



ZIGBEE ADAPTERS FOR
SERIAL AND USB DEVICES



DIGI XBEE-PRO[®] 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[®] X gateways, Digi XBee[®] 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



Gateways



Modules



Network
Extenders

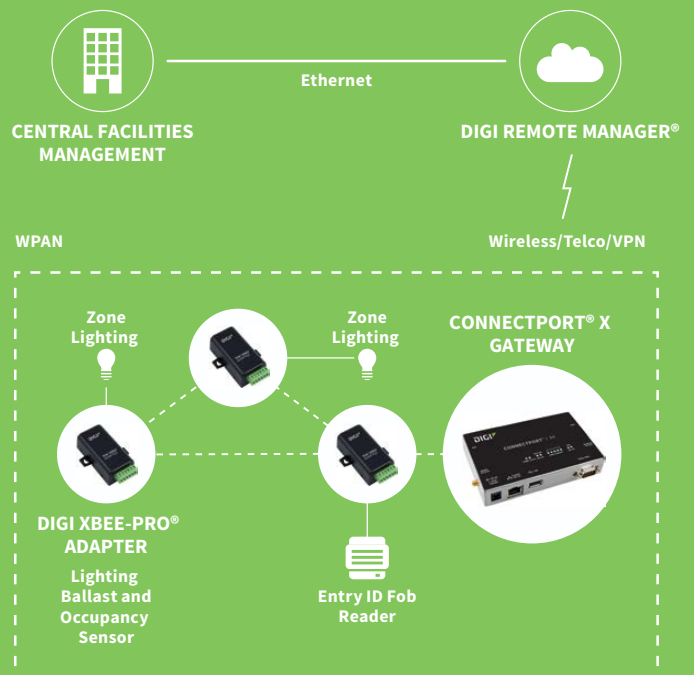


Sensors



Development
Kits

APPLICATION EXAMPLE



SPECIFICATIONS

Digi XBee-PRO® ZigBee Adapter

PERFORMANCE

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

FEATURES

ANTENNA TYPE	Digi XBee ZB Adapters: Internal Antenna; Digi 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	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

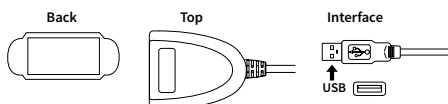
POWER REQUIREMENTS

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

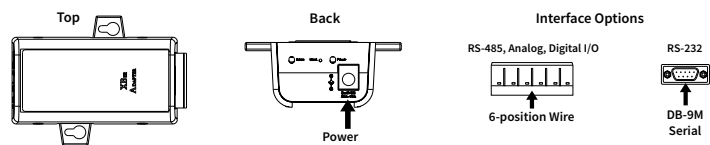
REGULATORY APPROVALS

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

USB MODEL



RS-232, RS-485, ANALOG, DIGITAL I/O MODELS



*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)

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