

Nano Series - n2420



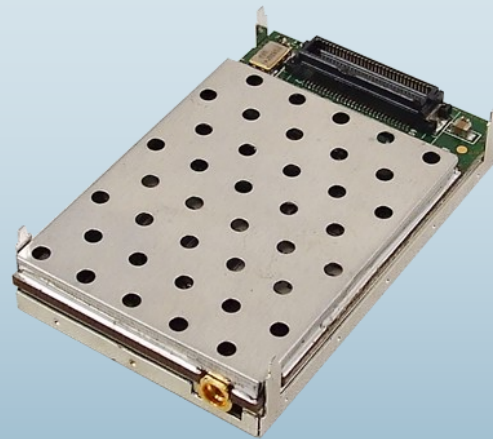
Miniature 2.4 GHz Wireless Modem

For size conscious consumers, consider the Nano Series with its small footprint and design flexibility. The Nano Series offers the reliability, features, and performance of our larger modems, yet can fit almost anywhere! Fully compatible with MHX series radio modems!

Applications

- Robotics
- Remote Telemetry, DGPS
- Electric, Oil & Gas Sensors/Detection
- Display Signs
- Small Enclosure Communication Devices
- Industrial Communications

Weights only 19 grams!



2" X 1.25" X 0.25"

Features an Input IP3 with more linearity than most spectrum analyzers!

The Nano Series features robust, high speed, low latency, secure data communications. The n2420 has full serial and diagnostics data capabilities and is 'radio compatible' with 2420 modems! The n2420 offers excellent noise figure, superior interference rejection, agile frequency synthesis, digital modulation, and matched filter detection. The n2420 can support 230 kbps and higher!

Features of the n2420

- Supports up to 230 kbps Wireless Link Rate
- Quad Filter Stage provides Extreme Noise & Interference Rejection
- Supports Point-to-Point, Point-to-Multipoint, Store and Forward Repeater, TDMA
- Maximum allowable transit power (1W)
- Low Power consumption in Sleep and Sniff modes
- 32 bits of CRC, selectable Forward Error Correction with retransmit
- Separate diagnostics port—transparent remote diagnosis and online network control
- Very Small Footprint
- MHX2400 and MHX2420 compatible interface card available

Interface Options

Enclosed Solution



Motherboard Solution

n2420

Specifications

Frequency	2.4000 - 2.4835 GHz	Input Voltage	OEM Enclosed 3.3VDC Nominal (+/- 0.3V) 7-30VDC
Spreading Method	Frequency Hopping / DTS	Power Consumption (OEM: 3.3V +/- 0.3V)	Sleep < 1mA Rx: 90mA to 140mA Idle: 20mA Tx: 1000mA to 1300mA
Band Segments	Selectable via Freq Restriction	Connectors:	OEM Antenna Data Enclosed MMCX 60 Pin OEM Header Antenna Data RP-SMA Female Bulkhead Data Female DE9 (x2)
Forward Error Detection	Hamming BCH Golay Reed-Solomon	Environmental	Temperature -40°F to +185°F (-40°C to +85°C) Humidity 5-95%, non-condensing
Error Detection	32 bits of CRC, ARQ	Weight	OEM Enclosed Approx. 19 grams Approx. 210 grams
Encryption	Optional (see -AES option)	Dimensions	OEM Enclosed Approx. 1.25" x 2.0" x .25" (32mm x 51mm x 6.35mm) Approx. 2.25" x 3.85" x 1.50" (57mm x 98mm x 38mm)
Range	30+ miles (50+ km)	Approvals	FCC Part 15.247 IC RSS210 CE ETSI EN 300 328 V1.8.1 (2012-06) Japan MIC (n2420BF)
Sensitivity	n2420F -107 dBm @ 10 ⁻⁶	Order Options	
Output Power	100mW - 1W (20-30dBm)	n2420BF-F1	2.390 - 2.400 GHz*
Serial Interface	OEM Enclosed TTL RS232/RS485/RS422	n2420BF-F2	2.245 - 2.290 GHz*
Serial Baud Rate	Up to 230.4 kbps asynchronous	n2420BF-F3	2.200 - 2.245 GHz*
Link Rate	115 kbps to 230.4 kbps	*No FCC/IC for these versions*	
Operating Modes	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer	-AES	128-bit AES Encryption (requires permit for export outside of Canada and USA.)
Signals Interface	RxD1, TxD1, RTS, CTS DCD, DSR, DTR, RxD2, TxD2, RSSI LEDs, Tx/Rx LEDs, Reset, Config, Wake-up, RSmode	-AES256	256-bit AES Encryption (requires permit for export outside of Canada and USA.)
Input IP3 (Antenna Connector)	+12 dBm		
RF Selectivity	Adjacent Channel 60 dB Alternate Channel 75 dB Out of Band >90 dB		
Remote Diagnostics	Battery Voltage, Temperature, RSSI, Packet Statistics		

Contact Information

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