



OrangeRX OpenLRSng 915MHz with Bluetooth

The all new Orange OpenLRSng TX and RX Module set is an open source transmitter module and receiver that can be programmed to use your choice of protocol and any channel in the 915MHz range. It is a fully user-customizable RF transmitter system. It can even be programmed to utilize extra features such as telemetry, operative remote control via sticks (cPPM ready) and mission control

The set is designed for using with APM flight control mostly. The tx module is equipped with Bluetooth module so user can connect it to the tablet, smartphone or PC via Bluetooth. All telemetry data, mission planning and flight modes will be available in APM Mission Planner on PC or Droid Planner or similar app on Android device without any cable attached to the remote control.

The Orange OpenLRSng is very versatile system perfect for your custom projects. It utilizes a 1000mW RFM22B RF unit and Atmega328 processor with Arduino Bootloader allowing you to upload pre-written codes or write your own to suit your transmitter needs.

The default code utilizes 3 channel frequency hopping. If you would like to use a different protocol, you can write your own hopping codes or simply download one of the many pre-written OpenLRS code sets already available.

- **915hz frequency band**
- **Receiver sensitivity to -117 dBm**
- **Transmit power up to 20dBm (500mW)**
- **Transparent serial link**
- **Air data rates up to 250kbps**

- Range of approx 1 mile with supplied antennas
- Demonstrated range of several kilometers with a small omni antenna
- Can be used with a bi-directional amplifier for even more range
- MAVLink protocol framing and status reporting
- Frequency hopping spread spectrum (FHSS)
- Adaptive time division multiplexing (TDM)
- Support for LBT and AFA
- Configurable duty cycle
- Built in error correcting code (can correct up to 25% data bit errors)
- Open source firmware
- AT commands for radio configuration
- RT commands for remote radio configuration
- Adaptive flow control when used with APM
- Based on the HopeRF HM-TRP radio module, featuring an SiLabs Si1000 RF microcontroller.

Features:

Tx module:

- 3.3v FTDI support for easy programming (DO NOT use 5V serial / AVRISP adapters)
- Bluetooth for telemetry, mission control and mode change
- 16Mhz Atmega328 processor with Arduino Pro Mini compatible bootloader.
- U.F.L connector between PCB and antenna
- Buzzer for audible information
- RFM22B transceiver unit with configurable 0-1000mW output, frequency hopping capability and hundreds of features

Receiver:

- 16Mhz Atmega328 processor with Arduino Pro Mini compatible bootloader.
- SMA female antenna connector
- cPPM output for direct control
- RSSI input for measure the signal strength
- UART port for telemetry and mission control
- RFM22B transceiver unit with configurable 0-1000mW output,

Specs:

Compatibility: 5-pin JR compatible module-based transmitters

Frequency: 915MHz

Voltage input: 6.8~12VDC

IC: Atmega328P

Power: Tx module – 500mW, Receiver -1000mW

Range: Full range system

Includes:

Orange OpenLRSng Tx Module (JR/Turnigy compatible)

Orange OpenLRSng receiver
2 Antennas 915MHz
2 cables to connect receiver to APM directly

LRS Rx Connectors pinout

