



# RFM95CW 915MHz LoRa Module

Product ID: 5684



## Description

Sending data over long distances is like magic, and now you can be a magician with this easy-to-use module that you can solder onto your microcontroller board, to add wireless LoRa connectivity on the 900 MHz ISM band.

These packet radios are simpler than WiFi or BLE, you don't have to associate, pair, scan, or worry about connections. All you do is send data whenever you like, and any other modules tuned to that same frequency (and, with the same encryption key) will receive. The receiver can then send a reply back. The modules do packetization, error correction and can also auto-retransmit so it's not like you have worry about everything but less power is wasted on maintaining a link or pairing.

These modules are great for use with Arduinos or other microcontrollers, say if you want a sensor node network or transmit data over a campus or town. The tradeoff is you need two or more radios, with matching frequencies. WiFi and BT, on the other hand, are commonly included in computers and phones.

This is a 900 MHz LoRa radio, which can be used for either 868MHz or 915MHz transmission/reception – the exact radio frequency is determined when you load the software since it can be tuned around dynamically. These are +20dBm LoRa packet radios that have a special radio modulation that is not compatible with the RFM69s but can go much much farther. They can easily go 2 Km line of sight using simple wire antennas, or up to 20Km with directional antennas and settings tweakings

Note: This product is just the radio module. Unlike our pre-assembled board, this is *just* the radio module itself. No power supply, level shifter, 0.1" breadboard-friendly header,

antenna, etc. It will need to be soldered directly to a PCB and can be done as an automated or hand-soldered process. It's the same module we use in all our LoRa radio boards, bonnets, wings, etc.!

- Packet radio with ready-to-go Arduino libraries
- Uses the license-free ISM band: "European ISM" @ 868MHz or "American ISM" @ 915MHz
- SX1276 LoRa® based module with SPI interface
- +5 to +20 dBm up to 100 mW Power Output Capability (power output selectable in software)
- ~100mA peak during +20dBm transmit, ~30mA during active radio listening.
- Range of approx. 2Km, depending on obstructions, frequency, antenna and power output

All radios are sold individually and can only talk to radios of the same part number. E.g. RFM69 900 MHz can only talk to RFM69 900 MHz, LoRa 433 MHz can only talk to LoRa 433, etc.

YouTube link:

[https://www.youtube.com/watch?t=513&v=djkzn9eSXe8&embeds\\_euri=https%3A%2F%2Fwww.adafruit.com%2F&feature=emb\\_imp\\_woyt](https://www.youtube.com/watch?t=513&v=djkzn9eSXe8&embeds_euri=https%3A%2F%2Fwww.adafruit.com%2F&feature=emb_imp_woyt)

## Technical Details

Product Dimensions: 16.0mm x 16.0mm x 2.2mm / 0.6" x 0.6" x 0.1"

- [Radio Test Report](#)
- [LVD Test Report](#)
- [EU-Type Examination Report](#)
- [NTEK249 Evaluation](#)
- [EN62479 Test Report](#)
- [EMC Test Report](#)
- [Antenna Installation Photo](#)
- [Antenna Installation Photo](#)
- [Test Setup](#)
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- [Specification Sheet](#)



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