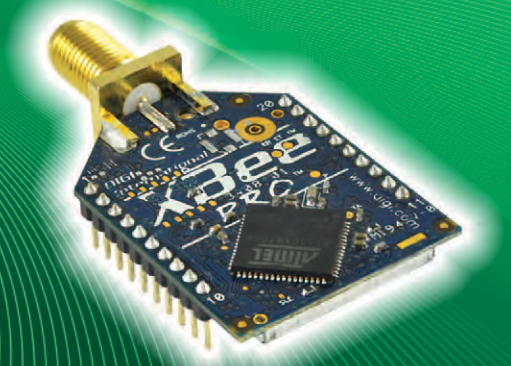
XBee-PRO® 868

Long-Range Embedded RF Modules for OEMs



XBee-PRO 868 modules deliver wireless connectivity with exceptional RF range performance for European applications.

Overview

XBee-PRO 868 embedded RF modules provide extended-range wireless connectivity to end-point devices. These modules use a proprietary 868 MHz point-to-multipoint protocol for European applications. Capable of 500 mW of EIRP transmit power and -112 dBm receive sensitivity, the XBee-PRO 868 is the most powerful XBee product ever offered. Supporting RF line-of-sight distances up to 40 km, these modules are ideal for challenging environments where RF penetration and transmission distance are critical to the application.

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 868 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 provide wireless connectivity to electronic devices in wired networks. ConnectPort™ X gateways enable users to access and configure remote devices in a network.

Application Highlight

Features/Benefits

- 868 MHz short-range device G3 band for Europe
- No configuration needed for out-of-the-box RF communications
- Common XBee footprint for a variety of RF modules
- Simple-to-use peer-to-peer or point-to-multipoint topology
- Software selectable transmit power
- Outdoor RF line-of-sight range up to 40 km
- Multiple antenna options

Related Products


Gateways


Development Kits


Adapters

Digi®

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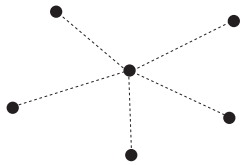
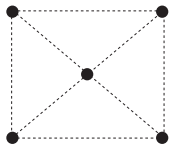
Platform	XBee-PRO® 868
Performance	
RF Data Rate	24 Kbps (limited to 10% duty cycle)
Indoor/Urban Range	Up to 1800 ft (550 m)
Outdoor/RF Line-of-Sight Range	Up to 25 miles (40 km) with dipole antenna (Italy only) up to 10 miles (16 km) with dipole antenna (13.7 dBm)
Transmit Power	1 mW (0 dBm) to 315 mW (+25 dBm)
Receiver Sensitivity (1% PER)	-112 dBm or 500 mW EIRP
Features	
Serial Data Interface	3.3V CMOS Serial UART
Configuration Method	API and AT commands
Frequency Band	868 MHz ISM
Interference Immunity	Multiple transmissions, acknowledgements
Serial Data Rate	1.2 Kbps to 230.4 Kbps (non-standard rates available)
ADC Inputs	6 (10-bit)
Digital I/O	13
Antenna Options	Wired Whip, U.FL connector, RPSMA connector
Networking & Security	
Encryption	128-bit AES
Reliable Packet Delivery	Retries/Acknowledgments
Addressing Options	Network ID, 64-bit address
Channels	Single channel
Power Requirements	
Supply Voltage	3.0 – 3.6VDC
Transmit Current	500 mA typical at 3.3V (800 mA max)
Receive Current	65 mA typical
Power-Down Current	55 uA typical @3.3V
Regulatory Approvals	
FCC (USA)	No
IC (Canada)	No
ETSI (Europe)	Yes (Italy 25 mW max)
C-TICK (Australia)	No
Telec (Japan)	No

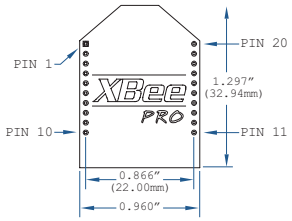
Point-to-Multipoint / Star



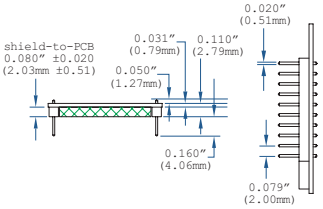
Peer-to-peer



(top view)



(side views)



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