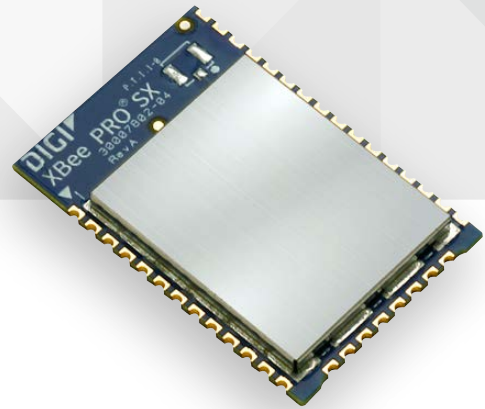




LOW-POWER RF  
MODULE FOR EUROPE



# 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 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

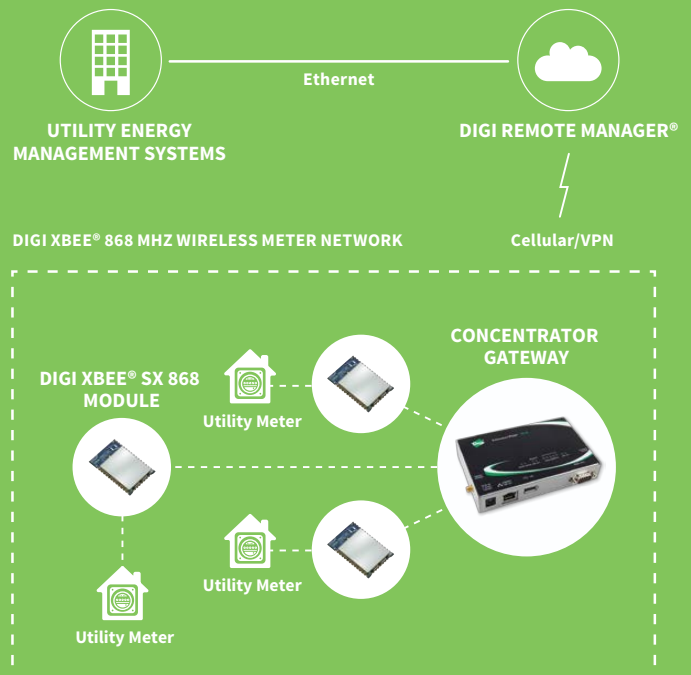


XCTU



Digi Remote Manager®

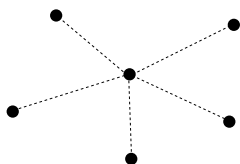
## APPLICATION EXAMPLE



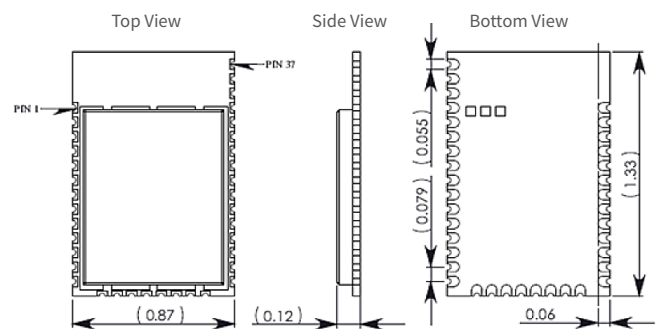
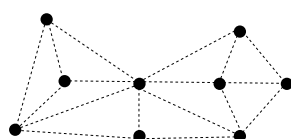
SPECIFICATIONS		Digi XBee® SX 868	
HARDWARE			
PROCESSOR	ADF7023 transceiver, Cortex™-M3 EFM32LG230F256 @ 48 MHz		
FREQUENCY BAND	863 MHz to 870 MHz		
ANTENNA OPTIONS	U.FL, RF pad		
PERFORMANCE			
RF DATA RATE	10 Kbps or 80 Kbps, software selectable		
UART DATA RATE	Up to 921 Kbps		
SPI DATA RATE	Up 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



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