# **EKI-9**510E-2GMH **EKI-9**510E-2GML

EN 50155 10-port Managed M12 Ethernet Switch 72/96/110  $V_{\text{DC}}$  EN 50155 10-port Managed M12 Ethernet Switch 24/48  $V_{\text{DC}}$ 



### **Features**

- Complies with EN50155
- 8 x M12 D-Coded 10/100Mbps ports + 2 x M12 X-Coded 10/100/1000Mbps ports with Bypass function
- Power Input EKI-9510E-2GMH: 72/96/110 V<sub>DC</sub> EKI-9510E-2GML: 24/48 V<sub>DC</sub>
- Operating Voltage
   EKI-9510E-2GMH: 50.4~137.5 V<sub>DC</sub>
   EKI-9510E-2GML: 16.8~60 V<sub>DC</sub>
- X-Ring Pro supports rapid and predictable convergence
- M12 connector with IP40 protection

# **CEFCC**

# Introduction

EKI-9500 series switch is designed for railway application, with rugged and high EMC performance. EKI-9500 series is the suitable networking solution for rolling stock and wayside applications. EKI-9500 series provide M12 connectors for Ethernet/ console/ relay/ power-input connections to ensure tight & robust connectivity, to guarantee reliable operation against environmental disturbances, such as vibration and shock on train. EKI-9510E-2GMH & EKI-9510E-2GML is a Managed Ethernet switch, it provides 8 x Fast Ethernet M12 D-code interface. It also provides 2 x Gigabit Ethernet M12 X-code interface with Bypass function, to increase the reliability of the network. EKI-9510E-2GMH/ ML features a "flat" design, can be easy deployed with its slender size and let network deployment more simple in crowded carriage/ cabinet.

# **Specifications**

In	terface	
•	I/O Port	

8 x M12 D-Coded 10/100Mbps ports + 2 x M12 X-Coded 10/100/1000Mbps ports with Bypass function

Console port
 Power Connector
 M12 A-Coded
 M12 A-Coded

## Physical

Enclosure Aluminum Shell
 Protection Class IP 40
 Installation Wall Mount
 Dimensions (W x D x H) 216 x 132 x 59.3 mm

• **Weight** 1.5kg

#### **LED Display**

System LEDs
 PWR1, PWR2, SYS, R.M., Alarm

#### **Environment**

Operating Temperature
 Storage Temperature
 Ambient Relative Humidity
 40 ~ 70°C (-40 ~ 158°F)
 -40 ~ 85°C (-40 ~ 185°F)
 10~ 95% (non-condensing)

#### **Power**

Power Consumption 10 Watts

Power Input
 EKI-9510E-2GMH: 72/96/110 V<sub>DC</sub>
 EKI-9510E-2GML: 24/48 V<sub>DC</sub>

EKI-9510E-2GMH: 50.4~137.5 V<sub>DC</sub> EKI-9510E-2GML: 16.8~60 V<sub>DC</sub>

**Dual inputs Supports Overload Current Protection** 

Supports Reverse Polarity Protection

# Certification

• EMI FCC Part 15 Subpart B Class A

CE EN55032 (CISPR) EN55024 Class A

EMS EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge);

EN61000-4-6 (CS)

■ Shock IEC 61373
■ Freefall IEC 60068-2-32
■ Vibration IEC 61373

Certificate
 EN 50155; EN50121-3-2

#### **L2 Features**

L2 MAC Address 8KJumbo Frame 9KB

VLAN Group 256 (VLAN ID 1~4093)
 VLAN 802.1Q VLAN, GVRP
 Port Mirroring Per port, Multi-source port

IP Multicast IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave

Storm Control Broadcast, Multicast, Unknown unicast
 Redundancy Protocol IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro

## QoS

Priority Queue Scheduling WRR (Weighted Round Robin),

SP (Strict Priority)

Class of Service
 IEEE 802.1p based CoS, IP TOS, DSCP based CoS

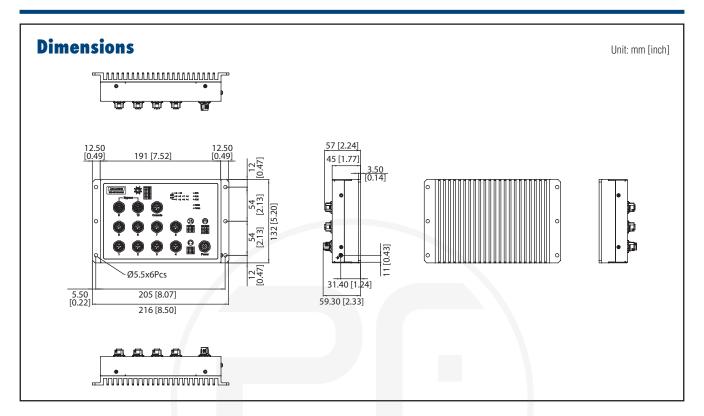
Rate Limiting
 Egress Rate limit

• Link Aggregation IEEE 802.3ad Dynamic Port Trunking, Static Port

Trunking

PF ELECTRONIC

Operating Voltage



## **Security**

• Port Security Static, Dynamic

Authentication
 802.1x (Port-Based, MAC-Based), RADIUS, TACACS+

Advanced Security IP Source Guard

## Management

■ **DHCP** Client, Server, Option 66/67

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

Private MIB

Security Access SSH 2.0, SSL

• Software Upgrade TFTP, HTTP, Dual Image

• NTP NTP NTP server/client

# **Ordering Information**

■ EKI-9510E-2GMH-AE

 $8 \times M12$  D-Coded +  $2 \times M12$  X-Coded Managed Ethernet Switch,  $72/96/110V_{DC}$  dual power input

■ EKI-9510E-2GML-AE

8 x M12 D-Coded + 2 x M12 X-Coded Managed Ethernet Switch, 24/48V<sub>DC</sub> dual power input

# **Accessories**

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