EKI-7708E-4F
EKI-7708E-4FI

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

Features

○ 4 x 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 for 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-4FI)
○ Dual 12 ~ 48 V_{DC} power input and 1 x relay output

IPv6   5 Year Warranty   CE FCC   RoHS COMPLIANT 2002/95/EC

Introduction

The EKI-7708E-4F and EKI-7708E-4FI provide users with abundant port options for connecting to various device types, with 4 fast Ethernet ports and 4 SFP (mini-GBIC) ports. These switches are embedded with Advantech's IXM function, which can benefit users with fast deployment while offering considerable savings on engineering time and costs. The series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, these switches are equipped with X-Ring Pro, which can achieve ultra-high-speed recovery times of <20 ms, thus ensuring network stability. The EKI-7708E-4FI features a wide operating temperature range of -40 ~ 75°C and a NEMA TS2 rating, making it ideal for use in traffic applications. Both switches in this series 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
○ 10BaseT	**Standards**	IEEE 802.3 for
		IEEE 802.3u for 100BaseT(X)/FX
		IEEE 802.3z for 1000BaseX
		IEEE 802.3x for Flow Control
○	**Console port**	RS-232 (RJ45)
○ Terminal Block (including relay)	**Power Connector**	6-pin screw

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

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

Environment

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

Power

○ (System)	**Power Consumption**	12.1W @ 48V_{DC}
○ dual power input	**Power Input**	12 ~ 48 V_{DC}, redundant
○	**Fault Output**	1 Relay Output

Certification

③   **EMI** CE, FCC Class A

③ **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

        EN 61000-6-2

        EN 61000-6-4

EN50121-4*

IEC 60068-2-27

③ **Shock**

③   **Freefall**   IEC 60068-2-32

③   **Vibration** IEC 60068-2-6

③   **Traffic control** NEMA TS2*

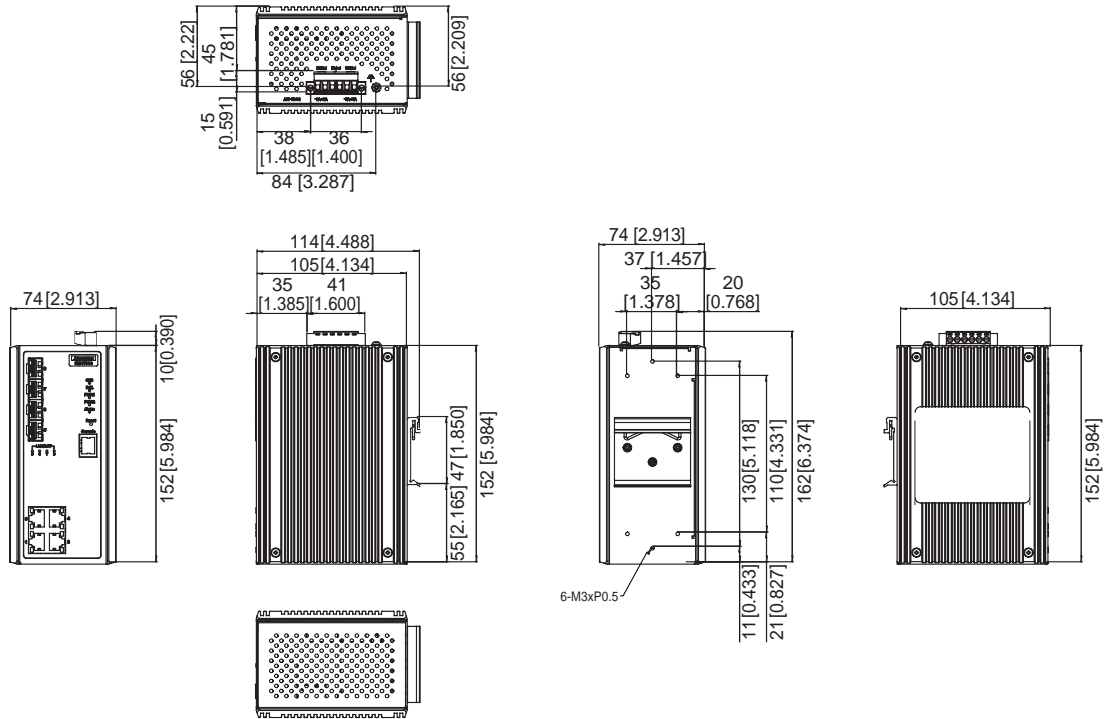*= Compliant

L2 Features

③   **L2 MAC Address**   8K

③   **Jumbo Frame** 9216 Bytes

③   **VLAN Group**   256 (VLAN ID 1 ~ 4094)

③   **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP

③   **Port Mirroring** Per port, Multi-source port,

③   **IP Multicast**   IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave

③   **Storm Control** Broadcast, Multicast, Unknown unicast

③   **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

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ADVANTECH   **Industrial Ethernet Solutions**

Dimensions

Unit: mm[inch]

56 [2.22]
45 [1.781]
56 [2.209]
15 [0.591]
38 [1.485]
36 [1.400]
84 [3.287]

74 [2.913]
10[0.390]
152[5.984]

114[4.488]
105[4.134]
35 [1.385]
41 [1.600]
55 [2.165] 47 [1.850]
152 [5.984]

74 [2.913]
37 [1.457]
35 [1.378]
20 [0.768]
130[5.118]
110[4.331]
162[6.374]
11 [0.433]
21 [0.827]
6-M3xP0.5

105 [4.134]
152[5.984]

Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

③ **Priority Queue** WRR (Weighted Round Robin), SP (Strict Scheduling **Scheduling** Priority) Hybrid Priority
③ **Class of Service** IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
③ **Rate Limiting** Ingress Rate limit, Egress Rate limit
③ **Link Aggregation** IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

③ **Port Security** Static, Dynamic IP Source Guard, ARP Spoofing Prevention, Access Control List, DHCP Snooping,
③ **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), TACACS+

Management

③ **DHCP** Client, Server, Option66/67/82
③ **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
③ **Security access** SSH2.0, SSL
③ **Software upgrade** TFTP, HTTP, Dual Image
③ **NTP** SNTP client

Ordering Information

③ **EKI-7708E-4FI-AE** 4FE + 4G SFP Port Managed Ethernet Switch w/Wide Temp
③ **EKI-7708E-4F-AE** 4FE + 4G SFP Port Managed Ethernet Switch

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