# EKI-7659C Series

## Features

- 2 Gigabit Copper/SFP combo ports, plus 8 Fast Ethernet ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring (ultra high-speed recovery time < 10ms), RSTP/STP (802.1w/1D)
- Management: Web, Telnet, Serial Console, Windows Utility, SNMP
- Control: VLAN/GVRP, QoS, IGMP Snooping/Query, LACP, Rate Limit
- Security: IP/MAC and port binding, DHCP Server, IP access list, 802.1X, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, E-Mail Alert, Syslog
- Dual 12 ~ 48 $V_{DC}$ power input and 1 Relay Output
- Robust mechanism and special heat spreader design
- Supports wide operating temperatures from -40~75° C (EKI-7659CI)

## Introduction

For many industrial automation applications, redundancy helps increase the reliability of your system. To create reliability in your network, the EKI-7659C 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 10 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-TX, Optional 100Base-FX, 1000Base-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance**   Ethernet: Up to 100 m (4- wire Cat.5e, Cat.6 RJ-45 cable suggested for Gigabit port)
  SFP: Up to 110 km (depends on SFP)
- **Transmission Speed**   Ethernet: 10/100Mbps Auto-Negotiation
  Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
  Gigabit Fiber: Up to 1000 Mbps

### Interface

- **Connectors**   8 x RJ-45 (Ethernet)
  2 x RJ-45/SFP (mini-GBIC) combo ports
  6-pin removable screw terminal (Power&Relay)
- **LED Indicators**   System: PWR, PWR1, PWR2, R.M., P-Fail
  10/100TX: Link/Activity, Duplex/Collision
  Gigabit Copper: Link/Activity, Speed (1000Mbps)
  SFP: Link/Activity
- **Console**   RS-232 (RJ-45)

### Network Management

- **Configuration**   Web browser, Telnet, Serial console, Windows Utility, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration
- **VLAN**   IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy**   ADVANTECH X-Ring (Recovery time < 10ms at 30pcs full loading ring structure), Dual Homing, Couple Ring, 802.1w/D RSTP/STP
- **Security**   IP Access security, port security, DHCP Server, 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)**   72 x 152 x 105 mm
- **Mounting**   DIN-rail, wall

### Power

- **Power Consumption**   Max. 10.7 W
- **Power Input**   2 x Unregulated 12~ 48 $V_{DC}$
- **Fault Output**   1 Relay Output

### Protection

- **ESD (Ethernet)**   4,000 $V_{DC}$
- **Surge (EFT for power)**   3,000 $V_{DC}$
- **Power Reverse**   Present
- **Overload**   3.5 A @ 12 $V_{DC}$ (Fuse)

### Environment

- **Operating Temperature**   -10 ~ 60° C (14 ~ 140° F)
  Wide temp. model   -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**   284,409 hours

### Certifications

- **Safety**   UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMC**   EU: EN55011, EN61000-6-4, EN55022 Class A, EN61000-3-2/3, EN55024, IEC61000-4-2/3/4/5/6/8, EN61000-6-2
- **Shock**   IEC60068-2-27
- **Freefall**   IEC60068-2-32
- **Vibration**   IEC60068-2-6

## Ordering Information

- **EKI-7659C**   8+2G Combo Ports Industrial Managed Redundant Gigabit Ethernet Switch
- **EKI-7659CI**   8+2G Combo Ports Industrial Managed Redundant Gigabit Ethernet Switch, Wide Temp.

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