



LONG-RANGE 900 MHz  
RF MODEMS



# DIGI XBEE-PRO<sup>®</sup> 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<sup>®</sup> 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

## RELATED PRODUCTS



Digi XBee<sup>®</sup>-PRO  
900HP Modules



XTend<sup>®</sup> PKG



Digi XBee<sup>®</sup>-PRO  
Gateways



ConnectPort<sup>®</sup>  
X2



Digi XLR PRO<sup>®</sup>

## APPLICATION EXAMPLE



PC INSIDE  
RETAIL STORE

USB/RS-232/  
422/485



DIGI XBEE-PRO<sup>®</sup> 900HP  
RF MODEM

RF Signal



DIGI XBEE-PRO<sup>®</sup> 900HP  
RF MODEM



Digital  
Signage

## 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

FOR MORE INFORMATION  
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