The M-2910 BlueJay™ Wireless Data Transceiver is a self-contained short-range wireless communication device (SRD) that is used for transferring serial communication data between Intelligent Electrical Device's (IED's) and computers hosting control software in an industrial environment. The M-2910 is based on an Intersil direct sequence spread spectrum chip set that operates in the 2.4 GHz ISM band. The M-2910 design meets the category for low power devices (LPDs) standard requirement for license-free operation.

Interface

The M-2910 is equipped with a dual-row, ten-pin (2 x 5) header connector utilizing a Serial Peripheral Interface (SPI) link capable of up to 500 Kbps communication speed.

Data Transmission:

- Error Detection – 16 bit CRC (10^{-5} BER at –70dBm)
- Maximum throughput – 1 Mbps RF, 2400 to 115.2 Kbps interface baud rate

Communication

The M-2910 conditions the data and transmits it over a half-duplex direct sequence spread spectrum radio operating in the 2.4 GHz ISM band. The over-the-air data rate is 1 Mbps.

Transmit:

- Frequency Range – 2400 MHz to 2483.5 MHz
- Output Power – 30 mW
- Modulation – DBPSK
- Occupied Bandwidth – 20 MHz
- Spurious Emissions – 50 mV/meter
- Harmonic Emissions – 500 uV/meter
- Spreading Method – Direct Sequence 11 bit code
- Center Band – Carrier 2.450 GHz

Receive:

- Sensitivity – -93 dBm
- Selectivity – 25 MHz

The M-2910 BlueJay Wireless Data Transceiver must be used with a cable extension when the M-2910 is mounted inside a metal enclosure. Antennas must be oriented in the same plane and located in view of the corresponding BlueJay transceiver. Beckwith Electric cable extensions are available in 18", 6' and 13' lengths (See Accessories).

■ **NOTE**: For maximum range, all antennae must be oriented in the same plane.

Accessories

18" Cable Extension – Beckwith Electric Part No. 420-00395

6' Cable Extension – Beckwith Electric Part No. 420-00391

13' Cable Extension – Beckwith Electric Part No. 420-00392

Power

The M-2910 is powered by 5 V dc, supplied by the SPI interface connector. Maximum power draw is 1.75 W (350 mA).

Power Requirements:

- Operating Voltage – +5 V dc ± 10%
- Transmit Current – 350 mA (1.75 W)
- Receive Current – 350 mA (1.75 W)
- Idle Current – 200 mA (1.00 W)
- Sleep Current – 30 mA (0.15 W)

Configuration

The M-2910 is configurable using parameters set into the M-2600A/M-2667A, using SlimCom®: The following parameters can be set:

- Wireless Source (unit) Address (1–250)
- Wireless Destination (Transmit) Address (1–255)
- Wireless Multicast (Receive) Address (251–254)
- Peer-to-Peer Unit Addresses (1–250)

Configuring the M-2910

To configure the M-2910, the unit must be installed on an M-2600A/M-2667A control, and the control connected to a PC running SlimCom, using a RS-232 cable. The unit may be configured through the SlimCom menus