DIGI XBEE® SX 868 DEVELOPMENT KIT

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)

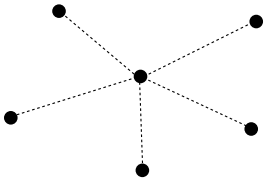| NUMBER	DESCRIPTION
XK8X-DMS-0	Digi XBee SX 868 Development Kit

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 XBee 868LP

– Listen-Before-Talk and Frequency Agility for optimal interference immunity

– DigiMesh networking topology for redundancy and reliability

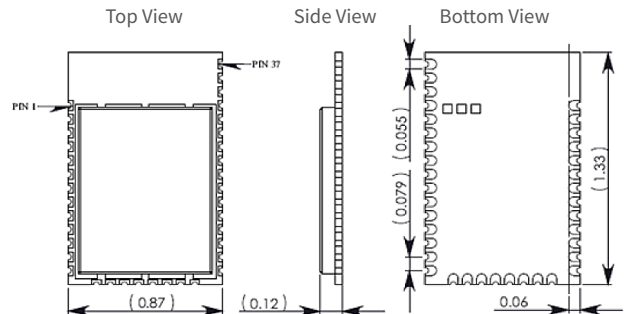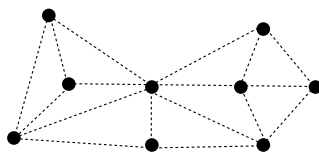– Simple configuration using X-CTU accelerates time to market

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

Point-to-Multipoint / Star

DigiMesh

Top View Side View Bottom View

PIN 37

PIN 1

(0.055)

(0.079)

(1.33)

(0.87) (0.12) 0.06

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

DIGI

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