

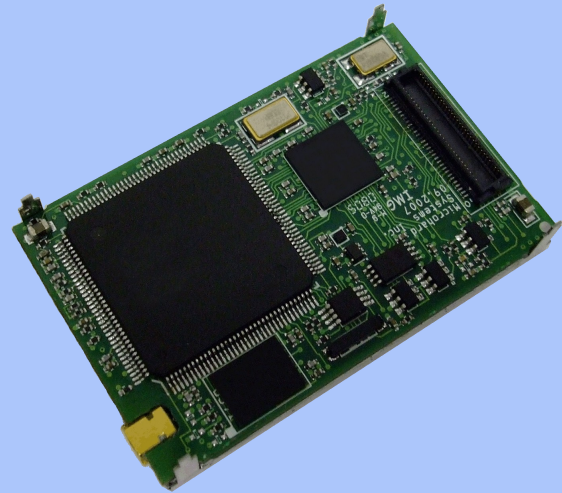
Miniature OEM Licensed Narrowband Modem

The Nano L Series is a long range, licensed, narrowband wireless modem which is configured to operate in the 410-480 MHz frequency range. The small size of the nL400 make it ideal to integrate into applications where space is at a premium.

Applications

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

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



The nL400 features robust, low latency, secure data communications. The nL400 is equipped with a fully supported serial port and a separate diagnostics port for real-time diagnostics without interrupting data communications. The nL400 offers excellent noise figure and superior interference rejection.

Features of the nL Series

- User-selectable frequency from within wide operating band
- Communicates with virtually all PLCs, RTUs, and serial devices
- Industrial Grade - robust 19.2kbps wireless link rate
- Supports Point-to-Point, Point-to-Multipoint, Peer-to-Peer, Store and Forward Repeater
- Programmable transmit power: 100mW - 2W
- Programmable bandwidth: 6.25, 12.5, or 25kHz
- 32 bits of CRC, selectable Forward Error Correction with retransmission
- Separate diagnostics port - transparent remote diagnostics and online network control
- RoHS Compliant

Interface Options

Enclosed Solution



Motherboard Solution

nL400

Specifications

Frequency	410 - 480 MHz* * Band use may be limited by country or operating zone/regulatory body	Core Voltage	OEM Enclosed	3.3VDC Nominal (+/- 0.3V) 7-30VDC
Occupied Bandwidth	6.25, 12.5, or 25kHz	Connectors:	OEM Antenna Data Enclosed Antenna Data	MMCX 60 Pin OEM Header
Modulation Type	GMSK			RP-SMA Female Female DB9 x2
Error Detection	32 bits of CRC, ARQ			
Encryption	Optional (see –AES option)	Environmental		-40°F - +185°F (-40°C - +85°C) 5-95% humidity, noncondensing (All units are fully tested over the entire temperature Range)
Range	60+ miles (100+ km) (dependant on link rate and line of sight)	Weight	OEM Enclosed	Approx. 19 grams Approx. 220 grams
Sensitivity	-115dBm @ 2400bps link rate -114dBm @ 4800bps link rate -110dBm @ 9600bps link rate	Dimensions	OEM Enclosed	Approx. 1.25" x 2.0" x .25" (32mm x 51mm x 6.35mm) Approx. 2.25" x 3.85" x 1.70" (57mm x 98mm x 43mm)
Output Power	100mW - 2W	Approvals		FCC Part 90 IC RSS119 CE RoHS
Serial Interface	RS232/RS485/RS422 TTL Driver Level (see –HV option)	Order Options		
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)
Serial Baud Rate	300bps to 230.4kbps	-AES		128 BIT AES Encryption (Requires Export Permit outside Canada & USA)
Link Rate	19.2 kbps	-CE		CE Certification
Operating Modes	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer			
Diagnostics	Battery Voltage, Temperature, RSSI, and remote diagnostics			
Rejection	Excellent strong signal interference & rejection characteristics			

Contact Information

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Specifications subject to change without notice.



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