

6

Industrial Communication

6-2 Industrial Ethernet Solutions

6-16 Industrial Wireless and Protocol Gateway Solutions



Industrial Communication in the IoT Era

Connecting legacy devices to IoT

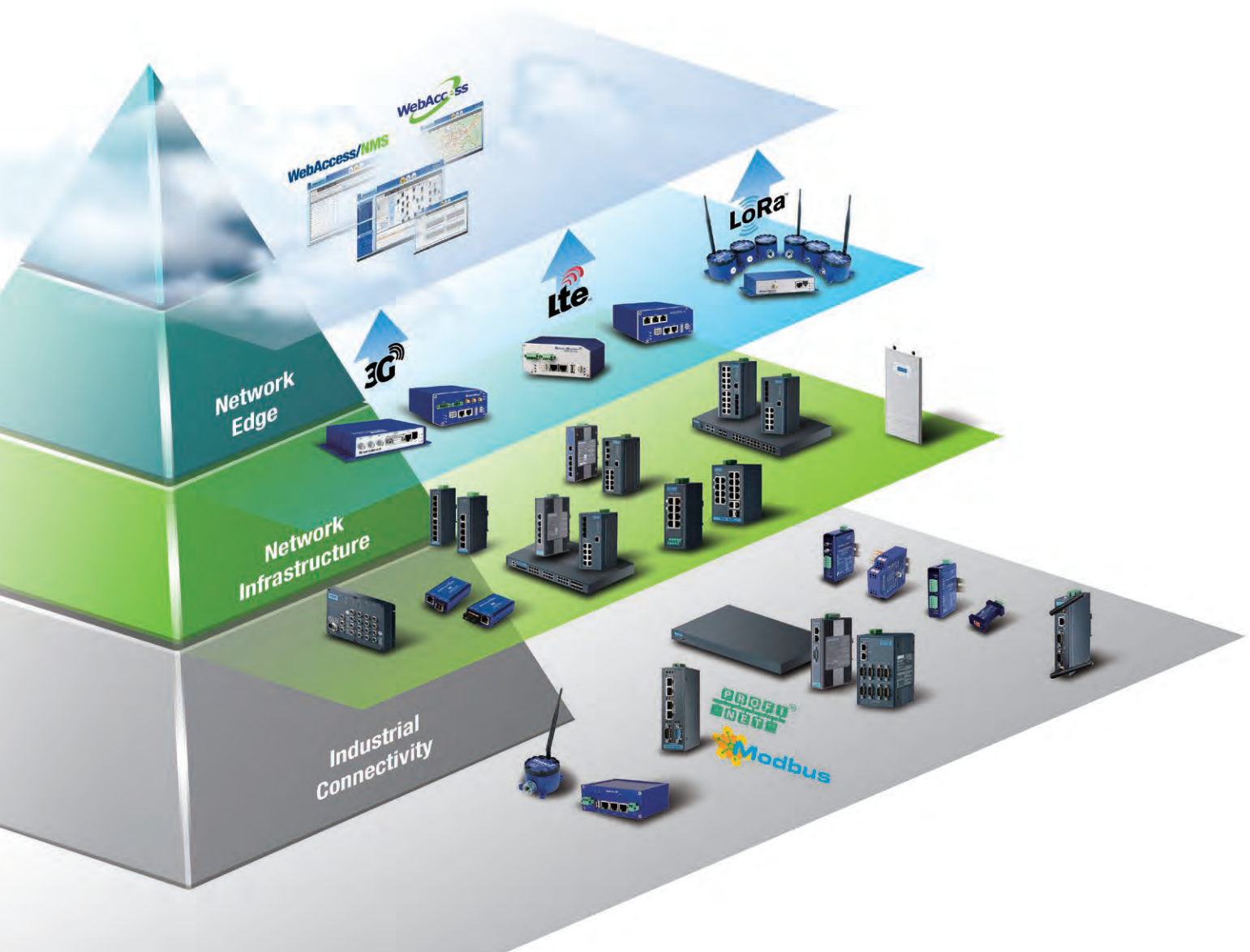
Most legacy devices are isolated and unconnected, but the use of legacy network technologies still prevails in industrial automation and new solutions that connect legacy devices to modern networking systems are needed in order to extend the useful life of existing machinery as to avoid an expensive machine purchase or major upgrade.

Moving from Closed to Open, IP-based Networks

The adoption of an open, IP-based network has gained in popularity for their ability to connect every machine, device, and equipment together on the same network either by wired or wireless technologies in order to maximize the true benefits of IoT.

Empowered Edge Computing

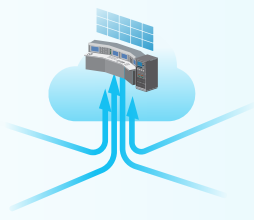
Bringing intelligence to where the action takes place — edge computing processes data locally, at the edge of the network, near the source of the data, then passes data from the local area network to the cloud. It is an attractive technology which not only provides a faster response, but also helps relieve the workload of the cloud, making the cost of building your IoT Infrastructure much lower. Advantech's industrial communication solutions offer various wired and wireless communication technologies, ensuring a secure and seamless connection of every layer in the industrial communication network.



Our Technologies

Interconnected Solutions for an Intelligent Planet

In the IoT era, equipment and machines are able to connect and communicate with each other to increase productivity, efficiency, and scalability. The core mission of Advantech's iConnectivity Group is to offer best-in-class industrial communication solutions including both wired and wireless technologies that can truly help integrators leverage the full potential of IoT in the most effective and productive way.



WebAccess/NMS

Advantech's WebAccess/NMS provides centralized remote network management for industrial vertical applications.

- Auto networking topology
- Configuration backup and restore
- Network monitoring and reporting
- Dynamic connectivity indication



Network Edge

Advantech's cellular routing solutions open up endless possibilities for IoT. Advantech's cellular routers support direct communication between MQTT-enabled devices and the cloud and their built-in Node-RED technology enables smart data processing and monitoring using Advantech's WISE/PaaS management software.

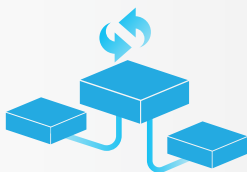
- Support for operation with global 3G/LTE coverage
- Cyber security protection via firewall, NAT, and VPN
- Intelligent gateways support LoRa, and Mesh networks



Wired & Wireless Network Infrastructure

Advantech provides a comprehensive product portfolio to help users build a robust, secure and scalable wired or wireless networking infrastructure.

- Supports various industrial Ethernet protocols, such as TCP/IP, Ethernet/IP, PROFINET, CC-link, and ODVA
- Compliant with C1D2, ATEX, IECEx certifications for hazardous environments
- Cyber security protection within the network
- Layer 3 routing protocols: RIP, OSPF, and VRRP
- Advantech's patented IXM technology for rapid deployment, saving up to 90% of engineering time and resources



Protocol & Interface Conversion Solutions

Advantech offers numerous wired and wireless products to convert different legacy protocols and interfaces to modern networking systems to avoid a complete overhaul of existing equipment and devices, saving cost and avoiding software programming errors.

- Supports various industrial Ethernet protocols including TCP/IP, Ethernet/IP, and PROFINET
- Surge protection and field isolation
- Connects to edge sensors via LoRa and MESH technologies
- Serial-to-Ethernet and USB-to-Serial conversion

1

Software and Industry Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and Monitors

5

Automation Computers and Controllers

6

Industrial Communication

7

Remote I/O Modules

8

Industrial I/O and Video Solutions

Industrial Ethernet Solutions

EN50155 Ethernet Switches



Model Name		EKI-9512E-4EETB	EKI-9528E-4GMP EKI-9528G-4GMP	EKI-9520E-4GMP EKI-9520G-4GMP	EKI-9510G-2GMPL EKI-9510G-2GMPL	EKI-9510E-2GMPL EKI-9510E-2GMPL	EKI-9508G-MPL EKI-9508G-MPL
Description		EN 50155 12-port Ethernet Train Backbone Router	EN 50155 28-port Managed Ethernet Switch/With PoE	EN 50155 20-port Managed Ethernet Switch/With PoE	EN 50155 10-port Full Gigabit Managed Ethernet Switch/With PoE	EN 50155 10-port Managed Ethernet Switch/With PoE	EN 50155 8-port Full Gigabit Managed Ethernet Switch/With PoE
Interface	Ports Number	12	28	20	10	10	8
	10/100Base-T (X)	12	-	-	-	-	-
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	12	4	2	2	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	-	-	-
	PoE (10/100 Mbps)	-	16 (EKI-9528E-4GMP)	16 (EKI-9520E-4GMP)	-	8	-
	PoE (10/100/1000 Mbps)	-	16 (EKI-9528G-4GMP)	16 (EKI-9520G-4GMP)	8	-	8
	DI/DO	-	-	-	-	-	-
Network Management	Console	✓	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓
Power	Traffic Control	✓	✓	✓	✓	✓	✓
	12 ~ 48 V DC	-	-	-	-	-	-
	24 ~ 110 V DC	✓	✓	✓	EKI-9510G-2GMPL: 24~48V DC EKI-9510G-2GMPL: 72~110V DC	EKI-9510E-2GMPL: 24~48V DC EKI-9510E-2GMPL: 72~110V DC	EKI-9508G-MPL: 24~48V DC EKI-9508G-MPL: 72~110V DC
	100 ~ 240 V AC	-	-	-	-	-	-
	Relay Output	✓	✓	✓	-	-	-
Mechanism	DIN-rail Mount	-	-	-	-	-	-
	Wall Mount	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-
	IP Level	IP67	IP67	IP67	IP40	IP40	IP40
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-
	UL 508	-	-	-	-	-	-
Others		EN50155	EN50155	EN50155	EN50155	EN50155	EN50155

✓ : supported, - : not supported, △ : optional

EN50155 Ethernet Switches



Model Name		EKI-9508E-MPH EKI-9508E-MPL	EKI-9512 EKI-9512P	EKI-9512D EKI-9512DP	EKI-9516 EKI-9516P	EKI-9516D EKI-9516DP
Description		EN 50155 8-port Managed Ethernet Switch/With PoE	EN 50155 12-port Full Gigabit Managed Ethernet Switch/With PoE + PoE+	EN 50155 12-port Managed Ethernet Switch /With PoE/PoE+	EN 50155 16-port Full Gigabit Managed Ethernet Switch/With PoE/PoE+	EN 50155 16-port Managed Ethernet Switch/With PoE/PoE+
Interface	Ports Number	8	12	12	16	16
	10/100Base-T (X)	-	-	12(EKI-9512D) 4(EKI-9512DP)	-	16(EKI-9516D) 4(EKI-9516DP)
	100BaseFX	-	-	-	-	-
	10/100/1000Base-T (X)	-	12(EKI-9512) 4(EKI-9512P)	-	16(EKI-9516) 4(EKI-9516P)	-
	1000Base-SX/LX/LHX/ XD/ZX/EZX	-	-	-	-	-
	PoE (10/100 Mbps)	8	-	8(EKI-9512DP)	-	12(EKI-9516DP)
	PoE (10/100/1000 Mbps)	-	8(EKI-9512P)	-	12(EKI-9516P)	-
	DI/DO	-	-	-	-	-
Network Management	Console	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓
Power	12 ~ 48 V DC	-	-	-	-	-
	24 ~ 110 V DC	EKI-9508E-MPL: 24~48V DC EKI-9508G-MPH: 72~110V DC	EKI-9512P-LV: 24~48V DC EKI-9512P-HV: 72~110V DC EKI-9512-WV: 24~110V DC	EKI-9512DP-LV: 24~48V DC EKI-9512DP-HV: 72~110V DC EKI-9512D-WV: 24~110V DC	EKI-9516P-LV: 24~48V DC EKI-9516P-HV: 72~110V DC EKI-9516-WV: 24~110V DC	EKI-9516DP-LV: 24~48V DC EKI-9516DP-HV: 72~110V DC EKI-9516-WV: 24~110V DC
	100 ~ 240 V AC	-	-	-	-	-
	Relay Output	-	✓	✓	✓	✓
Mechanism	DIN-rail Mount	-	-	-	-	-
	Wall Mount	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-
	IP Level	IP40	IP67	IP67	IP67	IP67
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-
	UL 508	-	-	-	-	-
	Others	EN50155	EN50155	EN50155	EN50155	EN50155

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1

Software and Industry
Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and
Monitors

5

Automation Computers
and Controllers

6

Industrial
Communication

7

Remote I/O Modules

8

Industrial I/O and
Video Solutions

Industrial Ethernet Solutions

L3 Managed Switches



IEC 61850-3 Managed Industrial Ethernet Switches



Model Name		EKI-9728G-4X8CI	EKI-9628G-4CI	EKI-9612G-4FI
Description		L3 28-port Managed Switch w/ 4 x 10GbE ports	L3 28-port Managed Switch	L3 12-port Managed Switch
Interface	Ports Number	28	28	12
	10/100Base-T (X)	-	-	-
	100BaseFX	-	-	-
	10/100/1000Base-T (X)	16+8 (combo)	24+4 (combo)	8
	1000Base-SX/LX/LHX/XD/ZX/EZX	8 (combo)	4 (combo)	4 x SFP
	PoE (10/100 Mbps)	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-
	HSR/PRP	4	-	-
	Console	✓	✓	✓
Network Management	Redundancy	✓	✓	✓
	Diagnostics	✓	✓	✓
	VLAN	✓	✓	✓
	Configuration	✓	✓	✓
	SNMP	✓	✓	✓
	Security	✓	✓	✓
	Traffic Control	✓	✓	✓
Power	12 ~ 48 V DC	-	✓	✓
	24 ~ 110 V DC	-	-	-
	100 ~ 240 V AC	90~264 V _{AC}	-	-
	Relay Output	-	-	-
Mechanism	DIN-rail Mount	-	-	✓
	Wall Mount	-	-	-
	Rack Mount	✓	✓	-
	IP Level	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓
	Power Reverse	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-
Certifications	CE	✓	✓	✓
	FCC	✓	✓	✓
	UL/cUL 60950-1	-	-	-
	Class 1, Division 2	-	-	-
	UL 508	-	✓	✓
Others		-	-	-

Model Name		EKI-9228G-20FOI EKI-9228G-20FMI	EKI-9226G-20FOI EKI-9226G-20FMI	EKI-9213E-2CPHR
Description		28-port Full Giga Managed Switch	26-port Full Giga Managed Switch	13-port Managed Switch support HSR/PRP
Interface	Ports Number	28	26	13
	10/100Base-T (X)	-	-	8
	100BaseFX	-	-	-
	10/100/1000Base-T (X)	24+4 (Combo)	20	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	4 x SFP(Combo)	6 x SFP	3 x SFP
	PoE (10/100 Mbps)	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-
	HSR/PRP	-	-	2 x RJ-45/SFP combo
	Console	✓	✓	✓
Network Management	Redundancy	✓	✓	✓
	Diagnostics	✓	✓	✓
	VLAN	✓	✓	✓
	Configuration	✓	✓	✓
	SNMP	✓	✓	✓
	Security	✓	✓	✓
	Traffic Control	✓	✓	✓
Power	12 ~ 48 V DC	EKI-9228G-20FMI (48 V _{DC})	EKI-9226G-20FMI (48 V _{DC})	✓
	24 ~ 110 V DC	-	-	-
	100 ~ 240 V AC	EKI-9228G-20FMI (90 ~ 264 V _{AC})	EKI-9226G-20FOI (90 ~ 264 V _{AC})	✓
	Relay Output	✓	✓	✓
Mechanism	DIN-rail Mount	-	-	✓
	Wall Mount	-	-	✓
	Rack Mount	✓	✓	✓
	IP Level	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓
	Power Reverse	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	-	-	-
	-40 ~ 85°C (-40 ~ 185°F)	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	✓	✓	✓
Certifications	CE	✓	✓	✓
	FCC	✓	✓	✓
	UL/cUL 60950-1	-	✓	✓
	Class 1, Division 2	-	-	-
	UL 508	✓	-	-
Others		IEC 618500-3	IEC 618500-3	IEC 618500-3

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Managed Ethernet Switches



Model Name		EKI-7428G-4FA	EKI-7428G-20FA	EKI-7708G-2FVI	EKI-7710E-2C EKI-7710E-2CI	EKI-7710G-2C EKI-7710G-2CI	EKI-7712E-4F EKI-7712E-4FI	EKI-7712G-2FVI	EKI-7712G-4F EKI-7712G-4FI
Description		24Giga+4SFP Giga ports Managed Redundant Switch w/ AC Input	8Giga+20SFP Giga ports Managed Redundant Switch w/ AC Input	4Giga + 2VDSL+2SFP Giga ports Managed Redundant Industrial Switch	8FE+2G Port Gigabit Managed Redundant Industrial Switch	8G+2G Port Gigabit Managed Redundant Industrial Switch/ with Wide Temperature	8FE+4G SFP Port Gigabit Managed Redundant Industrial Switch/ with Wide Temperature	8Giga + 2VDSL+2SFP Giga ports Managed Redundant Industrial Switch	8G+4G SFP Port Gigabit Managed Redundant Industrial Switch/ with Wide Temperature
Interface	Ports Number	28	28	8	10	10	12	12	12
	10/100Base-T (X)	-	-	4	8	-	-	-	-
	100BaseFX	-	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	24	8	-	2	8	8	8	8
	1000Base-SX/LX/ LHX/XD/ZX/EZX	4	20	4 (2SFP+2VDSL)	2	2	4	4 (2SFP+2VDSL)	4
	PoE (10/100 Mbps)	-	-	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-	-	-
	HSR/PRP	-	-	-	-	-	-	-	-
Network Management	Console	✓	✓	✓	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓	✓	✓
Power	12 ~ 48 V DC	-	-	✓	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-	-	-	-
	100 ~ 240 V AC	✓	✓	-	-	-	-	-	-
	Relay Output	-	-	✓	-	-	-	✓	-
Mechanism	DIN-rail Mount	-	-	✓	✓	✓	✓	✓	✓
	Wall Mount	-	-	✓	✓	✓	✓	✓	✓
	Rack Mount	✓	✓	-	-	-	-	-	-
	IP Level	-	-	30	IP30	IP30	IP30	30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-10 ~ 55°C (14 ~ 131°F)	-10 ~ 55°C (14 ~ 131°F)	-	✓	✓	✓	-	✓
	-40 ~ 75°C (-40 ~ 167°F)	-	-	✓	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	✓	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	✓	✓	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-	-	-
	UL 508	-	-	-	✓	✓	✓	-	✓
Others		-	-	UL 61010	NEMA TS2 EN50121-4	NEMA TS2 EN50121-4	NEMA TS2 EN50121-4	UL 61010	NEMA TS2 EN50121-4

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1
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2
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7
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8
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Video Solutions

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Managed Ethernet Switches



Model Name		EKI-7720E-4F EKI-7720E-4FI	EKI-7720G-4F EKI-7720G-4FI	EKI-7706E-2F/I	EKI-7706G-2F/I	EKI-7708E-4F/I	EKI-7708G-4F/I	EKI-7716E-4F/I	EKI-7716G-4F/I
Description		16FE+4G SFP Port Gigabit Managed Redundant Industrial Switch with Wide Temperature	16G+4G SFP Port Gigabit Managed Redundant Industrial Switch with Wide Temperature	4FE+2SFP Giga ports Managed Redundant Industrial Switch	4Giga+2SFP Giga ports Managed Redundant Industrial Switch	4FE+4SFP Giga ports Managed Redundant Industrial Switch	4Giga+4SFP Giga ports Managed Redundant Industrial Switch	8FE+4SFP+4G Combo port Managed Redundant Industrial Switch	8GE+4SFP+4G Combo port Managed Redundant Industrial Switch
Interface	Ports Number	20	20	6	6	8	8	16	16
	10/100Base-T (X)	-	-	4	-	4	-	8 + 4 (Combo)	-
	100BaseFX	-	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	16	16	-	4	-	4	-	8 + 4 (Combo)
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	4	2	2	4	4	4 + 4 (Combo)	4 + 4 (Combo)
	PoE (10/100 Mbps)	-	-	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-	-	-
	DI/DO	-	-	-	-	-	-	-	-
	Console	✓	✓	✓	✓	✓	✓	✓	✓
Network Management	Redundancy	✓	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓	✓	✓
Power	12 ~ 48 V DC	✓	✓	✓	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-	-	-
	Relay Output	-	-	-	-	-	-	-	-
Mechanism	DIN-rail Mount	✓	✓	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-	-	-
	IP Level	IP30	IP30	-	-	-	-	-	-
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	✓	✓	EKI-7706E-2F	EKI-7706G-2F	EKI-7708E-4F	EKI-7708G-4F	EKI-7716E-4F	EKI-7716G-4F
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	EKI-7706E-2FI	EKI-7706G-2FI	EKI-7708E-4FI	EKI-7708G-4FI	EKI-7716E-4FI	EKI-7716G-4FI
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-	-	-
	UL 508	✓	✓	-	-	-	-	-	-
Others		NEMA TS2 EN50121-4	NEMA TS2 EN50121-4	UL 61010	UL 61010	UL 61010	UL 61010	UL 61010	UL 61010

✓ : supported, - : not supported, △ : optional

Managed Protocol Switches



Model Name		EKI-5526/I-EI EKI-5528/I-EI	EKI-5526/I-PN EKI-5528/I-PN	EKI-5526/I-MB EKI-5528/I-MB	EKI-5626C/I-EI EKI-5629C/I-EI	EKI-5626C/I-PN EKI-5629C/I-PN	EKI-5626C/I-MB EKI-5629C/I-MB
Description		16/8 port Entry-Level Managed Switch Supporting EtherNet/IP	16/8 port Entry-Level Managed Switch Supporting PROFINET	16/8 port Entry-Level Managed Switch Supporting Modbus	18/10 port Entry-Level Managed Switch Supporting EtherNet/IP	18/10 port Entry-Level Managed Switch Supporting PROFINET	18/10 port Entry-Level Managed Switch Supporting Modbus
Interface	Ports Number	16/8	16/8	16/8	16/8	16/8	16/8
	10/100Base-T (X)	16/8	16/8	16/8	16/8	16/8	16/8
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	-	2/2	2/2	2/2
	1000Base-SX/LX/ LHX/XD/ZX/EZX	-	-	-	2/2	2/2	2/2
	PoE (10/100 Mbps)	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-
	DI/DO	-	-	-	-	-	-
	Console	-	-	-	-	-	-
Network Management	Redundancy	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓
Power	12 ~ 48 V DC	✓	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-
	Relay Output	✓	✓	✓	✓	✓	✓
Mechanism	DIN-rail Mount	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-
	IP Level	IP30	IP30	IP30	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	✓	✓	✓	✓	✓	✓
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-
	Class 1, Division 2	✓	✓	✓	✓	✓	✓
	UL 508	✓	✓	✓	✓	✓	✓
	Others	-	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

1

Software and Industry
Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and
Monitors

5

Automation Computers
and Controllers

6

Industrial
Communication

7

Remote I/O Modules

8

Industrial I/O and
Video Solutions

Industrial Ethernet Solutions

Unmanaged Ethernet Switches



Model Name		EKI-5726FI	EKI-5729FI	EKI-5726I	EKI-5728/I	EKI-5626CI	EKI-5629CI	EKI-5528/I EKI-5525/I
Description		16-port+2 SFP Gigabit Ethernet Switch	8-Port+2 SFP Gigabit Ethernet Switch	16-port Gigabit Ethernet Switch	5/8-port Gigabit Ethernet Switch	16FE + 2GE Combo Ethernet Switch	8FE + 2GE Combo Ethernet Switch	8/5-port Fast Ethernet Switch
Interface	Ports Number	16	8	16	5/8	18	10	8/5
	10/100Base-T (X)	-	-	-	-	16	8	8/5
	100BaseFX	✓	✓	-	-	-	-	-
	10/100/1000Base-T (X)	16	8	16	5/8	-	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	✓	✓	-	-	2	2	-
	PoE (10/100 Mbps)	-	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-	-
	DI/DO	-	-	-	-	-	-	-
	Console	✓	✓	-	-	-	-	-
Network Management	Redundancy	-	-	-	-	-	-	-
	Diagnostics	-	-	-	-	-	-	-
	VLAN	-	-	-	-	-	-	-
	Configuration	✓	✓	✓	-	-	-	-
	SNMP	✓	✓	✓	✓	-	-	-
	Security	-	-	-	-	-	-	-
Power	Traffic Control	-	-	-	-	-	-	-
	12 ~ 48 V DC	✓	✓	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-	-
Mechanism	Relay Output	✓	✓	✓	✓	✓	✓	✓
	DIN-rail Mount	✓	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-	-
Protection	IP Level	IP30	IP30	IP30	IP30	IP30	IP30	IP30
	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-
	Class 1, Division 2	✓	✓	✓	✓	✓	✓	✓
	UL 508	✓	✓	✓	✓	✓	✓	✓
	Others	-	-	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

Unmanaged Ethernet Switches



Model Name		EKI-5525SI/MI Series	EKI-5524SSI/MMI Series	EKI-2728M/MI	EKI-2725/I	EKI-2728/I
Description		4-port + 1x100FX port (Single/Multi-mode, SC/ST type), Fast Ethernet Switch	4-port + 2x100FX port (Single/Multimode, SC/ST type), Fast Ethernet Switch	6G+2G Multi-Mode Unmanaged Ethernet Switch	5-port Gigabit Unmanaged Industrial Ethernet Switch	8-port Gigabit Unmanaged Industrial Ethernet Switch
Interface	Ports Number	4	6	8	5	8
	10/100Base-T (X)	4	4	-	-	-
	100BaseFX	1	2	-	-	-
	10/100/1000Base-T (X)	-	-	6	5	8
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	2	-	-
	PoE (10/100 Mbps)	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-
	DI/DO	-	-	-	-	-
	Console	-	-	-	-	-
Network Management	Redundancy	-	-	-	-	-
	Diagnostics	-	-	-	-	-
	VLAN	-	-	-	-	-
	Configuration	-	-	-	-	-
	SNMP	-	-	-	-	-
	Security	-	-	-	-	-
	Traffic Control	-	-	-	-	-
Power	12 ~ 48 V DC	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-
	Relay Output	✓	✓	✓	✓	✓
Mechanism	DIN-rail Mount	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-
	IP Level	IP30	IP30	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	EKI-2728M	EKI-2725	EKI-2728
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	EKI-2728MI	EKI-2725I	EKI-2728I
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-
	CE	✓	✓	✓	✓	✓
Certifications	FCC	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	✓	✓
	Class 1, Division 2	✓	✓	✓	-	-
	UL 508	✓	✓	✓	-	-
	Others	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

1

Software and Industry Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and Monitors

5

Automation Computers and Controllers

6

Industrial Communication

7

Remote I/O Modules

8

Industrial I/O and Video Solutions

Industrial Ethernet Solutions

Unmanaged Ethernet Switches



Model Name		EKI-2428G-4FA	EKI-2728S/2728SI	EKI-2525M/S	EKI-2526M/S	EKI-2525LI-AE
Description		24Giga+4SFP Giga ports Unmanaged Switch w/ AC Input	6GE+2G Single-Mode Fiber Port Unmanaged Ethernet Switch	4+1 100FX Port Multi-mode/Single-mode Unmanaged Industrial Ethernet Switch	4+2 100FX Port Multi-mode/Single-mode Industrial Ethernet Switch	5Fast Ethernet ports Slim Type Unmanaged Switch
Interface	Ports Number	28	8	5	6	5
	10/100Base-T (X)	-	-	4	4	5
	100BaseFX	-	-	1	2	-
	10/100/1000Base-T (X)	24	6	-	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	2 x SC Single Mode	-	-	-
	PoE (10/100 Mbps)	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-
	DI/DO	-	-	-	-	-
Network Management	Console	-	-	-	-	-
	Redundancy	-	-	-	-	-
	Diagnostics	-	-	-	-	-
	VLAN	-	-	-	-	-
	Configuration	-	-	-	-	-
	SNMP	-	-	-	-	-
	Security	-	-	-	-	-
	Traffic Control	-	-	-	-	-
Power	12 ~ 48 V DC	-	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-
	100 ~ 240 V AC	✓	-	-	-	-
	Relay Output	-	✓	✓	✓	-
Mechanism	DIN-rail Mount	-	✓	✓	✓	✓
	Wall Mount	-	✓	✓	✓	✓
	Rack Mount	✓	-	-	-	-
	IP Level	20	IP30	IP30	IP30	40
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
	Power Reverse	-	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-10 ~ 55°C (14 ~ 131°F)	EKI-2728S	✓	✓	-
	-40 ~ 75°C (-40 ~ 167°F)	-	EKI-2728SI	-	-	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	✓	✓	✓	✓
	Class 1, Division 2	-	-	-	-	-
	UL 508	-	-	-	-	-
	Others	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

Industrial PoE Switches & Solutions



Model Name		EKI-7708G-4FP/I	EKI-7708G-2FVPI	EKI-7708E-4FP/I	EKI-7710G-2CPI EKI-7710G-2CP	EKI-7710E-2CP EKI-7710E-2CPI	EKI-7712G-4FP EKI-7712G-4FPI
Description		4Giga+4SFP Giga ports Managed Redundant Industrial PoE Switch	4Giga+2VDSL+2SFP Giga ports Managed Redundant Industrial PoE Switch	4FE+4SFP Giga ports Managed Redundant Industrial PoE Switch	8G+2G Port Gigabit Managed Redundant Industrial PoE Switch	8FE+2G Port Gigabit Managed Redundant Industrial PoE Switch	8G+4G Port Gigabit Managed Redundant Industrial PoE Switch
Interface	Ports Number	8	8	8	10	10	12
	10/100Base-T (X)	-	4	-	-	-	-
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	-	8	8	8
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	4(2SFP+2VDSL)	4	2	2	4
	PoE (10/100 Mbps)	-	-	4	-	8	-
	PoE (10/100/1000 Mbps)	4	-	-	8	-	8
Network Management	DI/DO	-	-	-	-	-	-
	Console	✓	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓
Power	Security	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓
	12 ~ 48 V DC	48 V _{DC}	48 V _{DC}	48 V _{DC}	✓	✓	48 V _{DC}
	24 ~ 110 V DC	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-
	Relay Output	✓	✓	✓	-	-	✓
	DIN-rail Mount	✓	✓	✓	✓	✓	✓
Mechanism	Wall Mount	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-
	IP Level	-	30	-	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	EKI-7708G-4FP	-	EKI-7708E-4FP	7710G-2CP	7710E-2CP	7712G-4F
	-40 ~ 75°C (-40 ~ 167°F)	EKI-7708G-4FPI	✓	EKI-7708E-4FPI	7710G-2CPI	7710E-2CPI	7712G-4FI
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-
	UL 508	-	-	-	✓	✓	✓
	Others	UL 61010	UL 61010	UL 61010	-	-	-

✓ : supported, - : not supported, △ : optional

1
Software and Industry Solutions

2
Industrial Server

3
Intelligent System

4
Intelligent HMI and Monitors

5
Automation Computers and Controllers

6
Industrial Communication

7
Remote I/O Modules

8
Industrial I/O and Video Solutions

Industrial Ethernet Solutions

Power Over Ethernet (PoE) Switches



Model Name		EKI-7712G-2FVPI	EKI-5624P/5624PI	EKI-5729P/5729PI	EKI-2726FHPI	EKI-2528PAI	EKI-2525P
Description		8Giga+2VDSL+2SFP Giga ports Managed Redundant Industrial PoE Switch	4FE PoE+2G Unmanaged Ethernet Switch, IEEE802.3af/at, E-Mark, 12V~24V _{DC}	8GE PoE+2G Unmanaged Ethernet Switch, IEEE802.3af/at, E-Mark, 12V~24V _{DC}	4G+2 SFP W/ 4 IEEE 802.3 High Power PoE Industrial Wide Temperature Switch	8-port Industrial PoE Switch with 24/48V _{DC} Power Input and Wide Temperature	5-port Industrial PoE Switch
Interface	Ports Number	12	6	8	6	8	5
	10/100Base-T (X)	-	4	-	-	4	1
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-T (X)	8	2	-	4	-	-
	1000Base-SX/LX/ LHX/XD/ZX/EZX	4 (2SFP+2VDSL)	-	-	2	-	-
	PoE (10/100 Mbps)	-	-	-	4 (PoE+, 30W)	4	4
	PoE (10/100/1000 Mbps)	-	-	8	-	-	-
	DI/DO	-	-	-	-	-	-
Network Management	Console	✓	-	-	-	-	-
	Redundancy	✓	-	-	-	-	-
	Diagnostics	✓	-	-	-	-	-
	VLAN	✓	-	-	-	-	-
	Configuration	✓	-	-	-	-	-
	SNMP	✓	-	-	-	-	-
	Security	✓	-	-	-	-	-
Power	Traffic Control	✓	-	-	-	-	-
	12 ~ 48 V DC	48 V _{DC}	12 ~ 24 V _{DC}	-	48 V _{DC}	24/48 V _{DC}	48 V _{DC}
	24 ~ 110 V DC	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-
Mechanism	Relay Output	✓	✓	✓	✓	✓	✓
	DIN-rail Mount	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-
Protection	IP Level	IP30	IP30	IP30	IP30	IP30	IP30
	ESD (Ethernet)	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓
Operating Temperature	Power Reverse	✓	✓	✓	✓	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	-	✓	✓	-	-	✓
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	-
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	✓	✓	-	-	✓
	Class 1, Division 2	-	-	-	-	-	-
	UL 508	-	-	-	✓	✓	-
	Others	UL 61010	✓	✓	-	-	-

✓ : supported, - : not supported, △ : optional

Power Over Ethernet (PoE) Switches



Model Name		EKI-2526PI	EKI-2525PA
Description		6-port Industrial PoE Switch with Wide Temperature	5-port Industrial PoE Switch with 24/48 V DC Power Input
Interface	Ports Number	6	5
	10/100Base-T (X)	2	1
	100BaseFX	-	-
	10/100/1000Base-T (X)	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-
	PoE (10/100 Mbps)	4	4
	PoE (10/100/1000 Mbps)	-	-
	DI/DO	-	-
Network Management	Console	-	-
	Redundancy	-	-
	Diagnostics	-	-
	VLAN	-	-
	Configuration	-	-
	SNMP	-	-
	Security	-	-
	Traffic Control	-	-
Power	12 ~ 48 V DC	48 V _{DC}	24/48 V _{DC}
	24 ~ 110 V DC	-	-
	100 ~ 240 V AC	-	-
	Relay Output	✓	✓
Mechanism	DIN-rail Mount	✓	✓
	Wall Mount	✓	✓
	Rack Mount	-	-
	IP Level	IP30	IP30
Protection	ESD (Ethernet)	✓	✓
	Surge (EFT for power)	✓	✓
	Power Reverse	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	✓
	-40 ~ 75°C (-40 ~ 167°F)	✓	-
	-40 ~ 85°C (-40 ~ 185°F)	-	-
	-40 ~ 85°C (-40 ~ 185°F)	-	-
Certifications	CE	✓	✓
	FCC	✓	✓
	UL/cUL 60950-1	✓	-
	Class 1, Division 2	-	-
	UL 508	-	✓
	Others	-	-

✓ : supported, - : not supported, △ : optional

Media Converters



Model Name		EKI-2741F/FI/SX/SXI/LX/LXI	EKI-2541M/MI/S/SI
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	-	-
	Traffic Control	-	-
Power	12 ~ 48 V DC	✓	✓
	24 ~ 110 V DC	-	-
	100 ~ 240 V AC	-	-
	Relay Output	✓	✓
Mechanism	DIN-rail Mount	✓	✓
	Wall Mount	✓	✓
	Rack Mount	-	-
	IP Level	IP30	IP30
Protection	ESD (Ethernet)	✓	✓
	Surge (EFT for power)	✓	✓
	Power Reverse	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	EKI-2741F/SX/LX	EKI-2541M
	-40 ~ 75°C (-40 ~ 167°F)	EKI-2741F/SXI/LXI	EKI-2541M/SI
	-40 ~ 85°C (-40 ~ 185°F)	-	-
	-40 ~ 85°C (-40 ~ 185°F)	-	-
Certifications	CE	✓	✓
	FCC	✓	✓
	UL/cUL 60950-1	✓	✓
	Class 1, Division 2	✓	✓
	UL 508	✓	✓
	Others	-	-

1
Software and Industry Solutions2
Industrial Server3
Intelligent System4
Intelligent HMI and Monitors5
Automation Computers and Controllers6
Industrial Communication7
Remote I/O Modules8
Industrial I/O and Video Solutions

Industrial Wireless and Protocol Gateway Solutions

Wireless Access Points/Client



Model Name		EKI-6331AN	EKI-6332GN
Description		IEEE 802.11 a/n Wi-Fi AP/Client	IEEE 802.11 b/g/n Wi-Fi AP/Client
Interface	IEEE Standard	IEEE 802.11 a/n	802.11 b/g/n
	100BaseFX	✓	✓
	1000BaseFX	-	-
RF	Frequency	2.4GHz	5GHz
	MIMO	2T2R	2T2R
	Multi-Hopping	✓	✓
	Mobility/Roaming	✓	✓
Operating Mode	Mesh	-	-
	Mobility/Roaming	-	-
	Multi-Hopping	-	-
	AP/CPE	✓	✓
Power	PoE	Passive 24V	Passive 24V
	Power Input Voltage	24V _{DC}	24V _{DC}
	Redundant DC Power Input	-	-
Mechanism	DIN-rail Mount	-	-
	Wall Mount	-	-
	VESA Mount	-	-
	Pole Mount	✓	✓
	IP Grade	IP55	IP55
Operating Temperature	-20 ~ 70°C (-4 ~ 158°F)	✓	✓
	-40 ~ 70°C (-40 ~ 158°F)	-	-
Certifications	CE	✓	✓
	FCC	✓	✓
	Others	Telec, ANATEL	Telec

* Note: Transmit Output Power & Receive Sensitivity are specified on data sheet.

✓ : supported, - : not supported, △ : optional

Wireless Devices



Model Name		EKI-1361 EKI-1362	EKI-1361-MB EKI-1362-MB	EKI-6333AC
Description		1/2-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server	1/2-port RS-232/422/485 to 802.11b/g/n WLAN Modbus Gateway	IEEE 802.11 a/b/g/n Wi-Fi AP
Connectivity	10/100Base-TX, Fixed	✓	✓	-
	10/100/1000Base-T, Fixed	-	-	✓
	RS-232 only	-	-	-
	RS-232/422/485	✓	✓	-
	Serial connector type	DB9 Male	DB9 Male	-
Operating Mode	Mobility/Roaming	✓	✓	-
	Multi-Hopping	-	-	-
	AP/CPE	-	-	✓
Enclosure & Mount kit	Enclosure	IP30	IP30	IP30
	DIN-rail	✓	✓	✓
	Wall	✓	✓	✓
	VESA Mount	-	-	-
	Pole Mount	-	-	-
Power	Power Input (V _{DC})	12~48V	12~48V	12~48V
	Power input (PoE)	-	-	-
	Power connector	Terminal block	Terminal block	Terminal block
	Power Consumption (12/24/48VDC) Watts	8W (EKI-1361) 9W (EKI-1362)	8W (EKI-1361-MB) 9W (EKI-1362-MB)	8W
Environment	Operating Temp.	-40 ~ 75°C	-40 ~ 75°C	-40 ~ 75°C
	Operating Humidity	10 ~ 95%	10 ~ 95%	10 ~ 95%
	Input Reverse Protection	✓	✓	✓
Software	Network Protocol	-	Modbus TCP, Modbus RTU/ASCII	-
	Firewall	-	-	-
	Router	-	-	-
	Configuration Options	Web-base, windows utility	Web-base, windows utility	Web-base
	Authentication	Username/Password	Username/Password	Username/Password
	Standard Operation Mode	VCOM, USDB mode (TCP/UDP server, TCP/UDP client), Pair connection/Access Point Mode	Pair connection/Access Point Mode/ Modbus RTU Master/Slave, Modbus ASCII Master/ Slave	Access Point
WLAN	IEEE Standard	a/b/g/n	a/b/g/n	a/b/g/n
	Radio Number	1	1	1
	Security	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise	WEP, WAP/WAP2-Persona, WAP/WAP2-Enterprise
RF	MIMO	2T2R	2T2R	2T2R
	Maximum Transmit Output Power	19dBm (11n)	19dBm (11n)	19dBm (11n)
	Receive Sensitivity	-93dBm (11g Rx0+Rx1)	-93dBm (11g Rx0+Rx1)	-93dBm (11g Rx0+Rx1)
	Antenna Connector	R-SMA	R-SMA	R-SMA
Cellular	Standard	-	-	-
	Five-band option in UMTS	-	-	-
	Quad-band option in EDGE/GSM	-	-	-
	Certification (GCF, PTCRB)	-	-	-
Certification	UL60950-1	-	-	-
	EN60950-1	-	-	-
	CE (EN55022 class A, EN55024)	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓
	Hazardous Location (Class I, Division 2)	-	-	-
	Radio (EN 301 489-1/-4, EN 301 511)	-	-	-
	Radio (FCC part 22H, part 24E)	-	-	-
	EN 50155	-	-	-

Fieldbus Gateway



Model Name		EKI-1221IPNMB	EKI-1221IEIMB	EKI-1242EIMS	EKI-1242PNMS	EKI-1242ECMS	EKI-1242BNMS
Description		Modbus TCP to PROFINET Protocol Gateway	Modbus TCP to EtherNet/IP Protocol Gateway	Modbus RTU/TCP to EtherNet/IP Fieldbus gateway	ModbusRTU/TCP to PROFINET Fieldbus gateway	ModbusRTU/TCP to EtherCAT Fieldbus gateway	ModbusRTU/TCP to BACnet Fieldbus gateway
Connectivity	10/100Base-TX, Fixed	2	2	4	4	4	4
	10/100/1000Base-T, Fixed	-	-	-	-	-	-
	RS-232 only	-	-	-	-	-	-
	RS-232/422/485	-	-	2	2	2	2
	Serial Connector Type	-	-	DB9 male	DB9 male	DB9 male	DB9 male
Operating Mode	Mobility/Roaming	-	-	-	-	-	-
	Multi-Hopping	-	-	-	-	-	-
	AP/CPE	-	-	-	-	-	-
Enclosure & Mount kit	Enclosure	IP30	IP30	IP30	IP30	IP30	IP30
	DIN-rail	✓	✓	✓	✓	✓	✓
	Wall	✓	✓	✓	✓	✓	✓
	VESA Mount	-	-	-	-	-	-
	Pole Mount	-	-	-	-	-	-
Power	Power Input (V _{DC})	(12~48V)	(12~48V)	(12~48V)	(12~48V)	(12~48V)	(12~48V)
	Power input (PoE)	-	-	-	-	-	-
	Power connector	Terminal block	Terminal block	Terminal block	Terminal block	Terminal block	Terminal block
	Power Consumption (12/24/48VDC) Watts	5.2W	5.2W	5.2W	5.2W	5.2W	5.2W
Environment	Operating Temp.	-40~70°C	-40~70°C	-10~60°C	-10~60°C	-10~60°C	-10~60°C
	Operating Humidity	10~95%	10~95%	10~95%	10~95%	10~95%	10~95%
	Input Reverse Protection	✓	✓	✓	✓	✓	✓
Software	Network Protocol	Modbus TCP PROFINET	Modbus TCP EtherNet/IP	Modbus RTU/TCP EtherNet/IP	Modbus RTU/TCP PROFINET	Modbus RTU/TCP EtherCAT	Modbus RTU/TCP BACnet
	Firewall	-	-	-	-	-	-
	Router	-	-	-	-	-	-
	Configuration Options	Web-based	Web-based	Web-based	Web-based	Web-based	Web-based
	Authentication	Username/Password	Username/Password	Username/Password	Username/Password	Username/Password	Username/Password
	Standard Operation mode	Modbus/TCP Master PROFINET Slave	Modbus/TCP Master PROFINET Adaptor	ModbusRTU/TCP Master Ethernet/IP Adapter	ModbusRTU/TCP Master PROFINET Slave	ModbusRTU/TCP Master EtherCAT Slave	ModbusRTU/TCP Master BACNet Slave
WLAN	IEEE Standard	-	-	-	-	-	-
	Radio Number	-	-	-	-	-	-
	Security	-	-	-	-	-	-
RF	MIMO	-	-	-	-	-	-
	Maximum Transmit Output Power	-	-	-	-	-	-
	Receive Sensitivity	-	-	-	-	-	-
	Antenna Connector	-	-	-	-	-	-
Cellular	Standard	-	-	-	-	-	-
	Five-band Options UMTS	-	-	-	-	-	-
	Quad-band Options EDGE/GSM	-	-	-	-	-	-
	Certification (GCF, PTCRB)	-	-	-	-	-	-
Certification	UL60950-1	✓	✓	✓	✓	✓	✓
	EN60950-1	-	-	-	-	-	-
	CE (EN55022 class A, EN55024)	✓	✓	✓	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓	✓	✓	✓
	Hazardous Location (Class I, Division 2)	-	-	-	-	-	-
	Radio (EN 301 489-1/-4, EN 301 511)	-	-	-	-	-	-
	Radio (FCC part 22H, part 24E)	-	-	-	-	-	-
		EN 50155	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

Industrial Wireless and Protocol Gateway Solutions

Modbus Gateway Modbus Router



Serial Device Servers



Model Name		EKI-1221/CI/I EKI-1222/CI/I EKI-1224/CI/I
Description		1/2/4-Port Modbus Gateway
Connectivity	10/100Base-TX, Fixed	2
	10/100/1000Based-T, Fixed	-
	RS-232 only	-
	RS-232/422/485	1/2/4 (CI version: RS-422/485)
Operating Mode	Serial Connector Type	DB9 Male
	Mobility/Roaming	-
	Multi-Hopping	-
	AP/CPE	-
Enclosure & Mount Kit	Enclosure	IP30
	DIN-rail	✓
	Wall	✓
	VESA Mount	-
Power	Pole Mount	-
	Power Input (V _{DC})	2* (12~48V)
	Power Input (PoE)	-
	Power Connector	Terminal block
Environment	Power Consumption (12/24/48V _{DC}) Watts	5.2W (EKI-1221/1222) 6.3W (EKI-1224)
	Operating Temp.	EKI-1221/EKI-1222/ EKI-1224: -10 ~ 60°C 'CI & I' models: -40 ~ 70°C
	Operating Humidity	5 ~ 95%
	Input Reverse Protection	-
Software	Network Protocol	Modbus RTU, Modbus TCP, Modbus ASCII
	Firewall	-
	Router	-
	Configuration Options	Windows Utility, Web Browser
WLAN	Authentication	-
	Standard Operating Mode	Modbus RTU Master/Slave mode Modbus ASCII Master/Slave mode
	IEEE Standard	-
	Radio Number	-
RF	Security	-
	MIMO	-
	Maximum Transmit Output Power	-
	Receive Sensitivity	-
Cellular	Antenna Connector	-
	Standard	-
	Five-band Options UMTS	-
	Quad-band Options EDGE/GSM	-
Certification	Certification (GCF, PTCRB)	-
	UL60950-1	✓
	EN60950-1	-
	CE (EN55022 class A, EN55024)	✓
	FCC (part 15 subpart B class A)	✓
	Hazardous Location (Class I, Division 2)	✓
	Radio (EN 301 489-1/-4, EN 301 511)	-
	Radio (FCC part 22H, part 24E)	-
	EN 50155	-

Model Name		EKI-1521/CI/I EKI-1522/CI/I EKI-1524/CI/I	EKI-1528I-DR EKI-1528CI-DR	EKI-1528I/IT EKI-1526I/IT	ADAM-4571/L ADAM-4570/L
Description		1/2/4-port RS-232/422/485 Serial Device Server	8-port RS-232/422/485 Device Server 8-port RS-422/485 Device Server	8/16-port RS-232/422/485 Serial Device Server	1/2-port RS-232/422/485 Serial Device Server
Connectivity	10/100Base-TX, Fixed	2	2	-	1
	10/100/1000Based-T, Fixed	-	-	2	-
	RS-232 only	-	-	-	ADAM-4571L/4570L: 1/2
	RS-232/422/485	1/2/4 (CI version: RS-422/485)	8	8/16	ADAM-4571/4570: 1/2
Operating Mode	Serial Connector Type	DB9 Male	DB9 Male	DB9 male	ADAM-4571/L: DB9 Male ADAM-4570/L: 10-pin RJ48
	Enclosure	IP30	IP30	SECC chassis	ABS+PC with solid mounting hardware
	DIN-rail	✓	✓	Rackmount	✓
	Wall	✓	✓	-	✓
Power	VESA Mount	-	-	-	-
	Pole Mount	-	-	-	-
	Power Input (V _{DC})	2* (12~48V)	2* (12~48V)	EKI-1528(I)/ EKI-1526(I): 100 ~ 240 Vac, 50 ~ 60 Hz EKI-1528T(I)/ EKI-1526T(I): 12 ~ 48 V _{DC} , Terminal Block	(10~30V)
	Power Input (PoE)	-	-	-	-
Environment	Power Connector	Terminal block	Terminal block	6-pin removable screw terminal	Terminal block
	Power Consumption (12/24/48V _{DC}) Watts	5.2 W (EKI-1521/ EKI-1522) 6.3 W (EKI-1524)	5 W (EKI-1528I) 6 W (EKI-1528CI)	5.6 W	2.5 W
	Operating Temp.	EKI-1521/EKI-1522/ EKI-1524: -10 ~ 60°C 'CI & I' models: -40 ~ 70°C	-40 ~ 70°C	-10 ~ 60°C (14 ~ 140°F) 'I' Model: -40 ~ 75°C (-40 ~ 167°F)	-10 ~ 60°C
	Operating Humidity	5 ~ 95%	10 ~ 95%	10 ~ 95%	5 ~ 95%
Software	Input Reverse Protection	-	-	-	-
	Network Protocol	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP
	Firewall	-	-	-	-
	Router	-	-	-	-
Certification	Configuration Options	Windows utility, Telnet console, Web Browser	Windows utility, Telnet console, Web Browser	Windows utility, Telnet console, Web Browser, serial console	Windows utility, Telnet console, Web Browser
	Authentication	-	-	-	-
	Standard Operating Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode RFC-2217 Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode RFC-2217 Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode RFC-2217 Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode
	UL60950-1	✓	✓	-	-
	EN60950-1	-	-	-	-
	CE(EN55022 class A, EN55024)	✓	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓	✓
	Hazardous Location (Class I, Division 2)	✓	-	-	-
	Radio (EN 301 489-1/-4, EN 301 511)	-	-	-	-
	Radio (FCC part 22H, part 24E)	-	-	-	-
	EN 50155	-	-	-	-

✓ : supported, - : not supported, △ : optional

Compact Ethernet
Media ConvertersCompact Ethernet
Gigabit Media
ConvertersPoE, PoE+ Gigabit
Media Converters

Model Name		MiniMc with LFPT	IE-MiniMc with LFPT	Giga-MiniMc with LFPT	IE-Giga-MiniMc with LFPT	PoE Giga-MiniMc w/LFPT	PoE+ Giga-MiniMc w/LFPT	IE-MultiWay
Part Numbers		855-11621, 855-11623, 855-11619	855-19822	856-11700, 856-11701, 856-11703	856-18930, 856-18931	PoE:857-11811, 857-11812, 857-11814	857-11911, 857-11912	858-11121
Description		Two Port Copper to Fiber compact 10/100 Media Converter with Link Fault Pass Through, unmanaged	Industrial Two Port Copper to Fiber compact 10/100Media Converter with Link Fault Pass Through, unmanaged	Two Port Copper to Fiber 10/100/1000 Media Converter with Link Fault Pass Through, Unmanaged	Industrial Two Port Copper to Fiber 10/100/1000 Media Converter with Link Fault Pass Through, unmanaged	PoE capable Unmanaged 10/100/1000 Media Converters	PoE+ capable Unmanaged 10/100/1000 Media Converters	Four Port Managed 10/100/1000 switch, with SFP capability, compact form factor
Interface	Ports Number	2	2	2	2	3	3	4
	10/100Base-T (X)	✓	✓	-	-	-	-	-
	100BaseFX	✓	✓	✓	✓	✓	-	✓
	10/100/1000Base-T (X)	-	-	✓	✓	2	2	✓
	1000Base-SX/LX	✓	✓	✓	✓	1	1	✓
	PoE (10/100/1000 Mbps)	-	-	-	-	1	-	-
	PoE+ (10/100/1000 Mbps)	-	-	-	-	✓	2	-
	PoE Reset DSX	-	-	-	-	✓	✓	-
Network Management	SFP Port Model Option	✓	-	✓	-	✓	✓	✓
	LFPT	✓	✓	✓	✓	✓	✓	✓
	Redundancy	-	-	-	-	-	-	✓
	Diagnostics	-	-	-	-	-	-	✓
	VLAN	-	-	-	-	-	-	✓
	Configuration	-	-	-	-	-	-	✓
	SNMP	-	-	-	-	-	-	✓
Power	Security	-	-	-	-	-	-	✓
	Jumbo Frames	1916	1916	10240	10240	10240	-	10240
	100-240V _{AC}	✓	✓	✓	✓	✓	-	✓
	DC voltage	-	7-50 V _{DC}	-	7-50 V _{DC}	-	-	480 V _{DC}
Hardware Mounting	DIN-rail Mount	✓	✓	✓	✓	✓	-	✓
	Wall Mount	✓	✓	✓	✓	✓	-	✓
	Rack Mount	✓	✓	✓	✓	✓	-	✓
	IP Level	-	-	-	-	-	-	-
Protection	ESD (Ethernet)	✓	✓	✓	-	-	-	-
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓
	Reverse Polarity	✓	✓	✓	✓	✓	-	✓
Operating Temp	0 ~50°C	✓	-	✓	-	✓	-	-
	-25 ~ 85°C (-13 ~ +185°F)	-	-	-	✓	-	-	-
	-40 ~ 85°C (-40 ~ 185°F)	-	✓	-	-	-	-	✓
Certifications	CE	✓	✓	✓	✓	✓	-	✓
	FCC	✓	✓	✓	✓	✓	-	✓
	UL/cUL 60950-1	✓	✓	✓	✓	✓	-	✓
	Class 1, Division 2	-	-	-	-	-	-	-
	UL 508	-	-	-	-	-	-	-
	MSA compliant	-	-	-	-	-	-	-
	Class 1, Eye-safe Lasers	✓	✓	✓	✓	✓	-	✓

✓ : supported, - : not supported, △ : optional

1

Software and Industry
Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and
Monitors

5

Automation Computers
and Controllers

6

Industrial
Communication

7

Remote I/O Modules

8

Industrial I/O and
Video Solutions

Industrial Wireless and Protocol Gateway Solutions

Serial Converters, Isolators and Surge Protectors



Model Name		485DRCI	485SD9R, 485SD9TB	FOSTCDRI	232OPDRI	485OPDRI	HESP4DR
Description		Triple Isolated RS-232 to RS-422/485 Converter	Port Powered RS-232 to RS-485 Converter	Triple Isolated RS-232/422/485 to Fiber Converter	Triple Isolated RS-232 DIN Rail Repeater	Triple Isolated RS-485/422 DIN Rail Repeater	Three-stage DIN Rail RS422/485 Surge Protector
Function		Serial Converter			Isolator / Repeater		Surge Protector
Key Features		Class 1 Division 2/ Tripple Isolation, Oil and Gas Applications	Small Form Factor, Port Powered	Fiber to Serial	Class 1 Division 2/ Tripple Isolation, Oil and Gas Applications	Class 1 Division 2/ Tripple Isolation, Oil and Gas Applications	High Energy Surge Protector
Specifications	Temp	-40 to 80°C	0 to 70 C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
	Isolation	✓	-	✓	✓	✓	-
	Input Power	10 to 48 V _{DC}	Port Powered from RS-232 Ports	10 to 48 V _{DC}	10 to 48 V _{DC}	10 to 48 V _{DC}	-
	Dataline Surge Protection	✓	-	✓	✓	✓	v (5 lines)
	RS-232 Connector	DB9 female	DB9 female	Removable Terminal Blocks	DB9 female & DB9 male	-	-
	RS-422/485 Connector and Power	Remmovable Terminal Blocks	DB9 female or Terminal Block	Remmovable Terminal Blocks	-	Remmovable Terminal Blocks	Terminal Block
	Maximum Buad Rate	115.2 kbps	115.2 kbps	115.2 kbps	115.2 kbps	115.2 kbps	-
	Mounting	DIN Rail	In-line	DIN Rail	DIN Rail	DIN Rail	DIN Rail
	Industrial Rating	Light	-	Light	Light	Light	Light
	UL Rating	UL 508	-	UL 508	UL 508	UL 508	-
	Class 1 Division 2	✓	-	✓	✓	✓	-

✓ : supported, - : not supported, △ : optional

USB to Serial Converters



Model Name	BB-USOPTL4DR-2	BB-USOPTL4	BB-USO9ML2	BB-USO9ML2-4P	BB-USOPTL4-4P
Series	Industrial	Industrial	Industrial	Industrial	Industrial
Description	USB to RS-422, RS-485 Isolated Converter, Industrial	USB to RS-422, RS-485 Isolated Converter, Commercial	USB to RS-232 Isolated Converter, Commercial	USB to RS-232 Isolated Converter, Industrial	USB to RS-422, RS-485 Isolated Converter, Industrial
Industrial Rating	Light	Light	Light	Light	Light
RS-232	-	-	✓	✓	-
RS-422	✓	✓	-	-	✓
RS-485 2-WIRE	✓	✓	-	-	✓
RS-485 4-WIRE	✓	✓	-	-	✓
TTL 5 V	-	-	-	-	-
TTL 3.3 V	-	-	-	-	-
SERIAL PORTS	2	1	1	4	4
High Retention USB Ports	✓	✓	-	✓	✓
Isolated	✓	✓	✓	✓	✓
Mounting	DIN	In Line	In Line	Panel	Panel
Shock and Vibration	-	-	-	-	-
Heavy Industrial	-	-	-	-	-
Serial Connector	Removable Terminal Block	Removable Terminal Block	DB9 Male	DB9 Male	Removable Terminal Block
Operating Temperature	0 to 70°C	0 to 70°C	0 to 70°C	0 to 70°C	0 to 70°C
Power Input	USB Bus	USB Bus	USB Bus	USB Bus or 10-30V _{DC}	USB Bus or 10-30V _{DC}
Metal Housing	-	-	-	-	-
LED Indicators	✓	✓	✓	✓	✓
UL	-	-	-	-	-
USB Cable Included	✓	✓	✓	✓	✓
Accessory Serial Cable	-	-	BB-9PAMF6	BB-9PAMF6	-
Accessory Power Supply	-	-		BB-MDR-20-24	BB-MDR-20-24
Operating System	Windows 10	Windows 10	Windows 10	Windows 10	Windows 10
Unique or Locked Serial Number	Locked	Unique	Unique	Locked	Locked

✓ : supported, - : not supported, △ : optional

1

Software and Industry Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and Monitors

5

Automation Computers and Controllers

6

Industrial Communication

7

Remote I/O Modules

8

Industrial I/O and Video Solutions

Industrial Wireless and Protocol Gateway Solutions

Ethernet to Serial Converters



Model Name		VESP211, VESP211-232, VESP211-485	VESR901	VESR921-MC	MESR901	MESR921-MC
Description		Compact Ethernet to Serial Converter	DIN Rail Mount Ethernet to Serial Converter	DIN Rail Mount Ethernet to Serial Converter with Fiber Port	Modbus Ethernet to Modbus Serial Converter	Modbus Ethernet to Modbus Serial Converter with Fiber Port
Function		VCOM, Socket Connection, Paired Mode			Modbus	
Ethernet	Copper Ports	1	1	1	1	1
	Fiber Ports	-	-	1 Multi-mode (SC)	-	1 Multi-mode (SC)
Serial	Port Count	1	1	1	1	1
	DB9	232	232	232	232	232
	Terminal Block	422/485	422/485	422/485	422/485	422/485
Specifications	Temp Spec	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
	Power DC	10 to 30V _{DC}	10 to 48V _{DC}	10 to 48V _{DC}	10 to 48V _{DC}	10 to 48V _{DC}
	Mounting	Panel	DIN	DIN	DIN	DIN
	Class 1 Division 2	-	✓	✓	✓	✓

Wireless Sensing Network



Model Name		Wzzard-LRPv Sensor Node	Wzzard	SmartStart	SmartFlex	SmartSwarm 243	WISE-6610
Part Number		BB-WSLxxxxxx	BB-WSDxxxx	BB-SL306x0110-SWH	BB-SR30xxxxxx	BB-SG30000115-43	WISE-6610-XX00-A
Description		Industrial LoRa Private Node	Intelligent Wireless Sensor Node	Intelligent LTE Router	Flexible, Module LTE Router	Industrial LoRa Private Gateway	LoRaWAN Gateway support up to 100/500 nodes with 868/915MHz
Specifications	Mobile Wireless	LoRa	DUST/BLE	GPRS/3G/LTE/WiFi	GPRS/3G/LTE/WiFi	LoRa	LoRaWAN
	Communication Interface	A/DI/DO	A/DI/DO	ETH/RS232/IO	ETH/SD/USB/IO/RS232&485/POE	ETH/IO	LoRaWAN
	Temp	-40~75 °C	-40~80 °C	-40~75 °C	-40~75 °C	-40~75 °C	-40~75 °C
	Power Input	3.3 V _{DC}	3.3 V _{DC}	9 -36 V _{DC}	10 -69 V _{DC}	9 -36 V _{DC}	9~36 V _{DC}
	Dimensions (W x H x D)	95 x 116 x 65 mm	95 x 116 x 65 mm	30 x 87 x 127 mm	55 x 97 x 125 mm	30 x 87 x 127 mm	150 x 30 x 83 mm
	Weight	340g	340g	187g	375g	187g	187g

✓ : supported, - : not supported, △ : optional

USB Hubs and Isolators



Model Name	BB-UHR304	BB-UHR204	BB-UH104	BB-UHR401	BB-UHR402
Series	Heavy Duty Hub	Heavy Duty Hub	Hub	Heavy Duty Isolator	Heavy Duty Isolator
Description	USB Hub, 4 Port, Isolated, Industrial	USB Hub, 4 Port, Industrial	USB Hub, 4 Port, Light Industrial	USB Isolator, 1 Port, Industrial	USB Isolator, 2 Port, Industrial
USB Standard	2.0	2.0	2.0	2.0	2.0
Isolation	4 KV	-	-	4 KV	4 KV
Maximum USB Speed	12 Mbps	480 Mbps	480 Mbps	12 Mbps	12 Mbps
High Retention USB Ports	✓	✓	✓	✓	✓
Downstream Ports	4	4	4	1	2
Operating Temperature	(-)40 to 80 °C	(-)40 to 80 °C	(-)40 to 80 °C	(-)40 to 80 °C	(-)40 to 80 °C
Shock and Vibration	✓	✓	-	✓	✓
Heavy Industrial	✓	✓	-	✓	✓
USB Bus Power		✓	✓		
External Power Inputs	2	2	-	1	1
Primary External Power Input	Removable Terminal Block	Removable Terminal Block	-	Threaded Barrel Jack	Threaded Barrel Jack
Secondary External Power Input	Threaded Barrel Jack	Threaded Barrel Jack	-	-	-
Metal Housing	✓	✓	-	-	-
LED Indicators	✓	✓	-	✓	✓
DIN Mount	✓	✓	-	✓	✓
Panel Mount	✓	✓	-	✓	✓
In Line	-	-	-	-	-
UL	C1D2	C1D2	-	-	-
USB Cable Included	✓	✓	-	✓	✓
Power Supply Included	-	-	-	✓	✓
Accessory Power Supply	BB-MDR-20-24	BB-MDR-20-24	-	BB-PS12VLB-INT-MED	BB-PS12VLB-INT-MED
Driver	-	-	-	-	-

✓ : supported, - : not supported, △ : optional

1

Software and Industry Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and Monitors

5

Automation Computers and Controllers

6

Industrial Communication

7

Remote I/O Modules

8

Industrial I/O and Video Solutions

Industrial Wireless and Protocol Gateway Solutions

Special Serial Converters



Model Name	BB-232LP TTL	BB-232LP TTL33	BB-422 TTL	BB-232CL9R	BB-232CLDR	BB-CANFB	BB-CANOP
Series	TTL Converter	TTL Converter	TTL Converter	Current Loop Converter	Current Loop Converter	CAN (Controller Area Network)	CAN (Controller Area Network)
Description	RS-232 to 5 V TTL Converter	RS-232 to 3.3 V TTL Converter	RS-422 to 5 V TTL Converter	RS-232 to Current Loop Converter	RS-232 to Current Loop Converter	CAN Bus to Fiber Repeater	CAN Bus Isolator
Industrial Rating	Light	Light	Light	Light	Light	Light	Light
Isolated	-	-	-	-	✓	✓	✓
3 Way Isolation	-	-	-	-	-	-	-
Mounting	In Line	In Line	In Line	In Line	DIN	DIN	DIN
RS-232	✓	✓	-	✓	✓	-	-
RS-422	-	-	✓	-	-	-	-
SM Fiber	-	-	-	-	-	✓	-
3.3 V TTL	-	✓	-	-	-	-	-
5 V TTL	✓	-	✓	-	-	-	-
Current Loop	-	-	-	✓	✓	-	-
CAN	-	-	-	-	-	✓	✓
Operating Temperature	0 to 70 °C	0 to 70 °C	0 to 50 °C	0 to 50 °C	(-)40 to 80 °C	0 to 70 °C	0 to 70 °C
Input Power	Port Powered	Port Powered	12 V _{bc}	12 V _{bc}	10 to 30 V _{bc}	10 to 30 V _{bc}	10 to 30 V _{bc}
Port Power Option	✓	✓	-	-	-	-	-
Power Supply Included	-	-	-	-	-	-	-
Power Connector	-	-	2.5 mm plug	Terminal Block	Terminal Block	Terminal Block	Terminal Block
RS-232 Connector	DB9 F	DB9 F	-	DB9 F	Terminal Block	-	-
TTL Connector	DB9 M	DB9 M	DB25 M	-	-	-	-
Current Loop Connector	-	-	-	Terminal Block	Terminal Block	-	-
CAN Connector	-	-	-	-	-	Terminal Block	Terminal Block
RS-422 Connector	-	-	DB25 F	-	-	-	-
Fiber Connector	-	-	-	-	-	ST	-
Maximum Baud Rate	115.2 kbps	115.2 kbps	115.2 kbps	19.2 kbps	19.2 kbps	250 kbps	250 kbps
Accessory Serial Cable	BB-9PAMF6	BB-9PAMF6	BB-232AMF5	-	-	-	-
Accessory Power Supply	-	-	-	BB-SMI6-12-V-ST	BB-MDR-20-24	BB-MDR-20-24	BB-MDR-20-24

✓ : supported, - : not supported, △ : optional

IE-SFP Fiber Modules



Model Name	808-38101	808-38103	808-38104	808-38519	808-38520
SFP Type	SFP	SFP	SFP	SFP	SFP
Part Description	IE-SFP/155-ED, MM850-LC	IE-SFP/155-ED, SM1310-LC	IE-SFP/155-ED, SM1310/PLUS -LC	IE-SFP/155-ED, SSFX-SM1310 / PLUS-LC (1310XMT/1550RCV)	IE-SFP/155-ED, SSFX-SM1550 / PLUS-LC (1550XMT/1310RCV)
Typical Speed Mbps	100	100	100	100	100
Mode (Fiber)	Multi Mode	Single Mode	Single Mode	Single Mode	Single Mode
BiDi/Single Strand	-	-	-	✓	✓
Wavelength (nm)	850	1310	1550	1310	1550
Connector Type	LC	LC	LC	LC	LC
Distance (KM)	2	20	40	40	40
Power (dB)	14.5	21	31	26	26
DDMI	Yes	Yes	Yes	Yes	Yes
Temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Use With SFP P/N (Works in Pair with)	-	-	-	808-38520	808-38519
MSA (Multi-Source Aggrement)	✓	✓	✓	✓	✓
Laser 1 Class 1 IEC 60825-2	✓	✓	✓	✓	✓
Telecordia GR-468-CORE	✓	✓	✓	✓	✓



Model Name	808-38529	808-38530	808-38201	808-38203	808-38205
SFP Type	SFP	SFP	SFP	SFP	SFP
Part Description	IE-SFP/155-ED, SSFX-SM1310 / LONG-LC (1310XMT/1550RCV)	IE-SFP/155-ED, SSFX-SM1550 / LONG-LC (1550XMT/1310RCV)	IE-SFP/1250-ED, MM850-LC	IE-SFP/1250-ED, SM1310/ PLUS-LC	IE-SFP/ 1250-ED, SM1510/XLONG-LC (LFP260)
Typical Speed Mbps	100	100	1000	1000	1000
Mode (Fiber)	Single Mode	Single Mode	Multi Mode	Single Mode	Single Mode
BiDi/Single Strand	✓	✓	-	-	-
Wavelength (nm)	1310	1550	850	1310	1510
Connector Type	LC	LC	LC	LC	LC
Distance (KM)	60	60	220/550m	30	70
Power (dB)	29	29	7.5	17	21
DDMI	✓	✓	✓	✓	✓
Temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Use With SFP P/N (Works in Pair with)	808-38530	808-38529	-	-	-
MSA (Multi-Source Aggrement)	✓	✓	✓	✓	✓
Laser 1 Class 1 IEC 60825-2	✓	✓	✓	✓	✓
Telecordia GR-468-CORE	✓	✓	✓	✓	✓

✓ : supported, - : not supported, △ : optional

1

Software and Industry
Solutions

2

Industrial Server

3

Intelligent System

4

Intelligent HMI and
Monitors

5

Automation Computers
and Controllers

6

Industrial
Communication

7

Remote I/O Modules

8

Industrial I/O and
Video Solutions

Industrial Wireless and Protocol Gateway Solutions



Model Name	808-38206	808-38721	808-38722	808-38723
SFP Type	SFP	SFP	SFP	SFP
Part Description	IE-SFP/1250-ED, MM1310-LC	IE-SFP/1250-ED, SSLX-SM1310-LC (1310XMT/1550RCV)	IE-SFP/1250-ED, SSLX-SM1550-LC (1550XMT/1310RCV)	IE-SFP/1250-ED, SSLX-SM1310 /PLUS-LC (1310XMT/1550RCV)
Typical Speed Mbps	1000	1000	1000	1000
Mode (Fiber)	Multi Mode	Single Mode	Single Mode	Single Mode
BiDi/Single Strand	-	✓	✓	✓
Wavelength (nm)	1310	1310	1550	1310
Connector Type	LC	LC	LC	LC
Distance (KM)	2	20	20	40
Power (dB)	10	15	15	20
DDMI	✓	✓	✓	✓
Temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Use With SFP P/N (Works in Pair with)	-	808-38722	808-38721	808-38724
MSA (Multi-Source Aggrement)	✓	✓	✓	✓
Laser 1 Class 1 IEC 60825-2	✓	✓	✓	✓
Telecordia GR-468-CORE	✓	✓	✓	✓



Model Name	808-38724	808-38600	808-38601
SFP Type	SFP	SFP+	SFP+
Part Description	IE-SFP/1250-ED, SSLX-SM1550 /PLUS-LC (1550XMT/1310RCV)	IE-SFP+SR/10G-ED, MM850-LC	IE-SFP+LR/10G-ED, SM1310-LC
Typical Speed Mbps	1000	10G	10G
Mode (Fiber)	Single Mode	Multi Mode	Single Mode
BiDi/Single Strand	✓	-	-
Wavelength (nm)	1550	850	1310
Connector Type	LC	LC	LC
Distance (KM)	40	33	10
Power (dB)	20	2.8	8.4
DDMI	✓	✓	✓
Temperature	-40 to +85°C	-10 to +70°C	-10 to +70°C
Use With SFP P/N (Works in Pair with)	808-38723	-	-
MSA (Multi-Source Aggrement)	✓	✓	✓
Laser 1 Class 1 IEC 60825-2	✓	✓	✓
Telecordia GR-468-CORE	✓	✓	✓

✓ : supported, - : not supported, △ : optional