SparkX Qwiic RF - LoRa®-enabled 915MHz

SPX-14788 ROHS

Qwiic RF is a packet radio system that's designed for sending short packets of sensor data from one Qwiic bus to another. Messages sent by one Qwiic RF are cached by the receiving Qwiic RF until they can be retrieved over the Qwiic bus. We've even written an Arduino library to do most of the work for you!

The RF Backbone of the Qwiic RF is the HopeRF RFM95W LoRa®-enabled radio module. This module is extremely long-range for its power class. Using only the attached patch antenna, we were able to send and receive packets between two of these boards **up to 1.5 miles (about 2.5 km) line-of-sight** in ideal conditions.

If that's not enough for you, longer distances should be achievable using high-gain directional antennas. A U.fl connector on the board can be used to connect an external antenna (after closing the appropriate jumper) and you can even snap off the patch antenna to save space if you don't need it! Accommodations are also made at the antenna feed for additional 0603-sized components to be added either in line with the signal or shunting the signal, in case you need to tune the antenna to account for hand effects or other coupling effects.

The Qwiic RF also implements a primitive pairing function for convenience. Paired radios agree on a random shared network ID and exchange randomly generated addresses. Once two radios are paired, messages can be sent between them by calling the .send() function without an address argument.

The mounting holes in the Qwiic RF have been positioned to make mounting to an Uno shaped board easy.

Experimental Product: SparkX products are rapidly produced to bring you the most cutting edge technology as it becomes available. These products are tested but come with no guarantees. Live technical support is not available for SparkX products. Head on over to our forum for support or to ask a question.

FEATURES

- LoRa®-enabled
- Qwiic Compatible
- Range of up to 1.5 miles with integrated antenna
- U.fl connector for external antenna
- Pairing functionality

DOCUMENTS

- Getting Started Wiki
- Arduino Library
- Github Repo
- Schematic
- Eagle Files