

# EasyLink Rail

Hardened Rail Certified Wireless Bridge Kit



## Overview

The EasyLink Rail is a hardened Indoor/Outdoor pre-configured wireless bridge kit containing 2 units that provide high-speed wireless connectivity. Comprised of an IEEE 802.11ac MIMO wireless radio with gigabit connectivity, the EasyLink Rail is hardened against dust, vibration, extreme temperatures, and limited water ingress for harsh and demanding environments. EasyLink Rail delivers reliable connectivity with Rail Certified M12 screw type and Harting push connectors for multiple connectivity options. Maximum transmission speeds are up to 867Mbps on the 5GHz band.

### + High Bandwidth Wireless Connectivity

- Designed for Point-to-Point wireless remote connectivity
- IEEE 802.11a/n/ac providing high throughput data transmission on 5GHz up to 867Mbps
- Just power and align using supplied PoE injectors and power supplies
- 2 x 2 MIMO 7dBi, 45° antennas designed to maintain connection between moving Rail cars

### + Comprehensive and Advanced Software Features

- Static routing, RIPv1, RIPv2, and OSPFv2
- Built in Stateful Firewall and RADIUS for security control
- RF strength LEDs and Bandwidth Tester to ease installation effort

### + Hardened Grade with IP65 Protection

- Wide operating temperature range for extreme environments
- Fanless and ruggedized indoor/outdoor enclosure
- EN 50155 Rail Certified

# Hardware Specifications

## + Technology

### Standards

IEEE 802.3 10BASE-T  
 IEEE 802.3u 100BASE-TX  
 IEEE 802.3ab 1000BASE-T  
 IEEE 802.11a/n/ac Wireless LAN  
 IEEE 802.11i Wireless LAN

### Performance

Wireless transmission rate 5GHz: 11a: 108Mbps, 11n: 300Mbps, 11ac: 867Mbps  
 Ethernet data rate: Up to 540Mbps (LAN to wireless 11ac)

### Wireless

RF channels: 2 Non-overlapping  
 Frequency range: 5GHz: 5150-5250MHz and 5725-5850MHz  
 Channel width: 5GHz: 10MHz, 20MHz, 40MHz, 80MHz  
 Data security: 256-bit AES-CCM

### Transmit Power (5GHz)

6MBit/s: 31  
 54MBit/s: 27  
 MCS0: 30  
 MCS7: 27  
 MCS9: 22

### Receive Sensitivity (5GHz)

6MBit/s: -96  
 54MBit/s: -81  
 MCS0: -96  
 MCS7: -77  
 MCS9: -72

## + Power

### Input

8-30 VDC

\*Note: Power can be provided via the M12 L-Coded connector, Harting Connector or Passive PoE

### Power Consumption

12W Max

## + Physical

### Casing Material

Fire rated UV treated plastic (R22/HL3) with internal metal enclosure, IP 65

### Dimensions

124 x 116 x 53.5mm (W x D x H)  
 (4.88" x 4.57" x 2.11")

### Unit Weight

1.1lbs

### Weight (shipping)

2lbs 7oz

### Units per kit

2 Units

### Installation Type

Bracket Mount: 1" x 1" square

## + Interface

### Ethernet

10/100/1000BASE-TX Harting or M12 X-Coded Connector

### Wireless

802.11a/n

### LED Indicators



## + Connectors

### Ethernet (Pins 1-8) and Power (Pins 9-10)

Harting Housing PP V4 2.0 Compact int seal/vrtcl jack, Harting connector HPP V4 SIGNAL THT 10-POLE STRAIGHT

### Ethernet with Passive PoE Support

M12 X-Coded Female 8 pin

## + Regulatory

### ISO

Manufactured in ISO-9001 facility

### EMI

FCC Part 15B Class A

PCC Part 15C

### EMC

ETSI EN 301 489-1 V2.2.0

ETSI EN 301 489-17 V3.2.0

### Environmental Test Compliance

IEC 60068-2-6 Fc (Vibration Resistance)

FED STD 101C Method 5007.1 (Free fall w/package)

EN50155/EN50121-3-2 Railway Compliant

### Safety

NEMA FR4 PCB Rated, Low Smoke Zero Halogen (LSZH)

EN 45545-2 Fire Safety

EN 60950-1: 2006+A11: 2009+A1: 2010+A12: 2011+A2: 2013;

EN60950-22:2017;

EN 62311:2008

## + Environmental

### Operating Temp.

-40 to 75°C (-40 to 167°F)

### Storage Temp.

-45 to 85°C (-49 to 185°F)

### Relative Humidity

5% to 95% (non-condensing)

### Wind Load

132N @200km/h/h

### Wind Survivability

200km/h

## + Pinouts

### Power - M12 L-Coded Male

Please see datasheet for more information

### Ethernet plus Power - Harting Connector

Please see datasheet for more information

### Ethernet - M12 X-Coded Female

Please see datasheet for more information

## Software Features

### + Interface

- Web Browser
- SNMP v1/v2/v3

### + Management

- Firmware and configuration upgrade and backup via Web Browser
- Supports DHCP Server/Client/Relay
- DNS cache and Web Proxy
- System health monitoring including temperature and voltage
- Local system log, e-mail and remote log service
- SNTP client
- Useful tools such as Bandwidth Test, E-mail, Ping, Traceroute, Packet Sniffer and Traffic Generator

### + Wireless

- Encryption: WPA, WPA2, WEP, AES
- Dynamic Frequency selection
- Proprietary Nstreme and Nv2 protocols for long distance transmission

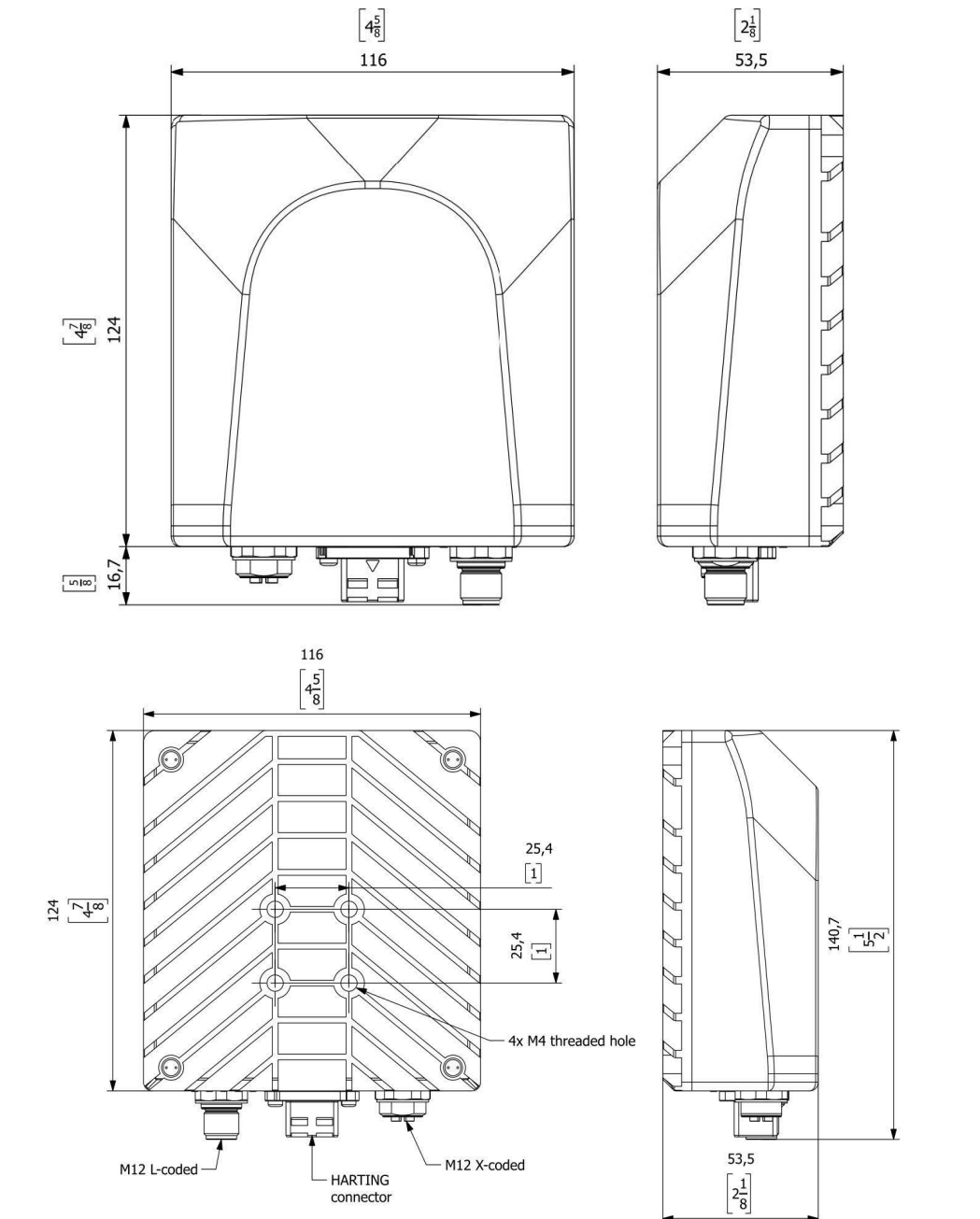
### + Routing

- Static routing, RIPv1 & v2 and OSPFv2
- Bidirectional Forwarding Detection
- Prefix List to filter and control the routing table

### + Security

- Radius Client
- Powerful Firewall: Stateful packet inspection, Layer-7 protocol detection, Peer-to-peer protocols filtering
- Standards
- Source MAC address
- IP addresses (network or list) and address types (broadcast, local, multicast, unicast)
- Port or port range
- IP protocols
- Protocol options (ICMP type and code fields, TCP flags, IP options and MSS)
- Interface the packet arrived from or left through
- Internal flow and connection marks
- DSCP byte
- Packet content
- Rate at which packets arrive and sequence numbers
- Packet size
- Packet arrival time

# Dimensions



# Application

