



ZIGBEE ADAPTERS FOR SERIAL AND USB DEVICES



# DIGI XBEE-PRO<sup>®</sup> ZIGBEE ADAPTERS

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

Digi XBee-PRO ZigBee 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.

Digi XBee-PRO ZigBee 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 Digi XBee-PRO modules,

these adapters can be purchased in a broad range of configurations and customized to meet your application needs.

Digi XBee adapters are compatible with ConnectPort<sup>®</sup> X gateways, Digi XBee<sup>®</sup> modules and Digi XBee accessories. This family of hardware, software and management tools provides users with unparalleled flexibility and end-to-end communication between devices.

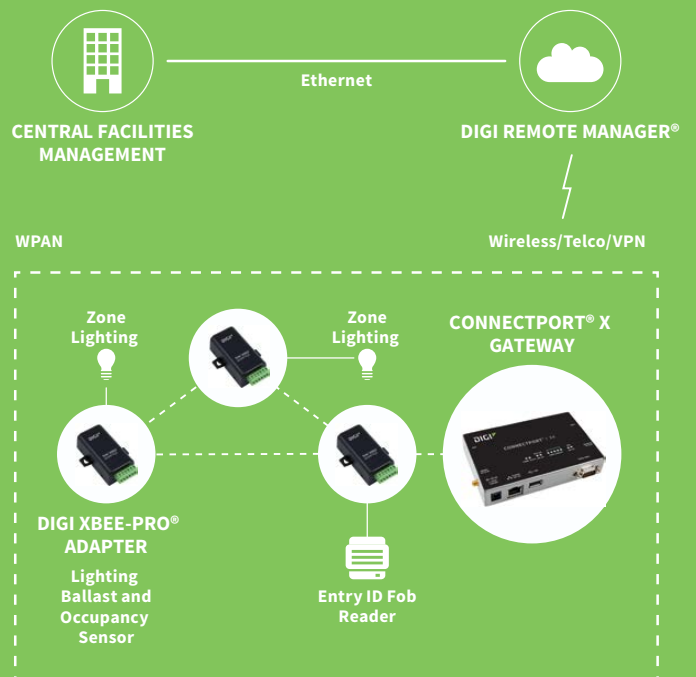
## BENEFITS

- Hardened design with extended operating temperature (-35° C to +74° C) for hazardous locations
- Class 1, Division 2 certified
- Multi-master/Multi-protocol concurrent support for Allen-Bradley and Modbus protocols
- Serial and Ethernet protocol bridging support for Allen-Bradley and Modbus protocols promotes interoperability
- ASCII to protocol translation for Allen-Bradley and Modbus
- Switch selectable RS-232/422/485 serial port

## RELATED PRODUCTS



## APPLICATION EXAMPLE



## SPECIFICATIONS

# Digi XBee-PRO® ZigBee Adapter

### PERFORMANCE

<b>RF DATA RATE</b>	250 kbps
<b>INDOOR/URBAN RANGE*</b>	Up to 300 ft (90 m) / 200 ft (60 m) Int'l variant
<b>OUTDOOR/RF LINE-OF-SIGHT RANGE*</b>	Up to 2 miles (3200m) / 5000 ft (1500 m) Int'l variant
<b>TRANSMIT POWER</b>	63 mW (+18 dBm) / Int'l version
<b>RECEIVER SENSITIVITY (1% PER)</b>	-102 dBm

### FEATURES

<b>ANTENNA TYPE</b>	Digi XBee ZB Adapters: Internal Antenna; Digi XBee-PRO ZB Adapters: External RPSMA Antenna
<b>FREQUENCY BAND</b>	2.4 GHz
<b>SERIAL DATA INTERFACE</b>	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
<b>USB DATA INTERFACE</b>	USB 2.0 Full Speed (with ESD protection); connects to host via captive 1-meter cable
<b>ANALOG IO (AIO) &amp; DIGITAL IO (DIO)</b>	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

<b>NETWORK TOPOLOGIES</b>	Point-to-point, Point-to-multipoint, Mesh
<b>NUMBER OF CHANNELS</b>	14
<b>SPREAD SPECTRUM TYPE</b>	Direct Sequence Spread Spectrum
<b>FILTRATION OPTIONS</b>	PAN ID, 64-bit MAC, channel
<b>ADDRESSING</b>	65,000 available addresses for each channel

### OTHER

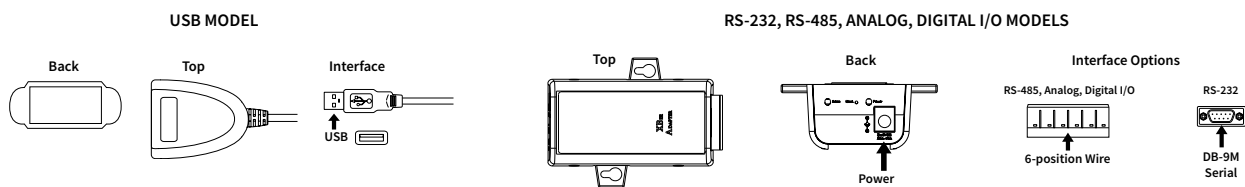
<b>LEDS</b>	Power: Glows green when external power is supplied (not active when battery powered to limit power drain) Associate: Blinks when unit is connected and associated on an RF network
<b>CONTROLS</b>	Device reset (internal push button); Identification (internal push button) – relays ID to gateway
<b>DIMENSIONS (L X W X H) &amp; WEIGHT</b>	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)
<b>OPERATING TEMPERATURE</b>	-40° C to +70° C

### POWER REQUIREMENTS

<b>INPUT VOLTAGE</b>	RS-232, RS-485, AIO, DIO models: 3.7-6VDC and 9-30 VDC USB models: Bus powered (+5V) USB Models: Bus Powered (+5V)
<b>POWER CONSUMPTION</b>	USB: 70 mA Rx and 250 mA Tx (normal operation) / 200 uA (suspend mode)

### REGULATORY APPROVALS

<b>EMISSIONS</b>	FCC Part 15.247, IC, ETSI/CE, Teleg, EN55022 (Class B)
<b>SAFETY</b>	UL60950, CAN/CSA C22.2 No.60950
<b>ROHS</b>	Yes



\*Range figure estimates are based on free-air terrain with limited sources of interference. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting antenna, height of receiving antenna, weather conditions, interference sources in the area, and terrain between receiver and transmitter, including indoor and outdoor structures such as walls, trees, buildings, hills, and mountains.

PART NUMBERS	DESCRIPTION
XA-Z14-CE1P-A	Digi XBee-PRO ZB USB adapter, internal wire antenna
XA-Z14-CS3PH-A	Digi XBee-PRO RS-485 adapter, external RPSMA antenna included (9 - 30V)

FOR MORE INFORMATION  
PLEASE VISIT [WWW.DIGI.COM](http://WWW.DIGI.COM)

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