

# Industrial Lite-Managed Ethernet Switch Sell Sheet

## Lite-Managed ProView Industrial Switches

- Remote Monitoring Feature by ProView Technology®
- Built-in Modbus/TCP and SNMP agent.
- Operation Temp: -10°C~ 60°C/-40°C~ 75°C
- IEEE802.3az, Power Saving feature
- Port-based QoS - Port Deterministic function.
- Loop Detection feature.
- EMS Protected: Level 3 (Surge/ESD/EFT)
- Cost-effective solution
- CE/FCC/UL508/C1D2/ATEX

### Typical Usage:

- Factory Automation/Machine Automation
- Applications that need basic network connectivity and Remote Monitoring.
- Ex: Factory Automation, Video Surveillance System, Food Processing, Transportation..



Type	Model Name	Copper RJ45			Optical Fiber			
		Total	100Base-TX	1000Base-TX (GbE)	100Base-FX	1000Base-SX	1000Base-LX	SFP Slot
		Ports	100m	100m	S.M:30km, 50/125 um,62.5/125 um M.M:2km, 9/125 um	550m 50/125 um,62.5/125 um	10 km 9/125 um	100/1000Mbps
Lite-Managed	EKI-5525/5525I-AE	5	5					
	EKI-5525M/5525MI-AE	5	4		1 (Multi-mode)-SC			
	EKI-5525M/5525MI-ST-AE	5	4		1 (Multi-mode)-ST			
	EKI-5525S/5525SI-AE	5	4		1 (Single-mode)-SC			
	EKI-5525S/5525SI-ST-AE	5	4		1 (Single-mode)-ST			
	EKI-5725/5725I-AE	5		5				
	EKI-5524MM/5524MMI-AE	6	4		2 (Multi-mode)-SC			
	EKI-5524MM/5524MMI-ST-AE	6	4		2 (Multi-mode)-ST			
	EKI-5524SS/5524SSI-AE	6	4		2 (Single-mode)-SC			
	EKI-5524SS/5524SSI-ST-AE	6	4		2 (Single-mode)-ST			
	EKI-5528/5528I-AE	8	8					
	EKI-5728/5728I-AE	8		8				
	EKI-5629C/5629CI-AE	10	8					2 Combo
	EKI-5729F/5729FI-AE	10		8				2
	EKI-5526/5526I-AE	16	16					
	EKI-5726/5726I-AE	16		16				
EKI-5626C/5626CI-AE	18	16					2 Combo	
EKI-5726F/5726FI-AE	18		16				2	

# Industrial Managed Ethernet Switch Sell Sheet

## Managed Industrial Switches

- Advanced Network Traffic Control/Management
- Fully Layer2 Protocol Features (Security, Redundancy, Managed, Optimize)
- Port monitoring and diagnostics
- 20ms Self-healing X-Ring
- Operation Temp: -10°~ 60°C/-40°~ 75°C
- UL Class1 Division2 / UL508 – Complaint
- Industrial Level ESD/EFT/Surge Protection

### Typical Usage:

- Large Networks (many switches)
- Applications where downtime is Expensive & Redundancy is required
- Where Ethernet/IP "Implicit" type messaging is used for I/O type communications
- Ex: Factory - Process Management/ ITS-Traffic Management and Video Surveillance



Type	Model Name	Copper RJ45			Optical Fiber			
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		Ports	100m	100m	S.M:30km, 50/125 um,62.5/125 um M.M:2km, 9/125 um	550m 50/125 um,62.5/125 um	10 km 9/125 um	100/1000Mbps
Managed	EKI-7554MI/7554SI	6	4		2 (Single/Multi-mode)-SC			
	EKI-7654C-AE	6	4	2 Combo			2 Combo	
	EKI-2548I-AE	8	8					
	EKI-7758F-AE	8		4			4	
	EKI-2748FI-AE	8		4			4	
	EKI-2748CI-AE	8		6 + 2 (Combo)			2 Combo	
	EKI-7657C/7657CI-AE	10	7	3 Combo			3 Combo	
	EKI-7659C/7659CI-AE	10	8	2 Combo			2 Combo	
	EKI-7559MI/7559SI-AE	10	8		2 (Single/Multi-mode)-SC			
	EKI-7659CPI-AE	10	8 (8 x PoE)	2 Combo			2 Combo	
	EKI-9312-C0ID42E	12		8			4	
	EKI-9312-P0ID42E	12		8 (PoE/PoE+)			4	
	EKI-9316-C0ID42E	16		12			4	
	EKI-9316-P0ID42E	16		12 (PoE/PoE+)			4	
	EKI-7656C/7656CI	18	16	2 Combo			2 Combo	
EKI-9778-C0SA820E	28		24			4 x 10G		

### Notes:

- I suffix = Wide Temperature model (-40 to +75C)
- PA suffix = Full PoE operation with only 24VDC input
- M-M = Multi-mode Fiber (short distance, < 1.2 mi.)
- S-M = Single-mode Fiber (long distance, > 1.2 mi.)
- Combo = Either RJ-45 Cooper or Fiber Interface (Using SFP transceiver module)

# Industrial SFP Modules Sell Sheet

## Small Form-factor Pluggable (SFP) Transceiver Modules

- Extend network connections
- Operation Temp: 0°~ 70°C and -40°~ 85°C (By different P/N)
- Industry standard small form pluggable (SFP) package
- Class 1 laser product complies with EN 60825-1
- Hot pluggable
- LC connector



### Typical Usage:

- Connections over 300 feet
- Work with devices (Switches, Media converters, etc.) with SFP slots

Type	Model Name	Category	Speed	Distance
100Base-FX	SFP-FXM/LC	100Base-FX M.M	100Mbps	1.2 mi. (2 km)
	SFP-FXS/LC-30	100Base-FX S.M	100Mbps	18.6 mi. (30 km)
1000Base-TX	SFP-GTX/RJ45	1000Base-T	1000Mbps (1 Gbps)	328 ft. (100 m)
1000Base-X	SFP-GSX/LC	1000Base-SX	1000Mbps (1 Gbps)	1804 ft. (550 m)
	SFP-GLX/LC-10	1000Base-LX	1000Mbps (1 Gbps)	6.2 mi. (10 km)
	SFP-GLX/LC-20	1000Base-LX	1000Mbps (1 Gbps)	12.4 mi. (20 km)
	SFP-GLX/LC-40	1000Base-LX	1000Mbps (1 Gbps)	24.9 mi. (40 km)
	SFP-GXD/LC-50E	1000Base-ZX	1000Mbps (1 Gbps)	31.3 mi. (50 km)
	SFP-GZX/LC-70E	1000Base-ZX	1000Mbps (1 Gbps)	43.8 mi. (70 km)

# Industrial PoE/PoE+ Ethernet Switch Sell Sheet

## PoE / PoE+ Industrial Ethernet Switch:

### What is Power over Ethernet?

- Data and Power over a single Ethernet cable
- Transmitting safe and uninterrupted power over existing LAN infrastructure
- IEEE 802.3af (15.4W, 48Vdc), PoE
- IEEE 802.3at (30W, 48Vdc), PoE+



Type	Model Name	Copper RJ45			Optical Fiber			
		Total	100Base-TX	1000Base-TX (GbE)	100Base-FX	1000Base-SX	1000Base-LX	SFP Slot
		Ports	100m	100m	S.M:30km, 50/125 um,62.5/125 um M.M:2km, 9/125 um	550m 50/125 um,62.5/125 um	10 km 9/125 um	100/1000Mbps
Unmanaged	EKI-2525P/2525PA	5	5 (4 x PoE)					
	EKI-3725P-AE	5		5 (4 x PoE)				
	EKI-2726FHPI-AE	6		4 (4 x PoE+)				2
	EKI-2526PI-AE	6	6 (4 x PoE)					
	EKI-2528PAI-AE	8	8 (4 x PoE)					
	EKI-7629CP/7629CPI-AE	10	8 (8 x PoE)	2 Combo				2 Combo
Managed	EKI-7659CPI-AE	10	8 (8 x PoE)	2 Combo				2 Combo
	EKI-9312-P0ID42E	12		8 (PoE/PoE+)				4
	EKI-9316-P0ID42E	16		12 (PoE/PoE+)				4
PoE Splitter	EKI-2701PSI-AE	2	2 (1 x PoE)					
PoE Injector	EKI-2701HPI-AE	2	2 (1 x PoE+)					

# Industrial Ethernet Media Converter Sell Sheet

## Industrial Media Converter

- Extend network connections
- Operation Temp: -10°~ 60°C/**-40°~ 75°C**
- No setup required – Plug-and-Play
- Link Fault Pass-through (LFP) setting
- UL Class1 Division2 / UL508 – Complaint
- Industrial Level ESD/EFT/Surge Protection



### Typical Usage:

- Connections over 300 feet
- Applications in electrically “noisy” environments (EMI/RFI)
- Applications that require electrical isolation (campus or inter-building)
- Ex: Oil&Gas, Factory Automation, Transportation System

Type	Model Name	Copper RJ45			Optical Fiber			
		Total	100Base-TX	1000Base-TX (GbE)	100Base-FX	1000Base-SX	1000Base-LX	SFP Slot
		Ports	100m	100m	S.M:30km, 50/125 um,62.5/125 um M.M:2km, 9/125 um	550m 50/125 um,62.5/125 um	10 km 9/125 um	100/1000Mbps
Media Converter	EKI-2541M/2541MI	2	1		1 (Multi-mode)-SC			
	EKI-2541S/2541SI	2	1		1 (Single-mode)-SC			
	EKI-2741SX/2741SXI	2		1		1		
	EKI-2741LX/2741LXI						1	
	EKI-2741F/2741FI	2		1				1

## Fiber Optic Types and Typical Connectors:

- MM: inexpensive, short-distance (50µm/125 µm)
- SM: expensive, long-distance (9 µm /125 µm)

ST                  SC                  LC



# EKI Industrial Ethernet Switch Feature Overview

Hardware	Protection	Layer 2	Security
<ul style="list-style-type: none"> <li>IP30/40/67 Protection</li> <li>Metal Chassis</li> <li>Wide Operating Temp.</li> <li>802.3af PoE/ 802.3at PoE+</li> <li>Auto MDI/MDI-X</li> <li>Auto Negotiation</li> <li>Store-and-Forward Switching</li> </ul>	<ul style="list-style-type: none"> <li>Magnetically Isolated Ethernet</li> <li>Ethernet ESD Protection</li> <li>Input Power EFT Protection</li> <li>Input Power Surge Protection</li> </ul>	<ul style="list-style-type: none"> <li>802.1 D/w STP/RSTP</li> <li>802.1Q(tag)</li> <li>MAC Violation</li> <li>802.3AD (LACP)</li> <li>Port Trunking /LACP</li> <li>Port Monitoring/Mirror</li> <li>IGMP v1/v2 Snooping / Query</li> <li>IGMP MLD Snooping</li> <li>IGMP/MLD querier</li> </ul>	<ul style="list-style-type: none"> <li>SSL(HTTPS)</li> <li>IP Access Security</li> <li>Port Security</li> <li>DHCP Server with IP/Port Binding</li> <li>802.1X Port Access Control</li> <li>Mac Address Table / Static MAC</li> <li>Multi-User Authentication</li> </ul>
Certifications Compliance	High Availability	VLAN / QoS	Management
<ul style="list-style-type: none"> <li>Safety (UL 60950-1, CAN/CSA-C22.2 No.60950, UL508)</li> <li>EMC (EU: EN55011, EN61000, EN55022, EN55024, IEC61000)</li> <li>Shock, Vibration, &amp; Freefall (IEC60068)</li> <li>Hazardous (C1D2)</li> <li>Railway (EN50155)</li> <li>Substation (IEC61850)</li> </ul>	<ul style="list-style-type: none"> <li>Dual Power Inputs</li> <li>Reverse Power Polarity Protection</li> <li>Protective Thermal Overload</li> <li>Fault Relay for External PLC/Controller</li> <li>Auto Bypass</li> <li>20ms Self-healing X-Ring                             <ul style="list-style-type: none"> <li>- Dual Homing</li> <li>- Dual Ring</li> <li>- Couple Ring</li> <li>- Multi Couple Ring</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>802.1Q</li> <li>Port-based VLAN</li> <li>GVRP</li> <li>802.1p QoS</li> <li>ToS / DSCP</li> <li>4 priority queues</li> <li>Rate Limit</li> <li>Storm Control</li> <li>Traffic Statistics</li> </ul>	<ul style="list-style-type: none"> <li>Web Browser</li> <li>Telnet</li> <li>Serial Console</li> <li>TFTP</li> <li>SNMPv1/2c/3</li> <li>SNTP</li> <li>SMTP</li> <li>Syslog</li> <li>Email/Relay Alert</li> <li>RMON/RMON II</li> <li>DMI for SFP</li> <li>PoE Management</li> <li>IPv6</li> </ul>

## Industrial Switches

## Managed Industrial Switches

**Notes:**

The feature chart provides an overview of Advantech EKI Ethernet Switches, and there might be minor discrepancies between individual models. Please refer to the datasheets online for the latest information.

# EKI Industrial Layer2 Managed Features

EKI Industrial Ethernet Switches (ALL)		Managed Industrial Ethernet Switches	
Feature	Benefit	Feature	Benefit
Auto-MDI/MDI-X	Eliminates the need for Ethernet cross-over cables, by automatically detecting cable type and configuring the port appropriately, greatly reducing installation errors.	DHCP	<b>D</b> ynamic <b>H</b> ost <b>C</b> onfiguration <b>P</b> rotocol (DHCP) allows automatic network settings. A built-in DHCP server eliminates a separate DHCP server, and for easy maintenance it can assign IP addresses by switch port
Auto-Negotiation	Allows devices with different capabilities (speed: 10/100/1000M, full/half duplex) to automatically configure ports for optimum communication.	IGMP Snooping	IGMP Snooping allows the switch to listen to multicast/broadcast traffic, and limits it to required switch ports. It minimizes network traffic, and is recommended for Ethernet/IP "Implicit" I/O systems.
Broadcast Storm Protection	Limits broadcast/multicast traffic to a predetermined maximum rate (frames/sec) to prevent network congestion by awry devices.	Link Aggregation or Port Trunking	Link Aggregation (IEEE 802.3ad), sometimes called Port Trunking, is a provision to connect multiple ports in parallel to increase throughput between switches and offer higher availability through link redundancy.
ESD Protection	Protects Ethernet ports from Electrostatic Discharge (ESD) of up to 4000 Volts when a switch is handled or Ethernet cables are connected or disconnected. IEC61000-4-2 makes certification.	MAC Filtering	MAC Filtering is a means for enhanced network security, by limiting network access by unique Ethernet device ID (MAC address). Specific devices can be either allowed or denied network access.
Full/Half Duplex	Full-duplex operation allows communication in both directions (send & receive) simultaneously, while half-duplex limits one device to wait until the other is finished transmitting.	Port Mirroring	Port Mirroring allows eavesdropping on data traveling in or out one or more switch ports. Used with a PC-based diagnostics program or protocol analyzer, it is a valuable for troubleshoot communications problems.
IP30 / 40 / 67 Protection	Ingress Protection Rating classifies the protection against the intrusion of objects by enclosures. The 1 <sup>st</sup> /2 <sup>nd</sup> digit is for solid objects/liquids. The higher the rating the greater the protection is.	Quality of Service	Quality of Service (IEEE 802.1p) is a means of prioritizing network traffic, to ensure time critical message delivery. For example, messages between a HMI and PAC can be given priority over e-mail.
Power over Ethernet	Commonly referred to as PoE, and also known as IEEE 802.3af, Power over Ethernet supplies DC (48V, 15.4W) power to attached devices over the same Cat5 cable used for a network connection.	Rate Limiting	Rate Limiting allows traffic to be throttled to a specified rate (kbps), in an effort to improve network performance. Limits can be placed on both incoming and outgoing traffic, on a port-by-port basis.
Redundant Power	Ensures uninterrupted communication, even in the event one external power supply fails.	RSTP (and STP)	<b>R</b> apid <b>S</b> panning <b>T</b> ree (IEEE 802.1w), replaces <b>S</b> panning <b>T</b> ree <b>P</b> rotocol (IEEE 802.1D), and provides redundant switch-to-switch connections, generally adapting to topology changes in 2 to 6 seconds.
SFP Module	Small Form-factor Pluggable (SFP) modules are compact electro-optical transceivers that allow a compatible device to connect to a fiber optic network connection.	SNMP	The "Modbus" of the IT world, Simple Network Management Protocol allows remote monitoring and control of network devices. IT administrators use it to determine which devices service or maintenance.





Store-and-Forward	A mode of transmission where data is received completely, before re-transmission to the final destination, allowing only error-free data transmission, and devices of different speeds.	VLAN	Virtual Local Area Networks (802.1Q) allow the creation of multiple logical networks within a single physical network, providing network segmentation for improved performance and enhanced security.
Surge (EFT) Protection	Protects the switch's power supply from external electrical noise and voltage spikes (Electrical Fast Transients) up to 3000V.	X-Ring	X-Ring, Advantech's proprietary self-healing ring technology, a high performance alternative to RSTP, ensures recover from loss of power to a switch, or a cable/fiber fault, within 20 ms (for up to 250switches).