

# XBee-PRO<sup>®</sup> 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<sup>®</sup> 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 products provides users with seamless communication between devices. XBee adapters provide wireless connectivity to electronic devices in wired networks. ConnectPort<sup>™</sup> X gateways enable users to access and configure remote devices in a network.

### Related Products



Gateways



Development Kits



Adapters

### Application Highlight

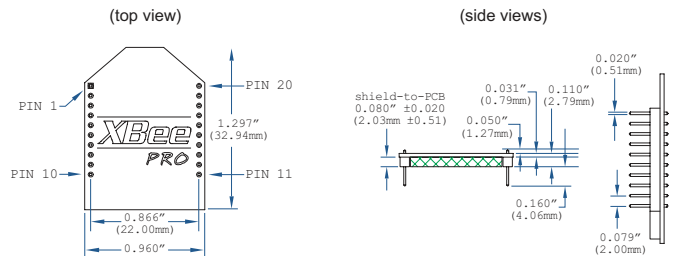
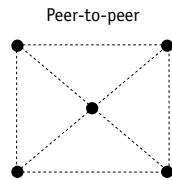
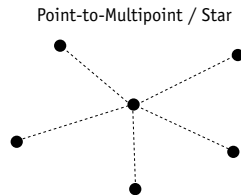


### Features/Benefits

- 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



| 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<br>(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   |



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