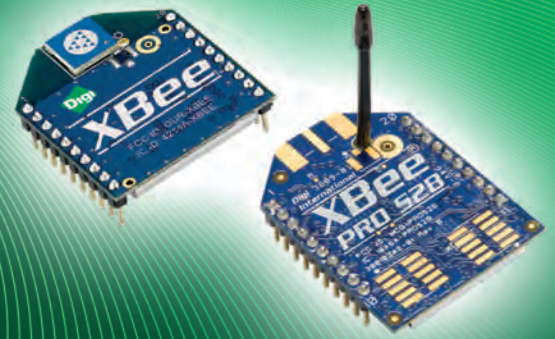


XBee® & XBee-PRO® ZB

ZigBee® Embedded RF Module Family for OEMs

Embedded RF modules provide low-cost, low-power wireless connectivity using the ZigBee PRO Feature Set.



Overview

XBee and XBee-PRO ZB embedded RF modules provide cost-effective wireless connectivity to devices in ZigBee mesh networks. Utilizing the ZigBee PRO Feature Set, these modules are interoperable with other ZigBee devices, including devices from other vendors*.

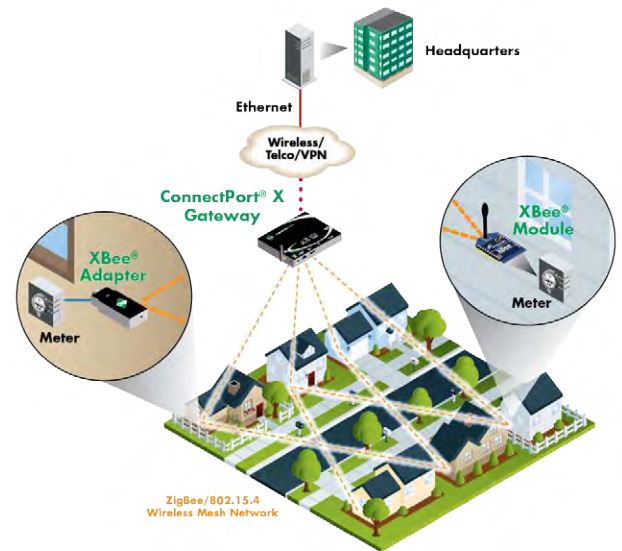
Products in the XBee family are easy to use. They require no configuration or additional development; users can have their network up and running in a matter of minutes.

Programmable versions of the XBee-PRO ZB module make customizing ZigBee applications easy. Programming directly on the module eliminates the need for a separate processor. Because the wireless software is isolated, applications can be developed with no risk to RF performance or security.

XBee modules are available in a variety of protocols and frequencies. The common hardware footprint shared by Digi's XBee modules means users can substitute one XBee for another with minimal development time and risk.

*Interoperability requires the ZigBee Feature Set or ZigBee PRO Feature Set to be deployed on all devices. Contact Digi Support for details.

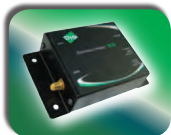
Application Highlight



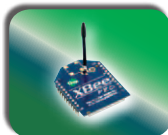
Features/Benefits

- Interoperability with ZigBee compliant devices*
- No configuration needed for out-of-the-box RF communications
- Common XBee footprint for a variety of RF modules
- ZigBee mesh networking protocol
 - Improved data traffic management
 - Remote firmware updates
 - Self-healing and discovery for network stability
- Programmable versions of the XBee-PRO ZB enable custom ZigBee application development
 - 8-bit Freescale™ S08 microprocessor brings intelligence to devices
 - CodeWarrior® development tools for easy customization

Related Products



Gateways



Modules



Adapters



Development Kits



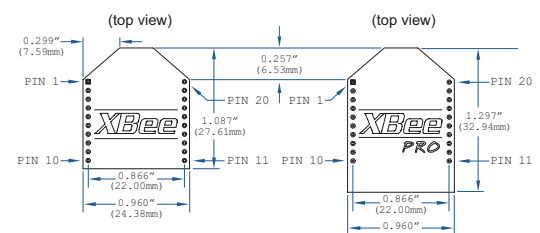
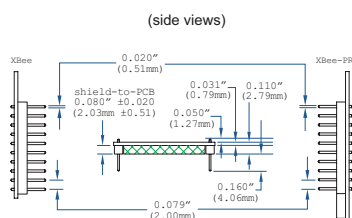
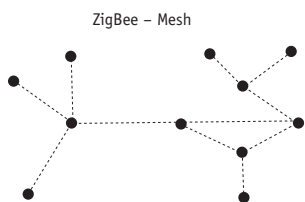
Network Extenders



Sensors



| Platform | XBee® ZB | XBee-PRO® ZB | Programmable XBee-PRO® ZB |
|----------------------------------|---|--|---------------------------|
| Performance | | | |
| RF Data Rate | 250 Kbps | | |
| Indoor/Urban Range | 133 ft (40 m) | 300 ft (90 m) | |
| Outdoor/RF Line-of-Sight Range | 400 ft (120 m) | 2 miles (3200 m) / Int'l 5000 ft (1500 m) | |
| Transmit Power | 1.25 mW (+1 dBm) / 2 mW (+3 dBm) boost mode | 63 mW (+18 dBm) / Int'l 10 mW (+10 dBm) | |
| Receiver Sensitivity (1% PER) | -96 dBm in boost mode | -102 dBm | |
| Features | | | |
| Adjustable Power | Yes | | |
| I/O Interface | 3.3V CMOS UART, ADC, DIO | 3.3V CMOS UART, SPI, I2C, PWM, DIO, ADC | |
| Configuration Method | API or AT commands, local or over-the-air | | |
| Frequency Band | 2.4 GHz | | |
| Interference Immunity | DSSS (Direct Sequence Spread Spectrum) | | |
| Serial Data Rate | 1200 bps - 1 Mbps | | |
| ADC Inputs | (4) 10-bit ADC inputs | | |
| Digital I/O | 10 | | |
| Antenna Options | Chip, Wire Whip, U.FL, RPSMA | PCB Embedded Antenna, Wire Whip, U.FL, RPSMA | |
| Operating Temperature | -40° C to +85° C, 0-95% humidity non-condensing | | |
| Programmability | | | |
| Memory | N/A | 32 KB Flash / 2 KB RAM | |
| CPU/Clock Speed | N/A | HCS08 / Up to 50.33 MHz | |
| Networking & Security | | | |
| Encryption | 128-bit AES | | |
| Reliable Packet Delivery | Retries/Acknowledgments | | |
| IDs and Channels | PAN ID, 64-bit IEEE MAC, 16 channels | PAN ID, 64-bit IEEE MAC, 15 channels | |
| Power Requirements | | | |
| Supply Voltage | 2.1 - 3.6VDC | 2.7 - 3.6VDC | |
| Transmit Current | 35 mA / 45 mA boost mode @ 3.3VDC | 205 mA | 220 mA |
| Receive Current | 38 mA / 40 mA boost mode @ 3.3VDC | 47 mA | 62 mA |
| Power-Down Current | <1 uA @ 25° C | 3.5 uA @ 25° C | 4 uA @ 25° C |
| Regulatory Approvals | | | |
| FCC, IC (North America) | Yes | | |
| ETSI (Europe) | Yes | | |
| C-TICK (Australia) | Yes | | |
| TELEC (Japan) | Yes | Yes (int'l unit only) | |



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
877-912-3444
952-912-3444
info@digi.com

Digi International
France
+33-1-55-61-98-98
www.digi.fr

Digi International
KK
+81-3-5428-0261
www.digi-intl.co.jp

Digi International
(HK) Limited
+852-2833-1008
www.digi.cn

Digi m2m Solutions
India Pvt. Ltd
+91-80-4287-9887
info@digi.com



91001471
D3/511

BUY ONLINE • www.digi.com

© 2008-2011 Digi International Inc. All rights reserved. Digi, Digi International, the Digi logo, the Making Wireless M2M Easy logo, ConnectPort, 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. All information provided is subject to change without notice.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Digi International:

[XB24-BPDK](#) [XB24-BPDKJ](#) [XB24-BPDK-WA](#) [XB24-BPDK-W](#) [XBP24-Z7WIT-006J](#) [XB24-Z7SIT-006](#) [XBP24-Z7UIT-006J](#) [XB24-Z7UIT-006](#) [XBP24-Z7SIT-006](#) [XBP24-Z7UIT-004J](#) [XBP24-Z7WIT-006](#) [XBP24-Z7SIT-006J](#) [XB24-Z7WIT-006](#) [XBP24-Z7UIT-006](#) [XBP24-Z7SIT-004J](#) [XBP24BZ7PIT-004](#) [XBP24BZ7SIT-004](#) [XBP24BZ7WIT-004](#) [XBP24BZ7B-DK](#) [XBP24BZ7B-DK](#) [XBP24BZ7UIT-004](#) [XBP24BZ7PIT-004J](#) [XBP24BZ7PITB003](#) [XBP24BZ7PITB003J](#) [XBP24BZ7SIT-004J](#) [XBP24BZ7SITB003](#) [XBP24BZ7SITB003J](#) [XBP24BZ7UIT-004J](#) [XBP24BZ7UITB003](#) [XBP24BZ7UITB003J](#) [XBP24BZ7WIT-004J](#) [XBP24BZ7WITB003](#) [XBP24BZ7WITB003J](#) [XB24-Z7PIT-003](#) [XB24-Z7PIT-004](#) [XBP24-Z7PIT-004](#) [XB24-Z7PIT-006](#) [XBP24-Z7PIT-006J](#) [XBP24BZ7SIT-003](#) [XB24-Z7PIT-002](#) [XBP24BZ7SIT-001](#) [XB24-Z7WIT-003](#) [XBP24BZ7PITA001J](#) [XBP24-Z7PIT-003](#) [XBP24BZ7PIT-002](#) [XBP24BZ7UITB001](#) [XBP24BZ7SITA003](#) [XBP24BZ7UIT-002](#) [XBP24BZ7PIT-005](#) [XBP24-Z7PIT-001](#) [XBP24BZ7UITA001](#) [XBP24BZ7SITB001](#) [XBP24BZ7PITA003](#) [XBP24BZ7UITA003](#) [XBP24BZ7SITA001](#) [XBP24-Z7PIT-005](#) [XBP24-Z7PIT-002](#) [XBP24BZ7PIT-003](#) [XBP24BZ7PITB001](#) [XBP24BZ7PITA001](#) [XBP24BZ7UIT-001](#) [XBP24BZ7PIT-001](#) [XBP24BZ7SIT-002](#)