

# Spectra 2420



## 2.4 GHz Industrial Wireless Modem

*The Spectra 2420 is a 2.4 GHz Frequency Hopping Spread Spectrum Wireless Modem, which can be optimized for long distance communications of over 30 miles (50km). Spectra 2420 radios offer the fastest communication over the longest distances.*

### Applications

- SCADA (PLCs, Modbus), Telemetry
- Commercial Communications
- GPS Vehicle Data/Tracking, DGPS
- Electric, Oil & Gas Utilities/Metering
- Robotics
- Display Signs
- Transparent Low Latency Communication

*Microhard Systems Inc.'s proprietary radio technology excels in the most demanding RF and physical environments.*



The Spectra 2420 features robust, high speed, low latency, secure data communications. It has a full serial port and a separate diagnostics port for real-time diagnostics without interrupting data communications. Excellent noise figure, superior interference rejection, agile frequency synthesis, digital modulation, and matched filter detection, are among the many advantages to using the Spectra 2420.

### Features of the Spectra 2420

- Transparent, low latency link, providing up to 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, Peer-to-Peer, Store and Forward Repeater, TDMA, Multimaster
- Adjustable transmit power (100mW - 1W)
- Low power consumption in Sleep Mode
- 32 bits of CRC, selectable Forward Error Correction with retransmission
- Separate diagnostics port - transparent remote diagnostics and online network control



# Spectra 2420

# Specifications



Frequency	2.4000 - 2.4835 GHz	Connectors	Antenna	RP-TNC Female Bulkhead
Spread Method	Frequency Hopping		Data	Female DE9
Band Segments	Selectable via Freq. Restriction		Diagnostic	Locking screw connector RJ-45
Error Detection	32 bits of CRC, ARQ	Environmental	-40°F to 185°F (-40°C to +85°C) 5-95% humidity, noncondensing	
Encryption	Optional (Canada & USA only. NOT AVAILABLE for export, see -AES option)	Weight	Approx. 0.92lbs (420g)	
Range	30+ miles (50+ km) (dependant on link rate and line of sight)	Dimensions	Approx. 4.375" x 3.75" x 1.75" (111mm x 95.3mm x 44.5mm)	
Sensitivity	-108dBm @ 172kbps link rate -116dBm @ 19.2kbps link rate (see -SL option)	Enclosure	Extruded Aluminum	
Output Power	100mW - 1W (20-30dBm)	Mount	Panel Mount	
System Gain	142dB w/Rubber Ducky antennas	Approvals	FCC Part 15.247 IC RSS210	
Serial Interface	RS-232/RS485/RS422	<b>Order Options</b>		
Serial Baud Rate	300bps to 230.4kbps	-DIN	DIN rail mount kit	
Link Rate	19.2 kbps - 230.4kbps (See Order Options)	-FT	Standard FAST Mode 115kbps - 230.4kbps	
Operating Modes	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer, TDMA, Multimaster	-SL	Extended sensitivity / SLOW Mode 19.2kbps - 230.4kbps	
Signals Interface	RxD1, TxD1, RTS, CTS, DCD, DSR, DTR, RxD2, TxD2, RSSI LEDs, Tx/Rx LEDs, Reset, Config, Wake-up, RSmode	-C1D2	Class 1 Div 2 (for use in hazardous environments)	
Diagnostics	Battery Voltage, Temperature, RSSI, and remote diagnostics	-AES	128-AES Encryption (Canada & USA only. NOT AVAILABLE for export)	
Rejection	Excellent strong signal interference & rejection characteristics			
Input Voltage	9-30VDC			

## Contact Information

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