

XBee-PRO[®] DigiMesh[™] 900

Mesh Networking Embedded RF Modules for OEMs

XBee-PRO DigiMesh 900 modules deliver device connectivity with exceptional RF range performance using the innovative DigiMesh protocol.



Overview

XBee-PRO DigiMesh 900 embedded modules provide extended-range wireless connectivity to end-point devices. These modules use the DigiMesh peer-to-peer networking protocol, featuring dense network operation and support for sleeping routers. Combining the range advantages of the 900 MHz operating frequency with a fast 156 Kbps data rate to the end node and supporting RF line-of-sight ranges up to 6 miles (with high-gain antennas), these modules are ideal for extended-range applications requiring increased data throughput.

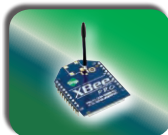
As a part of Digi's XBee[®] family of RF products, these modules are easy to use, share a common hardware footprint, and are fully interoperable with other XBee products utilizing XBee-PRO 900 technology. They are available in a variety of different protocols to suit different applications, enabling users to substitute one XBee module for another with minimal development time and risk.

Digi's unsurpassed offering of Drop-in Networking products provides users with seamless communication between devices. XBee adapters deliver wireless connectivity to electronic devices in wired networks. ConnectPort[™] X gateways enable users to access and configure remote devices in a network.

Related Products



Gateways



Modules



Adapters



Development Kits



Network Extenders



Accessories

Application Highlight



Features/Benefits

- No configuration needed for out-of-the-box RF communications
- Common XBee footprint for a variety of RF modules
- 900 MHz for extended range operation
- Outdoor RF line-of-sight range up to 6 miles (10 km)
- Fast 156 Kbps RF data rate
- Multiple antenna options
- DigiMesh peer-to-peer mesh networking protocol
 - Self-healing and discovery for network stability
 - Sleeping routers supported for long battery life



Platform

XBee-PRO® DigiMesh™ 900

Performance

RF Data Rate	156 Kbps
Indoor/Urban Range	450 ft (140 m)
Outdoor/RF Line-of-Sight Range	Up to 1.8 miles (3 km)
Outdoor/RF Line-of-Sight Range w/ High-Gain Antenna	Up to 6 miles (10 km)
Transmit Power	50 mW (+17 dBm)
Receiver Sensitivity (10% PER)	-100 dBm

Features

Serial Data Interface	3.3V CMOS Serial UART (5V tolerant inputs)
Configuration Method	AT & API, local or over-the-air
Frequency Band	900 MHz ISM
Interference Immunity	FHSS
Serial Data Rate	Up to 230 Kbps
ADC Inputs	Coming in future firmware revisions
Digital I/O	Coming in future firmware revisions
Antenna Options	Wired Whip, U.FL connector, RPSMA connector

Networking & Security

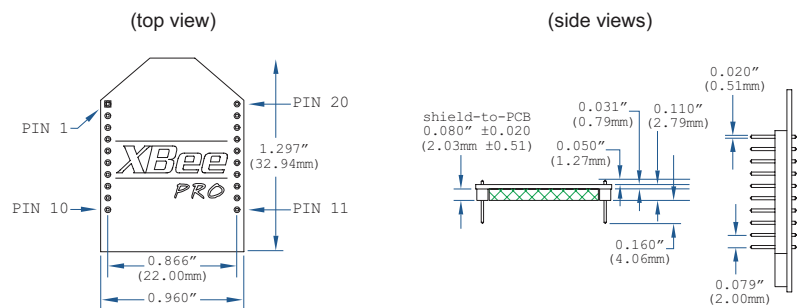
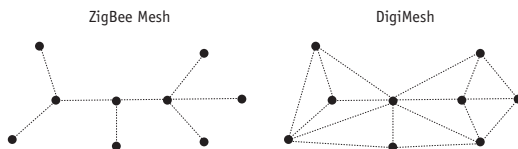
Encryption	128-bit AES
Reliable Packet Delivery	Retries/Acknowledgments
Addressing Options	PAN ID, channel, 64-bit address
Channels	8 hopping patterns on 12 channels or single channel

Power Requirements

Supply Voltage	3.0 – 3.6 VDC
Transmit Current	210 mA
Receive Current	80 mA
Power-Down Current	60 uA @ 3.3V

Regulatory Approvals

FCC (USA)	Yes
IC (Canada)	Yes
C-TICK (Australia)	No



Visit www.digi.com for part numbers.

DIGI SERVICE AND SUPPORT - You can purchase with confidence knowing that Digi is here to support you with expert technical support and a strong five-year warranty. www.digi.com/support

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