

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



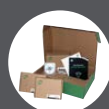
ZigBee
Modules



Adapters

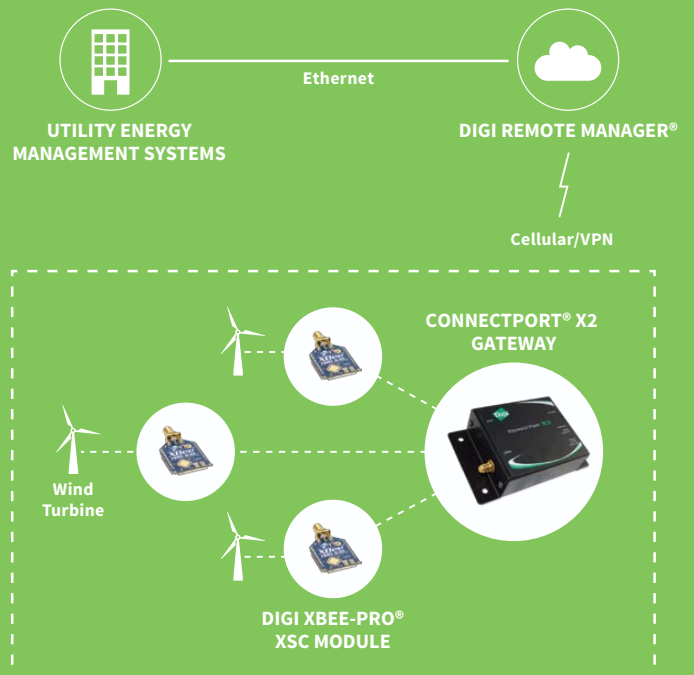


XCTU



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

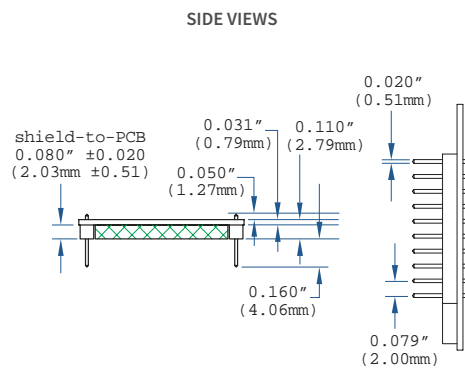
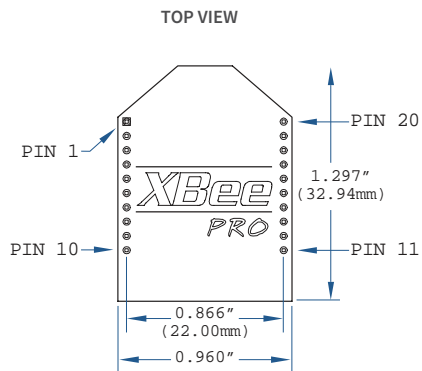
SPREAD SPECTRUM	FHSS
OPERATING TEMPERATURE	-40° C to +85° C

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



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-0	Digi XBee-PRO XSC S3B Development Kit
XK9-XCT-2	Digi XBee-PRO XSC S3B 920 MHz Development Kit (International)