EKI-3000 Product Training Kit
The Smarter, Faster, and Greener New Industrial Ethernet Switches

P/N: EKI-35xx/37xxx
Why Need “Smart Industrial Ethernet Switch”? 

Video Lag? 
Limited Bandwidth? 
Jumbo Frame Suffer?

EKI-3xxx Series 
Solve Your Problem!!!!
EKI-3000 Series, Target Mission

- Compact Size for Installation
- IoT Communication Solution
- Green Energy Design
- Entry Level Offering

**Not meant to compete against our EKI-2xxx line but rather offer customer’s an alternative light industrial solution.**

Enabling an Intelligent Planet
EKI-3000 Series Applications

Transportation

Factory Automation

Renewable Energy

Enabling an Intelligent Planet
EKI-35xx/37xx, Smart Industrial Unmanaged Ethernet Switch

**Gigabit Ethernet, 10/100/1000Mbps**
- Connect Gigabit Ethernet for Utmost Performance
- Jumbo Frame Support

**IEEE 802.1p QoS- VIP port setting**
- Port-based QoS Prioritizes Superior Media Traffics

**IEEE 802.3az, Energy Efficient Ethernet**
- Saving up to 60% power consumption as eco-friendly solution.

**Design-In Loop detection**
- Superior Self-Diagnostic minimizes network disruptions.

Enabling an Intelligent Planet
10/100/1000Mbps, Gigabit Ethernet

- Up to 8 10/100/1000 Mbps Gigabit ports
- Up to 16 Gbps Switching Fabric
- Supports 9,216 byte Jumbo Frames

What’s Jumbo Frame?
*Jumbo frames*: Is the term used most often to mean 9,000 bytes for Gigabit Ethernet.

*Basic*: IP MTU (Maximum Transmission Unit) which is 1,500 bytes on an Ethernet.

Why Jumbo Frame?
1. Increasing performance in high performance networks.
2. Raising effective TCP Throughput

Application:
Video Surveillance, GigaE Camera…
EKI-37xx, Video Surveillance

- **Application:**
  - Video Surveillance

- **Model:**
  - EKI-3725/3728

- **Major Demand:**
  - High bandwidth for transmission.
  - Jumbo Frame support
  - EFT Protection: 4,000 VDC.

Note: Electrical Fast Transient
Key Features-2

Port-based QoS Prioritizes Superior Media Traffics

- The EKI-3525 reserves one “VIP” port for prioritizing time-intensive network demands like Video streaming and critical control packet. Note: EKI-3528 with 2 “VIP” ports

Note: VIP Port get the “High Bandwidth” and “High Priority” for Data Transmission.
IEEE 802.3az, Energy Efficient Ethernet standard

- Saving Up To 60% Power Consumption
  - Automatically powers down ports that have no link
  - Budgets power output for different Ethernet Cable length

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**Key Features-3**

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*4 Port Active*

*1 Port Active*
EKI-35xx, Solar Automation

- **Application:**
  - Solar Automation

- **Model:**
  - EKI-3525/3528

- **Major Demand:**
  - Low Power Consumption
  - 8.4~10 VDC, Power Input
  - Long MTBF
  - Rugged HW protection
Key Features-4

Smart Self-Diagnostic – Loop Detection

- This function will detect when a loop condition is present in the network and disable the relevant port in order to prevent broadcast storms.

General Condition:

Advantech:

Easy Troubleshooting

Connection Loop

Enabling an Intelligent Planet
EKI-35xx Series
10/100Mbps Unmanaged Switch

- Dual Power Inputs (12 to 48 VDC)
- Protective current Overload
- Fault Relay

- QoS-VIP Port
  High Priority for Data Transmission

- IP40 design
- Operating Temp (-10 to 60°C)
- IEC60068 Shock, Vibration & Freefall
- 802.3az, Energy Efficient Ethernet

<table>
<thead>
<tr>
<th>P/N</th>
<th>VIP Qty</th>
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<tbody>
<tr>
<td>EKI-3525</td>
<td>1</td>
</tr>
<tr>
<td>EKI-3528</td>
<td>2</td>
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- 10/100Mbps Ethernet ports
- Design-in Loop Detection

Enabling an Intelligent Planet
EKI-37xx Series
10/100/1000Mbps Unmanaged Switch

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- 10/100/1000Mbps Ethernet ports
- Design-In Loop Detection
- Support Jumbo Frame: 9,216 Byte

Enabling an Intelligent Planet
EKI-3000, Flexible Installation Design

1. **DIN-Rail**
   
   1. Hang the device to the DIN-rail.
   
   2. Hook the device over the DIN rail and let it drop down straight to slide over the rail smoothly.

2. **Wall-Mounting**
   
   1. Attach the brackets included to the switch with screws.
   
   2. With the brackets attached, hang the switch to nails on the wall.
## Competition Analysis of EKI-3xxx

<table>
<thead>
<tr>
<th>Products</th>
<th>Advantech EKI-3525/8,3725/8</th>
<th>Moxa EDS-205/8A,G205A</th>
<th>Hirschman Spider 5TX/8TX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bandwidth</strong></td>
<td>10/100M &amp; 10/100/1000M</td>
<td>10/100M &amp; 10/100/1000M</td>
<td>10/100M &amp; 10/100/1000M</td>
</tr>
<tr>
<td><strong>Ethernet Port Qty.</strong></td>
<td>Plastic + Metal</td>
<td>Aluminum</td>
<td>Metal</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Slim size</td>
<td>Slim size</td>
<td>Slim size</td>
</tr>
<tr>
<td><strong>Power Range</strong></td>
<td>8.4 to 52.8 VDC</td>
<td>12/24/48 VDC 18 to 30 VAC</td>
<td>9.6 to 32 VDC</td>
</tr>
<tr>
<td><strong>Redundant Power</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Power-Fail Relay</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>IP Level</strong></td>
<td>IP40</td>
<td>IP30</td>
<td>IP30</td>
</tr>
<tr>
<td><strong>Power Saving (IEEE802.3az)</strong></td>
<td>Yes 5G:2.5W, 8G: 4.5W</td>
<td>No 5G: 4.8W, 8G:7.7W</td>
<td>No 5G:6.6W</td>
</tr>
<tr>
<td><strong>Smart Mechanism</strong></td>
<td>VIP Port &amp; Self-Detection</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**WIN**
EKI-3xxx Unmanaged Ethernet Switch Offering

- EKI-3725-AE: 5 ports Giga (Green product)
- EKI-3728-AE: 8 ports Giga (Green product)
- EKI-3525-AE: 5 ports Fast (Green product)
- EKI-3528-AE: 8 ports Fast (Green product)
EKI-3541x Media Converter Offering

- **EKI-3541S-AE:** Ethernet to Single-mode Fiber Optic (SC Type connector)

- **EKI-3541M-AE:** Ethernet to Multi-mode Fiber Optic (SC Type connector)
## EKI-3xxx Switch, Ordering Information

<table>
<thead>
<tr>
<th>Ordering P/N</th>
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<tbody>
<tr>
<td>EKI-3525-AE</td>
<td>5-port 10/100Mbps, Unmanaged Industrial Switch</td>
</tr>
<tr>
<td>EKI-3528-AE</td>
<td>8-port 10/100Mbps, Unmanaged Industrial Switch</td>
</tr>
<tr>
<td>EKI-3725-AE</td>
<td>5-port Gigabit, Unmanaged Industrial Switch</td>
</tr>
<tr>
<td>EKI-3728-AE</td>
<td>5-port Gigabit, Unmanaged Industrial Switch</td>
</tr>
<tr>
<td>EKI-3541M-AE</td>
<td>10/100T(X) to Multi-Mode SC Type, Media Converter</td>
</tr>
<tr>
<td>EKI-3541S-AE</td>
<td>10/100T(X) to Single-Mode SC Type, Media Converter</td>
</tr>
</tbody>
</table>
Appendix
## Commercial vs. Industrial Comparison

<table>
<thead>
<tr>
<th></th>
<th>Commercial</th>
<th>Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operation Temp</strong></td>
<td>0~50°C</td>
<td>-10~60°C</td>
</tr>
<tr>
<td><strong>Dual Power Input</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>MTBF</strong></td>
<td>&lt;600,000 hours</td>
<td>&gt;1,000,000 hours</td>
</tr>
<tr>
<td><strong>Protection</strong></td>
<td>EFT/Surge:Level1&amp;2</td>
<td>EFT/Surge:Level3</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 Year</td>
<td>5 Years</td>
</tr>
</tbody>
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**WIN**