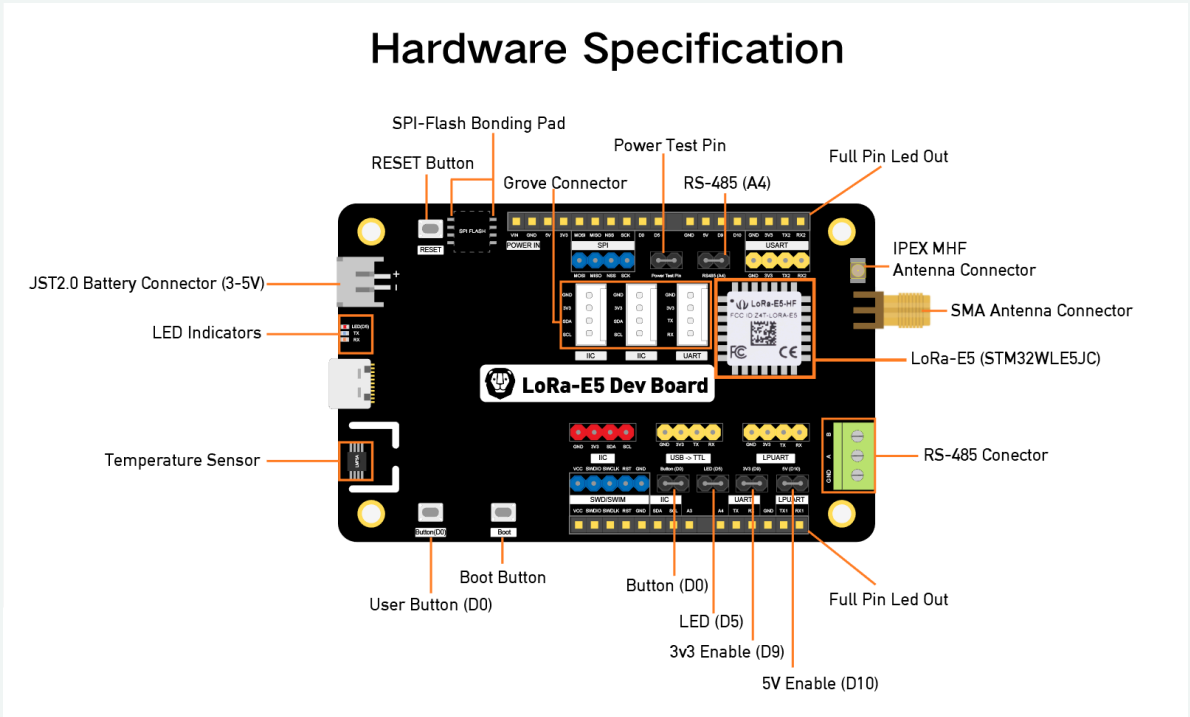



## Specification

| Parameters | Specifications |
|---|---|
| Size | LoRa-E5 Dev Board: 85.6*54mm  Package: 200*130*50mm |
| Voltage - supply | 3-5V (Battery) / 5V(USB Type C) |

| Parameters | Specifications |
|---|---|
| Voltage - output | EN 3V3 / 5V |
| Power - output | Up to +20.8dBm at 3.3V |
| Frequency | EU868 / US915 / AU915 / AS923 / KR920 / IN865 |
| Protocol | LoRaWAN |
| Sensitivity | -116.5dBm ~ -136dBm |
| interfaces | USB Type C / JST2.0 / Grove*3(IIC*2/UART*1) / RS485 / SMA-K / IPEX |
| modulation | LoRa, (G)FSK, (G)MSK, BPSK |
| working temperature | -40℃ ~ 85℃ |
| current | LoRa-E5 module sleep current as low as 2.1uA (WOR mode) |

# Hardware Overview



# Applications

- **Solar-Powered Outdoor LoRaWAN Air Quality Monitor**
- **Low-Power Snow Depth Sensor Monitoring for IoT Smart City Based On Wio-E5**
- **Stream Runoff Monitoring Sensors Using Wio-E5 for Temperature, Quality and Flow**
- **Smart City: Wio-E5-based Indoor Air Pollutant Detection Project**
- **Wio-E5 & ESP32 Powered WiLoBlIno**
- **Loko: The Tiniest GPS Tracker with Built-In Wio-E5 Module Can Track Wild Animals**

## Part List

| Part List: |
|---|
| LoRa-E5 Dev Board *1 |
| Antenna(EU868/US915) *1 |
| USB TypeC (20cm) *1 |
| 2*AA 3V Battery Holder *1 |

## Compliance & Logistics

| | |
|---|---|
| HSCODE | 8517709000 |
| USHSCODE | 8517180050 |
| UPC | |
| EUHSCODE | 8517180000 |
| COO | CHINA |

# Resource Links

- https://www.seeedstudio.com/LoRa-E5-Dev-Kit-p-4868.html
- Wio-E5 Development Board v1.0.brd
- Wio-E5 Development Board v1.0.pdf
- Wio-E5 Development Board v1.0.sch
- Wio-E5 datasheet and specifications
- Wio-E5 AT Command Specification
- STM32WLE5JC Datasheet
- Wio-E5-HF Certification CE-VOC-RED
- Wio-E5-HF FCC Certification -DSS
- Wio-E5-HF FCC Certification -DTS
- Wio-E5-HF TELEC Certification
- Wio-E5-HF IC Certification
- STM32Cube MCU Package for STM32WL series

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