

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-overlappingv 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

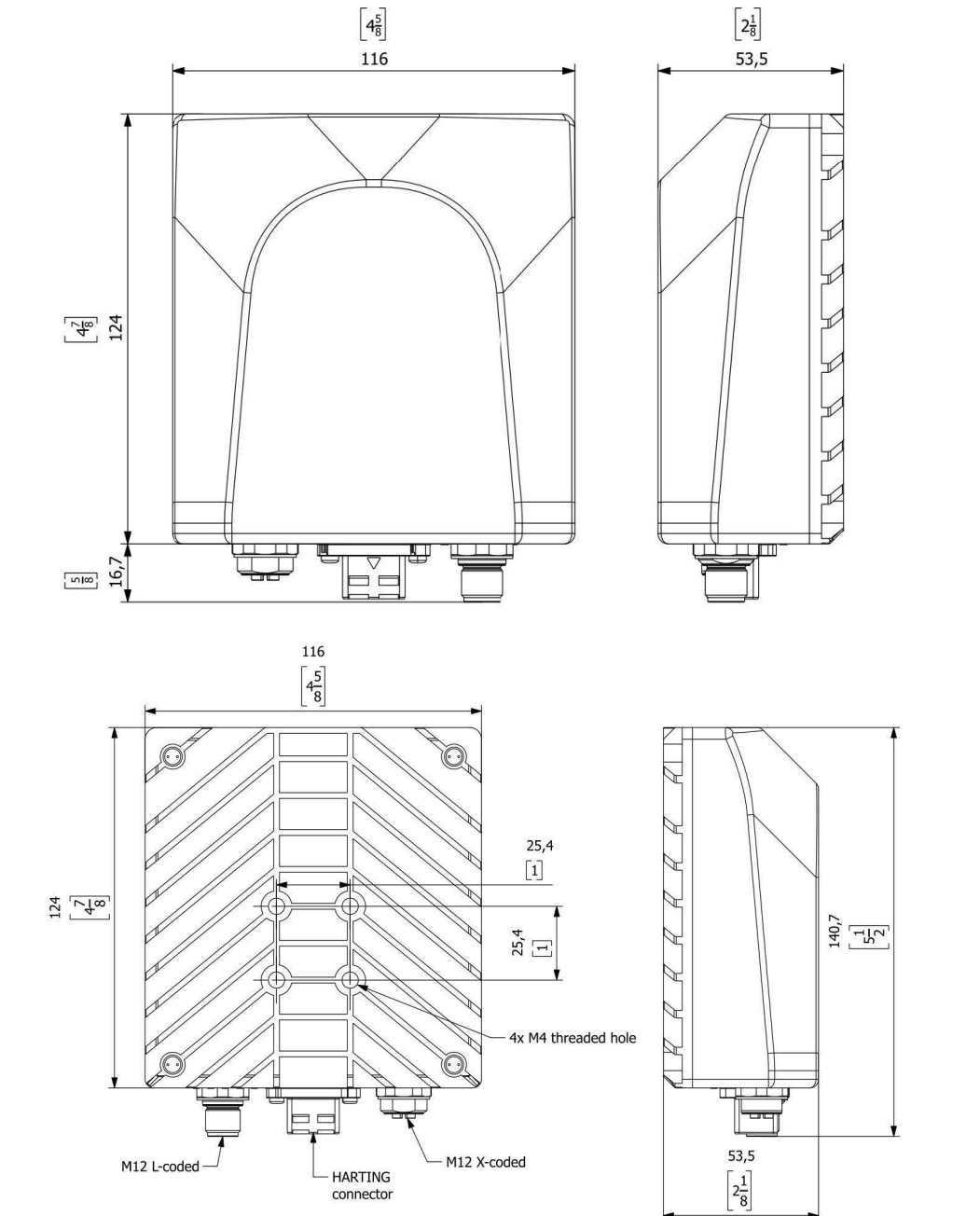
+ Routing

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



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