# **EKI-9510 Series**

# **EN 50155 10-port Ethernet Switch**



#### **Features**

- M12 connector with IP67 rugged housing
- Complies with EN50155 & EN50121-3-2
- Complies with EN45545-2 & EN61373
- Supports PoE IEEE802.3af/at(PoE model)
- Wide nominal power input range: 24~110V<sub>DC</sub> Operating power input range: 16.8~137.5V<sub>DC</sub>
- Compact size to fit in different narrow spaces
- Operating temperature:-40 ~ 70°C
- PoE/ non-PoE /Fast Ethernet/ Gigabit Ethernet/ Managed/ Unmanaged options available

Vertrieb durch

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## Introduction

EKI-9510 series switch is designed for railway application, with rugged and high EMC performance. EKI-9510 series is the suitable networking solution for rolling stock and wayside applications. It provides M12 connectors for Ethernet/ console/ power-input) connections to ensure tight & robust connectivity, to guarantee reliable operation against environmental disturbances, it complies with IEC61373 vibration and shock for rolling stock application. The portfolio of EKI-9510 series provides multiple options, depends on user's demand, it has Managed type or Unmanaged type, Fast Ethernet or Gigabit Ethernet solutions, with IEEE802.3af/at PoE function (PoE model only), it provides up to total 90Watts power budget for P.D. devices (such as camera, IP-phone and wireless access point).

EKI-9510 series features a "compact" designed, with the IP67 rugged housing and the ample pitch connectors that can easy connect/ disconnect cables without interference to prevent the human error within the harsh industry and narrow environment. With the "short vertical height" dimension, it could be easily deployed/installed in the cabinet or ceiling partition and integrate mass Ethernet connection in one box.

# **Specifications**

#### Interface

Ethernet Port\* M12 4pin D-coded for Fast Ethernet (10/100BASE-T) M12 8pin X-coded for Gigabit Ethernet (10/100/1000BASE-T) Console port M12 5pin A-coded (Management model only)

 Power Connector M12 5pin A-coded

\*See the port options from ordering information

#### **Physical**

Enclosure Die-cast zinc front panel and extruded aluminum chassis

Protection Class

Wall Mount Installation

160 x 100 x 70 mm (W x H x D) Dimensions

Weight

#### **LED Display**

 System LEDs PWR1, PWR2, SYS.

Alarm & R.M. (Management model only)

Port LED Data, PoE (PoÈ model only)

#### **Environment**

**Operating Temperature** -40 ~ 70°C (-40 ~ 158°F) -40 ~ 85°C (-40 ~ 185°F) Storage Temperature Ambient Relative Humidity 5~95% (non-condensing)

#### **Power (non-PoE Model)**

**Power Consumption** 

24/28/36/48/72/96/110V<sub>DC</sub> Nominal Input voltage Operating range 16.8~137.5V<sub>DC</sub>

Over current protection

Reverse polarity protection Yes

#### **Power (PoE Model)**

**ADVANTECH** 

Power Consumption

Reverse polarity protection Yes

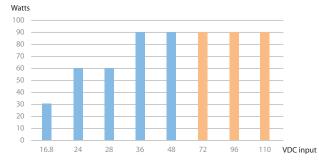
24/28/36/48/72/96/110V<sub>DC</sub> Nominal Input voltage

Operating range 16.8~137.5V<sub>DC</sub> Over current protection





#### **PoE Power budget**



#### Certification

DRAM

Safety FN62368-1

CE, EN55011/ 55032/ 55035; FCC Part 15 Subpart B class A **FMC** EMS EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT);

EN61000-4-5 (Surge); EN61000-4-6 (CS)

Shock Vibration EN61373 Freefall IEC60068-2-31

EN50155. EN 50121-3-2 Railway Fire protection FN45545

EN61000-6-4, EN61000-6-2

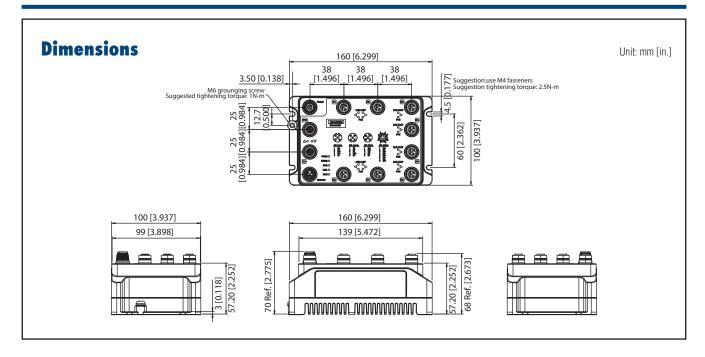
#### **Switch Properties (Management model only)**

128MB

32MB Flash Max. IGMP group 256 Max static VLANs 256 **VLAN ID range** 1-4094 ٩K MAC table 10KB Jumbo frame

4 1MB Packet buffer Max priority queues

## **EKI-9510 Series**



#### L2 Features (Management model only)

L2 MAC Address Jumbo Frame

**VLAN** Group 256 (VLAN ID 1~4094) VLAN 802.1Q VLAN, GVRP Port Mirroring IP Multicast

Per port, Multi-source port IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate

leave Storm Control
 Redundance Per Broadcast, Multicast, Unknown unicast IEEE 802.1D-STP, IEEE 802.1s-MSTP,

Redundancy Protocol IEEE 802.1w-RSTP, X-Ring Pro

#### **QoS (Management model only)**

Priority Queue

Scheduling WRR (Weighted Round Robin), SP (Strict Priority) IEEE 802.1p based CoS, IP TOS, DSCP based CoS Class of Service

Rate LimitingLink Aggregation

Egress Rate limit
IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

#### Security (Management model only)

Port SecurityAuthentication

Static, Dynamic 802.1x (Port-Based, MAC-Based), RADIUS, TACACS+ IP Source Guard. Access control list

Advanced Security

#### **Management (Management model only)**

DHCP Client, Server, Option 66/67

SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private Access

SSH 2.0, SSL TFTP, HTTP, Dual Image NTP server/client Security Access Software Upgrade NTP

# **Accessories**

PN		Description	
OPT1-M12-CRP-4MD	5	Phoenix Contact M12 D-code 4 pin Male crimp type connector	
OPT1-M12-CRP-8MX		Phoenix Contact M12 X-code 8 pin Male crimp type connector	
OPT1-M12-CRP-5MA		Phoenix Contact M12 A-code 5 pin Male crimp type connector	
OPT1-M12C-4MD-150R	0	M12 D-code 4 pin Male to RJ45, cable length:1.5m	
OPT1-M12C-8MX-150R		M12 X-code 8 pin Male to RJ45, cable length:1.5m	
OPT1-M12C-5MA-DB9	9	M12 A-code 5 pin Male to DB9 console, cable length:1.5m	
OPT1-M12C-5FA-100	Q,	M12 A-code 5 pin Female to 1m cable	
1990023703S000	98	M12 waterproof CAP (1pc.)	

# **Ordering Information**

Part number	Management model	10/100BASE-T	10/100/1000BASE-T	PoE ports
EKI-9510E-MPW-B	Yes	10 (P1-P10)		8 (P1-P8)
EKI-9510E-2GMPW-B	Yes	8 (P1-P8)	2 (P9-P10)	8 (P1-P8)
EKI-9510G-MPW-B	Yes		10 (P1-P10)	8 (P1-P8)
EKI-9510E-2GPW-B		8 (P1-P8)	2 (P9-P10)	8 (P1-P8)
EKI-9510E-PW-B		10 (P1-P10)		8 (P1-P8)
EKI-9510G-PW-B			10 (P1-P10)	8 (P1-P8)
EKI-9510E-MW-B	Yes	10 (P1-P10)		
EKI-9510E-2GMW-B	Yes	8 (P1-P8)	2 (P9-P10)	
EKI-9510G-2GMW-B	Yes		10 (P1-P10)	
EKI-9510E-W-B		10 (P1-P10)		
EKI-9510E-2GW-B		8 (P1-P8)	2 (P9-P10)	
EKI-9510G-W-B			10 (P1-P10)	

<sup>\*</sup>Bypass function by request