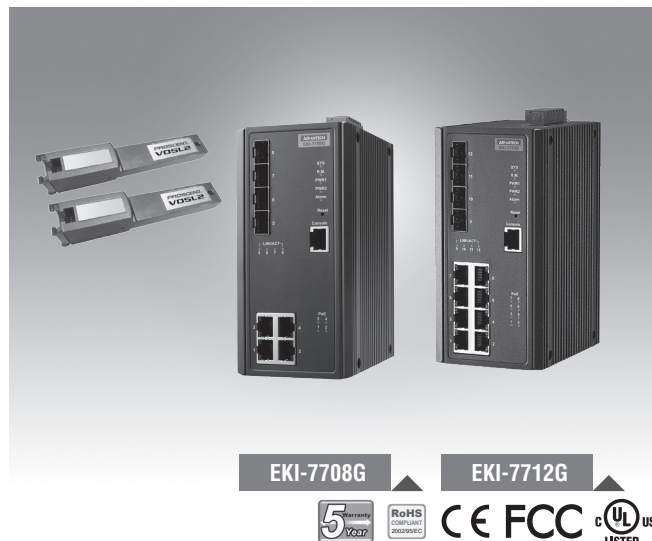# EKI-7708G-2FV
4GE + 2G SFP + 2 VDSL2 Port Managed Redundant Industrial Switch

EKI-7712G-2FV
8GE + 2G SFP + 2 VDSL2 Port Managed Redundant Industrial Switch

EKI-7708G	EKI-7712G

Features

- 4 x Gigabit + 2 x Gigabit SFP + 2 VDSL2 ports (EKI-7708G-2FV)
- 8 x Gigabit + 2 x Gigabit SFP + 2 VDSL2 ports (EKI-7712G-2FV)
- SFP socket for easy and flexible fiber expansion
- Redundancy: X-Ring Pro (ultra-high-speed recovery time, <20 ms), RSTP/STP, and MSTP (802.1w/1D/1s)
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB, private MIB
- 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-2FV and EKI-7708G-2FV provide 8/4 Gigabit ports, 2 Gigabit SFP ports, and 2 VDSL2 ports. 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 ms. 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-5e2 cable.

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 CAT 5e2 wire cable
- **Transmission Speed** — Gigabit copper: 10/100/1000 Mbps, auto negotiation
  Gigabit fiber: Up to 1000 Mbps

Interface

- **Connectors** — 4/8 x RJ45 (Gigabit Ethernet)
  2 x SFP (mini-GBIC)
  2 x VDSL 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)

Network Management

- **Configuration** — Web browser, Telnet, serial console, TFTP, SNMPv1/v2c/v3, port speed/duplex configuration, IPv6
- **VLAN** — IEEE 802.1Q, GVRP, port-based VLAN
- **Redundancy** — Advantech X-Ring, 802.1w/1D/1s RSTP, STP, MSTP
- **Security** — IP access security, port security, DHCP client, port and IP binding, 802.1X port access control
- **Traffic Control** — IGMP snooping/query for multicast group management, port trunking, static/802.3ad, LACP rate limit and storm control, IEEE 802.1p QoS CoS/TOS/DSCP priority queuing, IEEE 802.3x flow control
- **Diagnostics** — Port mirroring, real-time traffic statistic, MAC address table, SNTP, syslog, e-mail alert, SNMP trap, RMON

Mechanism

- **Enclosure** — IP30, metal shell with solid mounting kit
- **Dimensions (W x H x D)** — 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")
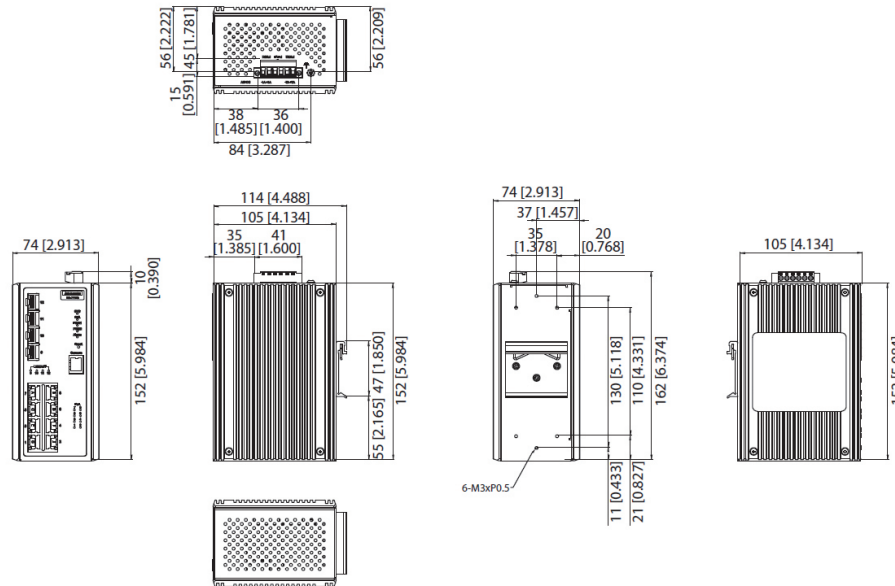- **Mounting** — DIN rail, wall mount

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]

56 [2.222] 45 [1.781] 56 [2.209]

15 [0.591]

38 [1.485] 36 [1.400]

84 [3.287]

114 [4.488]
105 [4.134]
35 [1.385] 41 [1.600]

74 [2.913]

10 [0.390]

152 [5.984]

55 [2.165] 47 [1.850] 152 [5.984]

74 [2.913]
37 [1.457]
35 [1.378] 20 [0.768]

130 [5.118] 110 [4.331] 162 [6.374]

11 [0.433] 21 [0.827]

6-M3xP0.5

105 [4.134]

152 [5.984]

Panel Cut-out Dimensions: 105 x 152 x 74 mm (4.13" x 5.98" x 2.91")

Environment

- **Operating Temperature** -20 ~ 70°C (-4 ~ 158°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
- **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
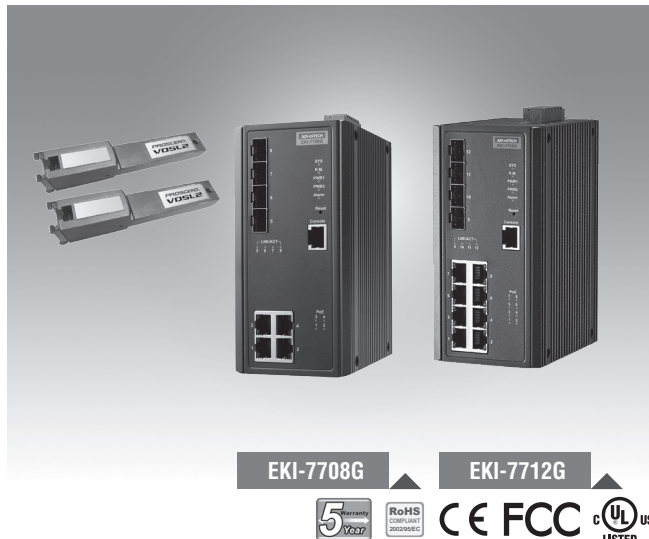
Ordering Information

- **EKI-7708G-2FV-AE** 4GE + 2G SFP + 2 VDSL2 port Managed Industrial Switch
- **EKI-7712G-2FV-AE** 8GE + 2G SFP + 2 VDSL2 port Managed Industrial Switch

EKI-7708G-2FVP

4GE PoE + 2G SFP + 2 VDSL2 Port Managed Redundant Industrial Switch

EKI-7712G-2FVP

8GE PoE + 2G SFP + 2 VDSL2 Port Managed Redundant Industrial Switch

Features

- 4 x Gigabit PoE + 2 x Gigabit SFP + 2 x VDSL2 ports (EKI-7708G-2FVP)
- 8 x Gigabit PoE + 2 x Gigabit SFP + 2 x VDSL2 ports (EKI-7712G-2FVP)
- SFP socket for easy and flexible fiber expansion
- Redundancy: X-Ring Pro (ultra-high-speed recovery time, <20 ms), RSTP/STP, and MSTP (802.1w/1D/1s)
- IXM function enables fast deployment
- Security: 802.1x (port-based, MD5/TLS/TTLS/PEAP encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB, private MIB
- NEMA TS2 for traffic control
- EN50121-4 approval for railway trackside deployment
- Provide 100/100 Mbps up to 400 m over CAT 5e
- Dual 48 V_{DC} (46 ~ 57 V_{DC}) power input and 1 x relay output

EKI-7708G **EKI-7712G**

Introduction

The EKI-7712G and EKI-7708G-2FVP support 8/4 Gigabit PoE ports, 2 Gigabit SFP ports, and 2 VDSL2 ports. They offer abundant port options for connecting many different device types. The embedded Advantech IXM function facilitates fast deployment, which can dramatically save on engineering time and costs. The 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 ms. The switches also incorporate the latest VDSL2 technology, meaning that this SFP module can be easily adapted to existing applications with existing 2-wire cable (e.g., phone line), thus avoiding the cost of rewiring. Furthermore, they can drastically extend Ethernet service on UTP wire up to 3000 m, and even with a rate of 100 Mbps up to 400 m on a standard CAT 5e2 wire cable.

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: 100 Mbps up to 400 m on standard CAT 5e2 wire
- **Transmission Speed**: Gigabit Copper: 10/100/1000 Mbps, auto negotiation
  Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors**: 4/8 x RJ45 (Gigabit Ethernet)
  2 x SFP (mini-GBIC)
  2 x VDSL 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)

Network Management

- **Configuration**: Configuration Web browser, Telnet, serial console, TFTP, SNMPv1/v2c/v3, port speed/duplex configuration, IPv6
- **VLAN**: IEEE 802.1Q, GVRP, port-based VLAN
- **Redundancy**: Advantech X-Ring, 802.1w/1D/1s RSTP, STP, MSTP
- **Security**: IP access security, port security, DHCP client, port and IP binding, 802.1X port access control

- **Traffic Control**: IGMP snooping/query for multicast group management, port trunking, static/802.3ad, LACP rate limit and storm control, IEEE 802.1p QoS CoS/TOS/DSCP priority queuing, IEEE 802.3x flow control
- **Diagnostics**: Port mirroring, real-time traffic statistics, MAC address table, SNTP, syslog, e-mail alert, SNMP trap, RMON

Mechanism

- **Enclosure**: IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)**: 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")
- **Mounting**: DIN rail, wall mount

Power

- **Power Consumption**: 15 W @ 48 V_{DC} (system)
- **Power Input**: 48 V_{DC} (46 ~ 57 V_{DC}), 53 ~ 57 V_{DC} is recommended for 802.3at, redundant dual power input
- **Power Budget**: 120 W
- **Fault Output**: 1 x relay output

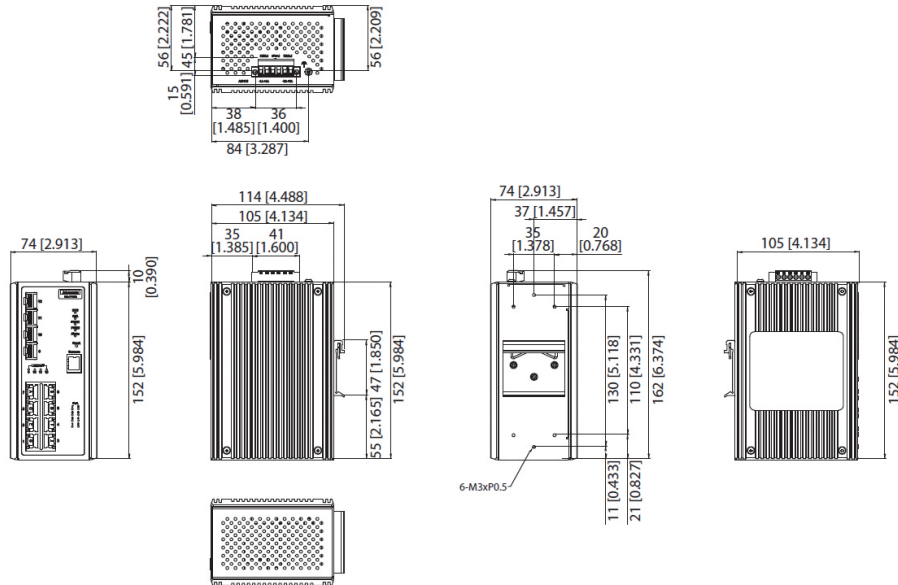### Protection

- **Power Reverse**: Present
- **Overload Current**: Present

Environment

- **Operating Temperature**: -20 ~ 60°C (-4 ~ 140F)
- **Storage Temperature**: -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity**: 10 ~ 95% (non-condensing)
- **Storage Humidity**: 10 ~ 95% (non-condensing)

ADVANTECH **Industrial Ethernet Soultions**

All product specifications are subject to change without notice.
Last updated: 24-Jul-2018

Dimensions

Unit: mm [in.]

Panel Cutout Dimensions: 105 x 152 x 74 mm (4.13" x 5.98" x 2.91")

Certification

- **Safety**   UL 61010
- **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
- **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-2FVP-AE**   4GE PoE + 2G SFP + 2 VDSL2 Port Managed Industrial Switch
- **EKI-7712G-2FVP-AE**   8GE PoE + 2G SFP + 2 VDSL2 Port Managed Industrial Switch