

# Advantech Intelligent Power over Ethernet (PoE) Solution

**A Comprehensive Collection of PoE Devices Which Integrate Power and Data over One Ethernet Cable**

- Introduction of PoE
- System Diagrams
- PoE Product Selection Guide



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# What is Power over Ethernet (PoE)?

Power over Ethernet (PoE) is a technology that transmits electric power and data over one Ethernet cable to power devices. With PoE enabled, only a network connection is required.

## Without PoE

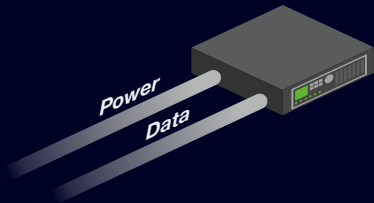
One cable for electric power, another for data transmission

- Higher cable costs
- Deployment space needed
- Occupies I/O space on device

## With PoE

One cable, two functions: electric power + data together

- Lower cable costs
- Less space needed
- Releases I/O space for other ports



# Device Types in PoE Technology

PoE technology has been divided into two main power types: PSE and PD. Some devices, such as Ethernet switches, can be categorized by either PSE or PD type.

## PSE= Power Sourcing Equipment

Power sourcing equipment (PSE) is a PoE provider. It delivers power and data to PDs .

## PD= Powered Device

A powered device (PD) is a PoE receiver. It receives power and data from PSEs.

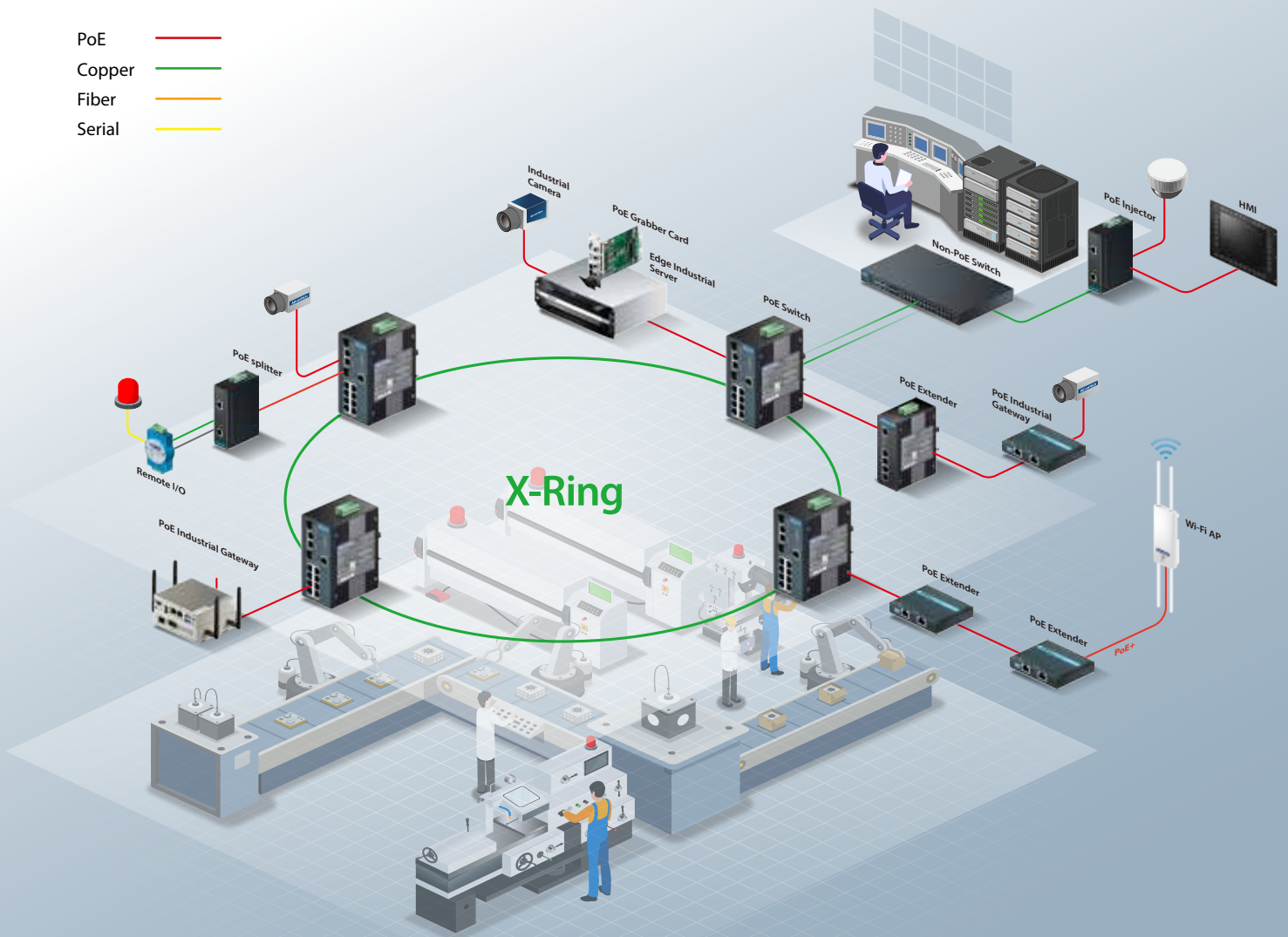


## PoE Standards

Standard	P.S.E maximum output power	P.D. maximum input power	Cable category	Cable length	Power over
IEEE802.3af	15.4W	12.95W	Cat3	100m	2 pairs
IEEE802.3at	30W	25.5W	Cat5e	100m	2 pairs
uPoE	60W	51W	Cat5e	100m	4 pairs
Power over HDBaseT (PoH)	Type 2: 60W Type 3: 95W	Type 2: 52W Type 3: Depends on cable length	Cat5e/ Cat6	100m	4 pairs
IEEE802.3bt	90W	71.3W	Cat5e/ Cat6	100m	2 & 4 pairs

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



## PoE Power Source Equipment (PSE)



PoE switch



PoE media converter



PoE extender



PoE injector



EN50155 PoE Ethernet switch



EN50155 PoE on-board controller



PoE industrial PC



PoE compact vision system



PoE frame grabber card

## PoE Powered Device (PD)



PoE splitter



PoE extender



PoE Wi-Fi AP



PoE industrial IoT gateway



PoE industrial camera



Human-machine Interface

# Unmanaged PoE Ethernet Switch

Advantech's unmanaged PoE switches provide multiple switch ports with PoE injector functionality with up to 30W per port for powering IEEE802.3af/at-compliant devices (PD) via an Ethernet cable, eliminating the need for additional wiring. With PoE injector support, all ports are available to contribute to delivering a centralized power supply for automation applications. Furthermore, our PoE switches come with a compact metal housing with an IP30 rating, making them suitable for use in dusty environment.

## 24/48VDC dual power inputs

Advantech unmanaged PoE Ethernet switches support redundant power inputs. They can work with not only 48VDC but also 24VDC (EKI-2706G-1GFPI-BE, EKI-2706G-2FPI, EKI-2706G-2GPI)

## Plug-and-Play

- Minimal setup time
- No compatibility issues
- Compatible with all types of network
- Compact format for fast installation

## SNMP (simple network management protocol) compliant

Advantech EKI-5624PI and EKI-5729PI are industrial unmanaged switches that support SNMP. It allows for a manageable network system

## Robust Application Solutions

- Din-Rail installation
- Supports -40~75°C wide temperature operation
- IP30 with metal shell enclosure

## PoE Unmanaged Ethernet Switch

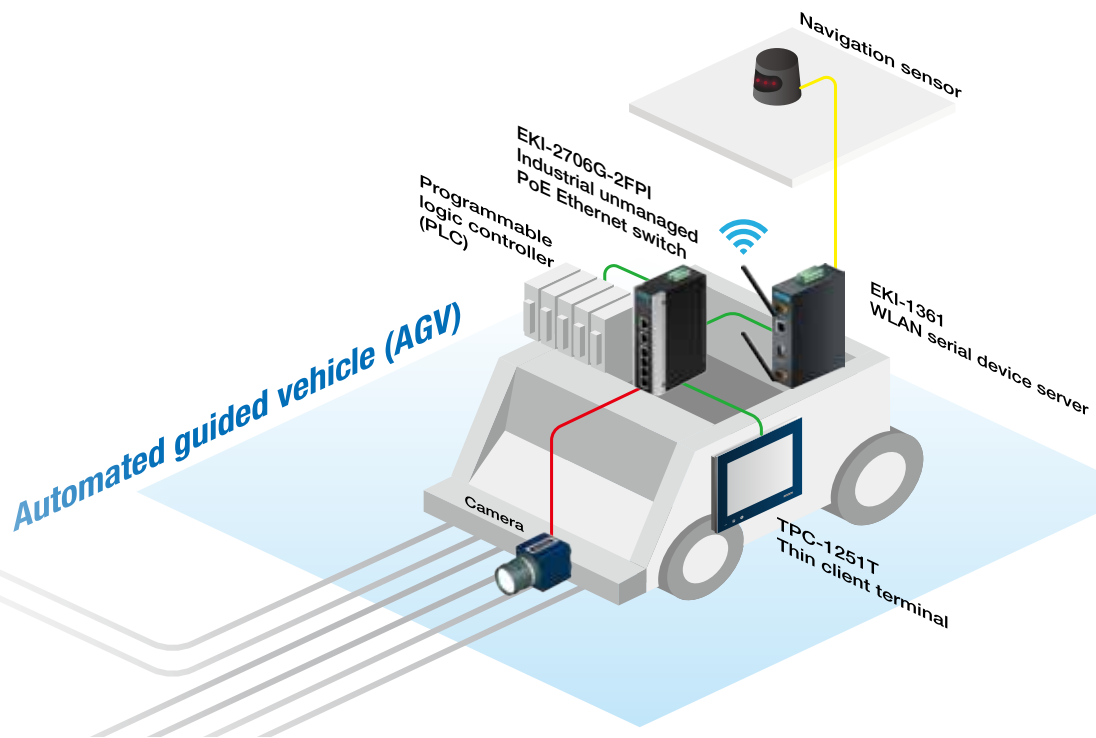


Model Name	EKI-2705E-1GPI-A	EKI-2705G-1GPI-A	EKI-2706E-1GFPI-BE	EKI-2706G-1GFPI-BE	
Description	4FE PoE+1GE Unmanaged Ethernet Switch	4GE PoE+1GE Unmanaged Ethernet Switch	4FE PoE+1G+1G SFP Unmanaged Ethernet Switch	4GE PoE+1G+1G SFP Unmanaged Ethernet Switch	
IEEE802.3af	✓	✓	✓	✓	
	✓	✓	✓	✓	
	-	-	-	-	
Interface	Number of Ports	5	6	6	
	PoE (10/100 Mbps)	4	-	4	
	PoE (10/100/1000 Mbps)	-	4	-	4
	10/100Base-T (X)	-	-	-	-
	10/100/1000Base-T (X)	1	1	1	1
	1000Base-SX/LX/LHX/XD/ZX/EZX	-	-	1	1
Power	Input Voltage	24/48V <sub>DC</sub>	24/48V <sub>DC</sub>	24/48V <sub>DC</sub>	
	Power consumption	2W	2W	2W	
	PoE Budget	60°C -90W 75°C -60W	60°C -90W 75°C -60W	60°C -90W 75°C -60W	60°C -90W 75°C -60W
	Relay Output	✓	✓	✓	✓
Mechanism	DIN-rail Mount	✓	✓	✓	
	Wall Mount	✓	✓	✓	
	Rack Mount	-	-	-	-
	Dimensions (WxHxD) mm	30 x 140 x 95	30 x 140 x 95	30 x 140 x 95	30 x 140 x 95
Protection	IP Level	IP30	IP30	IP30	
	ESD (Ethernet)	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓
	Overload current	✓	✓	✓	✓
Operating Temperature	Power Reverse	✓	✓	✓	
	-10 ~ 60°C (14 ~ 140°F)	-	-	-	
Certifications	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	
	CE	✓	✓	✓	
	FCC	✓	✓	✓	
	IEC/EN 60950	-	-	-	
	UL 62368	✓	✓	✓	
	IEC/EN 62368	✓	✓	✓	
	UL61010-2-201	-	-	-	
	NEMA TS2, EN50121-4	-	-	-	
e-Mark	-	-	-		

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

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



## PoE Unmanaged Ethernet Switch



Model Name	EKI-2706G-2FPI	EKI-2706G-2GPI	EKI-5729PI	EKI-2712G-4FPI	
Description	4GE PoE+ 2G SFP Unmanaged Ethernet Switch	4GE PoE+2GE Unmanaged Ethernet Switch	8GE PoE+2GE Unmanaged Ethernet Switch	8GE PoE+4G SFP Unmanaged Ethernet Switch	
Interface	IEEE802.3af	✓	✓	✓	
	IEEE802.3at	✓	✓	✓	
	IEEE802.3bt	-	-	-	-
	Number of Ports	6	6	10	12
	PoE (10/100 Mbps)	-	-	-	-
	PoE (10/100/1000 Mbps)	4	4	8	8
	10/100Base-T (X)	-	-	-	-
Power	10/100/1000Base-T (X)	-	2	-	
	1000Base-SX/LX/LHX/XD/ZX/EZX	2	-	-	4
	Input Voltage	24/48V <sub>DC</sub>	24/48V <sub>DC</sub>	12/24V <sub>DC</sub>	48V <sub>DC</sub>
	Power consumption	-	-	6W	12.1W
	PoE Budget	75°C -120W	75°C -120W	75°C -60W @ 24V 75°C -50W @ 12V	75°C -240W
	Relay Output	✓	✓	✓	✓
	Mechanism	DIN-rail Mount	✓	✓	✓
Wall Mount		✓	✓	✓	
Rack Mount		-	-	-	-
Dimensions (WxHxD) mm		44 x 140 x 130mm	44 x 140 x 130mm	74 x 152 x 105 mm	74 x 152 x 105 mm
IP Level		IP30	IP30	IP30	IP30
Protection	ESD (Ethernet)	✓	✓	✓	
	Surge (EFT for power)	✓	✓	✓	
	Overload current	✓	✓	✓	
	Power Reverse	✓	✓	✓	
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	-	-	-	
	-40 ~ 75°C (-40 ~ 167°F)	✓	✓	✓	
Certifications	CE	✓	✓	✓	
	FCC	✓	✓	✓	
	IEC/EN 60950	-	-	✓	-
	UL 62368	✓	✓	-	-
	IEC/EN 62368	-	-	-	-
	UL61010-2-201	-	-	✓	✓
	NEMA TS2, EN50121-4	✓	✓	-	✓
	e-Mark	-	-	✓	-

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# Managed PoE Ethernet Switch

Advantech's EKI-7700 PoE series offers a wide range of industrial DIN-rail and rack mount managed Ethernet switches for various network deployment requirements. With different models provided, Advantech's comprehensive managed switch product lines include copper wire and fiber optic connections in Gigabit as well as fast Ethernet options with essential management and control features. EKI-7700 is ideal for network applications in harsh environmental conditions.

## Multiple choices for PoE port density and power budget

- Supports up to 30W power output per port at the same time
- Works under harsh environmental conditions
- EKI-7712G-4FMPI achieves 90W output per 802.3bt port
- Reduces cost of onsite power supply configurations

## Support X-Ring Pro for network redundancy

- Ring configuration allows for instant routes back when there's a network connectivity failure
- Comes with a network recovery time of less than 20ms
- Faster reconnect time than RSTP or STP mechanisms
- Also support RSTP/STP with 3rd party Ethernet switch

## Industrial Ethernet Solutions



Model Name	EKI-7708E-4FP EKI-7708E-4FPI	EKI-7708G-4FP EKI-7708G-4FPI	EKI-7708G-2FVPI	EKI-7710E-2CP EKI-7710E-2CPI	EKI-7710G-2CPI EKI-7710G-2CP	
<b>Description</b>	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	
<b>Interface</b>	Number of Ports	8	8	10	10	
	10/100Base-T (X)	-	-	-	-	
	100BaseFX	-	-	-	-	
	10/100/1000Base-T (X)	-	-	4	2 (combo)	2 (combo)
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	4	4 (2SFP+2VDSL)	2 (combo)	2 (combo)
	PoE (10/100 Mbps)	4	-	-	8	-
	PoE (10/100/1000 Mbps)	-	4	4	-	8
	Console	✓	✓	✓	✓	✓
<b>Power</b>	Power Input	48 V <sub>DC</sub>	48 V <sub>DC</sub>	48 V <sub>DC</sub>	24~48 V <sub>DC</sub>	24~48 V <sub>DC</sub>
	Relay Output	✓	✓	✓	-	-
	Power Budget	120W	120W	120W	120W	120W
<b>Mechanism</b>	DIN-rail Mount	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓
<b>Protection</b>	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓
<b>Operating Temperature</b>	-10 ~ 60°C (14 ~ 140°F)	EKI-7708E-4FP	EKI-7708G-4FP	-	EKI-7710E-2CP	EKI-7710G-2CP
	-40 ~ 75°C (-40 ~ 167°F)	EKI-7708E-4FPI	EKI-7708G-4FPI	✓	EKI-7710E-2CPI	EKI-7710G-2CPI
<b>Certifications</b>	CE	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓
	UL/UL 60950-1	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-
	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	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1

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### Manageable PoE functions

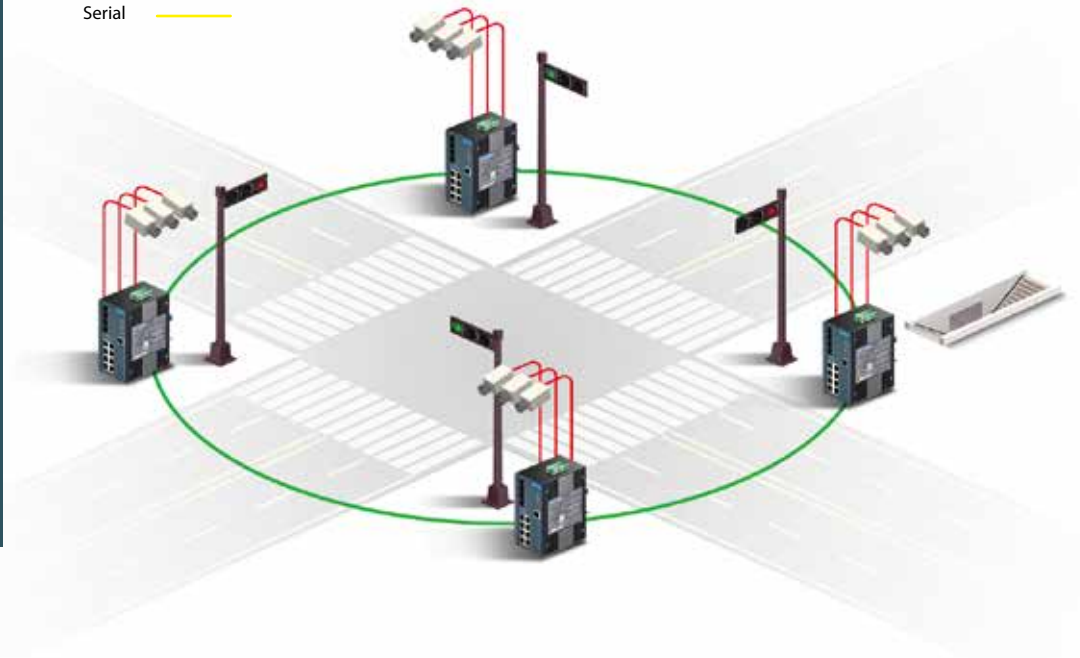
- Flexibly manage PoE settings for different P.D. power requirements
- Improve stability and security for both P.S.E and P.D. devices
- Best for field configuration because of its remote management

### IXM fast deployment for mass network configuration

- Advantech IXM function allows configuration settings be copied to hundreds of other switches
- Browser-based setting methods for easy management without the need of technicians

### System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



### Industrial Ethernet Solutions



Model Name	EKI-7712E-4FP EKI-7712E-4FPI	EKI-7712G-4FP EKI-7712G-4FPI	EKI-7712G-4FMPI	EKI-7712G-2FVPI	EKI-7720G-4FPI	
Description	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	12	12	12	20	
	10/100Base-T (X)	-	-	-	-	
	100BaseFX	-	-	-	-	
	10/100/1000Base-T (X)	-	-	-	-	
	1000Base-SX/LX/LHX/XD/ZX/EZX	4	4	4	4 (2SFP+2VDSL)	4
	PoE (10/100 Mbps)	8	-	-	-	-
	PoE (10/100/1000 Mbps)	-	8	8	8	16
Console	✓	✓	✓	✓	✓	
Power	Power Input	48 V <sub>DC</sub>	48 V <sub>DC</sub>	53 ~ 57 V <sub>DC</sub>	48 V <sub>DC</sub>	55 V <sub>DC</sub>
	Relay Output	✓	✓	✓	✓	✓
	Power Budget	240W	240W	370W	240W	420W
Mechanism	DIN-rail Mount	✓	✓	✓	✓	✓
	Wall Mount	✓	✓	✓	✓	✓
Protection	ESD (Ethernet)	✓	✓	✓	✓	✓
	Surge (EFT for power)	✓	✓	✓	✓	✓
	Power Reverse	✓	✓	✓	✓	✓
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)	EKI-7712E-4FP	EKI-7712G-4FP	-	-	-
	-40 ~ 75°C (-40 ~ 167°F)	EKI-7712E-4FPI	EKI-7712G-4FPI	✓	✓	✓
Certifications	CE	✓	✓	✓	✓	✓
	FCC	✓	✓	✓	✓	✓
	UL/UL 60950-1	-	-	-	-	-
	Class 1, Division 2	-	-	-	-	-
Others	NEMA TS2 EN 50121-4 LVD 62368-1	NEMA TS2 EN 50121-4 LVD 62368-1	UL 62368-1 NEMA TS2 EN50121-4	NEMA TS2 EN 50121-4 LVD 62368-1	UL 62368-1 NEMA TS2 EN50121-4	

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

# PoE Media Converter

A fiber-to-Ethernet PoE media converter can convert fiber optic to Ethernet and deliver power on the same Ethernet cable. Advantech's media converters provide a wide choice from commercial to industrial grade. The PoE power supply type media converters are available for a variety of usage scenarios such as AC power supply, DC power supply, and AC adapters. They also support Link Fault Passthrough for monitoring the links between converters and local devices.

## Extend Network Coverage up to 80 km

- No need to replace any existing devices
- Extends the transmission distance up to 80km
- Free from electronic interference

## Variety of Power Sources

- Universal AC power adapter
- DC power input via terminal block
- PoE-PD input

## Reliable Ethernet-to-Fiber Solutions

- Ultra-small industrial media converters measuring only 3.5 x 2 inches
- Easy installation in every corner
- Plug-and-play feature that increases space and power usage efficiency

## Smart Wiring Options for Various Application Needs

- Fiber-to-copper deployment
- Copper-to-fiber-to-copper deployment

## Media Converter with PoE, PoE+ & PoE++



	IMC-390-MM	IMC-390-MI-PS	IMC-390-SM	IMC-380-SFP	IMC-390-SFP	IMC-595MPI
Fiber Mode	Multi-mode 850nm	Multi-mode 1310nm	Single-mode 310nm	SFP	SFP	SFP
Transmission Distance	550m	2km	15km	Various	Various	Various
I/O Port	2 x 10/100/1000BASE-T		2 x 10/100/1000BASE-T		2 x 10/100/1000BASE-T	
PoE Port	2 x PoE+	2 x PoE+	2 x PoE+	1 x PoE	2 x PoE+	2 X PoE++
Operating Temperature	DC: 0~70 °C AC Adapter: 0~50 °C			DC: -40~75 °C AC Adapter: -10~40 °C		
Power Input	DC: 51~57V / AC Adapter			DC: 55~57V / AC Adapter		
Dimension	2.032 x 9.258 x 9.7cm			2.1 x 9.25 x 9.8 cm		
Certifications	CE/ FCC /UL62368 /NEMA TS2			CE/ FCC /UL62368	CE/ FCC /UL62368 / NEMA TS2	CE/ FCC

## Media Converter with PoE+

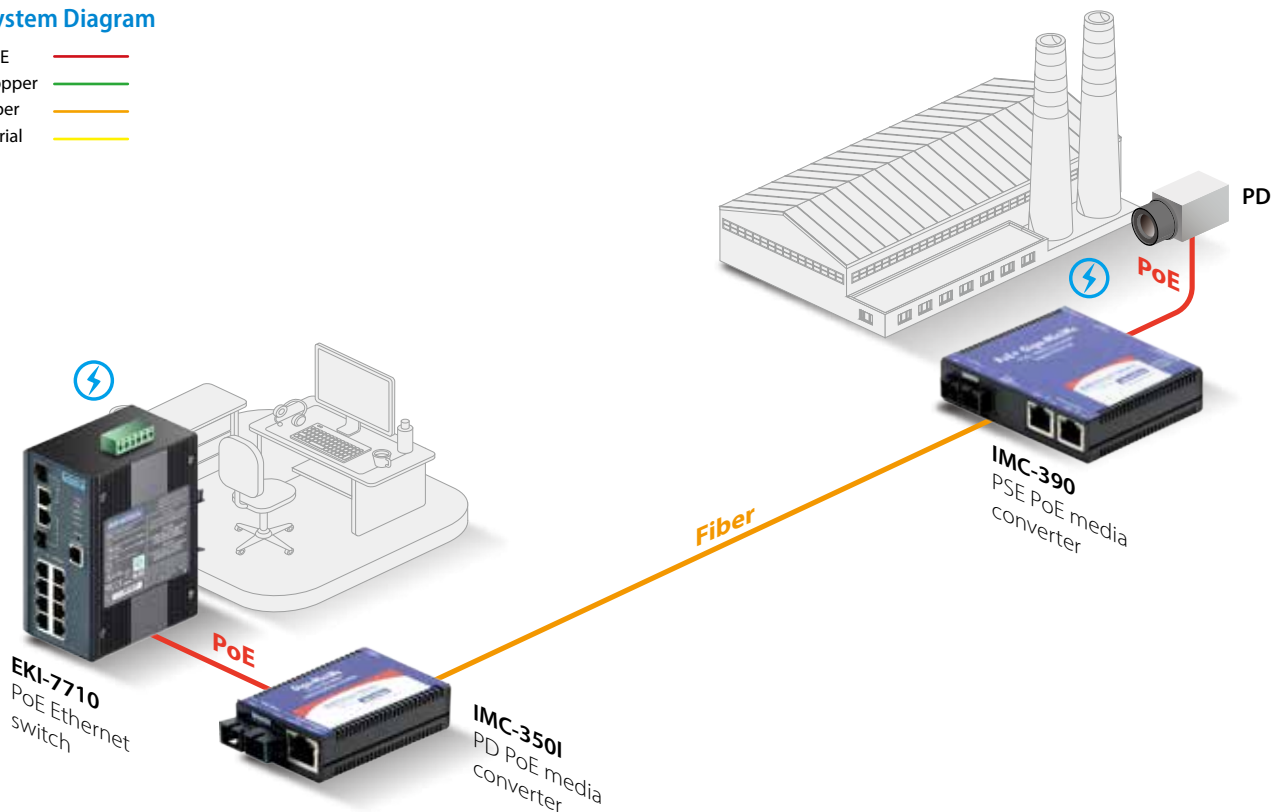


	EKI-2741FHPI	EKI-2741FPI	EKI-2742FPI
Fiber Mode	SFP	SFP	SFP
Transmission Distance	Various	Various	Various
I/O Port	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T
PoE Port	1xPoE+ (60w)	1xPoE+	2xPoE+
Operating Temperature	-40~75 °C	-40~75 °C	-40~75 °C
Power Input	48 V <sub>DC</sub>	48 V <sub>DC</sub>	48 V <sub>DC</sub>
Dimension	3.67 x 10.84 x 10.35 cm	3.67 x 10.84 x 10.35 cm	3.67 x 10.84 x 10.35 cm
Certifications	CE/FCC/UL508	CE/FCC/UL508	CE/FCC/UL508



## System Diagram

- PoE —
- Copper —
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- Serial —



## SFP modules

Part Number	Speed	Wavelength	Optical Mode	Distance	Optical Connector	Sensitivity (dB)	Operating Temp.
SFP-FMM850-2K	10 - 155 Mbps	850 nm	Multi-Mode	2 km	LC	-26	-40 to +85 °C (-40 to +185 °F)
SFP-FMM-2K	10 - 155 Mbps	1300 nm	Multi-Mode	2 km	LC	-32	-40 to +85 °C (-40 to +185 °F)
SFP-FSM-20K	10 - 155 Mbps	1310 nm	Single-Mode	20 km	LC	-35	-40 to +85 °C (-40 to +185 °F)
SFP-FSM-40K	10 - 155 Mbps	1310 nm	Single-Mode	40 km	LC	-36	-40 to +85 °C (-40 to +185 °F)
SFP-FSM-80K	10 - 155 Mbps	1310 nm	Single-Mode	80 km	LC	-36	-40 to +85 °C (-40 to +185 °F)
SFP-GMM-550	1.25 Gbps	850 nm	Multi-Mode	550 m	LC	-17	-40 to +85 °C (-40 to +185 °F)
SFP-GMM-2K	1.25 Gbps	1310 nm	Multi-Mode	2 km	LC	-19	-40 to +85 °C (-40 to +185 °F)
SFP-GSM-20K	1.25 Gbps	1310 nm	Single-Mode	20 km	LC	-23	-40 to +85 °C (-40 to +185 °F)
SFP-GLX/LCI-20E	1.25 Gbps	1310 nm	Single-Mode	20 km	LC	-23	0 to +70 °C (+32 to +158 °F)
SFP-GLX/LC-20E	1.25 Gbps	1310 nm	Single-Mode	20 km	LC	-23	-40 to +85 °C (-40 to +185 °F)
SFP-GSM-30K	1.25 Gbps	1310 nm	Single-Mode	30 km	LC	-24	-40 to +85 °C (-40 to +185 °F)
SFP-GSM-40K	1.25 Gbps	1550 nm	Single-Mode	40 km	LC	-24	-40 to +85 °C (-40 to +185 °F)
SFP-GXD/LC-50E	1.25 Gbps	1550 nm	Single-Mode	50 km	LC	-23	0 to +70 °C (+32 to +158 °F)
SFP-GXD/LCI-50E	1.25 Gbps	1550 nm	Single-Mode	50 km	LC	-23	-40 to +85 °C (-40 to +185 °F)
SFP-GZX/LC-70E	1.25 Gbps	1550 nm	Single-Mode	70 km	LC	-24	0 to +70 °C (+32 to +158 °F)
SFP-GZX/LCI-70E	1.25 Gbps	1550 nm	Single-Mode	70 km	LC	-24	-40 to +85 °C (-40 to +185 °F)
SFP-GZX/LCI-80E	1.25 Gbps	1550 nm	Single-Mode	80 km	LC	-24	-40 to +85 °C (-40 to +185 °F)
SFP-GZX/LC-110E	1.25 Gbps	1550 nm	Single-Mode	110 km	LC	-30	0 to +70 °C (+32 to +158 °F)
SFP-GZX/LCI-110E	1.25 Gbps	1550 nm	Single-Mode	110 km	LC	-30	-40 to +85 °C (-40 to +185 °F)

# PoE Injector

PoE injector is a device that injects power and data into one cable for end PoE PD. When deploying extra PD devices like PoE IP cameras to existent network structures, a power source is the most important factor to think about. If the existent network switches are non-PoE ones, and you just need one single port for your one PoE-powered device, PoE injector will be the best choice in that you can easily link up the PoE device without upgrading the existent network infrastructure. Advantech's PoE injectors offer a wide lineup from commercial to industrial grade, with the PoE output power from 15Watt to 90Watt.

1. Supports both DC power input and AC adapter in for power redundancy in case of any unexpected power failure
2. Palm-sized housing design for high PoE power (up to 90W) with wide operating temperature support, making it the best for industrial harsh environments

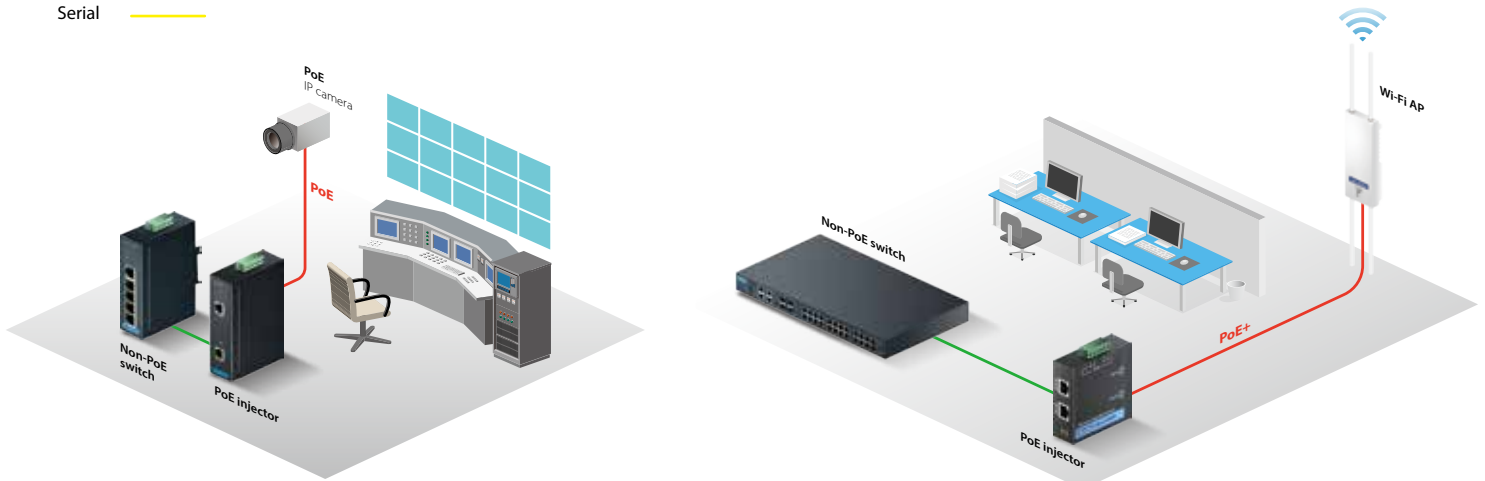
## PoE Injector



	EKI-2701HP-AC	EKI-2701HP(I)	EKI-2701MPI(-PS)	EKI-2701MPI-5G(-PS)
Transmission Distance	100m	100m	100m	100m
I/O Port	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T/2.5G/5G
PoE Port	1 x 802.3af/at	1 x 802.3af/at	1 x 802.3af/at	1 x 802.3at/af/bt
PoE Power Budget	30W	30W	90W	90W
Operating Temperature	0~40 °C	EKI-2701HPI: -40~75 °C EKI-2701HP: -10~60 °C	DC: -40~75 °C (EKI-2701MPI/EKI-2701MPI-5G) AC Adapter: 0~40 °C (EKI-2701MPI-PS/EKI-2701MPI-5GPS)	
Power Input	100~240 V <sub>AC</sub> / AC Adapter	DC: 24-48V	DC: 55~57V/AC Adapter	DC: 55~57V/AC Adapter
Dimension	6.5 x 3.6 x 14 cm	EKI-2701HPI: 3.7 x 140 x 9.5 cm EKI-2701HPL: 3 x 140 x 9.5 cm	8.4 x 8 x 2.5 cm	8.4 x 8 x 2.5 cm
Certifications	CE/ FCC /UL62368	CE/ FCC/ UL508	CE/FCC/UL62638	CE/FCC/UL62638

## System Diagram

- PoE —
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# PoE Splitter

PoE splitter works in the opposite way to an injector. It is powered by PoE and can divide PoE input into individual power output and data output. This device can therefore connect legacy or non-PoE compliant devices easily to a PoE network architecture and also supply power to the end device where power is beyond coverage, as alternative power source.

1. Accepts PoE from one cable and splits it into two cables (one for power and the other for data), allowing users to connect to non-PoE devices at ease.
2. Helps user facilitate the last-mile device installation when conducting network infrastructure upgrade projects by supplying power at 24VDC with 12.95W/25W.

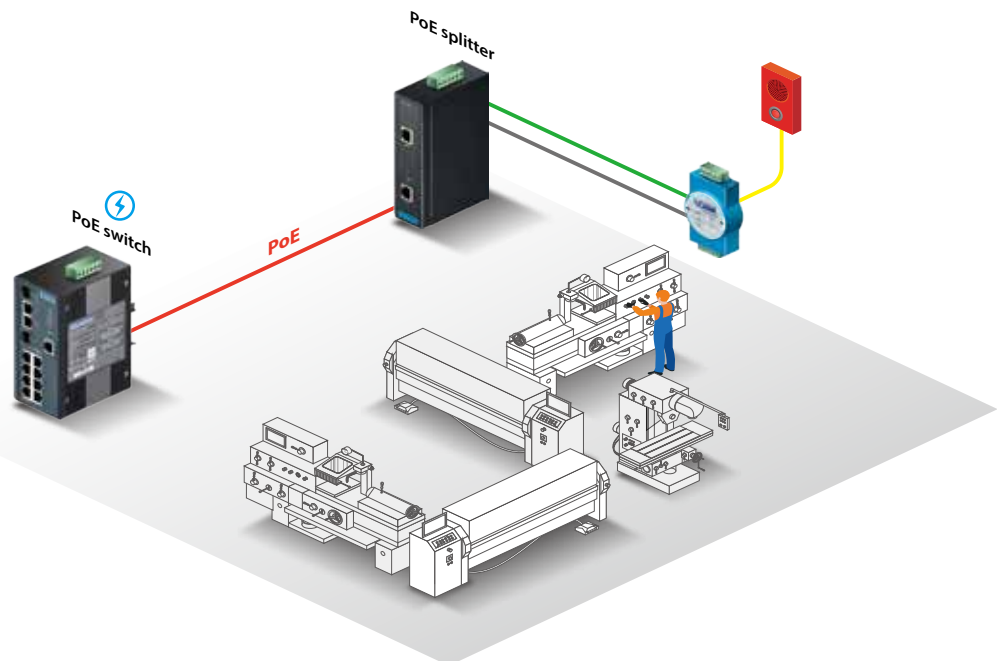
## PoE Splitter



	EKI-2701PSI	EKI-2711PSI
Transmission Distance	100m	100m
Port QTY	1 x 10/100/1000BASE-T	1 x 10/100/1000BASE-T
PoE Port	1 x PD PoE port	1 x PD PoE port
Output Power	12.95W@24V <sub>DC</sub>	25W@24V <sub>DC</sub>
Operating Temperature	-40~75 °C	-40~75 °C
Dimension	3.7 x 14 x 9.5cm	3.7 x 14 x 9.5cm
Certifications	CE/ FCC/UL60950	CE/FCC

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



# PoE Extender

The transmission distance of Ethernet cable is only 100-meters long. PoE extender can break the limitation of 100-meter transmission distance to 200m, 300m or even longer distance, widening power and data coverage with ease.

## Leverage legacy coaxial cables to upgrade network infrastructure

Upgrading network infrastructure usually necessitates costly rewiring and reconstruction. The IMC-150LPC supports both Ethernet and coaxial transmission, enabling network communication via extant underground coaxial cables. These features help users avoid halts in manufacturing and surveillance when upgrading network infrastructure.

## Industrial grade hardware design with EN50121-4 EMC certification

The IMC-150LPC series is EN50121-4 EMC certified and designed with industrial grade housing that supports broad temperature operation (-40 ~ 75 °C; -40 ~ 167 °F). This advanced durability makes IMC-150LPC suitable for applications in harsh environments such as trackside surveillance.

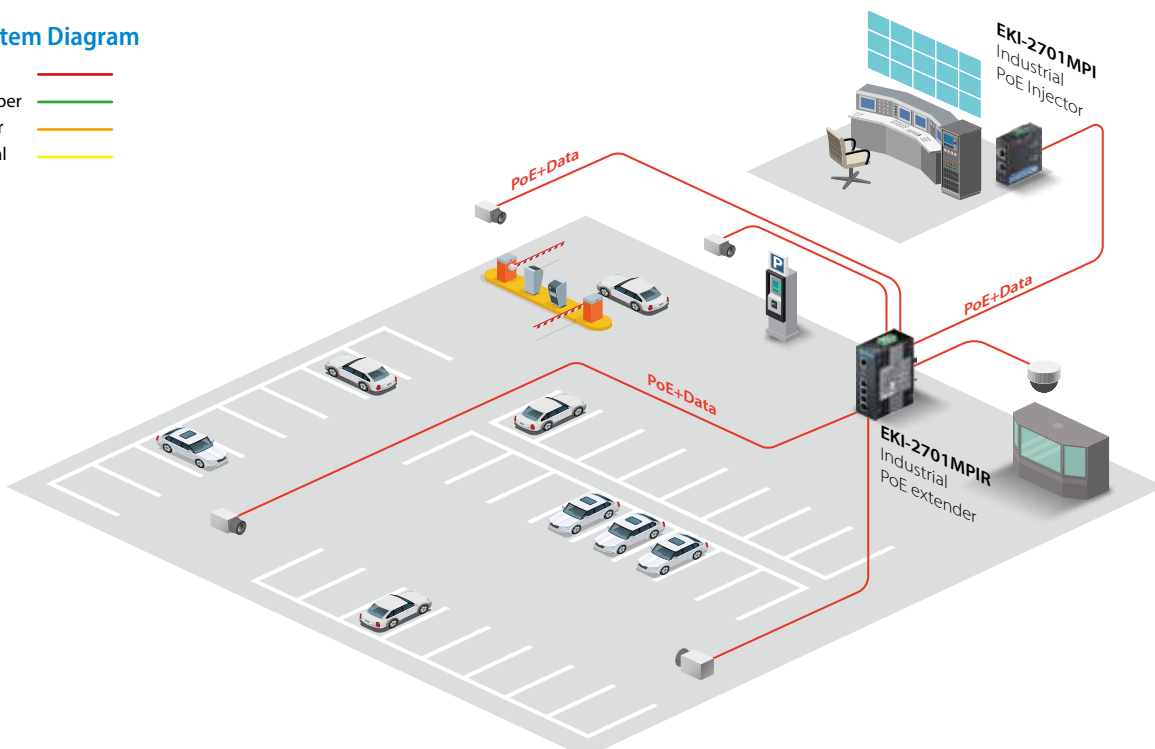
## PoE Extender



	<b>EKI-2701MPI-R</b>	<b>IMC-150LPI</b>	<b>IMC-150LPC-M</b> <b>IMC-150LPC-R</b>
Transmission Distance	100m	250m: 10Mbps 500m: 100Mbps	300m: 100Mbps (with BNC RG59 coaxial cable)
I/O Port	1 x HDBASE-T	1 x 10/100BASE-T	1 x 10/100BASE-T
PoE Port	4 x 802.3af	1 x 802.3af/at	1 x 802.3af/at
PoE Power Budget	15W x 4	30W	30W
Operating Temperature	-40~75°C	-40~75°C	-40~75°C
Power Input	DC: 50~57V	DC: 48V	DC: 55V
Dimension	4.86 x 14 x 9.5 cm	9.26 x 21 x 9.8 cm	8.4 x 8 x 2.5 cm
Certifications	CE/FCC	CE/ FCC/EN50121-4	CE/ FCC/EN50121-4

## System Diagram

- PoE ————
- Copper ————
- Fiber ————
- Serial ————



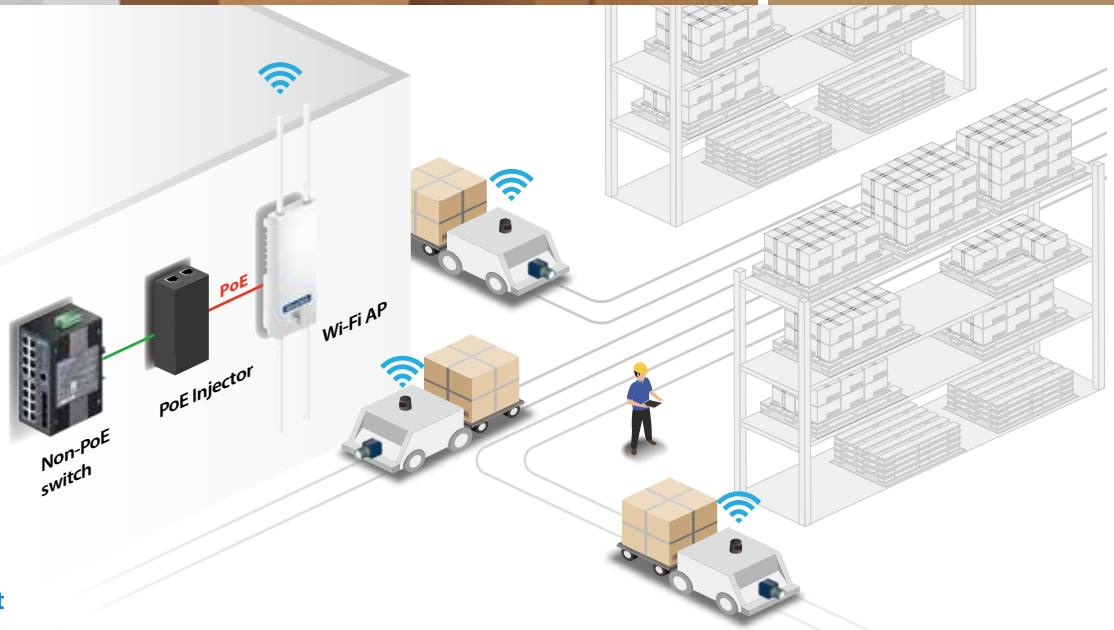
# PoE Wi-Fi Access Point

The EKI-6333AC-1GP and EKI-6333AC-1GPO are feature-rich wireless Access Points (AP) providing reliable wireless connectivity for indoor and outdoor environments. The PoE design enhances flexibility in the deployment of APs where the power supply is hard to fulfill. EKI-6333AC improves the reliability of wireless connectivity, especially in applications requiring high reliability and data throughput. To secure wireless connection, EKI-6333AC implements the latest encryption technologies, including WPA2/WPA/802.1x for powerful security authentication.

1. Supports 802.11ac MIMO 2x2
2. WLAN transmission rate up to 867 Mbps
3. MU-MIMO Improves Performance & Increases User Device Capacities
4. Supports secure access with WEP, 802.1x, WPA/WPA2-Personal, WPA/WPA2-Enterprise
5. Provides Web-based configuration
6. Supports dual bands 2.4/5GHz concurrent

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



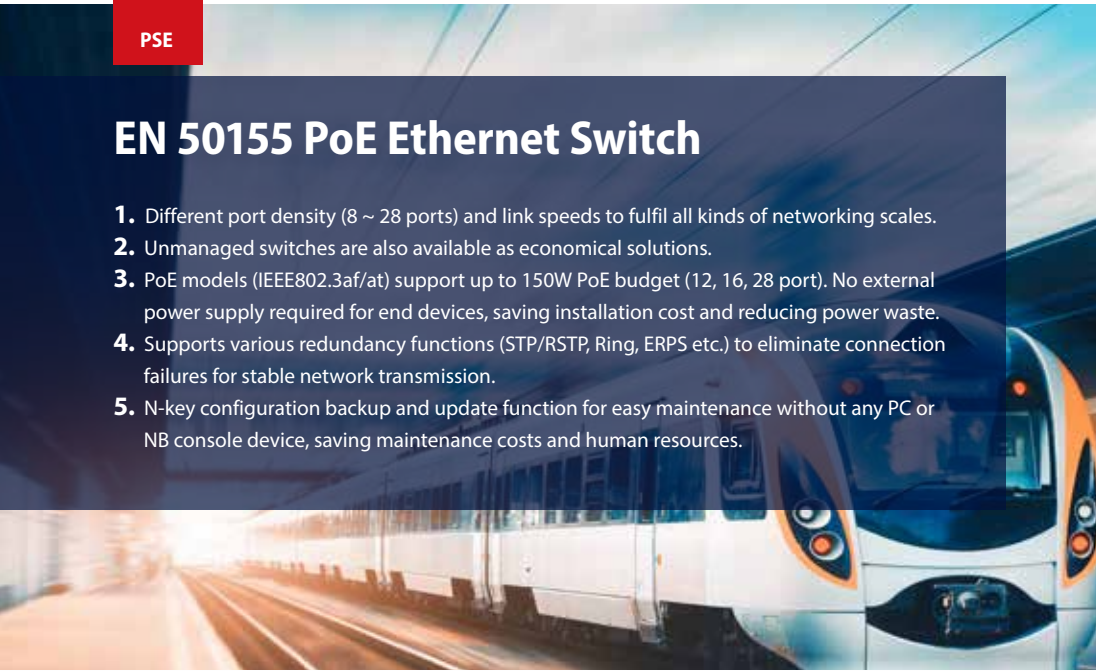
## PoE Wi-Fi Access Point

Model Name	EKI-6333AC-2G	EKI-6333AC-1GP-JA	EKI-6333AC-1GPO-JA	
Description	Industrial IEEE 802.11 Ind. 802.11 a/b/g/n/ac Wi-Fi AP/Client	Industrial IEEE802.11a/b/g/n/ac WIFI AP/Client	Industrial IEEE802.11a/b/g/n/ac WIFI AP/Client	
Connectivity	10/100/ 1000Based-T, Fixed	2	1	
Enclosure & Mount kit	Enclosure	IP55	✓	IP67
	T-rail	-	✓	-
	Wall	✓	✓	✓
	Pole Mount	✓	✓	✓
Power	Power Input (VDC)	-	12 V <sub>DC</sub>	-
	Power input (PoE)	Passive 54 V <sub>DC</sub>	802.3af	802.3af/at
	Power connector	RJ45	DC jack/RJ45	RJ45
Environment	Operating Temp.	-20 ~ 60 °C (-4 ~ 140 °F)	0~40 °C ( 32 ~104 °F)	-20~60 °C (-4 ~140 °F)
	Operating Humidity	10 ~ 95%	10-95%	10-90%
Software	Configuration Options	Web-based	web-based	web-based
	Authentication	User name/ Password	User name/ Password	User name/ Password
	Standard Operation Mode	Access Point, Client, Repeater mode	AP/Client/Repeater	AP/Client/Repeater
	Radio Number	2	2	2
WLAN	Security	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise	WEP, WPA/WPA2-Personal WPA/WPA2-Enterprise
RF	Frequency	2.4G/5GHz	2.4G/5GHz	2.4G/5GHz
	MIMO	2T2R	2T2R	2T2R
Certification	CE/ FCC	TELEC	CE/TELEC	

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

# EN 50155 PoE Ethernet Switch

1. Different port density (8 ~ 28 ports) and link speeds to fulfil all kinds of networking scales.
2. Unmanaged switches are also available as economical solutions.
3. PoE models (IEEE802.3af/at) support up to 150W PoE budget (12, 16, 28 port). No external power supply required for end devices, saving installation cost and reducing power waste.
4. Supports various redundancy functions (STP/RSTP, Ring, ERPS etc.) to eliminate connection failures for stable network transmission.
5. N-key configuration backup and update function for easy maintenance without any PC or NB console device, saving maintenance costs and human resources.



Emergency Intercom

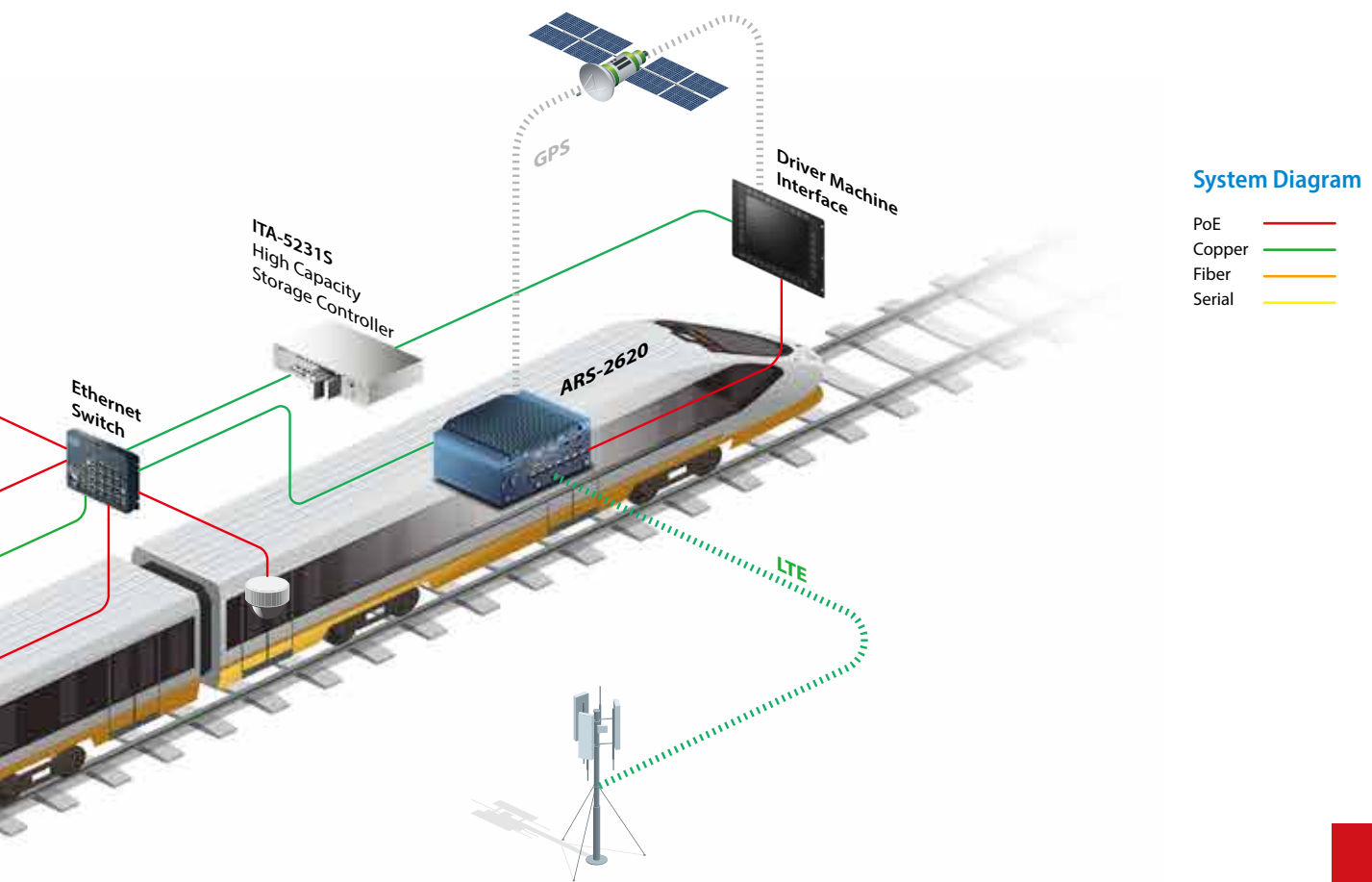
ARS-2620 Vision Inspection Controller

## EN 50155 Ethernet Switch



	EKI-9508 series	EKI-9510 series	EKI-9512 series	EKI-9516 series	EKI-9528 series	EKI-9520/9820 series
Total port count	8	10	12	16	28	20
Gigabit ports	Δ	Δ	Δ	Δ	Δ	Δ
L2 managed type	Δ	Δ	✓	✓	✓	L2/L3Δ
Unmanaged type	Δ	Δ	-	-	-	-
IP rating	IP50	IP40	IP67	IP67	IP54	IP40
Relay bypass	-	1 pair	2 pair	2 pair	2 pair	1 pair
PoE port count	8	8	8	12	24	16
PoE Standard	IEEE802.3af/at	IEEE802.3af/at	IEEE802.3af/at	IEEE802.3af/at	IEEE802.3af/at	IEEE802.3at/af
Total PoE budget	90W	120W	Up to 150W*	Up to 150W*	Up to 150W*	Up to 120W*
Input voltage	72-110V <sub>DC</sub> 24-48 V <sub>DC</sub> Δ	72-110V <sub>DC</sub> 24-48 V <sub>DC</sub> Δ	24-110V <sub>DC</sub>	24-110V <sub>DC</sub>	24-110V <sub>DC</sub>	24~110 V <sub>DC</sub>
Operating voltage	50.4~137.5V <sub>DC</sub>	50.4~137.5V <sub>DC</sub>	16.8~137.5V <sub>DC</sub>	16.8~137.5V <sub>DC</sub>	16.8~137.5V <sub>DC</sub>	16.8~137.5V <sub>DC</sub>




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



## EN50155 On-Board PoE Controller

1. Different port density (2 ~ 6 ports) in different compact box and 19" 2U rackmount form factor.
2. Supports Easy-swap storage module and I/O module.
3. Independent PoE port for PSE device management.
4. PoE models (IEEE802.3af/at) supports up to 15W - 60W PoE.
5. Multiple expansion slots for LTE and Wi-Fi modules for data transmission.
6. Fanless computer for railway vehicle applications, fully compliant with EN 50155, EN 50121-3-2 and EN 50121-4 test standards.

### EN 50155 On-Board PoE Controller

PoE Port Number	2 x M12 X-Coded connector IEEE 802.3 AF	4 x M12 X-Coded connector IEEE 802.3 AF / AT	6 x M12 X-Coded connector IEEE 802.3 AF
Model name	<b>ITA-5831</b>	<b>ARS-2620</b>	<b>ITA-5231</b>
			
CPU	6th Generation Intel® Core™ Sky Lake-H	6th Generation Intel® Core™ Sky Lake-U	6th Generation Intel® Core™ Sky Lake-H
RAM	DDR4, max up to 32GB	DDR4, max up to 16GB	DDR4, max up to 32GB
SSD Number	2 x 2.5"	2 x 2.5"	2 x 2.5"
LAN Port Number	3 (10/100/1000 Based-T)	2 (10/100/1000 Based-T)	3 (10/100/1000 Based-T)
Expansion Slot	2 x mPCIe Socket for LTE module 1 x mPCIe Socket for Wi-Fi module	2 x mPCIe Socket for LTE module 1 x mPCIe Socket for Wi-Fi module	2 x mPCIe Socket for LTE module 1 x mPCIe Socket for Wi-Fi module
Operating Temp.	- 40 ~70 °C	- 40 ~70 °C	- 40 ~70 °C
Input Voltage	24 / 48 / 72 / 110V <sub>DC</sub> Input	24 / 48 / 72 / 110V <sub>DC</sub> Input	24 / 48 / 72 / 110V <sub>DC</sub> Input
Expansion Module	1 x ITA-EM-PE61-00A1E	n/a	3 x ITA-EM-PE51-00A1E

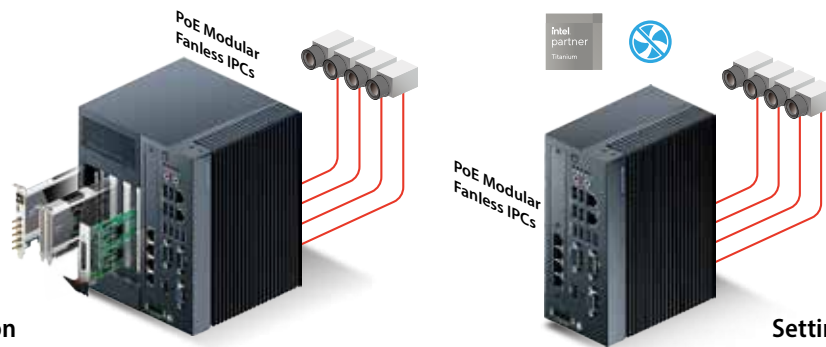
# PoE Modular Fanless IPCs

Advantech MIC-770 V2 and Advanced Flex I/O Expansion Kit are aimed at industrial applications, allowing existing infrastructure to be easily upgraded and configured for specific usage requirements. The various Flex I/O kits support GPIO and remote switch expansion, additional display monitors, and connection with up to four PoE cameras (802.3af compliant) for enhanced control, remote management, and system power and status monitoring.

1. Powered by a 10th generation Intel® Xeon®/Core™ i socket-type (LGA1200) processor with Intel® W480E chipset, offering outstanding computing performance.
2. Fanless and compact design with 9 ~ 36 V<sub>DC</sub> power inputs, and -10~60°C wide operating temperature, can be used in noise sensitive or hazardous environments.
3. MIC i-Modules and Advantech iDoor modules give flexible expansion ability, reducing assembly time, saving cost and space, and can be used in varied applications.
4. Built-in TPM technology features a dedicated microcontroller that enables cryptography-based security for enhanced protection of sensitive and confidential data.

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



### Setting A Demonstration

- 4x GbE PoE with dedicated bandwidth & i350 performance
- Quadro P2200 for image process
- (CUDA Cores 1280, GPU Memory 5GB GDDR5X)
- PCI-1240U for 4-axis motion control
- Compact size



### Setting B Demonstration

- Dedicated PCIe Gen.3 x4 lane: for Intel i350 capability
- PoE power on/off: Control PoE CAM power remotely
- 802.3.af PoE compliant: 4-port 40W in total



Model Name	MIC-770 V2 Setting A	MIC-770 V2 Setting B
Form Factor	Compact	Compact
Chipset	W480E	W480E
CPU	Intel® 10th Gen Xeon®/Core™	i socket-type (LGA1200)
Core	Max. 10	Max. 10
Cache	Max. 20MB	Max. 20MB
Memory	Dual DDR4 2933 MHz ECC/Non-ECC SODIMM Max. 64GB	Dual DDR4 2933 MHz ECC/Non-ECC SODIMM Max. 64GB
Expansion	1x PCIe x16, 3x PCI, 2x Mini-PCIe	2x Mini-PCIe
Storage	1x 2.5" SSD/HDD, 1x mSATA, 1x mSATA (shared with Mini-PCIe)	1x 2.5" SSD/HDD, 1x mSATA (shared with Mini-PCIe)
Ethernet	2x 1GbE LAN, 4x 1GbE PoE	2x 1GbE LAN, 4x 1GbE PoE
Display	VGA+HDMI	VGA+HDMI
USB	2x USB 3.2 (Gen2), 6x USB 3.2 (Gen1)	2x USB 3.2 (Gen2), 6x USB 3.2 (Gen1)
COM	2 x RS-232/422/485 supports auto flow control; 4 x RS-232 (Optional)	2 x RS-232/422/485 supports auto flow control; 4 x RS-232 (Optional)
Input Range	9 ~ 36 V <sub>DC</sub>	9 ~ 36 V <sub>DC</sub>
Remote Power Switch	Optional	Optional
Dimensions (W x H x D)	127 x 192 x 230 mm	77 x 192 x 230 mm
Weight	4kg	3kg



# PoE All-in-One Machine Vision IPC

Advantech AIIS-3411 is a pioneering All-in-One Machine Vision IPC with high-performance computing. It is the first machine vision system that integrates both cameras, lighting control, and rich DI/O interface into a compact all-in-one design. AIIS-3411 can be widely used in machine vision inspection, AOI, wafer inspection, alignment inspection, vision guidance robotics, AGV, AMR, AI, and deep learning

1. Powered by 10th generation Intel® Core™ i CPU (LGA1200) with dual-channel DDR4 memory up to 64GB, digital I/O, and external power input.
2. Built-in PWM lighting control, features 4-channel lighting output paired with 4 dedicated real-time triggers, saving effort to deploy external lighting controller.
3. Equipped with 12-ch isolated digital input supporting both dry and wet contact and 16-ch isolated digital output with 2500VDC isolation protection.
4. Two camera interfaces versions: AIIS-3411P is PoE with Intel i210 controller, 15W power output per channel.

## System Diagram

PoE ———  
Copper ———  
Fiber ———  
Serial ———



## Product Information



Model Name		AIIS-3400P	AIIS-3410P	AIIS-3411P
Processor System	Chipset	H110	H110	H420
	CPU	Intel 6th/7th generation Core i CPU (LGA1151)	Intel 6th/7th generation Core i CPU (LGA1151)	Intel 10th generation Core i CPU(LGA1200)
	Cache	Max. 8 MB	Max. 8 MB	Max. 20MB
	Memory	Dual channel DDR4 1866/2133 MHz (non-ECC) SODIMM Max. 32 GB	Dual channel DDR4 1866/2133 MHz (non-ECC) SODIMM Max. 32 GB	Dual channel DDR4 2933/2666 MHz (non-ECC) SODIMM Max. 64 GB
Graphics	Graphics controller	Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics
Machine Vision Interface	Interface	4-ch PoE	4-ch PoE	4-ch PoE
	Controller	Intel i210AT	Intel i210AT	Intel i210AT
Industrial I/O	Digital I/O	8 Channels (isolated); 32 Channels (isolated, via optional AIIS-1750)	8 Channels (isolated); 32 Channels (isolated, via optional AIIS-1750)	28 Channels (isolated, via optional AIIS-1882)
	Lighting Control	N/A	N/A	4-ch PWM Lighting output paired with 4-ch Trigger input
Expansion	PCIe x8	-	1	1
	PCI*	-	1 x riser card (optional)	1 x riser card (optional)
	mini PCIe	-	1	1
Storage	HDD Bay	1 x internal 2.5" HDD bay	1 x internal 2.5" HDD bay	1 x internal 2.5" HDD bay
	CFast	1	1	-
Ethernet	Ethernet interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel i219LM, LAN2: Intel i210AT	LAN1: Intel i219LM, LAN2: Intel i210AT	LAN1: Intel i219LM, AN2: Intel i210AT
Front I/O	Display	VGA + DVI-D	VGA + DVI-D	VGA + HDMI 1.4
	LAN	2	2	2
	USB	4 x USB 3.0	4 x USB 3.0	4 x USB 3.0
	COM	2 x RS-232/422/485	2 x RS-232/422/485	1 x RS-232/422/485, 1 x RS-232
	Audio	Line in/line out/mic in	Line in/line out/mic in	Line out/mic in
Power Supply	Input Range	19 ~ 24 V <sub>DC</sub>	19 ~ 24 V <sub>DC</sub>	19 ~ 24 V <sub>DC</sub>
	Remote Power Switch	1 (Rear)	1 (Rear)	(Front)
Physical Characteristics	Dimensions (W x H x D)	230 x 70.3 x 175 mm (9.06" x 2.77" x 6.89")	240 x 97 x 190 mm (9.45" x 3.82" x 7.48")	240 x 97 x 190 mm (9.45" x 3.82" x 7.48")

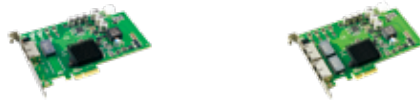
✓: supported , - : not supported , Δ : optional

# PoE Machine Vision Frame Grabber Card and Camera

Advantech provides a comprehensive machine vision edge solution, from intelligent computing platform to frame grabber card and industrial cameras. Advantech's edge machine vision solution can fulfill diverse requests in industrial IoT applications; boosting productivity and yield rates on the factory floor.

1. It allows power to be supplied to PoE-based GigE cameras connected devices, such in machine vision inspection systems.
2. Industrial camera series have between 0.3 ~ 20 mega pixel CCD/CMOS and include ultra-fast speeds in a very small form factor.
3. Power-over-Ethernet support let machine vision solution can benefit from a scalable Gigabit backbone construction
4. Support up to 10 GigE cameras in machine vision system, featuring programmable PoE+ power control. It can significantly increase the reliability for high performance, robust and reliable machine vision applications

## Frame Grabber Cards



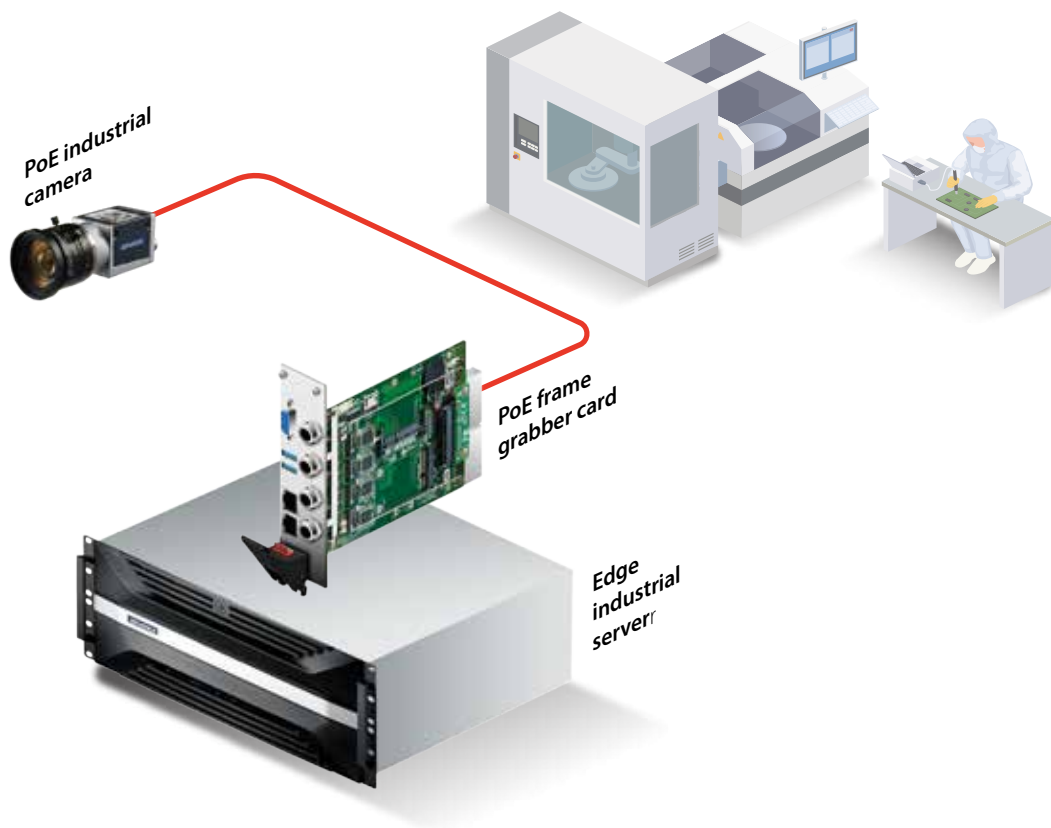
## 10 GigE Frame Grabber Cards



Model Name	PCIE-1672	PCIE-1674E	PCIE-1181	PCIE-1182	
Power Requirements	Input Voltage	12 V <sub>DC</sub> direct from PCIe slot, or AT/ATX System power input	12 V <sub>DC</sub> direct from PCIe slot, or AT/ATX System power input	12 V <sub>DC</sub> direct from PCIe slot, or with optional	12 V <sub>DC</sub> AT/ATX power jack input
	Overload Current Protection	Present	Present	Present	Present
	Connection	AT/ATX Power Jack	AT/ATX Power Jack	AT/ATX Power Jack	AT/ATX Power Jack
	Output PoE Power	48 VDC PoE Power output, total Max. 18W (total Max. 60W with AT/ATX system power input)	48 VDC PoE Power output, total Max. 18W (total Max. 60W with AT/ATX system power input)	30Watt, protect by recoverable eFuse	60W, protect by recoverable eFuse
Environment	Operating Temperature	0 ~ 50°C (32 ~ 122°F)	0 ~ 50°C (32 ~ 122°F)	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)
	Storage Temperature	-20 ~ 80°C (-4 ~ 176°F)	-20 ~ 80°C (-4 ~ 176°F)	-20 ~ 80°C (-4 ~ 176°F)	-20 ~ 80°C (-4 ~ 176°F)
	Operating Humidity	5 ~ 95% RH	5 ~ 95% RH	5 ~ 95% RH	5 ~ 95% RH
Mechanics	Dimensions (W x D)	185 x 110 mm (7.3" x 3.9")	185 x 110 mm (7.3" x 3.9")	167 x 68.9 mm, PCIe low profile	167 x 68.9 mm, PCIe low profile
GigE Vision	Compatibility	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af, IEEE802.3at	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af, IEEE802.3at
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10,000/5,000/1,000 Mbps	10,000/5,000/1,000 Mbps
	No. of Ports	2 Gigabit Ethernet Media Access Control (MAC) and physical layer (PHY) ports	4 Gigabit Ethernet Media Access Control (MAC) and physical layer (PHY) ports	1, 10GBASE-T MAC and PHY	2, 10GBASE-T MAC and PHY
	Port Connector	8-pin RJ45	8-pin RJ45	8-pin RJ45 Copper	8-pin RJ45 Copper
	Bus Interface	PCI Express x 4 compliant	PCI Express x 4 compliant	PCI Express x 4 compliant	PCI Express x 4 compliant
	Jumbo Frame	9KB	9KB	9KB	9KB
Safety	ESD	8KV (air), 4KV (contact)	8KV (air), 4KV (contact)	8KV (air), 6KV (contact)	8KV (air), 4KV(contact)
	EFT	2 KV	2 KV	2 KV	2 KV
	Surge Protection	1 KV	1 KV	1 KV	1 KV
	Isolation Protection	2.5 KV	2.5 KV	2.5 KV	2.5 KV

## System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —



## Industrial Cameras



Model Number	<b>QCAM-GC1440-073CE</b>	<b>QCAM-GM1440-073CE</b>	<b>QCAM-GC5472-005CE</b>	<b>QCAM-GM5400-005CE</b>	
Resolution	1440 x 1080	1440 x 1080	5472 x 3648	5472 x 3648	
Frame rate	73	73	5	5	
Pixel size (µm)	3.45 x 3.45	3.45 x 3.45	2.4 x 2.4	2.4 x 2.4	
Mono/ color	Color	Mono	Color	Mono	
Sensor	Company	SONY	SONY	SONY	
	Model	IMX273	IMX273	IMX183	
	Shutter	Global	Global	rolling	rolling
	Size	1/2.9"	1/2.9"	1"	1"
	Type	CMOS	CMOS	CMOS	CMOS
Input	1	1	1	1	
Output	1	1	1	1	
Power Requirements	PoE or 12 V <sub>DC</sub>	PoE or 12 V <sub>DC</sub>	PoE or 12 V <sub>DC</sub>	PoE or 12 V <sub>DC</sub>	
Power consumption	3.2W	3.2W	3 W	3 W	
Lens mount	C	C	C	C	
Size(L x W x H)	42.0 x 29.0 x 29.0 mm	42.0 x 29.0 x 29.0 mm	42.0 x 29.0 x 29.0 mm	42.0 x 29.0 x 29.0 mm	
Weight	90 g	90 g	90 g	90 g	
Operating temp.	0°~50°C	0°~50°C	0°~50°C	0°~50°C	

# PoE Industrial IoT Gateway

Advantech offers the PoE gateway product series to ensure rapid installation in remote areas that may be difficult to reach with a power cable. The PoE-in design enables easy installation and reduces maintenance costs, making the IoT gateways an ideal solution for edge to cloud data sensing that requires minimal wiring.

## Facility and Equipment Monitoring

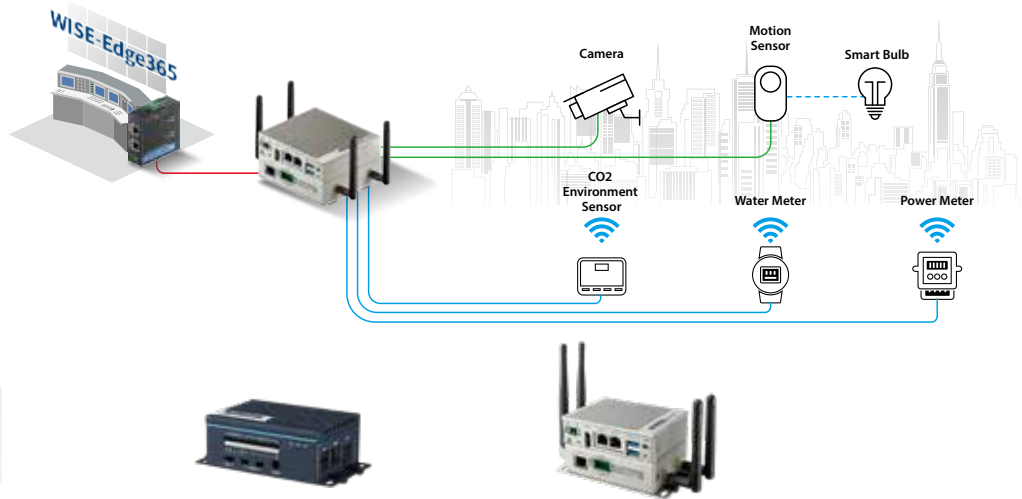
The PoE IoT gateways provides an ideal solution for efficient and seamless data collection from sensors and controllers, enabling real-time remote facility and equipment monitoring. Featuring the compact form factor PoE functionality, the PoE industrial IoT gateways also ensure easy installation and deployment in limited-space environments.

## Flexible Expansion for Diverse Application

Besides physical wired Ethernet connection, the PoE IoT gateways also support multiple wireless expansion interfaces (mPCIe, M.2), allowing users to expand a wide range of Wi-Fi, LTE and 5G wireless modules that facilitate long-distance data transmissions, over-the-air (OTA) updates, and real-time communication.

### System Diagram

- PoE —
- Copper —
- Fiber —
- Serial —
- Wi-Fi —



Model Name	UNO-420	UNO-220-P4N2	UNO-2271G V2 with UNO-2271G-RP1EA
Description	PoE Powered Device Sensing Gateway	Industrial Raspberry Pi 4 HAT Gateway Kit with PoE function	Edge IoT Gateway with 2nd stack expansion module
CPU	Intel Atom® E3815, 1.46 GHz Single Core	-	Intel® Celeron® Dual core N6210, 1.2GHz Intel® Pentium® Quad core N6415, 1.2GHz
Onboard RAM	2GB DDR3, 1066 MHz	-	4GB/8GB DDR4
Onboard Storage	32GB eMMC	8GB Micro SD card	32GB eMMC
Hardware Security	Onboard TPM 2.0	Onboard TPM 2.0	Onboard TPM 2.0
Display	1 x HDMI	-	1 x HDMI
I/O	2 x RS-232/422/485 1 x RS-485 (Terminal Block) 2 x GbE (One supports PoE-IN)	8 x GPIO 1 x RS-232/RS485	2 x GbE 2 x USB 3.2 Gen1 1 x HDMI 1.4 2 x COM (RS-232/422/485)
PCIe/PCI Expansion	1 x Full-size mPCIe slot 1 x Half-size mPCIe slot	-	1 x Full-size mPCIe slot 1 x M.2 B Key (SATA, USB 3.0 signal for LTE)
Storage	1 x M.2 B-key (2242)	-	1 x mSATA shared with mPCIe slot
SIM Card Slot	1 (micro)	-	1 x nano SIM Slot
Operating Systems	Windows10 LTSC, Ubuntu 20.04, Ubuntu Core 20	Linux (Raspbian)	Windows10 LTSC, Ubuntu 20.04, Ubuntu Core 20
Mounting	Wall mount, (Optional DIN-rail mount)	Stand mount, Wall mount, (Optional DIN-rail mount)	Stand mount, Wall mount (Optional DIN-rail mount)
Power Input Range	10-30V <sub>DC</sub>	5V <sub>DC</sub> via USB-C connector @ 3.0A (Minimum) or IEEE 802.3at PoE	10-30 V <sub>DC</sub> IEEE 802.3at PoE
Operating Temperature	-20 ~ 60°C (-4 ~ 140°F)	0 ~ 50 °C (32 ~ 122 °F)	-20 ~ 60°C (-4 ~ 140°F)
Power Consumption	12W (typical), 20W (Max)	15W	12W (typical), 30W (Max)
Dimensions (W x D x H)	125 x 125 x 50 mm	100 x 70 x 40 mm	100 x 70 x 60 mm
Weight	1.5kg	0.5 kg	0.8 kg

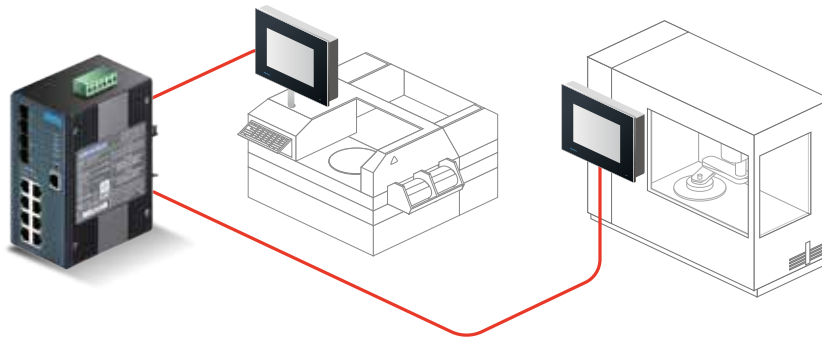
# PoE Web Browser Terminal

TPC-71W and TPC-100W allow system integrators to easily develop and deploy a wide range of industrial applications. TPC-71W and TPC-100W also feature PoE PD functionality for powering devices via Ethernet, thereby eliminating the need to build a power infrastructure; this greatly streamlines installation and reduces overall equipment costs. Furthermore, TPC-71W and TPC-100W are built with a serial port with a 120Ω termination resistor that supports the CAN 2.0B protocol and offers a programmable bit rate of up to 1 Mb/sec.

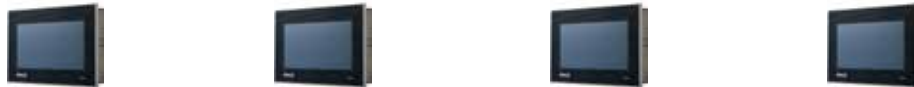
1. ARM based HMI system
2. Fieldbus supported and wide temperature range design
3. Open OS supported: Yocto/Ubuntu/Android
4. Google WEB Browser Chromium embedded
5. 1 Mb FRAM backup memory for unexpected power interruptions

## System Diagram

- PoE ————
- Copper ————
- Fiber ————
- Serial ————



## Web Browser Terminal (NXP i.MX6 processor)



Model	TPC-71W-N10PA	TPC-71W-N21PA	TPC-71W-N21WA	TPC-71W-N21AA
Description	Touch Panel Computer	Touch Panel Computer	Touch Panel Computer	Touch Panel Computer
Display Size	7"	7"	7"	7"
CPU	Cortex®-A9 i.MX6 Dual/Quad Core 1.0 GHz	Cortex®-A9 i.MX6 Dual/Quad Core 1.0 GHz	Cortex®-A9 i.MX6 Dual/Quad Core 1.0 GHz	Cortex®-A9 i.MX6 Dual/Quad Core 1.0 GHz
Memory	1GB DDR3L	2GB DDR3L	2GB DDR3L	2GB DDR3L
Storage	8G eMMC	8G eMMC	8G eMMC	8G eMMC
OS	Ubuntu 16.04	Ubuntu 16.04	WinCE7	Android 6
PoE Port	Support IEEE 802.3at PoE-PD	Support IEEE 802.3at PoE-PD	Support IEEE 802.3at PoE-PD	Support IEEE 802.3at PoE-PD

## Web Browser Terminal (NXP i.MX8M Mini processor)



Model	TPC-107W	TPC-110W
Description	Touch Panel Computer	Touch Panel Computer
Display Size	7"	10.1"
CPU	Cortex®-A53 i.MX 8 Mini Quad Core 1.6 GHz	Cortex®-A53 i.MX 8 Mini Quad Core 1.6 GHz
Memory	2GB DDR4	2GB DDR4
Storage	16G eMMC	16G eMMC
OS	Yocto 3.3, Android 10	Yocto 3.3, Android 10
PoE Port	Support IEEE 802.3at PoE-PD	Support IEEE 802.3at PoE-PD



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