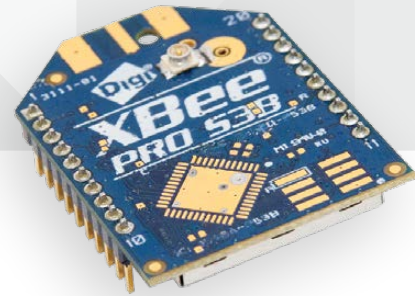




900 MHZ LONG-RANGE  
RF MODULE



# DIGI XBEE-PRO<sup>®</sup> 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<sup>®</sup> and the legacy Digi XBee-PRO XSC modules.

In addition, future firmware versions will support DigiMesh<sup>®</sup> 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



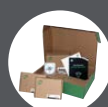
ZigBee  
Modules



Adapters

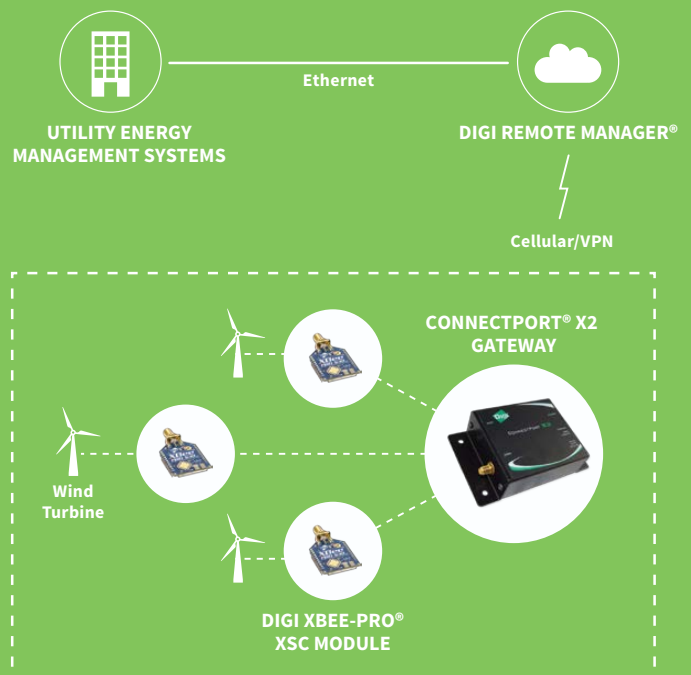


XCTU



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<br>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

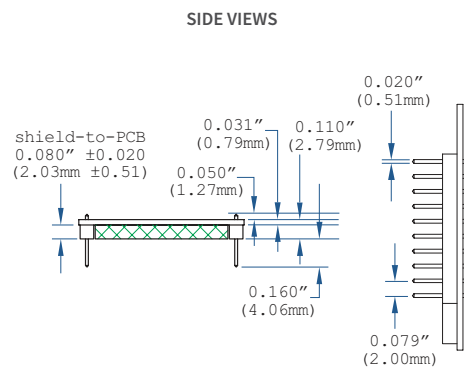
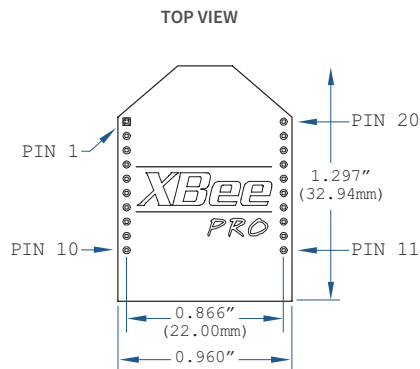
|                       |                  |
|-----------------------|------------------|
| SPREAD SPECTRUM       | FHSS             |
| OPERATING TEMPERATURE | -40° C to +85° C |

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

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

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