

# Nano IP Series - IPn320



## Miniature OEM Wireless Ethernet/Serial/USB Gateway

The Nano IP Series adds Ethernet capability to the miniature, yet powerful Nano platform. This incredibly small Ethernet Bridge and Serial Gateway provides robust wireless communication of simultaneous serial data and IP/Ethernet packets to extend serial data and IP networks.

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

The Nano IP platform is the smallest form factor (2" x 1.25" x .5", weighing only 25 grams) available which offers a full Ethernet/Serial/USB bridge and routing functionality. The Nano IP OEM module can be directly integrated into OEM systems or applications using a variety of interface options. With the LAN out interface ready to wire directly to CAT5 cable OEMs can integrate this unit quickly and efficiently. The Nano IP Series also features flexible maintenance utilities, secure firewall features and network management facilities. Robust Frequency Hopping with excellent receiver sensitivity and interference rejection allow for long range, high speed communications.



**Weighs only 25grams!**

**2" X 1.25" X 0.5"**

**World's Smallest Ethernet//Serial/USB Gateway!**

## Features of the Nano IP Series

- Low Power Consumption
- Up to 1.2 Mbps Wireless Link Rate\*
- Multicast Support
- Master, Slave, Repeater operation in a single unit
- HV Option provides a quick wiring solution with Ethernet and Serial Levels and Power (7-30 VDC)
- 2 Serial Com Ports, 1 USB Port, and 1 Ethernet Port
- Supports Point-to-Point, Point-to-Multipoint, Repeater, Peer-to-Peer
- Adjustable transmit power (100mW - 2W)
- Radius Server Support
- Full VLAN Support (for separate management and Data networking)
- User interface through local console, telnet, and web browser
- Network management capability with SNMP V1, V2, V3
- Local and remote wireless firmware upgrading through FTP
- QoS Routing on Serial, IP, or Logic Ports

## Interface Options

### Enclosed Solution



### Motherboard Solution



### HV Solution



\* For Faster Link Rates Contact Microhard

◆ VLAN ◆ RADIUS ◆ QoS ◆ HTTPS ◆ USB ◆ Firewall

# IPn320

# Specifications



<b>Frequency</b>	310 - 390 MHz / 350 - 400 MHz* *Contact Microhard Systems for additional frequencies	<b>Input Voltage</b>	OEM Enclosed Interface Card	3.3VDC Nominal (+/- 0.3V) 7-30VDC 7-30VDC
<b>Spread Method</b>	Frequency Hopping / DTS	<b>Connectors:</b>	<b>OEM</b> Antenna Data <b>Enclosed</b> Antenna Data	OEM - MMCX OEM - 60 Pin OEM Header x2 RP-TNC Female Bulkhead RJ-45 (Ethernet) Female DB9 Mini-USB
<b>Link Rate</b>	Up to 1.2Mbps (See Order Options)			
<b>Error Detection</b>	32 bits of CRC, ARQ			
<b>Encryption</b>	128-bit WEP/WPA (Canada & USA only. NOT AVAILABLE for export, see -AES option)			
<b>Range</b>	Up to 30+ miles (50+ km) @ 1.2Mbps Up to 60+ miles (100+ km) @ 172kbps	<b>Environmental</b>	Temperature Humidity	-40°F to 170°F (-40°C to +75°C) 5-95%, noncondensing
<b>Sensitivity</b>	-107 @ 172kbps link rate -97 @ 1.2Mbps link rate	<b>Weight (Including Radio)</b>	OEM Enclosed w/ Interface Board	Approx. 25 grams Approx. 240 grams Approx. 70 grams (No Conn. 50g)
<b>Output Power</b>	100mW - 2W	<b>Dimensions</b>	OEM Enclosed	Approx. 1.25" x 2.0" x .50" (32mm x 51mm x 13mm) Approx. 2.25" x 3.75" x 1.75" (57mm x 95mm x 45mm)
<b>Serial Interface</b>	RS232, RS485, RS422	<b>Sale Restriction</b>	<b>Restricted Sale to Military, Government and Export. Export Means Qualifying Customers Outside Canada and USA.</b>	
<b>Serial Baud Rate</b>	300bps to 921kbps	<b>Order Options</b>		
<b>USB</b>	USB 2.0 USB Console Port USB to Serial Data Routing USB to Ethernet Data Routing	<b>-AES256</b>	256-bit AES Encryption, Secure Shell, HTTPS (Canada & USA only. NOT AVAILABLE for export)	
<b>Ethernet</b>	10/100 BaseT, Auto - MDI/X IEEE 802.3	<b>IPn320F IPn320T</b>	115kbps - 230kbps 1.2Mbps	
<b>Network Protocols</b>	TCP, UDP, TCP/IP, TFTP, ARP, ICMP, DHCP, HTTP, HTTPS*, SSH*, SNMP, FTP, DNS, Serial over IP, QoS (* Only available in -AES)			
<b>Operating Modes</b>	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer			
<b>Management</b>	Local Serial Port Console, Telnet, WebUI, SNMP, FTP & Wireless Upgrade, RADIUS authentication, VLAN			
<b>Diagnostics</b>	Battery Voltage, Temperature, RSSI, and remote diagnostics			
<b>Rejection</b>	Excellent strong signal interference & rejection characteristics			
<b>Input IP3 (Antenna Connector)</b>	+12 dBm			

## Contact Information

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Microhard Systems Inc.  
150 Country Hills Landing N.W.  
Calgary, AB, Canada T3K 5P3

Email: [info@microhardcorp.com](mailto:info@microhardcorp.com)  
Tel: (403) 248-0028  
Fax: (403) 248-2762



[www.microhardcorp.com](http://www.microhardcorp.com)