

EKI-9528 Series

EN 50155 28-port Managed Ethernet Switch with 24 x PoE Ports



Features

- M12 connector with ruggedized IP54 certified housing
- Complies with EN50155 and EN50121-3-2 standards
- 24 x PoE IEEE802.3af/at ports
- Wide nominal power input range: 24 ~ 110V_{DC}
- Operating power input range: 16.8 ~ 137.5V_{DC}
- X-Ring Pro delivers rapid and predictable convergence
- Leverages IXM technology to ease maintenance
- Provides N-Key for quick configuration and backup
- Broad operating temperatures (-40 ~ 70 °C/-40 ~ 158 °F)
- Fast Full Giga Ethernet solution

Introduction

Advantech's EKI-9528 series Ethernet switch delivers a ruggedized design with high EMC performance to rolling stock, wayside control, and other railroad applications. This solution leverages M12 connectors for Ethernet, console, relay, and power-input — ensuring excellent connectivity and endurance in harsh environments. EKI-9528 accommodates 12 different users' options. It provides 28 x ports Full Giga Ethernet or 16 x ports Fast Ethernet + 12 Giga (with 4 x Relay Bypass ports) with IEEE802.3af/at PoE function (PoE model only). PoE models deliver 150W of power to cameras, IP-phones, wireless access points, and other devices. In addition, Advantech's EKI-9528 series features an IP54 certified ruggedized housing and ample pitch connectors that connect/disconnect cables easily. This solution accommodates deployment in compact spaces and delivers mass Ethernet connection.

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
- **Relay port**
 - M12 5pin A-coded with 2 relay outputs of 1A@24V_{DC}
- **Power connector**
 - M12 K-coded connector

*See the port option from ordering information

Physical

- **Enclosure**
 - Die-cast zinc front panel and extruded aluminum chassis
- **IP rating**
 - IP 54
- **Installation**
 - Wall Mount
- **Dimensions**
 - (W x H x D) 300 x 105 x 105 mm/11.8 x 4.1 x 4.1 in
 - *not including bracket
- **Weight**
 - 6.4 kg (14.1 lb)

LED Display

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

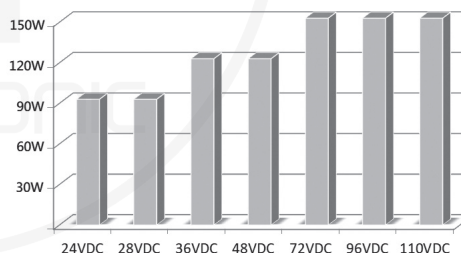
Environment

- **Operating temperature**
 - 40 ~ 70 °C (-40 ~ 158 °F)
- **Storage temperature**
 - 40 ~ 85 °C (-40 ~ 185 °F)
- **Ambient relative humidity**
 - 5 ~ 95% (non-condensing)

Power

- **Power consumption**
 - 25 Watts
- **Nominal input voltage**
 - 24/28/36/48/72/96/110V_{DC}
- **Operating range**
 - 16.8 ~ 137.5V_{DC}
- **Over current protection**
 - Yes
- **Reverse polarity protection**
 - Yes

PoE Power Budget



Switch Properties

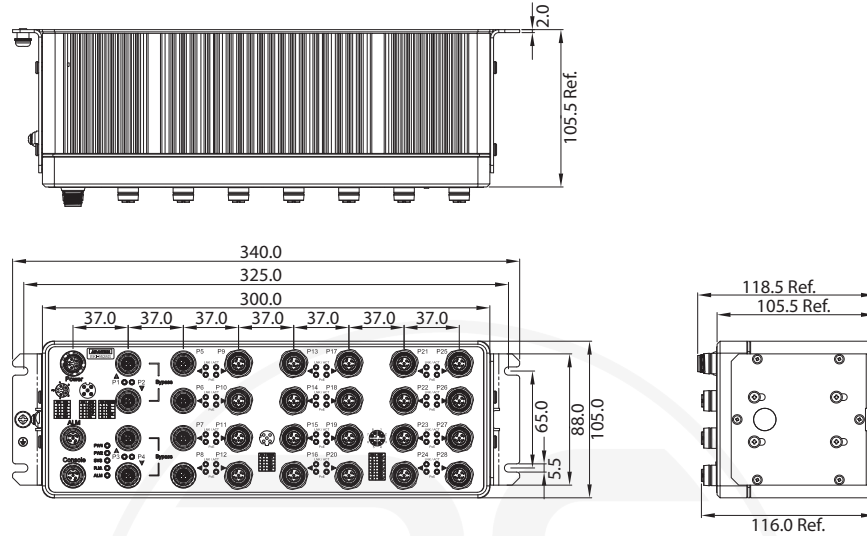
- **DRAM**
 - 64MB
- **Flash**
 - 32MB
- **Max. IGMP group**
 - 256
- **Max static VLANs**
 - 256
- **VLAN ID range**
 - 1-1094
- **MAC table**
 - 8K
- **Jumbo frame**
 - 9KB
- **Packet buffer**
 - 4.1MB
- **Max priority queues**
 - 8

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, EN50121-2-3, 50121-1
- **Fire resistant**
 - EN45545-2
- **Other**
 - EN61000-6-4, EN61000-6-2

Dimensions

Unit: mm



L2 Features

- VLAN group
- Port mirroring
- IP multicast
- Storm control
- Redundant protocol

802.1Q, GVRP, GMRP, 802.1ad VLAN stacking
Per port, multi-source port (4 mirroring sessions max.)
IGMP snooping v1/v2/v3, MLD snooping (256 multicast Entries max.)
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

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

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 Features

- DHCP
- Access
- Security access
- Software upgrade
- NTP
- Other

Client, Server, Option 66/67/82, 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: 1.5 m (4.9 ft)
OPT1-M12C-8MX-150R		M12 X-code 8 pin male to RJ45, cable length: 1.5 m (4.9 ft)
OPT1-M12C-5MA-DB9		M12 A-code 5 pin male to DB9 console, cable length: 1.5 m (4.9 ft)
OPT1-M12C-5FK-150		Phoenix Contact M12 K-code 5 pin female power cable 1.5 m (4.9 ft)

Ordering Information

Model Name	Description	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-9528E-12GMPW-A	16FE PoE + 8GE PoE + 4GE Bypass train switch		16 (P13-28)		8 (P5-12)	4 (P1-4)
EKI-9528E-8GMPW-A	20FE PoE + 4GE PoE + 4GE Bypass train switch		20 (P9-28)		4 (P5-8)	4 (P1-4)
EKI-9528G-4GMPW-A	24GE PoE + 4GE Bypass train switch				24 (P5-28)	4 (P1-4)
EKI-9528E-12GMW-A	16FE + 8GE + 4GE Bypass train switch	16 (P13-28)		8 (P5-12)		4 (P1-4)
EKI-9528E-8GMW-A	20FE + 4GE + 4GE Bypass train switch	20 (P9-28)		4 (P5-8)		4 (P1-4)
EKI-9528G-4GMW-A	24GE + 4GE Bypass train switch			24 (P5-28)		4 (P1-4)
EKI-9528E-12GMPX-A	16FE PoE + 8GE PoE + 4GE train switch		16 (P13-28)	4 (P1-4)	8 (P5-12)	
EKI-9528E-8GMPX-A	20FE PoE + 4GE PoE + 4GE train switch		20 (P9-28)	4 (P1-4)	4 (P5-8)	
EKI-9528G-4GMPX-A	24GE PoE + 4GE train switch			4 (P1-4)	24 (P5-28)	
EKI-9528E-12GMX-A	16FE + 12GE train switch	16 (P13-28)		12 (P1-12)		
EKI-9528E-8GMX-A	20FE + 8GE train switch	20 (P9-28)		8 (P1-8)		
EKI-9528G-4GMX-A	28GE train switch			28 (P1-28)		