



Preliminary Data Sheet

Micro Chirper Model MChirp-915 Reconfigurable Data Link Radio

FEATURES

- Very low cost
- Wide programmable frequency range – 30 MHz to 5 GHz
- Utilizes integrated COTS spread spectrum hopping transceiver
- Built-in 1024 node mesh networking
- Point-point, point-multipoint, peer-peer, and store forward
- Small and light weight – less than 1 cubic inch, 2 oz.
- Low power consumption – excellent power management, less than 750 mw for transmit, 400 mw in receive with 900 MHz transceiver
- Capable of up to 100Kb/s with 900 MHz transceiver, 500 Kb/s with 2.4 GHz transceiver
- Extremely flexible programming – through PDA, smart phone or laptop with Micro-USB, with tailorable serial port, or with miniature switches
- Easily adaptable to work with a variety of COTS products

DESCRIPTION

The Micro Chirper provides a low cost wireless data link solution to translate up or down in frequency according to user settable commands.

The transmitter may be implemented with the user-specified power output and frequency band(s), using low-risk Commercial Off The Shelf (COTS) components. Frequency coverage is 30-5000MHz, with a small guard band around the IF frequency of 900 or 2450 MHz.

The translator frequency may be controlled one of three ways, all using the onboard PIC microcontroller:

1. Miniature switches or jumpers to select preset frequencies
2. Micro-USB connector that allows a smart phone, PDA or PC to program a channel
3. Tailorable serial port that allows ANY device to program the frequency, including the Wi-Fi device or its controller

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For further information, contact: Wireless Innovations Inc

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The standard translator requires no T/R switching. Should an additional LNA or power amplifier be required, the transmit signal from the transceiver node can be used to drive a COTS T/R switch.

The microcontroller operates in conjunction with a very low power, miniature, SPI-bus real time clock that may be used for other sensor applications. This may be used to schedule event, frequency changes, etc. The microcontroller can control the sleep mode of the transceiver, sensors, translator, and microcontroller itself.

SPECIFICATIONS

PARAMETERS

Table with 2 columns: Parameter Name and Value. Parameters include Frequency Coverage, Transmission Bandwidth, Translator Tune Time, Waveform, and Transmit Power.

CONTROL CHARACTERISTICS

- Remote control/programming
PDA or PC through Micro-USB connector
Tailorable serial port that allows any device to program the frequency, including the serial output port of the transceiver
Miniature switches or jumpers to select one of four preset frequencies

PHYSICAL/ENVIRONMENTAL CHARACTERISTICS

Table with 2 columns: Parameter Name and Value. Parameters include Power input, Power consumption, Low Power Sleep Mode, Weight, Size, Operating temperature range, and Connectors (RF in/out, Control, Power).

OPTIONS

- Option 1 BW up to 500 Kb/s (uses 2.4 GHz data link)
Option 2 Extended range wireless data link network
Option 3 + 8dBm output power

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