# EKI-7708E-4FP
# EKI-7708E-4FPI

## 4FE+4G SFP Port Gigabit Managed Redundant Industrial PoE Switch

## Features

- 4 x IEEE 802.3 af/at PoE fast Ethernet ports + 4 x SFP ports
- SFP socket for easy and flexible fiber expansion
- Redundancy: X-Ring Pro (ultra-high-speed recovery time, <20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (port-based, MD5/TLS/TTLS/PEAP encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB, private MIB
- NEMA TS2 for traffic control
- EN50121-4 approval for railway trackside deployment
- Wide operating temperature range of -40 ~ 75°C (EKI-7708E-4FPI)
- Dual 48 $V_{DC}$ power input and 1 x relay output

## Introduction

The EKI-7708E-4FP/4FPI provide 4 fast Ethernet IEEE 802.3 af/at PoE ports and 4 SFP (mini-GBIC) ports. They can provide up to 30 W per port to fulfill high-power-consumption power device requirements. They are embedded with Advantech's IXM function, which can benefit users with fast deployment and can save considerably on engineering time and costs. The EKI-7708E series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, they are equipped with X-Ring Pro, which can achieve ultra-high-speed recovery times of <20 ms, thus ensuring network stability. The EKI-7708E-4FPI in particular also features a wide operating temperature range of -40 ~ 75°C and NEMA TS2 rating, making it ideal for use in traffic applications. Finally, the EKI-7708E-4FP/4FPI meet the EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

## Specifications

### Interface
- **I/O Port**  
  4 x 10/100BASE-T/TX RJ-45  
  4 x SFP (mini-GBIC) port
- **Console port**    RS-232 (RJ45)
- **Power Connector**    6-pin screw Terminal Block (including relay)

### Physical
- **Enclosure**    Metal Shell
- **Protection Class**    IP 30
- **Installation**    DIN-Rail
- **Dimensions (W x H x D)**    74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

### LED Display
- **System LED**    PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED**    Link / Speed / Activity

### Environment
- **Operating Temperature**    -40 ~ 75°C (-40 ~ 167°F) (7708E-4FPI)  
  -10 ~ 60°C (-40 ~ 140°F) (7708E-4FP)
- **Storage Temperature**    -40 ~ 85°C
- **Ambient Relative Humidity**    10 ~ 95% (non-condensing)
- **Humidity**    10 ~ 95% (non-condensing)

### Power
- **Power Consumption**    12.1W @ 48$V_{DC}$ (System)
- **Power Input**    48 $V_{DC}$ (46 to 57 $V_{DC}$),  
  53 -57 $V_{DC}$ is recommended for 802.3at, redundant dual power input
- **Power Budget**    120W
- **Fault Output**    1 Relay Output
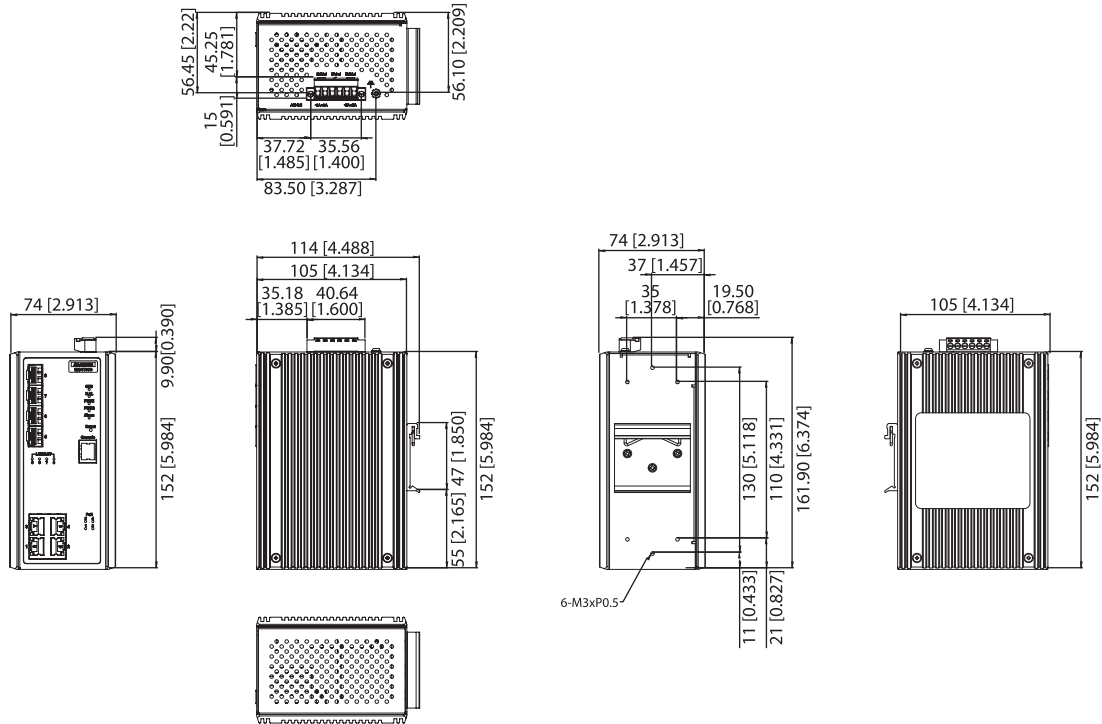
### Certification
- **EMI**    CE, FCC Class A
- **EMC**    EN 61000-4-2  
  EN 61000-4-3  
  EN 61000-4-4  
  EN 61000-4-5  
  EN 61000-4-6  
  EN 61000-4-8  
  EN50121-4
- **Shock**    IEC 60068-2-27
- **Freefall**    IEC 60068-2-32
- **Vibration**    IEC 60068-2-6
- **Traffic control**    NEMA TS2

*= Compliant
- **Patent**    http://www.advantech.com/legal/patent

### L2 Features
- **L2 MAC Address**    8K
- **Jumbo Frame**    9216 Bytes
- **VLAN Group**    256 (VLAN ID 1 ~ 4094)
- **VLAN Arrange**    Port based VLAN, Q-in-Q (VLAN Stacking), 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**    IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

**ADVANTECH**    **Industrial Ethernet Solutions**

All product specifications are subject to change without notice.    Last updated: 27-Jun-2018

# Dimensions

Unit: mm [inch]

**Panel Cut-out Dimensions: 105 x 152 x 74 (4.134" x 5.98" x 2.913")**

## QoS

- **Priority Queue Scheduling**   WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **Class of Service**   IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting**   Ingress Rate limit, Egress Rate limit
- **Link Aggregation**   IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

## Security

- **Port Security**   Static, Dynamic IP Source Guard, ARP Spoofing Prevention, Access Control List, DHCP Snooping
- **Authentication**   802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), TACACS+

## Management

- **DHCP**   Client, Server, Option66/67/82
- **Access**   SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access**   SSH2.0, SSL
- **Software upgrade**   TFTP, HTTP, Dual Image
- **NTP**   SNTP client

# Ordering Information

- **EKI-7708E-4FPI-AE**   4FE + 4G SFP Port Managed PoE Ethernet Switch w/ Wide Temp
- **EKI-7708E-4FP-AE**   4FE + 4G SFP Port Managed PoE Ethernet Switch