



2.4 GHZ
WIRELESS ADAPTERS



DIGI XBEE-PRO[®] DIGIMESH[®] ADAPTERS

Adapters utilize the DigiMesh peer-to-peer networking protocol to connect multiple types of devices over a self-healing, low-power mesh network

Digi XBee-PRO DigiMesh adapters deliver wireless connectivity to electronic devices using the DigiMesh protocol. This innovative, peer-to-peer networking protocol offers users increased stability by forming self-healing, self-discovering mesh networks. DigiMesh features dense network operation and support for sleeping routers, extending the operational life of battery dependent networks.

Digi XBee-PRO DigiMesh adapters are available in 2.4 GHz with interface options that include RS-232, RS-485, USB, digital and analog I/O.

Digi XBee-PRO DigiMesh adapters are compatible with other products using the DigiMesh protocol, such as ConnectPort[®] X gateways, and Digi XBee and Digi XBee-PRO wireless modules. By using Digi Remote Manager[®], users can securely access and manage devices in their DigiMesh network from anywhere in the world.

BENEFITS

- Simple topology to deploy and grow
- Digi XBee-PRO platform provides extended range
- DigiMesh peer-to-peer networking protocol
 - Self-healing and discovery for network stability
 - Sleeping routers supported for long battery life
 - No master/coordinator required
- Compatible with other devices using the DigiMesh protocol, like ConnectPort X gateways, RF modules and more

RELATED PRODUCTS



Gateways



Modules



Development Kits

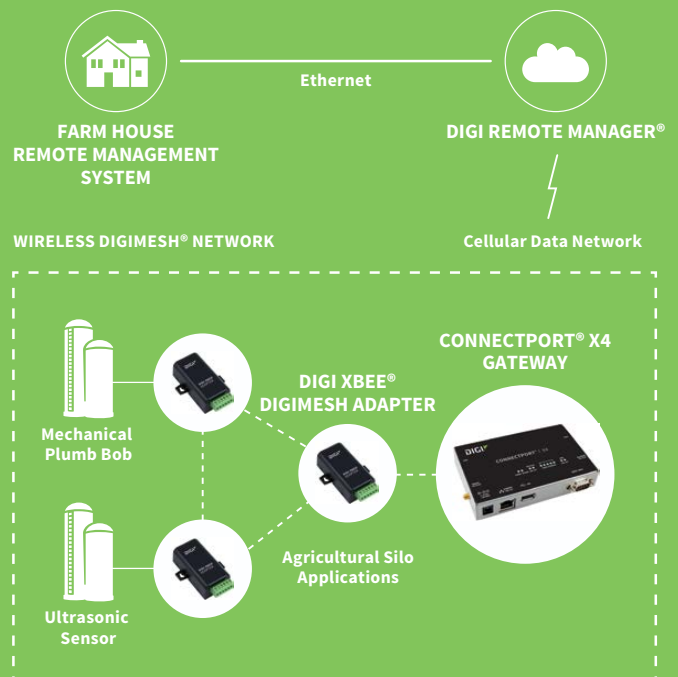


Modems



Digi XBee-PRO[®]
ZB Wall Router

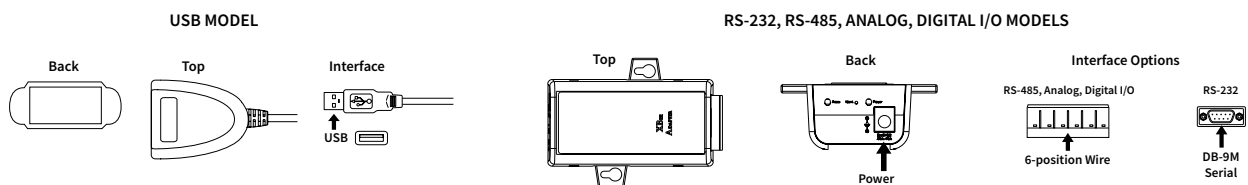
APPLICATION EXAMPLE



SPECIFICATIONS

Digi XBee-PRO® DigiMesh adapters

PERFORMANCE	
DATA RATE	250 Kbps
INDOOR/URBAN RANGE	300 ft (90 m) / 200 ft (60 m) Int'l variant
OUTDOOR/RF LINE-OF-SIGHT RANGE	1 mile (1.6 km) / 2500 ft (750 m) Int'l variant
TRANSMIT POWER	63 mW (+18 dBm) / 10 mW (+10 dBm) Int'l variant
RECEIVER SENSITIVITY (1% PER)	-100 dBm
FEATURES	
CONFIGURATION METHOD	API or AT commands
FREQUENCY BAND	2.4 GHz ISM
INTERFERENCE IMMUNITY	DSSS (Direct Sequence Spread Spectrum)
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 INTERFACE & DIGITAL I/O	6-position wire terminal block; Analog: 0 - 10V, 4 - 20 mA, or +/- 2VDC differential; Digital IO: Digital input or sinking driver output
ANTENNA TYPE	RPSMA (USB uses internal wire antenna)
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
OPERATING TEMPERATURE	-40° C to +70° C (-40° F to +158° F)
DIMENSIONS	RS-232, RS-485, Analog, Digital I/O models: 3.60 in x 1.90 in x 1.20 in (9.14 cm x 4.82 cm x 3.04 cm) USB models: 2.87 in x 1.80 in x 0.83 in (7.29 cm x 4.57 cm x 2.10 cm)
WEIGHT	RS-232, RS-485, Analog, Digital I/O models: 2.29 oz (64.92 g); USB models: 1.60 oz (45.36 g)
NETWORKING & SECURITY	
ENCRYPTION	128-bit AES
RELIABLE PACKET DELIVERY	Retries/Acknowledgements
ADDRESSING OPTIONS	PAN ID, channel, 64-bit address
CHANNELS	16
POWER REQUIREMENTS	
POWER INPUT	3.7 - 6.0VDC
POWER SUPPLY	120VAC/240VAC to 5VDC power supply, internal lithium battery pack or external 6-cell D battery holder (all sold separately)
USB MODEL	Bus powered (+5V)
TRANSMIT CURRENT	210 mA
RECEIVE CURRENT	55 mA
REGULATORY APPROVALS	
EMISSIONS	FCC Part 15, EN55022:2006 Class B, ICES-003Iss.4, EN55024:1998+A1 (2001) + A2 (2003), AS/NZS CISPR 22:2006, VCCI V 3/2007.04
SAFETY	IEC/EN 60950-1 (2001), CB Certificate, UL/cUL 60950-1
ROHS	Yes



PART NUMBERS	DESCRIPTION
XA-M14-CE1P-A	Digi XBee-PRO DigiMesh 2.4, USB adapter
XA-M14-CE1P-W	Digi XBee-PRO DigiMesh 2.4, USB adapter (International)
XA-M14-CS2P-A	Digi XBee-PRO DigiMesh 2.4, RS-232 adapter (3-6V)
XA-M14-CS2P-W	Digi XBee-PRO DigiMesh 2.4, RS-232 adapter (3-6V) (International)
XA-M14-CS3P-A	Digi XBee-PRO DigiMesh 2.4, RS-485 adapter (3-6V)
XA-M14-CS3P-W	Digi XBee-PRO DigiMesh 2.4, RS-485 adapter (3-6V) (International)
XA-M14-CS4P-A	Digi XBee-PRO DigiMesh 2.4, digital IO adapter (3-6V)
XA-M14-CS4P-W	Digi XBee-PRO DigiMesh 2.4, digital IO adapter (3-6V) (International)
XA-M14-CS5P-A	Digi XBee-PRO DigiMesh 2.4, analog input adapter (3-6V)
XA-M14-CS5P-W	Digi XBee-PRO DigiMesh 2.4, analog input adapter (3-6V) (International)

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DIGI INTERNATIONAL WORLDWIDE HQ
877-912-3444 / 952-912-3444 / www.digi.com

DIGI INTERNATIONAL GERMANY
+49-89-540-428-0

DIGI INTERNATIONAL JAPAN
+81-3-5428-0261 / www.digi-intl.co.jp

DIGI INTERNATIONAL SINGAPORE
+65-6213-5380

DIGI INTERNATIONAL CHINA
+86-21-50492199 / www.digi.com.cn

