# MHX920 OEM Industrial Wireless Modem

*The MHX920 is a long range - high speed 900MHz Frequency Hopping Spread Spectrum Modem. The MHX920's rate can be optimized for long distance communication over 60 miles. MHX920 radios offer the fastest communication over the longest distances.*

## Applications:

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

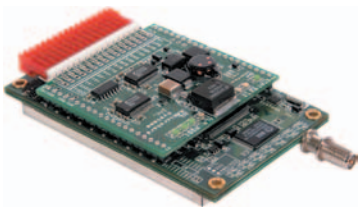
*If you thought our MHX-910 was good - you'll be amazed with the MHX920. There are many radios that make claims - just run our radios side by side and see what happens.*

The MHX920 features robust, high speed, low latency, secure data communications. The MHX920 has a full serial data port and a separate diagnostics port for real-time diagnostics; which does not interfere with data communications. MHX920 offers excellent noise figure, superior interference rejection, very agile frequency synthesis, digital modulation, and matched filter detection. The MHX920 can be user optimized for speed and distance.

## Features of the MHX920

- Transparent, low latency link providing true 230 kbps continuous throughput to support protocols such as MODBUS
- Communicates with virtually all PLCs, RTUs, and serial devices
- 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

## MHX920 HV Option



# MHX920 Specifications (preliminary)

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|---|---|
| Frequency | 902 - 928 MHz |
| Spreading Method | Frequency Hopping |
| Band Segments | 16 user selectable |
| Hopping Patterns | 128 user selectable |
| Hopping Channels | minimum 50 |
| Error Detection | 32 bit CRC, retransmit on error |
| Data Encryption | Dynamic Key Substitution |
| Range | +60 miles (line of sight) |
| Sensitivity | -108 dBm for BER=1E-6<br>-110 dBm for BER=1E-4 |
| 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 |
| Throughput | 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 30VDC(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)<br>Transmit 1200 / 600 / 220<br>Receive 220 / 95 / 40<br>Idle 60 / 20 / 8<br>Sleep 1 / 1 / 1 |
| Antenna Connector | MCX,<br>Reverse SMA (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 approved<br>IC RSS210 approved |

## Order Options

| | |
|---|---|
| Option 100 | HV OPTION - High Input voltage (7V to 30V) with RS232/RS485/RS422 Drivers |
| Option 110 | Reverse Polarity SMA Connector |
| Option 200 | Class 1 Div 2 (for use in hazardous environments) |

## Contact Information

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