

EKI-7712G-4F

EKI-7712G-4FI

8G+4G SFP Port Gigabit Managed
Redundant Industrial Switch



Introduction

The EKI-7712G-4F and EKI-7712G-4FI provide users with abundant port options for connecting to a range of different device types with 8 Gigabit ports and 4 SFP (mini-GBIC) ports. These units are embedded with Advantech's IXM function, which can benefit users with fast deployment and can save considerably on engineering time and costs. The EKI-7712G series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the series are equipped with X-Ring Pro, which can achieve ultra-high-speed recovery times of <20 ms, thus ensuring network stability. The EKI-7712G-4FI also features a wide operating temperature of -40 to 75°C and NEMA TS2 rating, making it ideal for use in traffic applications. Both the EKI-7712G-4F and EKI-7712G-4FI comply with EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

Specifications

Interfaces / Communications

▪ I/O Port	8 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 40
▪ 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-7712G-4FI) -10 ~ 60°C (-40 ~ 140°F) (EKI-7712G-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	1,377,597 hours

Features

- 8 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

Power

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

Certification

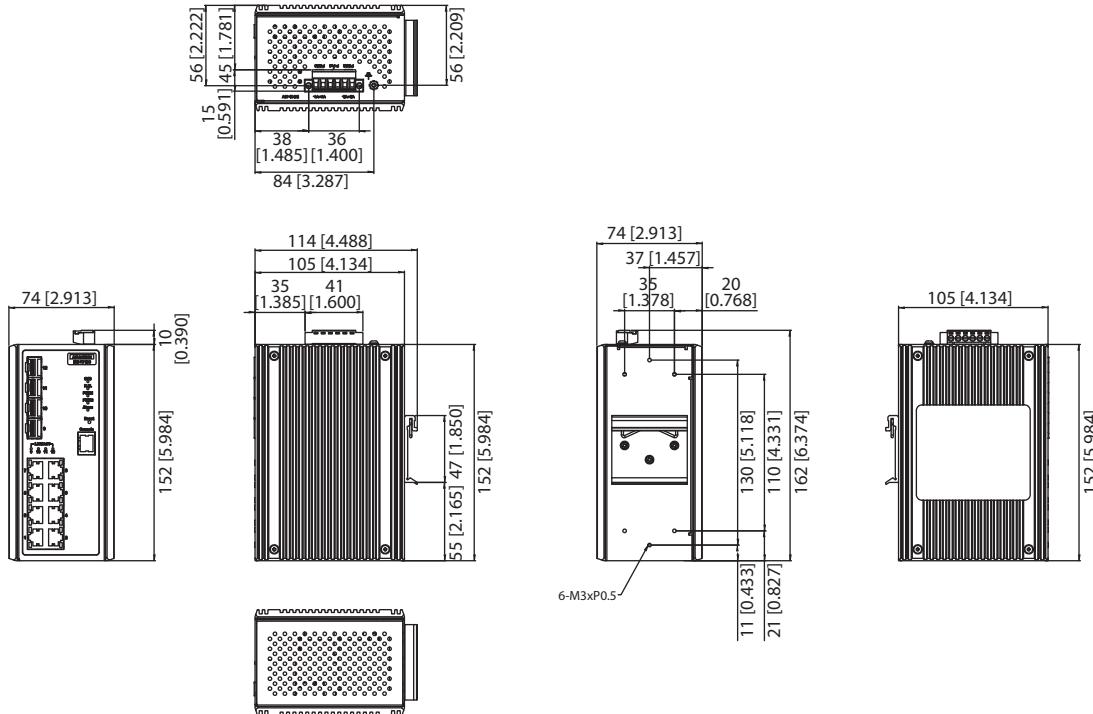
▪ Safety	UL 61010-2-201, EN LVD 62368
▪ EMI	CE, CISPR 32, FCC Part 15B Class A
▪ EMS	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
▪ EMC	EN 61000-6-2 EN 61000-6-4
▪ Shock	IEC 60068-2-27
▪ Freefall	IEC 60068-2-32
▪ Vibration	IEC 60068-2-6
▪ Traffic control	NEMA TS-2
▪ Railway Trackside	EN 50121-4
▪ Security	IEC 62443-4-2 SL2

Switch Properties

▪ Switch Capacity	24Gbps
▪ Transmission Rate	17.8Mpps
▪ 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-7712G-4F-BE** 8GE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7712G-4F-BE** 8GE + 4SFP Port Managed Ethernet Switch

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