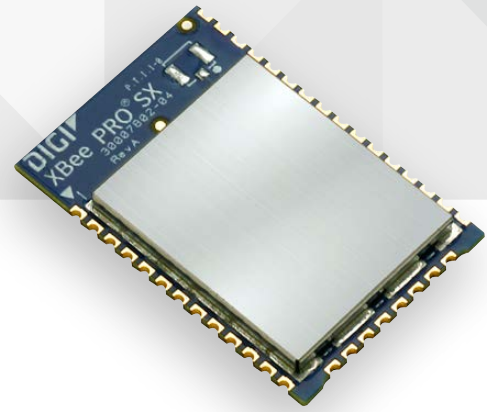


LOW-POWER RF
MODULE FOR EUROPE



DIGI XBEE® SX 868

RF module family operates in the 863-870 MHz range delivering superior performance and interference immunity at 868 MHz

The Digi XBee SX 868 is an 868 MHz RF module for Europe. The module can run either a proprietary DigiMesh® or point-to-multipoint networking protocol utilizing a low-power Silicon Labs microcontroller and an Analog Devices ADF7023 transceiver, along with an integrated SAW filter which offers industry-leading interference blocking. The Digi XBee SX 868 operates between 863 MHz and 870 MHz, making it deployable in several regions throughout the world including approved European countries.

The Digi XBee SX 868 also leverages 868 MHz and surrounding frequencies for LBT + AFA (Listen Before Talk and Adaptive Frequency Agility). This significantly reduces interference by listening to

the radio environment before any transmission starts, and automatically shifting to a new channel when interference is detected. This patented frequency scan occurs automatically and in a matter of microseconds so as not to impact performance.

The Digi XBee SX 868 RF module is a complete hardware and software solution that works directly out of the box. X-CTU, Digi's easy-to-use RF configuration tool, reduces development time from months to weeks, ensuring your product gets to market fast.

BENEFITS

- Low-power CE/RED certified 868MHz RF module based on Silabs EFM32 and ADI7023
- Design includes SAW filter for optimal performance in noisy RF environments
- OTA and pin compatible with legacy Digi XBee 868LP
- Listen-Before-Talk and Frequency Agility for optimal interference immunity
- DigiMesh networking topology for redundancy and reliability
- Simple configuration using X-CTU accelerates time to market

RELATED PRODUCTS



Modules



Development Kits



Gateways

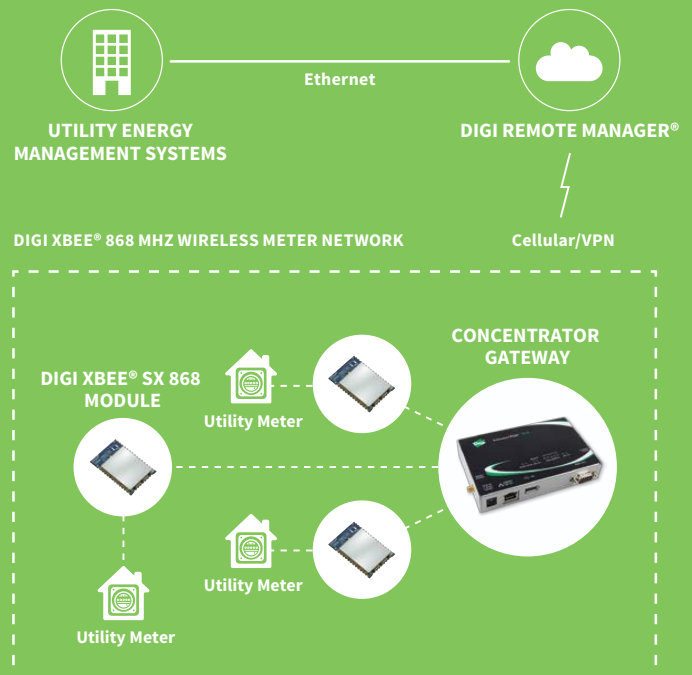


XCTU



Digi Remote Manager®

APPLICATION EXAMPLE



SPECIFICATIONS

Digi XBee® SX 868

HARDWARE

PROCESSOR ADF7023 transceiver, Cortex™-M3 EFM32LG230F256 @ 48 MHz

FREQUENCY BAND 863 MHz to 870 MHz

ANTENNA OPTIONS U.FL, RF pad

PERFORMANCE

RF DATA RATE 10 Kbps or 80 Kbps, software selectable

UART DATA RATE Up to 921 Kbps

SPI DATA RATE Up to 6 Mbps

THEORETICAL LINE-OF-SIGHT RANGE Up to 14.5 km w/ 2.1 dBi antenna

TRANSMIT POWER Up to 13 dBm ERP

RECEIVER SENSITIVITY -106 dBm @ 80 Kbps, -113 dBm @ 10 Kbps

FEATURES

I/O 13 Digital I/O

ANALOG INPUTS 4 channels 10-bit

OPERATING TEMPERATURE -40° C to +85° C

NETWORKING TOPOLOGIES DigiMesh®, Repeater, Point-to-point, Point-to-multipoint, Peer-to-peer

SECURITY 128-bit AES Encryption

POWER

SUPPLY VOLTAGE 2.4 - 3.6 VDC

TRANSMIT CURRENT 55 mA

RECEIVE CURRENT 40 mA

SLEEP CURRENT 1.8 uA

REGULATORY APPROVALS

ETSI (EUROPE) CE/RED

ROHS Compliant

PART NUMBERS

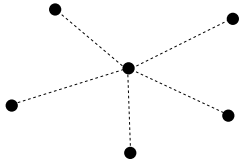
DESCRIPTION

XB8X-DMUS-001 XBee SX 868, 25 mW, DigiMesh/P2MP, U.FL, Europe

XB8X-DMRS-001 XBee SX 868, 25 mW, DigiMesh/P2MP, RF Pad, Europe

XK8X-DMS-0 Digi XBee SX 868 Development Kit

Point-to-Multipoint / Star



DigiMesh

