

Industrial 1-Port 802.3bt PoE++ to 2-Port 802.3at Gigabit PoE Extender



Outdoor 802.3bt PoE++ Solution for Breaking RJ45 100m Limitation

PLANET IPOE-E302 is an industrial IP67-rated 1-port 802.3bt PoE++ to 2-port 802.3at Gigabit PoE Extender designed especially for point to multipoint PoE application. The IPOE-E302 can obtain a maximum of **95-watt** PoE power from **802.3bt PoE++** or **PoH** (Power over HDBASE-T) input port and supplies a maximum of 65-watt PoE power budget for 2 PoE output ports, extending both the **Gigabit Ethernet Data and 802.3at Power over Ethernet** over the UTP cable. The IPOE-E302 provides a simple solution for adding PoE ports without running more cabling and achieves more flexible network applications without requiring an external power adapter.



Weather-proof RJ45 Ethernet Connector and Shielded Plug

The IPOE-E302 is ideal for installing an extended range of outdoor PoE devices such as outdoor PoE wireless access points, outdoor PoE IP cameras, outdoor PoE IP intercoms and much more. The IPOE-E302 is equipped with 3-port 10/100/1000BASE-T auto-negotiation RJ45 connectors and 3 waterproof cable glands for direct-attach applications. Assembled with waterproof cable gland, it can make the general RJ45 connector weather-proof and provides tight and strong connection, and ensures it comes with the industrial protection rating of IP67 capable of withstanding humidity, dirt, dust, shock, vibrations, heat and cold.

Environmentally-hardened Design

With industrial-level IP67-rated aluminum case, the IPOE-E302 provides a high level of immunity against electromagnetic interference, and is able to protect itself from dust and water ingress and to operate under the temperature range from -40 to 75 degrees C. All these features ensure the highest level of reliability for mission-critical applications in any difficult environment.

Physical Port

- Three **10/100/1000BASE-T** Gigabit RJ45 ports
 - 1-port **data + power input**
 - 2-port **data + power output**

Power over Ethernet

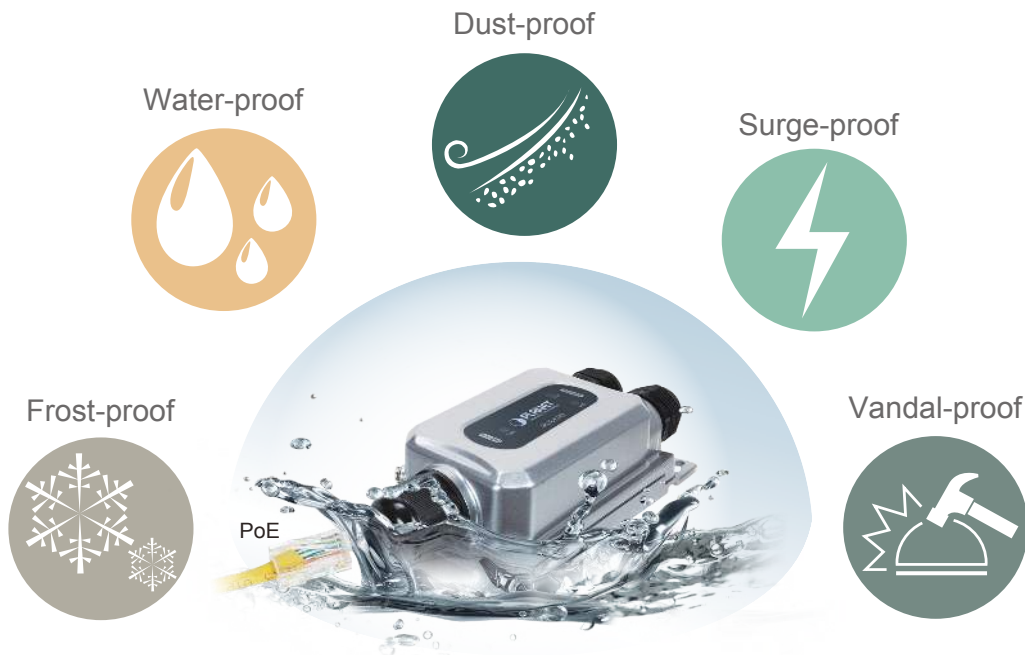
- 1-port data + power input
 - Complies with IEEE 802.3bt PoE++ Type 4 standard PD
 - Compatible with PoH (Power over HDBASE-T) protocol
 - Backward compatible with IEEE 802.3at PoE+ end-span or mid-span PD
 - Supports PoE input power up to 95 watts
- 2-port data + power output
 - Complies with IEEE 802.3at Power over Ethernet mid-span PSE
 - Up to 2 IEEE 802.3af/802.3at PoE devices powered
 - Supports total PoE budget up to 65 watts for 2 PoE output ports
 - Auto detects powered device (PD)
- Extends the range of PoE to an additional 100 meters (328ft.)
- Forwards both Ethernet **data** and **PoE** power to remote device

Layer 2 Features

- Hardware-based 10/100Mbps, half / full duplex and 1000Mbps full duplex mode, flow control, auto-negotiation and auto MDI/MDI-X
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- Integrates address look-up engine, supporting 2K absolute MAC addresses
- 9K jumbo frame support in 1000Mbps duplex mode
- Automatic address learning and address aging

Industrial Case and Installation

- IP67-rated aluminum case
- Wall-mount design
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- No external power cable required for installation
- Plug and Play installation

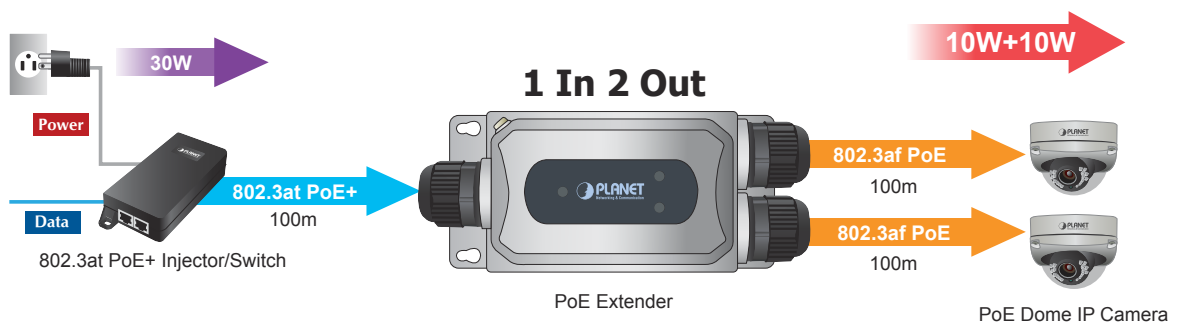
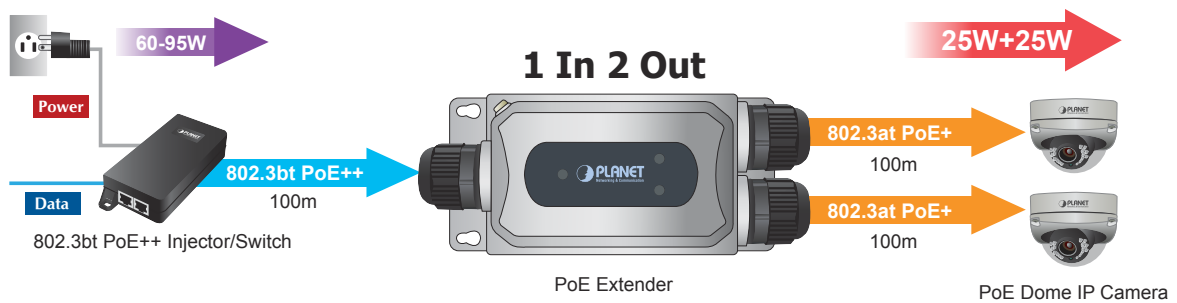


Environmental Adaptations in Outdoor Area

Plug and Play, and Easy Cabling Installation

The IPOE-E302 is quite easy to be installed by simply Plug and Play. It is used between a power source equipment (PSE) and a powered device (PD).

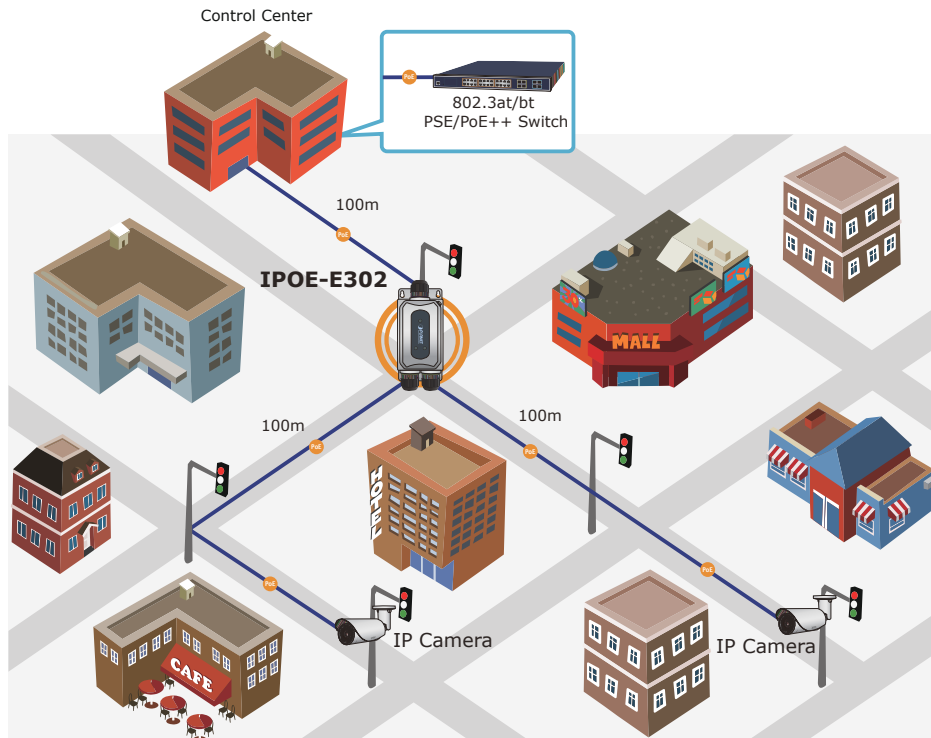
The IPOE-E302 is designed in a compact box containing three RJ45 ports, of which one "PoE++ In" port functions as PD input and the other two "PoE+ Out" ports on the other side function as PSE output. The "PoE OUT" port is also the power injector that transmits DC voltage over the Cat5/5e/6 cable and transfers data and power simultaneously to a remote PD without affecting the data transmission performance. It offers a cost-effective and quick solution to double the standard range of PoE from 100 to 200 meters.



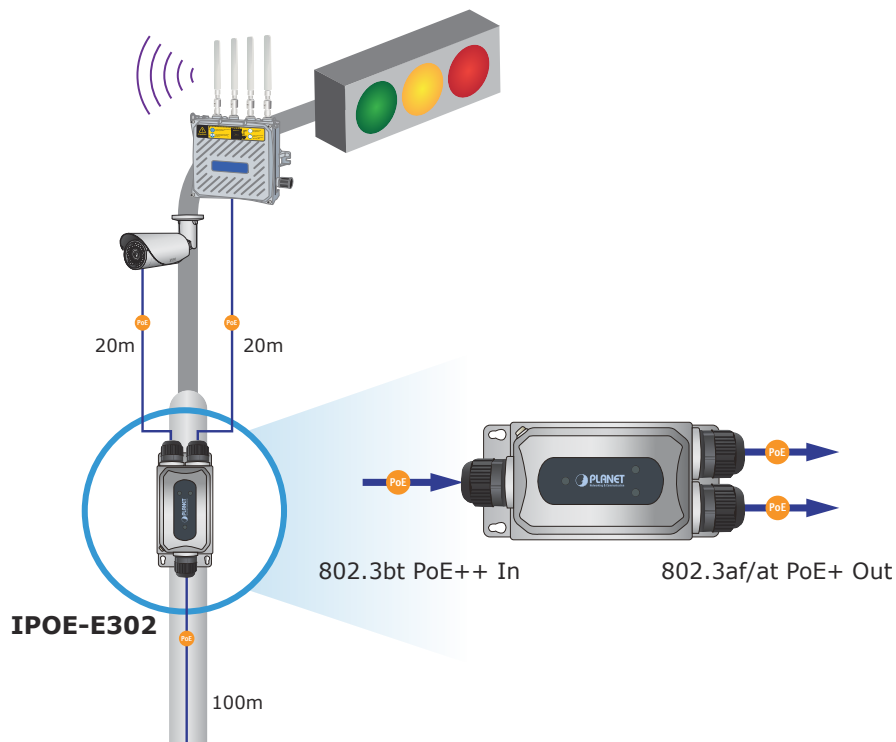
Applications

One Power Source for Multi Powered Devices

Today's IP surveillance technology makes the remote extension of IP cameras easy and the management of monitoring more effective. With the IPOE-E302, users do not have to change their existing network systems. The extender is an ideal solution for the expansion and extension of the current network infrastructures without having to add any cables and other related components and parts.

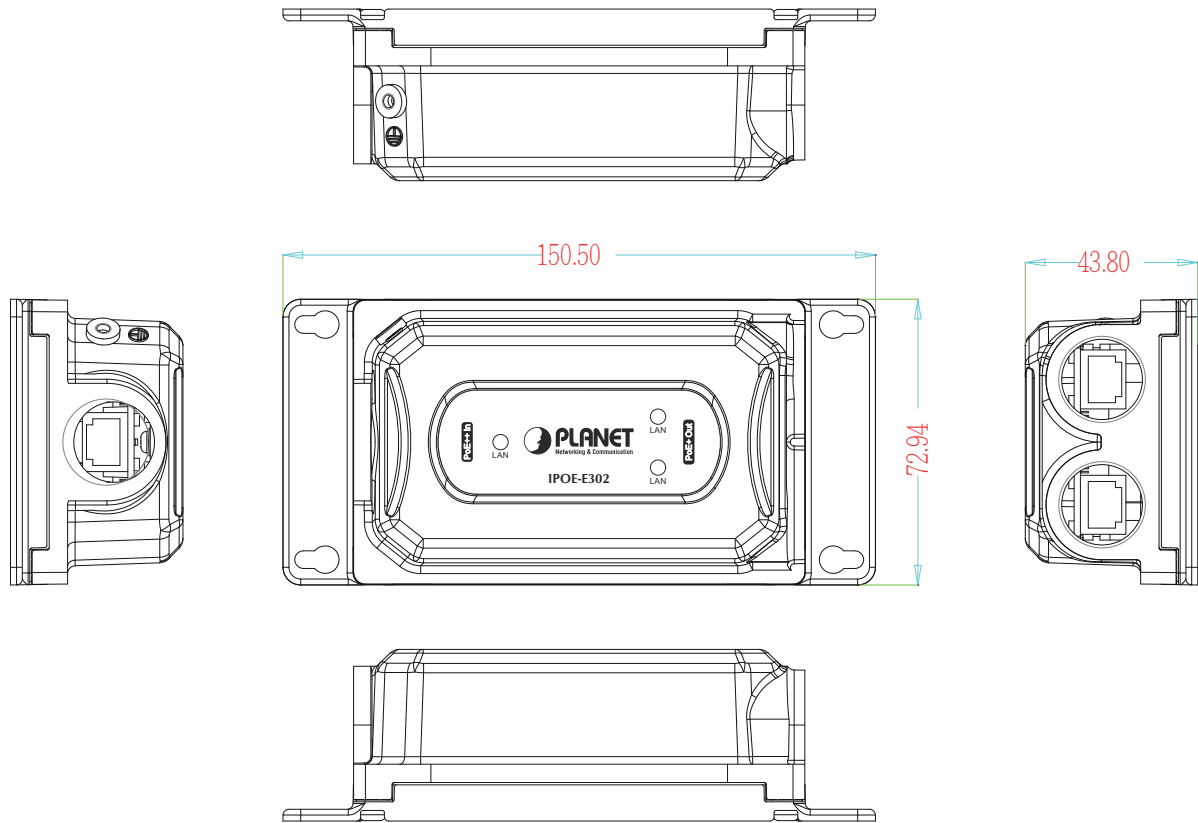


The IPOE-E302 industrial 1-port 802.3bt PoE to 2-port 802.3at Gigabit PoE Extender, powered by a PSE over standard RJ45 cable, requires very little installation time and does not require any additional setup or programming. The PoE injector port of the PSE supplies IEEE 802.3bt PoE power to the IPOE-E302 and then the IPOE-E302 transmits the power to 2 powered devices that are IEEE 802.3af/at PoE standard compliant, meaning any additional power adapter for IP cameras and wireless access points is not necessary.



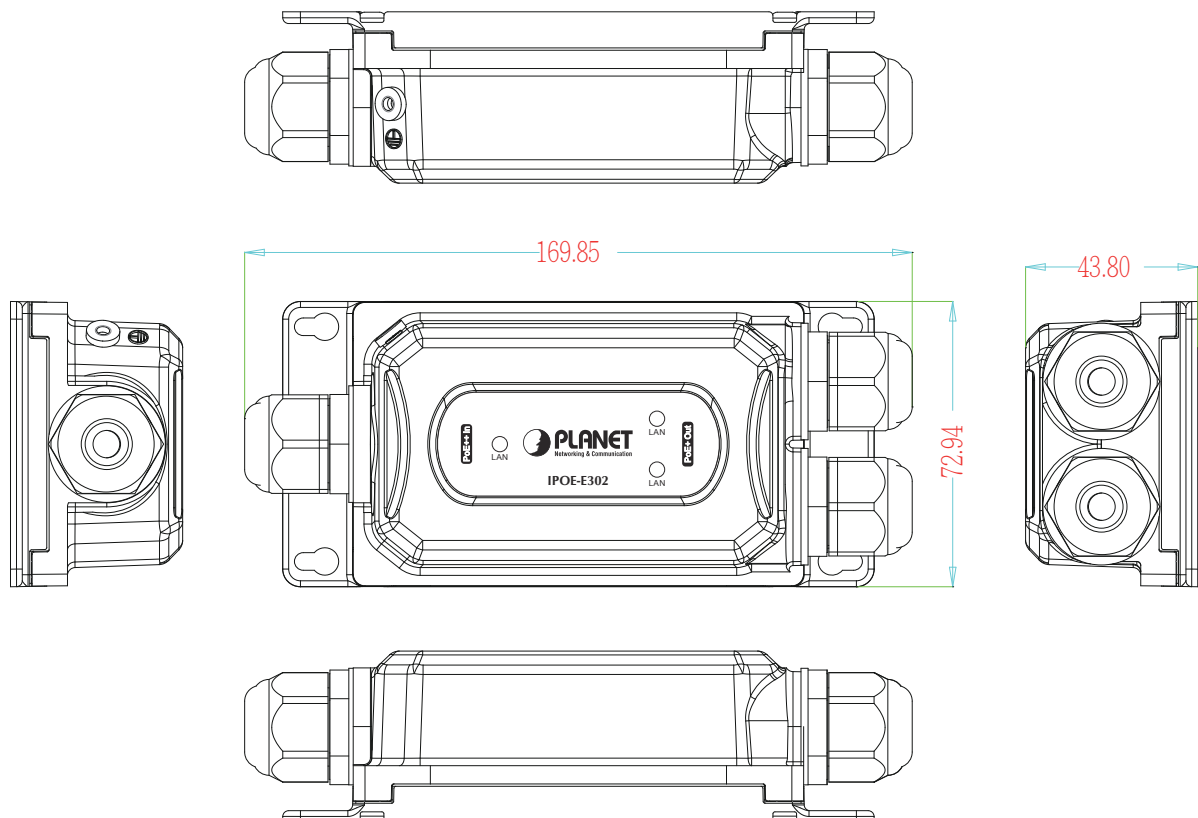
Diagram

- Diagram: IPOE-E302 without waterproof cable glands



Unit: mm

- Diagram: IPOE-E302 with waterproof cable glands



Unit: mm

Product Specifications

| | |
|--------------------------------|---|
| Model | IPOE-E302 |
| Hardware Specifications | |
| Network Connector | <p>PoE in Port 1 x 10/100/1000BASE-T Ethernet with 802.3bt PoE++ "Data + DC" in, auto MDI/MDI-X, auto-negotiation RJ45 connector</p> <p>PoE out Port 2 x 10/100/1000BASE-T Ethernet with IEEE 802.3af/at PoE "Data + DC" out, auto MDI/MDI-X, auto-negotiation RJ45 connector</p> |
| Switch Architecture | Store-and-Forward switch architecture |
| MAC Address Table | 2K MAC address table with auto learning function |
| Data Buffer | 1Mbit |
| Switch Fabric | 6Gbps |
| Switch Throughput | 4.46Mpps @ 64Bytes |
| Flow Control | IEEE 802.3x pause frame for full duplex Back pressure for half duplex |
| Jumbo Frame | 9Kbytes |
| ESD Protection | Air 8KV DC Contact 6KV DC |
| Surge Protection | 6KV |
| Enclosure | IP67-rated and IK10 aluminum metal case |
| Installation | Wall-mount ear |
| LED Display | Link/ACT LED x 3 |
| Dimensions (W x D x H) | 150 x 43.8 x 72.94 mm (W x D x H) 169.85 x 43.8 x 72.94 mm (W x D x H), with cable gland |
| Weight | 339g 372g (with three waterproof cable glands) |
| Power Consumption | 97 watts/331.6BTU (Full loading with PoE function) |
| Power over Ethernet | |
| PoE Standard | <p>PoE in Port - IEEE 802.3bt PoE++ Type 4 standard PD - PoH (Power over HDBASE-T) - IEEE 802.3at PoE+ end-span/mid-span PD</p> <p>Per PoE out Port - IEEE 802.3at PoE+ mid-span PSE</p> |
| PoE Power | <p>PoE in Port 50~57V DC, max. 95 watts 44~50V DC, max. 30 watts.</p> <p>Per PoE out Port 48~56V DC, max. 30 watts</p> |
| Power Pin Assignment | <p>PoE in Port 1/2(-), 3/6(+), 4/5(+), 7/8(-) or 1/2(+), 3/6(-), 4/5(+), 7/8(-)</p> <p>Per PoE out Port 4/5(+), 7/8(-)</p> |
| PoE Power Budget | 60 watts (max.) @ 802.3bt PoE++ input 65 watts (max.) @ PoH input 30 watts (max.) @ IEEE 802.3at PoE+ input No support @ IEEE 802.3af PoE input |
| Standards Conformance | |
| Regulatory Compliance | FCC Part 15 Class A CE |
| Stability Testing | IEC 60068-2-32 (Free fall) IEC 60068-2-27 (Shock) IEC 60068-2-6 (Vibration) |
| Standards Compliance | IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus |

| Environment | |
|-------------|--|
| Operating | Temperature: -40 ~ 75 degrees C Relative Humidity: 5 ~ 95% (non-condensing) |
| Storage | Temperature: -40 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing) |

Ordering Information

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| IPOE-E302 | Industrial 1-Port 802.3bt PoE++ to 2-Port 802.3at Gigabit PoE Extender |
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Related Products

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|------------------|--|
| IGS-6325-8UP2S2X | Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch |
| IGS-6325-8UP2S | Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 100/1000X SFP + Managed Ethernet Switch |
| IGS-5225-4UP1T2S | Industrial L2+ 4-Port 10/100/1000T 802.3bt PoE + 1-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch |
| IPOE-171-95W | Industrial Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector (95 Watts, -40~75 degrees C, 12~48V DC) |
| IPOE-171-60W | Industrial Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector (60 Watts, -40~75 degrees C) |
| IGUP-1205AT | Industrial 2-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter |
| IGUP-2205AT | Industrial 2-Port 100/1000X SFP to 2-Port 10/100/1000T 802.3bt PoE++ Media Converter |
| IGUP-805AT | Industrial 1-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter |
| IGS-5225-8P2T2S | L2+ Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T+ 2-Port 100/1000X SFP Managed Ethernet Switch |
| IGS-4215-8P2T2S | Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch |
| IPOE-260 Series | Industrial 2-port 10/100/1000T 802.3at PoE+ Injector Hub |
| IPOE-162S | Industrial IEEE 802.3at Gigabit High Power over Ethernet Splitter |
| UPOE-800G | 8-Port Gigabit 60W Ultra PoE Managed Injector Hub (400W) |
| UPOE-1600G | 16-Port Gigabit 60W Ultra PoE Managed Injector Hub (600W) |
| UPOE-2400G | 24-Port Gigabit 60W Ultra PoE Managed Injector Hub (800W) |