

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 performance 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)

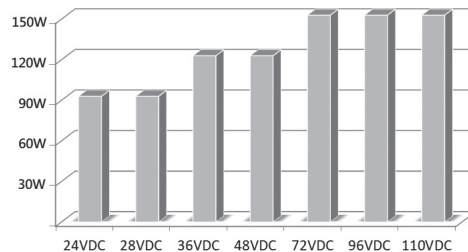
Environment

- **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

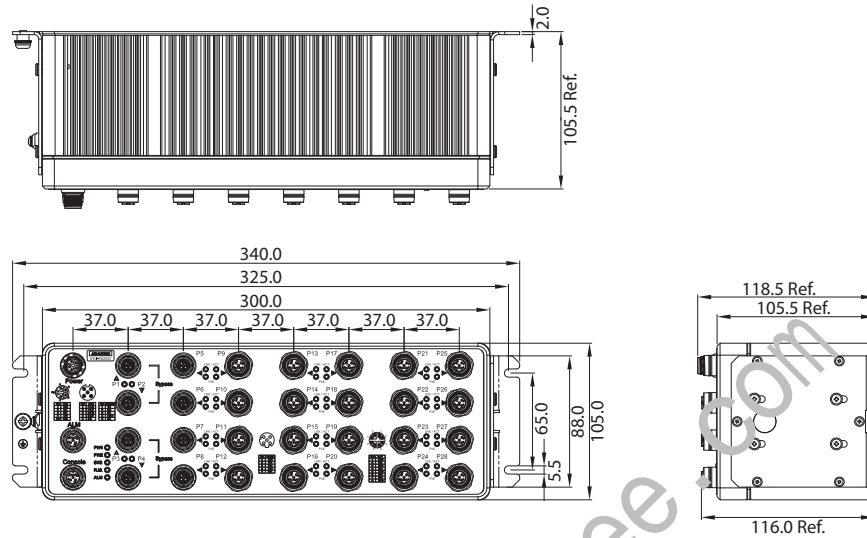
- **DRAM** 64MB
- **Flash** 32MB
- **Max. IGMP group** 256
- **Max static VLANs** 256
- **VLAN ID range** 1-1094
- **MAC table** 8K
- **Jumbo frame** 9KB
- **Packet buffer** 4.1MB
- **Max priority queues** 8

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 L/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

P/N		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)		