

# EKI-9516 Series

## EN 50155 16-Port Managed Ethernet Switch with up to 12 x PoE Ports



### Features

- M12 connector with IP67 rugged housing
- Complies with EN50155 & EN50121-3-2
- Up to 12 PoE ports which support IEEE802.3af/at
- Wide nominal power input range: 24~110V<sub>DC</sub>
- Operating power input range: 16.8~137.5V<sub>DC</sub>
- Supports X-Ring Pro for rapid and predictable convergence
- Supports IXM for fast and easy maintenance
- Supports N-Key for quick configuration and backup
- Operating temperature: -40 ~ 75°C
- Provides Fast Ethernet & Full Giga Ethernet solution

### Introduction

The EKI-9516 series Ethernet switch is designed for railway applications with rugged housing and high EMC performance. The EKI-9516 series is a suitable networking solution for rolling stock and wayside applications. It provides M12 connectors for Ethernet/ console/ relay/ power-input(M23) connections to ensure tight and robust connectivity, guarantees reliable operation against environmental disturbances, and complies with IEC61373 vibration and shock for rolling stock applications. The portfolio of the EKI-9516 series provides different options, catering to various user requirements. It provides 16-ports on different port configuration (please refer to the ordering information). With IEEE802.3af/at PoE functionality (PoE model only), it provides up to a 150 watt power budget (depends on different input voltage, please refer to PoE Total Power Budget) for P.D. devices (such as camera, IP-phone and wireless access point). The EKI-9516 series features IP67 housing and ample pitch connectors that can easily connect/ disconnect cables without interference; reducing human errors within the harsh and narrow industrial environments.

### Specifications

#### Interface

- **Ethernet Port** M12 4pin D-coded Female for Fast Ethernet (10/100BASE-T)  
M12 8pin X-coded Female for Giga Ethernet (10/100/1000BASE-T)
- **Console Port** M12 5pin A-coded Female
- **Relay Port** M12 5pin A-coded Female with 2 relay outputs of 1A @ 24V<sub>DC</sub>
- **Power Connector** M23 connector

#### Physical

- **Enclosure** Aluminum Die-casting
- **Protection Class** IP67
- **Installation** Wall Mount
- **Dimension** 254 x 174 x 64.5 mm (W x H x D)

#### LED Display

- **System LED** PWR1, PWR2, SYS, Alarm, R.M.
- **Port LED** Data, PoE (For PoE model only)

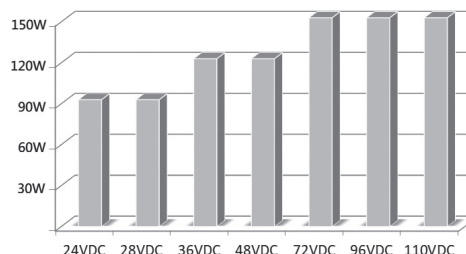
#### Environment

- **Operating Temperature** -40~75°C (-40~167°F)
- **Storage Temperature** -40~85°C (-40~185°F)
- **Humidity** 5~95% (non-condensing)

#### Power

- **Power Consumption** 17 Watts (System)
- **Nominal Input Voltage** 24/28/36/48/72/96/110V<sub>DC</sub>
- **Operating Input range** 16.8~137.5V<sub>DC</sub>
- **Power Interruptions** Class S2 (10ms) for system and PoE (system only@24V<sub>DC</sub> input)

#### PoE Total Power Budget



#### Certification

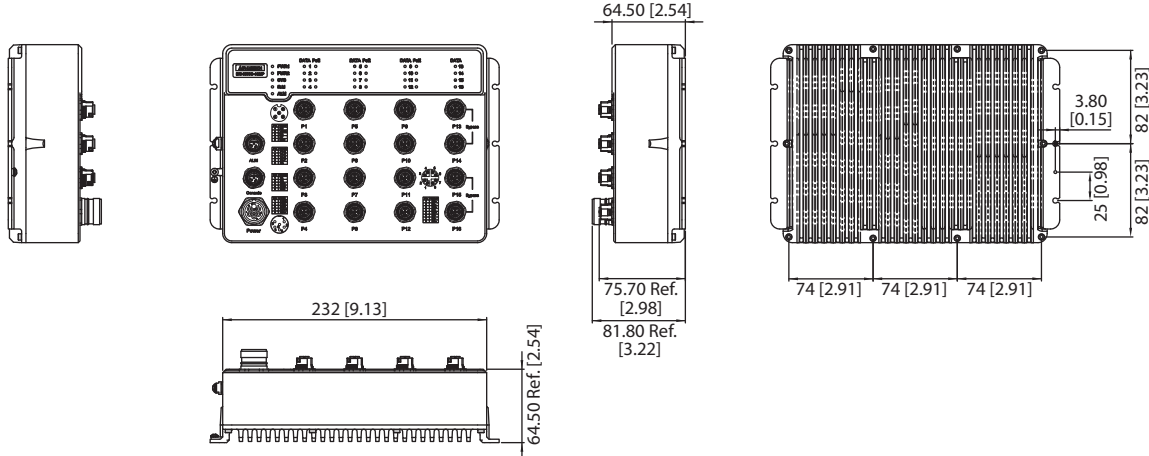
- **Safety** EN62368-1
- **EMC** CE, EN55011/ 55032/ 55024; FCC Part 15 Subpart B class A
- **EMS** EN61000-4-2(ESD); EN61000-4-3(RS); EN61000-4-4(EFT); EN61000-4-5(Surge); EN61000-4-6(CS)
- **Shock** EN 61373
- **Vibration** EN 61373
- **Railway** EN50155, EN50121-3-2, 50121-1
- **Fire Protection** EN45545-2
- **Other** EN61000-6-4, EN61000-6-2

#### L2 Feature

- **L2 MAC Address** 8K
- **Jumbo Frame** 9KB
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Group** 802.1Q, GVRP, GMRP, 802.1ad VLAN stacking
- **Port Mirroring** Per port, Multi-source port (4 Mirroring sessions Max.)
- **IP Multicast** IGMP snooping v1/v2/v3, MLD snooping(256 Multicast Entries Max.)

## Dimensions

Unit: mm [inch]



### Storm Control

### Redundant Protocol

Broadcast, Multicast, Unknown Unicast  
IEEE 802.1D(STP), IEEE802.1s(MSTP),  
IEEE802.1w(RSTP), X-Ring Pro, X-Chain, Dual  
homing, Coupling, ERPS G.8032

### Quality of Service

- QoS Function
- Rate Limit
- Max Priority Queues

Scheduling(STRICT/ WRR), Port Priority, 802.1p,  
DSCP, IP TOS/ precedence  
Ingress/ Egress Rate limit  
8

### Security

- Port Security
- Authentication
- Security Pack

Static MAC, MAC violation notice, port-based loop  
detection  
802.1x (Port-based, MAC-based), RADIUS, TACACS+  
IP source guard, DoS attack prevention, DHCP  
snooping, ARP spoofing prevention, L2/ L3/ L4 ACL  
(Access Control List)

### Management Feature

- DHCP
- Access
- Security Access
- Software Upgrade
- NTP
- Other

Client, Server, Option66/67/82, Port IP-Binding  
SNMP v1/v2c/v3, WEB, Telnet, Console, RMON,  
Standard MIB, Private MIB  
SSH (v2), SSL (v2), HTTPS  
TFTP, HTTP, Dual Image  
NTP server/ client, SNTP  
IPv4, IPv6, Modbus TCP, IXM, N-Key for config file  
backup/ restore

## 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-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  |  | M12 A-code 5 pin Male to DB9 console, cable length:1.5m    |
| OPT1-M23C-6FH-100  |  | M23 Female to 1m cable                                     |
| 1990023703S000     |  | M12 waterproof CAP                                         |

## Ordering Information

| Model name         | 10/100BASE-T | 10/100BASE-T with PoE Function | 10/100/1000BASE-T | 10/100/1000BASE-T with PoE Function | 10/100/1000BASE-T with Bypass Function |
|--------------------|--------------|--------------------------------|-------------------|-------------------------------------|----------------------------------------|
| EKI-9516E-4GMPW-AE |              | 12 (P1-12)                     |                   |                                     | 4 (P13-16)                             |
| EKI-9516G-4GMPW-AE |              |                                |                   | 12 (P1-12)                          | 4 (P13-16)                             |
| EKI-9516E-4GMW-AE  | 12 (P1-12)   |                                |                   |                                     | 4 (P13-16)                             |
| EKI-9516G-4GMW-AE  |              |                                | 12 (P1-12)        |                                     | 4 (P13-16)                             |
| EKI-9516E-8GMPW-AE |              | 8 (P1-8)                       |                   | 4 (P9-12)                           | 4 (P13-16)                             |
| EKI-9516E-4GMPX-AE |              | 12 (P1-12)                     | 4 (P13-16)        |                                     | 4 (P13-16)                             |
| EKI-9516G-4GMPX-AE |              |                                | 4 (P13-16)        | 12 (P1-12)                          |                                        |
| EKI-9516E-4GMX-AE  | 12 (P1-12)   |                                | 4 (P13-16)        |                                     |                                        |
| EKI-9516G-4GMX-AE  |              |                                | 16 (P1-16)        |                                     |                                        |
| EKI-9516E-8GMPX-AE |              | 8 (P1-8)                       | 4 (P13-16)        | 4 (P9-12)                           |                                        |
| EKI-9516E-MX-AE    | 16 (P1-16)   |                                |                   |                                     |                                        |
| EKI-9516E-MPX-AE   | 4 (P13-16)   | 12 (P1-12)                     |                   |                                     |                                        |
| EKI-9516E-2GMPX-AE | 2 (P13-14)   | 12 (P1-12)                     | 2 (P15-16)        |                                     |                                        |
| EKI-9516E-2GMX-AE  | 14 (P1-14)   |                                | 2 (P15-16)        |                                     |                                        |

# Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



## AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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### PRŮMYSLOVÉ POČÍTAČE

*fanless embedded PC, do racku, ...*



### POČÍTAČE S DISPLEJEM

*panelové PC, terminály, do vozidel, ...*



### AUTOMATIZACE A SBĚR DAT

*převodníky, karty, moduly, switche, ...*



### PERIFERIE A KOMPONENTY

*monitory, klávesnice, desky, skříně, ...*



### NOTEBOOKY A TABLETY

*odolné, windows, android, IP65, ...*



### INFORMAČNÍ KIOSKY

*interiérové, venkovní, ...*



### MEDICÍNSKÁ TECHNIKA

*počítače, tablety, LCD, klávesnice, ...*



### SOFTWAREVÁ ŘEŠENÍ

*pro výrobu, zaměstnance, kiosky, ...*



### PŘEJÍT DO E-SHOPU

[eshop.autocont-ipc.cz](http://eshop.autocont-ipc.cz)



### DOPRAVA ZDARMA

Doprava zdarma v ČR a SR při  
objednávce nad 10 000 Kč bez DPH  
nebo nad 400 EUR.



### PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače  
s možností jejího prodloužení  
až na 5 let.



### ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují  
za nižší ceny. Výše slevy se odvíjí  
od realizovaného obrátu.



### SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme  
rozšířenou podporu a servis s garancí  
výměny zařízení do 48 hodin.