

Nano Series - n920



OEM 900 MHz Wireless Modem

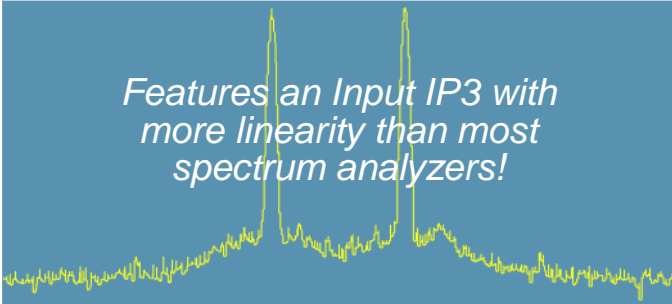
For size conscious consumers, consider the Nano Series with its small footprint and design flexibility. The Nano Series offers the reliability, features, and performance of our larger modems, yet can fit almost anywhere! Fully compatible with MHX series radio modems!

Applications

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



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



The Nano Series features robust, high speed, low latency, secure data communications. The n920 has full serial and diagnostics data capabilities and is 'radio compatible' with 910/910A and 920/920A modems! The n920 offers excellent noise figure, superior interference rejection, agile frequency synthesis, digital modulation, and matched filter detection. The n920 can support 1.2Mbps and higher!

Features of the n920

- Supports up to 1.2Mbps (higher rates available, contact Microhard for details)
- 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
- MHX910 and MHX920A compatible interface card available

Nano Motherboard



Nano Series - n920 Specifications



Frequency	902-928 MHz	Core Voltage	3.3VDC Nominal (+/- 0.3V)
Spreading Method	Frequency Hopping / DTS	Power Consumption (3.3V +/- 0.3V)	Sleep < 1mA
Band Segments	Selectable via Freq Restriction		Idle 20mA
Forward Error Detection	Hamming BCH Golay Reed-Solomon	(12V with Development board)	Rx: 140mA to 280mA
Error Detection	32 bits of CRC, ARQ		Tx: 1000mA to 1500mA
Encryption	Optional (see -AES option)		Sleep < 1mA
Range	60+ miles (100+ km)	Connectors: Antenna Data	Rx: 50mA to 95mA
Sensitivity	n920T -100 dBm @ 10 ⁻⁴ n920F -108 dBm @ 10 ⁻⁶ n920S -116 dBm @ 10 ⁻⁶	MMCX 60 Pin OEM Header	Master Avg Tx/Rx: 140mA
Output Power	100mW - 1W (20-30dBm)	Environmental	Slave Avg Tx/Rx: 110mA
Serial Interface	TTL	Weight	Tx: 300mA to 450mA
Serial Baud Rate	- Up to 230.4 kbps asynchronous - Up to 3.2 Mbps synchronous	Dimensions	-40°C - +85°C
Link Rate	19.2kbps to 1.3824 Mbps (higher rates available, contact Microhard for details)	Approvals	All units are fully tested over the entire temperature Range
Operating Modes	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer	Order Options	
Signals Interface	RxD1, TxD1, RTS, CTS DCD, DSR, DTR, RxD2, TxD2, RSSI LEDs, Tx/Rx LEDs, Reset, Config, Wake-up, RSmode	MHS113000 MHS113060 MHS113020 MHS113040	n920S - Slow n920LC - Low Cost n920F - Fast n920T - Turbo
Input IP3 (Antenna Connector)	+12 dBm	-AES	128-bit AES Encryption (NOT AVAILABLE for export outside of Canada and USA.)
RF Selectivity	Adjacent Channel 60 dB Alternate Channel 75 dB Out of Band >90 dB	-AES256	256-bit AES Encryption (NOT AVAILABLE for export outside of Canada and USA.)
Remote Diagnostics	VSWR, Battery Voltage, Temperature, RSSI, Packet Statistics	-2W	Up to 2 Watts Output Power. (Government, Export Only. Not for commercial / Industrial use) Contact Microhard for details.
		-C1D2	Class 1 Div 2 (for use in hazardous environments)

Contact Information

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