

Industrial Ethernet WiFi Radio

Product Datasheet

(WiFi-100 & WiFi-300 Options)

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Simple networking solutions



Industrial Ethernet WIFI Radio modems

Economical radio modems for industrial control,

AUTOMATIONDIRECT has chosen the Niplex WIFI Ethernet Radio modems as a partner in developing innovative wireless data networking and communications products for industrial, OEM and Internet access markets.

Employing 2.4 Ghz Direct sequence Spread Spectrum (DSSS) radio transmission technology, these products offer reliable, long range performance and unparalleled immunity against jamming and interference. The new NIP-WIFI series Ethernet radios were developed specifically for the industrial automation marketplace.

- Transmission at 2.4 GHz, the only truly international unlicensed frequency band
- Embedded Protocols: TCP/IP, UDP, ARP, PPP, ICMP, HTTP, FTP, TFTP, TELNET
- Reliable data throughput using Direct Sequence Spread Spectrum (DSSS) technology; assures reliable performance even in high-multipath and noisy RF environments.
- Long range with high speed (up to 11 Mbps total over-the-air bandwidth in point-to-point and multipoint applications), up to 5 Km (farther using repeater features)
- Will function as a serial modem and Ethernet modem simultaneously

The Niplex-WIFI family provides reliable and secure high-speed wireless Ethernet connectivity across a broad range of applications in process and automation plants.

802.11b compliant 2.4 GHz license-free, wireless data up to 11Mb/s

Connects to PLC's, HMI, DCS, data acquisition, video devices and industrial PC's

Greater flexibility in one unit

Each module can be configured as a

- ▶ Access Point ▶ Bridge ▶ Repeater ▶ Client/Station ▶ Router

The Niplex-WIFI has an Ethernet port (10/100 BaseT) as well as two serial ports (RS232 and RS485) and on-board I/O for local and remote link status, or external status transfer.

Industrial strength for industrial applications

The Niplex-WIFI has been designed and built for demanding industrial applications.

- ▶ Reliable data transfer in congested industrial environments - high RF power and receiver sensitivity
- ▶ Industrial ratings, -35 degC to 65 degC, humidity to 99% - designed for demanding applications
- ▶ Secure data transfer, military grade 128-bit AES encryption, plus commercial grade WEP encryption
- ▶ Firewall protection via message filtering at MAC address level
- ▶ Redundancy for critical applications, automatic changeover at Access Point
- ▶ Easy to use configuration and powerful diagnostics via web-browser
- ▶ Remote configuration and diagnostics via the wireless link.

Long & short range applications

- ▶ High RF output (100 or 300 mW) and superior receiver sensitivity gives excellent penetration in congested industrial environments, through buildings, factory walls and steelwork.
- ▶ Repeater functionality increases wireless range even further.

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The common sense way to buy industrial controls



Niplex



SPECIFICATIONS

Ethernet

10/100 BaseT RJ45, IEEE 802.3 compliant.
 Bridge/router functions work with all Ethernet protocols
 Embedded Protocols:
 TCP/IP, UDP ARP, PPP, ICMP, HTTP, FTP, TFTP, TELNET

Serial

RS232 V.24 DCE 1.2 to 115.2 Kb/s
 RS485 1.2 to 115.2 Kb/s

Discrete I/O

One I/O channel
 Input voltage-free contact / Output FET 30VDC 500mA

Networking

Configurable as Access Point or Client, Bridge or Router
 Point-to-point, Point-to-multipoint, user configurable addressing
 Repeater functionality MAC Filtering - whitelist or blacklist
 Serial gateway TELNET, PPP (RS232)

Wireless

2.400 - 2.484GHz Direct Sequence Spread Spectrum (DSSS),
 13 selectable zones
 802.11b compliant, auto rate selection 1-11Mb/s
 Transmit power 100mW (20dBm) / 300mW (25dBm)
 Receiver sensitivity < 8% FER -96dBm @ 1Mb/s,
 -91dBm @ 11Mb/s
 Line-of-sight range 1km @ 100mW (Europe)
 5km @ 300mW (America)
 Range may be extended using repeater features
 Dual SMA coaxial antenna connectors for antenna diversity

Security

Security encryption 40 and 104 bit WEP; plus WPA1 (TKIP)
 and WPA2 (128/bit AES)
 MAC Address filtering Password protected configuration

On-line Configuration and Diagnostics

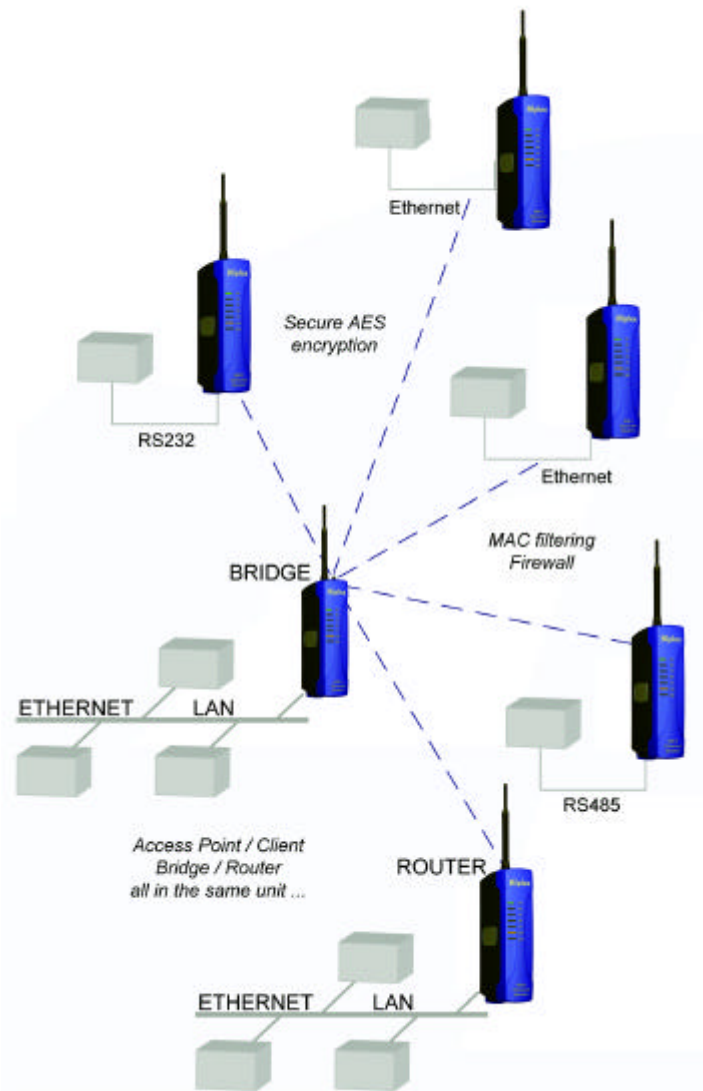
HTTP with remote configuration via wireless link
 Web based system management - RF signal strength,
 Bit Error Rate, connection monitoring and statistics
 PPP Protocol Access to diagnostics
 Firmware upgradeable via serial port

General

Temperature -35 to 65 degC
 Humidity 99% non-condensing
 Power Supply 9 V 30VDC
 Current average 240mA (12VDC), 150mA (24VDC)
 Case, heavy duty painted aluminium, DIN rail mounting
 Size 114 x 140 x 30 mm
 Weight 0.5 kg
 Indicators: Power/OK, Radio Rx and Tx, Radio Link,
 LAN Link/Activity, Serial Activity, Digital I/O
 Approvals FCC Part 15.247, CE ETS 300 328, RSS 210
 Hazardous area CSA Class 1 Div 2, IEC 60950 (pending)

Ordering Details

Niplex-WIFI-100 100mW RF Power
 Niplex-WIFI-300 300mW RF Power



Niplex Radios are also available from AutomationDirect they sell over 5,500 feature-packed products through its Online Automation Superstore and CD catalog.

The company offers its customers high-quality automation products at prices well below the industry average, 24-hour order entry with same-day shipping on in-stock items, the best documentation in the industry, outstanding sales and technical support.

For a free catalog, access their Web site at www.automationdirect.com.au or call 1800-633-0405.

Specifications subject to change without notice



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