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

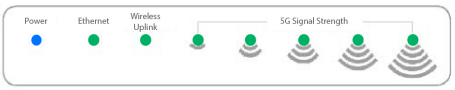
Ethernet

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

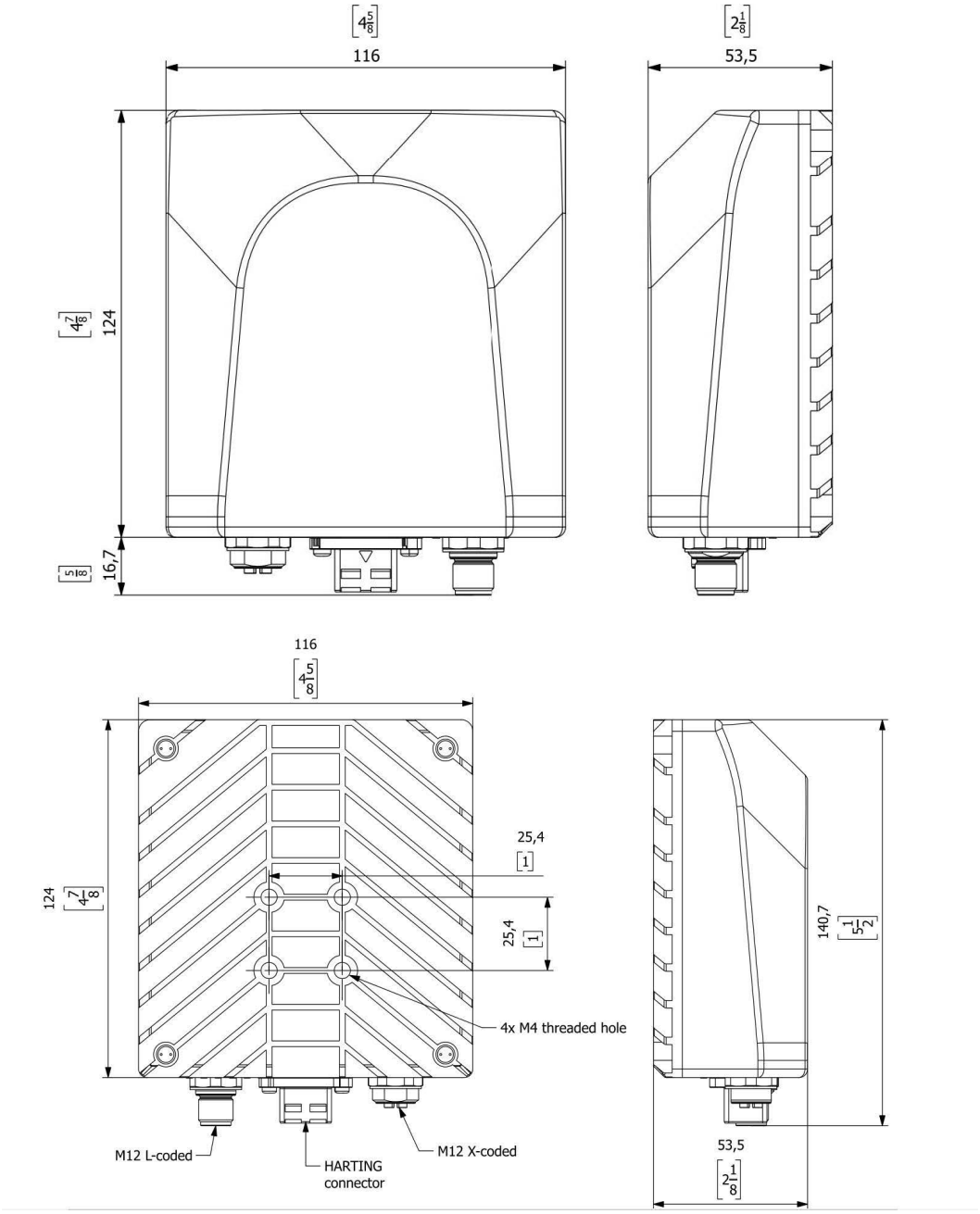
Packet content

Rate at which packets arrive and sequence numbers

Packet size

Packet arrival time

Dimensions


116
53,5
124
16,7
116
25,4
25,4
124
140,7
4x M4 threaded hole
M12 L-coded
HARTING connector
M12 X-coded
53,5

Application



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