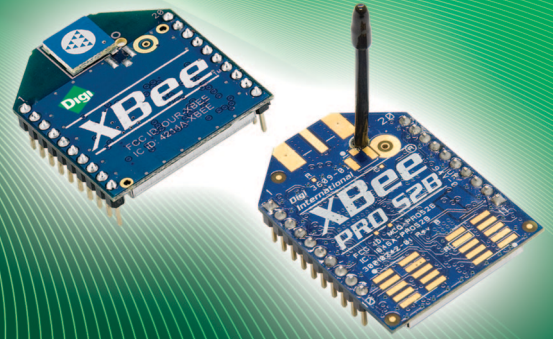


XBee® & XBee-PRO® ZB

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*.

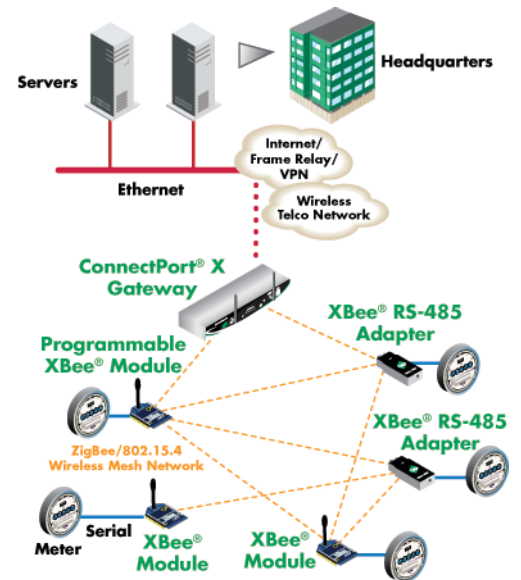
Products in the XBee family are easy to use. They require no configuration or additional development; users can have their network up and running in a matter of minutes.

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



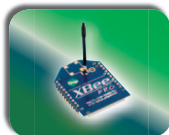
Features/Benefits

- 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

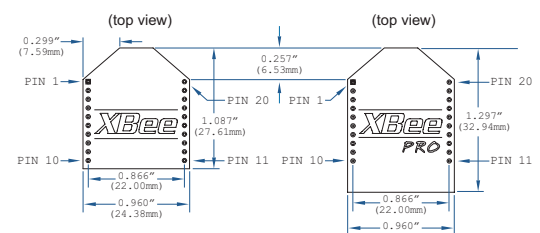
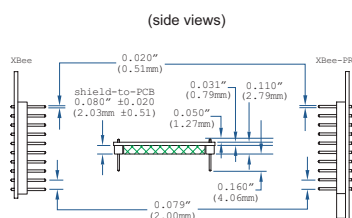
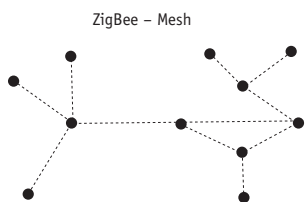


Sensors



www.digi.com

| Platform | XBee® ZB | XBee-PRO® ZB | XBee-PRO® ZB Programmable |
|----------------------------------|---|--|---------------------------|
| 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.

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