



900 MHZ LONG-RANGE
RF MODULE



DIGI XBEE-PRO[®] XSC

High-performance, long-range RF module is ideal for applications with low power requirements

Digi XBee-PRO XSC module features two times the throughput and 20 times less current draw than the previous XSC module, making it ideal for long-range sensor applications. The module features an ADF7023 transceiver from Analog Devices, delivering best-in-class distances up to 28 miles Line-of-Sight (LOS)*, along with low power consumption, drawing less than 2.5 uA in power down.

The latest Digi XBee-PRO XSC (S3B hardware) allows for several firmware options which are firmware compatible with the legacy 9XStream[®] and the legacy Digi XBee-PRO XSC modules.

In addition, future firmware versions will support DigiMesh[®] along with Digi's proprietary point-to-multipoint protocols.

Digi's free XCTU configuration utility simplifies the configuration of the XSC module, which requires no programming. In addition, it can be easily configured via a simplified AT command set. The modules are pre-certified for North America and Australia, further reducing development costs and time to market.

BENEFITS

- Simplified AT command set accelerates time to market
- Modules are over-the-air compatible with legacy 9XStream and XSC products
- 20 times less current draw than previous XSC module
- Superior outdoor LOS range of up to 28 miles*
- Pin-compatible with existing through-hole Digi XBee RF modules
- RF data throughput up to 20 Kbps
- 900 MHz license-free ISM band operation

RELATED PRODUCTS



Gateways



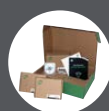
ZigBee Modules



Adapters

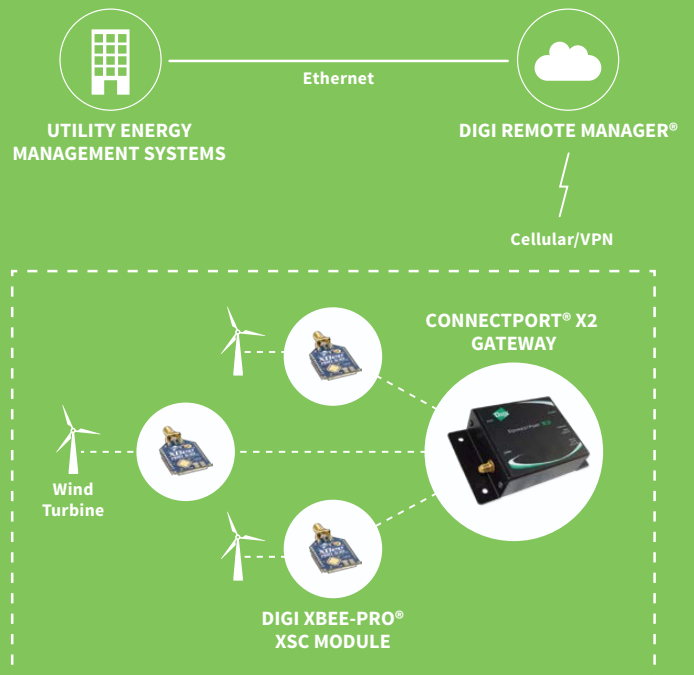


XCTU



Development Kits

APPLICATION EXAMPLE



SPECIFICATIONS

Digi XBee-PRO® XSC (S3)

Digi XBee-PRO® XSC (S3B)

HARDWARE

PROCESSOR	ADF7025 transceiver, Atmel AT91SAM7S	ADF7023 transceiver, Cortex-M3 EFM32G230 @ 28 MHz
FREQUENCY BAND	902 MHz to 928 MHz	
ANTENNA OPTIONS	Wire, U.FL, RPSMA	

PERFORMANCE

RF DATA RATE	10 Kbps	10 Kbps or 20 Kbps
INDOOR/URBAN RANGE*	Up to 1200 ft (370 m)	Up to 2000 ft (610 m)
OUTDOOR/LINE-OF-SIGHT RANGE*	Up to 6 mi (9.6 km)	Up to 9 mi (14 km) w/ dipole antenna Up to 28 mi (45 km) w/ high-gain antenna
TRANSMIT POWER	Up to 20 dBm (100 mW)	Up to 24 dBm (250 mW) software selectable
RECEIVER SENSITIVITY	-106 dBm	-109 dBm at 9600 baud -107 dBm at 19200 baud

FEATURES

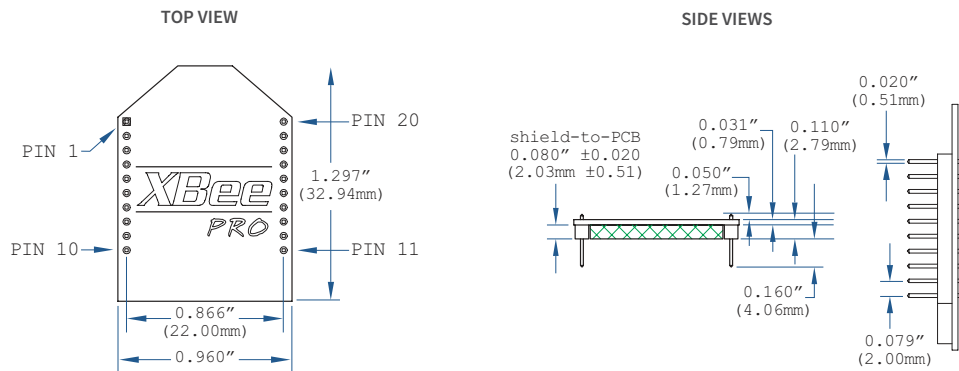
SPREAD SPECTRUM	FHSS
OPERATING TEMPERATURE	-40° C to +85° C

POWER

SUPPLY VOLTAGE	3.0 - 3.6 VDC	2.4 to 3.6 VDC
TRANSMIT CURRENT	265 mA	215 mA
RECEIVE CURRENT	65 mA	26 mA
SLEEP CURRENT	45 uA	2.5 uA

REGULATORY APPROVALS

FCC	MCQ-Digi XBeeXSC	MCQ-XBPS3B
IC	1846A-Digi XBeeXSC	1846A-XBPS3B
C-TICK	No	Australia



*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
XBP9B-XCST-001	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, RPSMA ant connector, 9600 bps
XBP9B-XCUT-001	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, U.FL ant connector, 9600 bps
XBP9B-XCWT-001	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, wire antenna, 9600 bps
XBP9B-XCST-002	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, RPSMA ant connector, 19.2 Kbps
XBP9B-XCUT-002	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, U.FL ant connector, 19.2 Kbps
XBP9B-XCWT-002	Digi XBee-PRO XSC S3B, 900 MHz, 250 mW, wire antenna, 19.2 Kbps
XBP9B-XCST-021	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, RPSMA ant connector, 9600 bps (International)
XBP9B-XCUT-021	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, U.FL ant connector, 9600 bps (International)
XBP9B-XCWT-021	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, wire antenna, 9600 bps (International)
XBP9B-XCST-022	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, RPSMA ant connector, 19.2 Kbps (International)
XBP9B-XCUT-022	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, U.FL ant connector, 19.2 Kbps (International)
XBP9B-XCWT-022	Digi XBee-PRO XSC S3B, 920 MHz, 250 mW, wire antenna, 19.2 Kbps (International)
XK9-XCT-2	Digi XBee-PRO XSC S3B 920 MHz Development Kit (International)

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