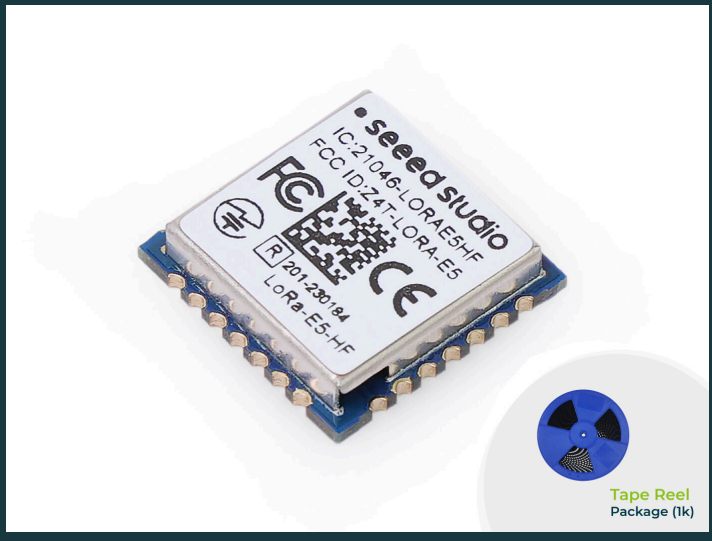
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INDUSTRIAL PRODUCT DATASHEET

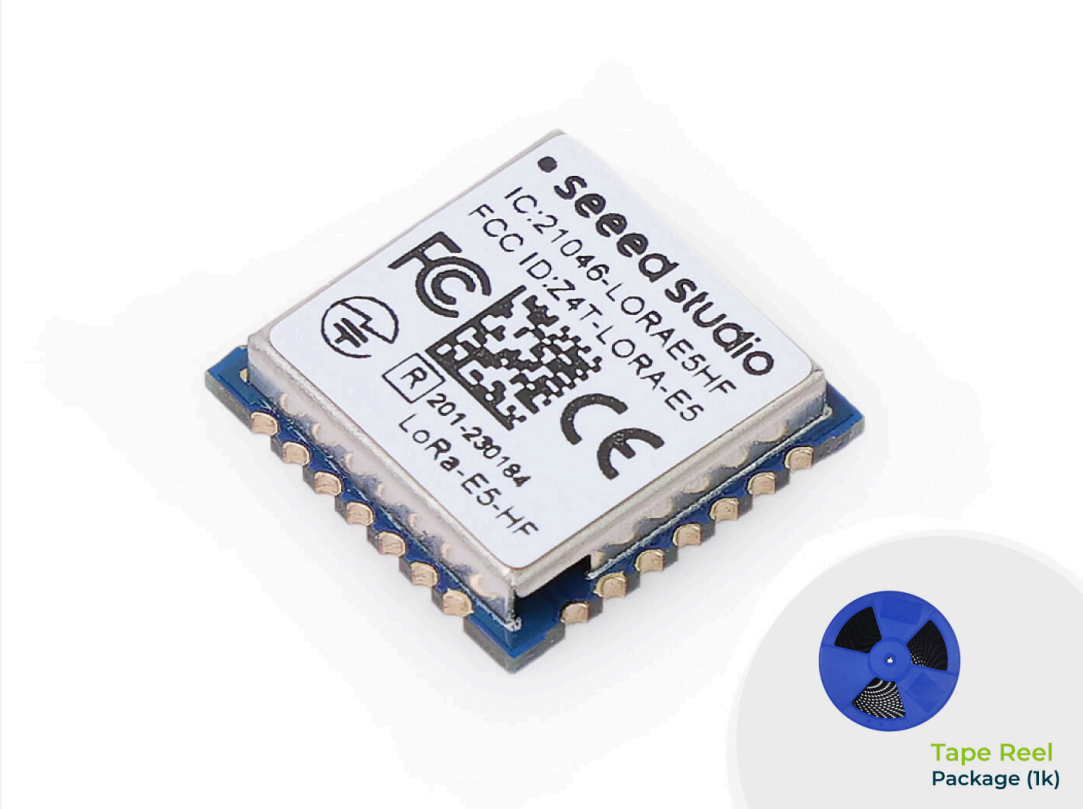
Wio-E5 Wireless Module (Tape Reel) - STM32WLE5JC, ARM Cortex-M4 and SX126x embedded, supports LoRaWAN on EU868 & US915

The Wio-E5 wireless LoRa module is embedded with the ST system-level package chip STM32WLE5JC, ARM Cortex M4 ultra-low power MCU, and Long Range SX126X.

SKU	UPDATED	PRICE
317990829	2026-11-13 09:59:42	$6.49(Excl. VAT)



Overview



The Wio-E5 wireless LoRa module is embedded with the ST system-level package chip STM32WLE5JC, ARM Cortex M4 ultra-low power MCU, and Long Range SX126X. It supports EU868, US915 and more, making it suitable for wireless sensor networks and other IoT devices that require battery power, low power consumption and long range.

Key Features

01 **Go from Module Selection to a Working Project**

02 **See Modules, Resources, and Real Projects →**

03 **High Performance**

The transmit power up to 22dBm @868/915MHz; -136.5dBm sensitivity for SF12 with 125KHz BW.

04 **Long Distance Use**

158dB link budget.

05 **Wireless Connectivity**

Embedded Long Range protocol, supports global Long Range frequency plan.

06 **Abundant peripherals**

Equipped with a variety of GPIO interfaces like UART, I2C, and ADC, this module offers great flexibility for developers looking to expand peripherals.

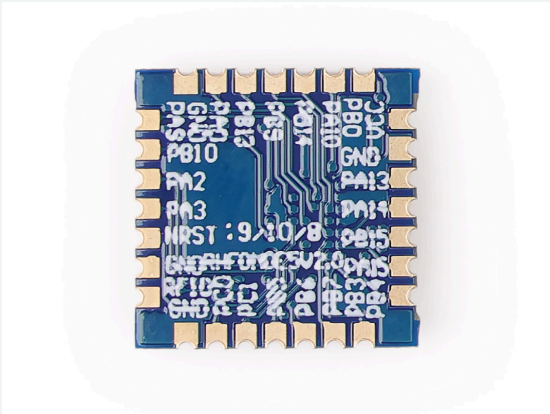
07 **Easy to Use**

Has built-in AT command firmware and supports custom product development using an SDK.

08 **FCC, CE, IC, Telec, WPC and RCM Certified**

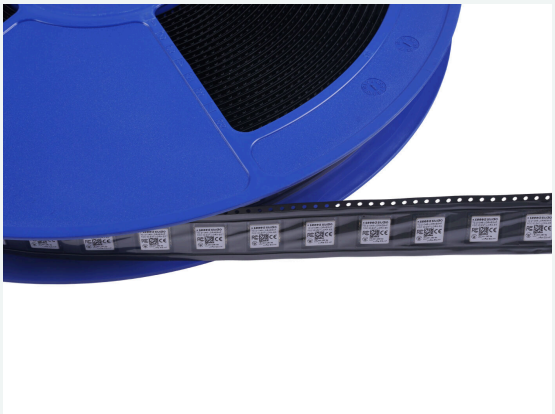
Product Gallery

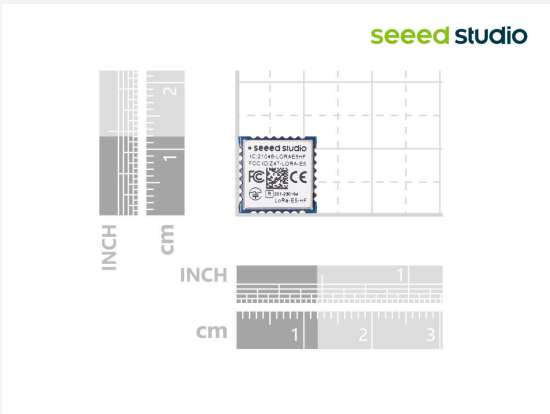












Hardware Overview



	 Wio-E5 (STM32WLE5JC)	 RFM95 and RFM95W
Core	32-bit Arm Cortex-M4 CPU, up to 48MHz	NONE
LoRaWAN stack	Built-in with AT Command Firmware; Program with STM32Cube MCU Package	NONE
Package	12*12mm, 28 pins SMD	16*16mm, 16 pins SMD
Interfaces	UART*3, I2C*1, ADC(12-bit)*1, SPI*1, GPIO*6	SPI*1, DIO*6
Sensitivity	-116.5dBm(SF5), -121.5dBm(SF7), -136dBm(SF12)	-111dBm ~ -148dBm
Modulation	LoRa, (G)FSK, (G)MSK and BPSK	LoRa, (G)FSK, (G)MSK and OOK
Certificate	FCC, CE, IC and TELEC	NONE
Power Supply	1.8V - 3.6V	1.8V - 3.7V
RF Output Power	up to +20.8 dBm at 3.3V	up to +20 dBm

	Wio-E5 	Wio-E5-LE 
High-Performance	The transmit power up to **22dBm**, ideal for long-range transmission. @868/915MHz	The transmit power is **14dBm**, for slightly shorter transmission distances than Wio-E5. @868/915MHz
Low Power Consumption	**111mA** in transmit mode @868MHz	**26mA** in transmit mode @868MHz, a reduction of **76%**.
Certification	FCC、CE、IC ID、TELEC、WPC、RCM	FCC、CE

Applications

- **Solar-Powered Outdoor LoRaWAN Air Quality Monitor**
- **Low-Power Snow Depth Sensor Monitoring for IoT Smart City Based On Wio-E5 Applied in Norway**
- **Developed Stream Runoff Monitoring Sensors Using Wio-E5 to Measure The 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 Any Wild Animals and Drones**

Resource Links

- https://www.seeedstudio.com/LoRa-E5-Wireless-Module-Tape-Reel-p-5302.html
- 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
- Wio-E5 kicad library
- Wio-E5 HF 3D File
- Wio-E5 Eagle Library
- STM32Cube MCU Package for STM32WL series

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