Introduction

The EKI-7428G is an industrial-class layer 2 full managed switch including 24 Gigabit ports and 4 Gigabit combo ports. It is designed for rack-mount installation, and can be deployed in demanding industrial environments. It is suitable for edge to core industrial networks. It integrates Layer 2 switching software, which is optimized for scale and performance, delivering wire speed across all ports up to 56 Gbps for layer 2 traffic forwarding. In addition, the PoE design provides up to 30 watts per port to fulfill high power consumption device, moreover, it supports high reliability with -40 – 70°C operating temperatures, and dual 48 VDC input power design ensure vital network capabilities with minimum downtime. It is also embedded with Advantech IXM, which benefits users by giving them fast deployment and can dramatically save engineer’s time and costs.

Specifications

Communications

- **Standard**: IEEE 802.3, 802.3u, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN**: 10/100/1000Base-T (X), Optional 100Base-FX, 1000Base-SX/LX/LH/XX/EX/EXZ
- **Transmission Distance**: Ethernet: Up to 100 m (4- wire Cat.5e, Cat.6 RJ45 cable suggested for Gigabit port), SFP: Up to 110 km (depends on SFP)
- **Transmission Speed**: Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors**: 24 x RJ45 (Ethernet), 4 x RJ45/SFP (mini-GBIC) combo ports, 4-pin removable screw terminal (Power), 3-pin removable screw terminal (Relay)
- **LED Indicators**: 10/100T (X): Link/Activity, Duplex/Collision Gigabit Copper: Link/Activity, Speed (1000 Mbps), SFP: Link/Activity
- **Console**: RS-232 (RJ45)

Network Management

- **Configuration**: Web browser, Telnet, Serial console, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration, IPv6
- **Switching**: Switching Capacity 56 Gbps, Forwarding Rate 41.6 Mpps, MAC Address 8K, Jumbo Frame 9K, VLAN Group 256 (VLAN ID 1 – 4094), Packet Buffer 4.1 Mbit
- **VLAN**: IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy**: Advantech X-Ring, 802.1w/1D, RSTP/STP/MSTP
- **Security**: IP Security, SSH, SSL, SNMPv3, HTTPS, IP Source Guard, DHCP Snooping, ARP Spoofing Prevention, 802.1X, TACACS+, Access Control List
- **Traffic Control**: IGMP Snooping/Query for multicast group management, Port Trunking, Static/802.3ad, LACP Rate limit and storm control, IEEE 802.1o QoS CoS/TOS/DSCP priority queuing, IEEE 802.3x flow control
- **Diagnostics**: Port Mirroring, Real-time traffic statistic, MAC Address Table, SNTP, Syslog, E-Mail Alert, SNMP Trap, RMON

Mechanism

- **Enclosure**: IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)**: 438 x 43.6 x 259.20 mm (17.24” x 1.72” x 10.2”)
- **Mounting**: 1U 19” Rack mount
## Dimensions

**Unit:** mm [inch]

![Dimensions Diagram](image.png)

## Power
- **Power Consumption**
  - 20W @ 24V (EKI-7428G-4CI)
  - 20W @ 48V (EKI-7428G-4CPI)
- **Power Budget**
  - 685W (EKI-7428G-4CPI)
- **Power Input**
  - EKI-7428G-4CI: 12-48 V DC
  - EKI-7428G-4CPI: 48 V DC (46 to 57 V DC), 53 - 57 V DC is recommended for 802.3at
- **Fault Output**
  - 2 Relay Outputs

## Protection
- **Power Reverse**
  - Present
- **Overload Current**
  - Present

## Environment
- **Operating Temperature**
  - -40 – 70°C (-40 – 158°F)
- **Storage Temperature**
  - -40 – 85°C (-40 – 185°F)
- **Operating Humidity**
  - 10 – 95% (non-condensing)
- **Storage Humidity**
  - 10 – 95% (non-condensing)
- **MTBF**
  - EKI-7428-4CI: 787,940 hours
  - EKI-7428G-4CPI: 424,517 hours

## Certification
- **Safety**
  - UL 61010-2-201
- **EMI**
  - CE FCC EN55022 Class A
- **EMS**
  - EN 61000-4-2
  - EN 61000-4-3
  - EN 61000-4-4
  - EN 61000-4-5
  - EN 61000-4-6
  - EN 61000-4-8
- **Shock**
  - IEC 60068-2-27
- **Freefall**
  - IEC 60068-2-32
- **Vibration**
  - IEC 60068-2-6
- **Railway Track Side**
  - EN 50121-4
- **Patent**

## Ordering Information
- **EKI-7428G-4CI-AE**
  - 24GE+4G Combo Port Managed Ethernet Switch w/ Wide Temp
- **EKI-7428G-4CPI-AE**
  - 24G+4G Combo Port POE Managed Ethernet Switch w/ Wide Temp

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**Note:** For SFP copper type, only 1000Mbps supported.