

# SIP Series



## OEM 900MHz / 2.4GHz Wireless Ethernet Bridge / Serial Gateway

The SIP Series of Wireless Ethernet Bridge/Serial Gateway products are powered by reliable high-speed 900MHz / 2.4 GHz FHSS radios. They provide robust wireless communication of simultaneous serial data and IP/Ethernet packets to extend serial data and IP networks.

### Applications

- IP / Ethernet Wireless Extension
- Legacy Networks/Devices Migration
- Video/Voice over IP
- SCADA (PLCs, MODBUS, HART)
- GPS Vehicle Data/Tracking, DGPS
- Electric, Oil, & Gas Utilities/Metering
- Display Signs



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

A complete wireless solution for integrating industrial Ethernet and serial devices into IP/Ethernet networks. The SIP Series allows Ethernet devices to share high speed wireless media and provides a wireless gateway for network applications to access serial devices. The SIP Series also features flexible maintenance utilities and network management facilities.

### Features of the SIP Series

- Standard 1.1Mbps wireless link rate
- Long-range, high-speed communications with excellent receiver sensitivity and robust frequency hopping
- User-selectable Tx power from 100mW to 1W
- OEM Header supports RS232 TTL level and ready to wire Ethernet
- Two serial ports: RS232 and RS232/485/422 (TTL)
- Point-to-Point, Point-to-Multipoint, Repeater, and Peer-to-Peer
- Bringing industrial data into IP/Ethernet networks
- Radius Server Authentication
- Full VLAN Support
- User interface through local console, telnet, and web browser
- Network management capability with SNMP V1, V2, V3
- Local and remote firmware upgrading through FTP

### SIP Top View



# SIP Series

# Specifications



Frequency	SIP921: 902-928 MHz SIP2421: 2.4000-2.4835 GHz	Connectors: Antenna Data	MCX 52 Pin OEM Header
Spreading Method	Frequency Hopping / DTS	Environmental	-40°F - +185°F (-40°C - +85°C) 5-95% humidity, noncondensing
Link Rate	345kbps or 1.1Mbps(User-Select)	Weight	Approx. 3oz. (85g)
Error Detection	32 bits of CRC, ARQ	Dimensions	Approx. 4.02" x 2.10" x .75" (102.1mm x 53.3mm x 19.1mm)
Encryption	128-bit WEP/WPA (NOT AVAILABLE on any Export versions)	Approvals	FCC Part 15.247, IC RSS210
Range	SIP921: 60+ miles (100+ km) SIP2421: 30+ miles (50+ km)	<b>Order Options</b>	
Sensitivity	-103 dBm @ 345kbps -96 dBm @ 1.1Mbps	-C1D2	Class 1 Div 2 (for use in hazardous environments)
Output Power	100mW - 1W (20-30dBm)	-AES	128/256-bit AES Encryption, Secure Shell. HTTPS (NOT AVAILABLE on any Export versions)
System Gain	140dB w/Rubber Ducky antennas @ 345kbps link rate	<b>Outline Dimensions</b>	
Serial Interface	OEM header supplies required TTL level signals to support RS232 and RS232/485/422 serial ports		
Baud Rate	300bps to 921kbps		
Ethernet	10/100 BaseT - IEEE 802.3		
Network Protocols	TCP, UDP, TCP/IP, ARP, ICMP, DHCP, HTTP, SNMP, FTP, Serial over IP, QoS		
Management	Local Serial Port Console, Telnet, WEBUI, SNMP, FTP Upgrade, RADIUS Authentication, VLAN		
Diagnostics	VSWR, Battery Voltage, Temperature, RSSI, Remote Diagnostics		
Operating Modes	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer		
Rejection	Excellent Strong Signal Interference & Rejection Characteristics		
Power Supply	9VDC - 30VDC		

## Contact Information

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