Digi XBee SX 868 Development Kit provides OEMs with a simple, quick way to integrate low-power, long-range 868 MHz connectivity into their devices.

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.

This kit is designed for anyone interested in getting started in the world of XBee embedded connectivity and mesh networking. Hardware and software engineers, corporate technologists, or educators and students can quickly learn more about embedded wireless integration using the hands-on examples included in the kit.

The Kit Includes:

- 3 Digi XBee SX 868 Modules
- 3 Digi XBee Interface Boards
- Antennas and Accessories
- Getting Started Guide (Online)

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**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
**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

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It's the easy and fast way to build a wireless mesh network using Digi XBee modules. To learn more visit docs.digi.com.

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