

INDUSTRIAL PRODUCT DATASHEET

Wio-LR1121 Wireless Module with IPEX (Tape Reel), LR1121 embedded, supports sub-GHz, 2.4GHz ISM, and 2.1GHz satellite S-band

Wio-LR1121: Multi-band (sub-GHz/2.4GHz/2.1GHz S-band) LoRa/LoRaWAN module with high TX power, low power, and compact design.

SKU

113991415

UPDATED

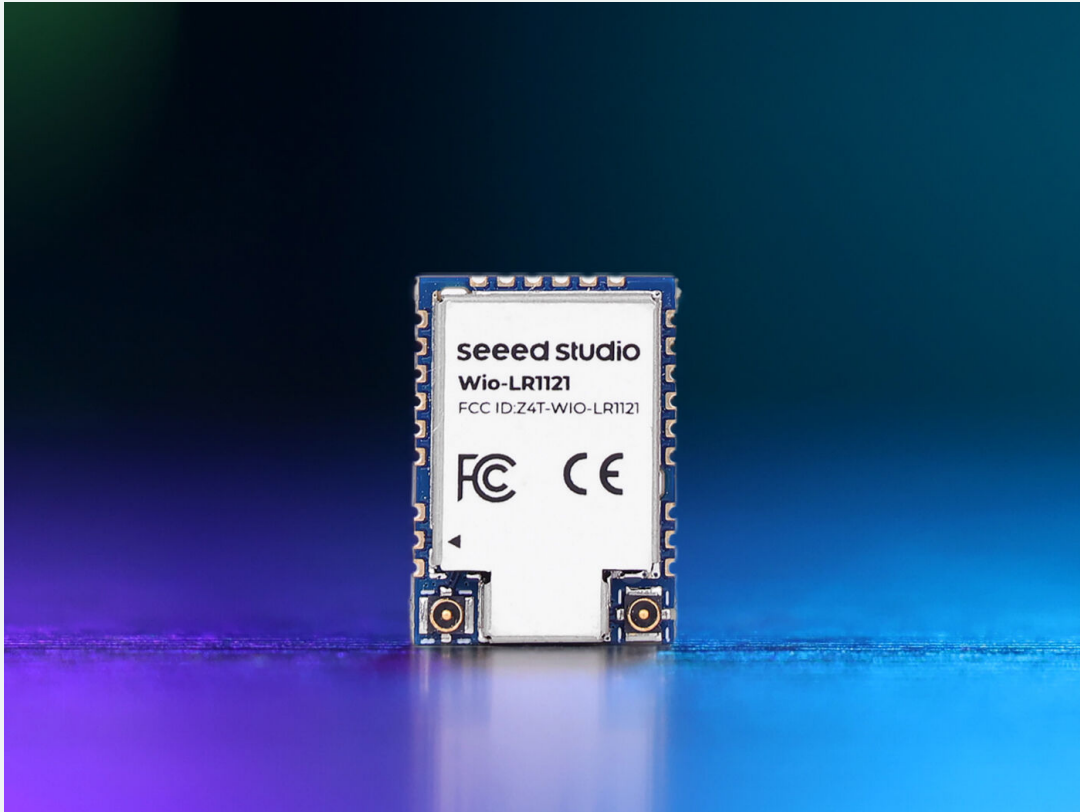
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PRICE

\$6.99(Excl. VAT)



Overview



The Wio-LR1121 Wireless Module integrates the LR1121 chip to provide multi-band connectivity covering sub-GHz, 2.4GHz ISM, and 2.1GHz satellite S-band, with high transmit power (up to 33dBm @868/930MHz) and low power consumption (35 μ A sleep). Its compact SMT form factor (17x12x2.6mm), SPI interface, IPEX4 connector, and FCC/CE certifications make it ideal for global LoRa/LoRaWAN applications.

Key Features

- **High Performance:** The transmit power up to 33 dBm @868/930MHz; 11.23dBm @ 2.4-2.5GHz
- **Wireless Connectivity:** SPI interface, supports Sub-GHz global LoRa&LoRaWAN frequency plan and 4GHz
- **Small Size:** 17*12*2.6mm @24Pins SMT
- **Low Power Consumption:** 35uA sleep current;Sub-GHz: 20.33dBm@124.5mA/3.3V; 2.4G:11.23dBm@30.72mA/3.3V
- **RF Interface:** With IPEX4 @1.5mm
- **FCC, CE, Certified**

The Wio-LR1121 and Wio-E5 are both perfect choices for designing LoRa devices. Their main differences lie in whether you have a host MCU.

If you need a single MCU to complete your design, then the **Wio-E5** is an excellent choice.

ODM & OEM

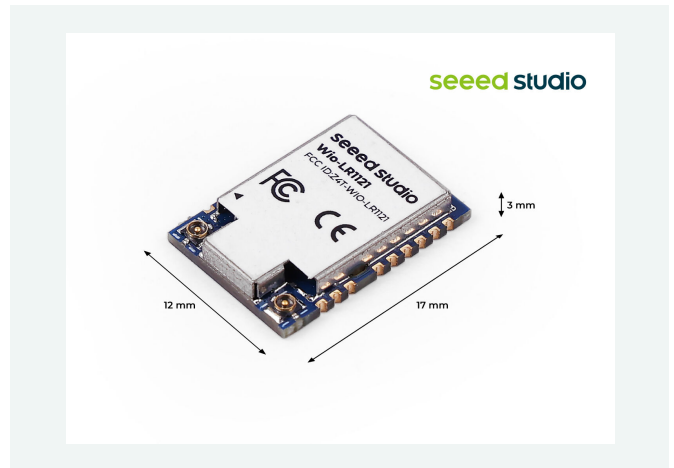
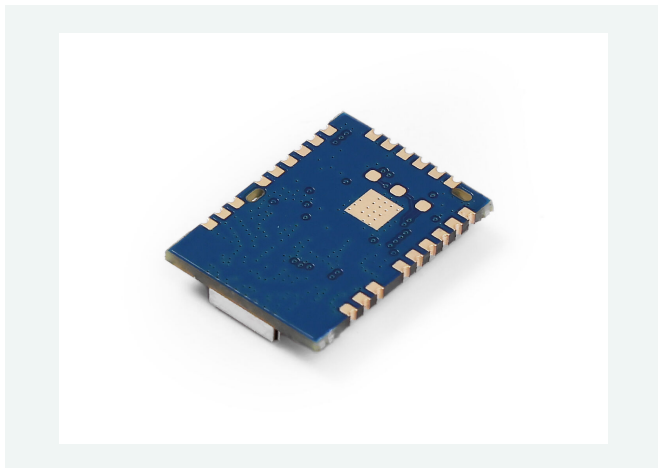
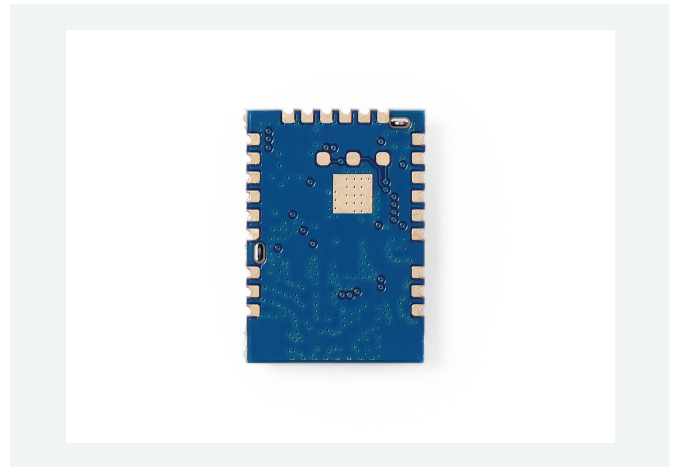
With over 10 years of ODM & OEM experience, our engineers and product experts are proficient in delivering customization and manufacturing services for hardware products. We are committed to assisting you at any moment and shortening your path from idea to product for emerging AIoT scenarios.

If you want to design in our Wio-E5/Wio-SX1262/Wio-LR1121 Module, we provide a one-stop ODM and OEM service for quick customization and scale-up. Please contact **iot@seeed.cc** if you have a large quantity customization need.

30% off Wio-E5/Wio-SX1262/Wio-LR1121/Wio-WM1110 Project Sponsorship with Seeed Fusion PCBA

If you have an interesting concept for any of Wio-E5/Wio-SX1262/Wio-LR1121/Wio-WM1110 and are willing to share it, we can help you make it a reality with Seeed Fusion's one-stop-shop capabilities. Through our Fusion PCBA Sponsorship program, you can not only enjoy the lowest unit prices for Wio-E5/Wio-SX1262/Wio-LR1121/Wio-WM1110 modules from our Fusion Open Parts Library, but also fabricate and scale your PCBA designs at low cost (30% off) with FREE Design for Manufacturing consulting services, streamlining your journey from prototype to production. For more information, please click [here](#).

Product Gallery

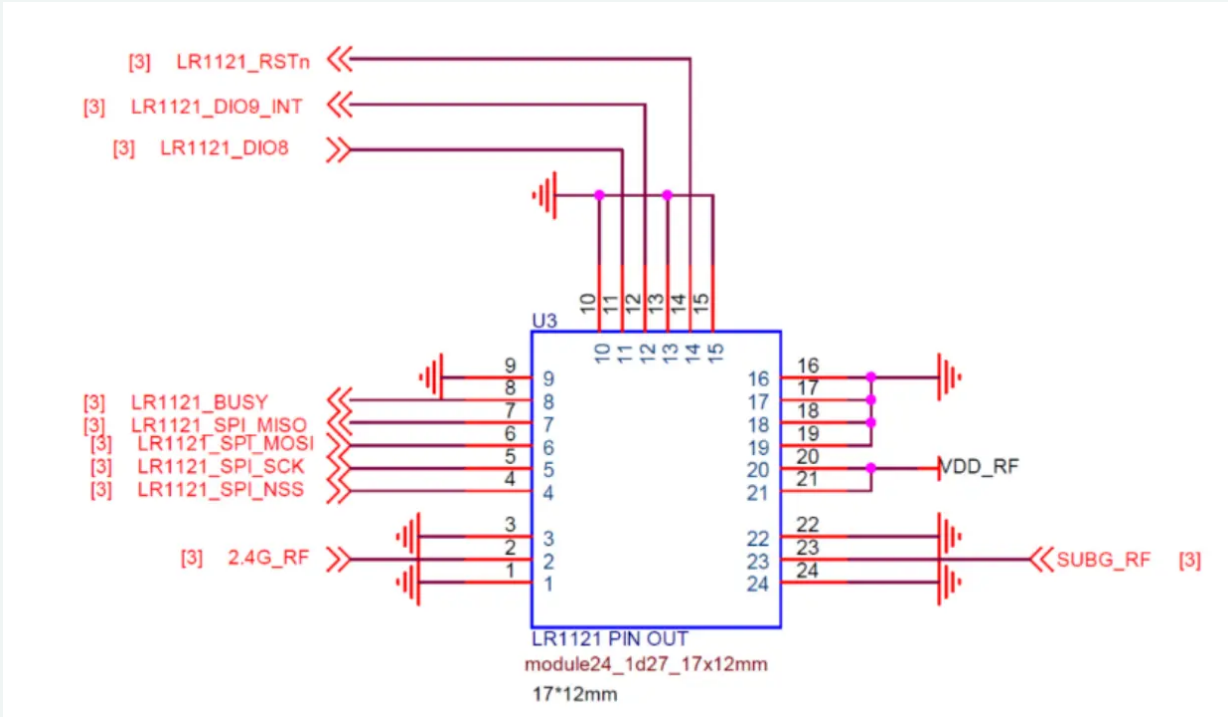


Specification

Main Chip	LR1121
Size	17*12*2.6 mm
Package	12 pins, SMT
Frequency	supports 863-928MHz; 2.4-2.5GHz
Power Supply	3.3V @typical
Sleep Current	1.35 μ A
LR1121 Power Distribution Mode	DC-DC Mode
TCXO Supply Mode	By LR1121 VTCXO Pin
TCXO Supply Voltage	1.6~3.3 V
Maximum Operation Current (Transmitter)	124.5mA @ LoRa® 915 TX 22dBm 31mA@ LoRa® 868 TX 14dBm 30.7mA@ LoRa® 2.4G TX 13dBm
Maximum Operation Current (Receiver)	7.8mA@ LoRa® SF12 125kHz sub-GHz 6.7mA@ LoRa® SF12 125kHz 2.4GHz/S-band
Output Power	20.4dBm max @ LoRa® 11dBm max @ 2.4G

Receiver Sensitivity	RxBoost ON : -126dBm @SubG,BW=125KHz, SF = 7 -140dBm @SubG, BW=125KHz, SF = 12 -118dBm @2.4G,BW=125KHz, SF = 7 -132.5dBm @2.4G ,BW=125KHz, SF = 7 RxBoost OFF : -124dBm @SubG,BW=125KHz, SF = 7 -138dBm @SubG, BW=125KHz, SF = 12
Antenna	IPEX4 @1.5mm
Working Temperature	-40°C ~ 85°C

Hardware Overview



Part List

Wio-LR1121(with IPEX antenna connector)	x1
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Compliance & Logistics



HSCODE	8517799000
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-LR1121-with-IPEX-antenna-connector-p-6479.html>
- [Wio-LR1121 Module Datasheet](#)
- [Semtech LR1121 Datasheet](#)
- [ALLEGRO Library](#)
- [Wio LR1121 Kicad Library](#)

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