

# XBee-PRO<sup>®</sup> 900HP

900 MHz RF Module

Best-in-class range RF module features software-complete mesh or multipoint topologies with advanced sleep modes.



## Overview

XBee-PRO 900HP embedded modules provide best-in-class range wireless connectivity to devices. They take advantage of the DigiMesh<sup>®</sup> networking protocol, featuring dense network operation and support for sleeping routers, and are also available in a proprietary point-to-multipoint configuration. Supporting RF line-of-sight ranges up to 28 miles (with high-gain antennas), and data rates of up to 200 Kbps, these modules are ideal for extended-range applications requiring increased data throughput.

The XBee-PRO 900HP requires no programming and can be configured easily using Digi's free X-CTU software or via a simplified AT command set. XBee modules are pre-certified for use in multiple countries, further reducing development costs and time to market.

The programmable version of the XBee-PRO 900HP module makes customizing long-range wireless applications easy. Programming directly on the module eliminates the need for a separate host processor. Because the wireless software is isolated, applications can be developed with no risk to RF performance, security or additional certifications.

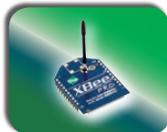
### Related Products



Gateways

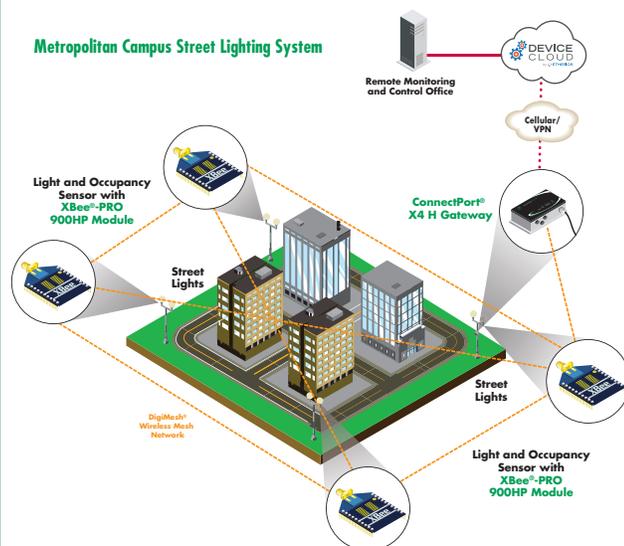


Development Kits



ZigBee Modules

### Application Highlight

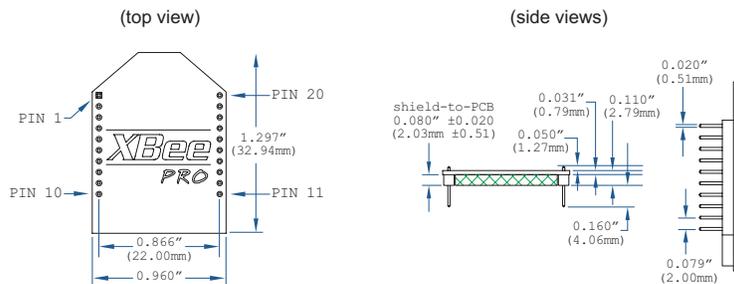


### Features/Benefits

- Superior outdoor LOS range of up to 28 miles with high-gain antenna
- Over-the-air firmware updates via other XBee-PRO 900HP modules or Device Cloud by Etherios<sup>™</sup>
- Software-selectable channel mask for interference immunity
- Programmable versions of the XBee-PRO 900HP enable custom application development
  - 8-bit Freescale<sup>™</sup> S08 microprocessor brings custom intelligence to the module
  - XBee-specific CodeWarrior<sup>®</sup> development tools for easy programming
- RF data rate up to 200 Kbps
- Patent-pending channel selectivity algorithm allows for more dense networks



Hardware		
Processor	ADF7023 transceiver, Cortex-M3 EFM32G230 @ 28 MHz Programmable includes: Freescale MC9S08QE32	
Frequency Band	902 to 928 MHz, software selectable channel mask for interference immunity	
Antenna Options	Wire, U.FL and RPSMSA	
Performance		
RF Data Rate	10 Kbps or 200 Kbps	
Indoor/Urban Range	10 Kbps: up to 2000 ft (610 m); 200 Kbps: up to 1000 ft (305 m)	
Outdoor/ Line-Of-Sight Range	10 Kbps: up to 9 miles (15.5 km); 200 Kbps: up to 4 miles (6.5 km) (with 2.1dB dipole antennas)	
Transmit Power	Up to 24 dBm (250 mW) software selectable	
Receiver Sensitivity	-101 dBm @ 200 Kbps, -110 dBm @ 10 Kbps	
Features		
Data Interface	UART (3V), SPI	
GPIO	Up to 15 Digital I/O, 4 10-bit ADC inputs, 2 PWM outputs	
Networking Topologies	DigiMesh, Repeater, Point-to-Point, Point-to-Multipoint, Peer-to-Peer	
Spread Spectrum	FHSS (Software Selectable Channels)	
Programmability		
Memory	N/A	32 KB Flash / 2 KB RAM
CPU/Clock Speed	N/A	HCS08 / Up to 50.33 MHz
Power		
Supply Voltage	2.1 to 3.6 VDC	2.4 to 3.6 VDC
Transmit Current	215 mA	229 mA
Receive Current	29 mA	44 mA
Sleep Current	2.5 uA	3 uA
Regulatory Approvals		
FCC (USA)	MCQ-XB900HP	
IC (Canada)	1846A-XB900HP	
C-Tick (Australia)	Yes	
Anatel (Brazil)	Yes	
IDA (Singapore)	Yes	



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