B&B ELECTRONICS

PRODUCT INFORMATION

X09-009PKC-EA shown

Models: X09-009PKC-EA, X24-009PKC-EA

Ethernet Radio Frequency Modems CE

Overview

Ethernet RF Modems contain an OEM RF Module that renders the modem the longest range performer in the RFd2d (Radio Frequency device-to-device) segment of the wireless market . The integrated ethernet interface board extends data system performance and flexibility by adding serial connectivity to Ethernet networks, with use of MaxStream serial radio modems.

This RF Modem is optimized for mobile and remote applications, allowing OEMs and integrators to quickly test, monitor and control their wireless systems via standard laptop and PC Ethernet ports. Additionally, the RF modem enables worldwide access to wireless networks via the Internet.

The 900 MHz radio modem comes equipped with the best receiver sensitivity in the industry, making it one of the longest range, low cost radio modems available. The 2.4 GHz radio modem can provide high performance and dependable operation for deployment throughout the world

These radio modems are perfect for applications in automatic meter reading (AMR), supervisory control and data acquisition (SCADA), home automation, security, instrument monitoring and point of sale (POS) systems among many others. Ethernet RF Modems can be configured to integrate quickly and seamlessly into any new or existing design.

Features

- Plug-and-communicate (no configuration required)
- Ethernet interface
- Compatible with other MaxStream RS-232 and USB modems
- Transparent operation supports existing software & systems
- Simple configuration using software & standard AT commands
- Retries & acknowledgements for guaranteed packet delivery
- Peer-to-peer, point-to-point & point-to-multipoint networks
- Up to 65,000 network addresses available
- Allows up to 7 Frequency Hopping Spread Spectrum independent pairs (networks) to operate in close proximity
- Low power modes for current consumption as low as 230 mA
- XON / XOFF or hardware flow control
- Signal strength reporting for link quality monitoring & debugging
- Support for multiple data formats (7/8 bits, Even/Odd/No Parity)

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Applications
- Monitoring of remote systems
- Production reporting of active systems
- Home automation & building control
- Supervisory control & data acquisition
- Vehicle management & asset tracking

Specifications	900 MHz	2.4 GHz
General		
Frequency	902-928 MHz	2.4000 to 2.4835 GHz
Spreading Spectrum Type	Frequency hopping, direct FM	Frequency hopping, direct FM
Network Topology	Point-to-multipoint, point-to-point, multi-drop transparent	Point-to-multipoint, point-to-point, multi-drop transparent
Channel Capacity	7 hop sequences share 25 frequencies	7 hop sequences share 25 frequencies
Serial Data Interface	Ethernet	Ethernet
Power Requirements		
Supply Voltage	5-28 VDC	5-28 VDC
Transmit Current	400 mA	400 mA
Receive Current	250 mA	250 mA
Power Down Current	230 mA	230 mA
Physical Properties		
Enclosure Type	Extruded aluminum, black anodized	Extruded aluminum, black anodized
Enclosure Size	7.9 x 13.9 x 3.8 cm (2.75 x 5.5 x 1.1 in)	7.9 x 13.9 x 3.8 cm (2.75 x 5.5 x 1.1 in)
Weight	200 g (7.1 oz)	200 g (7.1 oz)
Operating Temperature	0 to 70 °C (commercial)	0 to 70 °C (commercial)
Antenna		
Type	½ wave dipole whip	½ wave dipole whip
Gain	2.1 dBi	2.1 dBi
Length	17.1 cm (6.8 in)	13.3 cm (5.3 in)
Connector	Reverse-polarity SMA	Reverse-polarity SMA
Impedance	50 Ohms unbalanced	50 Ohms unbalanced
Certifications		
FCC Part 15.247	OUR9XSTREAM	OUR-24XSTREAM
Industry Canada	4214A-9XSTREAM	4214A 12008
Europe	n/a	ETSI
Performance		
Indoor/Urban Range	Up to 457m (1500 ft)	Up to 183 m (600 ft)
Outdoor LOS Range	Up to 11 km (7 mi) w/dipole Up to 32 km (20 mi) w/high-gain	Up to 5 km (3 mi) w/dipole Up to 16 km (10 mi) w/high-gain
Data Throughput	**9600 bps**	**9600 bps**
RF Data Rate (Baud)	10,000 bps	10,000 bps
Transmit Power Output	100 mW (20 ± 2 dBm)	50 mW (17 ± 2 dBm)
Receiver Sensitivity	-110 dBm	-105 dBm

Ordering Information
X09-009PKC-EA **900 MHz Ethernet Radio Modem**
X24-009PKC-EA **2.4 GHz Ethernet Radio Modem**
Includes: Ethernet Radio Modem, Quick Start Guide, CD (software & documentation), ½ wave antenna, CAT-5 cable