

# XBee® 868LP for Europe

Low-Power RF Module for Europe

RF module family operates in the 863-870 MHz range utilizing 30 channels to deliver superior throughput performance and interference immunity at 868 MHz.



## Overview

The XBee 868LP module was designed to provide a high-performance, low-power module at an extremely competitive price point. The XBee 868LP module can run either a proprietary DigiMesh® or point-to-multipoint networking protocol utilizing a low-power Energy Micro microcontroller and an Analog Devices ADF7023 transceiver, which offers industry-leading interference blocking. The XBee 868LP operates between 863-870 MHz, making it deployable in several regions throughout the world including approved European countries and India by utilizing a software selectable channel masking feature.

The XBee 868LP is also the industry's first RF module using 868 MHz and surrounding frequencies for LBT + AFA (Listen Before Talk and Adaptive Frequency Agility). This virtually eliminates interference by listening to the radio environment before any transmission starts, and automatically shifting to a new channel when interference is detected. This patent-pending frequency scan occurs automatically and in a matter of microseconds so as not to impact performance.

The XBee 868LP 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.

### Related Products



Gateways

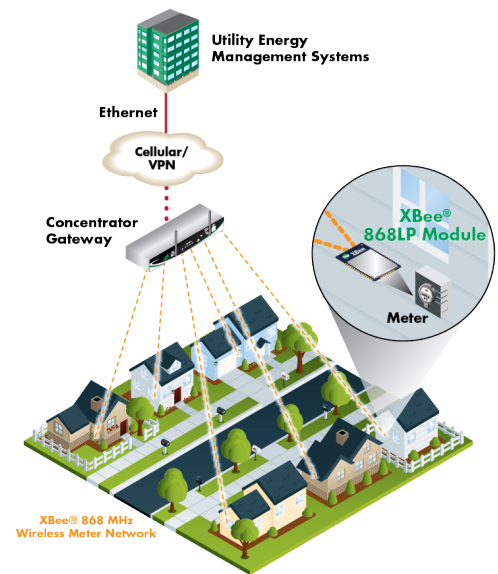


Development Kits



Modules

### Application Highlight



### Features/Benefits

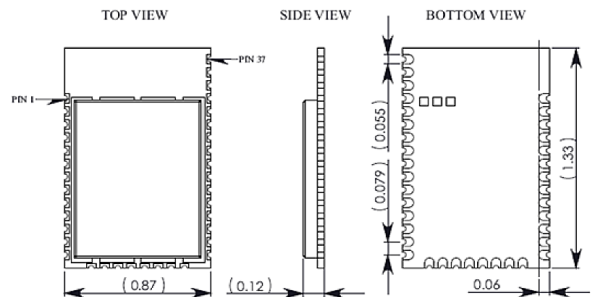
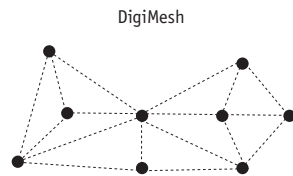
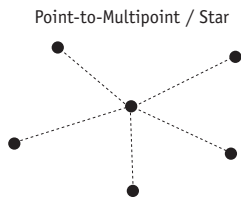
- Simplified configuration using X-CTU accelerates time to market
- Industry's first RF module to utilize LBT + AFA for interference immunity
- Modules can operate in DigiMesh or point-to-multipoint wireless networking topologies
- Programmable versions use a free version of Freescale's Code Warrior, further limiting development costs
- Pin-compatible with XBee® ZB SMT versions
- Module can operate at 865 MHz for use in India with channel masking feature
- RF throughput up to 50 Kbps



# Specifications

# XBee® 868LP for Europe

Hardware	
Processor	ADF7023 transceiver, Cortex™-M3 EFM32G230 @ 32 MHz
Frequency Band	863 MHz to 870 MHz
Antenna Options	U.FL, RF pad, PCB (PCB antenna only approved with 10 Kbps data rate)
Performance	
RF Data Rate	10 Kbps or 80 Kbps
Indoor/Urban Range	Up to 500 ft (150 m) w/2.1 dBi antenna, up to 250 ft (75 m) w/PCB embedded antenna
Outdoor/Line-Of-Sight Range	Up to 2.5 miles (4 km) w/2.1 dBi antenna, up to 0.6 miles (1 km) w/PCB embedded antenna
Transmit Power	Up to 12 dBm (16 mW), software selectable
Receiver Sensitivity	-101 dBm @ 80 Kbps, -106 dBm @ 10 Kbps
Features	
I/O	13
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
Power	
Supply Voltage	2.7- 3.6 VDC
Transmit Current	48 mA
Receive Current	27 mA
Sleep Current	1.7 uA
Regulatory Approvals	
ETSI (Europe)	CE
RoHS	Yes



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