

XBee® & XBee-PRO® ZB Adapters

ZigBee® Device Adapters for Drop-in Networking

Easy-to-use adapters bring wireless connectivity to electronic devices in legacy wired applications.



Overview

XBee & XBee-PRO ZB adapters deliver wireless connectivity to electronic devices through advanced mesh networks. These adapters utilize the ZigBee PRO Feature Set, for robust self-healing, self-configuring networks. They are ideal for wirelessly enabling sensors, controllers and other devices in legacy wired applications, or where a common hardware interface is preferable.

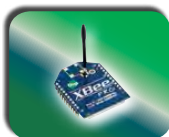
XBee & XBee-PRO ZB adapters can be battery or mains powered. They are available in a wide range of physical interfaces, including RS-232, RS-485, USB (power harvesting), digital I/O and analog I/O. Built upon either low-power and low-cost XBee modules or extended-range XBee-PRO modules, these adapters can be purchased in a broad range of configurations and customized to meet your application needs.

Part of Digi's Drop-in Networking solutions, XBee adapters are compatible with ConnectPort® X gateways, XBee modules and XBee accessories. This family of hardware, software and management tools provides users with unparalleled flexibility and end-to-end communication between devices.

Related Products



Gateways



Modules



WPAN Adapter



Dev Kits

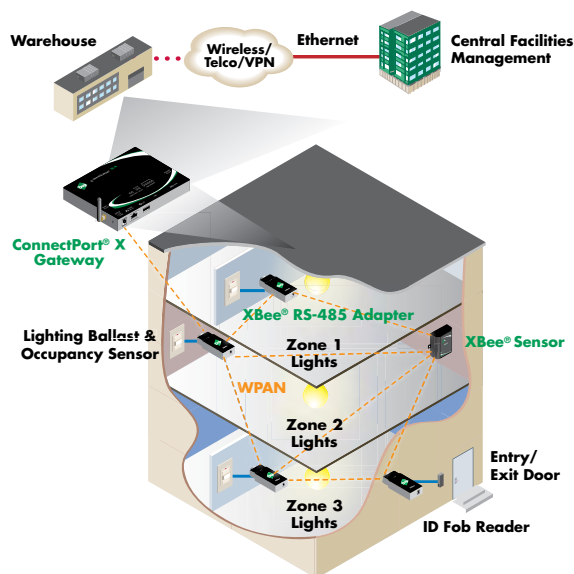


Network Extenders



Sensors

Application Highlight



Features/Benefits

- ZigBee mesh wireless connectivity for all types of end-point devices
- Multiple interface options available for a range of devices including RS-232, RS-485, USB, digital I/O and analog I/O
- ModBus fragmentation support
- Flexible powering options
- Small form factor for easy handling and installation
- Outdoor RF line-of-sight range up to 2 miles with XBee-PRO
- Easy to install and configure for rapid deployment
- Low-power XBee or extended-range XBee-PRO



Platform	XBee® ZB		XBee-PRO® ZB
Performance			
RF Data Rate	250 kbps		
Indoor/Urban Range	Up to 133 ft (40 m)	Up to 300 ft (90 m) / 200 ft (60 m) Int'l variant	
Outdoor/RF Line-of-Sight Range	Up to 400 ft (120 m)	Up to 2 miles (3200m) / 5000 ft (1500 m) Int'l variant	
Transmit Power	1.25 mW (+1 dBm) / 2 mW (+3 dBm) boost mode	63 mW (+18 dBm) / Int'l version	
Receiver Sensitivity (1% PER)	-96 dBm in boost mode	-102 dBm	
Features			
Antenna Type	XBee ZB Adapters: Internal Antenna; XBee-PRO ZB Adapters: External RPSMA Antenna		
Frequency Band	2.4 GHz		
Serial Data Interface	RS-232 DB9M/DTE or RS-485 (6-position wire terminal block) switch selectable between RS-422 half-duplex, RS-422 full duplex and RS-485		
USB Data Interface	USB 2.0 Full Speed (with ESD protection); connects to host via captive 1-meter cable		
Analog IO (AIO) & Digital IO (DIO)	6-position wire terminal block; Analog IO: 0 - 10V, 4 - 20 mA, or +/- 2VDC Differential; Digital IO: Digital Input or sinking driver output		
Networking & Security			
Network Topologies	Point-to-point, Point-to-multipoint, Mesh		
Number of Channels	16	14	
Spread Spectrum Type	Direct Sequence Spread Spectrum		
Filtration Options	PAN ID, 64-bit MAC, channel		
Addressing	65,000 available addresses for each channel		
Other			
LEDs	Power: Glows green when external power is supplied (not active when battery powered to limit power drain) Associate: Blinks when unit is connected and associated on an RF network		
Controls	Device reset (internal push button); Identification (internal push button) – relays ID to gateway		
Dimensions (L x W x H) & Weight	RS-232, RS-485, AIO, DIO models: 3.60 in x 1.90 in x 1.20 in (9.14 cm x 4.82 cm x 3.04 cm) 2.29 oz (64.92 g) USB models: 2.87 in x 1.80 in x 0.83 in (7.29 cm x 4.57 cm x 2.10 cm) 1.60 oz (45.36 g)		
Operating Temperature	-40° C to +70° C		
Power Requirements			
Input Voltage	RS-232, RS-485, AIO, DIO models: 3.7-6VDC and 9-30 VDC USB models: Bus powered (+5V)		
Power Consumption	USB: 70 mA (normal operation) / 200 uA (suspend mode)	USB: 70 mA Rx and 250 mA Tx (normal operation) / 200 uA (suspend mode)	
Regulatory Approvals			
Emissions	FCC Part 15.247, IC, ETSI/CE, Telec, EN55022 (Class B)		
Safety	UL60950, CAN/CSA C22.2 No.60950		
RoHS	Yes		



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