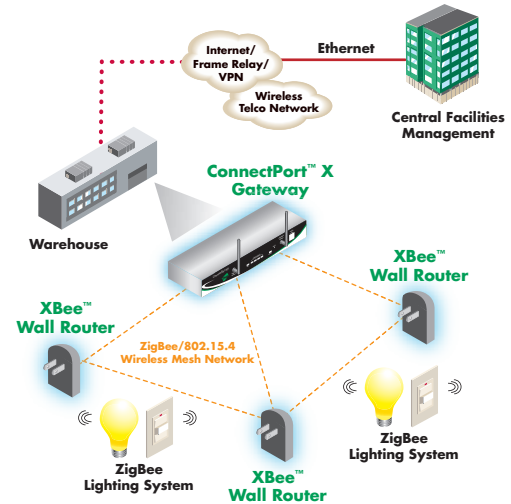


# XBee™ Wall Router

ZigBee®/Mesh Network Extender/Router

Simple plug-in ZigBee extender/router utilizes a standard wall socket for power. Small form factor and ease of deployment make it a perfect solution to effortlessly create or supplement Digi Drop-in Networks.



## Features/Benefits

- Small plug-in form factor
- Easy to deploy – plugs into standard power outlet
- Acts as extender to increase signal strength or add distance to ZigBee networks
- Creates additional network pathways to ensure more reliable mesh network
- Secure mounting tab prevents accidental unplugging
- Integrates with Digi Drop-in Networking products
  - ConnectPort™ X gateways
  - XBee™ embedded modules
  - XBee™ adapters
  - XBee™ bridges
  - Digi Connectware® Manager
- Extended operating temperature (-20° C to 75° C)

## Overview

ZigBee technology enables low-cost, low-power networking of sensors, controllers and other such devices in self-configuring, self-healing wireless mesh networks. Digi's XBee wall router is a small extender used to create the backbone of a ZigBee network or to expand the range of a ZigBee network so that other ZigBee devices can seamlessly communicate with one another.

Part of Digi's Drop-in Networking solutions, the XBee wall router helps to create and/or fortify the infrastructure of a ZigBee network by simply plugging into standard wall power sockets around a customer facility, creating a multi-path self-healing network. Installation is easy and completely unobtrusive.

The U.S. version of the XBee wall router includes a built-in mounting tab, which allows it to be securely screwed into standard wall sockets using the existing mounting screw hole. This prevents accidental unplugging of the repeater and reduces risk of theft or vandalism.

The wall router is designed primarily to “patch” areas within a ZigBee network where signal erosion or loss occurs due to distance limitations or air interference. It also serves to create multiple pathways, increasing the redundancy of the mesh communications to ensure maximum network reliability.

In addition to ZigBee network extension, the wall router also includes two integrated environmental sensors. Customers using ConnectPort X gateways have the ability to receive data from ZigBee enabled temperature and light sensors built inside of the product.

XBee wall routers can be used with ConnectPort X gateways, XBee embedded modules, XBee adapters or XBee sensors to “drop-in” end-to-end device networks – without the need for a wired network infrastructure.



# Features/Specifications

## FEATURES

### General

- Frequency: 2.4 GHz (ISM)
- Internal antenna
- Swappable international power plugs
- Locking mechanism - secure unit to electrical outlet using center outlet screw (U.S. only)

### Performance

- Indoor/Urban range: Up to 100 ft (30 m)
- Outdoor RF line-of-sight range: Up to 300 ft (100 m)
- Transmit power output: 1 mW (0 dBm)
- RF data rate: 250,000 bps
- Receiver sensitivity: -95 dBm (1% PER)

### Networking and Security

- Networking topologies: Point-to-Point, Point-to-Multipoint, Peer-to-Peer, Mesh
- Number of channels: 16 - 5 MHz channels (Direct Sequence Spread Spectrum)
- Filtration options: PAN ID, Channel, 2<sup>^</sup>64 (64-bit) addresses

### LEDs

- Power: Solid when external power is supplied
- Associate: Blinks when unit is connected and associated to an RF network

### Push Button

- Device reset
- Configuration reset to factory defaults
- Identification/Commissioning mode

## SENSORS

### Integrated Temperature and Light Sensor

- Temperature sensor:
  - Range: -20° C to 70° C (-4° F to 158° F)
  - Accuracy: +/- 2° C
- Ambient light sensor:
  - Range of spectral bandwidth: 360 to 970 nm (similar to human eye)
  - Wavelength of peak sensitivity: 570 nm

## INTERFACES

- ZigBee - Compatible with:
  - Digi XBee Series 2 Module
  - EmberZNet 2.5.x Mesh Stack

## ENVIRONMENTAL

- Operating temperature: -20° C to 75° C (-4° F to 167° F)
- Relative humidity: 5% to 95% (non-condensing)

## POWER REQUIREMENTS

- Power input: Universal AC input (85VAC to 265VAC)

## REGULATORY APPROVALS

- UL/cUL (60950-1 / CSA-22.2 No. 60950-1-03)
- CE (EN 60950-1)
- CB Scheme (IEC 60950-1)
- FCC Part 15, Class B
- EN55022 Class B, EN 55024
- VCCI
- C-Tick (pending)
- RoHS Compliant

## DIMENSIONS

Length: 2.87 in (7.30 cm)  
 Width: 1.97 in (5.00 cm)  
 Height: 1.37 in (3.50 cm)  
 Weight: 2.50 oz (70.87 g)

## MODEL ..... PART NUMBERS

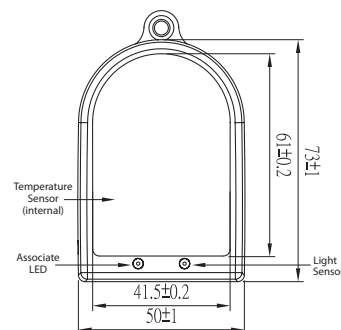
### Model

- XBee Wall Router (U.S. power plug)
- XBee Wall Router (25-piece bulk pack)
- XBee Wall Router (European power plug)
- XBee Wall Router (25-piece bulk pack)
- XBee Wall Router (U.K. power plug)
- XBee Wall Router (25-piece bulk pack)
- XBee Wall Router (Australia Power Plug)
- XBee Wall Router (25-piece bulk pack)

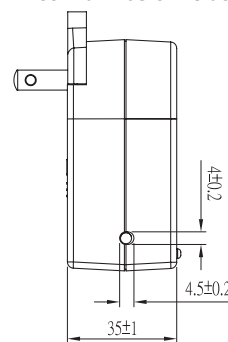
### Worldwide

- XR-B14-CW1R1
- XR-B14-CW1R1-25
- XR-B14-CW1R2
- XR-B14-CW1R2-25
- XR-B14-CW1R3
- XR-B14-CW1R3-25
- XR-B14-CW1R4
- XR-B14-CW1R4-25

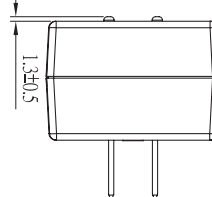
XBee Wall Router - Front



XBee Wall Router - Side



XBee Wall Router - Top



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