



LONG-RANGE 900 MHz
RF MODEMS



DIGI XBEE-PRO[®] 900 HP RF MODEMS

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

Digi 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 Digi 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*.

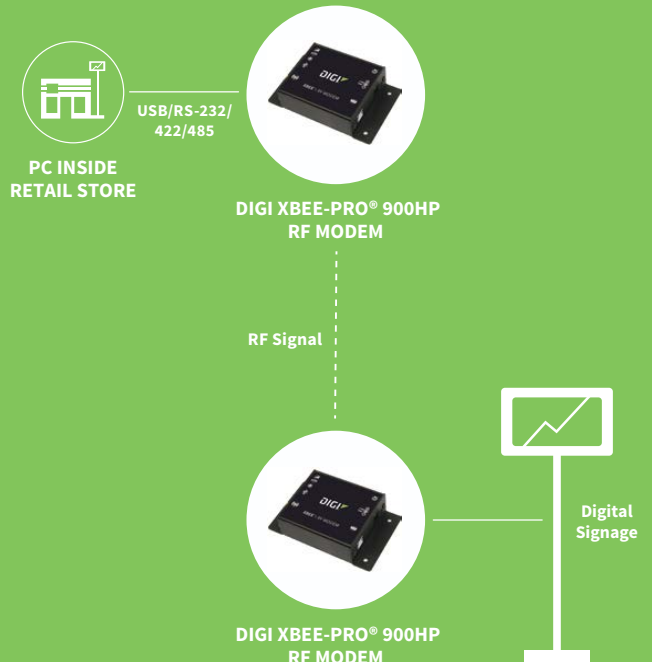
Digi XBee-PRO 900HP RF modems allow the user to easily make their existing wired systems wireless simply by connecting to this product. They take advantage of the DigiMesh[®] networking protocol, featuring dense network operation using mesh technology.

Digi 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.

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

APPLICATION EXAMPLE



RELATED PRODUCTS



SPECIFICATIONS

Digi 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) |
| 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 |

*Range figure estimates are based on free-air terrain with limited sources of interference. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting antenna, height of receiving antenna, weather conditions, interference sources in the area, and terrain between receiver and transmitter, including indoor and outdoor structures such as walls, trees, buildings, hills, and mountains.

| PART NUMBERS | DESCRIPTION |
|--------------|--|
| XM-M92-4P-UA | Digi XBee Modem, RS485 to XBee-PRO 900HP, 200Kbps w/ Accessoriess |
| XM-M92-UP-UA | Digi XBee Modem, USB to XBee-PRO 900HP, 200Kbps w/ Accessories |
| XM-P91-UP-UA | Digi XBee Modem, USB to XBee-PRO 900HP, 10Kbps w/ Accessories |
| XM-M92-2P-AA | Digi XBee Modem, RS232 to Digi XBee-PRO 900HP, 200 Kbps w/Accessories for Australia |
| XM-M92-4P-AA | Digi XBee Modem, RS485 to Digi XBee-PRO 900HP, 200 Kbps w/ Accessories for Australia |
| XM-P91-4P-AA | Digi XBee Modem, RS485 to Digi XBee-PRO 900HP, 10 Kbps w/ Accessories for Australia |
| XM-P91-UP-AA | Digi XBee Modem, USB to Digi XBee-PRO 900HP, 10 Kbps w/ Accessories for Australia |

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