EKI-7708G-2FVI
4GE + 4 x Giga SFP (VDSL2 supported) + 2 VDSL2 transceiver Managed Redundant Switch

EKI-7712G-2FVI
8GE + 4x Giga SFP (VDSL2 supported) + 2 VDSL2 transceiver Managed Redundant Switch

EKI-7708G

EKI-7712G

Features

- 4 x Gigabit + 4 x Gigabit SFP (VDSL2 * 3 supported) + 2 VDSL2 transceivers (EKI-7708G-2FVI)
- 8 x Gigabit + 4 x Gigabit SFP (VDSL2 *3 supported) + 2 VDSL2 transceivers (EKI-7712G-2FVI)
- Redundancy: X-Ring Pro (ultra-high-speed recovery time of 20 Seconds with SFP-VDSL modules, RSTP/STP, and MSTP (802.1w/1D/1s)
- 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
- NEMA TS2 for traffic control
- EN50121-4 approval for railway trackside deployment
- 100/100 Mbps up to 400 m over CAT-5e
- Dual 12 ~ 48 V_{DC} power input + 1 x relay output

Introduction

The EKI-7712G-2FVI and EKI-7708G-2FVI provide 8/4 Gigabit ports and 4 SFP ports with SFP-VDSL transceivers. These switches provide abundant port options, thus providing support for connecting a range of different devices. They also come embedded with Advantech IXM function for fast deployment, thus have a marked impact in saving on engineering time and costs. This series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, they are equipped with X-Ring Pro redundancy for ultra- high- speed recovery times of 20 seconds with SFP-VDSL modules. These switches also incorporate the latest VDSL2 technology and can be easily adapted to existing applications with existing 2-wire cable (e.g., phone line systems), thus avoiding unnecessary costs associated with rewiring. It can substantially extend Ethernet service on UTP wire with distances up to 3000 m, and even with a rate of 100Mbps for up to 400 m on standard CAT-5e with 2 cables.

Specifications

Communications

- **Standard** — IEEE 802.3, 802.3u, 802.3x, 802.3ad, 802.3ab, 802.3z, 802.1D, 802.1w, 802.1s, 802.1P, 802.1Q, 802.1X
- **LAN** — 10/100/1000BASE-TX, optional 100BASE-FX, 1000BASE-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance** — Ethernet: Up to 100 m (4-wire CAT-5e, CAT 6 RJ45 cable suggested for Gigabit port) SFP: Up to 110 km (depends on SFP) VDSL2: With the rate of 100Mbps speed up to 400 m on a standard CAT5e with wire cables
- **Transmission Speed** — Gigabit copper: 10/100/1000 Mbps, auto negotiation Gigabit fiber: Up to 1000 Mbps

Interface

- **Connectors** — 4/8 x RJ45 (Gigabit Ethernet) 4 x SFP (mini-GBIC) ports 6-pin screw terminal block connector 4-pin for power, 2-pin for relay
- **LED Indicators** — PWR1, PWR2, SYS, Alarm, and R.M. Gigabit copper: Link / Activity / Speed (1000 Mbps) SFP: Link / Activity
- **Console** — RS-232 (RJ45)

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 20 Seconds with SFP-VDSL modules

QoS

- **Priority Queue** — WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority, Max. Priority Queues: 8
- **Scheduling**
- **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

Mechanism

- **Enclosure** — IP30, metal shell with solid mounting kit
- **Dimensions (W x H x D)** — 79 x 152 x 105 mm (3.1" x 5.98" x 4.13")
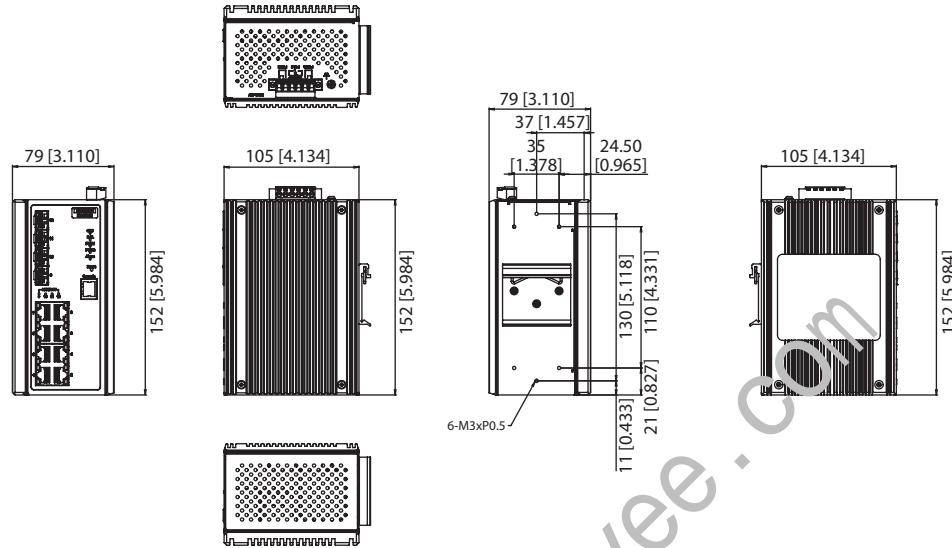- **Mounting** — DIN rail, wall mount

Power

- **Power Consumption** — 15 W @ 48 V_{DC} (system)
- **Power Input** — 12 ~ 48 V_{DC}
- **Fault Output** — 1 x relay output

Protection

- **Power Reverse** — Present
- **Overload Current** — Present

Dimensions

Unit: mm [inch]

79 [3.110]

105 [4.134]

79 [3.110]
37 [1.457]
35 [1.378]
24.50 [0.965]

105 [4.134]

152 [5.984]

152 [5.984]

152 [5.984]

130 [5.118]
110 [4.331]

11 [0.433]
21 [0.827]

6-M3xP0.5

Panel Cut-out Dimensions: 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")

Environment

- **Operating Temperature**   -20 ~ 75°C (-4 ~ 167°F)
- **Storage Temperature**   -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity**   10 ~ 95% (non-condensing)
- **Storage Humidity**   10 ~ 95% (non-condensing)

Certification

- **Safety**   UL 61010, EN LVD62368
- **EMI**   CE, FCC 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 NEMA TS2
- **Shock**   IEC 60068-2-27
- **Freefall**   IEC 60068-2-32
- **Vibration**   IEC 60068-2-6
- **Railway Track Side**   EN 50121-4
- **Patent**   http://www.advantech.com/legal/patent
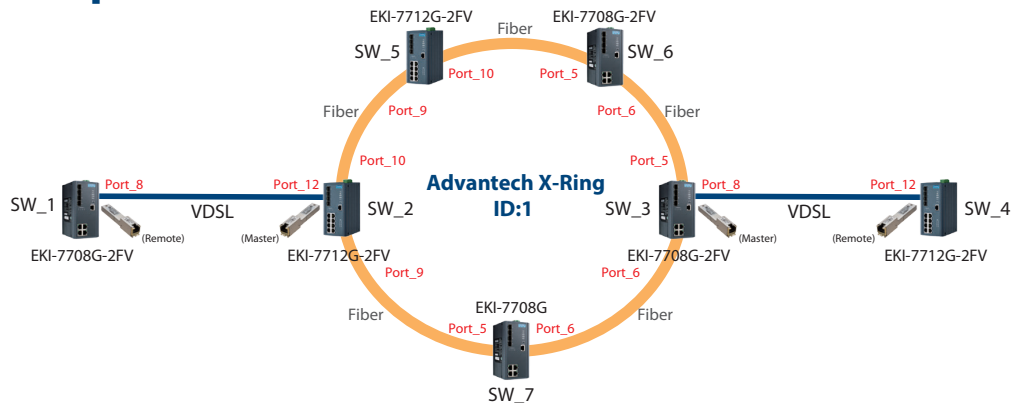
Ordering Information

- **EKI-7708G-2FVI-A**   4 x Gigabit + 4 x Gigabit SFP (VDSL2 * 3 supported) + 2 VDSL2 transceivers
- **EKI-7712G-2FVI-A**   8 x Gigabit + 4 x Gigabit SFP (VDSL2 * 3 supported) + 2 VDSL2 transceivers

Accessory (Sold Separately)

- **SFP-VDSL**   Master & Remote as a set
- **SFP-VDSL-M**   SFP VDSL transceiver, master
- **SFP-VDSL-R**   SFP VDSL transceiver, remote

Deployment Option

EKI-7712G-2FV   Fiber   EKI-7708G-2FV
SW_5   SW_6
Port_10   Port_5
Fiber   Port_9   Port_6   Fiber

Port_10   Port_5
SW_1   Port_8   Port_12   **Advantech X-Ring**   Port_8   Port_12   SW_4
VDSL   SW_2   **ID:1**   SW_3   VDSL
(Remote)   (Master)   Port_9   Port_6   (Master)   (Remote)
EKI-7708G-2FV   EKI-7712G-2FV   EKI-7708G-2FV   EKI-7712G-2FV

Fiber   EKI-7708G   Fiber
Port_5   Port_6
SW_7

Note: For SFP copper type, only 1000Mbps supported.
Note 2: SFP Transceivers can only be plugged in port 6,7,8 of EKI-7708G-2FVI if additional 1 SFP VDSL transceiver is used (port 5 shall not be used)
SFP Transceivers can only be plugged in port 10,11,12 of EKI-7712G-2FVI if additional 1 SFP VDSL transceiver is used (port 9 shall not be used)