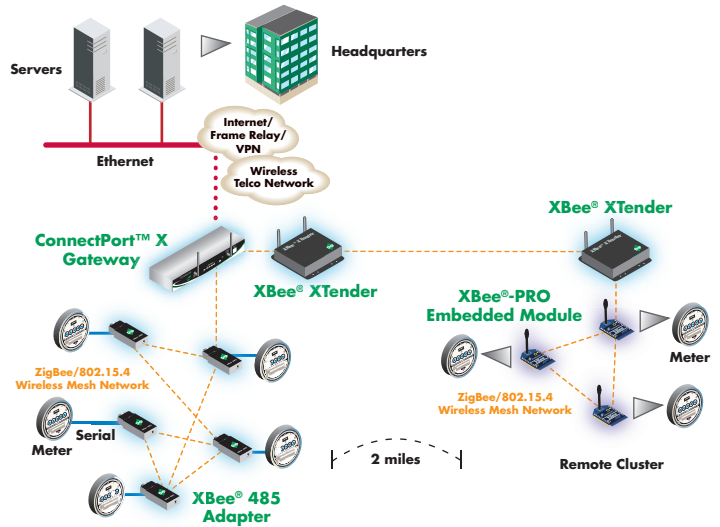


XBee® & XBee-PRO® ZB

ZigBee® Embedded RF Modules for OEMs

A critical component to Drop-in Networking, XBee and XBee-PRO ZB embedded RF modules deliver low-cost and low-power wireless end-point connectivity using the ZigBee PRO Feature Set.



Features/Benefits

- ZigBee PRO Feature Set
- Advanced mesh networking
- Over-the-air firmware updates
- ZigBee Certification coming soon
- Low-power/low-cost XBee modules
- Extended-range XBee-PRO modules
- 2.4 GHz for worldwide deployment
- Fully interoperable with other Digi Drop-in Networking products, including gateways, device adapters and extenders
- Common XBee footprint for a variety of RF modules
- Multiple antenna options
- Industrial temperature rating (-40° C to 85° C)

Overview

XBee and XBee-PRO ZB are the most advanced ZigBee modules available in the XBee footprint and are ideal for deployment in ZigBee networks. Available in the low-cost XBee or extended-range XBee-PRO, and utilizing the ZigBee PRO Feature Set, these embedded RF modules are interoperable with ZigBee PRO Feature Set devices from other vendors. With advanced mesh networking functionality, XBee and XBee-PRO ZB modules improve data traffic management, allow for greater node density, and provide OEMs with the ability to change firmware remotely with over-the-air updates.

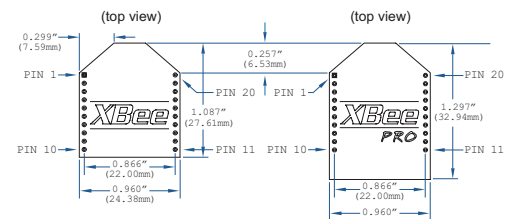
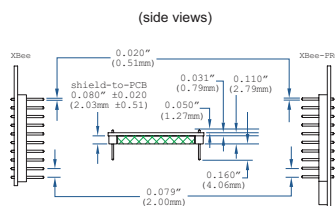
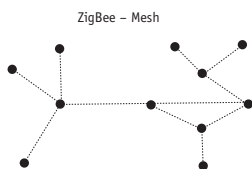
XBee Protocols

XBee embedded modules are available with different protocols to suit a variety of applications and networking topologies. Supported protocols include IEEE 802.15.4, the ZigBee PRO Feature Set, proprietary long range, and DigiMesh™. XBee embedded RF modules share a common hardware footprint and are modeled after a common software API. Once deployed into an application, OEMs can rapidly change from one protocol to another with minimal time and development risk.

Drop-in Networking Compatibility

XBee embedded RF modules are compatible with Digi's Drop-in Networking adapters, network extenders and gateways that use the same protocol. This allows OEMs to embed XBee solutions into an application and have seamless communication to other devices using USB, RS-232, RS-485, digital I/O, analog I/O, Ethernet, Wi-Fi and even cellular connections with plug-and-play ease.

| Platform | XBee® ZB | XBee-PRO® ZB |
|----------------------------------|---|---|
| Performance | | |
| RF Data Rate | 250 Kbps | 250 Kbps |
| Indoor/Urban Range | 133 ft (40 m) | 300 ft (90 m) |
| Outdoor/RF Line-of-Sight Range | 400 ft (120 m) | 1 mi (1.6 km) |
| Transmit Power | 1.25 mW (+1 dBm) / 2 mW (+3 dBm) boost mode | 50 mW (+17 dBm) / Int'l 10 mW (+10 dBm) |
| Receiver Sensitivity (1% PER) | -96 dBm in boost mode | -102 dBm |
| Features | | |
| Serial Data Interface | 3.3V CMOS UART | 3.3V CMOS UART |
| Configuration Method | API or AT commands, local or over-the-air | API or AT commands, local or over-the-air |
| Frequency Band | 2.4 GHz | 2.4 GHz |
| Interference Immunity | DSSS (Direct Sequence Spread Spectrum) | DSSS (Direct Sequence Spread Spectrum) |
| Serial Data Rate | 1200 bps - 1 Mbps | 1200 bps - 1 Mbps |
| ADC Inputs | (4) 10-bit ADC inputs | (4) 10-bit ADC inputs |
| Digital I/O | 10 | 10 |
| Antenna Options | Chip, Wire Whip, U.FL, RPSMA | Chip, Wire Whip, U.FL, RPSMA |
| Networking & Security | | |
| Encryption | 128-bit AES | 128-bit AES |
| Reliable Packet Delivery | Retries/Acknowledgments | Retries/Acknowledgments |
| IDs and Channels | PAN ID, 64-bit IEEE MAC, 16 channels | PAN ID, 64-bit IEEE MAC, 13 channels |
| Power Requirements | | |
| Supply Voltage | 2.1 - 3.6VDC | 3.0 - 3.4VDC |
| Transmit Current | 35 mA / 45 mA boost mode @ 3.3VDC | 295 mA @ 3.3VDC |
| Receive Current | 38 mA / 40 mA boost mode @ 3.3VDC | 45 mA @ 3.3VDC |
| Power-Down Current | <1 uA @ 25° C | <10 uA @ 25° C |
| Regulatory Approvals | | |
| FCC (USA) | Yes | Yes |
| IC (Canada) | Yes | Yes |
| ETSI (Europe) | Yes | Yes (int'l unit only) |
| C-TICK (Australia) | Yes | Pending |
| Telec (Japan) | Yes | Pending (int'l unit only) |



Please 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 one-year warranty. www.digi.com/support

Digi International
11001 Bren Road E.
Minnetonka, MN 55343
U.S.A.
PH: 877-912-3444
952-912-3444
FX: 952-912-4952
email: info@digi.com

Digi International France
31 rue des Poissonniers
92200 Neuilly sur Seine
PH: +33-1-55-61-98-98
FX: +33-1-55-61-98-99
www.digi.fr

Digi International KK
NES Building South 8F
22-14 Sakuragaoka-cho,
Shibuya-ku
Tokyo 150-0031, Japan
PH: +81-3-5428-0261
FX: +81-3-5428-0262
www.digi-intl.co.jp

Digi International (HK) Limited
Suite 1703-05, 17/F,
K Wah Centre
191 Java Road
North Point, Hong Kong
PH: +852-2833-1008
FX: +852-2572-9989
www.digi.cn

Digi International, the leader in device networking for business, develops reliable products and technologies to connect and securely manage local or remote electronic devices over the network or via the web. With over 20 million ports shipped worldwide since 1985, Digi offers the highest levels of performance, flexibility and quality.

www.digi.com

WHEN RELIABILITY MATTERS™

© 2008 Digi International Inc.
All rights reserved. Digi, Digi International, the Digi logo, the When Reliability Matters logo, DigiMesh, XBee and XBee-PRO are trademarks or registered trademarks of Digi International Inc. in the United States and other countries worldwide. All other trademarks are the property of their respective owners.

91001471
A1/608

