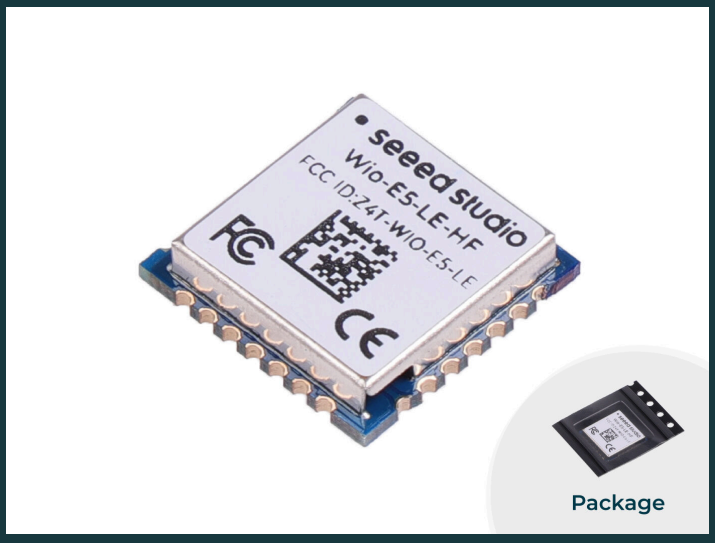
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INDUSTRIAL PRODUCT DATASHEET

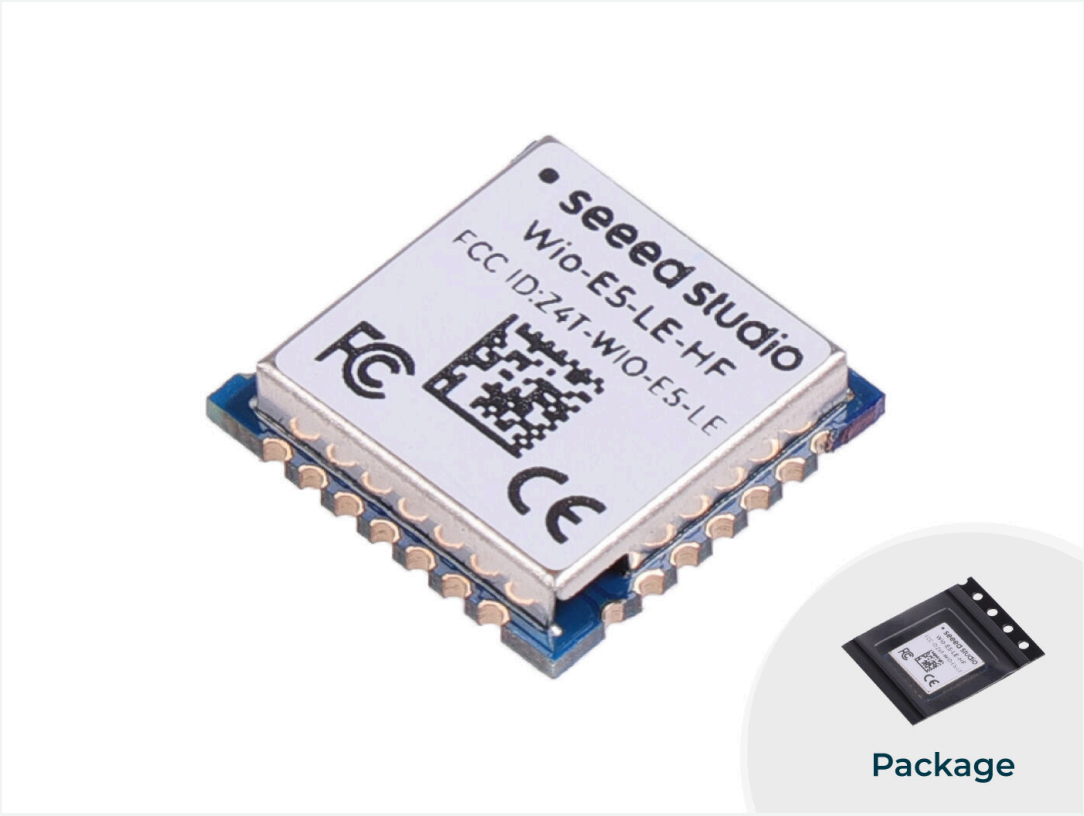
Wio-E5-LE Wireless Module (Bulk) - STM32WLE5JC, ARM Cortex-M4 and SX126x embedded, supports LoRaWAN on EU868 & US915

Compact LoRaWAN® wireless module with STM32WLE5JC, SX126x, EU868/US915 support, ultra-low power, long range, and FCC/CE certified.

SKU	UPDATED	PRICE
114993120	2026-09-21 09:59:46	$6.49(Excl. VAT)



Overview



The Wio-E5-LE Wireless Module (Bulk) integrates STM32WLE5JC with ARM Cortex-M4 and SX126x, providing (G)FSK and Long Range support plus LoRaWAN® Class A/B/C compatibility across EU868/US915/AU915/AS923/KR920/IN865. It features ultra-low power consumption (26mA TX), 14dBm transmit power, -136.5dBm sensitivity for SF12 with 125kHz BW, a 158dB link budget, abundant GPIOs (UART/I2C/ADC), and FCC/CE certification, with built-in AT command firmware and SDK support.

Key Features

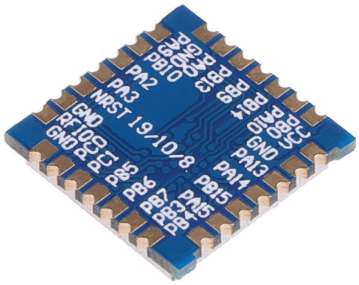
This compact unit offers versatile (G)FSK and Long Range support, compatibility with LoRaWAN® Class A/B/C protocols, and a broad frequency range including EU868/US915/AU915/AS923/KR920/IN865. Easily connect with LoRaWAN servers like TheThingsStack and Chirpstack.

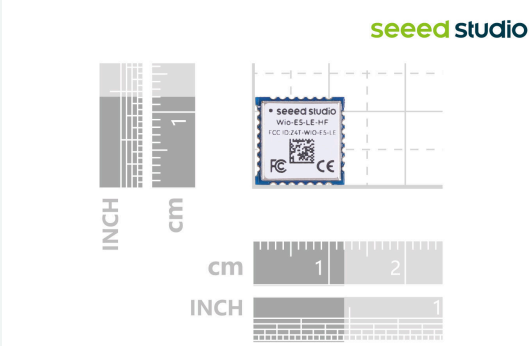
- **Ultra-Low Power Consumption:** In transmit mode, the operating current is only 26mA.
- **High Performance:** The transmit power is 14dBm @868/915MHz; -136.5dBm sensitivity for SF12 with 125KHz BW
- **Long-Distance Communication:** Benefit from a 158dB link budget to ensure a seamless connection over extended distances.
- **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.
- **Certified and Trusted:** Wio-E5-LE is FCC and CE-certified, guaranteeing compliance with regulations and standards.
- **Easy to Use:** Has built-in AT command firmware and supports custom product development using an SDK.

Product Gallery









Specification

Items	Parameter	Specifications	Unit
Structure	Size	12(W) X 12(L) X 2.5(H)	mm
	Package	28 pins, SMT	
Electrical Characteristics	power supply	3.3V type	V
	Sleep current	2.1uA (WDT on);	uA
	Operation current (Transmitter+MCU)	26mA @14dBm in 868MHz type	mA
		26mA @14dBm in 915MHz type	
	Operation current (Receiver+MCU)	6.7mA @BW125kHz, 868MHz type	mA
		6.7mA @BW125kHz, 915MHz type	
	Output power	14dBm max @868MHz	dBm
		14dBm max @915MHz	
	Sensitivity	@SF12, BW125kHz	dBm
		Fr(MHz) / min / type / max	
		868 / - / -135 / -137	
		915 / - / -135 / -137	
	Harmonics	<-36dBm below 1GHz	dBm
		<-40dBm above 1GHz	dBm
Interface	RFIO	RF port	
	UART	3 group of UART, include 6 pins	
	I2C	1 group of I2C, include 2 pins	
	ADC	1 ADC Input, include 1pins,12-bit 1Msps	
	NRST	Manual reset pin input	
	SPI	1 group of SPI, include 4 pins	
Working Temperature	-40℃ ~ 85℃		℃

Hardware Overview



	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 in Norway**
- **Stream Runoff Monitoring Sensors Using Wio-E5**
- **Smart City: Wio-E5-based Indoor Air Pollutant Detection Project**
- **Wio-E5 & ESP32 Powered WiLoBlIno**
- **Loko: Tiniest GPS Tracker with Built-In Wio-E5**

Compliance & Logistics



HSCODE	8517709000
USHSCODE	8517620090
UPC	
EUHSCODE	8517180000
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/Wio-E5-LE-Wireless-Module-Bulk-STM32WLE5JC-p-5751.html
- Wio-E5-LE Datasheet
- Wio-E5-LE AT Command Specification
- STM32WLE5JC Datasheet
- Wio-E5-LE FCC Certification -DTS
- Wio-E5-LE FCC Certification -DSS
- Wio-E5-LE Certification CE-VOC
- STM32Cube MCU Package for STM32WL series

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