

# XBee-PRO<sup>®</sup> 900HP RF Modems

900 MHz Modems

900 MHz stand-alone RF modems provide outstanding range (up to 28 miles) in a reliable wireless solution.



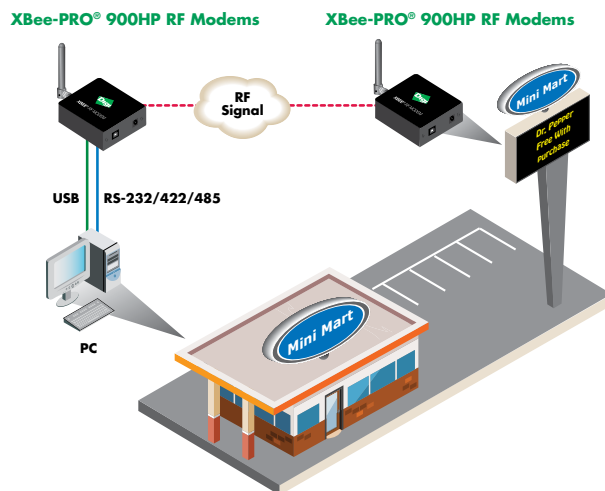
## Overview

Digi's XBee-PRO 900HP RF modems can be configured in minutes to provide reliable serial cable replacement between many different types of electronic devices. These modems utilize the XBee-PRO 900HP 900 MHz RF Module in an enclosure with interface options that include RS-232, RS-485, USB and Ethernet with transmission ranges of up to 28 miles.

XBee-PRO 900HP RF modems allow the user to easily make their existing wired systems wireless simply by connecting to this product. They take advantage of the DigiMesh<sup>®</sup> networking protocol, featuring dense network operation using mesh technology.

XBee-PRO 900HP RF modems can wirelessly connect a variety of devices across many applications including remote monitoring, building automation/ security, industrial automation/SCADA, fleet management/asset tracking and sensor data capture in embedded systems.

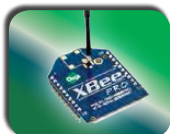
## Application Highlight



## Features/Benefits

- Industrial design with -40° C to 85° C operating temperature
- Superior outdoor LOS range of up to 28 miles
- RF data throughput up to 200 Kbps
- 900 MHz license-free ISM band operation
- Interface options include RS-232, RS-485, USB and Ethernet
- DigiMesh peer-to-peer mesh networking protocol
  - Self-healing and discovery for network stability
- Includes mini-USB port for simple device configuration

## Related Products



XBee<sup>®</sup>-PRO 900HP  
Modules



XTend<sup>®</sup> PKG



XBee<sup>®</sup> Gateways



## Specifications

## XBee-PRO® 900HP RF Modems

### Performance

Indoor/Urban Range	10 Kbps: up to 2000 ft (610 m); 200 Kbps: up to 1000 ft (305 m)
Outdoor/RF Line-of-Sight Range	10 Kbps: up to 9 miles (15.5 km); 200 Kbps: up to 4 miles (6.5 km); w/2.1 dbi dipole antenna
Transmit Power Output	Up to 24 dBm (250 mW) software selectable
Throughput Data Rate	10 Kbps: up to 8.8 Kbps; 200 Kbps: up to 105.5 Kbps; (When configured as point-to-multipoint)
RF Data Rate	10 Kbps or 200 Kbps
Interface Data Rate	125-65,0000 bps (Software selectable, includes non-standard baud rates)
Receiver Sensitivity	10 Kbps: -110 dBm; 200 Kbps: -101 dBm

### Network and Security

Frequency	902-928 MHz (located in the 900 MHz ISM Band)
Spread Spectrum	Frequency hopping
Supported Network Topologies	Mesh, Point-to-point, Point-to-multipoint, Peer-to-peer
Channel Capacity	8 hop sequences share 25 channels, 64 channels available (there are 64 channels available, of which the user can select 25 that are hopped through in 8 different patterns.)

### Antenna

Connector	RPSMA (Reverse polarity SMA)
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### Power Requirements

Power Supply	7-30 VDC
Receive Current	60 mA (@9V)
Transmit Current	140 mA (@9V)

### Physical Properties

Size	4.5 in x 2.75 in x 1.125 in (11.4 cm x 7 cm x 2.9 cm)
Weight	5.25 oz (150 g)
Data Connection	RS-232 female DB-9, RS-485/422 screw terminal, USB Type B, Config USB mini-B, 10/100 Ethernet
Operating Temperature	-40° C to 85° C (Industrial)

### Regulatory Approvals

FCC Part 15.247 (U.S.A)	Yes
IC (Canada)	Yes
C-TICK (Australia)	Yes
RoHS	Compliant

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