

EKI-2748FI

EKI-2748CI

4Gx+4SFP Managed Ethernet Switch with Wide Temperature Support

6Gx+2 Combo Managed Ethernet Switch with Wide Temperature Support



EKI-2748FI

EKI-2748CI



Features

- All Gigabit Ethernet ports for copper and SFP/combo interfaces
- SFP sockets for easy and flexible fiber expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, serial console, SNMP v1/v2c/v3
- Control: VLAN/GVRP, QoS, IGMP snooping/query, LACP, rate limit
- Security: IP/MAC and port binding, DHCP server, IP access list, 802.1X, SSL
- Diagnostic: Port statistic, port mirroring, RMON, trap, email alert, syslog
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

EKI-2748FI and EKI-2748CI supports Gigabit with Ethernet and SFP/Combo ports. To enhance reliability in industrial communication networks, it is equipped with Advantech's owned redundant network protocol—X-Ring Pro, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery times of less than 20 ms. Furthermore, EKI-2748FI and EKI-2748CI also support advanced network standards to optimize network performance, reduce maintenance cost, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1d, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 10/100/1000 Base-T(X), Optional 100Base-FX, 1000Base-SX/LX/LHX/XD/ZX/EZX
- **Transmission Speed** Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
SFP: Up to 1000 Mbps

Interface

- **Connectors** RJ45 x 4; SFP Combo: 100/1000 SFP *4 (EKI-2748FI)
RJ45 x 6; SFP Combo: RJ45 x 2;
100/1000 Mini-GBIC x 2 (EKI-2748CI)
Console port : RJ45 x 1
- **LED Indicators** System: PWR1, PWR2, P-Fail, R-Master
Gigabit Copper: Link/Activity, Speed
SFP: Link/Activity
- **Console** RS-232 (RJ45)

Network Management

- **Configuration** SNMP v1/v2c/v3, Web, Telnet, CLI, IPv6
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, IEEE 802.1w/d RSTP/STP
- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
- **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, DMI

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 59.6 x 152 x 105 mm (2.35" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 12.21 W (EKI-2748FI)
Max. 15.12 W (EKI-2748CI)
- **Power Input** 12 ~ 48 V_{DC}, 24 V_{AC} (18 ~ 30 V_{AC})
- **Fault Output** 1 Relay Output

Protection

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

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 5 ~ 95% (non-condensing)
- **MTBF** 248,507 hours (EKI-2748CI)
289,385 hours (EKI-2748FI)

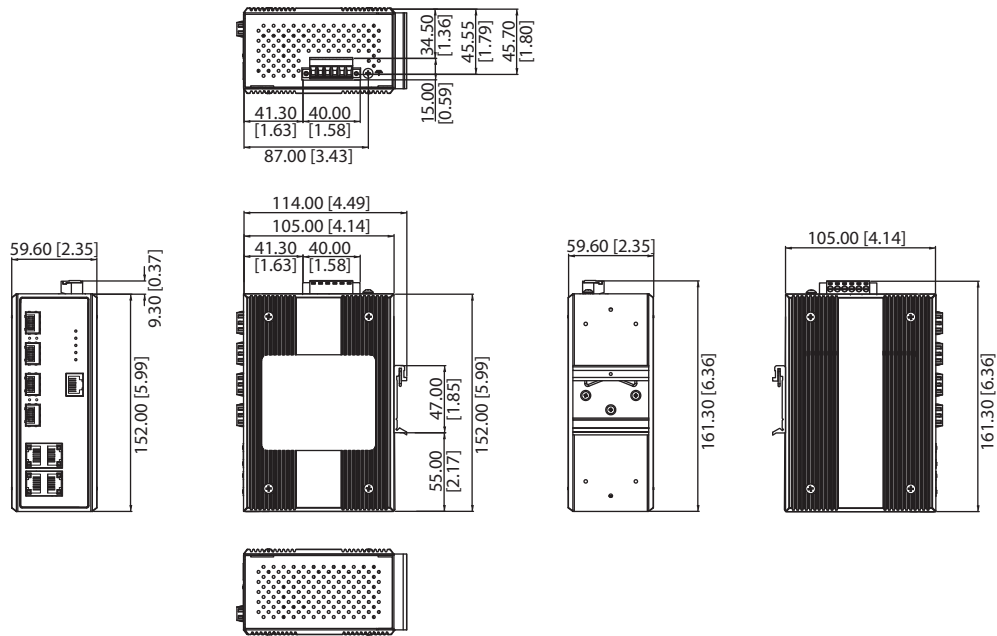
Certification

- **Safety** UL 508
Class I, Division 2
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Dimensions

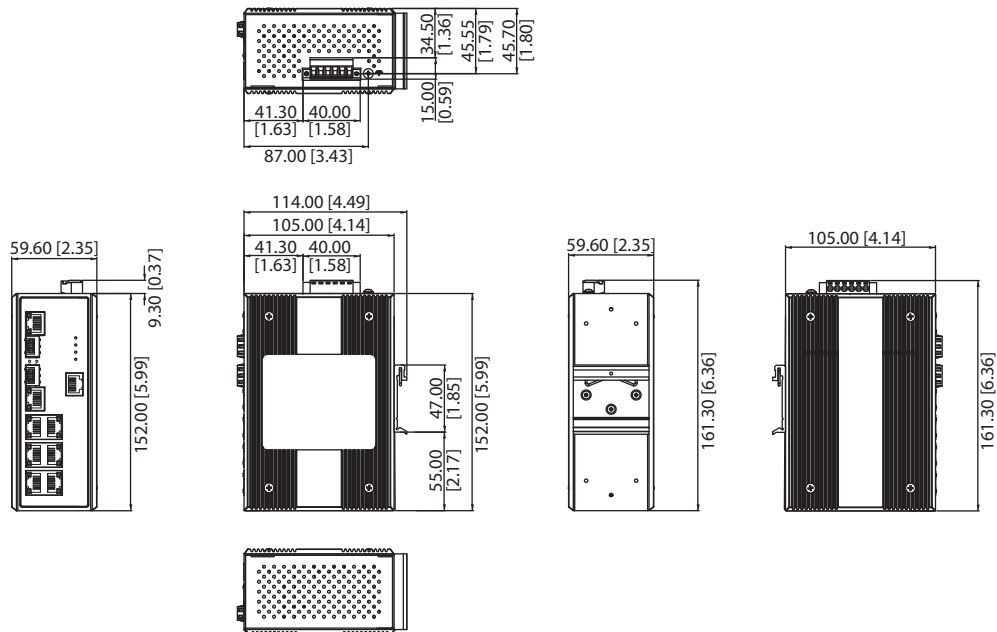
Unit: mm [inch]

EKI-2748FI



Panel Cut-out Dimensions: 114 x 152 x 59.6 mm (4.49" x 5.99" x 2.35)

EKI-2748CI



Panel Cut-out Dimensions: 114 x 152 x 59.6 mm (4.49" x 5.99" x 2.35)

Ordering Information

- **EKI-2748FI** 4GX+ 4SFP Managed Ethernet Switch w/Wide Temp
- **EKI-2748CI** 6Gx + 2G Combo Port Managed Ethernet Switch w/ Wide Temp

EKI-7428G-4CI

EKI-7428G-4CPI

24G+4G Combo port L2 Managed Switch

24G+4G Combo port L2 Managed PoE Switch



Features

- 24 x IEEE 802.3 af/at PoE Gigabit ports + 4 x Gigabit Copper/SFP combo ports, provide up to 30Watts per port
- SFP socket for Easy and Flexible Fiber Expansion
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), HTTPS, SSH and SNMPv3
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D), MSTP
- 48V_{DC} power input (46-57 V_{DC} for POE af, 53 -57 V_{DC} is recommended for at) and 2 relay output
- 40 ~ 70°C wide-range operating temperature

Introduction

The EKI-7428G is an industrial-class layer 2 full managed switch including 24 Gigabit ports and 4 Gigabit combo ports. It is designed for rack-mount installation, and can be deployed in demanding industrial environments. It is suitable for edge to core industrial networks. It integrates Layer 2 switching software, which is optimized for scale and performance, delivering wire speed across all ports up to 56 Gbps for layer 2 traffic forwarding. In addition, the PoE design provides up to 30 watts per port to fulfill high power consumption device, moreover, it supports high reliability with -40 ~ 70°C operating temperatures, and dual 48 V_{DC} input power design ensure vital network capabilities with minimum downtime. It is also embedded with Advantech IXM, which benefits users by giving them fast deployment and can dramatically save engineer's time and costs.

Specifications

Communications

- Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- LAN** 10/100/1000Base-T (X), 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)
- Transmission Speed** Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
Gigabit Fiber: Up to 1000 Mbps

Interface

- Connectors** 24 x RJ45 (Ethernet)
4 x RJ45/SFP (mini-GBIC) combo ports
4-pin removable screw terminal (Power)
3-pin removable screw terminal (Relay)
- LED Indicators** 10/100T (X): Link/Activity, Duplex/Collision
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/D RSTP/STP
- 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 kits
- Dimensions (W x H x D)** 438 x 43.6 x 259.20 mm (17.24" x 1.72" x 10.2")
- Mounting** 1U 19" Rack mount

Power

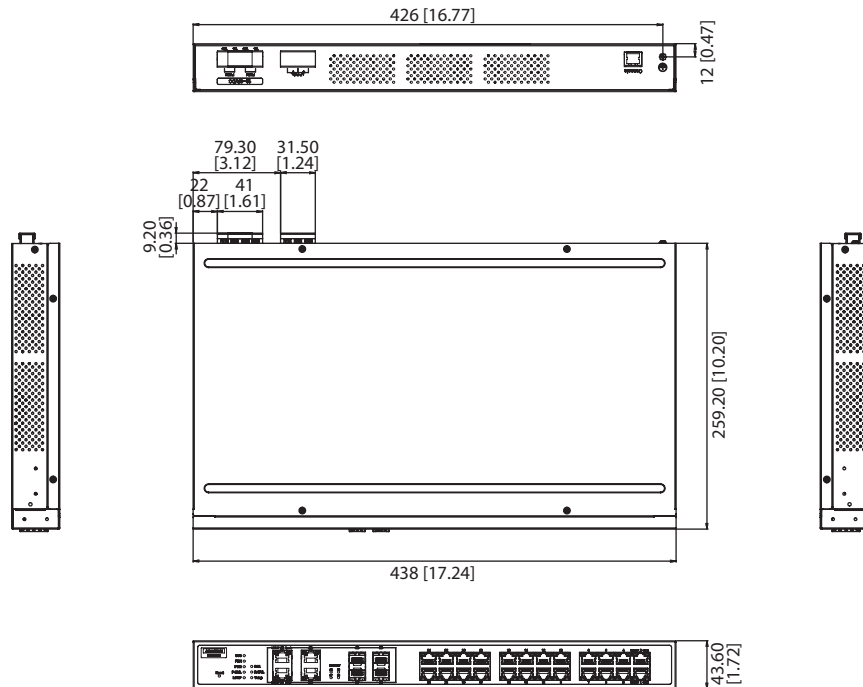
- Power Consumption** 20W @ 24V (EKI-7428G-4CI)
20W @ 48V (EKI-7428G-4CPI)
- Power Budget** 685W (EKI-7428G-4CPI)
- Power Input** EKI-7428G-4CI 12-48 V_{DC}
EKI-7428G-4CPI 48 V_{DC} (46 to 57 V_{DC}),
53 -57 V_{DC} is recommended for 802.3at
- Fault Output** 2 Relay Outputs

Protection

- Power Reverse** Present
- Overload Current** Present
- Environment**
- Operating Temperature** -40 ~ 70°C (-40 ~ 158°F)
- Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- Operating Humidity** 10 ~ 95% (non-condensing)
- Storage Humidity** 10 ~ 95% (non-condensing)
- MTBF** EKI-7428-4CI: 787,940 hours
EKI-7428G-4CPI: 424,517 hours

Dimensions

Unit: mm [inch]



- **Certification**
- **Safety** UL 61010-2-201
- **EMI** CE FCC EN55022 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-7428G-4CI-AE** 24GE+4G Combo Port Managed Ethernet Switch w/ Wide Temp
- **EKI-7428G-4CPI-AE** 24G+4G Combo Port POE Managed Ethernet Switch w/ Wide Temp

EKI-7559SI/MI

EKI-7554SI/MI

8+2 SC Type Fiber Optic Managed Industrial Ethernet Switch with Wide Temperature

4+2 SC Type Fiber Optic Managed Industrial Ethernet Switch with Wide Temperature



EKI-7559SI/MI

EKI-7554SI/MI



Features

- 2 x SC type fiber ports, plus 4 Fast Ethernet ports. (EKI-7554SI/MI)
- 2 x SC type fiber ports, plus 8 Fast Ethernet ports. (EKI-7559SI/MI)
- Redundancy: X-Ring Pro (high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC, port binding, DHCP Server, IP access list, 802.1X, SSL, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V_{DC} power input and 1 relay output
- Supports wide operating temperature -40 ~ 75°C

Introduction

Both the EKI-7554SI/MI and EKI-7559SI/MI support two SC type Fiber ports, EKI-7554SI/MI four Fast Ethernet ports and EKI-7559SI/MI can support up to eight Fast Ethernet ports. To create reliability in your network, the EKI-7554SI/MI come equipped with a proprietary redundant network protocol -- X-Ring Pro that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, EKI-7554SI/MI also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3ad, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X
- **LAN** 10/100Base-T (X), 100Base-FX
- **Transmission Distance** Ethernet : Up to 100 m
Multi-mode Fiber: Up to 2 km (EKI-7554MI)
Single-mode Fiber: Up to 30 km (EKI-7554SI)
- **Transmission Speed** Up to 100 Mbps

Interface

- **Connectors** 4 x RJ45 ports (EKI-7554SI/MI)
8 x RJ45 ports (EKI-7559SI/MI)
2 x SC type fiber optic connectors
- **LED Indicators** System: PWR, PWR1, PWR2, R.M., P-Fail
10/100T (X): Link/Activity, Duplex/Collision
- **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 Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP
- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
- **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, Email Alert, SNMP Trap, RMON

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 7.7 W (EKI-7554SI/MI)
Max. 8.4 W (EKI-7559SI/MI)
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

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

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 262,230 hours (EKI-7554SI/MI)
264,964 hours (EKI-7559SI/MI)

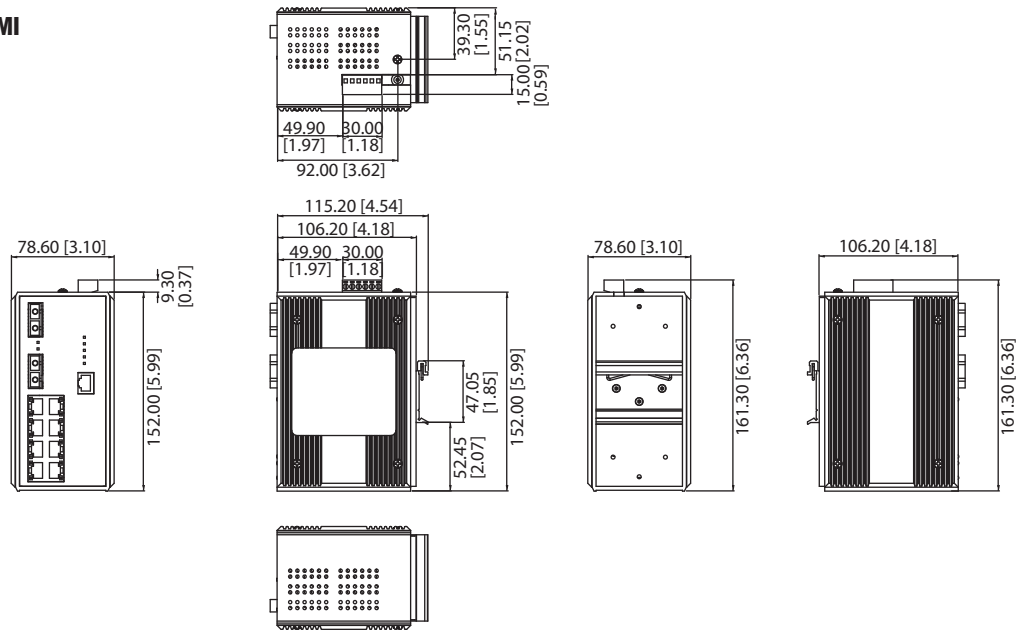
Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950 Class I, Division 2 (EKI-7559MI/SI)
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Dimensions

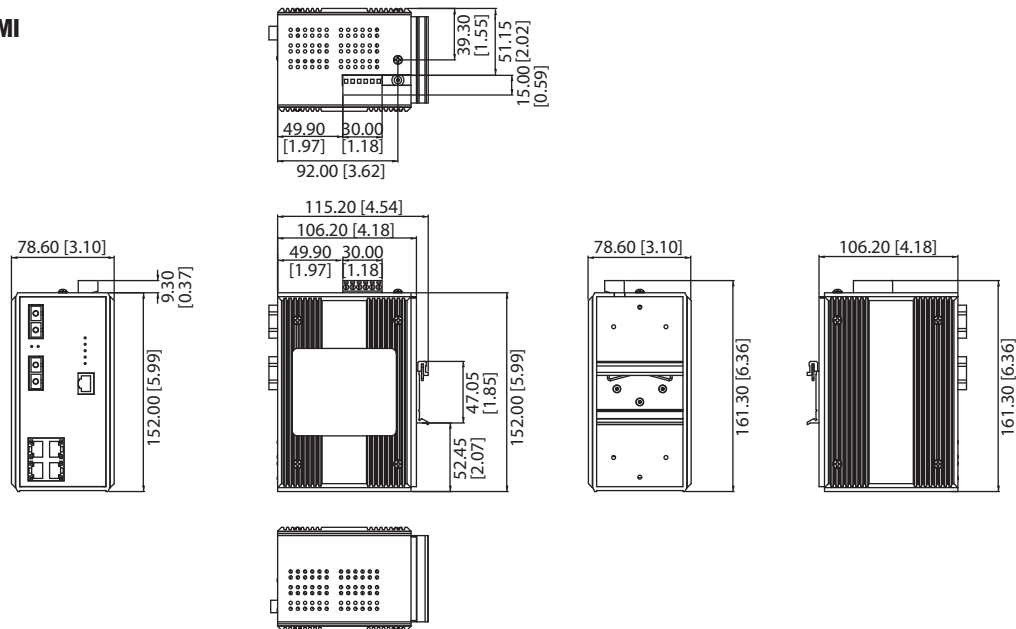
Unit: [mm]

EKI-7559SI/MI



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

EKI-7554SI/MI



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

Ordering Information

- **EKI-7554SI** 4FE + 2-port Single-mode Fiber Managed Ethernet Switch w/Wide Temp
- **EKI-7554MI** 4FE + 2-port Multi-mode Fiber Managed Ethernet Switch w/Wide Temp
- **EKI-7559SI** 8FE + 2-port Single-mode Fiber Managed Ethernet Switch w/Wide Temp
- **EKI-7559MI** 8FE + 2-port Multi-mode Fiber Managed Ethernet Switch w/Wide Temp

EKI-7654C

4+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch



Features

- 2 Gigabit Copper/SFP combo ports, plus 4 Fast Ethernet ports
- Full/half duplex mode flow control
- MDI/MDI-X auto crossover
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/ Query, LACP, Rate
- Limit Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SSL, SNMPv3 Diagnostic: Port Statistic, Port Mirroring, RMON, SNMP Trap, SMTP, Syslog, SSL
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

EKI-7654C supports 4 Fast Ethernet ports and 2 Gigabit combo ports. To create reliability in your network, the EKI-7654C comes equipped with a proprietary redundant network protocol -- X-Ring Pro that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, EKI-7654C also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 100Base-TX, 10/1000Base-T, 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)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors** 4 x RJ45 (Ethernet) 2 x RJ45/SFP (mini-GBIC) combo ports 6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR, PWR1, PWR2, R.M., P-Fail
10/100T (X): Link/Activity, Duplex/Collision
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 Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP
- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL

- **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 kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 10.7 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

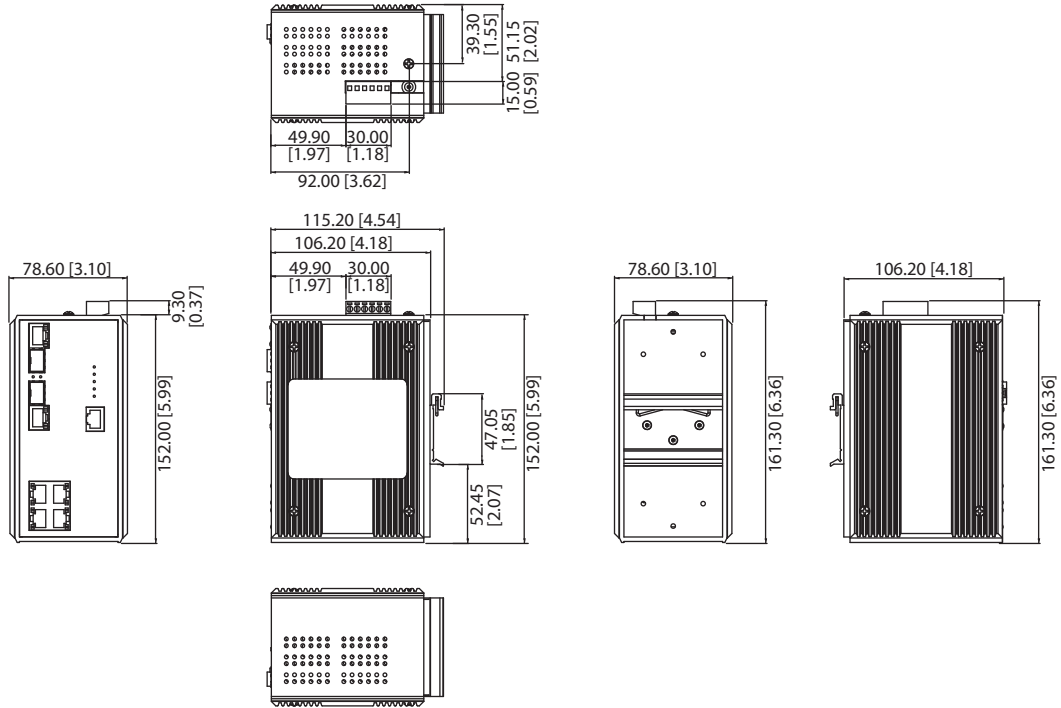
- **Power Reverse** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 284,409 hours

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Ordering Information

- **EKI-7654C** 4FE + 2G Combo Port Managed Ethernet Switch

EKI-7656C/CI

16+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch



Features

- 2 Gigabit Copper/SFP combo ports, plus 16 Fast Ethernet ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SSL, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V_{DC} power inputs and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7656CI)

Introduction

The EKI-7656C supports 16 Fast Ethernet ports and 2 Gigabit combo ports. To create reliability in your network, the EKI-7656C comes equipped with a proprietary redundant network protocol -- X-Ring Pro that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, EKI-7656C also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 10/100/1000Base-T (X), 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)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation,
SFP: Up to 1000 Mbps

Interface

- **Connectors** 16 x RJ45 (Ethernet)
2 x RJ45/SFP (mini-GBIC) combo ports
6-pin removable screw terminal (Power&Relay)
- **LED Indicators** System: PWR, PWR1, PWR2, R.M., P-Fail
Ethernet: Link/Activity, Duplex/Collision
Gigabit Copper: Link/Activity, Speed (1000 Mbps)
SFP: Link/Activity
- **Console** RS-232 (RJ45)

Network Management

- **Diagnostics** Port Mirroring, Real-time traffic statistic, MAC Address Table, STMP, Syslog, E-Mail Alert, SNMP Trap, RMON
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Configuration** Web browser, Telnet, Serial console, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration, IPv6
- **Redundancy** Advantech X-Ring Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP

- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
- **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

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 10.7 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

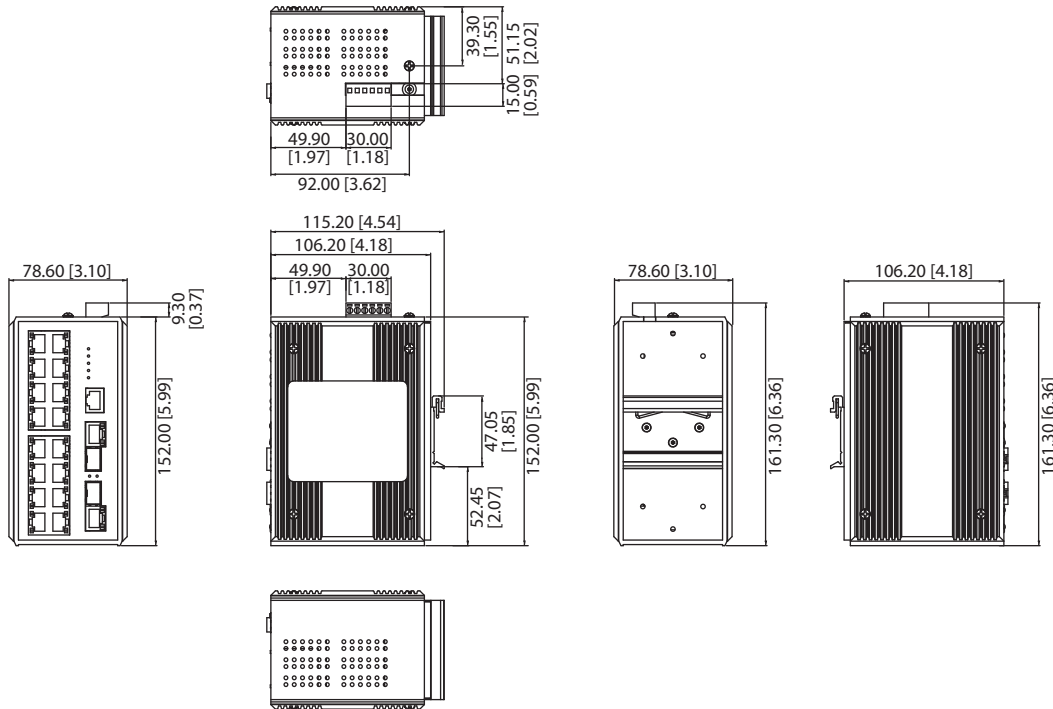
- **Power Reverse** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
-40 ~ 75°C (-40 ~ 167°F) (EKI-7656CI)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 295,000 hours

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1)

Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Ordering Information

- **EKI-7656C** 16FE + 2G Combo Port Managed Ethernet Switch
- **EKI-7656CI** 16FE + 2G Combo Port Managed Ethernet Switch w/ Wide Temp

EKI-7657C/CI

7+3G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch with 2 x DI/O



Features

- 3 Gigabit Copper/SFP combo ports, plus 7 Fast Ethernet ports
- 2 Digital Inputs and 2 Digital Outputs for Events and Alarms in the Network
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SSL, SNMPv3
- Diagnostic: Port Statistics, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V_{DC} power input and 1 relay output
- Operating temperature from -40 to 75°C (EKI-7657CI)

Introduction

The EKI-7657C supports seven Fast Ethernet ports and three Gigabit combo ports with 2 x Digital Input and Digital Output ports. To create reliability in your network, the EKI-7657C comes equipped with a proprietary redundant network protocol -- X-Ring Pro that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, the EKI-7657C also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 10/100/1000Base-T (X), 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)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors** 7 x RJ45 (Ethernet)
3 x RJ45/SFP (mini-GBIC) combo ports
1 x 6-pin removable terminal (Power & Relay)
1 x 6-pin removable terminal (DI/DO)
- **LED Indicators** System: PWR, PWR1, PWR2, R.M., P-Fail
10/100T (X): Link/Activity, Duplex/Collision
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 Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP

- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
- **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, SNMP, Syslog, Email Alert, SNMP Trap, RMON

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 10.7 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

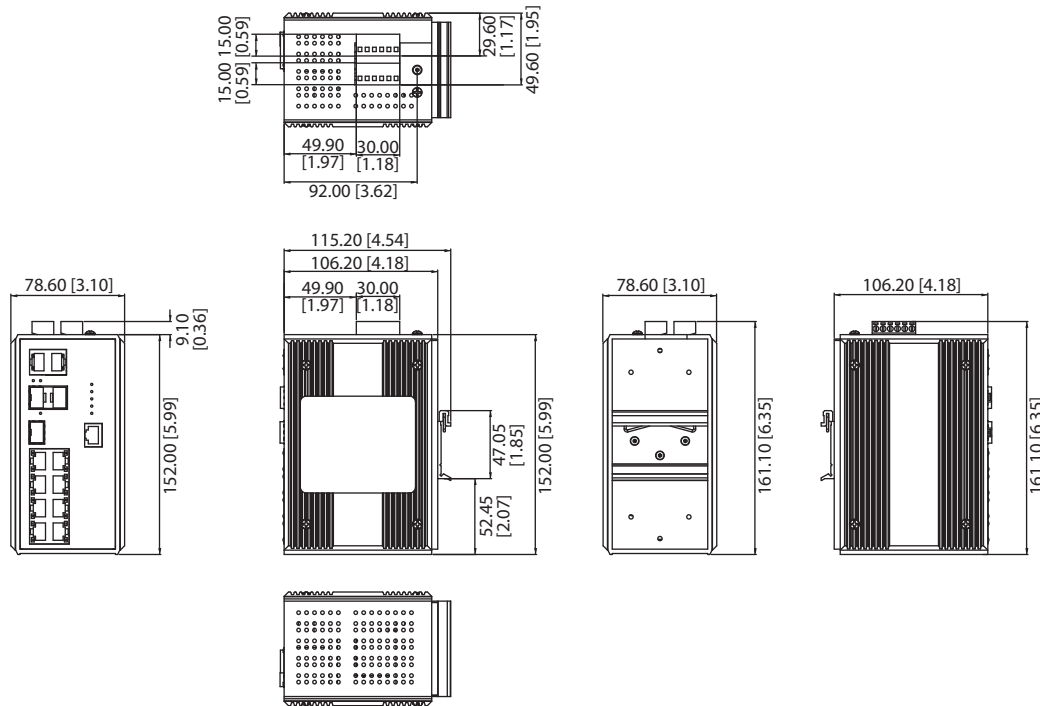
- **Power Reverse** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
-40 ~ 75°C (-40 ~ 167°F) (EKI-7657CI)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 284,409 hours

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

Certifications

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Ordering Information

- **EKI-7657C** 7FE + 3G Combo Port Managed Ethernet Switch w/ 2 x DI/DO
- **EKI-7657CI** 7FE + 3G Combo Port Managed Ethernet Switch w/ 2 x DI/DO and Wide Temp

EKI-7659C/CI

8+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch



Features

- 2 Gigabit Copper/SFP combo ports, plus 8 Fast Ethernet ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SSL, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V_{DC} power input and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7669CI)

Introduction

The EKI-7659C supports eight Fast Ethernet ports and two Gigabit combo ports. To create reliability in your network, the EKI-7659C comes equipped with a proprietary redundant network protocol – X-Ring Pro that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, EKI-7659C also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 10/100/1000Base-T (X), 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)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors** 8 x RJ45 (Ethernet)
2 x RJ45/SFP (mini-GBIC) combo ports
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR, PWR1, PWR2, R.M., P-Fail
10/100T (X): Link/Activity, Duplex/Collision
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 Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP
- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
- **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, SNMP, Syslog, E-Mail Alert, SNMP Trap, RMON

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

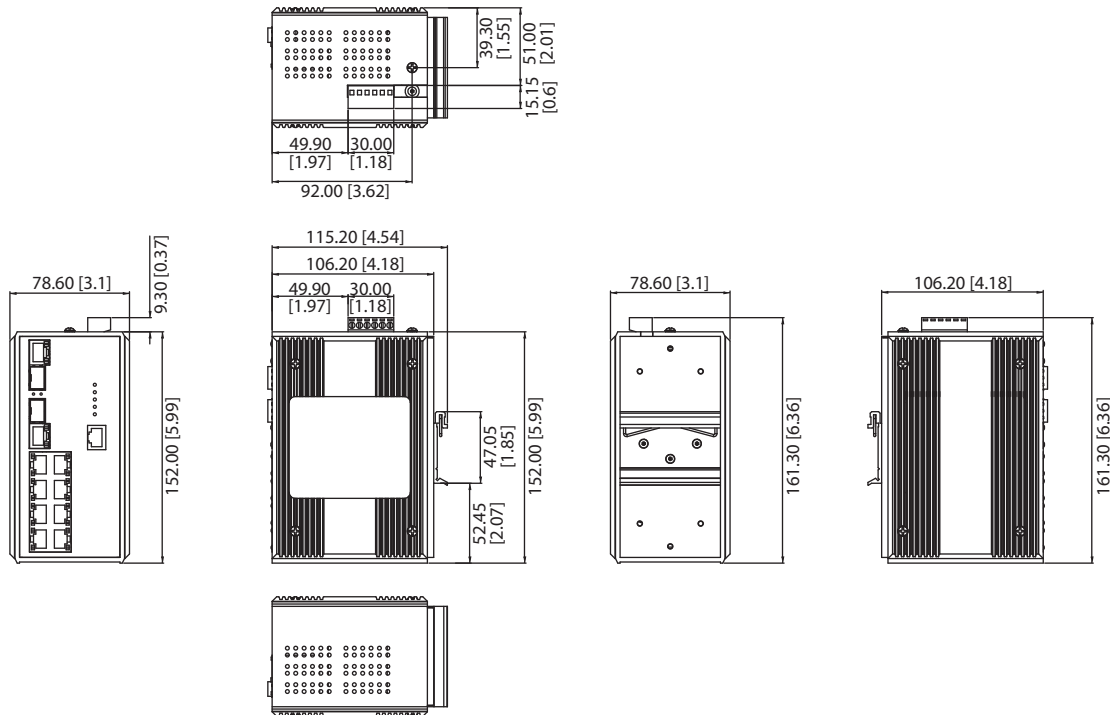
- **Power Consumption** Max. 10.7 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

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

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
-40 ~ 75°C (-40 ~ 167°F) (EKI-7659CI)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 284,409 hours

Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Ordering Information

- **EKI-7659C** 8FE + 2G Combo Port Managed Ethernet Switch
- **EKI-7659CI** 8FE + 2G Combo Port Managed Ethernet Switch w/ Wide Temp

EKI-7710E-2C EKI-7710E-2CI

8FE+2G Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Fast Ethernet ports + 2 Gigabit Copper/SFP combo ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7710E-2CI)
- Dual 12~48 V_{DC} power input and 1 relay output

Introduction

EKI-7710E-2C/2CI supports 8 Fast Ethernet ports and 2 Gigabit combo ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7710E series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7710E series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability.

Specifications

Interface

- **I/O Port** 8 x 10/100Base-T/TX RJ-45
2 x RJ-45/SFP(mini-GBIC)Combo port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) 7710E-2CI
-10 ~ 60°C (-40 ~ 140°F) 7710E-2C
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

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

Certification

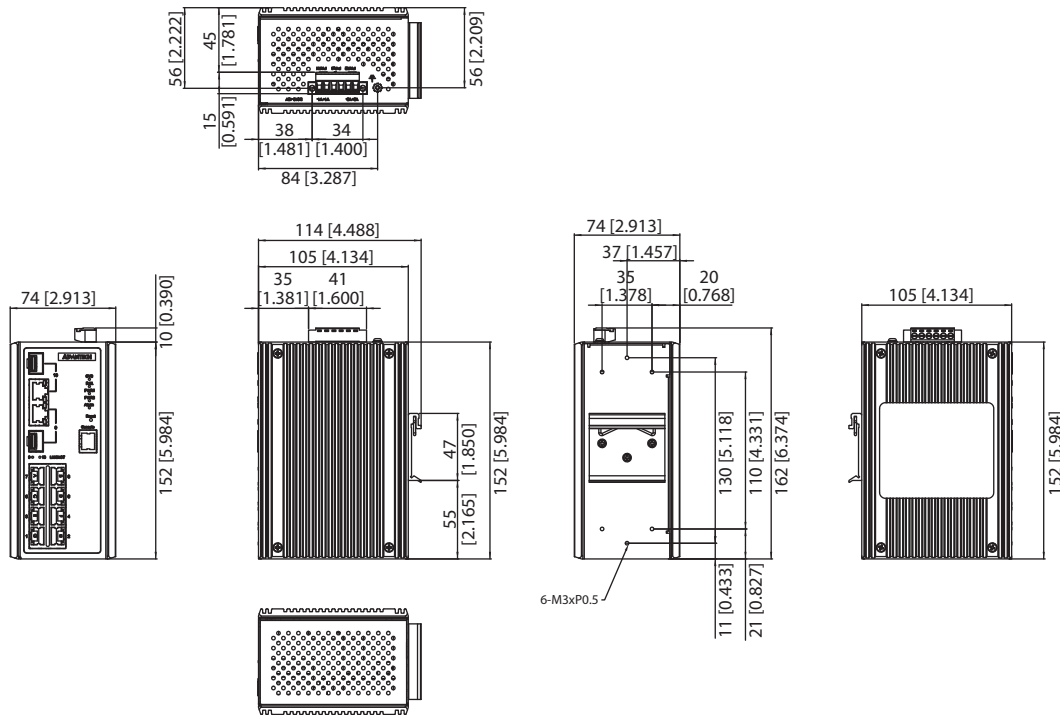
- **EMI** CE, FCC Class A
 - **Safety** UL508
UL60950*, C1D2*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4*
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2*
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7710E-2CI-AE** 8FE + 2G Combo Port Managed Ethernet Switch w/ Wide Temp
- **EKI-7710E-2C-AE** 8FE + 2G Combo Port Managed Ethernet Switch

EKI-7710G-2C EKI-7710G-2CI

8G+2G Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Gigabit ports + 2 Gigabit Copper/SFP combo ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7710G-2CI)
- Dual 12~48 V_{DC} power input and 1 relay output

Introduction

EKI-7710G-2C/2CI supports 8 Gigabit ports and 2 Gigabit combo ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7710G series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7710G series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability.

Specifications

Interface

- **I/O Port** 8 x 10/100/1000Base-T/TX RJ-45
2 x RJ-45/SFP (mini-GBIC) Combo port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) 7710G-2CI
-10 ~ 60°C (-40 ~ 140°F) 7710G-2C
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

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

Certification

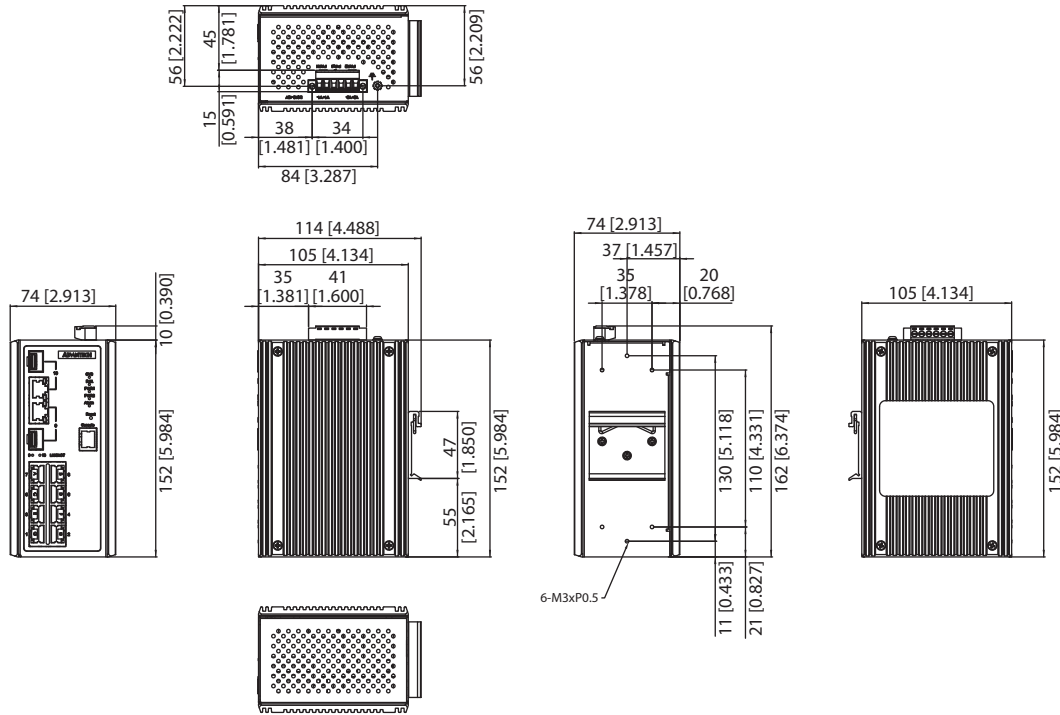
- **EMI** CE, FCC Class A
 - **Safety** UL508
UL60950*, C1D2*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN 50121-4*
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2*
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7710G-2CI-AE** 8G + 2G Combo Port Managed Ethernet Switch w/Wide Temp
- **EKI-7710G-2C-AE** 8G + 2G Combo Port Managed Ethernet Switch

EKI-7712E-4F

EKI-7712E-4FI

8FE+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Fast Ethernet ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7712E-4FI)
- Dual 12-48 V_{DC} power input and 1 relay output

Introduction

EKI-7712E-4F/4FI supports 8 Fast Ethernet ports and 4 SFP (mini-GBIC) ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7712E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712E series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature (EKI-7712G-4FI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic application and have successfully passed the EN50121-4 European railway standard requirements of emission and immunity for railway platforms and trackside deployment.

Specifications

Interface

- **I/O Port** 8 x 10/100Base-T/TX RJ-45
4 x SFP (mini-GBIC) port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (7712E-4FI)
-10 ~ 60°C (-40 ~ 140°F) (7712E-4F)
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** 12.1W @ 48V_{DC} (System)
- **Power Input** 12-48 V_{DC}, redundant dual power input
- **Fault Output** 1 Relay Output

Certification

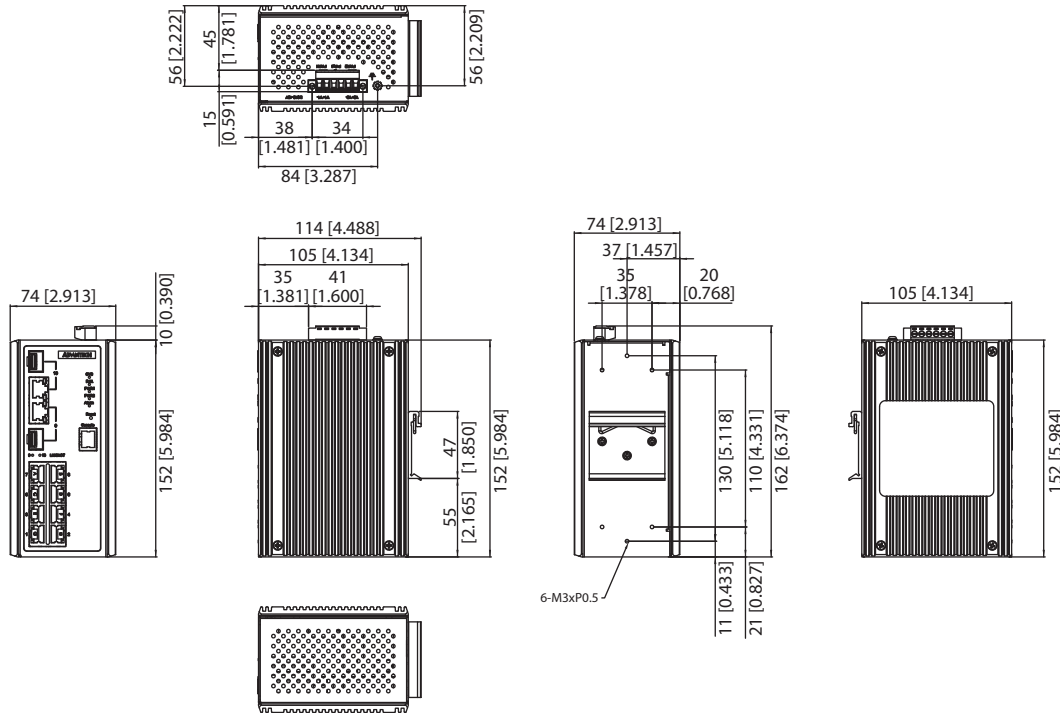
- **EMI** CE, FCC Class A
 - **Safety** UL61010-2-201
IEC60950*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4*
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2*
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1-4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7712E-4FI-AE** 8FE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7712E-4F-AE** 8FE + 4SFP Port Managed Ethernet Switch

EKI-7712G-4F

EKI-7712G-4FI

8G+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Gigabit ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7712G-4FI)
- Dual 12-48 V_{DC} power input and 1 relay output

Introduction

EKI-7712G-4F/4FI supports 8 Gigabit ports and 4 SFP (mini-GBIC) ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7712G series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712G series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature (EKI-7712G-4FI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications and have successfully passed the EN50121-4 European railway standard requirements of emission and immunity for railway platforms and trackside deployment.

Specifications

Interface

- **I/O Port** 8 x 10/100/1000Base-T/TX RJ-45
4 x SFP (mini-GBIC) port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (7712G-4FI)
-10 ~ 60°C (-40 ~ 140°F) (7712G-4F)
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** 12.1W @ 48V_{DC} (System)
- **Power Input** 12-48 V_{DC}, redundant dual power input
- **Fault Output** 1 Relay Output

Certification

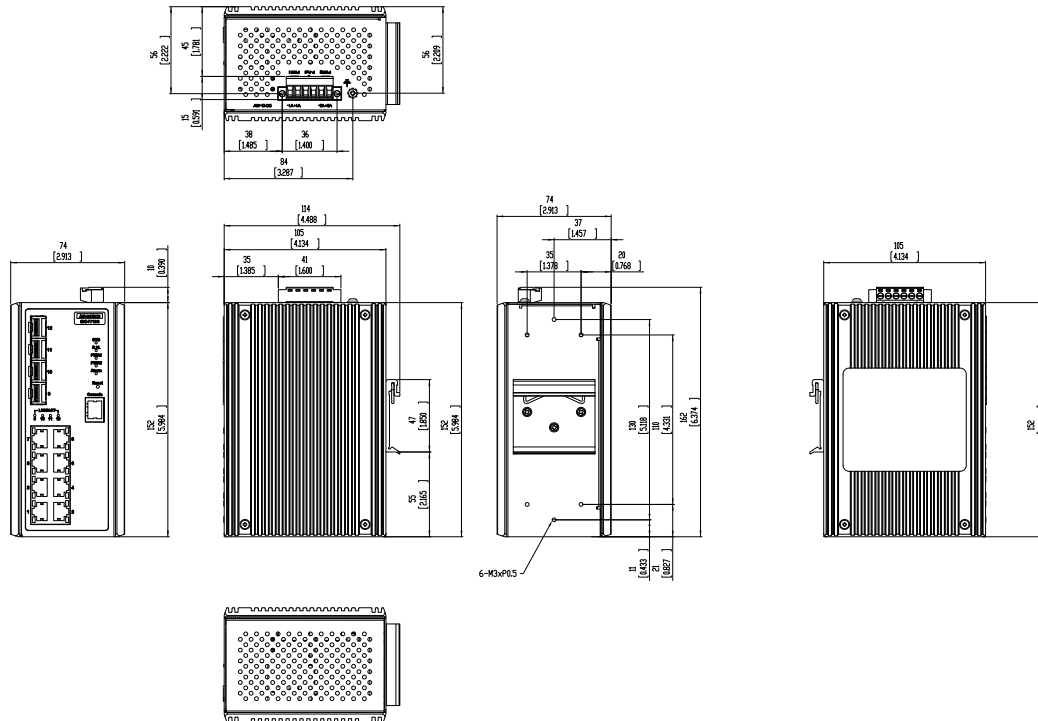
- **EMI** CE, FCC Class A
 - **Safety** UL61010-2-201
IEC60950*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4*
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2*
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1-4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7712G-4FI-AE** 8GE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7712G-4F-AE** 8GE + 4SFP Port Managed Ethernet Switch

EKI-7712G-4FP EKI-7712G-4FPI

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



Features

- 8 x IEEE 802.3 af/at PoE Gigabit ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7712G-4FPI)
- Dual 48 V_{DC} power input and 1 relay output

Introduction

EKI-7712G-4FP/4FPI supports 8 Gigabit IEEE 802.3 af/at PoE ports and 4 SFP (mini-GBIC) ports. They can provide up to 30 watts per port to fulfill high power consumption PD (Power Device). Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7712G series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712G series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature (EKI-7712G-4FPI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications and have successfully passed the EN50121-4 European railway standard requirements of emission and immunity for railway platforms and trackside deployment.

Specifications

Interface

- **I/O Port** 8 x 10/100/1000Base-T/TX RJ-45
4 x SFP (mini-GBIC) port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (7712G-4FPI)
-10 ~ 60°C (-40 ~ 140°F) (7712G-4FP)
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** 12.1W @ 48V_{DC} (System)
- **Power Input** 48 V_{DC} (46 to 57 V_{DC}),
53 ~ 57 V_{DC} is recommended for 802.3at,
redundant dual power input
- **Power Budget** 240W
- **Fault Output** 1 Relay Output

Certification

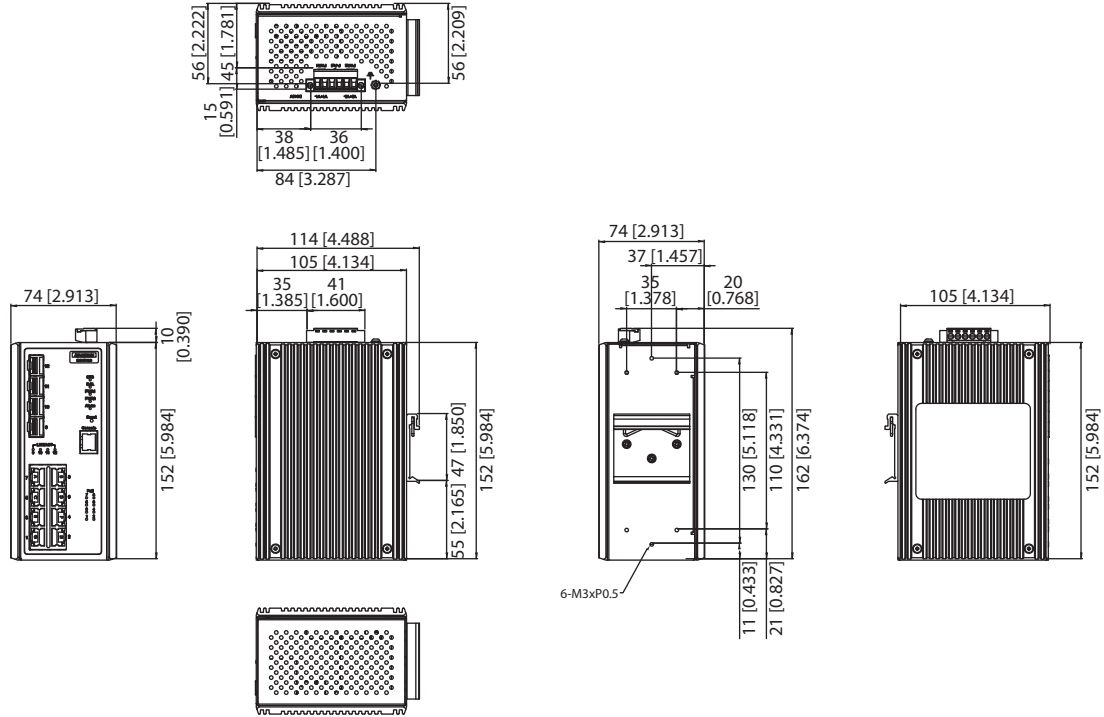
- **EMI** CE, FCC Class A
- **Safety** UL61010-2-201
IEC60950*
- **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Traffic control** NEMA TS2
- *= Compliant
- **Patent** <http://www.advantech.com/legal/patent>

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
IGMP Snooping v1/v2/v3, MLD
Snooping, IGMP Immediate leave
- **IP Multicast**
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 105 x 152 x 74 (4.134" x 5.98" x 2.913")

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7712G-4FPI-AE** 8GE + 4SFP Port Managed PoE Ethernet Switch w/Wide Temp
- **EKI-7712G-4FP-AE** 8GE + 4SFP Port Managed PoE Ethernet Switch

EKI-7720E-4F

EKI-7720E-4FI

16FE+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 16 Fast Ethernet ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7720E-4FI)
- Dual 12~48 V_{DC} power input and 1 relay output

Introduction

EKI-7720E-4F/4FI supports 16 Fast Ethernet ports and 4 SFP (mini-GBIC) ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advantech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7720E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7720E series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature(EKI-7720E-4FI) .

Specifications

Interface

- **I/O Port** 16 x 10/100Base-T/TX RJ-45
4 x SFP (mini-GBIC) port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (7720E-4FI)
-10 ~ 60°C (-40 ~ 140°F) (7720E-4F)
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** TBC
- **Power Input** 12~48 V_{DC}, redundant dual power input
- **Fault Output** 1 Relay Output

Certification

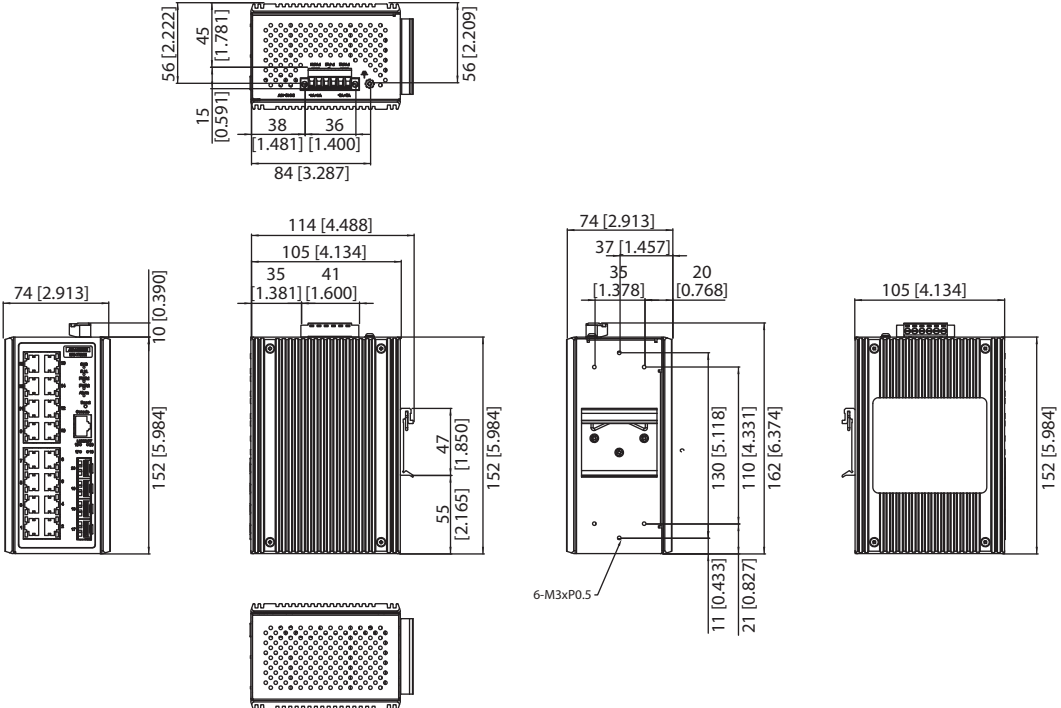
- **EMI** CE, FCC Class A
 - **Safety** UL61010-2-201
IEC60950*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7720E-4FI-AE** 16FE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7720E-4F-AE** 16FE + 4SFP Port Managed Ethernet Switch

EKI-7720G-4F

EKI-7720G-4FI

16FE+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 16 Gigabit Ethernet ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- 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
- -40 ~ 75°C wide-range operating temperature (EKI-7720G-4FI)
- Dual 12-48 V_{DC} power input and 1 relay output

Introduction

EKI-7720G-4F/4FI supports 16 Gigabit Ethernet ports and 4 SFP (mini-GBIC) ports. It can provide users abundant ports to connect many devices. Besides, it is embedded with Advan-tech IXM function, this can benefit users for fast deployment and can dramatically save engineers time and costs. The EKI-7720G series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7720G series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75°C operating temperature(EKI-7720G-4FI).

Specifications

Interface

- **I/O Port** 16 x 10/100/1000Base-T/TX RJ-45
4 x SFP (mini-GBIC) port
- **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
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F) (7720G-4FI)
-10 ~ 60°C (-40 ~ 140°F) (7720G-4F)
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** TBC
- **Power Input** 12-48 V_{DC}, redundant dual power input
- **Fault Output** 1 Relay Output

Certification

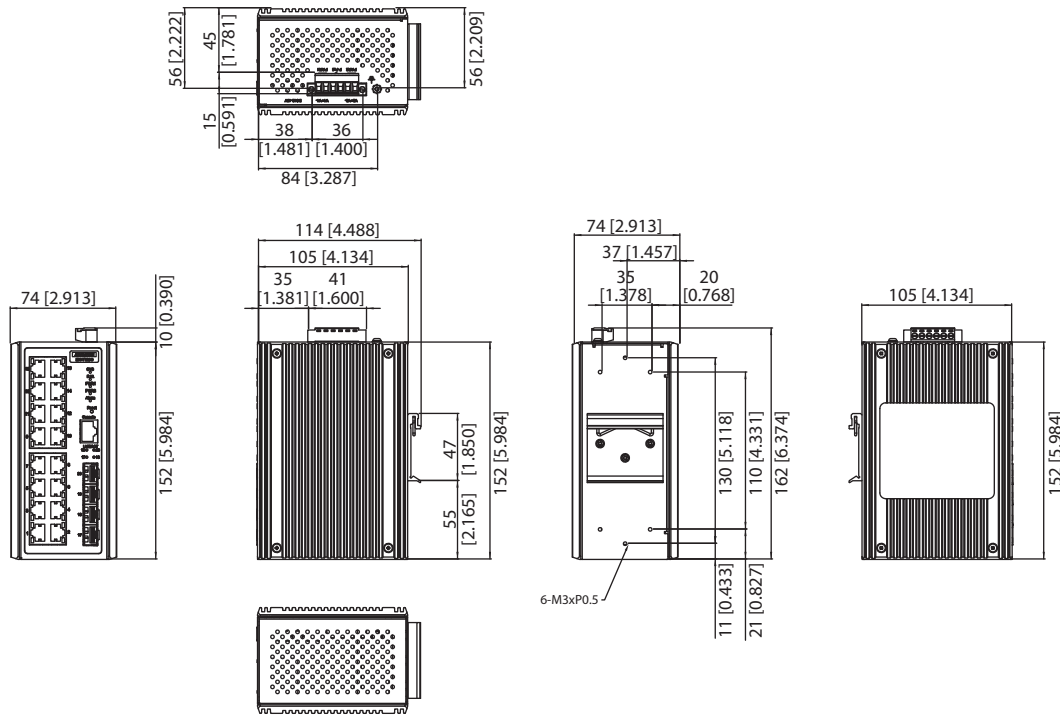
- **EMI** CE, FCC Class A
 - **Safety** UL61010-2-201
IEC60950*
 - **EMC** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4
 - **Shock** IEC 60068-2-27
 - **Freefall** IEC 60068-2-32
 - **Vibration** IEC 60068-2-6
 - **Traffic control** NEMA TS2
- *= Compliant

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1-4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **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

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 105 (4.137) x 152 (5.984) x 74 (2.91)

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **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
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, 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

EKI-7758F

4G+4 SFP Gigabit Managed Redundant Industrial Ethernet Switch



Features

- All Gigabit Ethernet ports for 4 Copper and 4 SFP
- SFP sockets for easy and flexible fiber expansion
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SSL
- Diagnostic: Port statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

The EKI-7758F supports eight Gigabit ports with four Ethernet and four SFP. To create reliability in your network, the EKI-7758F comes equipped with a proprietary redundant network protocol – X-Ring that was developed by Advantech, which provides users with an easy way to establish a redundant Ethernet network with ultra high-speed recovery time less than 20 ms. Furthermore, the EKI-7758F also supports many advanced network standards to optimize network performance, ease maintenance issues, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ab
- **LAN** 100Base-T (X), 10/100Base-T, 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)
- **Transmission Speed** Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
SFP: Up to 1000 Mbps

Interface

- **Connectors** 4 x RJ45 (Ethernet)
4 x SFP (mini-GBIC) ports
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR, R.M., PWR1, PWR2, P-Fail
Gigabit Copper: Link/Activity, Speed
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 Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP
- **Security** IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL

- **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, SNMP, Syslog, E-Mail Alert, SNMP Trap, RMON

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 17 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Protection

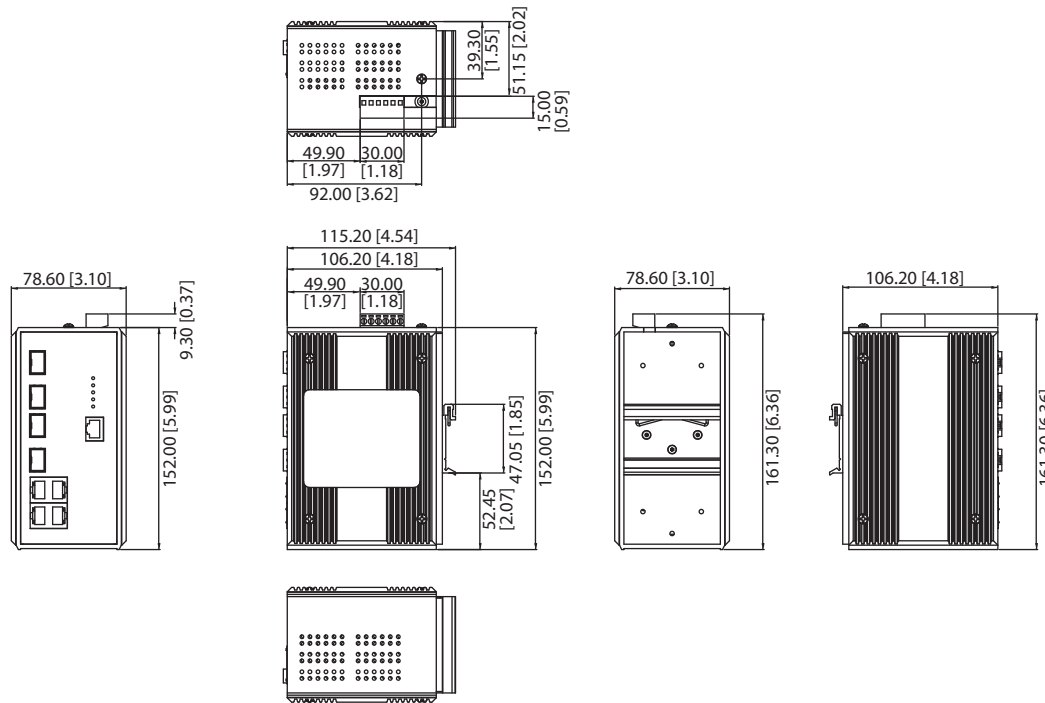
- **Power Reverse** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 289,777 hours

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 115.2 x 152 x 78.6 mm (4.54" x 5.99" x 3.1")

Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
Class I, Division 2
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 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

Ordering Information

- **EKI-7758F** 4G+4 SFP Managed Gigabit Ethernet Switch

EKI-9312

Industrial-Class 12 Port Full Gigabit Managed DIN Rail Switch

NEW



Features

- All Gigabit connections support dual-ring protection and non-blocking traffic forwarding
- X-Ring Pro: recovery time within 20ms for 250 node connections
- STP, RSTP, MSTP for better redundancy
- Super security mechanism includes SSL, SSH, 802.1X, MAC, IP filtering, RADIUS, TACACS+, VLAN for access protection
- Dual power input, dual image for system reliability
- Operating temperature: -40 ~ 75°C

Introduction

The EKI-9312 Gigabit Managed Ethernet Switches are designed for rigorous mission critical applications, such as factory automation, ITS, and process control. The 4 Gigabit Ethernet ports allow great flexibility to build up a Gigabit redundant ring and a Gigabit uplink.

The EKI-9312 is equipped with 8 Gigabit Ethernet ports and up to 4 fiber optic ports, making them ideal for upgrading an existing network to Gigabit speed or building a new, full Gigabit network. The X-Ring Pro with RSTP, STP and MSTP support, increases system reliability and the availability of your network. The EKI-9312 are designed especially for communication demanding applications, such as video and process monitoring, or intelligent transportation systems, all of which can benefit from a scalable backbone construction.

Specifications

Interface

- **I/O Port** 8 x 10/100/1000Base-T/TX RJ-45
4 x 1000BASE-X SFP
- **Console port** RJ-45
- **F/W backup port** USB
- **Power Connector** 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure** Aluminum Shell
- **Protection Class** IP 30
- **Installation** DIN Rail
- **Dimensions (W x H x D)** 86 x 165 x 125 (mm)

LED Display

- **System LED** PWR1, PWR2, SYS, CFG, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** ~ 21.82 Watts (System)
- **Power Input** 24/48 V_{DC} dual inputs

Certification

- **EMI** CE, FCC Class A
- **Safety** UL60950 C1D2
- **EMC** EN61000-6-4; EN61000-6-2; EN61000-4-2 (ESD) Level 4 EN61000-4-3 (RS) Level 3; EN61000-4-4 (EFT) Level 4 EN61000-4-5 (Surge) Level 4; EN61000-4-6 (CS) Level 3 EN61000-4-8 (Magnetic Field) Level 4; EN50121-4
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6

L2 Features

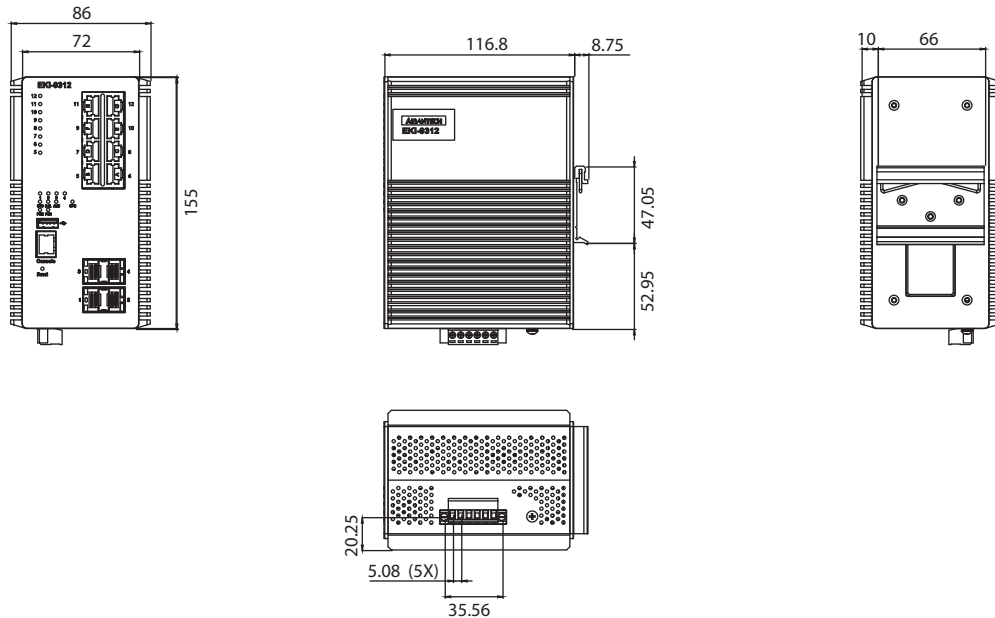
- **L2 MAC Address** 16K
- **Jumbo Frame** 12KB
- **VLAN Group** 4K (VLAN ID 1-4094)
- **VLAN Arrange** Mac based VLAN, Protocol based VLAN, IP subnet based VLAN, Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **Spanning Tree** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Priority), Hybrid Priority
- **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

Dimensions

Unit: [mm]



Security

- **Port Security** Static, Dynamic
- **Authentication** 802.1x (Port-Based, MAC-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS, TCACAS+
- **ACL** 1K rules
- **Advanced Security** IP Source guard, ARP inspection, DHCP Snooping

Management

- **DHCP** Client, Server, Relay, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** NTP client/server

Ordering Information

- **EKI-9312-C0ID42E** Layer 2 Fastpath, 8xGbE 100/1000Base-T + 4x GbE SFP w/ 24/48 V_{DC} Redundant Power Input
- Contact our sales for more pricing & ordering information.

EKI-9316

Industrial-Class 16 Port Full Gigabit Managed DIN Rail Switch



FC CE

Features

- All Gigabit connections support dual-ring protection and non-blocking traffic forwarding
- X-Ring Pro: recovery time within 20ms for 250 node connections
- STP, RSTP, MSTP for better redundancy
- Super security mechanism includes SSL, SSH, 802.1X, MAC, IP filtering, RADIUS, TACACS+, VLAN for access protection
- Dual power input, dual image for system reliability
- Operating temperature: -40 ~ 75°C

Introduction

The EKI-9316 Gigabit Managed Ethernet Switches are designed for rigorous mission critical applications, such as factory automation, ITS, and process control. The 4 Gigabit Ethernet ports allow great flexibility to build up a Gigabit redundant ring and a Gigabit uplink.

The EKI-9316 is equipped with 12 Gigabit Ethernet ports and up to 4 fiber optic ports, making them ideal for upgrading an existing network to Gigabit speed or building a new, full Gigabit network. The X-Ring Pro with RSTP, STP and MSTP support, increases system reliability and the availability of your network. The EKI-9316 is designed especially for communication demanding applications, such as video and process monitoring, or intelligent transportation systems, all of which can benefit from a scalable backbone construction.

Specifications

Interface

- **I/O Port** 12 x 10/100/1000Base-T/TX RJ-45
4 x 1000 BASE-X SFP
- **Console port** RJ-45
- **F/W backup port** USB
- **Power Connector** 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure** Aluminum Shell
- **Protection Class** IP 30
- **Installation** DIN Rail
- **Dimensions (W x H x D)** 86 x 165 x 125 (mm)

LED Display

- **System LED** PWR1, PWR2, SYS, CFG, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75°C
- **Storage Temperature** -40 ~ 85°C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** ~ 21.82 Watts (System)
- **Power Input** 24/48 V_{DC} dual inputs

Certification

- **EMI** CE, FCC Class A
- **Safety** UL60950 C1D2
- **EMC** EN61000-6-4; EN61000-6-2; EN61000-4-2 (ESD) Level 4 EN61000-4-3 (RS) Level 3; EN61000-4-4 (EFT) Level 4 EN61000-4-5 (Surge) Level 4; EN61000-4-6 (CS) Level 3 EN61000-4-8 (Magnetic Field) Level 4; EN50121-4
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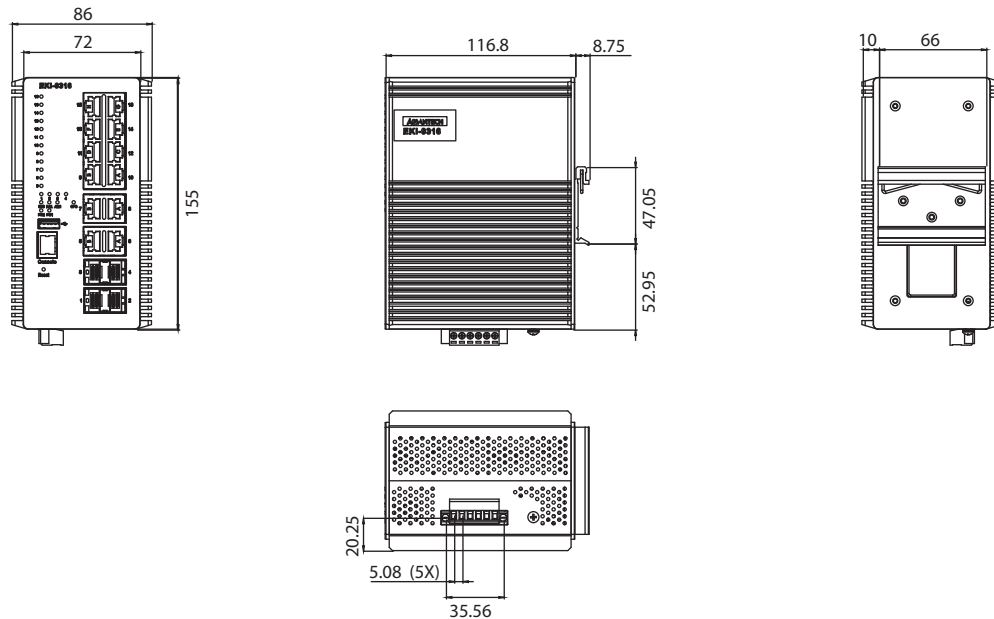
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