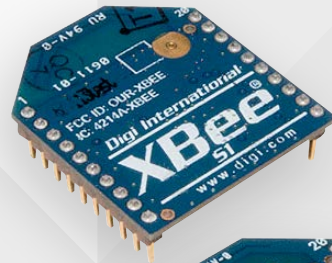




EMBEDDED RF  
MODULES FOR OEMS



# XBEE® 802.15.4 RF MODULES

Low-cost, easy-to-deploy modules provide critical end-point connectivity to devices and sensors

XBee 802.15.4 RF modules provide OEMs with a common footprint shared by multiple platforms, including multipoint and ZigBee/Mesh topologies, and both 2.4 GHz and 900 MHz solutions. OEMs deploying the XBee can substitute one XBee for another, depending upon dynamic application needs, with minimal development, reduced risk and shorter time-to-market.

XBee 802.15.4 RF modules are ideal for applications requiring low latency and predictable communication timing. Providing quick, robust communication in point-to-point, peer-to-peer, and multipoint/star configurations, XBee 802.15.4 products

enable robust end-point connectivity with ease. Whether deployed as a pure cable replacement for simple serial communication, or as part of a more complex hub-and-spoke network of sensors, XBee 802.15.4 RF modules maximize performance and ease of development.

XBee 802.15.4 modules seamlessly interface with compatible gateways, device adapters and range extenders, providing developers with true beyond-the-horizon connectivity.

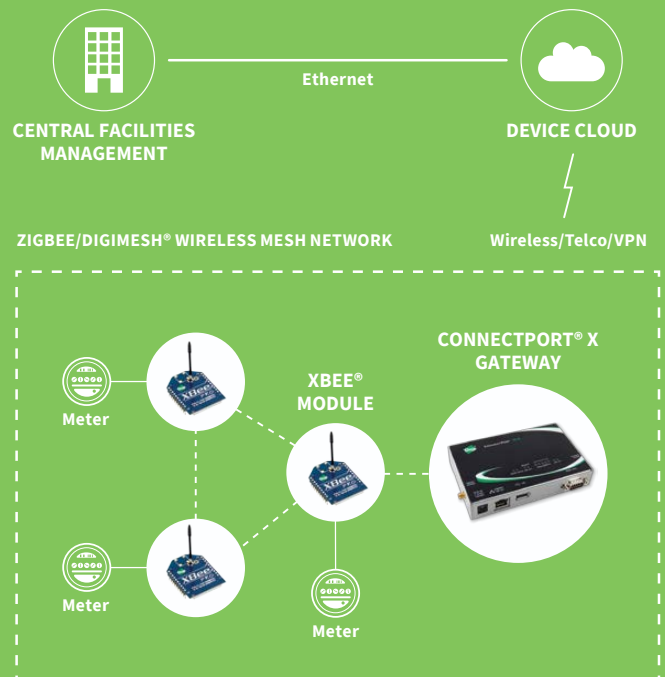
## BENEFITS

- Point-to-multipoint network topology
- 2.4 GHz for worldwide deployment
- 900 MHz for long-range deployment
- Fully interoperable with other other Digi networking products, including gateways, device adapters and range extenders
- Common XBee footprint for a variety of RF modules
- Low-power sleep modes
- Multiple antenna options
- Industrial temperature rating (-40° C to 85° C)

## RELATED PRODUCTS



## APPLICATION EXAMPLE



# SPECIFICATIONS

**XBee® 802.15.4**

**XBee-PRO® 802.15.4**

## PERFORMANCE

<b>RF DATA RATE</b>	250 kbps	250 kbps
<b>INDOR/URBAN RANGE</b>	100 ft (30 m)	300 ft (100 m)
<b>OUTDOOR/RF LINE-OF-SIGHT RANGE</b>	300 ft (100 m)	1 mi (1.6 km)
<b>TRANSMIT POWER</b>	1 mW (+0 dBm)	60 mW (+18 dBm)*
<b>RECEIVER SENSITIVITY (1% PER)</b>	-92 dBm	-100 dBm

## FEATURES

<b>SERIAL DATA INTERFACE</b>	3.3V CMOS UART
<b>CONFIGURATION METHOD</b>	API or AT Commands, local or over-the-air
<b>FREQUENCY BAND</b>	2.4 GHz
<b>INTERFERENCE IMMUNITY</b>	DSSS (Direct Sequence Spread Spectrum)
<b>SERIAL DATA RATE</b>	1200 bps - 250 kbps
<b>ADC INPUTS</b>	(6) 10-bit ADC inputs
<b>DIGITAL I/O</b>	8
<b>ANTENNA OPTIONS</b>	Chip, Wire Whip, U.FL, & RPSMA

## NETWORKING & SECURITY

<b>ENCRYPTION</b>	128-bit AES
<b>RELIABLE PACKET DELIVERY</b>	Retries/Acknowledgments
<b>IDS AND CHANNELS</b>	PAN ID, 64-bit IEEE MAC, 16 Channels

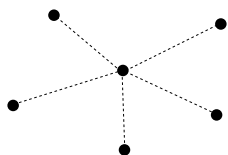
## POWER REQUIREMENTS

<b>SUPPLY VOLTAGE</b>	2.8 - 3.4VDC	2.8 - 3.4VDC
<b>TRANSMIT CURRENT</b>	45 mA @ 3.3VDC	215 mA @ 3.3VDC
<b>RECEIVE CURRENT</b>	50 mA @ 3.3VDC	55 mA @ 3.3VDC
<b>POWER-DOWN CURRENT</b>	<10 uA @ 25° C	

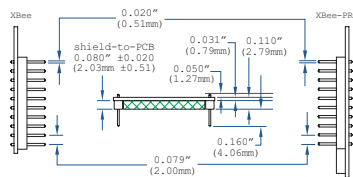
## REGULATORY APPROVALS

<b>FCC (USA)</b>	OUR-XBEE	OUR-XBEEPRO
<b>IC (CANADA)</b>	4214A-XBEE	4214A-XBEEPRO
<b>ETSI (EUROPE)</b>	Yes	Yes - Max TX 10 mW
<b>C-TICK AUSTRALIA</b>	Yes	
<b>TELEC (JAPAN)</b>	Yes	

802.15.4 - Star

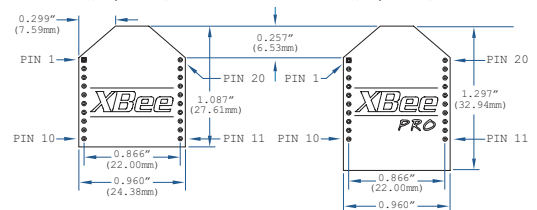


(Side Views)



(Top View)

(Top View)



PART NUMBERS	DESCRIPTION
XKB2-AT-WWC	Wireless Connectivity Kit w/ XBee 802.15.4
XKB2-AT-WWG	XBee / Arduino Compatible Coding Platform
XB24-AWI-001	XBee 802.15.4 low-power module w/ wire antenna
XB24-API-001	XBee 802.15.4 low-power module w/ PCB antenna
XB24-AUI-001	XBee 802.15.4 low-power module w/ U.fl connector
XB24-ASI-001	XBee 802.15.4 low-power module w/ RPSMA connector
XBP24-AWI-001	XBee-PRO 802.15.4 extended-range module w/ wire antenna
XBP24-AWI-001J	XBee-PRO 802.15.4 extended-range module w/ wire antenna (International)
XBP24-AUI-001	XBee-PRO 802.15.4 extended-range module w/ U.fl connector
XBP24-AUI-001J	XBee-PRO 802.15.4 extended-range module w/ U.fl connector (International)
XBP24-ASI-001	XBee-PRO 802.15.4 extended-range module w/ RPSMA connector
XBP24-ASI-001J	XBee-PRO 802.15.4 extended-range module w/ RPSMA connector (International)
XBP24-API-001	XBee-PRO 802.15.4 extended-range module w/ PCB antenna
XBP24-API-001J	XBee-PRO 802.15.4 extended-range module w/ PCB antenna (International)

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

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