

Remote Data Radio - HR900

H Series



For professional license-free data radio communications in SCADA and Telemetry systems, the solution is Trio DataCom's HR900.

The compact HR900 is an industrial strength frequency hopping spread spectrum data radio designed for use in the 915MHz license exempt frequency bands for applications such as water, electricity, oil and gas. Rugged construction and full -40C to +60C operational capability make it suitable for the harshest environments.

The HR900 is a highly versatile product that can be used in a variety of configurations including Point to Point Systems and also for store and forward repeater operation to extend the range of customer networks.

With a 1 Watt RF output power and high performance receiver, the HR900 is capable of providing long range communications between industrial serial communications devices.

Features

Radio

- License Free communication in the 915MHz ISM band
- Compatible with most industry standard data protocols, e.g., MODBUS, DNP-3, IEC 870-5-101 etc.
- 1 Watt transmitter output power
- 115kbps over the air data speed
- Industrial temperature specifications
- Extremely robust, long range frequency hopping data radio
- Supports Point to Point, Point to Multipoint and Repeater.
- Repeater units can also support interface to local application
- No restriction on the number of repeaters in the system.
- Internal CRC and user-selectable forward error correction
- Excellent BER performance
- Industry standard TNC antenna connector
- Compact footprint
- Rugged die-cast alloy chassis

Data Modem

- User configurable 1200-115,000 bps asynch RS-232/RS485 port
- Fully transparent 3 wire user interface
- Intelligent transmitter control

Configuration and Diagnostics

- User friendly Windows GUI for configuration of all parameters
- Local and remote diagnostics access

Innovative and sophisticated
digital communications
designs products and solutions



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Radio

Frequency Range: 902.4 to 927.6MHz

Spreading Code: Frequency Hopping

Frequency Accuracy: ± 2 ppm
(-30 to 60°C) (-22 to 140°F) ambient

Hopping Patterns: 62 pseudo-random,
user selectable

Bandwidth / Data Rate: 1,200 to 115,200
bps, uncompressed half duplex

Communications Range: 30 km **

System Gain: 138dB

Operational Modes: Half duplex

Configuration: All configuration via
Windows based software

Compliances:
FCC PART 15.247
IC RSS 139 (RSS210)

Transmitter

Tx Power: 0.001 to 1W (0 to +30 dBm)
Software adjustable

Modulation: CPFSK

Tx Spurious: < -60 dBc

Receiver

Adjacent Channel Rejection: >60dB

In Band Rejection: >70dB

Out of Band Rejection: >80dB

**Requires suitable gain antenna and line of site path

Diagnostics

Offline local and remote diagnostics
facilities

Connections

User Data Port: DB9 female port wired
as DCE (modem)

Antenna: TNC

Power: 2 pin screw locking (mating
connector supplied)

LED Display: Multimode LED Indicators
for Pwr, Tx, Rx/Sync, RSSI level

Modem

Data Serial Port: RS232/RS485
DCE 1200 to 115,200bps asynchronous

Diagnostics Connection: RS232,
1200 to 115,200 bps asynchronous

Flow Control: Selectable hardware /
software / 3 wire interface. (Tx, Rx & Gnd)

RF Channel Data Rate:
115,200bps

Error Detection:
CRC-16 with auto re-transmit

Sensitivity:
-108 dBm

General

Power Supply: 13.8 Vdc nominal
(10-30 Vdc)

Transmit Current: 750mA nom. @ 1 W

Receive Current: <156 mA nominal

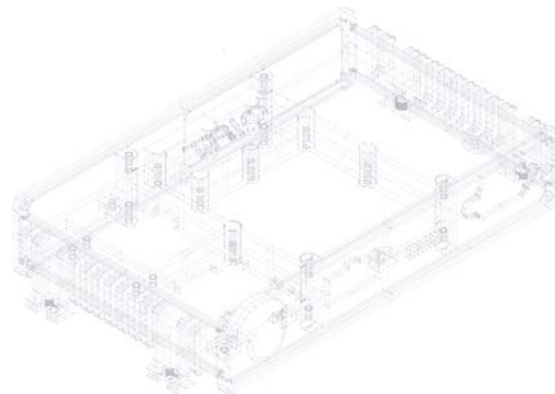
Dimensions: Solid Diecast Alloy Housing
154 x 102 x 29 mm
(6.1 x 4.1 x 1.2 inches)

Mounting: Integral Solid Diecast feet

Weight: 0.395 kg (0.87 lbs)

Options

HR-PROG™ Configuration and Diagnostics
Windows GUI Software



Local regulatory conditions may determine the performance and suitability of individual versions in different countries. It is the responsibility of the buyer to confirm these regulatory conditions. Performance data indicates typical values related to the described unit.

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