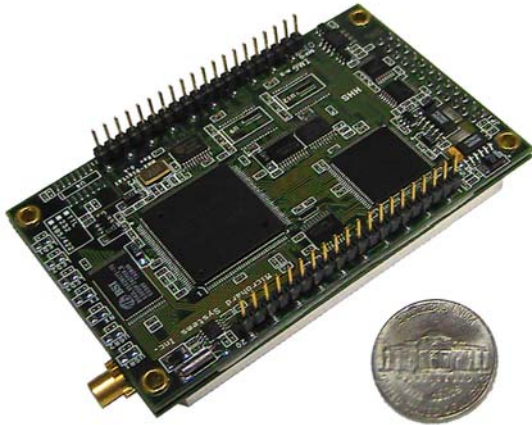## MHX-920 | OEM Industrial Wireless Modem

The MHX-920 is a long range - high speed 900MHz Frequency Hopping Spread Spectrum Modem. The MHX-920's rate can be optimized for long distance communication over 60 miles. MHX-920 radios offer the fastest communication over the longest distances.

Applications:

- *SCADA (PLCs, Modbus, HART)*
- *Telemetry*
- *GPS Vehicle Data/Tracking, DGPS*
- *Electric, Oil, & Gas Utilities/Metering*
- *Display Signs*
- *Traffic Control, Loop detectors*
- *Transparent low latency communication*

If you thought our MHX-910 was good - you'll be amazed with the MHX-920. There are many radios that make claims - just run our radios side by side and see what happens.

The MHX-920 features robust, high speed, low latency, secure data communications. The MHX-920 has a full data serial port and a separate diagnostics port for real-time diagnostics; which does not interfere with data communications. MHX-920 offers excellent noise figure, superior interference rejection, very agile frequency synthesis, digital modulation, and matched filter detection. The MHX-920 can be user optimized for speed and distance.

Features of the MHX-920

- Transparent, low latency link providing true 230 kbps continuous throughput to support protocols such as MODBUS

- License-free communication in the 902 - 928 MHz ISM band

- Industrial Grade - extended temperature specification

- Supports point-to-point, point-to-multipoint, Store and Forward Repeater, TDMA, Multimaster

- Maximum allowable transmit power, (1W)

- Low power consumption in Sleep Mode and High Voltage Option

- 32-bit CRC, selectable forward error correction with retransmit

- Separate diagnostics port - transparent remote diagnosis and online network control

- Backwards and Footprint Compatible with MHX-910 and Spectra-910 radios

MHX-920 HV Option

Preliminary Specifications subject to change without Notice

MHX-920

Specifications (preliminary)

Frequency	902 - 928 MHz
Spreading Method	Frequency Hopping
Band Segments	16 user selectable
Hopping Patterns	128 user selectable
Hopping Channels	50 to 128 user selectable
Error Detection	32 bit CRC, retransmit on error
Data Encryption	Dynamic Key Substitution
Range	+60 miles (line of sight)
Sensitivity	-108 dBm
Output Power	1mW, 100mW to 1W (30dBm)
System Gain	140dB
Data Port Inteface	RS-232/RS485/RS422 TTL or Drivers Level
Serial Baud Rate	300bps to 230.4kbps
Operating Modes	Point-to-Point, Point-to-Multipoint, Store&Forward Repeater, TDMA, Multimaster, Peer to Peer, Transparent
Signals Interface	RxD1, TxD1, RTS, CTS, DCD, DSR, DTR, RxD2, TxD2, RSSI1,RSSI2,RSSI3, Tx LEDs, Rx LEDS, Reset, Config, Wake-up, RSmode, User Analog Input
Diagnostics	Forward & Reflected Power, VSWR, Current, Battery voltage, Temperature, RSSI, Real-time event logging and remote diagnostics
Rejection	Excellent Strong Signal Interference & Rejection Characteristics

Core Voltage	4VDC to 5.5VDC, 7VDC to 40VDC(See option 100)
IO voltage (user selectable)	3.3VDC to 5.5VDC, RS232/485/ 422 Levels(See option 100)

Current (mA)	4 VDC	12 VDC	30 VDC (High Voltage Option)
Transmit	1200	600	220
Receive	220	95	40
Idle	60	20	8
Sleep	1	1	1

Antenna Connector	MCX, Reverse polarity SMA (See option 110)
Environment	-40 °C to +75 °C
Weight	Approx. 80 grams
Dimensions	Approx. 3.5" x 2.1" x 0.7"
Approvals	FCC Part 15.247, pending IC RSS210, pending

Order Options

Option 100	HV OPTION - High Input voltage (7V to 40V) with optional RS232/ RS485/RS422 Drivers
Option 110	Reverse Polarity SMA Connector

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