# EKI-7720G-4F
# EKI-7720G-4FI

## 16GE+4G SFP Port Gigabit Managed Redundant Industrial Switch



## Features

- 16 x Gigabit Ethernet ports + 4 x SFP ports
- 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 12 ~ 48 $V_{DC}$ power input and 1 x relay output

IPv6   5 Years Warranty   c(UL)us   CE   FCC   RoHS COMPLIANT 2002/95/EC

## Introduction

The EKI-7720G-4F and EKI-7720G-4FI provide users with abundant port options for connecting to various device types with 16 Gigabit Ethernet ports and 4 SFP (mini-GBIC) ports. These switches are embedded with Advantech's IXM function, which can benefit users with fast deployment and can dramatically save 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-7720G-4FI in particular features a wide operating temperature range of wide -40 ~ 75°C.

## Specifications

### Interfaces / Communications

- **I/O Port**
  16 x 10/100/1000BASE-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 802.3ab 1000BaseT(X)
  IEEE 802.3z for 1000BaseSX/LX/LHX/ZX
  IEEE 802.3x for Flow Control
- **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

### Environment

- **Operating Temperature**
  -40 ~ 75°C (-40 ~ 167°F) (EKI-7720G-4FI)
  -10 ~ 60°C (-40 ~ 140°F) (EKI-7720G-4F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5 ~ 95% (non-condensing)
- **Overload Current Protection** Present
- **Reverse Polarity Protection** Present
- **MTBF** 1,469,341 hours

### Power

- **Power Consumption** 14.5Watts@48$V_{DC}$, 14Watts@12$V_{DC}$
- **Power Input** 12 ~ 48 $V_{DC}$, redundant dual power input
- **Fault Output** 1 Relay Output

### Certification

- **Safety** UL 61010-2-201, EN LVD 62368
- **EMI** CE, CISPR 32, FCC Part 15B 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
- **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

- **Switching Capacity** 40Gbps
- **Transmission Rate** 29.7Mpps
- **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)

# Dimensions

Unit: mm [inch]
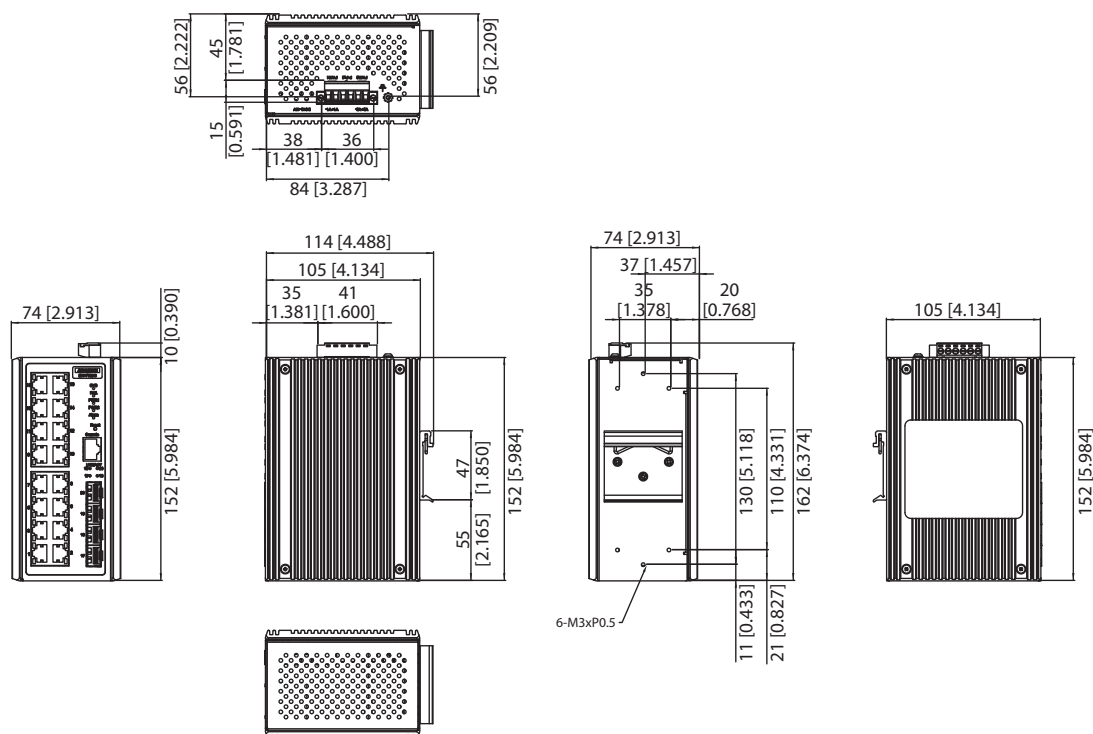
**Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)**

## 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

- **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-7720G-4FI-AE** — 16GE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7720G-4F-AE** — 16GE + 4SFP Port Managed Ethernet Switch

Note: For SFP copper type, only 1000Mbps supported