EKI-7706G-2F
EKI-7706G-2FI

4GE+2G SFP Port Gigabit Managed Redundant Industrial Switch

Features

- 4 x Gigabit Ethernet ports + 2 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

Introduction

The EKI-7706G-2F and EKI-7706G-2FI support 4 Gigabit Ethernet ports and 2 SFP ports. They provide abundant port options for connecting to various device types and are embedded with Advantech's IXM function, which can benefit users with faster deployment while saving considerably on engineering time and costs. The EKI-7706G series also supports NMS to help IT managers with networking maintenance and failure prevention. The series is equipped with X-Ring Pro, which can achieve ultra-high-speed recovery times of <20 ms, thus ensuring network stability.

Specifications

Interfaces / Communications

- **I/O Port**: 4 x 10/100/1000BASE-T/TX RJ-45
  2 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)**: 43 x 120 x 84 mm (1.69" x 4.72" x 3.31")

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-7706G-2FI)
  -10 ~ 60°C (-40 ~ 140°F) (EKI-7706G-2F)
- **Storage Temperature**: -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity**: 5 ~ 95% (non-condensing)
- **Overload Current Protection**: Present
- **Reverse Polarity Protection**: Present
- **MTBF**: 2,113,340 hours

Power

- **Power Consumption**: 5.28W @ 48V_{DC} (System)
- **Power Input**: 12 ~ 48 V_{DC}, redundant dual power input
- **Fault Output**: 1 Relay Output
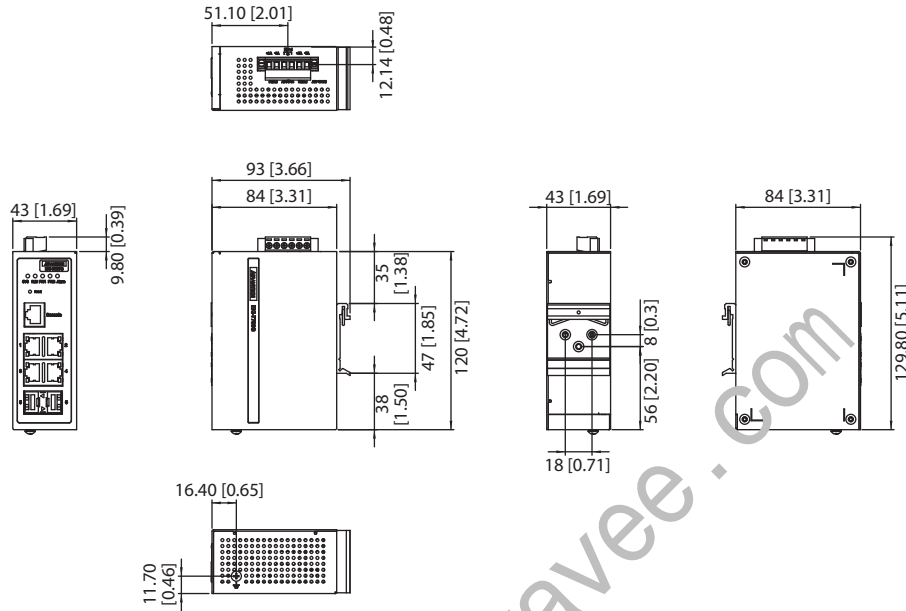
Certification

- **Safety**: UL 61010-1, 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**: 12Gbps
- **Transmission Rate**: 8.9Mpps
- **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)

Last updated: 22-Jun-2021

Dimensions

Unit: mm [inch]

51.10 [2.01]
12.14 [0.48]

93 [3.66]
84 [3.31]
43 [1.69]
9.80 [0.39]
35 [1.38]
47 [1.85]
120 [4.72]
38 [1.50]

43 [1.69]
8 [0.3]
56 [2.20]
18 [0.71]

84 [3.31]
129.80 [5.11]

16.40 [0.65]
11.70 [0.46]

Panel Cut-out Dimensions: 84 (3.31) x 120 (4.72) x 43 (1.69)

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-7706G-2FI-AE** — 4GE + 2SFP Port Managed Ethernet Switch w/ Wide Temp
- **EKI-7706G-2F-AE** — 4GE + 2SFP Port Managed Ethernet Switch

Note: For SFP copper type, only 1000Mbps supported