EKI-7712E-4FP
EKI-7712E-4FPI

8FE+4G SFP Port Managed Redundant Industrial PoE Switch

Features

- 8 x Fast Ethernet ports + 4 x SFP ports
- Support 8 x IEEE 802.3at/af PoE ports for PD demands
- Redundancy: X-Ring Pro (ultra-high-speed recovery time, <20 ms), RSTP/STP (802.1w/1D)
- IXM function for fast deployment
- Security Pack with 802.1X, ACL, RADIUS, TACACS+, MAB Authentication, SNMPv3, HTTPS, SSH, and SFTP
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB, private MIB
- Supports NMS for easy and visualized to monitor and manage network remotely
- Dual 48 V_{DC} power input and 1 x relay output

Introduction

EKI-7712E-4FP/4FPI supports 8 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-7712E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712E series is equipped with X-Ring Pro which can achieve ultra high speed recovery times of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75 °C operating temperature (EKI-7712E-4FPI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications. EKI-7712E-4FP/4FPI has successfully passed the EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

Specifications

Interfaces / Communications

- **I/O Port** 8 x 10/100BASE-T/TX RJ-45
  4 x SFP (mini-GBIC) port
  Auto-Negotiation, Full/Half Duplex Mode
  Auto MDI/MDI-X Connection
- **Standards** IEEE 802.3 for 10BaseT
  IEEE 802.3u for 100BaseT(X)/FX
  IEEE 802.3z for 1000BaseSX/LX/LHX/ZX
  IEEE 802.3x for Flow Control
- **PoE** Port 1 ~ Port 8: IEEE 802.3at/af
- **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, Wall-mount
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Indicators

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

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (EKI-7712E-4FPI)
  -10 ~ 60°C (-40 ~ 140°F) (EKI-7712E-4FP)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5 ~ 95% (non-condensing)
- **Overload Current Protection** Present
- **Reverse Polarity Protection** Present
- **MTBF** 1,001,782 hours

Power

- **Power Consumption** 12.1W @ 48V_{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** 240W
- **Fault Output** 1 Relay Output
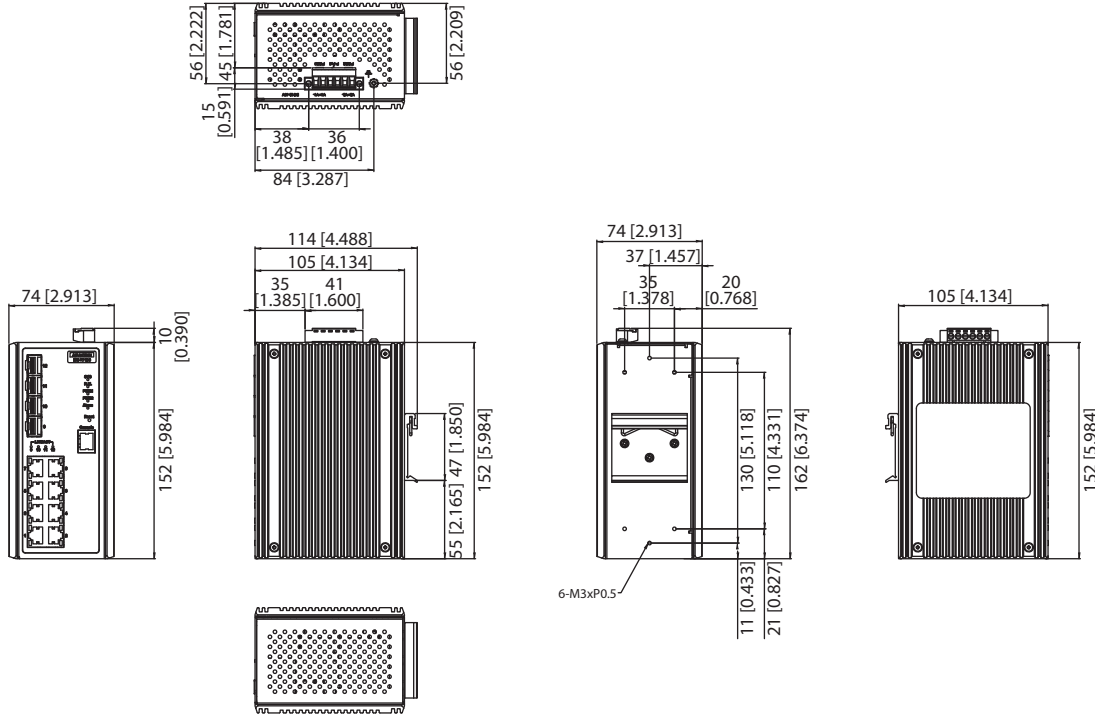
Certification

- **Safety** UL 61010-2-201
- **EMI** CE, CISPR 32, FCC Part 15B Class A
- **EMS** IEC 61000-4-2
  IEC 61000-4-3
  IEC 61000-4-4
  IEC 61000-4-5
  IEC 61000-4-6
  IEC 61000-4-8
- **EMC** EN 61000-6-2
  EN 61000-6-4
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Traffic control** NEMA TS-2
- **Railway Trackside** EN 50121-4

Switch Properties

- **Switch Capacity** 9.6Gbps
- **Transmission Rate** 7.14Mpps
- **MAC Table Size** 8K
- **Jumbo Frame** 1,0240 Bytes
- **Packet Buffer Size** 4.1Mb
- **Max. IGMP Group** 256
- **Max. VLAN Group** 256 (VLAN ID 1 ~ 4094)

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All product specifications are subject to change without notice. Last updated: 22-Jun-2021

Dimensions

Unit: mm [inch]

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

L2 Features

- **VLAN Arrange** — 802.1Q Tag-based VLAN, 802.1ad QinQ VLAN Stacking
- **Port Mirroring** — 1 to 1, N to 1
  Max. Mirror Session: 4
- **RSPAN** — Remote Switched Port Analysis
- **GARP** — GVRP, GMRP
- **IP Multicast** — IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** — Broadcast, Multicast, Unknown unicast
- **LLDP** — 802.1ab LLDP, LLDP-MED
- **Industrial Protocol** — Modbus/TCP
- **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, ERPS(G.8032)

QoS

- **Priority Queue Scheduling** — WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority, Max. Priority Queues: 8
- **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 MAC, Max. Learning Limit, MAC Violation Notice
- **802.1X** — Port-based/MAC-based Authentication (MD5/PEAP/TLS/TTLS Encryption)
- **MAB** — MAC Authentication Bypass
- **Authentication** — RADIUS, TACAS+
- **IP Security** — IP Source Guard, DHCP Snooping, ARP Spoofing Prevention
- **ACL** — Access Control List (IP-ACL, MAC-ACL) Max. ACL Entries: 128

Management

- **PoE** — PoE system settings, port settings and status
- **DHCP** — Client, Server, Option66/67/82, DHCP Relay
- **Access** — SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB-II, Private MIB, Ethernet-Like MIB, RMON MIB (Group 1, 2, 3, 9)
- **Security Access** — SSH2.0, SSL
- **Software Upgrade** — TFTP, SFTP, HTTP, Dual Image
- **NTP** — SNTP client

Ordering Information

- **EKI-7712E-4FPI-AE** — 8FE + 4SFP Port Managed PoE Ethernet Switch w/Wide Temp
- **EKI-7712E-4FP-AE** — 8FE + 4SFP Port Managed PoE Ethernet Switch

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

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