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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China







# **EKI-77**08E-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 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
- -40 ~ 75°C wide-range operating temperature (EKI-7708E-4FPI)
- Dual 48 V<sub>DC</sub> power input and 1 relay output







#### Introduction

EKI-7708E-4FP/4FPI supports 4 Fast Ethernet IEEE 802.3 af/at PoE ports and 4 SFP (mini-GBIC) ports. They can provide up to 30 watts per port to fulfill high power consumption PD (Power Device) requirements. They are embedded with Advantech's IXM function, which can benefit users for fast deployment and can dramatically save engineers time and cost. The EKI-7708E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7708E series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature (EKI-7708E-4FPI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications. EKI-7708E-4FP/4FPI has successfully passed the EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

## **Specifications**

n	t	e	r	fa	C	e

4 x 10/100Base-T/TX RJ-45 I/O Port 4 x SFP (mini-GBIC) port RS-232 (RJ45) Console port

 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)

-40 ~ 85°C Storage Temperature

- Ambient Relative Humidity 10 ~ 95% (non-condensing) - Humidity 10 ~ 95% (non-condensing)

#### Power

 Power Consumption 12.1W @ 48V<sub>DC</sub> (System) Power Input 48 V<sub>DC</sub> (46 to 57 V<sub>DC</sub>),

 $53-57 V_{DC}$  is recommended for 802.3at,

redundant dual power input

 Power Budget 120W Fault Output 1 Relay Output

#### Certification

- EMI CE. FCC Class A EN 61000-4-2 EMC 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 IEC 60068-2-6 Vibration

 Traffic control \*= Compliant

Patent http://www.advantech.com/legal/patent

NEMA TS2

#### **L2 Features**

Storm Control

 L2 MAC Address Jumbo Frame 9216 Bytes

256 (VLAN ID 1 ~ 4094) VLAN Group

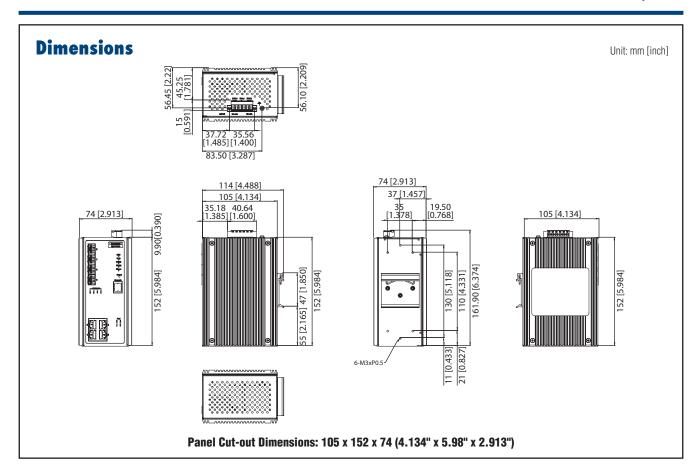
 VLAN Arrange Port based VLAN, Q-in-Q (VLAN Stacking), GVRP

Port Mirroring Per port, Multi-source port, IGMP Snooping v1/v2/v3, MLD IP Multicast

Snooping, IGMP Immediate leave 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



#### QoS

Priority Queue WRR (Weighted Round Robin), SP (Strict Scheduling
Scheduling Priority) Hybrid Priority

Class of Service
Rate Limiting
IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
Ingress Rate limit, Egress Rate limit

 Link Aggregation
IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

Port Security Static, Dynamic

Authentication
802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

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