

# Industrial Ethernet Solutions

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## Wireless Access Point/CPE



Model Name		EKI-6311GN	EKI-6331AN	EKI-6340-1	EKI-6340-2	EKI-6340-3	EKI-6351	EKI-6351-B	EKI-6351-C
Description		IEEE 802.11 b/g/n Wi-Fi AP/CPE	IEEE 802.11 a/n Wi-Fi AP/ CPE	IEEE 802.11 a/b/g/n Outdoor Single-Radio Wi-Fi Mesh AP	IEEE 802.11 a/b/g/n Outdoor Dual-Radio Wi-Fi Mesh AP	IEEE 802.11 a/b/g/n Outdoor Triple-Radio Wi-Fi Mesh AP	IEEE 802.11 a/b/g/n Wi-Fi Mesh AP/ Station	IEEE 802.11 a/b/g/n Wi-Fi AP/CPE	IEEE 802.11 a/b/g/n Wi-Fi Mesh Station
Interface	IEEE Standard	802.11b/g/n	802.11a/n	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n
	100Base-TX	v	v	v	v	v	v	v	v
	1000Base-TX	-	-	v	v	v	v	v	v
	Radio Number	1	1	1	2	3	1	1	1
RF	MIMO	1T1R	2T2R	2T2R	2T2R	2T2R	2T2R	2T2R	2T2R
	Transmit Output Power	*	*	*	*	*	*	*	*
	Receive Sensitivity	*	*	*	*	*	*	*	*
Operating Mode	Mesh	-	-	v	v	v	v	-	v
	Mobility/ Roaming	-	-	v	v	v	v	-	v
	Multi-Hopping	-	-	v	v	v	v	v	v
	AP/CPE	v	v	v	v	v	v	v	-
Power	PoE	Passive 12 V	Passive 15 V	802.3at	802.3at	802.3at	802.3at	802.3at	802.3at
	Power Input Voltage	12 V <sub>DC</sub>	15 V <sub>DC</sub>	12 ~ 48 V <sub>DC</sub>					
	Redundant DC Power Input	-	-	v	v	v	v	v	v
Mechanism	DIN-rail Mount	-	-	-	-	-	v	v	v
	Wall Mount	-	-	v	v	v	v	v	v
	VESA Mount	-	-	v	v	v	-	-	-
	Pole Mount	v	v	v	v	v	-	-	-
	IP Grade	IP55	IP55	IP67	IP67	IP67	IP30	IP30	IP30
Operating Temperature	-20 ~ 70°C (-4 ~ 158°F)	v	v	-	-	-	-	-	-
	-35 ~ 75°C (-31 ~ 167°F)	-	-	v	v	v	v	v	v
Certifications	FCC	v	v	v	v	v	v	v	v
	CE	v	v	v	v	v	v	v	v
	EN50155	-	-	v	v	v	v	v	v
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\*Note: Transmit Output Power & Receive Sensitivity are specified on data sheet.

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## EN50155 Ethernet Switches



Model Name		EKI-6558TI	EKI-6559TMI	EKI-6528TI	EKI-6528TPI
Description		EN50155 IP67 8-port M12 Managed Ethernet Switch with Wide Temperature	EN50155 IP67 8-port M12 + 2-port Fiber Optic Managed Ethernet Switch with Wide Temperature	EN50155 8-port M12 Unmanaged Switch with Wide Temperature	EN50155 8-port PoE M12 Unmanaged Switch with Wide Temperature
Interface	Ports Number	8	10	8	8
	10/100Base-T (X)	8	8	8	8
	100BaseFX	-	2	-	-
	10/100/1000Base-T (X)	-	-	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	-
	PoE (10/100 Mbps)	-	-	0	4
	PoE (10/100/1000 Mbps)	-	-	-	-
	DI/DO	-	-	-	-
Network Management	Console	V	V	-	-
	Redundancy	V	V	-	-
	Diagnostics	V	V	-	-
	VLAN	V	V	-	-
	Configuration	V	V	-	-
	SNMP	V	V	-	-
	Security	V	V	-	-
	Traffic Control	V	V	-	-
Power	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	V	V	12 ~ 48 V <sub>DC</sub>	24 ~ 48 V <sub>DC</sub>
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	-	-	-	-
	Relay Output	V	V	-	-
Mechanism	DIN-rail Mount	-	-	V	V
	Wall Mount	V	V	V	V
	Rack Mount	-	-	-	-
	IP Level	IP67	IP67	IP40	IP40
Protection	ESD (Ethernet)	V	V	V	V
	Surge (EFT for power)	V	V	V	V
	Power Reverse	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-
	-40 ~ 70°C (-40 ~ 158°F)	V	V	V	V
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-
Certifications	CE	V	V	V	V
	FCC	V	V	V	V
	UL/cUL 60950-1	-	-	V	V
	Class I, Division 2	-	-	-	-
	UL 508	V	V	-	-
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## Managed Ethernet Switches



Model Name		EKI-4654R	EKI-7758F	EKI-7656C/CI	EKI-7659C/CI	EKI-7657C	EKI-7654C
Description		24 FE + 2 SFP Gigabit Managed Redundant Industrial Ethernet Switch	4G+4SFP Gigabit Managed Redundant Industrial Ethernet Switch	16+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch	8+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch	7+3G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch with 2 x DI/O	4+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch
Interface	Ports Number	26	8	18	10	10	6
	10/100Base-T (X)	24	-	16	8	7	4
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	4	2	2	3	2
	1000Base-SX/LX/LHX/XD/ZX/EZX	2	4	2	2	3	2
	PoE (10/100 Mbps)	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-
	DI/DO	-	-	-	-	2	-
	Console	V	V	V	V	V	V
Network Management	Redundancy	V	V	V	V	V	V
	Diagnostics	V	V	V	V	V	V
	VLAN	V	V	V	V	V	V
	Configuration	V	V	V	V	V	V
	SNMP	V	V	V	V	V	V
	Security	V	V	V	V	V	V
	Traffic Control	V	V	V	V	V	V
Power	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	-	V	V	V	V	V
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	V	-	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	V	-	-	-	-	-
	Relay Output	V	V	V	V	V	V
Mechanism	DIN-rail Mount	-	V	V	V	V	V
	Wall Mount	-	V	V	V	V	V
	Rack Mount	V	-	-	-	-	-
	IP30	V	V	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V	V	V
	Surge (EFT for power)	V	V	V	V	V	V
	Power Reverse	V	V	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	V	V	V	V	V
	-40 ~ 70°C (-40 ~ 158°F)	-	-	V (EKI-7656CI)	V (EKI-7659CI)	-	-
	-40 ~ 85°C (-40 ~ 185°F)	V	-	-	-	-	-
Certifications	CE	V	V	V	V	V	V
	FCC	V	V	V	V	V	V
	UL/cUL 60950-1	V	V	V	V	V	V
	Class I, Division 2	-	V	V	-	V	-
	UL 508	-	-	-	-	-	-
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## Managed Ethernet Switches



Model Name		EKI-7556MI	EKI-7559SI/MI	EKI-7554SI/MI	EKI-2748FI/CI	EKI-2548I/SI/MI
Description		16+2 SC Type Fiber Optic Managed Industrial Ethernet Switch with Wide Temperature	8+2 SC Type Fiber Optic Managed Redundant Industrial Ethernet Switch with Wide Temperature	4+2 SC Type Fiber Optic Managed Redundant Industrial Ethernet Switch with Wide Temperature	8Gx Managed Ethernet Switch with Wide Temperature	8Tx Managed Ethernet Switch with Wide Temperature
Interface	Ports Number	18	10	6	8	8
	10/100Base-T (X)	16	8	4	-	8/6/6
	100BaseFX	2	2	2	-	0/2/2
	10/100/1000Base-T (X)	-	-	-	4/6	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	4/2	-
	PoE (10/100 Mbps)	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-
	DI/DO	-	-	-	-	-
	Console	V	V	V	V	-
Network Management	Redundancy	V	V	V	V	V
	Diagnostics	V	V	V	V	V
	VLAN	V	V	V	V	V
	Configuration	V	V	V	V	V
	SNMP	V	V	V	V	V
	Security	V	V	V	V	V
	Traffic Control	V	V	V	V	V
Power	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	V	V	V	V	V
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-	-
	Relay Output	V	V	V	V	V
Mechanism	DIN-rail Mount	V	V	V	V	V
	Wall Mount	V	V	V	V	V
	Rack Mount	-	-	-	-	-
	IP30	V	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V	V
	Surge (EFT for power)	V	V	V	V	V
	Power Reverse	V	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	V	V	V	V	V
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-
Certifications	CE	V	V	V	V	V
	FCC	V	V	V	V	V
	UL/cUL 60950-1	-	V	V	-	-
	Class I, Division 2	-	V	-	V	V
	UL 508	V	-	-	V	V
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## Unmanaged Ethernet Switches



Model Name		EKI-4524I/RI	EKI-7626C/CI	EKI-7629C/CI	EKI-7526I/MI	EKI-7529MI/ST	EKI-2728MI
Description		24+2 SPF Port Unmanaged Industrial Ethernet Switch with Wide Temperature	16+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch	8+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch	16+2 SC Type Fiber Optic Unmanaged Industrial Ethernet Switch with Wide Temperature	8+2 Multi-mode Fiber Optic Unmanaged Industrial Ethernet Switch with Wide Temperature	6Gx+2 Multi-mode Unmanaged Ethernet Switch with Wide Temperature
Interface	Ports Number	24/26	18	10	16/18	10	8
	10/100Base-T (X)	24	16	8	16/16	8	-
	100BaseFX	0/2	-	-	0/2	2	-
	10/100/1000Base-T (X)	-	2	2	-	-	6
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	2	2	-	-	2
	PoE (10/100 Mbps)	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-
	DI/DO	-	-	-	-	-	-
Network Management	Console	-	-	-	-	-	-
	Redundancy	-	-	-	-	-	-
	Diagnostics	-	-	-	-	-	-
	VLAN	-	-	-	-	-	-
	Configuration	-	-	-	-	-	-
	SNMP	-	-	-	-	-	-
	Security	-	-	-	-	-	-
Power	Traffic Control	-	-	-	-	-	-
	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	-	V	V	V	V	V
	1 x Unregulated 100 ~ 240 V <sub>DC</sub>	V	-	-	-	-	-
	1 x Unregulated 100 ~ 240 V <sub>AC</sub>	V	-	-	-	-	-
	Relay Output	V	V	V	V	V	V
Mechanism	DIN-rail Mount	-	V	V	V	V	V
	Wall Mount	-	V	V	V	V	V
	Rack Mount	V	-	-	-	-	-
	IP30	V	V	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V	V	V
	Surge (EFT for power)	V	V	V	V	V	V
	Power Reverse	V	V	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	V	V	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	V	-	-	V	V	V
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	V	V	V	V	V	V
	FCC	V	V	V	V	V	V
	UL/cUL 60950-1	-	V	V	-	-	-
	Class I, Division 2	-	-	-	-	-	V
	UL 508	-	-	-	V	V	V
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Model Name		EKI-2725/2728	EKI-2525/2528	EKI-2525M	EKI-2526M/S
Description		5/8-port Gigabit Unmanaged Industrial Ethernet Switch	5/8-port Unmanaged Industrial Ethernet Switch	4+1 100FX Port Multi-mode Unmanaged Industrial Ethernet Switch	4+2 100FX Port Multi-mode/Single-mode Industrial Ethernet Switch
Interface	Ports Number	5/8	5/8	5	6
	10/100Base-T (X)	-	5/8	4	4
	100BaseFX	-	-	1	2
	10/100/1000Base-T (X)	5/8	-	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	-
	PoE (10/100 Mbps)	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-
	DI/DO	-	-	-	-
Network Management	Console	-	-	-	-
	Redundancy	-	-	-	-
	Diagnostics	-	-	-	-
	VLAN	-	-	-	-
	Configuration	-	-	-	-
	SNMP	-	-	-	-
	Security	-	-	-	-
Power	Traffic Control	-	-	-	-
	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	V	V	V	V
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	-	-	-	-
	Relay Output	V	V	V	V
Mechanism	DIN-rail Mount	V	V	V	V
	Wall Mount	V	V	V	V
	Rack Mount	-	-	-	-
	IP30	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V
	Surge (EFT for power)	V	V	V	V
	Power Reverse	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	V	V	V	V
	-40 ~ 75°C (-40 ~ 167°F)	-	V (EKI-2525I/ EKI-2528I)	-	-
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-
Certifications	CE	V	V	V	V
	FCC	V	V	V	V
	UL/cUL 60950-1	V	V	V	V
	Class I, Division 2	- / V	V	V	V
	UL 508	-	-	-	-
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## PoE Switches



Model Name		EKI-7659CPI	EKI-2525P	EKI-2525SPI	EKI-2526PI
Description		8+2G Port Gigabit Managed Redundant Industrial PoE Switch with Wide Temperature	5-port Industrial PoE Switch	5-port Industrial PoE Switch with 1x100Fx Single-Mode and Wide Temperature	6-port Industrial PoE Switch with Wide Temperature
Interface	Ports Number	10	5	5	6
	10/100Base-T (X)	-	1	-	2
	100BaseFX	-	-	1	-
	10/100/1000Base-T (X)	-	-	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	2	-	-	-
	PoE (10/100 Mbps)	8	4	4	4
	M12 Connector (10/100 Mbps)	-	-	-	-
	DI/DO	-	-	-	-
Network Management	Console	V	-	-	-
	Redundancy	V	-	-	-
	Diagnostics	V	-	-	-
	VLAN	V	-	-	-
	Configuration	V	-	-	-
	SNMP	V	-	-	-
	Security	V	-	-	-
	Traffic Control	V	-	-	-
Power	2 x Unregulated 48 V <sub>DC</sub>	48 V <sub>DC</sub>	48 V <sub>DC</sub>	48 V <sub>DC</sub>	48 V <sub>DC</sub>
	2x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	-	-	-	-
	Relay Output	V	V	V	V
Mechanism	DIN-rail Mount	V	V	V	V
	Wall Mount	V	V	V	V
	Rack Mount	-	-	-	-
	IP30	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V
	Surge (EFT for power)	V	V	V	V
	Power Reverse	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	V	-	-
	-40 ~ 75°C (-40 ~ 167°F)	V	-	V	V
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-
Certifications	CE	V	V	V	V
	FCC	V	V	V	V
	UL/cUL 60950-1	V	V	V	V
	Class I, Division 2	-	-	-	-
	UL 508	-	-	-	-
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- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

Model Name		EKI-2525PA	EKI-2528PAI	EKI-2701HPI	EKI-2701PSI
Description		5-port Industrial PoE Switch with 24/48 V <sub>DC</sub> Power Input	8-port Industrial PoE Switch with 24/48 V <sub>DC</sub> Power Input and Wide Temperature	Industrial PoE+ Injector with Wide Temperature	Industrial PoE Splitter with Wide Temperature
Interface	Ports Number	5	8	2	2
	10/100Base-T (X)	1	4	-	1
	100BaseFX	-	-	-	-
	10/100/1000Base-T (X)	-	-	1	1
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	-
	PoE (10/100 Mbps)	4	4	1 (10/100/1000 Mbps)	1 (10/100/1000 Mbps)
	M12 Connector (10/100 Mbps)	-	-	-	-
	DI/DO	-	-	-	-
	Console	-	-	-	-
Network Management	Redundancy	-	-	-	-
	Diagnostics	-	-	-	-
	VLAN	-	-	-	-
	Configuration	-	-	-	-
	SNMP	-	-	-	-
	Security	-	-	-	-
	Traffic Control	-	-	-	-
Power	2 x Unregulated	24/48 V <sub>DC</sub>	24/48 V <sub>DC</sub>	24/48 V <sub>DC</sub>	44~57 V <sub>DC</sub>
	2x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	-	-	-	-
	Relay Output	V	V	V	-
Mechanism	DIN-rail Mount	V	V	V	V
	Wall Mount	V	V	V	V
	Rack Mount	-	-	-	-
	IP30	V	V	V	V
Protection	ESD (Ethernet)	V	V	V	V
	Surge (EFT for power)	V	V	V	V
	Power Reverse	V	V	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	V	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	-	V	V	V
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-
Certifications	CE	V	V	V	V
	FCC	V	V	V	V
	UL/cUL 60950-1	V	V	V	V
	Class I, Division 2	-	-	-	-
	UL 508	-	-	-	-
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# Industrial Ethernet Product Selection Guide

## Media Converters



Model Name		EKI-2741F/SX/LX/LXI	EKI-2541M/S
Description		10/100/1000TX to Fiber Optic Gigabit Industrial Media Converters	10/100TX to Multi-mode / Single-mode SC Type Fiber Optic Industrial Media Converters
Interface	Ports Number	2	2
	10/100Base-T (X)	-	1
	100BaseFX	-	1
	10/100/1000Base-T (X)	1	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	1	-
	PoE (10/100 Mbps)	-	-
	PoE (10/100/1000 Mbps)	-	-
	DI/DO	-	-
Network Management	Console	-	-
	Redundancy	-	-
	Diagnostics	-	-
	VLAN	-	-
	Configuration	-	-
	SNMP	-	-
	Security	-	-
Power	Traffic Control	-	-
	2 x Unregulated 12 ~ 48 V <sub>DC</sub>	V	V
	2 x Unregulated 100 ~ 240 V <sub>DC</sub>	-	-
	2 x Unregulated 100 ~ 240 V <sub>AC</sub>	-	-
	Relay Output	V	V
Mechanism	DIN-rail Mount	V	V
	Wall Mount	V	V
	Rack Mount	-	-
	IP30	V	V
Protection	ESD (Ethernet)	V	V
	Surge (EFT for power)	V	V
	Power Reverse	V	V
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	V	V
	-40 ~ 75°C (-40 ~ 167°F)	V (EKI-2741LXI)	V (EKI-2541MI/EKI-2541SI)
	-40 ~ 85°C (-40 ~ 185°F)	-	-
Certifications	CE	V	V
	FCC	V	V
	UL/cUL 60950-1	V	V
	Class I, Division 2	V	V
	UL 508	-	-
Page		9-45	9-44

# EKI-6311GN

IEEE 802.11 b/g/n Wi-Fi AP/CPE



## Features

- Compliant with IEEE 802.11 b/g/n
- IP55 waterproof certification
- Embedded 8 dBi directional antenna with external N-type connector for optional antenna
- High output power 26 dBm
- MIMO 2 x 2 11n
- Passive 12 V PoE
- Support distances up to 5 km
- WPA/WPA2-Enterprise encryption for a highly secure wireless network
- WEP/WPA/WPA2/ IEEE 802.1x authentication support
- Spanning Tree and IGMP snooping protocol support

## Introduction

EKI-6311GN is a feature rich wireless AP/CPE which provides a reliable wireless connectivity for industrial environments. The PoE injector enhances flexibility in deployment of this AP/CPE even where the DC power supply is hard to fulfill. As an 802.11n compliant device, EKI-6311GN provides 3 times higher data rates than legacy 802.11g devices. With the support of STP, WMM and IGMP snooping protocols, EKI-6311GN effectively improves the reliability of wireless connectivity, especially in applications that need high reliability and high throughput data transmission. To secure wireless connections, EKI-6311GN implements the latest encryption technologies including WPA2/WPA/802.1x for powerful security authentication.

## Specifications

### Standard Support

- Wireless** IEEE 802.11b/g/n
- Ethernet** IEEE 802.3u MDI / MDIX 10/100 Fast Ethernet
- LAN** IEEE 802.11b/g wireless LAN interface  
IEEE 802.11n wireless LAN standard  
Passive 12 V PoE, max. distance: 20 meters  
US FCC Part 15 Class B & C & E  
Europe ETSI 300 328, ETSI 301 489-1&17,  
EN 60950 compliant and CE Mark
- Certifications**
- Data Rates** 802.11b 11, 5.5, 2, 1 Mbps, auto-fallback,  
802.11g 54, 48, 36, 24, 18, 12, 9, 6 Mbps,  
auto-fallback
- IEEE 802.11n:** 6 M, 6.5 M, 13 M, 13.5 M, 19.5 M, 26 M, 27 M, 39 M,  
40.5 M, 53 M, 54 M, 58.5 M, 65 M, 78 M, 81 M,  
104 M, 108 M, 117 M, 121.5 M, 130 M, 135 M,  
150 Mbps

### Physical Specifications

- Power** DC 12 V / 1.0A; AC Adapter 100 V ~ 240 V
- Dimensions (W x H x D)** 60 x 165 x 34 mm (2.36" x 6.50" x 1.34")
- Mounting** DIN-rail, Pole
- Weight** 0.5 Kg

### Environment

- Operating Temperature** Non Heater : -20 ~ 70°C (-4 ~ 158°F)
- Storage Temperature** -30 ~ 80°C (-22 ~ 176°F)
- Humidity** 10% ~ 95% non-condensing

### Interface Operation Modes

- Access Point (AP) / Customer Premise Equipment (CPE)

### Antenna

- Antenna Configuration 1x1 (1 Tx, 1 Rx)
- Default embedded 8 dBi directional antenna (Vertical-Pol)
- Reserve N-type Connector (Plug) \*Switchable by software
- Equipped N-to-RSMA adaptor and 5dBi dipole antenna for indoor AP applications.

### Other Features

- Telnet, FTP, SNMP, Password Changes, Firmware updates, Configuration Files
- Radio on/off, WMM/Regatta Mode, Output Power Control, Fragmentation Length, Beacon Interval
- RTS/CTS threshold, DTIM Interval

### Modulation Techniques

- IEEE 802.11n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- IEEE 802.11g** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

### Channel Support

- IEEE 802.11b/g/gn** HT20  
FCC: CH1 ~ CH11; ETSI: CH1 ~ CH13
- IEEE 802.11gn** HT40  
FCC: CH3 ~ CH9; ETSI: CH3 ~ CH11

### Wireless Transmission Rates

- Transmitted Power** 802.11b: 26 dBm  
802.11g: 26 dBm @ 6 Mbps, 24 dBm @ 54 Mbps  
802.11gn HT20: 26 dBm @ MCS0, 22 dBm @ MCS7  
802.11gn HT40: 26 dBm @ MCS0, 21 dBm @ MCS7

### Receiver Sensitivity

- 802.11b Sensitivity** -93 dBm @ 1 Mbps; -88 dBm @ 11 Mbps
- 802.11g Sensitivity** -89 dBm @ 6 Mbps; -73 dBm @ 54 Mbps
- 802.11n HT20** -88 dBm @ MCS0; -70 dBm @ MCS7
- 802.11n HT40** -84 dBm @ MCS0; -67 dBm @ MCS7

## Ordering Information

- EKI-6311GN** 802.11 b/g/n Wireless Access Point/CPE (US)
- EKI-6311GN-EU** 802.11 b/g/n Wireless Access Point/CPE (EU)

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-6331AN

IEEE 802.11 a/n Wi-Fi AP/CPE



## Features

- Compliant with IEEE 802.11 a/n
- IP55 waterproof certification
- MIMO 2 x 2 11n
- Embedded 16 dBi dual-polarity directional antenna with external R-SMA connector for optional antenna
- High output power 24 dBm
- Passive 15 V PoE
- Supports distances up to 10 km
- WEP/WPA/WPA2/ IEEE 802.1 x authentication support
- IGMP snooping protocol support

## Introduction

EKI-6331AN is a feature rich wireless AP/CPE which provides a reliable 5GHz wireless connectivity for industrial environments. The PoE injector enhances flexibility in deployment of this AP/CPE even where the DC power supply is hard to fulfill. As an 802.11n compliant device, EKI-6331AN provides 3 times higher data rates than legacy 802.11a devices. With MIMO 2 x 2 technology, EKI-6331AN provides both robust wireless connectivity as well as high throughput rate in wireless transmission. With the support of WMM and IGMP snooping protocols, EKI-6331AN effectively improves the reliability of wireless connectivity, especially in applications that need high reliability and high throughput data transmission. To secure wireless connections, EKI-6331AN implements the latest encryption technologies including WPA2/WPA/802.1x for powerful security authentication.

## Specifications

### Standard Support

- **Wireless** IEEE 802.11 a/n
- **Ethernet** IEEE 802.3u MDI / MDIX 10/100 Fast Ethernet
- **LAN** IEEE 802.11a wireless LAN interface  
IEEE 802.11n wireless LAN standard
- **Certifications** Passive 15 V PoE  
US FCC Part 15  
ETSI 301 489-1&17,  
EN 60950 compliant and CE Mark  
EN 301 893 (5470-5725MHz DFS)  
EN 302 502 (5725-5850 MHz DFS)
- **Data Rates** IEEE 802.11a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps,  
auto-fallback  
IEEE 802.11n: 6 M, 6.5 M, 13 M, 13.5 M, 19.5 M,  
26 M, 27 M, 39 M, 40.5 M, 53 M, 54 M, 58.5 M,  
65 M, 78 M, 81 M, 104 M, 108 M, 117 M, 121.5 M,  
130 M, 135 M, 150 Mbps, up to 300 Mbps

### Physical Specifications

- **Power** 15 V<sub>DC</sub> @ 0.8A; AC Adapter 100 V ~ 240 V
- **Dimensions (W x H x D)** 111 x 256 x 48 mm (4.37" x 10.08" x 1.89")
- **Mounting** Pole
- **Weight** 0.5 Kg

### Environment

- **Operating Temp.** -20 ~ 70°C (-4 ~ 158°F)
- **Storage Temperature** -30 ~ 80°C (-22 ~ 176°F)
- **Humidity** 5% ~ 95% non-condensing

### Interface Operation Modes

- Access Point (AP) / Customer Premise Equipment (CPE)

### Antenna

- Antenna Configuration 2 x 2 (2T2R)
- Default embedded 14~16 dBi (Dual-polarity)
- Reverse SMA Connectors (configured by software)

### Other Features

- **Management** Telnet, FTP, SNMP, Web UI
- **Security** Open System, Shared Key, 802.1X only, WPA, WPA2, WPA-PSK (TKIP)
- **Wireless** Radio on/off, WMM/Regatta Mode, Output Power Control, Fragmentation Length, Beacon Interval, RTS/CTS threshold, DTIM Interval

### Modulation Techniques

- **IEEE 802.11n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11a** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

### Channel Support

- **FCC** 5725-5850 MHz
- **CE** 5470-5725 MHz, 5725-5850 MHz

### Wireless Transmission Rates

- **IEEE 802.11a** 6-24 Mbps: 24 dBm  
54 Mbps: 21 dBm
- **IEEE 802.11n** HT20 - MCS0: 23 dBm  
MCS15: 20 dBm  
HT40 - MCS0: 23 dBm  
MCS15: 19 dBm
- Note: bandedge exclusive (Controllable for different country regulations)

### Receiver Sensitivity

- **IEEE 802.11a** 54 Mbps: -76 dBm
- **IEEE 802.11n** HT20 - MCS15: -70 dBm  
HT40 - MCS15: -66 dBm

## Ordering Information

- **EKI-6331AN** IEEE 802.11 a/n Wireless AP/CPE
- **EKI-6331AN-EU** IEEE 802.11 a/n Wireless AP/CPE (EU)

# EKI-6340 Series

IEEE 802.11 a/b/g/n  
Outdoor Wi-Fi Mesh AP

NEW



EKI-6340-1

EKI-6340-2

EKI-6340-3



## Features

- Highly secured self-healing & self-forming Mesh capability
- Ultra-fast roaming (hand-over switch time  $\leq 20$  ms)
- High throughput multiple hopping ( $\geq 100$  Mbps @10 hops)
- Ease of use installation utilities: antenna alignment, distance calculation and site survey tools
- Compliant with IEEE 802.11 a/b/g/n
- Up to 3 radios for Mesh back haul and Access Point
- MIMO 2 x 2, up to 300 Mbps data rate
- Dual 12 ~ 48 V redundant DC input power
- 802.3 at PoE input
- Gigabit Ethernet support
- WEP, WPA, WPA2-PSK/EAP (IEEE 802.1X/RADIUS, TKIP and AES)
- IP67 enclosure, wide operating temperature range
- EN50155 compliant

## Introduction

EKI-6340 series are perfect wireless Mesh AP for your outdoor deployment. With self-healing & self-forming capabilities, the wireless network is free from interruption even part of Mesh nodes failed. It's especially critical to infrastructures where wired solutions are hard to deploy. The ultra-fast roaming seamlessly enables the applications of high-speed mobility. The low latency and high throughput multiple hopping features greatly enables the extension of network coverage. This high throughput Mesh network perfectly covers growing rich data demands such as video security, surveillance and entertainment. Comprehensive security features prevent system from intrusion. IP67 sturdy waterproof enclosure with wide-temperature design enables excellent performances under all harsh outdoor environments.

## Specifications

### Standard Support

- **Wireless** IEEE 802.11a/b/g/n compliant
- **Ethernet** IEEE 802.11i, IEEE 802.3/802.3u/802.3ab, IEEE 802.3at PoE, 802.1d, 802.1w, 802.1q, 802.1p
- **Data Rates** IEEE 802.11b: 1, 2, 5.5, 11 Mbps  
IEEE 802.11a, g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps  
IEEE 802.11n: @ 800ns (400ns) GI  
20 MHz BW  
1 Nss: 65 (72.2) Mbps maximal  
2 Nss: 130 (144.4) Mbps maximal  
40 MHz BW  
1 Nss: 135 (150) Mbps maximal  
2 Nss: 270 (300) Mbps maximal

### Physical Specifications

- **Power** Dual redundant 12 ~ 48 V<sub>DC</sub>  
IEEE 802.3at PoE
- **Power Consumption** Normal operation:  
EKI-6340-1 Max. 17 W  
EKI-6340-2 Max. 21 W  
EKI-6340-3 Max. 25 W  
Cold start:  
EKI-6340-1 Max. 13 W  
EKI-6340-2/3 Max. 25 W
- **Dimensions (W x H x D)** 225 x 242 x 65 (8.86" x 9.53" x 2.56")
- **Weight** 2.25 Kg
- **Enclosure** Metal, IP67 protection
- **Mounting** Pole, Wall, VESA

### Environment

- **Operating Temperature** -35 ~ 75°C (-31 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5% ~ 100% (non-condensing)

### Interface

- **Antenna** N-type female connector  
EKI-6340-1: 2 connectors  
EKI-6340-2: 4 connectors  
EKI-6340-3: 6 connectors
- **Power** M12 D-code connector
- **LAN** M25 cable gland

### System Operation Mode

- Bridge/ Router/ Mesh

### Other Features

- DHCP Client/Server, Statistic routing table, RIP v1&v2, WMM, Multi-SSID (up to 16x ESSID for each radio), traffic limitation, IEEE 802.11h DFS, Syslog, L2 management utility, HTTP (s), Telnet, SSH, CLI, SNMP, installation utilities.

### Modulation Techniques

- **IEEE 802.11a/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

### Frequency Range

- **USA** 2.400 ~ 2.483 GHz, 5.725 ~ 5.825 GHz
- **Europe** 2.400 ~ 2.483 GHz, 5.15 ~ 5.35 GHz, 5.47 ~ 5.725 GHz
- **China** 2.400 ~ 2.483 GHz, 5.725 ~ 5.85 GHz

Note: radio is capable to be operated within FCC DFS2 band or ETSI/EC DFS band, or other countries which is regulating or is planning to regulate mid -5 GHz band. The usage of mid -5 GHz band is subject to the regulatory approval status.

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

7

Automation Panel PCs

8

Industrial Monitors

9

Industrial Ethernet

10

Device Servers & Gateways

11

Serial Communication Cards

12

Embedded Auto. Computers

13

PACs

14

M2M I/O

15

Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards

## Certificates

- **EMC** US FCC Part 15 Class B & C & E, Europe ETSI 301 489-1&17
- **Radio** ETSI 300 328, ETSI 301 893, FCC 15.247
- **Rail Traffic** EN50155, EN50121-1/-4
- **Safety** EN 60950

## Ordering Information

- **EKI-6340-1A** 802.11 a/b/g/n Outdoor Single Radio Mesh AP
- **EKI-6340-2A** 802.11 a/b/g/n Outdoor Dual Radio Mesh AP
- **EKI-6340-3A** 802.11 a/b/g/n Outdoor Triple Radio Mesh AP
- **EKI-6340-1U** 802.11 a/b/g/n Outdoor Single Radio Mesh AP (EU)
- **EKI-6340-2U** 802.11 a/b/g/n Outdoor Dual Radio Mesh AP (EU)
- **EKI-6340-3U** 802.11 a/b/g/n Outdoor Triple Radio Mesh AP (EU)

## Transmit Power Settings (Typical Composite Power) Tolerance: +2/-2 dB

802.11a	802.11b	802.11g	802.11n 2.4GHz/HT20	802.11n 2.4GHz/HT40	802.11n 5GHz/HT20	802.11n 5GHz/HT40
+19 dBm @ 6, 9, 12, 18, 24 Mbps	+19 dBm	+22 dBm @ 6, 9, 12, 18, 24 Mbps	+20 dBm @ MCS 0/8	+20 dBm @ MCS 0/8	+18 dBm @ MCS 0/8	+17 dBm @ MCS 0/8
+18 dBm @ 36 Mbps	-	+21 dBm @ 36 Mbps	+20 dBm @ MCS 1/9	+20 dBm @ MCS 1/9	+18 dBm @ MCS 1/9	+17 dBm @ MCS 1/9
+17 dBm @ 48 Mbps	-	+20 dBm @ 48 Mbps	+20 dBm @ MCS 2/10	+20 dBm @ MCS 2/10	+18 dBm @ MCS 2/10	+17 dBm @ MCS 2/10
+15 dBm @ 54 Mbps	-	+18 dBm @ 54 Mbps	+20 dBm @ MCS 3/11	+20 dBm @ MCS 3/11	+18 dBm @ MCS 3/11	+17 dBm @ MCS 3/11
-	-	-	+20 dBm @ MCS 4/12	+19 dBm @ MCS 4/12	+18 dBm @ MCS 4/12	+17 dBm @ MCS 4/12
-	-	-	+20 dBm @ MCS 5/13	+19 dBm @ MCS 5/13	+18 dBm @ MCS 5/13	+17 dBm @ MCS 5/13
-	-	-	+18 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+16 dBm @ MCS 6/14
-	-	-	+16 dBm @ MCS 7/15	+15 dBm @ MCS 7/15	+13 dBm @ MCS 7/15	+12 dBm @ MCS 7/15

## Receiver Sensitivity

	Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)		Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)
802.11a	6M	-80	-93/-89	802.11a/n HT40	MCS0	-77	-89/-85
	9M	-79	-93/-89		MCS1	-74	-88/-84
	12M	-77	-92/-88		MCS2	-72	-85/-81
	18M	-75	-90/-86		MCS3	-69	-82/-78
	24M	-72	-86/-82		MCS4	-65	-80/-76
	36M	-68	-83/-79		MCS5	-61	-76/-72
	48M	-64	-79/-75		MCS6	-60	-74/-70
	54M	-63	-77/-73		MCS7	-59	-72/-68
802.11b	5.5M	-79	-94/-90	802.11b/g/n HT20	MCS0	-81	-94/-90
	11M	-75	-90/-86		MCS1	-78	-93/-89
802.11g	6M	-81	-94/-90		MCS2	-76	-91/-87
	9M	-80	-94/-90		MCS3	-73	-87/-83
	12M	-78	-93/-89		MCS4	-69	-84/-80
	18M	-76	-92/-88		MCS5	-65	-79/-75
	24M	-73	-89/-85		MCS6	-64	-78/-74
	36M	-69	-85/-81		MCS7	-63	-76/-72
	54M	-64	-79/-75	802.11b/g/n HT40	MCS0	-78	-89/-85
802.11a/n HT20	MCS0	-80	-93/-89		MCS1	-75	-89/-85
	MCS1	-77	-91/-87		MCS2	-73	-88/-84
	MCS2	-75	-88/-84		MCS3	-70	-84/-80
	MCS3	-72	-85/-81		MCS4	-66	-81/-77
	MCS4	-68	-82/-78		MCS5	-62	-77/-73
	MCS5	-64	-78/-74		MCS6	-61	-76/-72
	MCS6	-63	-77/-73		MCS7	-60	-73/-70
	MCS7	-62	-75/-71				

# EKI-6351 Series

IEEE 802.11 a/b/g/n  
Wi-Fi Mesh AP/Station

NEW



## Features

Unique features of EKI-6351 Series:

- Highly secured self-healing & self-forming Mesh capability
- Ultra-fast roaming (hand-over switch time  $\leq 20$  ms)
- High throughput multiple hopping ( $\geq 100$  Mbps @ 10 hops)

Common features:

- Ease of use installation utilities: antenna alignment, distance calculation and site survey tools
- Compliant with IEEE 802.11a/b/g/n
- MIMO 2 x 2 11n, up to 300 Mbps data rate
- Dual 12 ~ 48 V redundant DC input power
- 802.3at PoE input
- Gigabit Ethernet support
- WEP, WPA, WPA2-PSK/EAP (IEEE 802.1X/RADIUS, TKIP and AES)
- Wide operating temperature range from -35 to 75°C
- EN50155 compliant

## Introduction

The EKI-6351 series are perfect wireless AP/stations for your deployment. With self-healing & self-forming capabilities, the wireless network is free from interruption even if part of the Mesh node fails. Ultra-fast roaming seamlessly enables the applications to achieve high-speed mobility. This high throughput Mesh network covers the increasing data demands of applications such as video security, surveillance and entertainment.

Comprehensive security features prevent the system from intrusion whilst the wide operating temperature range enables excellent performances in harsh outdoor environments. EKI-6351B is dual band configurable AP/CPE with Giga Ethernet which enables to perform high throughput rate.

## Specifications

### Standard Support

- **Wireless** IEEE 802.11a/b/g/n compliant
- **Ethernet** IEEE 802.11i, IEEE 802.3/802.3u/802.3ab, IEEE 802.3at PoE, 802.1d, 802.1w, 802.1q, 802.1p
- **Data Rates** 802.11b: 1, 2, 5.5, 11 Mbps  
802.11a, g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps  
Passive 15 V PoE, max. distance: 20 meters  
IEEE 802.11n: @ 800ns (400ns) GI  
20 MHz BW  
1 Nss: maximal  
2 Nss: 130 (144.4) Mbps maximal  
40 MHz BW  
1 Nss: 135 (150) Mbps maximal  
2 Nss: 270 (300) Mbps maximal

### Physical Specifications

- **Power** Dual redundant 12 ~ 48 V<sub>DC</sub>  
IEEE 803.2at PoE
- **Power Consumption** Normal operation: Max. 17 W  
Cold start: Max. 13W
- **Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Weight** 0.63 Kg
- **Enclosure** Metal, IP30 protection
- **Mounting** DIN-rail, Wall

### Environment

- **Operating Temperature** -35 ~ 75°C (-31 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5% ~ 100% (non-condensing)

### Interface

- **Antenna** 2 x RSMA connector
- **Power** Terminal block
- **LAN** RJ45

### System Operation Mode

- EKI-6351-A - Bridge/Router/Mesh
- EKI-6351-B - Bridge/Router
- EKI-6351-C - Bridge/Mesh

### Other Features

- DHCP Client/Server\*, Statistic routing table\*, RIP v1&v2\*, WMM, Multi-SSID (up to 16x ESSID for each radio), traffic limitation, IEEE 802.11h DFS, Syslog, L2 management utility, HTTP (s), Telnet, SSH, CLI, SNMP, installation utilities.

### Modulation Techniques

- **IEEE 802.11a/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

### Frequency Range

- **USA** 2.400 ~ 2.483 GHz, 5.15 ~ 5.25GHz, 5.725 ~ 5.825 GHz
- **Europe** 2.400 ~ 2.483 GHz, 5.15 ~ 5.35 GHz, 5.47 ~ 5.725 GHz
- **China** 2.400 ~ 2.483 GHz, 5.725 ~ 5.85 GHz

Note: radio is capable to be operated within FCC DFS2 band or ETSI/EC DFS band, or other countries which is regulating or is planning to regulate mid -5 GHz band. The usage of mid -5 GHz band is subject to the regulatory approval status.

### Certificates

- **EMC** US FCC Part 15 Class B & C & E,  
Europe ETSI 301 489-1&17
- **Radio** ETSI 300 328, ETSI 301 893, FCC 15.247
- **Rail Traffic** EN50155, EN50121-1/-4
- **Safety** EN 60950

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

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Automation Panel PCs

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Industrial Monitors

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Industrial Ethernet

10

Device Servers & Gateways

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Serial Communication Cards

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Embedded Auto. Computers

13

PACs

14

M2M I/O

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Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards



## Ordering Information

▪ <b>EKI-6351-A</b>	802.11 a/b/g/n Wi-Fi Mesh AP/Station	▪ <b>EKI-6351-U</b>	802.11 a/b/g/n Wi-Fi Mesh AP/Station (EU)
▪ <b>EKI-6351-CA</b>	802.11 a/b/g/n Wi-Fi Mesh Station	▪ <b>EKI-6351-CU</b>	802.11 a/b/g/n Wi-Fi Mesh Station (EU)
▪ <b>EKI-6351-BA</b>	802.11 a/b/g/n Wi-Fi AP/CPE	▪ <b>EKI-6351-BU</b>	802.11 a/b/g/n Wi-Fi AP/CPE (EU)

## Transmit Power Settings (Typical Composite Power) Tolerance: +2/-2 dB

802.11a	802.11b	802.11g	802.11n 2.4GHz/HT20	802.11n 2.4GHz/HT40	802.11n 5GHz/HT20	802.11n 5GHz/HT40
+19 dBm @ 6, 9, 12, 18, 24 Mbps	+19 dBm	+22 dBm @ 6, 9, 12, 18, 24 Mbps	+20 dBm @ MCS 0/8	+20 dBm @ MCS 0/8	+18 dBm @ MCS 0/8	+17 dBm @ MCS 0/8
+18 dBm @ 36 Mbps	-	+21 dBm @ 36 Mbps	+20 dBm @ MCS 1/9	+20 dBm @ MCS 1/9	+18 dBm @ MCS 1/9	+17 dBm @ MCS 1/9
+17 dBm @ 48 Mbps	-	+20 dBm @ 48 Mbps	+20 dBm @ MCS 2/10	+20 dBm @ MCS 2/10	+18 dBm @ MCS 2/10	+17 dBm @ MCS 2/10
+15 dBm @ 54 Mbps	-	+18 dBm @ 54 Mbps	+20 dBm @ MCS 3/11	+20 dBm @ MCS 3/11	+18 dBm @ MCS 3/11	+17 dBm @ MCS 3/11
-	-	-	+20 dBm @ MCS 4/12	+19 dBm @ MCS 4/12	+18 dBm @ MCS 4/12	+17 dBm @ MCS 4/12
-	-	-	+20 dBm @ MCS 5/13	+19 dBm @ MCS 5/13	+18 dBm @ MCS 5/13	+17 dBm @ MCS 5/13
-	-	-	+18 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+16 dBm @ MCS 6/14
-	-	-	+16 dBm @ MCS 7/15	+15 dBm @ MCS 7/15	+13 dBm @ MCS 7/15	+12 dBm @ MCS 7/15

## Receiver Sensitivity

	Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)		Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)
802.11a	6M	-80	-93/-89	802.11a/n HT40	MCS0	-77	-89/-85
	9M	-79	-93/-89		MCS1	-74	-88/-84
	12M	-77	-92/-88		MCS2	-72	-85/-81
	18M	-75	-90/-86		MCS3	-69	-82/-78
	24M	-72	-86/-82		MCS4	-65	-80/-76
	36M	-68	-83/-79		MCS5	-61	-76/-72
	48M	-64	-79/-75		MCS6	-60	-74/-70
	54M	-63	-77/-73		MCS7	-59	-72/-68
802.11b	5.5M	-79	-94/-90	802.11b/g/n HT20	MCS0	-81	-94/-90
	11M	-75	-90/-86		MCS1	-78	-93/-89
802.11g	6M	-81	-94/-90		MCS2	-76	-91/-87
	9M	-80	-94/-90		MCS3	-73	-87/-83
	12M	-78	-93/-89		MCS4	-69	-84/-80
	18M	-76	-92/-88		MCS5	-65	-79/-75
	24M	-73	-89/-85		MCS6	-64	-78/-74
	36M	-69	-85/-81		MCS7	-63	-76/-72
	54M	-64	-79/-75		MCS0	-78	-89/-85
				802.11b/g/n HT40	MCS1	-75	-89/-85
802.11a/n HT20	MCS0	-80	-93/-89		MCS2	-73	-88/-84
	MCS1	-77	-91/-87		MCS3	-70	-84/-80
	MCS2	-75	-88/-84		MCS4	-66	-81/-77
	MCS3	-72	-85/-81		MCS5	-62	-77/-73
	MCS4	-68	-82/-78		MCS6	-61	-76/-72
	MCS5	-64	-78/-74		MCS7	-60	-73/-70
	MCS6	-63	-77/-73				
	MCS7	-62	-75/-71				



# EKI-6558TI EKI-6559TMI

**EN50155 IP67 8-port M12 Managed Ethernet Switch with Wide Temperature**

**EN50155 IP67 8-port M12 + 2-port Fiber Optic Managed Ethernet Switch with Wide Temperature**



## Introduction

EKI-6558TI and EKI-6559TMI are EN50155 certified IP67 wide temperature industrial switches which are especially designed for railway industry and harsh environments. M12 connectors secure highly reliable connectivity for industrial communication applications. EN50155 certification ensures the use of railway application. EKI-6559TMI also provides two additional fiber optic ports to extend communication range. Both EKI-6558TI and EKI-6559TMI provide Advantech's X-Ring protocol, which enables users to establish a redundant Ethernet network with ultra high-speed recovery (less than 20 ms). They 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, 802.3ad, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X
- LAN** 10/100Base-T (X), 100Base-FX
- Transmission Speed** Up to 100 Mbps

### Interface

- Ethernet** M12, 4-pole D-coded, Female x 8
- Fiber Optic** LC type waterproof x 2
- Console** M12, 8-pole A-coded, Female x 1

### Network Management

- Configuration** Web browser, Telnet, Serial console, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration
- VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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** IP67, aluminum shell with solid mounting kits
- Dimensions (W x H x D)** 193 x 176 x 62.5 mm (7.59" x 6.93" x 2.46")
- Mounting** Wall

### Power

- Power Consumption** Max. 8.1 W
- Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- Power Connector** M12, 5-pole A-coded, male x 1
- P-Fail Output** 1A @ 24 V<sub>DC</sub>
- P-Fail Connector** M12, 8-pole A-coded, Female x 1

## Features

- EN50155 certified
- Supports X-Ring function (ultra high-speed recovery time < 20 ms)
- Wide redundant power design
- Provides M12 connector with IP67 protection
- Provides Waterproof fiber optic connector
- TFTP firmware updates and system configure restore and backup
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperature -40 ~ 75°C
- Provides 100 Mbps LC type connector

### Protection

- Power Reverse** 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** 388,201 hours (EKI-6558TI)  
320,420 hours (EKI-6559TMI)

### Certifications

- Safety** UL 508
- 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  
IEC 61373  
IEC 60068-2-32  
IEC 61373
- Shock** EN50155, EN 50121-3-2, EN 50121-4
- Freefall**
- Vibration**
- Railway**

## Ordering Information

- EKI-6558TI** EN50155 8-port M12 Managed Ethernet Switch
- EKI-6559TMI** EN50155 8-port M12+ 2-port FX Managed Ethernet Switch

1  
Motion Control

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Hazardous Location

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Energy Automation

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Building Automation Systems

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Automation Software

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Operator Panels

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# EKI-6528TI

# EKI-6528TPI

**EN50155 8-port M12 Unmanaged Switch with Wide Temperature**

**EN50155 8-port M12 Unmanaged PoE Switch with Wide Temperature**



## Features

- Auto Bypass between Port 1 and Port 2
- EN50155 certified
- Wide redundant power design
- 8-port 10/100 Mbps M12 type connector with IP40 protection
- 4-port PoE type M12 (EKI-6528TPI)
- Dual redundant power input
- Supports wide operating temperature -40 ~ 75°C



## Introduction

EKI-6528TI and EKI-6528TPI are EN50155 certified industrial switches with IP40 protection and wide temperature support designed for railway applications. EKI-6528TPI provides four PoE ports that support IEEE 802.3af and can provide up to 15.4 watts of power per port. M12 connectors ensure highly reliable connectivity for industrial communication applications. With IP40 compact metal housings, these switches are protected against dusty environments and are a good fit for many industrial applications. Under no-power condition, 'Auto Bypass' function ensures the Ethernet signal connection through internal circuitry. This feature provides non-stop communication to rolling stocks even no power exists in some of the carriages.

## Specifications

### Communications

- **Standard** IEEE 802.3  
IEEE 802.3u  
IEEE 802.3x  
IEEE 802.3af
- **LAN** 10/100Base-T (X)
- **Transmission Speed** Up to 100 Mbps

### Interface

- **Ethernet** M12, 4-pole D-coded, Female x 8

### Mechanism

- **Enclosure** IP40 protected metal shell
- **Dimensions (W x H x D)** 92 x 180 x 42 mm (3.62" x 7.08" x 1.65")
- **Mounting** DIN-rail, Wall

### Power

- **Power Consumption** Max. 3.36 W (EKI-6528TI)  
Max. 72 W (EKI-6528TPI)
- **Power Input** 24 ~ 48 V<sub>DC</sub>, redundant dual inputs (for EKI-6528TPI)  
12 ~ 48 V<sub>DC</sub>, redundant dual inputs (for EKI-6528TI)
- **Power Connector** M12, 5-pole A-coded, male x 1
- **P-Fail Output** 1A @ 24 V<sub>DC</sub>
- **P-Fail Connector** M12, 8-pole A-coded, Female x 1

### 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** 391,307 hours (EKI-6528TI)  
348,384 hours (EKI-6528TPI)

### Certifications

- **Safety** UL 60950-1
- **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 61373
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 61373
- **Railway** EN50155, EN 50121-3-2, EN 50121-4

## Ordering Information

- **EKI-6528TI** EN50155 8-port M12 Unmanaged Ethernet Switch
- **EKI-6528TPI** EN50155 8-port M12 Unmanaged PoE Switch

# EKI-4668C

## 24 FE + 4 Combo Port L3 Managed Industrial Ethernet Switch



### Features

- 1U 19" Rack mount
- 24 FE Copper ports plus 4 Gigabit Copper/SFP combo ports
- SFP socket for easy and flexible fiber extension
- Redundancy: Gigabit X-Ring (ultra high-speed recovery time < 100 ms), RSTP/ STP and port trunking
- L3+IP routing RIP & OSPF support
- Port Security and Static MAC filtering & Limited MAC number per port
- SNMP & RMON Support
- Management: Web, Telnet, Serial Console

### Introduction

EKI-4668C supports up to 24 x 10/100 Base-TX and four Gigabit combo ports for high speed transmissions and is a multilayered managed Ethernet switch which provides a resilient and redundant architecture with Advantech's X-Ring technology. EKI-4668C also offers many advanced features like QoS, rate-limiting, IGMP, multicasting support, high performance IP routing and SNMP support to optimize network performance, ease maintenance, secure network safety and improve network operation.

### 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 1000Base-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance** Ethernet: Up to 100 m (4- wire Cat.5e)  
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** 24 x 10/100Base-TX  
4 x RJ45/SFP (mini-GBIC) combo ports
- **LED Indicators** 10/100/1000 T (X): Link/Activity, Duplex/Collision  
Gigabit Copper: Link/Activity, Speed  
SFP: Link/Activity
- **Console** RS-232 (RJ45)

#### Power

- **Power Consumption** Max. 50 W
- **Power Input** AC Power: 100 ~ 240 V, 50/60 Hz

#### Environment

- **Operating Temperature** -10 ~ 55°C (14 ~ 131°F)
- **Storage Temperature** -20 ~ 70°C (-4 ~ 158°F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 10 ~ 95% (non-condensing)
- **MTBF** 438,889 hours

#### Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 438 x 44.5 x 270 mm (17.24" x 1.75" x 10.62")
- **Mounting** 1U 19" Rack mount

#### Network Management

- **MAC Address** 16K
- **IP Routing** Wire-speed IP routing, RIPV1/V2, OSPF V2, Static routing
- **Configuration** Web browser, Telnet, Serial console, TFTP, SNMP v1/v2c/v3, OPC (with external SNMP-OPC server), Port Speed/Duplex Configuration
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 100 ms, 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, WRR queuing, IEEE 802.3x flow control
- **Diagnostics** Port Mirroring, Real-time traffic statistic, MAC Address Table, SNTP, Syslog, E-Mail Alert, SNMP Trap, RMON

#### Certifications

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950

### Ordering Information

- **EKI-4668C** 24 FE + 4 Combo Managed Ethernet Switch

#### Accessories

- **1702002600** Power Cable US Plug 1.8 m
- **1702002605** Power Cable EU Plug 1.8 m
- **1702031801** Power Cable UK Plug 1.8 m
- **1702031836** Power Cable China/Australia Plug 1.8 m

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# EKI-4654R

## 24 FE + 2 SFP (Mini-GBIC) Managed Redundant Ethernet Switch



### Features

- IEC 61850-3 & IEEE 1613 compliant
- 1U 19" Rack mount
- 2 x 1000Base SFP ports, plus 24 Fast Ethernet ports
- Redundancy: X-Ring (ultra high-speed recovery time < 20 ms), RSTP/ STP (802.1w/1D)
- Fully integrated, dual-redundant power supply: 2 x 100 ~ 240 V<sub>AC</sub>/100 ~ 240 V<sub>DC</sub>
- Fanless design
- Front panel LEDs simplify the monitoring and management
- Rear-end wiring with LED indicator
- Wide operating temperature from -40 to 85°C

### Introduction

EKI-4654R is compliant with the IEC 61850-3 & IEEE 1613 certifications for power automation systems and supports 24 Fast Ethernet ports and 2 x 1000Base SFP slots for different SFP modules for various application. EKI-4654R has long range voltage redundancy power input which provides convenient and uninterrupted power supply. EKI-4654R also supports many advanced network standards to optimize 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
- **LAN** 10/100Base-T (X), Optional 1000Base-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance** Ethernet: Up to 100 m (4- wire Cat.5e)  
SFP: Up to 110 km (depends on SFP)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation  
Copper: 10/100 Mbps, Auto-Negotiation  
Fiber: Up to 1000 Mbps

#### Interface

- **Connectors** 24 x 10/100 Base-TX + 2 x SFP (mini-GBIC) ports
- **LED Indicators** System: Power 1, Power 2, Alarm (Red), R.M  
Copper: Link/Activity, Full duplex/collision  
SFP: Link/Activity
- **Console** RS-232 (RJ45)

#### Network Management

- **Configuration** Web browser, Telnet, Serial console, TFTP, SNMP v1/v2c/v3, Port Speed/Duplex Configuration
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, STMP, Syslog, E-Mail Alert, SNMP Trap, RMON

#### Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 440 x 44 x 280 mm (17.31" x 1.73" x 11.02")
- **Mounting** 1U 19" Rack mount

#### Power

- **Power Consumption** Max. 36 W
- **Power Input** 2 x 100 ~ 240 V<sub>AC</sub>/100 ~ 240 V<sub>DC</sub> (Redundancy)
- **Fault Output** 1 Relay Output

#### Protection

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

#### Environment

- **Operating Temperature** -40 ~ 85°C (-40 ~ 185°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
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-3-2/3  
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
- **Substation** IEC 61850-3, IEEE 1613

### Ordering Information

- **EKI-4654R** 24FE+2-port SFP Managed Redundant Ethernet Switch

# EKI-7758F

## 4G+4 SFP Gigabit Managed Redundant Industrial Ethernet Switch



### Introduction

EKI-7758F supports 8 Gigabit ports with 4 x Ethernet and 4 x 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, 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), 10/1000Base-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** 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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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

### Features

- All Gigabit Ethernet ports for 4 Copper and 4 SFP
- SFP sockets for easy and flexible fiber expansion
- Redundancy: Gigabit X-Ring (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
- Diagnostic: Port statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output

#### 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<sub>DC</sub>, 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

#### Certifications

- **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  
IEC 60068-2-27  
IEC 60068-2-32  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

### Ordering Information

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

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards



# 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 (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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power inputs and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7656CI)

### Introduction

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 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)  
System: PWR, PWR1, PWR2, R.M., P-Fail
- **LED Indicators** 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
- **Redundancy** Advantech X-Ring (Recovery time < 120 ms at 250 pcs 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, SSH/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<sub>DC</sub>, 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

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

# EKI-7659C/CI

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



### Introduction

EKI-7659C support 8 Fast Ethernet ports and 2 Gigabit combo ports. 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 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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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, STNP, Syslog, E-Mail Alert, SNMP Trap, RMON

### 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 < 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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7669CI)

#### 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<sub>DC</sub>, 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-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

#### 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  
IEC 60068-2-27  
IEC 60068-2-32  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

### Ordering Information

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

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-7657C

## 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 (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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Operating temperature from -10 to 60°C

### Introduction

EKI-7657C supports 7 Fast Ethernet ports and 3 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 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-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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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<sub>DC</sub>, 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

#### 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-7654C

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



### 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 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, 10/100Base-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** 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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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

### 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 (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, SNMPv3 Diagnostic: Port Statistic, Port Mirroring, RMON, SNMP Trap, SMTP, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output

#### 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<sub>DC</sub>, 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

#### 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  
IEC 60068-2-27  
IEC 60068-2-32  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

### Ordering Information

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

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

7

Automation Panel PCs

8

Industrial Monitors

9

Industrial Ethernet

10

Device Servers & Gateways

11

Serial Communication Cards

12

Embedded Auto. Computers

13

PACs

14

M2M I/O

15

Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards

# EKI-7556MI

## 16+2 SC Type Fiber Optic Managed Industrial Ethernet Switch with Wide Temperature



### Features

- 2 x SC type fiber ports (Multi-mode), plus 16 Fast Ethernet ports
- Redundancy: X-Ring (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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperature -40 ~ 75°C

### Introduction

EKI-7556MI supports 16 Fast Ethernet ports and 2 SC type fiber optic ports. To create reliability in your network, the EKI-7556MI 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, EKI-7556MI 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
- **Transmission Speed** Up to 100 Mbps

#### Interface

- **Connectors** 16 x RJ45 ports  
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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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. 10.75 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, 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** 218,490 hours

#### Certifications

- **Safety** UL 508
- **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-7556MI** 16FE + 2-port Multi-mode Fiber 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



## Introduction

Both EKI-7554SI/MI and EKI-7559SI/MI support 2 SC type Fiber ports, EKI-7554SI/MI 4 Fast Ethernet ports and EKI-7559SI/MI can support up to 8 Fast Ethernet ports. To create reliability in your network, the EKI-7554SI/MI come 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, 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  
RS-232 (RJ45)
- **Console**

### Network Management

- **Configuration** Web browser, Telnet, Serial console, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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

## 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 (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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperature -40 ~ 75°C

### Power

- **Power Consumption** Max. 7.7 W (EKI-7554SI/MI)  
Max. 8.4 W (EKI-7559SI/MI)
- **Power Input** 12 ~ 48 V<sub>DC</sub>, 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)

### Certifications

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950  
Class I, Division 2 (EKI-7559MI/MI)  
FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMI** EN 61000-4-2  
EN 61000-4-3  
EN 61000-4-4  
EN 61000-4-5  
EN 61000-4-6  
EN 61000-4-8
- **EMS** IEC 60068-2-27  
IEC 60068-2-32  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

## 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

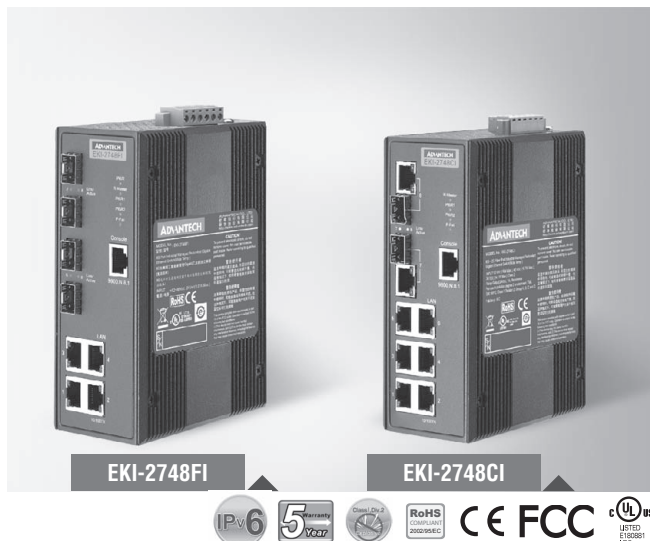
- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-2748FI

# EKI-2748CI

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

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



### Features

- All Gigabit Ethernet ports for Copper and SFP/Combo interfaces
- SFP sockets for easy and flexible fiber expansion
- Redundancy: Gigabit X-Ring (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
- Diagnostic: Port statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 12 ~ 48 V<sub>DC</sub> 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 network, it equipped with Advantech owned redundant network protocol -- X-Ring, 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-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, 100Base-T (X), 10/100Base-T, Optional 100Base-FX, 1000Base-SX/LX/LHX/XD/ZX/EZX
- **LAN** Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
- **Transmission Speed** 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
- **VLAN** IEEE 802.1Q, GVRP, Port-based VLAN
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, 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, SSH/SSL
- **Traffic Control** IGMP Snooping/Query for multicast group management Port Trunking, Static 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, 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<sub>DC</sub>, 24 V<sub>AC</sub> (18 ~ 30 V<sub>AC</sub>)
- **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)

#### Certifications

- **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

### Ordering Information

- **EKI-2748FI** 6Gx + 2G Combo Port Managed Ethernet Switch w/ Wide Temp
- **EKI-2748CI** 4Gx + 3G SFP Managed Ethernet Switch w/ Wide Temp



# EKI-2548SI/MI EKI-2548I

## 6Tx+2 Fiber Optic Managed Ethernet Switches with Wide Temperature 8Tx Managed Ethernet Switch with Wide Temperature



### Features

- All Fast Ethernet ports for 8 Copper (EKI-2548I)
- 6 Copper + 2 Fiber Optic (EKI-2548SI/MI)
- Redundancy: Advantech X-Ring, Dual Homing, Couple Ring, and RSTP/STP (802.1w/1d)
- Configuration: SNMP v1/v2c, Web
- Backplane (Switching Fabric): 1.6 Gbps
- Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperature -40 ~ 75°C
- DIP switch for configure port alarm and enable Ring master

### Introduction

EKI-2548I and EKI-2548SI/MI is a cost effective managed industrial Ethernet switch which supports Fast Ethernet. To enhance reliability in industrial communication network, it equipped with Advantech owned redundant network protocol -- X-Ring, 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-2548I and EKI-2548SI/MI 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, 802.1d, 802.1w, 802.1p, 802.1Q
- **LAN** 10/100Base-TX
- **Transmission Distance** Ethernet : Up to 100 m  
Multi-mode Fiber: Up to 2 km (EKI-2548MI)  
Single-mode Fiber: Up to 30 km (EKI-2548SI)
- **Transmission Speed** Up to 100 Mbps

#### Interface

- **Connectors** 8 x RJ45 ports (EKI-2548I)  
6 x RJ45 ports + 2 x SC type fiber optic (EKI-2548SI/MI)
- **LED Indicators** System: PWR1, PWR2, P-Fail, R-Master  
Ethernet port: Link/Activity, Speed  
Fiber port: Link/Activity
- **Reset Button** Reset and restore to factory default

#### Network Management

- **Configuration** SNMP v1/v2c, Web
- **VLAN** IEEE 802.1Q, Port based VLAN
- **Redundancy** Advantech X-Ring, Dual Homing, Couple Ring, IEEE 802.1d STP, and IEEE 802.1w RSTP
- **Security** IP access security
- **Traffic Control** IGMP Snooping/Query for multicast group management, rate limit and storm control
- **Diagnostics** Port Mirroring, SNTp, Syslog, SNMP Trap, Email Alert

#### 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. 7.6 W (EKI-2548I)  
Max. 10.6 W (EKI-2548SI/MI)
- **Power Input** 12 ~ 48 V<sub>DC</sub>, 24 V<sub>AC</sub> (18 ~ 30 V<sub>AC</sub>)
- **Fault Output** 1 Relay Output, 1A @ 24 V<sub>DC</sub>

#### 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** 215,266 hours (EKI-2548I)  
337,238 hours (EKI-2548MI)

#### Certifications

- **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

### Ordering Information

- **EKI-2548SI** 6Tx + 2-port Single-mode Fiber Managed Ethernet Switch w/Wide Temp
- **EKI-2548MI** 6Tx + 2-port Multi-mode Fiber Managed Ethernet Switch w/Wide Temp
- **EKI-2548I** 8Tx Managed Ethernet Switch w/Wide Temp

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-4524I

# EKI-4524RI

## 24-port Ethernet Unmanaged Switch with Wide Temperature

## 24+2 SFP Port Unmanaged Industrial Ethernet Switch with Wide Temperature



### Features

- Backplane (Switching Fabric): 4.8 Gbps
- Provides 8K MAC address
- Supports 100 ~ 240 V<sub>AC</sub>/ V<sub>DC</sub> power input and power relay alarm
- Front panel LEDs simplify the monitoring and management
- Rear-end wiring with LED indicator (EKI-4524RI)
- Designed to be IEC 61850-3 compliant
- Wide operating temperature -40 ~ 75°C
- 1U 19" Rack mount design

### Introduction

EKI-4524I/4524RI is designed to be compliant with the IEC 61850-3 certification for power automation systems and supports 24 Fast Ethernet ports and 2 x 100Base SFP slots for different SFP modules in any application. EKI-4524I/4524RI has wide range voltage power input which provides convenient and uninterrupted power supply. EKI-4524RI has two sides (Front and Rear) LED indicator to show the link status conveniently. It also provides relay output for an event alarm. Quick notification and fast response time can shorten service procedures and reduce data loss in the field.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-TX
- **Transmission Distance** Ethernet: Up to 100 m  
SFP: Up to 30 km (depends on SFP)
- **Transmission Speed** Up to 100 Mbps

#### Interface

- **Connectors** 24 x RJ45 (Ethernet)  
2 x SFP (mini-GBIC) ports (EKI-4524RI)
- **LED Indicators** System: PWR  
Copper: Link/Activity, Speed  
SFP: Link/Activity

#### Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 440 x 44 x 280 mm (17.31" x 1.73" x 11.02") (EKI-4524RI)  
440 x 44 x 224 mm (17.31" x 1.73" x 8.81") (EKI-4524I)
- **Mounting** 1U 19" Rack mount

#### Power

- **Power Input** 100 ~ 240 V<sub>AC</sub> 50/60 Hz  
100 ~ 240 V<sub>DC</sub>
- **Fault Output** 1 Relay Output (20 mA @ 250 V<sub>DC</sub>)

#### Protection

- **Power Reverse** 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)

#### Certifications

- **EMI** FCC Part 15 Subpart B Class A
- **EMS** EN 61000-4-2, Level 4  
EN 61000-4-3, Level 3  
EN 61000-4-4, Level 4  
EN 61000-4-5, Level 3  
EN 61000-4-6, Level 3  
EN 61000-4-8, Level 4  
EN 61000-4-11
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Substation** IEC 61850-3 compliant

### Ordering Information

- **EKI-4524I** 24FE Ethernet Switch w/ Wide Temp
- **EKI-4524RI** 24FE+2 FX-SFP Port Ethernet Switch w/ Wide Temp

# EKI-7626C/CI

## 16+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch



### Features

- Provides 2 Gigabit Copper/SFP combo port plus 16 Fast Ethernet ports (EKI-7626C/CI)
- SFP socket for Easy and Flexible Fiber Expansion
- Supports Auto Negotiation and Auto MDI/MDI-X
- Provides flexible mounting: DIN-rail and Wall mount
- Supports Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7626CI)

### Introduction

Aside from 2 Gigabit fiber optic/copper combo ports, the EKI-7626C/CI comes equipped with 16 x 10/100Base-T (X) fast Ethernet ports. Traditional RJ45 ports can be used for up-linking wide-band paths in short distances (< 100 m), or the appropriate replaceable SFP module can be used for the application of wideband uploading and long distance transmissions to flexibly fit field requests. The long MTBF (Mean Time Between Failures) ensures low operation and maintenance cost. EKI-7626C/CI includes a switch controller that can automatically sense transmission speeds (10/100 Mbps) The RJ45 interface can also be auto-detected, so MDI or MDI-X is automatically selected and a cross-over cable is not required. All Ethernet ports have memory buffers that support the store-and-forward mechanism, which assures that data can be transmitted properly

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3ab, 802.3u, 802.3x, 802.3z
- **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)  
Gigabit Fiber: Up to 110 km (depending on SFP)
- **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) with 2 x RJ45/SFP (mini-GBIC) combo ports (EKI-7626C/CI)  
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR1, PWR2, P-Fail  
Gigabit Copper: Link/Activity, Speed (1000 Mbps)  
Gigabit SFP: Link/Activity

#### Power

- **Power Consumption** Max. 6.5 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Fault Output** 1 Relay Output

#### Mechanism

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

#### Protection

- **Reverse Polarity** Present
- **Overload Current** Present

#### 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** 295,000 hours

#### 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-7626C** 16+2G Combo Port Unmanaged Ethernet Switch
- **EKI-7626CI** 16+2G Combo Port Unmanaged Ethernet Switch w/ Wide Temp

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-7629C/CI

## 8+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch



### Features

- Provides 2 Gigabit Copper/SFP combo port plus 8 Fast Ethernet ports (EKI-7629C/CI)
- SFP socket for Easy and Flexible Fiber Expansion
- Supports Auto Negotiation and Auto MDI/MDI-X
- Provides flexible mounting: DIN-rail and Wall mount
- Supports Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperatures from -40 to 75°C (EKI-7629CI)

### Introduction

Aside from 2 Gigabit fiber optic/copper combo ports, the EKI-7629C/CI comes equipped with 8 x 10/100Base-TX fast Ethernet ports. Traditional RJ45 ports can be used for up-linking wide-band paths in short distances (< 100 m), or the appropriate replaceable SFP module can be used for the application of wideband uploading and long distance transmissions to flexibly fit field requests. The long MTBF (Mean Time Between Failures) ensures low operation and maintenance cost. EKI-7629C/CI includes a switch controller that can automatically sense transmission speeds (10/100 Mbps). The RJ45 interface can also be auto-detected, so MDI or MDI-X is automatically selected and a cross-over cable is not required. All Ethernet ports have memory buffers that support the store-and-forward mechanism, which assures that data can be transmitted properly.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3ab, 802.3u, 802.3x, 802.3z
- **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)  
Gigabit Fiber: Up to 110 km (depending on SFP)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation  
Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation  
SFP: Up to 1000 Mbps

#### Interface

- **Connectors** 8 x RJ45 (Ethernet) with 2 x RJ45/SFP (mini-GBIC) combo ports (EKI-7629C/CI)  
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR1, PWR2, P-Fail  
Gigabit Copper: Link/Activity, Speed (1000 Mbps)  
Gigabit SFP: Link/Activity

#### Power

- **Power Consumption** Max. 6.5 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Fault Output** 1 Relay Output

#### Mechanism

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

#### Protection

- **Reverse Polarity** Present
- **Overload Current** Present

#### 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** 295,000 hours

#### 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-7629C** 8+2G Combo Port Unmanaged Ethernet Switch
- **EKI-7629CI** 8+2G Combo Port Unmanaged Ethernet Switch w/ Wide Temp



# EKI-7526I EKI-7526MI

## 16-port Unmanaged Industrial Ethernet Switch with Wide Temperature

## 16+2 SC Type Fiber Optic Unmanaged Industrial Ethernet Switch with Wide Temperature



### Features

- Provides 16 10/100 Mbps Ethernet ports with RJ45 connector
- Provides SC type fiber optic ports plus 16 Fast Ethernet ports
- Supports Auto Negotiation and Auto MDI/MDI-X
- Provides flexible mounting: DIN-rail and Wall mount
- Supports Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperature -40~75°C

### Introduction

EKI-7526I and EKI-7526MI are cost effective unmanaged industrial Ethernet switches which support 16 x 10/100Base-TX fast Ethernet ports. Traditional fiber optic ports can be used for up-linking and long distance transmissions to flexibly fit the field requests (EKI-7526MI Only). The long MTBF (Mean Time Between Failures) ensures low operation and maintenance costs. All Ethernet ports have memory buffers that support the store-and-forward mechanism, which assures that data can be transmitted properly. Both EKI-7526MI and EKI-7526I support advanced network standards to optimize network performance, reduce maintenance costs, and secure network safety..

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-T (X), Optional 100Base-FX
- **Transmission Distance** Ethernet: Up to 100 m (4- wire Cat.5e  
Multi-mode Fiber: Up to 2 km
- **Transmission Speed** Ethernet:10/100 Mbps Auto-Negotiation

#### Interface

- **Connectors** 16 x RJ45 (Ethernet), EKI-7526I  
16 x RJ45 (Ethernet) with 2 x SC type fiber optic,  
(EKI-7526MI)  
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR1, PWR2, P-Fail  
10/100T (X): Link/Activity, Duplex/Collision

#### Power

- **Power Consumption** Max. 8.9 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Fault Output** 1 Relay Output

#### Mechanism

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

#### Protection

- **Reverse Polarity** 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** 237,130 hours

#### Certifications

- **Safety** UL 508
- **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  
IEC 60068-2-27
- **Shock** IEC 60068-2-32
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6

### Ordering Information

- **EKI-7526I** 16FE Unmanaged Ethernet Switch w/Wide Temp
- **EKI-7526MI** 16FE + 2 x Multi-mode Fiber Unmanaged Ethernet Switch w/Wide Temp

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAO Boards

# EKI-7529MI/ST

## 8+2 Multi-Mode Fiber Optic Industrial Unmanaged Ethernet Switch with Wide Temperature



### Features

- Provides ST type fiber optic ports plus 8 Fast Ethernet ports
- Supports Auto Negotiation and Auto MDI/MDI-X
- Provides flexible mounting: DIN-rail and Wall mount
- Supports Dual 12 ~ 48 V<sub>DC</sub> power input and 1 relay output
- Enable or disable broadcast storm protection through a simple dip switch
- Supports wide operating temperatures -40 ~ 75°C

### Introduction

EKI-7529MI/ST come equipped with 8 x 10/100Base-TX fast Ethernet ports. Traditional ST fiber optic ports can be used for uplinking and long distance transmissions to flexibly fit field requests. The RJ45 interface can also be auto-detected, so MDI or MDI-X is automatically selected and a cross-over cable is not required. All Ethernet ports have memory buffers that support the store-and-forward mechanism, which assures that data can be transmitted properly. Furthermore, the power line of EKI-7529MI/ST supports Surge and EFT protection which secure equipment against unregulated voltage and make systems safer and more reliable.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-T (X), Optional 100Base-FX
- **Transmission Distance** Ethernet: Up to 100 m  
Multi-mode Fiber: Up to 2 km

#### Transmission Speed

- **Ethernet:** Port 1~2: 10 Mbps  
Port 3~8: 10/100 Mbps Auto-Negotiation

#### Interface

- **Connectors** 8 x RJ45 (Ethernet) with 2 x ST-type fiber optic connectors  
6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR1, PWR2, P-Fail  
10/100T (X): Link/Activity, Duplex/Collision
- **Dip Switch** DIP1 (Port 1 and 2): ON: 10M Full Force/  
OFF: 10M Full Auto-Negotiation
- DIP2: ON: Broadcast Storm filter enable/  
OFF: Broadcast Storm filter Disable

#### Power

- **Power Consumption** Max. 6.7W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Fault Output** 1 Relay Output
- **Mechanism**
- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

#### Protection

- **Reverse Polarity** 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** 289,329 hours

#### Certifications

- **Safety** UL 508
- **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-7529MI/ST** 8 + 2-port Multi-mode Fiber Ethernet Switch w/ ST and Wide Temp

# EKI-2725

# EKI-2728

## 5-port Gigabit Unmanaged Industrial Ethernet Switch

## 8-port Gigabit Unmanaged Industrial Ethernet Switch



### Features

- Provides 5/8 Gigabit Ethernet ports with Auto MDI/MDI-X
- Supports 10/100/1000 Mbps Auto Negotiation
- Supports jumbo frame transmission up to 9kbytes
- Provides Slim size, DIN-rail with IP30 metal mechanism
- Supports Redundant 12 ~ 48 V<sub>DC</sub> power input and P-Fail Relay
- Provides broadcast storm protection

### Introduction

The EKI-2725/2728 supports Gigabit Ethernet. The power is a +12 ~ 48 V<sub>DC</sub> redundant input design, and is secured with a double protection mechanism: Power Polarity Reverse Protect and an Overload Current Resettable Fuse. The former tolerates reverse power wiring while the later secures the system from overload currents. As the power supply turns normal, EKI-2725/2728 will automatically get back to normal operation state. Each port of EKI-2725/2728 has 2 LED's to show the link status transmission speed and collision status. It also provides a relay output for an event alarm. In the event of a power failure, the built-in LED will activate the alarm to notify administrators. Engineers can simply verify the hardware status by checking the LED, and have troubleshooting easy and quick. EKI-2725/2728 comes with compact metal housing that rates IP30 to help against from dusty industrial environments.

### Specifications

#### Communications

- Standard** IEEE 802.3, 802.3u, 802.3x, 802.3ab
- LAN** 100Base-TX, 10/100Base-T
- Transmission Distance** Up to 100 m (4-wire Cat.5e, Cat.6 RJ45 cable)
- Transmission Speed** Up to 1000 Mbps

#### Interface

- Connectors** 5 x RJ45 (EKI-2725) or 8 x RJ45 (EKI-2728)  
6-pin removable screw terminal (power & relay)
- LED Indicators** P1, P2, P-Fail  
10/100/1000T (X): Link/Activity, Duplex/Collision

#### Power

- Power Consumption** Max. 4.6W
- Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- Fault Output** 1 Relay Output

#### Mechanism

- Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- Enclosure** IP30, Metal shell with solid mounting kits
- Mounting** DIN-rail, Wall

#### 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** 627,958 hours

#### Certifications

- Safety** UL 60950-1, CAN/CSA-C22.2 No.60950  
Class I, Division 2 (EKI-2728)
- 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-2725** 5-port Gigabit Unmanaged Ethernet Switch
- EKI-2728** 8-port Gigabit Unmanaged Ethernet Switch

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

7

Automation Panel PCs

8

Industrial Monitors

9

Industrial Ethernet

10

Device Servers & Gateways

11

Serial Communication Cards

12

Embedded Auto. Computers

13

PACs

14

M2M I/O

15

Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards

# EKI-2728MI

## 6G+2G Multi-Mode Unmanaged Ethernet Switch with Wide Temperature



### Features

- Supports 10/100/1000 Mbps Auto Negotiation
- Supports jumbo frame transmission up to 9kbytes
- Provides Slim size, DIN-rail with IP30 metal mechanism
- Provides broadcast storm protection
- Redundant DC power supply and one removable AC power input

### Introduction

EKI-2728MI is a cost effective unmanaged industrial Ethernet switch which supports Giga Ethernet. It supports Green Power requirement, furthermore, EKI-2728MI also supports advanced network standards to optimize network performance, reduce maintenance cost, and secure network safety.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.1ab, 802.1z
- **LAN** 10/100/1000Base-Tx
- **Transmission Distance** Ethernet: Up to 100 m  
Fiber: Up to 2 km
- **Transmission Speed** Up to 1000 Mbps

#### Interface

- **Connectors** 6 x RJ45 ports  
2 x SC type fiber optic
- **LED Indicators** System: PWR1, PWR2, P-Fail  
Gigabit Ethernet copper: Link/Activity, speed (10/100/1000 Mbps)  
Fiber SC: Link/Activity

#### 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. 10.2 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, 24 V<sub>AC</sub> (18 ~ 30 V<sub>AC</sub>)
- **Fault Output** 1 Relay Output, 1 A @ 24 V<sub>DC</sub>

#### Protection

- **Power Reverse** 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** 505,863 hours

#### Certifications

- **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

### Ordering Information

- **EKI-2728MI** 6Gx+2 Multi-mode Fiber Unmanaged Ethernet Switch w/ Wide Temp

# EKI-2525/I EKI-2528/I

## 5-port Unmanaged Industrial Ethernet Switch

## 8-port Unmanaged Industrial Ethernet Switch



EKI-2525

EKI-2528



### Features

- Provides 5/8 Fast Ethernet ports with Auto MDI/MDI-X
- Supports 10/100 Mbps Auto-Negotiation
- Provides broadcast storm protection
- Provides compact size with DIN-rail/Wall mount, and IP30 metal mechanism
- Supports redundant 12 ~ 48 V<sub>DC</sub> power input and P-Fail relay
- Supports wide operating temperatures from -40 to 75°C (EKI-2525I/EKI-2528I)

### Introduction

The EKI-2525/2528 supports a Fast Ethernet solution. The power is a +12 ~ 48 V<sub>DC</sub> redundant input design, and is secured with a double protection mechanism: Power Polarity Reverse Protect and an Overload Current Resettable Fuse. The former tolerates reverse power wiring while the later secures the system from overload currents. As the power supply turns normal, EKI-2525/2528 will automatically get back to work. Each port of EKI-2525/2528 has 2 LED's to show the link status transmission speed and collision status. It also provides a relay output for an event alarm. In the event of a power failure, the built-in LED will activate the alarm to notify administrators. Engineers can simply verify the hardware status by checking the LED, and have troubleshooting easy and quick. EKI-2525/2528 comes with compact metal housing that rates IP30 to help against from dusty industrial environments.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-T (X)
- **Transmission Distance** Up to 100 m
- **Transmission Speed** Up to 100 Mbps

#### Interface

- **Connectors** 8 x RJ45 (EKI-2528) or 5 x RJ45 (EKI-2525)  
6-pin removable screw terminal (power & relay)
- **LED Indicators** P1, P2, P-Fail  
10/100T (X): Link/Activity, Duplex/Collision

#### Power

- **Power Consumption** EKI-2528: Max. 5 W  
EKI-2525: Max. 3 W
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- **Fault Output** 1 Relay Output

#### Mechanism

- **Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

#### Protection

- **Reverse Polarity** Present
- **Overload current** Present

#### Environment

- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)  
-40 ~ 75°C (-40 ~ 167°F), (EKI-2525I and EKI-2528I)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 689,000 hours (EKI-2528)  
412,590 hours (EKI-2525)

#### Certifications

- **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-2525** 5-port Ethernet Switch
- **EKI-2525I** 5-port Ethernet Switch w/ Wide Temp
- **EKI-2528** 8-port Ethernet Switch
- **EKI-2528I** 8-port Ethernet Switch w/ Wide Temp

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

7

Automation Panel PCs

8

Industrial Monitors

9

Industrial Ethernet

10

Device Servers & Gateways

11

Serial Communication Cards

12

Embedded Auto. Computers

13

PACs

14

M2M I/O

15

Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards



# EKI-2525M EKI-2526M/S

## 4+1 100FX Port Multi-Mode Unmanaged Industrial Ethernet Switch

## 4+2 100FX Port Unmanaged Industrial Ethernet Switch



### Features

- Provides 4 x 10/100 Mbps Ethernet ports with RJ45 connector
- Provides 1 x 100 Mbps Multi-mode SC type fiber optic port (EKI-2525M)
- Provides 2 x 100 Mbps Multi-mode SC type fiber optic port (EKI-2526M)
- Provides 2 x 100 Mbps Single-mode SC type fiber optic port (EKI-2526S)
- Supports full/half duplex flow control
- Supports MDI/MDI-X auto crossover
- Provides broadcast storm protection
- Provides redundant 12 ~ 48 V<sub>DC</sub> power input
- Provides flexible mounting: DIN-rail and Wall mount

### Introduction

EKI-2525M/2526M/2526S are industrial-grade Ethernet switches that enable you to expand your industrial network fast and cost-effectively. The EKI-2525M/2526M/2526S have four 10/100 Mbps Ethernet ports, and additionally the EKI-2525M/2526M provides one or two multi-mode fiber-optic ports, while the EKI-2526S provides two single-mode fiber-optic ports. Using fiber-optics, you can prevent noise from interfering with your system and supports high-speed (100 Mbps) and high-distance (up to 30 km) transmissions.

EKI-2525M/2526M/2526S have industrial-grade designs, assuring high reliability and stability in harsh environments, making it a robust bridge between enterprise fiber-optic backbones and Ethernet devices. EKI-2525M/2526M/2526S includes a switch controller that can automatically sense transmission speeds. The RJ45 interface can also be auto-detected, so MDI or MDI-X is automatically selected and a crossover cable is not required. All the Ethernet ports have memory buffers that support the store and forward mechanism, assuring all data is transmitted properly.

### Specifications

#### Communications

- Standard** IEEE 802.3, 802.3u, 802.3x
- LAN** 10/100Base-T (X), 100Base-FX
- Transmission Distance** Ethernet: Up to 100 m  
Multi-mode Fiber: Up to 2 km (EKI-2525M/2526M)  
Single-mode Fiber: Up to 30 km (EKI-2526S)
- Transmission Speed** Up to 100 Mbps
- Optical Fiber Multi-Mode** (EKI-2525M/EKI-2526M)  
Tx Power: -14/-20 dBm  
Rx Sensitivity: -31 dBm  
Parameters: 50/125  $\mu$ m, 62.5/125  $\mu$ m  
Wavelength: 1310 nm
- Single-Mode** (EKI-2526S)  
Tx Power: -8/-15 dBm  
Rx Sensitivity: -34 dBm  
Parameters: 9/125  $\mu$ m

#### Interface

- Connectors** 4 x RJ45 ports  
1 x SC type fiber connector (EKI-2525M) or  
2 x SC type fiber connector (EKI-2526M/S)  
6-pin removable screw terminal (Power & Relay)  
P1, P2, P-Fail
- LED Indicators** 10/100T (X): Link/Activity, Duplex/Collision

#### Power

- Power Consumption** EKI-2525M: Max. 5 W  
EKI-2526M: Max. 6.41 W  
EKI-2526S: Max. 6.45 W
- Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs
- Fault Output** 1 Relay Output

#### Mechanism

- Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- Enclosure** IP30, Metal shell with solid mounting kits
- Mounting** DIN-rail, Wall

#### Protection

- Reverse Polarity** 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** 610,453 hours

#### 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-2525M** 5-port Ethernet Switch w/ 1-port 100FX Multi-mode
- EKI-2526M** 4-port Ethernet Switch w/ 2-port 100FX Multi-mode
- EKI-2526S** 4-port Ethernet Switch w/ 2-port 100FX Single-mode

# EKI-7659CPI

## 8+2G Port Gigabit Managed Redundant Industrial PoE Switch with Wide Temperature



### Features

- 2 Gigabit Copper/SFP combo ports, plus 8 PoE injector ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring (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, SNMPv3
- Diagnostic: Port Statistic, Port Mirroring, RMON, Trap, Email Alert, Syslog
- Dual 48 V<sub>DC</sub> power input and 1 relay output
- Supports wide operating temperatures -40 ~ 75°C

### Introduction

EKI-7659CPI supports 8 Power over Ethernet (PoE) ports and 2 Gigabit combo ports. The PoE device helps realize a centralized power supply solution and provides up to 15.4 watts of power per port. To create reliability in your network, the EKI-7659CPI 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, EKI-7659CPI 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, 802.3ad, 802.3ab, 802.3af, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 10/100/1000Base-T (X), Optional 100Base-FX, 1000Base-SX/LX/LHX/XD/ZX/EZX
- **LAN**
- **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  
IEEE 802.1Q, GVRP, Port-based VLAN
- **VLAN**
- **Redundancy** Advantech X-Ring (Recovery time < 20 ms at 250 pcs 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, SSH/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** 116 W (Full load PoE)
- **Power Input** 48 V<sub>DC</sub>, redundant dual power input
- **Power Output** 15.4W at 48V (per PoE port)
- **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** 190,200 hours

#### 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  
IEC 60068-2-27  
IEC 60068-2-32  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

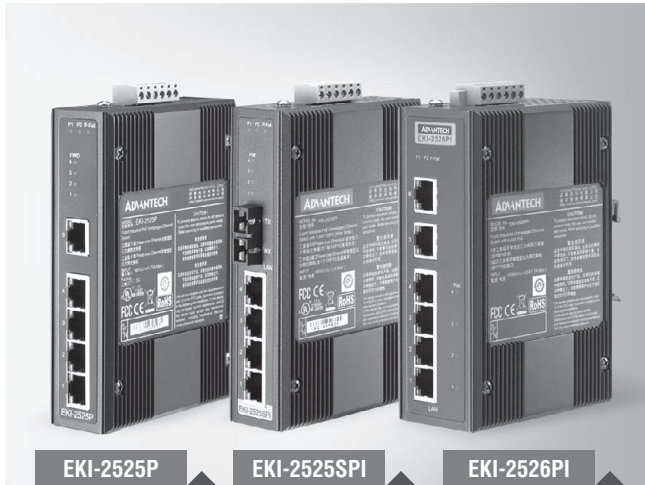
### Ordering Information

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

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

# EKI-2525P EKI-2525SPI EKI-2526PI

## 5-port Industrial PoE Switch 5-port Industrial PoE Switch with 1x100Fx Single-Mode and Wide Temperature 6-port Industrial PoE Switch with Wide Temperature



### Features

- Provides 5/6 Fast Ethernet ports with 4 PoE ports with injector function
- Provides 1 x 100 Mbps Single-mode SC type fiber optic port (EKI-2525SPI)
- Supports 10/100 Mbps Auto Negotiation
- Provides broadcast storm protection
- Supports Ethernet ESD protection
- Provides Slim size, DIN-rail/Wall mount with IP30 metal mechanism
- Supports Redundant 48 V<sub>DC</sub> power input and P-Fail relay
- Supports operating temperatures from -10 to 60°C (EKI-2525P)
- Supports wide operating temperature -40 ~ 75°C (EKI-2525SPI/EKI-2526PI)

### Introduction

The EKI-2525P/EKI-2525SPI is a 5-port unmanaged PoE (Power-over-Ethernet) Industrial Ethernet switch and EKI-2526PI is a 6-port unmanaged PoE Industrial Ethernet switch, they support 4 PoE ports which are classified as power source equipments (PSE). The PoE devoces makes centralized power supply come true and provides up to 15.4 watts of power per port. Advantech EKI PoE devices can be used to power IEEE 802.3af compliant powered devices (PD) by Ethernet cable and eliminates the need for additional power wiring. Advantech EKI PoE devices come equipped with all the standard features of the EKI family. Furthermore, it offers a 48 V<sub>DC</sub> redundant power input design (EKI-2525P/EKI-2526PI), and is secured with a double protection mechanism; Power Polarity Reverse Protect and an Overload Current Resettable Fuse. Advantech EKI PoE devices come with compact metal housing that rates IP30 to help against from dusty industrial environments.

### Specifications

#### Communications

- Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af
- LAN** 10/100Base-T (X)
- Transmission Distance** Ethernet: Up to 100 m (EKI-2525P/EKI-2526PI)  
Single-mode Fiber: Up to 30 km (EKI-2525SPI)
- Transmission Speed** Up to 100 Mbps

#### Fiber Optics (EKI-2525SPI)

- Single-mode** 1310 nm  
Tx Power: -8/-15 dBm  
Rx Sensitivity: -34 dBm  
Parameters: 9/125  $\mu$ m

#### Interface

- Connectors** PoE Ports: 4 (Ports 1 ~ 4)  
Ethernet x1 (EKI-2525P)  
1xSC type fiber connector (EKI-2525SPI)  
Ethernet x2 (EKI-2526PI)  
6-pin removable screw terminal (power & relay)  
P1, P2, P-Fail
- LED Indicators** 10/100TX: Link/Activity, Duplex/Collision

#### Power

- Power Consumption** EKI-2525P: 65 W (Full load PoE)  
EKI-2525SPI: 62.5 W (Full load PoE)  
EKI-2526PI: 62.6 W (Full load PoE)  
48 V<sub>DC</sub> (EKI-2525P/EKI-2526PI), redundant dual inputs  
15.4 W at 48 V (per PoE port)
- Power Input** 1 Relay Output
- Power Output**
- Fault Output**

#### Mechanism

- Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")  
(EKI-2525P/EKI-2525SPI)  
48.6 x 140 x 95 mm (1.91" x 5.51" x 3.74")  
(EKI-2525P/EKI-2525SPI)
- Enclosure** IP30, Metal shell with solid mounting kits
- Mounting** DIN-rail, Wall

#### Protection

- Reverse Polarity** Present
- Overload current** Present

#### Environment

- Operating Temperature** -10 ~ 60°C (14 ~ 140°F) (EKI-2525P)  
-40 ~ 75°C (-40 ~ 167°F) (EKI-2525SPI/EKI-2526PI)
- Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- Operating Humidity** 5 ~ 95% (non-condensing)
- Storage Humidity** 0 ~ 95% (non-condensing)
- MTBF** 440,132 hours

#### 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-2525P** 5-port Switch with 4 port-PoE
- EKI-2525SPI** 5-port Switch with 4 port-PoE and 1-port 100FX Single-mode (Wide Temp)
- EKI-2526PI** 6-port Switch with 4 port-PoE



# EKI-2525PA EKI-2528PAI

**5-port Industrial PoE Switch with 24/48 V<sub>DC</sub> Power Input**

**8-port Industrial PoE Switch with 24/48 V<sub>DC</sub> Power Input and Wide Temperature**



EKI-2525PA

EKI-2528PAI



## Features

- Provides 5/8 Fast Ethernet ports with 4 PoE ports with injector function
- Supports 10/100 Mbps Auto Negotiation
- Provides broadcast storm protection
- Supports Ethernet ESD protection
- Provides power line EFT protection
- Provides slim size, DIN-rail/Wall mount with IP30 metal mechanism
- Supports Redundant 24/48 V<sub>DC</sub> power input and P-Fail Relay
- Supports operating temperatures from -10 to 60°C (EKI-2525PA)
- Supports wide operating temperature -40 ~ 75°C (EKI-2528PAI)

## Introduction

The EKI-2525PA and EKI-2528PAI are a 5/8-port unmanaged PoE (Power-over-Ethernet) Industrial Ethernet switches that supports 4 PoE ports which are classified as power source equipment (PSE). These PoE devices make centralized power supply possible and provide up to 15.4 watts of power per port. Advantech EKI PoE devices can be used to power IEEE 802.3af compliant powered devices (PD) through Ethernet cable and eliminate the need for additional power wiring. Advantech EKI PoE devices come equipped with all the standard features of the EKI family. Furthermore, they offer a 24/48 V<sub>DC</sub> redundant power input design and is secured with a double protection mechanism; Power Polarity Reverse Protect and an Overload Current Resettable Fuse. Advantech EKI PoE devices come with compact metal housing that rates IP30 to help against from dusty industrial environments.

## Specifications

### Communications

- Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af
- LAN** 10/100Base-T (X)
- Transmission Distance** Up to 100 m
- Transmission Speed** Up to 100 Mbps

### Interface

- Connectors** PoE Ports: 4 (Ports 1 ~ 4)  
Ethernet ports: 1 (Port 5 ~ Port 8), EKI-2525PA  
Ethernet ports: 4 (Port 5 ~ Port 8), EKI-2528PAI  
6-pin removable screw terminal (power & relay)
- LED Indicators** P1, P2, P-Fail  
10/100TX: Link/Activity, Duplex/Collision

### Power

- Power Consumption** EKI-2525PA: 62.5 W (Full load PoE)  
EKI-2528PAI: 65 W (Full load PoE)
- Power Input** 24/48 V<sub>DC</sub>, redundant dual inputs
- Power Output** 15.4 W at 48 V (per PoE port)
- Fault Output** 1 Relay Output

### Mechanism

- Dimensions (W x H x D)** 48.6 x 140 x 95 mm (1.91" x 5.51" x 3.74")
- Enclosure** IP30, Metal shell with solid mounting kits
- Mounting** DIN-rail, Wall

### Protection

- Reverse Polarity** Present
- Overload current** Present

### Environment

- Operating Temperature** -10 ~ 60°C (14 ~ 140°F) (EKI-2525PA)  
Wide temp. model -40 ~ 75°C (-40 ~ 167°F) (EKI-2528PAI)
- Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- Operating Humidity** 5 ~ 95% (non-condensing)
- Storage Humidity** 0 ~ 95% (non-condensing)
- MTBF** 440,132 hours

### Certifications

- Safety** UL 60950-1, CAN/CSA-C22.2 No.60950 (EKI-2525PAI)  
UL 508 (EKI-2528PAI)
- 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-2525PA** 5-port Switch with 4 port-PoE and 24/48 V<sub>DC</sub> Power Input
- EKI-2528PAI** 8-port Switch with 4 port-PoE and 24/48 V<sub>DC</sub> Power Input (Wide Temp)

1  
Motion Control

2  
Hazardous Location

3  
Energy Automation

4  
Building Automation Systems

5  
Automation Software

6  
Operator Panels

7  
Automation Panel PCs

8  
Industrial Monitors

9  
Industrial Ethernet

10  
Device Servers & Gateways

11  
Serial Communication Cards

12  
Embedded Auto. Computers

13  
PACs

14  
M2M I/O

15  
Distributed Nano Controllers

16  
RS-485 I/O

17  
Ethernet I/O

18  
DAQ Boards

# EKI-2701HPI

## IEEE 802.3af/at Gigabit PoE+ Injector with Wide Temperature

NEW



### Features

- Supports 10/100/1000Base-T (X) for PoE+ OUT and Data IN
- IEEE 802.3af/at compliant, supports a full 30 watt output
- Power isolation and short circuit protection for power output
- Power input (24 ~ 48 V<sub>DC</sub>), inject 30 W for each port
- Provides slim size and DIN-rail/Wall mount with IP30 metal mechanism
- Supports operating temperatures from -40 to 75°C

### Introduction

With the technology of PoE (Power over Ethernet), we can transfer both data and electrical power to Ethernet-enabled devices using a standard CAT5 cable. EKI-2701HPI is compliant IEEE 802.3af/at and inject 30W for PD device. This product can operate in a wide range of Temp. between -40 to 75°C and support wide power input range between 24 to 48 V<sub>DC</sub>.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af/at, 802.3ab
- **LAN** 10/100/1000Base-T (X)
- **Transmission Distance** Up to 100 m
- **Transmission Speed** up to 1000 Mbps

#### Interface

- **Connectors** PoE OUT: RJ45  
DATA IN: RJ45  
6-pin removable screw terminal
- **LED Indicators** PWR1, PWR2, PoE status, Link/Activity

#### Power

- **Power Consumption** Max. 35 W (Full load PoE)
- **Power Input** 24 ~ 48 V<sub>DC</sub>, redundant dual power inputs
- **Power Output** 30 W @ 24 V<sub>DC</sub>

#### Mechanism

- **Dimensions (W x H x D)** 27 x 120 x 85 mm (1.06" x 4.72" x 3.34")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

#### Protection

- **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** 440,132 hours

#### 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-2701HPI** PoE+ Injector, support a full 30 W output

# EKI-2701PSI

## Industrial PoE Splitter with Wide Temperature



### Features

- Supports 10/100/1000 Base-TX for PoE in and Data out
- IEEE 802.3af compliant split power/data from PoE equipment
- Power isolation and short circuit protection for power output
- Supports output power up to 12.95 W at 24 V<sub>DC</sub>
- Provides slim size and DIN-rail/Wall mount with IP30 metal mechanism
- Supports operating temperatures from -40 to 75°C

### Introduction

With the technology of PoE (Power over Ethernet), we can transfer both data and electrical power to Ethernet-enabled devices using a standard Ethernet CAT5 cable, EKI-2701PSI plays the role of powered device (PD) and splits power from PoE to Ethernet devices. In this case, both power and data can be transmitted up to 328 feet (100m) from power source equipment (PSE). This product can operate in a wide range of temperature between -40 and 75°C, and the rugged hardware design makes EKI-2701PSI perfect to ensure your PoE Ethernet equipment can meet industrial applications demanding.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3af, 802.3ab
- **LAN** 10/100/1000 Base-TX
- **Transmission Distance** Up to 100 m
- **Transmission Speed** up to 1000 Mbps

#### Interface

- **Connectors** PoE IN: RJ-45  
DATA OUT: RJ-45  
6-pin removable screw terminal (power output)
- **LED Indicators** Power  
Link/Activity, Duplex/Collision

#### Power

- **Power Consumption** Max. 17.76 W
- **Power Input** 44 ~ 57 V<sub>DC</sub>
- **Power Output** 12.95 W @ 24 V<sub>DC</sub>

#### Mechanism

- **Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

#### Protection

- **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** 440,132 hours

#### 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-2701PSI** PoE Splitter w/ Wide Temp

1

Motion Control

2

Hazardous Location

3

Energy Automation

4

Building Automation Systems

5

Automation Software

6

Operator Panels

7

Automation Panel PCs

8

Industrial Monitors

9

Industrial Ethernet

10

Device Servers & Gateways

11

Serial Communication Cards

12

Embedded Auto. Computers

13

PACs

14

M2M I/O

15

Distributed Nano Controllers

16

RS-485 I/O

17

Ethernet I/O

18

DAQ Boards

# EKI-2541M/MI

# EKI-2541S/SI

**10/100T (X) to Multi-Mode SC Type  
Fiber Optic Industrial Media Converter**

**10/100T (X) to Single-Mode SC Type  
Fiber Optic Industrial Media Converter**



## Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps Multi-mode/Single-mode SC type fiber port
- Provides internal jumper for Link Fault Pass-through (LFP) setting
- Supports full/half duplex flow control
- Supports store and forward transmission
- Supports Auto-Negotiation
- Supports MDI/MDI-X auto crossover
- Supports redundant 12-48 V<sub>DC</sub> power input
- Provides flexible mounting: DIN-rail and Panel mount
- Supports wide operating temperatures from -40 to 75°C (EKI-2541M/MI/SI)

## Introduction

EKI-2541M/2541S is designed to convert Ethernet networks to fiber networks by transparently converting Ethernet signals to optic signals. The advantages of fiber optics are wide bandwidth, EMI immunity and long-distance transmissions. Therefore, EKI-2541M/2541S is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-2541M/2541S supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2541M/2541S can work normally from -10 to 60°C and accepts a wide voltage range from 12 ~ 48 V<sub>DC</sub>. Besides, it also provides 3,000 V<sub>DC</sub> surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

### Link Fault Pass-Through (LFP)

EKI-2541M/2541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile EKI-2541M/2541S also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the internal jumper to enable the LFP function, then EKI-2541M/2541S will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

## Specifications

### Communications

- Standard** IEEE 802.3, 802.3u, 802.3x
- LAN** 10/100Base-T (X), 100Base-FX
- Transmission Distance** Ethernet: Up to 100 m  
Fiber: Multi-mode: up to 2 km  
Fiber: Single-mode: up to 30 km  
Up to 100 Mbps
- Transmission Speed**
- Optical Fiber**
  - Multi-mode (EKI-2541M/MI)
    - Wavelength: 1310 nm
    - Tx Power: -14/-20 dBm
    - Rx Sensitivity: -31 dBm
    - Parameters: 50/125 um, 62.5/125 um
  - Single-mode (EKI-2541S/SI)
    - Wavelength: 1310 nm
    - Tx Power: -8/-15 dBm
    - Rx Sensitivity: -34 dBm
    - Parameters: 9/125 um

### Interface

- Connectors**
  - 1 x RJ45
  - 1 x SC type fiber connector
- LED Indicators**
  - 6-pin removable screw terminal (power)
  - P1, P2, P-Fail
  - Ethernet: 10/100 m, LNK/ACT
  - Fiber: HDX/FDX, LNK/ACT
- DIP Switch**
  - Port/Power Alarm, LFP
  - Fiber: HDX/FDX, Converter/Switch

### Power

- Power Consumption** Max. 2.7 W
- Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs

### Mechanism

- Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- Mounting** DIN-rail, Wall
- Enclosure** IP30, Metal shell with solid mounting

### Protection

- Power Reverse** Present
- Overload current** Present

### 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** 577,175 hours

### 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-2541M** Ethernet to Multi-mode Fiber Converter
- EKI-2541MI** Ethernet to Multi-mode Fiber Converter w/ Wide Temp.
- EKI-2541S** Ethernet to Single-mode Fiber Converter
- EKI-2541SI** Ethernet to Single-mode Fiber Converter w/ Wide Temp.

# EKI-2741 Series

## 10/100/1000T (X) to Fiber Optic Gigabit Industrial Media Converters



### Features

- Provides 1 x 1000 Mbps Ethernet port with RJ45 connector
- Provides 1 x 1000 Mbps fiber port with SC or SFP (mini-GBIC) type connector for 1000Base-SX/LX device
- Provides DIP switch for full/half duplex setting
- Supports MDI/MDI-X auto crossover
- Supports Auto-Negotiation
- Supports redundant 12 ~ 48 V<sub>DC</sub> power input
- Provides flexible mounting: DIN-rail and Wall mount
- Provides Link Fault Pass-through (LFP)
- Supports wide operating temperatures from -40 to 75°C (EKI-2741LXI)
- Jumbo Frame: 9K bytes

### Introduction

EKI-2741 is designed to convert Gigabit Ethernet networks to Gigabit fiber networks by transparently converting Ethernet signals to optic signals. Therefore, EKI-2741 is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-2741 supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2741 accepts a wide voltage range from 12 ~ 48 V<sub>DC</sub>. Besides, it also provides 3,000 V<sub>DC</sub> surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

EKI-2741 is an enhanced gigabit Ethernet to fiber optic converter. Aside from its standard features, the versatile EKI-2741 also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. EKI-2741 will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

### Specifications

#### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3ab, 802.3x, IEEE 802.3z
- **LAN** 10/100/1000Base-T (X), 1000Base-SX or 1000Base-LX
- **Transmission Distance** Ethernet: Up to 100 m  
Fiber:  
Multi-mode: Up to 550 m  
Single-mode: Up to 10 km (EKI-2741LX/LXI) or up to 110 km (EKI-2741F)  
SFP: Up to 110 km (EKI-2741F)  
Up to 1000 Mbps
- **Transmission Speed**
- **Optical Fiber** Multi-mode (EKI-2741SX)  
Single-mode (EKI-2741LX/LXI)  
Wavelength: 850 nm  
Tx Power: -4/-9.5 dBm  
Rx Sensitivity: -18 dBm  
Parameters: 50/125 um, 62.5/125 um  
Wavelength: 1310 nm  
Tx Power: -3/-9.5 dBm  
Rx Sensitivity: -20 dBm  
Parameters: 9/125 um

#### Interface

- **Connectors** 1 x RJ45  
1 x SC type fiber connector (EKI-2741SX/LX/LXI) or 1 x SFP type fiber connector (EKI-2741F)  
6-pin removable screw terminal (power & relay)
- **LED Indicators** P1, P2, P-Fail  
Fiber: LNK/ACT  
Ethernet: 1000M, LNK/ACT  
Port Alarm, LFP
- **DIP Switch**

#### Power

- **Power Consumption** 5.28 W (EKI-2741F)  
5.18 W (EKI-2741SX)  
5.30 W (EKI-2741LX/LXI)
- **Power Input** 12 ~ 48 V<sub>DC</sub>, redundant dual inputs

#### Mechanism

- **Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

#### Protection

- **Power Reverse** Present
- **Overload current** Present

#### 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** 515,600 hours (EKI-2741F)  
525,300 hours (EKI-2741SX/LX/LXI)

#### 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  
IEC 60068-2-27  
IEC 60068-2-28  
IEC 60068-2-6
- **Shock**
- **Freefall**
- **Vibration**

### Ordering Information

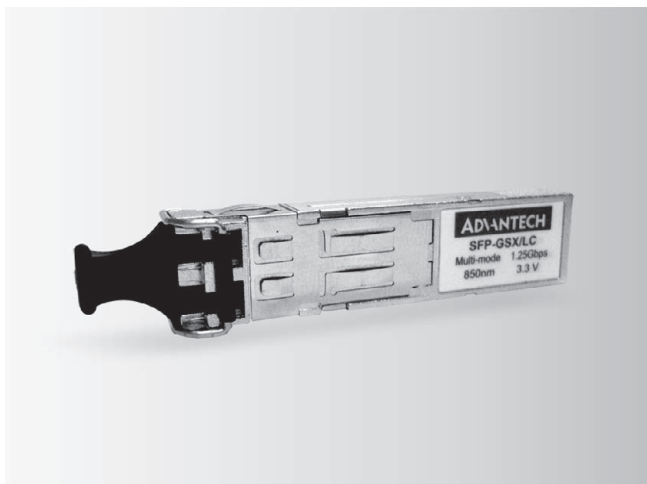
- **EKI-2741F** Giga Ethernet to SFP Fiber Converter
- **EKI-2741SX** Giga Ethernet to 1000Base-SX Fiber Converter
- **EKI-2741LX** Giga Ethernet to 1000Base-LX Fiber Converter
- **EKI-2741LXI** Giga Ethernet to 1000Base-LX Converter w/Wide Temp

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards



# Accessories

## SFP Transceiver Modules



### Features

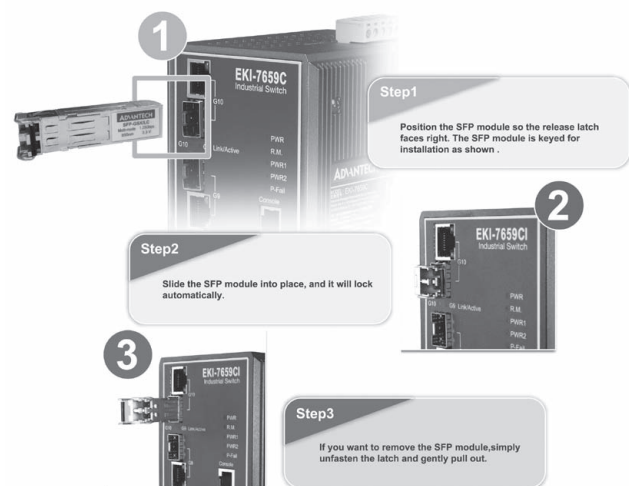
- Industry standard small form pluggable (SFP) package
- Immovable lock design
- Hot pluggable
- Duplex LC connector
- Full duplex speeds support
- TTL signal detect indicator
- 3.3 V<sub>DC</sub> power supply
- Industry leading EMI performance for high port density
- Class 1 laser product complies with EN 60825-1
- RoHS compliant

### Introduction

Advantech's Small Form-factor Pluggable (SFP) transceiver family is available with a variety of different types, allowing users to select the appropriate transceiver for each link to provide the required optical reach over the available optical fiber type. Advantech's SFP transceiver immovable lock design can fix SFP module into the switch firmly. Besides Advantech's SFP transceiver's compact design provides high port density and compliant with Fast Ethernet and IEEE 802.3z Gigabit Ethernet Standards. Advantech's SFP transceivers ensure your networks operate with maximum performance, reliability, and flexibility.

### Specifications

Category	Distance	Model Name	Wave length	Tx Power	Rx sensitivity	Link Budget	Operating Temperature
100Base-FX	M.M. (2 km)	SFP-FXM/LC	1310 nm	-14 dBm ~ -20 dBm	-31 dBm (Min)	11dB	0 ~ 70°C (32 ~ 158°F)
	S.M. (30 km)	SFP-FXS/LC-30E	1310 nm	-8 dBm ~ -15 dBm	-34 dBm (Min)	11dB	
1000Base	SX (550 m)	SFP-GSX/LC	850 nm	-4 dBm ~ -9.5 dBm	-18 dBm (Min)	19dB	
	LX (10 km)	SFP-GLX/LC-10E	1310 nm	-3 dBm ~ -9.5 dBm	-20 dBm (Min)	19dB	
	LX (20 km)	SFP-GLX/LC-20E	1310 nm	-2 dBm ~ -8 dBm	-23 dBm (Min)	19dB	
	LX (40 km)	SFP-GLX/LC-40E	1310 nm	+1 dBm ~ -4 dBm	-24 dBm (Min)	20dB	
	XD (50 km)	SFP-GXD/LC-50E	1550 nm	+1 dBm ~ -4 dBm	-24 dBm (Min)	20dB	
	ZX (70 km)	SFP-GZX/LC-70E	1550 nm	+5 dBm ~ -0 dBm	-24 dBm (Min)	20dB	
1000Base	Up to 100 m	SFP-GTX/RJ45	N/A	N/A	N/A	N/A	



Note: Don't remove the SFP module plugs until you are ready to install the cables.

### Ordering Information

- **SFP-FXM/LC** 100Base-FX Multi-mode SFP module
- **SFP-FXS/LC-30E** 100Base-FX Single-mode SFP module
- **SFP-GSX/LC** 1000Base-SX Multi-mode SFP module
- **SFP-GLX/LC-10E** 1000Base-LX Single-mode SFP module (10 km)
- **SFP-GLX/LC-20E** 1000Base-LX Single-mode SFP module (20 km)
- **SFP-GLX/LC-40E** 1000Base-LX Single-mode SFP module (40 km)
- **SFP-GXD/LC-50E** 1000Base-XD Single-mode SFP module (50 km)
- **SFP-GZX/LC-70E** 1000Base-ZX Single-mode SFP module (70 km)
- **SFP-GTX/RJ45** 1000Base RJ45 SFP module