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## Industrial Communication

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# Industrial Communication in the IoT Era

## Providing Interconnected Solutions for Advantech's Mission of Enabling an Intelligent Planet

In the age of Internet of Things (IoT), the trend in industrial communication is for all devices, equipment, and machines to be 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 the best-in-class industrial communication solutions including both wired and wireless technologies that can truly help users leverage the full potential of IoT in the most efficient and productive way.



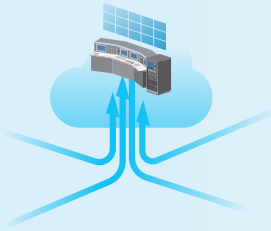
### Advantech Worldwide Ranking

- No.7 for Industrial Ethernet Infrastructure Market
- No. 3 for Router Market

*IHS Markit*



# Our Technologies



## Intelligent Connectivity Software

Advantech intelligent connectivity software platform provides provisioning and management software, aiming at serving users a tailored management solution based on different user scenarios.

- WebAccess/DMP for provisioning and managing status of each routing device and application
- WebAccess/NMS for monitoring the interconnectivity status of the whole network system
- WebAccess/VPN for remote asset control and management



## Network Edge

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

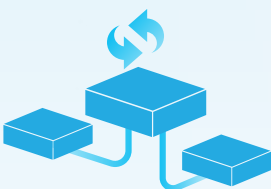
- Support for inter-operation with global 5G/LTE/3G coverage
- Cyber security protection by firewall, NAT, and VPN
- Intelligent gateway support for LoRaWAN, or Mesh networks for Industrial IoT
- Intelligent ODB cellular gateway supports G5 CatM1



## Wired and Wireless Network Infrastructure

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

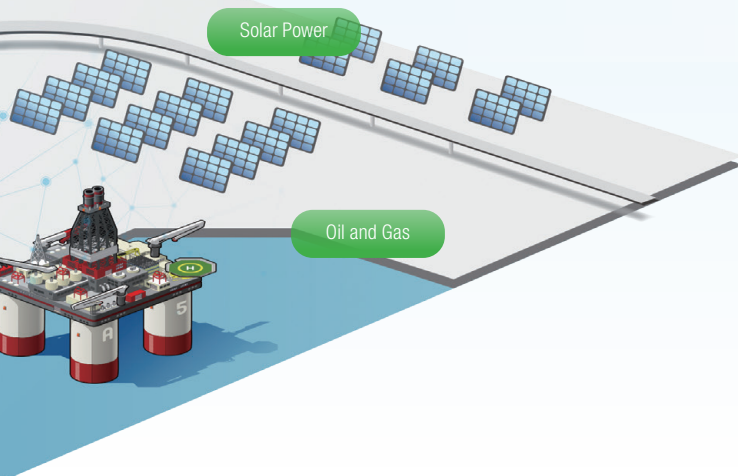
- Supports various industrial Ethernet protocols, such as TCP/IP, Ethernet/IP, PROFINET, CC-link, ODVA, etc.
- Compliant with C1D2, ATEX, IECEx certifications for hazardous environments
- Cyber security protection within the network
- Layer 3 Routing Protocols: RIP, OSPF, and VRRP
- Advantech's patented IXM technology for rapid deployment, saving up to 90% of engineering time and resources
- Advantech security gateway with firewall and Ethernet switch with security pack protects against internal and external cyber attacks



## Protocol and Interface Conversion Solutions

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

- Supports various industrial Ethernet protocols including TCP/IP, Ethernet/IP, PROFINET, BACnet, OPC UA and more
- Surge protection and field isolation
- Connect to edge sensors via LoRaWAN, MESH technologies
- Access remote vehicle OBD data for telematics services providers (TSP) and fleet management applications



1

IoT Software Solutions

2

Intelligent Systems

3

SKY Servers

4

AI &amp; Advanced Computer Vision

5

Intelligent HMI and Monitors

6

Automation Computers

7

Intelligent Transportation Platforms

8

Mission Critical CompactPCI Platforms

9

Utility and Energy Solutions

10

EtherCAT Solutions and Automation Controllers

11

Intelligent Motion Control Solutions

12

High Speed DAQ Solutions

13

Industrial Communication

14

Intelligent Edge DAQ Devices

15

Remote I/O, Wireless I/O &amp; Sensors

16

Serial Communication

# Industrial Ethernet Solutions

## EN50155 Ethernet Switches



Model		☞ EKI-9512E-4GETB	☞ EKI-9528E-12GMPW	☞ EKI-9528E-8GMPW	☞ EKI-9528G-4GMPW	☞ EKI-9528E-12GMW	☞ EKI-9528E-8GMW	☞ EKI-9528G-4GMW
		☞ EKI-9512G-4GETB	☞ EKI-9528E-12GMPX	☞ EKI-9528E-8GMPX	☞ EKI-9528G-4GMPX	☞ EKI-9528E-12GMX	☞ EKI-9528E-8GMX	☞ EKI-9528G-4GMX
Description		EN50155 12-Port Ethernet Train Backbone Router	EN50155 28-Port L2 Managed PoE Switch	EN50155 28-Port L2 Managed PoE Switch	EN50155 28-Port L2 Managed PoE Switch	EN50155 28-Port L2 Managed Switch	EN50155 28-Port L2 Managed Switch	EN50155 28-Port L2 Managed Switch
Interface	Number of Ports	12	28	28	28	28	28	28
	10/100Base-TX	8 (EKI-9512E-4GETB)	-	-	-	-	-	-
	100BaseFX	-	-	-	-	-	-	-
	10/100/1000Base-TX	8 (EKI-9512G-4GETB)	4 (EKI-9528E-12GMPX)	4 (EKI-9528E-8GMPX)	4 (EKI-9528E-8GMPX)	8 (EKI-9528E-12GMW) 12 (EKI-9528E-12GMX)	4 (EKI-9528E-8GMW) 8 (EKI-9528E-8GMX)	24 (EKI-9528G-4GMW) 28 (EKI-9528G-4GMX)
	10/100/1000Base-TX with Bypass function	4	4 (EKI-9528E-12GMPW)	4 (EKI-9528E-8GMPW)	4 (EKI-9528E-8GMPW)	4 (EKI-9528E-12GMW)	4 (EKI-9528E-8GMW)	4 (EKI-9528G-4GMW)
	PoE(10/100Mbps)	-	16	20	-	-	-	-
	PoE(10/100/1000Mbps)	-	8	4	24	-	-	-
	DI/DO	-	-	-	-	-	-	-
	Console	✓	✓	✓	✓	✓	✓	✓
Network Management	Redundancy	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓
Power	Traffic Control	✓	✓	✓	✓	✓	✓	✓
	24-48V <sub>DC</sub>	-	-	-	-	-	-	-
	72-110V <sub>DC</sub>	-	-	-	-	-	-	-
	24-110V <sub>DC</sub>	✓	✓	✓	✓	✓	✓	✓
Rolling Stock Application	IP level	IP67	IP54	IP54	IP54	IP54	IP54	IP54
	Ethernet Train Backbone (IEC61375-2-3 & -2-5)	✓	-	-	-	-	-	-
	EN50155	✓	✓	✓	✓	✓	✓	✓
	EN50121-3-2	✓	✓	✓	✓	✓	✓	✓
EN61373	✓	✓	✓	✓	✓	✓	✓	

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

### EN50155 Ethernet Switches



Model		EKI-9516E-4GMPW	EKI-9516G-4GMPW	EKI-9516E-8GMPW	EKI-9516E-4GMW	EKI-9516G-4GMW	EKI-9512E-4GMPW	EKI-9512G-4GMPW
Description		EN50155 16-Port L2 Managed PoE Switch	EN50155 16-Port L2 Managed PoE Switch	EN50155 16-Port L2 Managed PoE Switch	EN50155 16-Port L2 Managed Switch	EN50155 16-Port L2 Managed Switch	EN50155 16-Port L2 Managed PoE Switch	EN50155 16-Port L2 Managed PoE Switch
Interface	Number of Ports	16	16	16	16	16	16	16
	10/100Base-TX	-	-	-	-	-	-	-
	100BaseFX	-	-	-	-	-	-	-
	10/100/1000Base-TX	4 (EKI-9516E-4GMPX)	4 (EKI-9516G-4GMPX)	4 (EKI-9516G-4GMPX)	4 (EKI-9516E-4GMPX)	12 (EKI-9516G-4GMPW) 16 (EKI-9516G-4GMPX)	4 (EKI-9512E-4GMPX)	4 (EKI-9512G-4GMPX)
	10/100/1000Base-TX with Bypass function	4 (EKI-9516E-4GMPW)	4 (EKI-9516G-4GMPW)	4 (EKI-9516G-4GMPW)	4 (EKI-9516E-4GMPW)	4 (EKI-9516G-4GMPW)	4 (EKI-9512E-4GMPW)	4 (EKI-9512G-4GMPW)
	PoE(10/100Mbps)	12	-	8	-	-	8	-
	PoE(10/100/1000Mbps)	-	12	4	-	-	-	8
	DI/DO	-	-	-	-	-	-	-
Console	✓	✓	✓	✓	✓	✓	✓	
Network Management	Redundancy	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓	✓
Power	24-48V <sub>DC</sub>	-	-	-	-	-	-	-
	72-110V <sub>DC</sub>	-	-	-	-	-	-	-
	24-110V <sub>DC</sub>	✓	✓	✓	✓	✓	✓	✓
	IP level	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Rolling Stock Application	Ethernet Train Backbone (IEC61375-2-3 & -2-5)	-	-	-	-	-	-	-
	EN50155	✓	✓	✓	✓	✓	✓	✓
	EN50121-3-2	✓	✓	✓	✓	✓	✓	✓
	EN61373	✓	✓	✓	✓	✓	✓	✓

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

- 1 IoT Software Solutions
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- 3 SKY Servers
- 4 AI & Advanced Computer Vision
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 Intelligent Transportation Platforms
- 8 Mission Critical CompactPCI Platforms
- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
- 11 Intelligent Motion Control Solutions
- 12 High Speed DAQ Solutions
- 13 Industrial Communication
- 14 Intelligent Edge DAQ Devices
- 15 Remote I/O, Wireless I/O & Sensors
- 16 Serial Communication

# Industrial Ethernet Solutions

## EN50155 Ethernet Switches



Model		EKI-9512E-4GMW EKI-9512E-4GMX	EKI-9512G-4GMW EKI-9512G-4GMX	EKI-9508E series	EKI-9508G series	EKI-9510E series	EKI-9510G series
Description		EN50155 16-Port L2 Managed Switch	EN50155 16-Port L2 Managed Switch	EN50155 8-Port L2 Ethernet Switch	EN50155 8-Port L2 Ethernet Switch	EN50155 10-Port L2 Ethernet Switch	EN50155 10-Port L2 Ethernet Switch
Interface	Number of Ports	16	16	8	8	8	8
	10/100Base-TX	8	-	△8	-	△8	-
	100BaseFX	-	-	-	-	-	-
	10/100/1000Base-TX	4 (EKI-9512E-4GMPX)	8 (EKI-9512G-4GMPW) 12 (EKI-9512G-4GMPX)	-	△8	-	△8
	10/100/1000Base-TX with Bypass function	4 (EKI-9512E-4GMPW)	4 (EKI-9512G-4GMPW)	-	-	2	2
	PoE(10/100Mbps)	-	-	△8	-	△8	-
	PoE(10/100/1000Mbps)	-	-	-	△8	-	△8
	DI/DO	-	-	-	-	-	-
Console	✓	✓	△	△	△	△	
Network Management	Redundancy	✓	✓	△	△	△	△
	Diagnostics	✓	✓	△	△	△	△
	VLAN	✓	✓	△	△	△	△
	Configuration	✓	✓	△	△	△	△
	SNMP	✓	✓	△	△	△	△
	Security	✓	✓	△	△	△	△
	Traffic Control	✓	✓	△	△	△	△
Power	24-48V <sub>DC</sub>	-	-	△	△	△	△
	72-110V <sub>DC</sub>	-	-	△	△	△	△
	24-110V <sub>DC</sub>	✓	✓	-	-	-	-
	IP level	IP67	IP67	IP40	IP40	IP40	IP40
Rolling Stock Application	Ethernet Train Backbone (IEC61375-2-3 & -2-5)	-	-	-	-	-	-
	EN50155	✓	✓	✓	✓	✓	✓
	EN50121-3-2	✓	✓	✓	✓	✓	✓
	EN61373	✓	✓	✓	✓	✓	✓

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

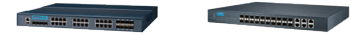
### L3 Managed Switches



Model		EKI-9728G-4X8CI	EKI-9628G-4CI	EKI-9612G-4FI
Description		L3 28-port Managed Switch	L3 28-port Managed Switch	L3 12-port Managed Switch
Interface	Number of Ports	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 x SFP+ (10G)	4 (combo)	4 x SFP
	PoE (10/100 Mbps)	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-
	HSR/PRP	-	-	-
Network Management	Console	✓	✓	✓
	Redundancy	✓	✓	✓
	Diagnostics	✓	✓	✓
	VLAN	✓	✓	✓
	Configuration	✓	✓	✓
	SNMP	✓	✓	✓
	Security	✓	✓	✓
Power	Traffic Control	✓	✓	✓
	12 ~ 48 V DC	-	✓	✓
	24 ~ 110 V DC	-	-	-
	100 ~ 240 V AC	90~264 V <sub>AC</sub>	-	-
Mechanism	Relay Output	-	✓	✓
	DIN-rail Mount	-	-	✓
	Wall Mount	-	-	✓
	Rack Mount	✓	✓	-
Protection	IP Level	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)	-	✓	✓
Certifications	-40 ~ 85°C (-40 ~ 185°F)	✓	-	-
	CE	✓	✓	✓
	FCC	✓	✓	✓
	UL/cUL 60950-1	-	-	-
	Class 1, Division 2	-	-	-
Others	-	LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	

✓: supported, -: not supported, Δ: optional

### IEC 61850-3 Managed Industrial Ethernet Switches



Model		EKI-9228G-8COI	EKI-9226G-20FOI
Description		28-port Full Giga Managed Switch	26-port Full Giga Managed Switch
Interface	Number of Ports	28	26
	10/100Base-T (X)	-	-
	100BaseFX	-	-
	10/100/1000Base-T (X)	24 + 8 (combo)	6
	1000Base-SX/LX/LHX/XD/ZX/EZX	8 x SFP (combo)	20 x SFP
	PoE (10/100 Mbps)	-	-
	PoE (10/100/1000 Mbps)	-	-
	HSR/PRP	-	-
Network Management	Console	✓	✓
	Redundancy	✓	✓
	Diagnostics	✓	✓
	VLAN	✓	✓
	Configuration	✓	✓
	SNMP	✓	✓
	Security	✓	✓
Power	Traffic Control	✓	✓
	12 ~ 48 V DC	EKI-9228G-20FMI (48 V <sub>DC</sub> )	EKI-9226G-20FMI (48 V <sub>DC</sub> )
	24 ~ 110 V DC	-	-
	100 ~ 240 V AC	EKI-9228G-20FMI (90 ~ 264 V <sub>AC</sub> )	EKI-9226G-20FOI (90 ~ 264 V <sub>AC</sub> )
Mechanism	Relay Output	✓	✓
	DIN-rail Mount	-	-
	Wall Mount	-	-
	Rack Mount	✓	✓
Protection	IP Level	IP30	IP30
	ESD (Ethernet)	✓	✓
	Surge (EFT for power)	✓	✓
Operating Temperature	Power Reverse	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	-	-
	-40 ~ 75°C (-40 ~ 167°F)	-	-
Certifications	-40 ~ 85°C (-40 ~ 185°F)	✓	✓
	CE	✓	✓
	FCC	✓	✓
	UL/cUL 60950-1	-	✓
	Class 1, Division 2	-	-
Others	-	UL 508	-
Others	ICE 61850-3	ICE 61850-3	

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# Industrial Ethernet Solutions

## Managed Ethernet Switches



Model		EKI-7428G-4X	EKI-7412G-4XP	EKI-7428G-4CA	EKI-7706E-2F/I	EKI-7706G-2F/I	EKI-7708E-4F/I	EKI-7708G-4F/I	EKI-7708G-2FVI	EKI-7708G-2MI/2SI
Description		24GE+4SFP 10G Managed Switch w/ AC Input	8GE + 4 SFP 10G, PoE 10/100/1000 Managed Switch w/ AC Input	24GE+4SFP Giga Managed Redundant Switch w/ AC Input	4FE+2SFP Giga Managed Redundant Industrial Switch	4GE+2SFP Giga Managed Redundant Industrial Switch	4FE+4SFP Giga Managed Redundant Industrial Switch	4GE+4SFP Giga Managed Redundant Industrial Switch	4GE + 2VDSL+2SFP Giga Managed Redundant Industrial Switch	6GE+2SFP Managed Redundant Industrial Switch
Interface	Number of Ports	28	12	28	6	6	8	8	8	8
	10/100Base-T (X)	-	-	-	4	-	4	-	4	-
	100BaseFX	-	-	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	24	-	24 + 4 (combo)	-	4	-	4	-	6
	1000Base-SX/LX/LHX/XD/ZX/EZX	4 x SFP+ (10G)	4 x SFP+ (10G)	4 (combo)	2	2	4	4	4 (2SFP+ 2VDSL)	2 (multi/single)
	PoE (10/100 Mbps)	-	-	-	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	8	-	-	-	-	-	-	-
Network Management	HSR/PRP	-	-	-	-	-	-	-	-	-
	Console	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
	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)	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)	-10 ~ 55°C (14 ~ 131°F)	EKI-7706E-2F	EKI-7706G-2F	EKI-7708E-4F	EKI-7708G-4F	-	-
	-40 ~ 75°C (-40 ~ 167°F)	-	-	-	EKI-7706E-2FI	EKI-7706G-2FI	EKI-7708E-4FI	EKI-7708G-4FI	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-	-	✓
Certifications	CE	✓	-	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	✓	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-	-	-	-
	UL 508	-	-	-	-	-	-	-	-	-
Others	LVD 62368-1	LVD 62368-1	LVD 62368-1	EN50121-4 UL 61010 LVD 62368-1	EN50121-4 UL 61010 LVD 62368-1	NEMA TS2 EN50121-4 UL 61010 LVD 62368-1	NEMA TS2 EN50121-4 UL 61010 LVD 62368-1	NEMA TS2 EN50121-4 UL 61010 LVD 62368-1	LVD 62368-1	

✓: supported, -: not supported, Δ: optional



## Managed Ethernet Switches



Model		EKI-7710E-2C EKI-7710E-2CI	EKI-7710G-2C EKI-7710G-2CI	EKI-7712E-4F EKI-7712E-4FI	EKI-7712G-2FVI EKI-7712G-4FI	EKI-7712G-4F EKI-7712G-4FI	EKI-7716G-4F4CI	EKI-7720E-4F EKI-7720E-4FI	EKI-7720G-4F EKI-7720G-4FI
Description		8FE+2G Gigabit Managed Redundant Industrial Switch	8GE+2G Gigabit Managed Redundant Industrial Switch/ with Wide Temperature	8FE+4SFP Gigabit Managed Redundant Industrial Switch/ with Wide Temperature	8GE + 2VDSL+2SFP Giga Managed Redundant Industrial Switch	8G+4G SFP Gigabit Managed Redundant Industrial Switch/ with Wide Temperature	8GE+4SFP + 4G Combo Managed Redundant Industrial Switch	16FE+4G SFP Gigabit Managed Redundant Industrial Switch with Wide Temperature	16GE+4G SFP Gigabit Managed Redundant Industrial Switch/ with Wide Temperature
Interface	Number of Ports	10	10	12	12	12	16	20	20
	10/100Base-T (X)	8	-	8	-	-	-	16	-
	100BaseFX	-	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	2 (combo)	8 + 2 (combo)	-	8	8	8 + 4 (Combo)	-	16
	1000Base-SX/LX/LHX/XD/ZX/EZX	2 (combo)	2 (combo)	4	4 (2SFP+ 2VDSL)	4	4 + 4 (Combo)	4	4
	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	IP40	IP30	IP30	IP30
	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	Power Reverse	✓	✓	✓	✓	✓	✓	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	EKI-7710E-2C	EKI-7710G-2C	✓	-	EKI-7712G-4F	-	EKI-7720E-4F	EKI-7720G-4F
	-40 ~ 75°C (-40 ~ 167°F)	EKI-7710E-2CI	EKI-7710G-2CI	✓	✓	EKI-7712G-4FI	EKI-7716G-4FI	EKI-7720E-4FI	EKI-7720G-4FI
Certifications	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-	-
	CE	✓	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-	-	-
	UL 508	✓	✓	✓	-	✓	-	✓	✓
Others	NEMA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1	MENA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 UL 61010 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1	NEMA TS2 EN50121-4 LVD 62368-1

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# Industrial Ethernet Solutions

## Entry-level Managed Switches



Model		EKI-55261-MB EKI-55261-PN EKI-55261-EI	EKI-55281-MB EKI-55281-PN EKI-55281-EI	EKI-56261-MB EKI-56261-PN EKI-56261-EI	EKI-56291-MB EKI-56291-PN EKI-56291-EI	EKI-57261-MB	EKI-57281-MB	EKI-57291-MB
Description		16FE Entry-level Managed Switch	8FE Entry-level Managed Switch	16FE+2GE Combo Ports Entry-level Managed Switch	8FE+2GE Combo Ports Entry-level Managed Switch	16GE Entry-level Managed Switch	8GE Entry-level Managed Switch	8GE + 2 SFP Entry-level Managed Switch
Interface	Number of Ports	16	8	16+2	8+2	16	8	8+2
	10/100Base-T (X)	16	8	16	8	-	-	-
	100BaseFX	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	2/2 (combo)	2/2 (combo)	16	8	8
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	2/2 (combo)	2/2 (combo)	-	-	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)	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	Power Reverse	✓	✓	✓	✓	✓	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	✓	✓
Certifications	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-
	CE	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-
	Class 1, Division 2	✓	✓	✓	✓	✓	✓	✓
UL 508	✓	✓	✓	✓	✓	✓	✓	
Others	-	-	-	-	-	-	-	

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## Unmanaged Ethernet Switches



Model		EKI-5524SSI/MMI Series	EKI-5525SI/MI Series	EKI-5528I EKI-5525I	EKI-5626CI	EKI-5629CI	EKI-5725I EKI-5728I	EKI-5726I
Description		4-port + 2x100FX port (Single/Multimode, SC/ST type), Fast Ethernet Switch	4-port + 1x100FX port (Single/Multimode, SC/ST type), Fast Ethernet Switch	8/5-port Fast Ethernet Switch	16FE + 2GE Combo Ethernet Switch	8FE + 2GE Combo Ethernet Switch	5/8-port Gigabit Ethernet Switch	16-port Gigabit Ethernet Switch
Interface	Number of Ports	6	4	8/5	18	10	5/8	16
	10/100Base-T (X)	4	4	8/5	16	8	-	-
	100BaseFX	2	1	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	-	2 (combo)	2 (combo)	5/8	16
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	2 (combo)	2 (combo)	-	-
	PoE (10/100 Mbps)	-	-	-	-	-	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-	-
Network Management	DI/DO	-	-	-	-	-	-	-
	Console	-	-	-	-	-	-	-
	Redundancy	-	-	-	-	-	-	-
	Diagnostics	-	-	-	-	-	-	-
	VLAN	-	-	-	-	-	-	-
	Configuration	-	-	-	-	-	-	✓
	SNMP	-	-	-	-	-	✓	✓
Power	Security	-	-	-	-	-	-	-
	Traffic Control	-	-	-	-	-	-	-
	12 ~ 48 V DC	✓	✓	✓	✓	✓	✓	✓
	24 ~ 110 V DC	-	-	-	-	-	-	-
Mechanism	100 ~ 240 V AC	-	-	-	-	-	-	-
	Relay Output	✓	✓	✓	✓	✓	✓	✓
	DIN-rail Mount	✓	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓	✓
Protection	Rack Mount	-	-	-	-	-	-	-
	IP Level	IP30	IP30	IP30	IP30	IP30	IP30	IP30
	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	-	-	-	-	-	-	-
Certifications	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	✓	✓	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-
	CE	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-
	Class 1, Division 2	✓	✓	✓	✓	✓	✓	✓
Others	✓	✓	✓	✓	✓	✓	✓	
		-	-	-	-	-	-	-

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# Industrial Ethernet Solutions

## Unmanaged Ethernet Switches



Model		EKI-5726FI	EKI-5729FI	EKI-2428G-4CA	EKI-2525MI/SI-ST	EKI-2525MI/SI
Description		16-port+2 SFP Gigabit Ethernet Switch	8-Port+2 SFP Gigabit Ethernet Switch	24GFE+4SFP Giga ports Unmanaged Switch w/ AC Input	4+1 100FX Port Multi-mode/ Single-mode ST connector type Unmanaged Industrial Ethernet Switch	4+1 100FX Port Multi-mode/ Single-mode Unmanaged Industrial Ethernet Switch
Interface	Number of Ports	16	8	28	5	5
	10/100Base-T (X)	-	-	-	4	4
	100BaseFX	✓	✓	-	1	1
	10/100/1000Base-T (X)	16	8	24 + 4 (combo)	-	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	✓	✓	4 (combo)	-	-
	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
	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
Operating Temperature	Power Reverse	✓	✓	-	✓	✓
	-10 ~ 60°C (14 ~ 140°F)	-	-	-10 ~ 55°C (14 ~ 131°F)	✓	✓
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	-	-	-
Certifications	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-
	CE	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	✓	✓
	Class 1, Division 2	✓	✓	-	-	-
	UL 508	✓	✓	-	-	-
Others	-	-	LVD 62368-1	-	-	

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## Unmanaged Ethernet Switches



Model		EKI-2525LI-AE	EKI-2526M/S	EKI-2725/I	EKI-2728/I	EKI-2728S/2728SI	EKI-2728M/MI
Description		5 x Fast Ethernet Ports Slim Type Unmanaged Switch	4+2 100FX Port Multi-mode/ Single-mode Industrial Ethernet Switch	5-port Gigabit Unmanaged Industrial Ethernet Switch	8-port Gigabit Unmanaged Industrial Ethernet Switch	6GE+2G Single-Mode Fiber Port Unmanaged Ethernet Switch	6G+2G Multi-Mode Unmanaged Ethernet Switch
Interface	Number of Ports	5	6	5	8	8	8
	10/100Base-T (X)	5	4	-	-	-	-
	100BaseFX	-	2	-	-	-	-
	10/100/1000Base-T (X)	-	-	5	8	6	6
	1000Base-SX/LX/ LHX/XD/ZX/EZX	-	-	-	-	2 x SC Single Mode	2
	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	40	IP30	IP30	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	✓	EKI-2725	EKI-2728	EKI-2728S	EKI-2728M
	-40 ~ 75°C (-40 ~ 167°F)	✓	-	EKI-2725I	EKI-2728I	EKI-2728SI	EKI-2728MI
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	✓	✓	✓	✓	✓	-
	Class 1, Division 2	-	-	-	-	-	✓
	UL 508	-	-	-	-	-	✓
	Others	-	-	-	-	-	-

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# Industrial Ethernet Solutions

## Power over Ethernet (PoE) Switches



Model	EKI-7708E-4FP/I	EKI-7708G-4FP/I	EKI-7708G-2FVPI	EKI-7710E-2CP	EKI-7710G-2CPI	EKI-7712E-4FP	EKI-7712G-4FP	EKI-7712G-4FMPI	EKI-7712G-2FVPI	EKI-7720G-4FPI
Description	4FE+4SFP Managed Redundant Industrial PoE Switch	4GE+4SFP Managed Redundant Industrial PoE Switch	4GE+2VDSL+2SFP Managed Redundant Industrial PoE Switch	8FE+2SFP Managed Redundant Industrial PoE Switch	8GE+2SFP Managed Redundant Industrial PoE Switch	8FE + 4SFP Managed Redundant Industrial PoE Switch	8GE+4SFP Managed Redundant Industrial PoE Switch	8GE+4SFP Managed Redundant Industrial PoE Switch	8GE+2VDSL + 2SFP Managed Redundant Industrial PoE Switch	16GE+2SFP Managed Redundant Industrial PoE Switch
Interface	Number of Ports	8	8	8	10	10	12	12	12	20
	10/100Base-T (X)	-	-	4	-	-	-	-	-	-
	100BaseFX	-	-	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	-	2 (combo)	2 (combo)	-	-	8	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	4	4 (2SFP+2VDSL)	2 (combo)	2 (combo)	4	4	4 (2SFP+2VDSL)	4
	PoE (10/100 Mbps)	4	-	-	8	-	8	-	-	-
	PoE (10/100/1000 Mbps)	-	4	-	-	8	-	8	8	16
	DI/DO	-	-	-	-	-	-	-	-	-
Network Management	Console	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Redundancy	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Diagnostics	✓	✓	✓	✓	✓	✓	✓	✓	✓
	VLAN	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Configuration	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SNMP	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Security	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Traffic Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Power	12 ~ 48 V DC	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>	53 ~ 57 V <sub>DC</sub>	48 V <sub>DC</sub>
	24 ~ 110 V DC	-	-	-	-	-	-	-	-	-
	100 ~ 240 V AC	-	-	-	-	-	-	-	-	-
	Relay Output	✓	✓	✓	-	-	✓	✓	✓	✓
	Power Budget	120W	120W	120W	120W	120W	240W	240W	370W	240W
Mechanism	DIN-rail Mount	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Rack Mount	-	-	-	-	-	-	-	-	-
	IP Level	IP30	IP30	IP30	IP30	IP30	IP30	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	EKI-7708E-4FP	EKI-7708G-4FP	-	EKI-7710E-2CP	EKI-7710G-2CPI	EKI-7712E-4FP	EKI-7712G-4FP	-	-
	-40 ~ 75°C (-40 ~ 167°F)	EKI-7708E-4FPI	EKI-7708G-4FPI	✓	EKI-7710E-2CPI	EKI-7710G-2CPI	EKI-7712E-4FPI	EKI-7712G-4FPI	✓	✓
	-40 ~ 85°C (-40 ~ 185°F)	-	-	-	-	-	-	-	-	-
Certifications	CE	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UL/cUL 60950-1	-	-	-	-	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-	-	-	-	-
	UL 508	-	-	-	✓	✓	✓	✓	-	-
	Others	NEMA TS2 EN 50121-4 LVD 62368-1 UL 61010	NEMA TS2 EN 50121-4 LVD 62368-1 UL 61010	NEMA TS2 EN 50121-4 LVD 62368-1 UL 61010	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	UL 62368-1 NEMA TS2 EN50121-4

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## Power over Ethernet (PoE) Switches



Model		EKI-2525P	EKI-2525PA	EKI-2526PI	EKI-2528PAI	EKI-2726FHP1	EKI-5624P/5624PI	EKI-5729P/5729PI
Description		5-port Industrial PoE Switch	5-port Industrial PoE Switch with 24/48 V DC Power Input	6-port Industrial PoE Switch with Wide Temperature	8-port Industrial PoE Switch with 24/48V <sub>DC</sub> Power Input and Wide Temperature	4G+2 SFP W/ 4 IEEE 802.3 High Power PoE Industrial Wide Temperature Switch	4FE PoE+2G Unmanaged Ethernet Switch, IEEE802.3af/at, E-Mark, 12V~24V <sub>DC</sub>	8GE PoE+2G Unmanaged Ethernet Switch, IEEE802.3af/at, E-Mark, 12V~24V <sub>DC</sub>
Interface	Number of Ports	5	5	6	8	6	6	8
	10/100Base-T (X)	1	1	2	4	-	4	-
	100BaseFX	-	-	-	-	-	-	-
	10/100/1000Base-T (X)	-	-	-	-	4	2	-
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	-	-	2	-	-
	PoE (10/100 Mbps)	4	4	4	4	4 (PoE+, 30W)	-	-
	PoE (10/100/1000 Mbps)	-	-	-	-	-	-	8
	DI/DO	-	-	-	-	-	-	-
Console	-	-	-	-	-	-	-	
Network Management	Redundancy	-	-	-	-	-	-	-
	Diagnostics	-	-	-	-	-	-	-
	VLAN	-	-	-	-	-	-	-
	Configuration	-	-	-	-	-	-	-
	SNMP	-	-	-	-	-	-	-
	Security	-	-	-	-	-	-	-
Power	Traffic Control	-	-	-	-	-	-	-
	12 ~ 48 V DC	48 V <sub>DC</sub>	24/48 V <sub>DC</sub>	48 V <sub>DC</sub>	24/48 V <sub>DC</sub>	48 V <sub>DC</sub>	12 ~ 24 V <sub>DC</sub>	-
	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)	✓	✓	✓	✓	✓	✓	✓
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	-	-	-	-	-	✓	✓

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

- 1 IoT Software Solutions
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- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
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- 12 High Speed DAQ Solutions
- 13 Industrial Communication
- 14 Intelligent Edge DAQ Devices
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- 16 Serial Communication

# Industrial Wireless and Protocol Gateway Solutions

## Wireless Access Points/Clients



## EN50155 Wireless Devices



Model		EKI-6333AC-2G	EKI-6333AC-4GP	EKI-6333AC-M12
Description		Industrial IEEE 802.11 Ind. 802.11 a/b/g/n/ac Wi-Fi AP/Client	Industrial IEEE 802.11 a/b/g/n/ac Wi-Fi AP with PoE PSE	EN50155 IEEE 802.11 a/b/g/n/ac Wi-Fi AP/Client
Connectivity	10/100/1000Base-T, Fixed	2	-	Δ2 (M12 Connector)
	10/100Base-TX, Fixed	-	4	
	RS-232 Only	-	-	
	RS-232/422/485	-	1x RS-232/RS-485	
	Serial Connector Type	-	Terminal Block Male	
Operating Mode	Mobility/Roaming	-	-	-
	Multi-Hopping	-	-	-
	AP/CPE	✓	✓	✓
Enclosure & Mount kit	Enclosure	IP55	-	Metal shell with solid mounting kits
	DIN-rail	-	✓	-
	Wall	✓	-	✓
	VESA Mount	-	-	-
	Pole Mount	✓	-	-
Power	Power Input (VDC)	-	24 ~ 56 V <sub>DC</sub>	24 ~ 48V <sub>DC</sub> (LV model), 72/96/110V <sub>DC</sub> (HV model)
	Power Input (PoE)	Passive 24V	PoE 802.3at PSE	-
	Power Connector	RJ45	Terminal block	M12 A-Code male (5-pin)
Environment	Operating Temp.	-20 ~ 70 °C (-4~158°F)	-30 ~ 70 °C	-40 ~ 75 °C (-40 ~ 166 °F)
	Operating Humidity	10 ~ 95%	10 ~ 95%	10 ~ 95%
	Input Reverse Protection	-	-	-
	Network Protocol	-	-	-
Software	Firewall	-	-	-
	Router	-	-	-
	Configuration Options	Web-based	Web-based	Web-based
	Authentication	Username/Password	Username/Password	Username/Password
	Standard Operation Mode	Access Point, Client, Repeater mode	Access Point/Bridge mode	Access Point/Bridge/Client mode
WLAN	IEEE Standard	a/b/g/n/ac	a/b/g/n/ac	a/b/g/n/ac
	Radio Number	2	2	2
	Security	WEP, WPA/WPA2-Perso-I, WPA/WPA2-Enterprise	-	Open System, Shared Key, Legacy 802.1X, WPA/WPA2, WPA-PSK (TKIP), WPA2-PSK(AES)
RF	Frequency	2.4G/5GHz	2.4G/5GHz	2.4G/5GHz
	MIMO	2T2R	2T2R	2T2R
	UL60950-1	-	-	-
Certification	EN60950-1	-	-	-
	CE	✓	✓	✓
	FCC	✓	-	✓
	EN50155	-	-	✓

Model		EKI-9502G
Description		EN50155 Train-To-Ground Wi-Fi/Cellular Router
Connectivity	10/100Base-TX, Fixed	-
	10/100/1000 Based-T, Fixed	2
	RS-232 only	-
	RS-232/422/485	2
Serial connector type		Terminal Block Male
Operating Mode	Mobility/Roaming	-
	Multi-Hopping	-
AP/CPE		✓
Enclosure & Mount kit	Enclosure	Metal shell with solid mounting kits
	DIN-rail	-
	Wall	✓
	VESA Mount	-
	Pole Mount	-
Power	Power Input (VDC)	24-110 V <sub>DC</sub>
	Power Input (PoE)	-
	Power Connector	M12 A-coded with (4-pin)
Environment	Operating Temp.	-40 ~ 70°C (-40 ~ 158°F)
	Operating Humidity	10 ~ 95%
	Input Reverse Protection	-
Software	Network Protocol	IPv4, TCP/IP, UDP, ARP
	Firewall	✓
	Router	NAT/PAT, Firewall, QoS, Static Route, Port Forwarding, DMZ, IPSec/PPTP/L2TP passthrough, OpenVPN Server/Client, GRE
	Protocol	DHCP Server, DHCP Client, DNS Proxy
	Management	HTTP, Telnet, SSH, System Log, E-mail, SMS, SNMP
	Configuration Options	Web-base
	Authentication	Authentication (X.509 certificate, Pre-shared key, PW)
	Standard Operation Mode	Access Point/Client mode
	IEEE Standard	802.11 a/b/g/n/ac
	Radio Number	up to 2 (module type design)
Security	Open System, Shared Key, Legacy 802.1X	
WAN	Frequency	2.4G/5G
	MIMO	3T3R
	LTE	Cat 4/6/12 (base on LTE module type)
Certification	Radio Number	Up to 4 (Module type design)
	SIM Card Slot	8
	UL60950-1	-
	EN60950-1	-
CE	✓	
FCC	✓	
EN50155	✓	

\* Note: Transmit Output Power & Receive Sensitivity are specified on data sheet.  
 ✓ : supported, - : not supported, Δ : optional



## Fieldbus Gateways



Model		EKI-1242IEIMS	EKI-1242IPNMS	EKI-1242IECMS	EKI-1242IBNMS	EKI-1242INR	EKI-1242IOUMS
Description		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	Node-RED Fieldbus Gateway	Modbus TCP/RTU to OPC UA Fieldbus Gateway
Connectivity	10/100Base-TX, Fixed	4	4	4	4	4	4
	RS-232/422/485	2	2	2	2	2	2
	Serial Connector Type	DB9 male	DB9 male	DB9 male	DB9 male	DB9 male	DB9 male
Enclosure & Mount kit	Enclosure	IP30	IP30	IP30	IP30	IP30	IP30
	DIN-rail	✓	✓	✓	✓	✓	✓
	Wall	✓	✓	✓	✓	✓	✓
Power	Power Input (V <sub>DC</sub> )	(12-48V)	(12-48V)	(12-48V)	(12-48V)	12-48V	12-48V
	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.	-10-60°C	-10-60°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 RTU/TCP EtherNet/IP	Modbus RTU/TCP PROFINET	Modbus RTU/TCP EtherCAT	Modbus RTU/TCP BACnet	Node-RED	Modbus RTU/TCP, OPC UA
	Configuration Options	Web-based	Web-based	Web-based	Web-based	Web-base	Web-base
	Authentication	Username/Password	Username/Password	Username/Password	Username/Password	Username/ password	Username/ password
	Standard Operation mode	ModbusRTU/TCP Master Ethernet/IP Adapter	ModbusRTU/TCP Master PROFINET Slave	ModbusRTU/TCP Master EtherCAT Slave	ModbusRTU/TCP Master BACNet Slave	-	-
Certification	UL60950-1	✓	✓	✓	✓	✓	✓
	CE (EN55022 class A, EN55024)	✓	✓	✓	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓	✓	✓	✓

## Modbus Gateways



Model		EKI-1221I/CI	EKI-1222I/CI	EKI-1224I/CI	EKI-1221R	EKI-1222R	EKI-1224R
Description		1-Port Modbus Gateway	2-Port Modbus Gateway	4-Port Modbus Gateway	1-Port Modbus Router	2-Port Modbus Router	4-Port Modbus Router
Connectivity	10/100Base-TX, Fixed	2	2	2	2	2	2
	RS-232/422/485	1 (CI version: RS-422/485)	2 (CI version: RS-422/485)	4 (CI version: RS-422/485)	1 (CI version: RS-422/485)	2 (CI version: RS-422/485)	4 (CI version: RS-422/485)
	Serial Connector Type	DB9 Male	DB9 Male	DB9 Male	DB9 Male	DB9 Male	DB9 Male
Enclosure & Mount kit	Enclosure	IP30	IP30	IP30	IP30	IP30	IP30
	DIN-rail	✓	✓	✓	✓	✓	✓
	Wall	✓	✓	✓	✓	✓	✓
Power	Power Input (V <sub>DC</sub> )	2* (12-48V)	2* (12-48V)	2* (12-48V)	2* (12-48V)	2* (12-48V)	2* (12-48V)
	Power Connector	Terminal block	Terminal block	Terminal block	Terminal block	Terminal block	Terminal block
	Power Consumption (12/24/48V <sub>DC</sub> ) Watts	5.2W	5.2W	6.3W	5.2W	5.2W	6.3W
Environment	Operating Temp.	-10 ~ 60°C 'CI & I' models: -40 ~70°C	-10 ~ 60°C 'CI & I' models: -40 ~70°C	-10 ~ 60°C 'CI & I' models: -40 ~70°C	-10 ~ 60°C 'CI & I' models: -40 ~70°C	-10 ~ 60°C 'CI & I' models: -40 ~70°C	-10 ~ 60°C 'CI & I' models: -40 ~70°C
	Operating Humidity	5 ~ 95%	5 ~ 95%	5 ~ 95%	5 ~ 95%	5 ~ 95%	5 ~ 95%
Software	Network Protocol	Modbus RTU, Modbus TCP, Modbus ASCII	Modbus RTU, Modbus TCP, Modbus ASCII	Modbus RTU, Modbus TCP, Modbus ASCII	Modbus RTU, Modbus TCP, Modbus ASCII	Modbus RTU, Modbus TCP, Modbus ASCII	Modbus RTU, Modbus TCP, Modbus ASCII
	Configuration Options	Windows Utility, Web Browser	Windows Utility, Web Browser	Windows Utility, Web Browser	Windows Utility, Web Browser	Windows Utility, Web Browser	Windows Utility, Web Browser
	Standard Operating Mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode	Modbus RTU Master/Slave mode Modbus ASCII Master/ Slave mode
Certification	UL60950-1	✓	✓	✓	✓	✓	✓
	CE (EN55022 class A, EN55024)	✓	✓	✓	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓	✓	✓	✓
	Hazardous Location (Class I, Division 2)	✓	✓	✓	✓	✓	✓

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

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# Industrial Wireless and Protocol Gateway Solutions

## Serial Device Servers



Model		EKI-1511L	EKI-1511LL	EKI-1511X
Description		1 Port RS-232 Serial Device Server	1 Port RS-232 Serial Device Server	1 Port RS-422-485 Serial Device Server
Connectivity	10/100Base-TX, Fixed	1	1	1
	Serial Connector Type	DB9 Male	DB9 Male	DB9 Male
Enclosure & Mount kit	Enclosure	IP30	IP30	IP30
	DIN-rail	✓	✓	✓
	Wall	✓	✓	✓
Power	Power Input (V <sub>DC</sub> )	9-36V	9-36V	9-36V
	Power Connector	Terminal block	Terminal block	Terminal block
	Power Consumption (12/24/48V <sub>DC</sub> ) Watts	1W	1W	1W
Environment	Operating Temp.	-10 - 60°C	-40 - 75°C	-10 - 60°C
	Operating Humidity	10-95%	10-95%	10-95%
Software	Network Protocol	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP
	Configuration Options	Windows utility, Telnet console, Web Browser	Windows utility, Telnet console, Web Browser	Windows utility, Telnet console, Web Browser
	Standard Operating Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode	COM Port redirection (Virtual COM) TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode
	Certification	CE(EN55022 class A, EN55024)	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓



Model		EKI-1521/CI/I EKI-1522/CI/I EKI-1524/CI/I	EKI-1528-DR EKI-1528CI-DR	EKI-1528/I/II EKI-1526/I/II	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
	10/100/1000Base-T, Fixed	-	-	2	-
	RS-232 only	-	-	-	ADAM-4571L/4570L: 1/2
	RS-232/422/485	1/2/4 (EKI-1524: RS-422/485)	8	8/16	ADAM-4571/4570: 1/2
Serial Connector Type	DB9 Male	DB9 Male	DB9 male	ADAM-4571L: DB9 Male ADAM-4570L: 10-pin RJ48	
Enclosure & Mount kit	Enclosure	IP30	IP30	SECC chassis	ABS+PC with solid mounting hardware
	DIN-rail	✓	✓	Rackmount	✓
	Wall	✓	✓	-	-
Power	Power Input (V <sub>DC</sub> )	2* (12-48V)	2* (12-48V)	EKI-1528(I)/EKI-1526(I): 100 - 240 V <sub>AC</sub> , 50 - 60 Hz EKI-1528(II)/EKI-1526(II): 12 - 48 V <sub>DC</sub> , Terminal Block	(10-30V)
	Power Connector	Terminal block	Terminal block	6-pin removable screw terminal	Terminal block
	Power Consumption (12/24/48V <sub>DC</sub> ) Watts	5.2 W (EKI-1521/EKI-1522) 6.3 W (EKI-1524)	5 W (EKI-1528) 6 W (EKI-1528CI)	5.6 W	2.5 W
Environment	Operating Temp.	EKI-1521/EKI-1522/EKI-1524: -10 - 60°C "CI & I" models: -40 - 80°C	-40 - 70°C	-10 - 60°C (14 - 140°F) "I" Model: -40 - 75°C (-40 - 167°F)	-10 - 60°C
	Operating Humidity	10 - 95%	10 - 95%	10 - 95%	5 - 95%
Software	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
	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
	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
	Certification	UL60950-1	✓	✓	-
	CE(EN55022 class A, EN55024)	✓	✓	✓	✓
	FCC (part 15 subpart B class A)	✓	✓	✓	✓
	Hazardous Location (Class I, Division 2)	✓	-	-	-

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

### Console Servers



Model		EKI-1528NL-CS EKI-1526NL-CS
Description		8/16-Port RS-232/422/485 Console Server
Connectivity	10/100Base-TX, Fixed	-
	10/100/1000Based-T, Fixed	2
	RS-232 Only	-
	RS-232/422/485	8/16
	Serial Connector Type	RJ-45 (Cisco compliant)
Enclosure & Mount kit	Enclosure	SECC chassis
	DIN-rail	Rackmount
	Wall	-
	VESA Mount	-
	Pole Mount	-
Power	Power Input (V <sub>DC</sub> )	EKI-1528(I)/EKI-1526(I): 100 ~ 240 V <sub>AC</sub> , 50 ~ 60 Hz EKI-1528T(I)/EKI-1526T(I): 12 ~ 48 V <sub>DC</sub> , Terminal Block
	Power Input (PoE)	-
	Power Connector	6-pin removable screw terminal
	Power Consumption (12/24/48V <sub>DC</sub> ) Watts	5.6 W
Environment	Operating Temp.	-10 ~ 60°C (14 ~ 140°F) *I* Model: -40 ~ 75°C (-40 ~ 167°F)
	Operating Humidity	10 ~ 95%
	Input Reverse Protection	-
Software	Network Protocol	ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP
	Firewall	-
	Router	-
	Configuration Options	Windows utility, Telnet console, Web Browser, serial console
	Authentication	-
Standard Operating Mode	COM Port redirection (Virtual COM)	COM Port redirection (Virtual COM)
	TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode RFC-2217 Mode	TCP/UDP Server (Polling) Mode TCP/UDP Client (event handling) Mode Pair Connection (P2P) Mode RFC-2217 Mode
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	-	

### Wireless Devices



Model		EKI-1361 EKI-1362	EKI-6333AC
Description		1/2-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server	IEEE 802.11 a/b/g/n/ac Wi-Fi AP
Connectivity	10/100Base-TX, Fixed	✓	-
	10/100/1000Based-T, Fixed	-	✓
	RS-232 Only	-	-
	RS-232/422/485	✓	-
	Serial Connector Type	DB9 Male	-
Operating Mode	Mobility/Roaming	✓	-
	Multi-Hopping	-	-
Enclosure & Mount kit	AP/CPE	✓	✓
	Enclosure	IP30	IP30
	DIN-rail	✓	✓
	Wall	✓	✓
	VESA Mount	-	-
Power	Pole Mount	-	-
	Power Input (V <sub>DC</sub> )	12~48V	12~48V
	Power input (PoE)	-	-
	Power Connector	Terminal block	Terminal block
Power Consumption (12/24/48VDC) Watts	8W (EKI-1361) 9W (EKI-1362)	8W	8W
	Operating Temp.	-40 ~ 75°C	-40 ~ 75°C
Environment	Operating Humidity	10 ~ 95%	10 ~ 95%
	Input Reverse Protection	✓	✓
	Network Protocol	-	-
Software	Firewall	-	-
	Router	-	-
	Configuration Options	Web-base, windows utility	Web-base
	Authentication	Username/Password	Username/Password
	Standard Operation Mode	VCOM, USDG mode (TCP/UDP server, TCP/UDP client), Station Mode	Access Point
WLAN	IEEE Standard	a/b/g/n	a/b/g/n/ac
	Radio Number	1	1
	Security	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise	WEP, WAP/WAP2-Persona, WAP/WAP2-Enterprise
RF	MIMO	2T2R	2T2R
	Maximum Transmit Output Power	19dBm (11n)	19dBm (11n)
	Receive Sensitivity	-93dBm (11g Rx0+Rx1)	-93dBm (11g Rx0+Rx1)
	Antenna Connector	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	-	-	

✓ : supported, - : not supported, Δ : optional

1	IoT Software Solutions
2	Intelligent Systems
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5	Intelligent HMI and Monitors
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7	Intelligent Transportation Platforms
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9	Utility and Energy Solutions
10	EtherCAT Solutions and Automation Controllers
11	Intelligent Motion Control Solutions
12	High Speed DAQ Solutions
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# Industrial Cellular Routers and Gateways

## Industrial Modulized Cellular Routers



Model		LR77 v2 Libratum	UR5i v2 Libratum	LR77 v2	UR5i v2	XR5i v2E	XR5i v2F
Region	EMEA	✓	✓	✓	✓	✓	✓
	NAM	-	-	-	-	-	ERT31x
	ASIA & LATAM	-	✓	-	✓	✓	✓
	AUS & NZ	-	✓	-	-	-	-
Mobile Wireless Network Technology	GPRS/EDGE	✓	✓	✓	✓	-	-
	UMTS/HSPA+	✓	✓	✓	✓	-	-
	LTE	Cat.3	-	Cat.3	-	-	-
	LTE 450	-	-	-	-	-	-
Communication Interfaces and Expansions	WAN Ethernet	✓	✓	△	△	✓	✓
	Two VF modules	-	-	-	-	-	-
	Ethernet 10/100	2x	2x	1x - 3x	1x - 3x	2x	1x - 3x
	PoE PSE / PoE PD	-	-	-	-	-	-
	SD Card Holder	-	-	△	△	-	△
	Wi-Fi (IEEE 802.11 b, g, n)	△	△	△	△	△	△
	USB Host	-	-	✓	✓	-	✓
	RS232/RS422/RS485	-	-	△	△	-	△
	MBUS, Wireless MBUS	-	-	△	△	-	△
	I/O CNT (4x bin. IN, 2x analog IN, 1x output)	-	-	△	△	-	△
	I/O (1 x IN/1 x OUT)	-	-	✓	✓	-	✓
	GPS Receiver	-	-	△	△	-	-
CPU, Ram, Consuption, Sim, Design, Environmental, Dimensions	CPU Power (MHz)	333	333	333	333	333	333
	Flash RAM / RAM / M-RAM (MB / MB / kB)	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128
	Consumption - Idle / Average / Peak / Sleep Mode	2,3 / 3,5 / 5,5W / -	2,3 / 3,5 / 5,5W / -	2,3 / 4 / 6W / -	2,3 / 4 / 6W / -	2,3 / 4 / 6W / -	2 / 2,5 / 3W / -
	2 x SIM Card	✓	✓	optional	optional	-	-
	Power Supply (V DC)	9 - 36	9 - 36	9 - 36	9 - 36	9 - 36	9 - 36
	Op. Temperature (°C)	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75
	Plastic Casing (mm)	51x87x116	51x87x116	51x87x116	51x87x116	51x87x116	51x87x116
	Metal Casing (mm)	42x87x113	42x87x113	42x87x113	42x87x113	42x87x113	42x87x113
Functions	DIN holder TS35/TS32	✓	✓	✓	✓	✓	✓
	Linux	✓	✓	✓	✓	✓	✓
	IPSec, OpenVPN, PPTP, L2TP, GRE, Easy VPN	✓	✓	✓	✓	✓	✓
	Authentication (X.509 certificate, Pre-shared key, PW)	✓	✓	✓	✓	✓	✓
	Firewall, NAT/PAT	✓	✓	✓	✓	✓	✓
	DHCP Server, Client, Relay	✓	✓	✓	✓	✓	✓
	HTTP/HTTPS Server, Telnet/SSH, NTP Server, NTP Client	✓	✓	✓	✓	✓	✓
	DynDNS	✓	✓	✓	✓	✓	✓
	FTP Server	✓	✓	✓	✓	✓	✓
	SNMP, VRRP, PPPoE Bridge	✓	✓	✓	✓	✓	✓
	SMTP, E-mail, SMS Functions	✓	✓	✓	✓	✓	✓
	VLAN 802.1Q	✓	✓	✓	✓	✓	✓
	QoS, IGMP, BGP, OSPF, RIP	△	△	△	△	△	△
	IPv6 Dual Stack	✓	✓	✓	✓	✓	✓
	COM Port TCP/UDP Server/Client	-	-	✓	✓	-	✓
	MODBUS RTU/TCP Gateway	-	-	△	△	-	△
	4 Configuration Profiles	✓	✓	✓	✓	✓	✓
	Automatic Configuration and FW Update	✓	✓	✓	✓	✓	✓
Additional Software Support	Supports Software User Modules (free space for UM)	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB
	WebAccess/DMP	✓	✓	✓	✓	✓	✓
	R-SeeNet	✓	✓	✓	✓	✓	✓
	WebAccess/VPN	✓	✓	✓	✓	✓	✓
	Python, Node-RED						

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

## Industrial Advanced Cellular Routers



Model	SmartFlex LAN	SmartFlex	SmartMotion	SmartStart		
Region	EMEA	BB-SR300	BB-SR303, BB-SR304, BB-SR307	BB-ST352, BB-ST355	BB-SL305	
	NAM	BB-SR300	BB-SR305	-	BB-SL302	
	ASIA & LATAM	BB-SR300	BB-SR304	-	BB-SL306, BB-SL305	
Mobile Wireless Network Technology	AUS & NZ	BB-SR300	BB-SR308	-	-	
	GPRS/EDGE	-	✓	✓	✓	
	UMTS/HSPA+	-	✓	✓	✓	
	LTE	-	Cat.3/Cat.4	Cat.3	Cat.1/Cat.4	
Communication Interfaces and Expansions	LTE 450	-	SR307	ST355	-	
	WAN Ethernet	✓	✓	✓	-	
	Two VF Modules	-	-	✓	-	
	Ethernet 10/100	5x	2x - 5x	2x	1x	
	PoE PSE / PoE PD	△	△	△	-	
	SD Card Holder	✓	✓	✓	-	
	Wi-Fi (IEEE 802.11 b, g, n)	△	△	△	△	
	USB Host	✓	✓	✓	-	
	RS232/RS422/RS485	-	△	-	RS232	
	MBUS, Wireless MBUS	-	-	-	-	
	I/O CNT (4x bin. IN, 2x analog IN, 1x output)	-	-	-	-	
	I/O (1 x IN/1 x OUT)	2xIN / 1xOUT	2xIN / 1xOUT	2xIN / 1xOUT	✓	
	GPS Receiver	-	by module	✓	-	
	CPU, Ram, Consumption, Sim, Design, Environmental, Dimensions	CPU Power (MHz)	1000	1000	1000	1000
Flash RAM / RAM / M-RAM (MB / MB / KB)		256 / 512 / 128	256 / 512 / 128	256 / 512 / 128	256 / 512 / 128	
Consumption - Idle / Average / Peak / Sleep Mode		2,5 / 4 / 11 W / 10mW	2,5 / 4 / 11 W / 10mW	2,5 / 4 / 11 W / 10mW	2,7 / 5,5 / 11 W / 40mW	
2 x SIM Card		-	✓	4x	a	
Power Supply (V DC)		10 - 60	10 - 60	10 - 60	9 - 36	
Op. Temperature (°C)		-40 to +75	-40 to +75 (-40 to +70 LTE450)	-40 to +75 (-40 to +70 LTE450)	-40 to +75	
Plastic Casing (mm)		55x97x125	55x97x125	55x97x125	30x87x127	
Metal Casing (mm)		55x97x125	55x97x125	55x97x125	-	
DIN holder TS35/TS32		✓	✓	✓	Wall / DIN	
Linux		✓	✓	✓	✓	
Functions	IPSec, OpenVPN, PPTP, L2TP, GRE, Easy VPN	✓	✓	✓	✓	
	Authentication (X.509 Certificate, Pre-shared Key, PW)	✓	✓	✓	✓	
	Firewall, NAT/PAT	✓	✓	✓	✓	
	DHCP Server, Client, Relay	✓	✓	✓	✓	
	HTTP/HTTPS Server, Telnet/SSH, NTP Server, NTP Client	✓	✓	✓	✓	
	DynDNS	✓	✓	✓	✓	
	FTP Server	✓	✓	✓	✓	
	SNMP, VRRP, PPPoE Bridge	✓	✓	✓	✓	
	SMTP, E-mail, SMS Functions	✓	✓	✓	✓	
	VLAN 802.1Q	✓	✓	✓	✓	
	QoS, IGMP, BGP, OSPF, RIP	△	△	△	△	
	IPv6 Dual Stack	✓	✓	✓	✓	
	COM Port TCP/UDP Server/Client	-	✓	✓	✓	
	MODBUS RTU/TCP Gateway	-	△	△	△	
	4 Configuration Profiles	✓	✓	✓	✓	
	Automatic Configuration and FW Update	✓	✓	✓	✓	
	Additional Software Support	Supports Software User Modules (free space for UM)	128 MB	128 MB	128 MB	128 MB
		WebAccess/DMP	✓	✓	✓	✓
R-SeeNet		✓	✓	✓	✓	
WebAccess/VPN		✓	✓	✓	✓	
Python, Node-RED		✓	✓	✓	✓	

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

- 1 IoT Software Solutions
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- 3 SKY Servers
- 4 AI & Advanced Computer Vision
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 Intelligent Transportation Platforms
- 8 Mission Critical CompactPCI Platforms
- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
- 11 Intelligent Motion Control Solutions
- 12 High Speed DAQ Solutions
- 13 Industrial Communication
- 14 Intelligent Edge DAQ Devices
- 15 Remote I/O, Wireless I/O & Sensors
- 16 Serial Communication

# Industrial Cellular Routers and Gateways

## Industrial IoT Cellular Routers



Model		ICR-3200w	ICR-3201	ICR-3831	ICR-2031	ICR-2431
Region	EMEA	ICR-3231	ICR-3201	ICR-3831	✓	✓
	NAM	ICR-3241, ICR-3211	ICR-3201	-	-	-
	ASIA & LATAM	-	ICR-3201	-	-	-
	AUS & NZ	ICR-3232	ICR-3201	-	-	-
Mobile Wireless Network Technology	GPRS/EDGE	✓	-	✓	✓	✓
	UMTS/HSPA+	✓	-	✓	✓	✓
	LTE	Cat.4/Cat M1	-	Cat.4	✓	✓
	LTE 450	-	-	-	-	-
	WAN Ethernet	✓	✓	✓	✓	✓
Communication Interfaces and Expansions	Two VF Modules	-	-	-	-	-
	Ethernet 10/100	2x	2x	2x (M12 connector)	1	2
	PoE PSE / PoE PD	-	-	PoE PD	-	-
	SD Card Holder	-	-	✓	-	-
	Wi-Fi (IEEE 802.11 b, g, n)	△	△	-	-	-
	USB Host	-	-	✓ (M12 connector)	-	-
	RS232/RS422/RS485	RS232/RS485	RS232/RS485	RS232 (M12 connector)	-	RS232/485
	MBUS, Wireless MBUS	-	-	-	-	-
	I/O CNT (4x bin. IN, 2x analog IN, 1x output)	-	-	-	-	-
	I/O (1 x IN/1 x OUT)	✓	✓	2xIN / 2xOUT (M12 connector)	✓	✓
	GPS Receiver	△	△	✓	-	-
CPU, Ram, Consumption, Sim, Design, Environmental, Dimensions	CPU Power (MHz)	1000	1000	1000	600	600
	Flash RAM / RAM / M-RAM (MB / MB / kB)	2x 256 MB – FW 512 MB – User data storage 838 MB – Space for User Modules	2x 256 MB – FW 512 MB – User data storage 838 MB – Space for User Modules	256 / 512 / 128	Flash 64MB, 12MB for RouterAPP	Flash 64MB, 12MB for RouterAPP
	Consumption - Idle / Average / Peak / Sleep Mode	2.5 / 4 W / 11 W / 10 mW	2.5 / 4 W / 11 W / 10 mW	2.5 / 4 / 11 W / 10mW	1/3.5/10 No sleep mode	1/3.5/10 No sleep mode
	2 x SIM Card	a/ eSIM	-	✓	✓	✓
	Power Supply (V DC)	9 - 36	9 - 36	12 - 48	9 - 48	9 - 48
	Op. Temperature (°C)	-40 to +75	-40 to +75	-40 to +70	-40 to +75	-40 to +75
	Plastic Casing (mm)	-	-	-	-	-
	Metal Casing (mm)	55 x 97 x 125	55 x 97 x 125	59 x 113 x 203	103 x 95 x 23	103 x 95 x 23
DIN holder TS35/TS32	Wall / DIN	Wall / DIN	Wall	Wall/DIN	Wall/DIN	
Functions	Linux	✓	✓	✓	✓	✓
	IPSec, OpenVPN, PPTP, L2TP, GRE, Easy VPN	✓	✓	✓	✓	✓
	Authentication (X.509 Certificate, Pre-shared Key, PW)	✓	✓	✓	✓	✓
	Firewall, NAT/PAT	✓	✓	✓	✓	✓
	DHCP Server, Client, Relay	✓	✓	✓	✓	✓
	HTTP/HTTPS Server, Telnet/SSH, NTP Server, NTP Client	✓	✓	✓	✓	✓
	DynDNS	✓	✓	✓	✓	✓
	FTP Server	✓	✓	✓	✓	✓
	SNMP, VRRP, PPPoE Bridge	✓	✓	✓	✓	✓
	SMTP, E-mail, SMS Functions	✓	✓	✓	✓	✓
	VLAN 802.1Q	✓	✓	✓	✓	✓
	QoS, IGMP, BGP, OSPF, RIP	△	△	△	△	△
	IPv6 Dual Stack	✓	✓	✓	✓	✓
	COM Port TCP/UDP server/client	✓	✓	✓	✓	✓
	MODBUS RTU/TCP Gateway	△	△	△	△	△
	4 Configuration Profiles	✓	✓	✓	✓	✓
	Automatic Configuration and FW Update	✓	✓	✓	✓	✓
	Additional Software Support	Supports Software User Modules (free space for UM)	838 MB	838 MB	128 MB	12 MB
WebAccess/DMP		✓	✓	✓	✓	✓
R-SeeNet		✓	✓	✓	-	-
WebAccess/VPN		✓	✓	✓	✓	✓
Python, Node-RED		✓	✓	✓	-	-

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

# Industrial Network Infrastructure



## IMC-700

### Intelligent Modular Media Converters

Centralized powered chassis design with SNMP management increases installation flexibility for high-end deployment.

- Supports iView<sup>2</sup> with capacity of more than 400 devices
- High-port density modules for Ethernet to fiber applications
- Comes with AC or DC power inputs for redundancy
- Supports Network management via iView<sup>2</sup> and SNMP for remote management
- Wide speed ranges up to 10GE transmission

### Intelligent Modular Chassis

Part Number	Slot	Power Input
IMC-711	1	AC / DC
IMC-712	2	AC / DC
IMC-713*	3	Dual AC/DC
IMC-716*	6	Dual AC/DC
IMC-719*	20	Dual AC/DC

\* Needs to work with a centralized SNMP module IMC-710 for network management.  
 IMC-710: 2 x 10/100Mbps RJ-45 Slide-In SNMP Management Module

### Unmanaged Slide-in Modules

Part Number	Optical Speed	Optical Mode	Wavelength	Distance	Optical Connector	Wide Temp.
IMC-790-2XFP	10Gbps	Various	Various	Various	2 x XFP	-
IMC-790-2SFP	10Gbps	Various	Various	Various	2 x SFP+	-
IMC-771-MM	1000Mbps	Multi-Mode	850 nm	550 m	1 x SC	-
IMC-771-SM	1000Mbps	Single-Mode	1310 nm	10 km	1 x SC	-
IMC-771-SE	1000Mbps	Single-Mode	1310 nm	40 km	1 x SC	-
IMC-771-SXL	1000Mbps	Single-Mode	1550 nm	100 km	1 x SC	-
IMC-771-SST	1000Mbps	Single-Strand	1310T/1550R	10 km	1 x SC	-
IMC-771-SSR	1000Mbps	Single-Strand	1550T/1310R	10 km	1 x SC	-
IMC-771-SSET	1000Mbps	Single-Strand	1310T/1550R	40 km	1 x SC	-
IMC-771-SSER	1000Mbps	Single-Strand	1550T/1310R	40 km	1 x SC	-
IMC-771-SS4T	1000Mbps	Single-Strand	1490T/1550R	70 km	1 x SC	-
IMC-771-SS4R	1000Mbps	Single-Strand	1550T/1490R	70 km	1 x SC	-
IMC-771I-SFP	1000Mbps	Various	Various	Various	1 x SFP	-
IMC-770-MM	10/100/1000Mbps	Multi-Mode	850 nm	550 m	1 x SC	-
IMC-770-SM	10/100/1000Mbps	Single-Mode	1310 nm	10 km	1 x SC	-
IMC-770-SSR	10/100/1000Mbps	Single-Strand	1550T/1310R	10 km	1 x SC	-
IMC-770-SFP	10/100/1000Mbps	Various	Various	Various	1 x SFP	-
IMC-770I-2SFP	10/100/1000Mbps	Various	Various	Various	2 x SFP	-
IMC-751-SST	100Mbps	Single-Strand	1310T/1550R	20 km	1 x SC	-
IMC-751-SSR	100Mbps	Single-Strand	1550T/1310R	20 km	1 x SC	-
IMC-751-SSET	100Mbps	Single-Strand	1310T/1550R	40 km	1 x SC	-
IMC-751-SSER	100Mbps	Single-Strand	1550T/1310R	40 km	1 x SC	-
IMC-751-SE	100Mbps	Single-Mode	1310nm	40 km	1 x SC	-
IMC-751I-2SFP	100Mbps	Various	Various	Various	2 x SFP	-
IMC-750-SST	10/100Mbps	Single-Strand	1310T/1550R	20 km	1 x SC	-
IMC-750-SSR	10/100Mbps	Single-Strand	1550T/1310R	20 km	1 x SC	-
IMC-750-SSET	10/100Mbps	Single-Strand	1310T/1550R	40 km	1 x SC	-
IMC-750-SSER	10/100Mbps	Single-Strand	1550T/1310R	40 km	1 x SC	-
IMC-750I-SFP	10/100Mbps	Various	Various	Various	1 x SFP	✓
IMC-750-SE	10/100Mbps	Single-strand	Various	Various	1 x SC	-

### Managed Slide-in Modules

Part Number	Optical Speed	Optical Mode	Wavelength	Distance	Optical Connector	Wide Temp.
IMC-784I-SFP	10/100/1000 Mbps	Various	Various	Various	2 x SFP	✓
IMC-782-SFP	10/100/1000 Mbps	Various	Various	Various	1 x SFP	-
IMC-762-SST	10/100 Mbps	Single-Strand	1310T/1550R	20 km	1 x SC	-
IMC-762-SSR	10/100 Mbps	Single-Strand	1550T/1310R	20 km	1 x SC	-
IMC-762-SSET	10/100 Mbps	Single-Strand	1310T/1550R	40 km	1 x SC	-
IMC-762-SSER	10/100 Mbps	Single-Strand	1550T/1310R	40 km	1 x SC	-
IMC-762-SFP	10/100 Mbps	Various	-	Various	1 x SFP	-
IMC-721I-MMST	DS1	Multi-Mode	1310nm	40 km	1 x ST	✓
IMC-721I-MM	DS1	Multi-Mode	1310nm	40 km	1 x SC	✓
IMC-721I-SEST	DS1	Single-Mode	1300nm	5 km	1 x ST	✓
IMC-721I-SE	DS1	Single-Mode	1300nm	5 km	1 x SC	✓
IMC-721I-SL	DS1	Single-Mode	1310nm	80 km	1 x SC	✓
IMC-721I-SST	DS1	Single-Strand	1310T/1550R	20 km	1 x SC	✓
IMC-721I-SSR	DS1	Single-Strand	1550T/1310R	20 km	1 x SC	✓
IMC-721I-SSET	DS1	Single-Strand	1310T/1550R	40 km	1 x SC	✓
IMC-721I-SSER	DS1	Single-Strand	1550T/1310R	40 km	1 x SC	✓
IMC-721I-SFP	DS1	Various	Various	Various	1 x SFP	✓

✓ : supported, - : not supported, Δ : optional

- 1 IoT Software Solutions
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- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 Intelligent Transportation Platforms
- 8 Mission Critical CompactPCI Platforms
- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
- 11 Intelligent Motion Control Solutions
- 12 High Speed DAQ Solutions
- 13 Industrial Communication
- 14 Intelligent Edge DAQ Devices
- 15 Remote I/O, Wireless I/O & Sensors
- 16 Serial Communication

# Industrial Network Infrastructure

## Compact Media Converter Series

Part Number	Ethernet Speed	Optical Mode	Wavelength	Distance	Optical Connector
IMC-450-MM-A	10/100 Mbps	Multi-Mode	1300 nm	5 km	SC / ST
IMC-450-SE-A	10/100 Mbps	Single-Mode	1310 nm	40 km	SC / ST
IMC-450-SL-A	10/100 Mbps	Single-Mode	1310 nm	80 km	SC / ST
IMC-470-MM	10/100/1000 Mbps	Multi-Mode	850 nm	550 m	SC
IMC-470-M1	10/100/1000 Mbps	Multi-Mode	1300 nm	2 km	SC
IMC-470-SM	10/100/1000 Mbps	Single-Mode	1310 nm	10 km	SC
IMC-470-SE	10/100/1000 Mbps	Single-Mode	1310 nm	40 km	SC
IMC-470-SFP	10/100/1000 Mbps	Various	Various	Various	SFP

## 10/100Mbps Miniature Media Converters

Part Number	Optical Mode	Wavelength	Distance	Optical Connector
IMC-350-M8ST-PS-A	Multi-Mode	850 nm	2 km	ST
IMC-350-M8ST-A	Multi-Mode	850 nm	2 km	ST
IMC-350-M8-PS-A	Multi-Mode	850 nm	2 km	SC
IMC-350-M8-A	Multi-Mode	850 nm	2 km	SC
IMC-350-USB-A	Multi-Mode	850 nm	2 km	SC
IMC-350-MMST-PS-A	Multi-Mode	1300 nm	5 km	ST
IMC-350-MMST-A	Multi-Mode	1300 nm	5 km	ST
IMC-350-MM-PS-A	Multi-Mode	1300 nm	5 km	SC
IMC-350-MM-A	Multi-Mode	1300 nm	5 km	SC
IMC-350-SEST-PS-A	Single-Mode	1310 nm	40 km	ST
IMC-350-SEST-A	Single-Mode	1310 nm	40 km	ST
IMC-350-SE-PS-A	Single-Mode	1310 nm	40 km	SC
IMC-350-SE-A	Single-Mode	1310 nm	40 km	SC
IMC-350-SL-PS-A	Single-Mode	1310 nm	80 km	SC
IMC-350-SL-A	Single-Mode	1310 nm	80 km	SC
IMC-350-SSMT-PS-A	Single-Strand	1310T/1550R	2 km	SC
IMC-350-SSMR-PS-A	Single-Strand	1550T/1310R	2 km	SC
IMC-350-SST-PS-A	Single-Strand	1310T/1550R	20 km	SC
IMC-350-SSR-PS-A	Single-Strand	1550T/1310R	20 km	SC
IMC-350-SFP-PS-A	Various	Various	Various	SFP
IMC-350-SFP-A	Various	Various	Various	SFP

## Industrial Grade 10/100Mbps Miniature Media Converters with PoE-PD

Part Number	Optical Mode	Wavelength	Distance	Optical Connector
IMC-350I-M8ST-PS-A	Multi-Mode	850 nm	2 km	ST
IMC-350I-M8ST-A	Multi-Mode	850 nm	2 km	ST
IMC-350I-M8-PS-A	Multi-Mode	850 nm	2 km	SC
IMC-350I-M8-A	Multi-Mode	850 nm	2 km	SC
IMC-350I-MMST-PS-A	Multi-Mode	1300 nm	5 km	ST
IMC-350I-MMST-A	Multi-Mode	1300 nm	5 km	ST
IMC-350I-MM-PS-A	Multi-Mode	1300 nm	5 km	SC
IMC-350I-MM-A	Multi-Mode	1300 nm	5 km	SC
IMC-350I-SEST-PS-A	Single-Mode	1310 nm	40 km	ST
IMC-350I-SEST-A	Single-Mode	1310 nm	40 km	ST
IMC-350I-SE-PS-A	Single-Mode	1310 nm	40 km	SC
IMC-350I-SE-A	Single-Mode	1310 nm	40 km	SC
IMC-350I-SL-PS-A	Single-Mode	1310 nm	80 km	SC
IMC-350I-SST-PS-A	Single-Strand	1310T/1550R	20 km	SC
IMC-350I-SST-A	Single-Strand	1310T/1550R	20 km	SC
IMC-350I-SSR-PS-A	Single-Strand	1550T/1310R	20 km	SC
IMC-350I-SSR-A	Single-Strand	1550T/1310R	20 km	SC
IMC-350I-SFP-PS-A	Various	Various	Various	SFP

## 10/100/1000Mbps Miniature Media Converters

Part Number	Optical Mode	Wavelength	Distance	Optical Connector
IMC-370-MM-PS-B	Multi-Mode	850 nm	550 m	SC
IMC-370-MMST-PS-B	Multi-Mode	850 nm	550 m	ST
IMC-370-SM-PS-B	Single-Mode	1310 nm	10 km	SC
IMC-370-SE-PS-B	Single-Mode	1310 nm	40 km	SC
IMC-370-SL-PS-B	Single-Mode	1550 nm	80 km	SC
IMC-370-SST-PS-B	Single-Strand	1310T/1550R	15 km	SC
IMC-370-SSR-PS-B	Single-Strand	1550T/1310R	15 km	SC
IMC-370-SFP-PS-B	Various	Various	Various	SFP



## Industrial Grade 10/100/1000Mbps Miniature Media Converters

Part Number	Optical Mode	Wavelength	Distance	Optical Connector
IMC-370I-MM-B	Multi-Mode	850 nm	550 m	SC
IMC-370I-MM-PS-B	Multi-Mode	850 nm	15 km	SC
IMC-370I-SM-B	Single-Mode	1310 nm	15 km	SC
IMC-370I-SM-PS-B	Single-Mode	1310 nm	15 km	SC
IMC-370I-SE-PS-B	Single-Mode	1310 nm	30 km	SC
IMC-370I-SST-PS-B	Single-Strand	1310T/1550R	15 km	SC
IMC-370I-SSR-PS-B	Single-Strand	1550T/1310R	15 km	SC
IMC-370I-SFP-B	Various	Various	Various	SFP
IMC-370I-SFP-PS-B	Various	Various	Various	SFP

For IMC-350 and IMC-370 series, "-PS-A" means a universal power adapter with US/EU/UK/AU/JP plugs are included

## PoE+ / PoE Media Converters 1 Gbps PoE & PoE+ Media Converters w/ 2 x RJ-45

Part Number	PSE	Optical Mode	Wavelength	Distance	Optical Connector	Internal Power
IMC-380-SFP	1 x PoE	Various	Various	Various	SFP	-
IMC-390-MM	2 x PoE+	Multi-Mode	850 nm	550 m	SC	-
IMC-390-M1	2 x PoE+	Multi-Mode	1310 nm	2 km	SC	-
IMC-390-SM	2 x PoE+	Single-Mode	1310 nm	15 km	SC	-
IMC-390-SFP	2 x PoE+	Various	Various	Various	SFP	-
IMC-595MPI	2 x PoE+++	Various	Various	Various	SFP	-
EKI-2741FPI	1 x PoE+	Various	Various	Various	SFP	-
EKI-2742FPI	2 x PoE+	Various	Various	Various	SFP	-
EKI-2741FHPI	1 x PoE++	Various	Various	Various	SFP	-

## Industrial Extenders

Combining data and power together, IMC-150LPI and IMC-150LI long reach extenders are brand new products which break the 100-meter limitation to extend Power over Ethernet (PoE) power and data transmission distance. The extenders flexibly lengthen existing PoE networks to reach remote IP devices. Compliant with IEEE 802.3at PoE+ standards, they deliver power over cables without distance limitations of traditional copper wires. DIP switches for various LAN data rates strike the perfect balance of data rates and distance for each device.

Part Number	Ethernet Speed	PoE+	UTP	Coaxial
IMC-150LPI	10/100 Mbps	PSE/PD	2 x RJ-45	-
IMC-150LI	10/100 Mbps	-	2 x RJ-45	1 x BNC
IMC-150LPC-M/R	10/100 Mbps	PSE/PD	1 x RJ45	1 x BNC

✓: supported, -: not supported, Δ: optional

## IMC-574I-SFP

### Industrial 10/100/1000Mbps Intelligent Media Converter

A value-based, managed Gigabit Ethernet solution that comes with two SFP ports and two fixed 10/100/1000Base-T copper ports. They support wide operating temperatures for use in extreme or harsh environments and features OAM and 1+1 with troubleshooting functionality.

- Converts Ethernet data to fiber optic signals
- Supports wide temperature operation for harsh environments
- Offers Link Fault Pass Through (LFPT) for easy troubleshooting fault conditions
- Supports OAM and 1+1 protection

Ordering P/N: IMC-574I-SFP-PS-A

Intelligent Media Converter, Wide-Temp, 1000Base-TX/FX, SFP



- 1 IoT Software Solutions
- 2 Intelligent Systems
- 3 SKY Servers
- 4 AI & Advanced Computer Vision
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 Intelligent Transportation Platforms
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- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
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- 16 Serial Communication

# Industrial Network Infrastructure

## Media Converters



Model	☞ EKI-2741SL/ML	☞ EKI-2741FL	☞ EKI-2541SL/ML
Standard	IEEE 802.3, 802.3u, 802.3ab, 802.3x, 802.3z	IEEE 802.3, 802.3u, 802.3ab, 802.3x, 802.3z	IEEE 802.3, 802.3u, 802.3x
RJ45 Port Interface	1 x 10/100/1000Base-T(X)	1 x 10/100/1000Base-T(X)	1 x 10/100Base-T(X)
RJ45 Transmission Distance	1000 m	1000 m	100 m
Fiber Port Interface	SL: Singel Mode ML: Multi Mode	SFP	SL: Singel Mode ML: Multi Mode
Fiber Port Connector	1	1	1
Fiber Transmission Distance	SL: Up to 10km ML: Up to 550m	-	SL: Up to 30km ML: Up to 2km
Switch Fabric Speed	1.25Gbps	1.25Gbps	125Mbps
Jumbo Frame	9216 bytes	9216 bytes	-
Dimensions (W x H x D) mm	22 x 101 x 75 mm	23 x 60 x 75 mm	22 x 101 x 75 mm
Dimensions (W x H x D) mm	75 x 22.6 x 101.2 mm	60.88 x 23 x 75.58 mm	75 x 22.6 x 101.2 mm
Dimensions (W x H x D) inch	2.95" x 0.89" x 3.98"	2.4" x 0.91" x 2.98"	2.95" x 0.89" x 3.98"
IP Grade	IP30	IP30	IP30
Enclosure	Metal	Metal	Metal
Weight	226 g	158 g	213 g
Operating Temperature	0~50°C	0~50°C	0~50°C
Storage Temperature	-40~70°C	-40~70°C	-40~70°C
Relative Humidity (Non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 90% RH (non-condensing)
Time (25 degree C)	1269493 hours	1031686 hours	1776203 hours
Method	Telcordia (Relax), GB	Telcordia (Relax), GB	Telcordia (Relax), GB
Operating Voltage	90-264 V <sub>AC</sub>	90-264 V <sub>AC</sub>	90-264 V <sub>AC</sub>
Operating Current (DC 5V)	SL: 0.61 A ML: 0.6 A	0.52 A	SL: 0.31 A ML: 0.3 A
Power Consumption (DC 5V)	SL: 3.1 W ML: 3.0W	2.6 W	SL: 1.6 W ML: 1.5 W
Reverse Polarity	Present	Present	Present
Safety	LVD EN60950	LVD EN60950	LVD EN60950
EMC	CE, FCC	CE, FCC	CE, FCC
EMI	EN55024/EN 55032 Class A, FCC Part 15 Subpart B 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, EN61000-4-11		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
Warranty Period	2 years		

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

## VDSL Solutions



Model	EKI-1751	EKI-1751I	EKI-1751PI-M/R	EKI-7708G-2FV	EKI-7712G-2FV
Standard	IEEE 802.3, 802.3u, 802.3x	IEEE 802.3, 802.3u, 802.3x	M: IEEE 802.3, 802.3u, 802.3x R: IEEE 802.3, 802.3u, 802.3x, 802.3af/at	IEEE 802.3, 802.3u, 802.3x, 802.3ad, 802.3ab, 802.3z, 802.1D, 802.1w, 802.1s, 802.1P, 802.1Q, 802.1X	
RJ45 Port Interface	1 * 10/100BaseT(X) + 1 * VDSL	2 * RJ45 Ethernet port + 1 * M12 Ethernet port	4* RJ45 PoE Port	4 x RJ45 (Gigabit Ethernet) 2 x SFP (mini-GBIC) 2 x VDSL ports	8 x RJ45 (Gigabit Ethernet) 2 x SFP (mini-GBIC) 2 x VDSL ports
RJ45 Transmission Distance	100 m	100 m	100 m	Ethernet: Up to 100 m SFP: Up to 110 km (depends on SFP) VDSL2: With the rate of 100Mbps speed up to 400 m	
RJ45 w/ PoE Quantity	-	-	4	0	0
MAC Table Size	1024	2K	-	8K	8K
Packet Buffer Size	1024 byte	1M bit	1M bit	4.1Mbit	4.1Mbit
Switch Fabric Speed	100Mbps	100Mbps	100Mbps	Supports 1000/100	Supports 1000/100
Jumbo Frame	-	-	-	1,518-10,240	1,518-10,240
Dimensions (W x H x D)	72.5x 22.8 x 96.2 mm	62 x 135 x 106.5 mm	62 x 135 x 106.5 mm	74 x 152 x 105 mm	74 x 152 x 105 mm
IP Grade	IP30	IP30	IP30	IP30	IP30
Enclosure	Metal	Metal	Metal	Metal	Metal
Weight	0.22kg	0.67kg	M: 0.7kg R: 0.75kg	1.1kg	1.1kg
Mounting Type	Din Rail	Din Rail or Wall Mount	Din Rail or Wall Mount	Din Rail or Wall Mount	Din Rail or Wall Mount
Operating Temperature	0~45°C (32~113°F)	-40~75°C (-40~167°F)	-40~75°C (-40~167°F)	-20~45C	-20~45C
Storage Temperature	-40~70°C (-40~158°F)	-40~85°C (-40~185°F)	-40~85°C (-40~185°F)	-40~85C	-40~85C
Relative Humidity (Non-condensing)	0 ~ 95%	5 ~ 95%	5 ~ 95%	10 ~ 95%	10 ~ 95%
Time	901,329	225,664	M: 175496 R: 159617		
Method	MIL-HDBK-217 FN2	MIL-HDBK-217 FN2	MIL-HDBK-217 FN2		
Operating Voltage	12 V <sub>DC</sub>	12- 48 V <sub>DC</sub>	48 - 57V <sub>DC</sub>	12- 48 V <sub>DC</sub>	12- 48 V <sub>DC</sub>
Power Consumption	4.2 W (system)	5 W (system)	M: 65 W (system) R: 125 W (system)	15W@48Vdc (system)	15W@48Vdc (system)
Connectors	DC Jack (power)	6-pin removable screw terminal (power & relay)		6-pin screw terminal block connector 4-pin for power; 2-pin for relay	
Safety	UL 60950 LVD EN 62368	UL 60950 LVD EN 62368	UL 60950 LVD EN 62368	UL61010 LVD EN62368	UL61010 LVD EN62368
EMC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC
EMI	EN 55032 EN 61000-6-4, FCC Part 15 Subpart B EN 61000-6-4, FCC Part 15 Subpart B	EN 55011/ EN 55032 EN 61000-6-4, FCC Part 15 Subpart B		EN 55032 Class A, EN 61000-6-4, FCC Part 15 Sub-part B 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		EN 61000-4-2	EN 61000-4-2
Shock	-	IEC 60068-2-27	IEC 60068-2-27	IEC 60068-2-27	IEC 60068-2-27
Freefall	-	IEC 60068-2-32	IEC 60068-2-32	IEC 60068-2-32	IEC 60068-2-32
Vibration	-	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6
Warranty Period	5 years	5 years	5 years	5 years	5 years

✓: supported, -: not supported, Δ: optional

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# Industrial Network Infrastructure

## PoE Injectors



Model		EKI-2701HPI	EKI-2701HP	EKI-2701HP-AC	EKI-2701MPI	EKI-2701MPI-5G
Connectivity	10/100/1000Based-Tx, Fixed	1	1	-	-	-
	10/100/1000Base-T PoE, Fixed	1	1	1	1	1 (multi data rate 10M / 100M / 1G / 2.5G / 5G)
	Auto Negotiation	-	-	✓	✓	✓
	Store-and-Forward Switching	-	-	✓	✓	✓
	MTBF	1419817Hrs	1419817Hrs	1,999,263 Hrs	-	-
Physical	Housing Dimensions (W x H x D) mm	37 x 140 x 95 mm	30 x 140 x 95 mm	65 x 36 x 140 mm	84 x 80 x 25 mm	84 x 80 x 25 mm
	Mounting Type	DIN-Rail/Wall mount	DIN-Rail/Wall mount	Desktop	DIN-Rail/Wall mount	DIN-Rail/Wall mount
	IP Rating	IP30	IP30	-	IP30	IP30
Power	Power Input Voltage	24 - 48V <sub>DC</sub>	24 - 48V <sub>DC</sub>	100 - 240V <sub>DC</sub>	54 - 57V <sub>DC</sub>	54 - 57V <sub>DC</sub>
	Power Consumption	33.36W	33.36W	<36W	Max 92W	Max 92W
	Reverse Protection	✓	✓	-	✓	✓
Certification	UL60950-1	-	-	UL62368	UL62368	UL62368
	FCC	✓	✓	✓	✓	✓
	CE	✓	✓	✓	✓	✓



Model		EKI-2701PSI	BB-EP5G202
Connectivity	10/100/1000Based-Tx, fixed	1	1
	10/100/1000Base-T PoE, Fixed	1	1
Physical	Dimensions (WxHxD) mm	37x140x95	30x140x95
	Mounting Type	DIN-rail/Wall mount	DIN rail (sold separately)
	IP rating	IP30	IP30
Power	Power Input voltage	44-57V <sub>DC</sub>	48V <sub>DC</sub>
	PoE output power	12.95 W @24 V <sub>DC</sub>	25W @24 V <sub>DC</sub>
	Reverse protection	Power isolation & short circuit protection	✓
Certification	UL60950-1	✓	-
	UL508	-	✓
	UL-C1D2	-	-
	FCC	✓	-
	CE	✓	✓

✓: supported, - : not supported, Δ : optional

## SFP Modules

The small form-factor pluggable (SFP) is a hot-swappable optical module transceiver in a compact size and a variety of transmitter and receiver specifications for data communications. They are used for when a transmission service is needed between points further than 100 meters beyond where traditional copper cables can reach, SFP modules can easily overcome these problems.



### Industrial Grade 1.25 Gbps SFP Modules w/ DDM

Part Number	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)
<a href="#">SFP-GMM-550</a>	850 nm	Multi-Mode	550 m	LC	-17
<a href="#">SFP-GMM-2K</a>	1310 nm	Multi-Mode	2 km	LC	-19
<a href="#">SFP-GSM-20K</a>	1310 nm	Single-Mode	20 km	LC	-23
<a href="#">SFP-GSM-30K</a>	1310 nm	Single-Mode	30 km	LC	-24
<a href="#">SFP-GSM-40K</a>	1550 nm	Single-Mode	40 km	LC	-24
<a href="#">SFP-GSS-40KTX-LC</a>	1310T/1550R	Single-Strand	40 km	LC	-23
<a href="#">SFP-GSS-40KRX-LC</a>	1550T/1310R	Single-Strand	40 km	LC	-23
<a href="#">SFP-GS4-70KTX-LC</a>	1490T/1550R	Single-Strand	70 km	LC	-24
<a href="#">SFP-GS4-70KRX-LC</a>	1550T/1490R	Single-Strand	70 km	LC	-24
<a href="#">SFP-GSS-20KTX</a>	1310T/1550R	Single-Strand	20 km	SC	-23
<a href="#">SFP-GSS-20KRX</a>	1550T/1310R	Single-Strand	20 km	SC	-23
<a href="#">SFP-GSS-40KTX</a>	1310T/1550R	Single-Strand	40 km	SC	-23
<a href="#">SFP-GSS-40KRX</a>	1550T/1310R	Single-Strand	40 km	SC	-23
<a href="#">SFP-GS4-70KTX</a>	1490T/1550R	Single-Strand	70 km	SC	-24
<a href="#">SFP-GS4-70KRX</a>	1550T/1490R	Single-Strand	70 km	SC	-24

### Industrial Grade 1.25 Gbps SFP Modules

Part Number	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)
<a href="#">SFP-GSX/LCI-AE</a>	850 nm	Multi-Mode	550 m	LC	-17
<a href="#">SFP-GLX/LCI-10E</a>	1310 nm	Single-Mode	10 km	LC	-20
<a href="#">SFP-GLX/LCI-20E</a>	1310 nm	Single-Mode	20 km	LC	-23
<a href="#">SFP-GLX/LCI-40E</a>	1310 nm	Single-Mode	40 km	LC	-23

### 1.25 Gbps SFP Modules

Part Number	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)
<a href="#">SFP-GSX/LC-AE</a>	850 nm	Multi-Mode	550 m	LC	-17
<a href="#">SFP-GLX/LC-10E</a>	1310 nm	Single-Mode	10 km	LC	-20
<a href="#">SFP-GLX/LC-20E</a>	1310 nm	Single-Mode	20 km	LC	-23
<a href="#">SFP-GLX/LC-40E</a>	1310 nm	Single-Mode	40 km	LC	-23



### Industrial Grade 100-155 Mbps SFP Modules w/ DDM

Part Number	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)
<a href="#">SFP-FMM850-2K</a>	850 nm	Multi-Mode	2 km	LC	-26
<a href="#">SFP-FMM-2K</a>	1300 nm	Multi-Mode	2 km	LC	-32
<a href="#">SFP-FSM-20K</a>	1310 nm	Single-Mode	20 km	LC	-35
<a href="#">SFP-FSM-40K</a>	1310 nm	Single-Mode	40 km	LC	-36
<a href="#">SFP-FSM-80K</a>	1310 nm	Single-Mode	80 km	LC	-36
<a href="#">SFP-FSS-20KTX</a>	1310T/1550R	Single-Strand	20 km	SC	-32
<a href="#">SFP-FSS-20KRX</a>	1550T/1310R	Single-Strand	20 km	SC	-32
<a href="#">SFP-FSS-40KTX</a>	1310T/1550R	Single-Strand	40 km	SC	-34
<a href="#">SFP-FSS-40KRX</a>	1550T/1310R	Single-Strand	40 km	SC	-34

















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# Industrial Network Infrastructure







## Industrial Grade 100-155 Mbps SFP Modules

Part Number	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)
 SFP-FXM/LCI-AE	1310 nm	Multi-Mode	2 km	LC	-32
 SFP-FXS/LCI-30E	1310 nm	Single-Mode	30km	LC	-34




## 10 Gbps SFP+ & XFP Modules w/ DDM

Part Number	Wavelength	Optical Mode	Distance	Connector	Sensitivity (dB)
 SFP-XMM-33-XFP	850 nm	Multi-Mode	33 m	LC	-9.9
 SFP-XSM-10K-XFP	1310 nm	Single-mode	10 km	LC	-14.4
 SFP-XSM-40K-XFP	1550 nm	Single-mode	40 km	LC	-16
 SFP-XSM-80K-XFP	1550 nm	Single-mode	80 km	LC	-23
 SFP-XMM-33	850 nm	Multi-Mode	33 m	LC	-9.9
 SFP-XSM-10K	1310 nm	Single-mode	10 km	LC	-14.4
 SFP-XMM-LC-400	850nm	Multi-mode	400 m	LC	-11.1
 SFP-XSM-LC-10K	1310nm	Single-mode	10 km	LC	-12.6
 SFP-XSM-LC-20K	1310nm	Single-mode	20 km	LC	-12.6
 SFP-XSM-LC-40K	1310nm	Single-mode	40 km	LC	-12.6
 SFP-XSM5-LC-40K	1550nm	Single-mode	40 km	LC	-15.5
 SFP-XSM-LC-80K	1550nm	Single-mode	80 km	LC	-23
 SFP-XSS-10KTX-LC	1270T/1330R	Single-mode	10 km	LC	-15.5
 SFP-XSS-10KRX-LC	1330T/1270R	Single-mode	10 km	LC	-15.5
 SFP-XSS-40KTX-LC	1270T/1330R	Single-mode	40 km	LC	-15.5
 SFP-XSS-40KRX-LC	1330T/1270R	Single-mode	40 km	LC	-15.5

## Industrial Grade 10 Gbps SFP+ & XFP Modules w/ DDM

Part Number	Wavelength	Optical Mode	Distance	Connector	Sensitivity (dB)
 SFP-XMM-LCI-400	850nm	Multi-mode	400 m	LC	-11.1
 SFP-XSM-LCI-10K	1310nm	Single-mode	10 km	LC	-12.6
 SFP-XSM-LCI-20K	1310nm	Single-mode	20 km	LC	-12.6
 SFP-XSM-LCI-40K	1310nm	Single-mode	40 km	LC	-12.6
 SFP-XSM5-LCI-40K	1550nm	Single-mode	40 km	LC	-15.5
 SFP-XSM-LCI-80K	1550nm	Single-mode	80 km	LC	-23

## Copper SFP Modules

Part Number	Speed	Distance	Wide Temp.
 SFP-GTX	10/100/1000 Mbps	100 m	-
 SFP-GTXB	1000 Mbps	100 m	-
 SFP-GTX/RJ45I-AE	1000 Mbps	100 m	✓
 SFP-10GTX	1G/2.5G/5G/10Gbps	100m-1G; 50m-2.5/5G; 10m-10G	-
 SFP-10GTXI	1G/2.5G/5G/10Gbps	100 m	✓

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

# Intelligent Telematics Gateways

Advantech Model WISE-4773 series, Intelligent OBD Cellular Data Interface, collects data from GPS, Bluetooth beacons, and your vehicle's OBD port. The plug-and-play, self-installing device wirelessly transmits the data over the new G5 CAT M1 cellular network to your fleet management or analytics systems. Transport Layer Security (TLS) allows secure data connections to a configurable IP address via JSON over HTTPS and/or Cloud Management Platform for device management. All data in and out of the device is secure and encrypted.



## WISE-4773-S52U - Additional Features

- European vehicle support
- Bluetooth beacon forwarding
- WiFi access point supporting up to 8 devices on a WLAN
- One BT serial connection profile
- One smart peripheral on either WiFi or Bluetooth communicating on an API
- Configure which peripheral port is smart
- Digital input report on change
- Digital output set from cellular connection
- User API

## 👉 WISE-4773-S51U and 👉 WISE-4773-S52U

Specification	Description
Vehicle Protocols	J1939, J1708/J1587, OBDII (NATAM)
Cellular	LTE, Category-M1, LTE CATM bands (USA), AT&T
Accelerometer	Digital, 3-axis, self-orientating (acceleration, braking, cornering)
Bluetooth	BT 4.1 (BTLE)
GPS/GLONASS/AGPS	At least 2.5 M CEP location accuracy
Wi-Fi	802.11 b/g/n/e/i, AP or Client
Internal Antennas	GPS, Cellular, Bluetooth, Wi-Fi
Data Rate	Up to 15 Mbps
Transmit Power	1MB: 12.5dBm; 54MB: 12.25dBm; 65MB: 9.25dBm
Receive Sensitivity	1MB: -91dBm; 54MB: -75dBm; 65MB: -71dBm
Port Connector	(4) Terminal Block (digital I/O) (1) J1962 (OBD) / ISO 15031 Type A
LEDs	Green = cellular network connection Red = vehicle network connection
Buzzer Indicator	Hard braking, acceleration, cornering
Security	TLS cellular connection. Tamper alert. Automatic Ignition detection.
Configuration	Over cellular or CLI.
Data Transmission	Automatic cellular transmission. Configurable interval. Store-&-forwarding if cellular connection not available.

## Common Features

Specification	Description	
Digital Outputs	Output Voltage Range	0 - 30 V DC
	Output Type	Open drain
	Output Current	Not to be less than 100 mA
	Protection	Current limit protection
	Isolation	None
	Digital Inputs	Input Voltage Range
VIL		0.4 V, maximum
VIH		2.5 V, minimum
Pull-up Current		65 uA
Type		Sinking (NPN) Input
Isolation		None
Power Source		Direct power via OBD J1962P port Battery backup Low-power states.
Operating Voltage		9 to 36 V DC
Power Consumption		<5 mA @ 12V DC deep sleep <15 mA @ 12V DC network sleep <150 mA @ 12V DC active
Operating Temperature		-30 to +75°C (-22 to +167°F)
Enclosure Dimensions	68.6x48.3x25.4 mm (1.7x1.9x1.0 in) approx.	

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IoT Software Solutions

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Intelligent Edge DAQ Devices

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Serial Communication

# OBD2 Vehicle Converters

These Intelligent OBD vehicle data converters connect your PC, driver terminal, Java-enabled phone, or other on-board computing device to the OBD diagnostic bus of light-duty or heavy-duty vehicles. They enable the retrieval of the most commonly used parameters in telematics service provider (TSP) and fleet management system applications. With proprietary vehicle detection algorithm and embedded database, these converters provide a simple, operational protocol to communicate with the OBD bus on any compliant vehicle.



Model	BB-LD3IC-S	BB-LD3-1939P1D	BB-HD3-A3
Vehicle Interfaces	ISO 15765 (CAN), LSGMLAN, Ford Secondary CAN	ISO 15765 (CAN), LSGMLAN, Ford Secondary CAN	J1939 & J1708/J1587
OBD Data Support	2008 and newer light-duty vehicles	2008 and newer light-duty vehicles	1996 and newer heavy-duty vehicles
Host Connection	RS-232: DB9 female, DCE	J1939: DB9 female	RS-232: DB9 female, DCE
Ignition On / Signal Output	RS-232 CTS/DB9 Pin 6	-	-
Power Consumption	0.20W in Operating Mode 0.15W in Automatic Sleep Mode (Key Off)	0.2W in Operating Mode 0.1W in Automatic Sleep Mode (Key Off)	0.6W typical, 1.6W maximum (Key On)
Operating Voltage	8 to 30 V <sub>DC</sub>	8 to 30 V <sub>DC</sub>	10 to 42 V <sub>DC</sub>
Operating Temperature	-40 to +85°C (-40 to +185°F)	-40 to +85°C (-40 to +185°F)	-40 to +85°C (-40 to +185°F)
Enclosure Dimensions	68.6 x 48.3 x 25.4 mm (2.7 x 1.9 x 1.0 in)	104.1 x 43.2 x 20.3 mm (4.1 x 1.7 x 0.8 in)	104.1 x 43.2 x 20.3 mm (4.1 x 1.7 x 0.8 in)
Y-Cable	Integrated J1962/ISO 15031 Type B	Available J1962/ISO 15031 Type B	Available Deutsch 6, Deutsch 9, Deutsch 9 Type2
Available Form Factors	Device; embedded software	-	-
Regulatory & Testing	SAE J1113/41 - radiated RF interference SAE J1113/11 - load dump and transient protection SAE J1113/13 - ESD immunity IEC-60068-2-6 - vibration IEC-60068-2-27 - shock IEC-60068-2-32 - drop	SAE J1113/41 - radiated RF interference SAE J1113/11 - load dump and transient protection SAE J1113/13 - ESD immunity IEC-60068-2-6 - vibration IEC-60068-2-27 - shock IEC-60068-2-32 - drop	SAE J1113/41 - radiated RF interference SAE J1113/11 - load dump and transient protection SAE J1113/13 - ESD immunity IEC-60068-2-6 - vibration IEC-60068-2-27 - shock IEC-60068-2-32 - drop

✓: supported, -: not supported, Δ: optional

