POE304-EX-4P-V2 User Manual

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Product documentation

Please consult the following web link to retrieve the electronic version of the product documentation. The manuals are available in several languages.

Content

Package contents

Thank you for purchasing IFS Industrial 1-Port 802.3bt Gigabit PoE Extender, POE304-EX-4P-V2. In the following sections, the term “Industrial PoE Extender” means the POE304-EX-4P-V2.

Open the box of the POE304-EX-4P-V2 and carefully unpack it. The box should contain the following items:

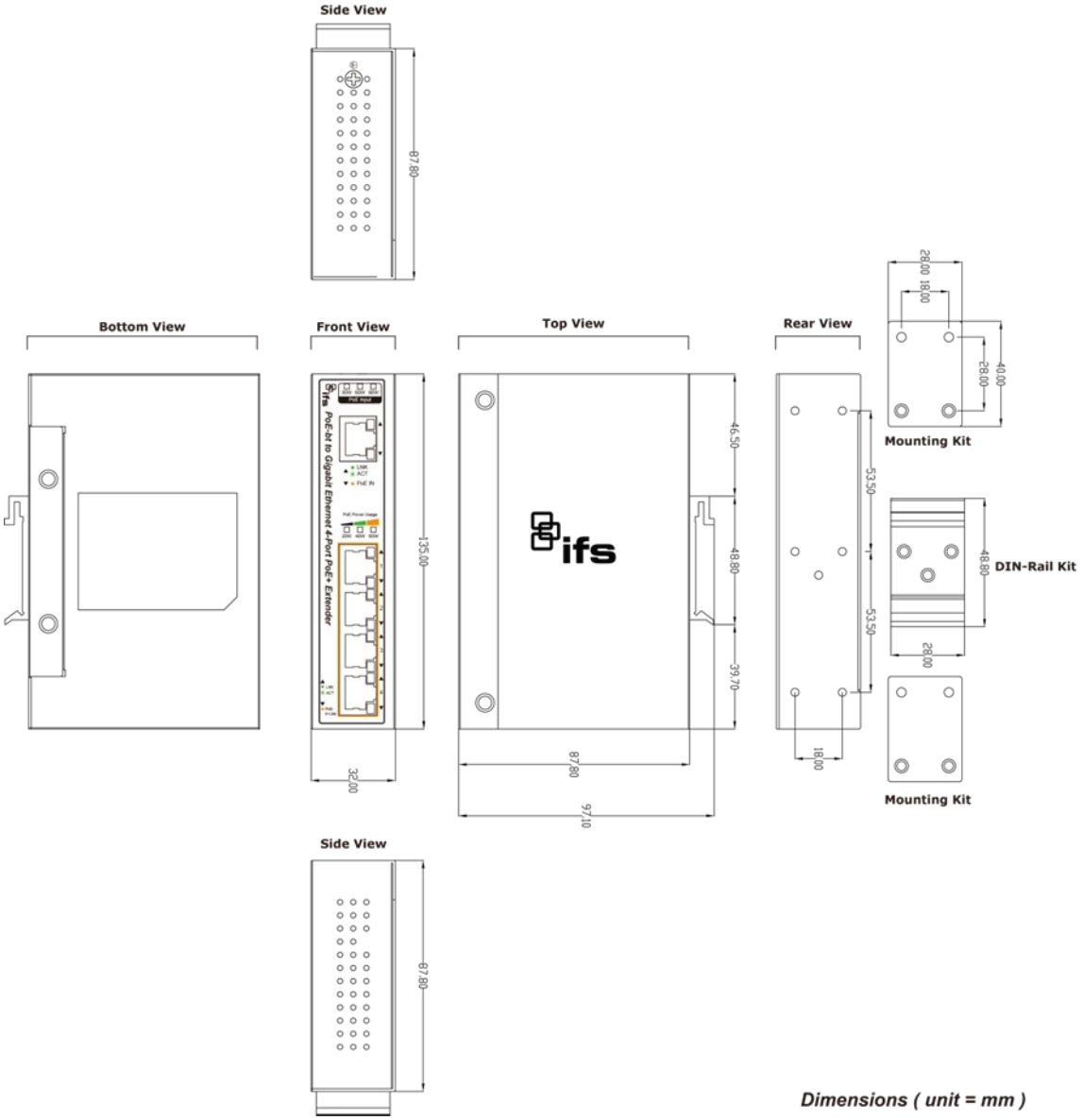
- 1 Industrial Power over Ethernet Extender
- 1 User manual
- 5 RJ45 Dust cap
- 1 Wall mounting kit

If any of these are missing or damaged, contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair

Hardware introduction

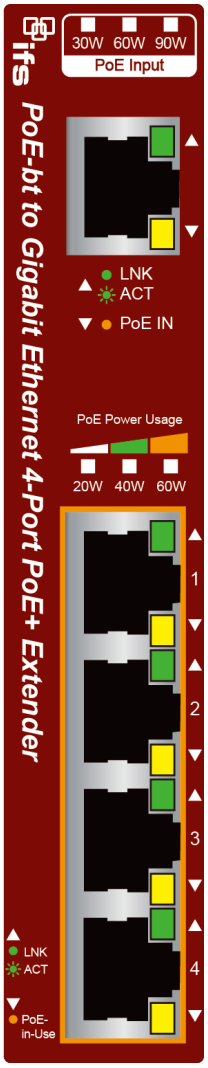
Physical dimensions

The physical dimensions of the Industrial PoE Extender are (W x D x H) are 32 x 87.8 x 135 mm.



Front panel

The graphic below shows the front panel of the Industrial PoE Extender.



LED indicators

Table 1: System

LED	Color	Function
30 W IN	Green	Lights to indicate the POE304-EX-4P-V2 is working in 2-pair mode and offers up to 30 W power.
60 W IN	Green	Lights to indicate the POE304-EX-4P-V2 is working in 4-pair mode and offers more than 60 W power.
90 W+ IN	Green	Lights to indicate the POE304-EX-4P-V2 is working in 4-pair mode and offers more than 90 W power.

Table 2: PoE power usage

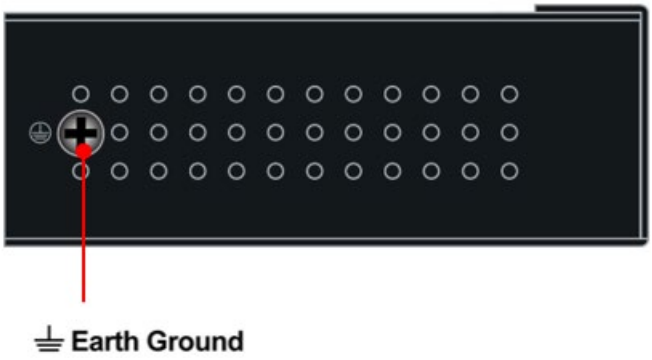
LED	Color	Function
20 W	Amber	Blinks to indicate the system is providing 10 W to 20 W PoE power.
		Lights to indicate the system is providing 20 W to 30 W PoE power.
40 W	Amber	Blinks to indicate the system is providing 30 W to 40 W PoE power.
		Lights to indicate the system is providing 40 W to 50 W PoE power.
60 W	Amber	Blinks to indicate the system is providing 50 W to 60 W PoE power.
		Lights to indicate the system is providing 60 W+ PoE power.

Table 3: Per PoE output port (port 1 ~ 4)

LED	Color	Function
LNK/ACT	Green	Lights to indicate the port is linked up.
		Blinks to indicate that the POE304-EX-4P-V2 is actively sending or receiving data over that port.
PoE-in-use	Amber	Lights to indicate the port is providing PoE power.
		OFF to indicate the connected device is not a PoE PD.

Grounding the device

For equipment protection, the device must be properly grounded, otherwise a lightning strike could severely damage the equipment.



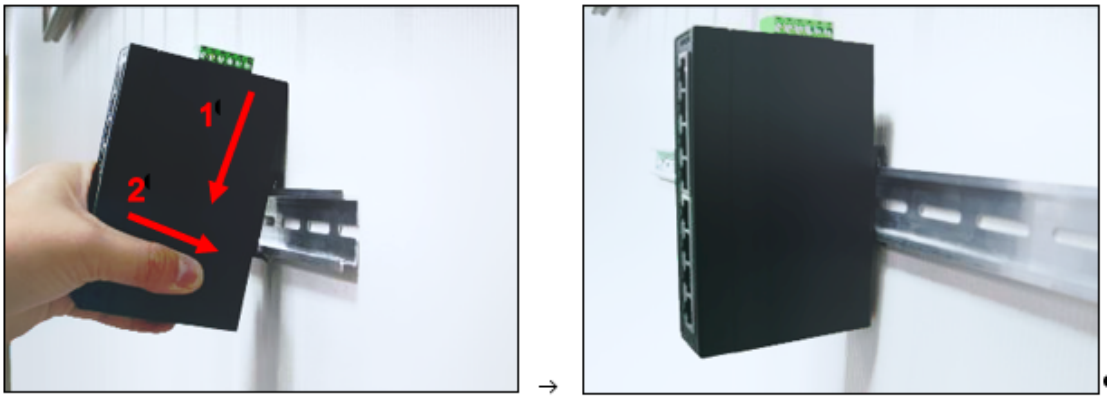
Note: EMD (lightning) damage is not covered under warranty.

Installation

This section describes the functionalities of the Industrial PoE Extender's components and guides you to installing it on the DIN rail and wall. Read this chapter completely before continuing.

Note: The following pictures show how to install the device. However, the device in the pictures is not POE304-EX-4P-V2.

DIN-rail mounting installation

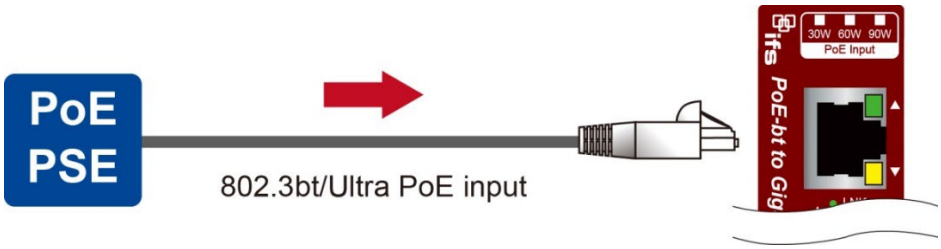


Wall-mount plate mounting

Connecting POE304-EX-4P-V2 to PSE

The Industrial PoE Extender has five RJ45 ports of which one is the PoE++ In port connected to the PSE and the other four are PoE+ Out ports connected to the PDs.

1. Connect a standard Cat5e/6 UTP cable from a remote PSE, such as PoE switch, to the “PoE++ In” port of the POE304-EX-4P-V2.



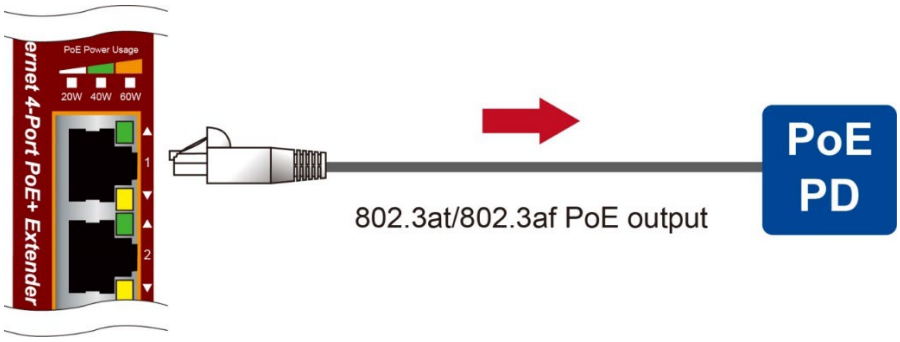
2. The PSE delivers both Ethernet Data and PoE power over UTP cable to the POE304-EX-4P-V2 and the “PoE IN” LED will be lit steadily.

Notes:

- When the LED turns steady green, it means the POE304-EX-4P-V2 is being powered successfully with PoE.
- If the LED is not lit, please check the remote PSE or the cable connecting to a PC or a network device to see if the cable is correct. Or with an 802.3at device such as the target PD, check whether the power injection is correct.
- Never connect any non-standard PoE PSE to the POE304-EX-4P-V2; it will damage the device permanently.
- Refer to ““Front panel” on page 7 for more information about LEDs.

Connecting POE304-EX-4P-V2 to PD

1. Connect the additional Cat5e/6 cable from the PoE+ Out of the POE304-EX-4P-V2 to a remote PD.

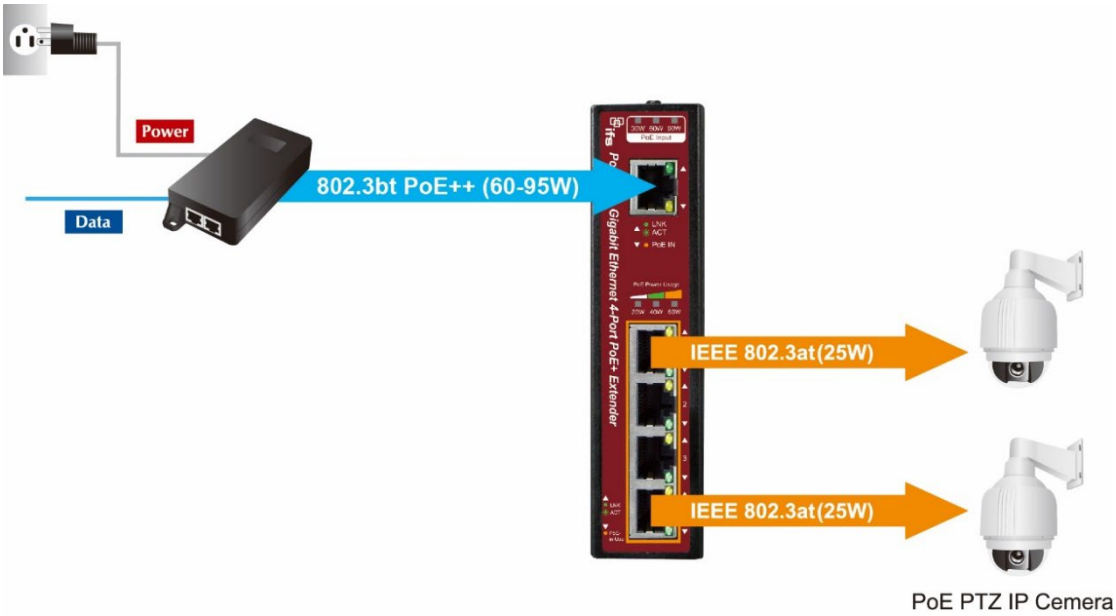


2. The PoE+ Out port is also the power injector, which transmits DC voltage to the Cat5e/6 cable and transfers data and power simultaneously between the PSE and PD.

3. Once the POE304-EX-4P-V2 detects the existence of an IEEE 802.3at/af device, the PoE-in-Use LED indicator will be lit steadily, showing it is providing power.

Notes:

- If the connected device is not fully complying with IEEE 802.3af/at standard or in-line power device, the PoE-in-Use LED indicator of the POE304-EX-4P-V2 will not be lit steadily.
- According to IEEE 802.3af/at standard, the POE304-EX-4P-V2 will not inject power to the cable if not connecting to a standard IEEE 802.3af/at device.
- Do not connect any PSE to port 1~ port 4 of the POE304-EX-4P-V2; it may damage the device permanently.



Power over Ethernet budget

The following table lists how many PoE devices can be powered by the POE304-EX-4P-V2 under 1m distance:

Power Source	PoE Output Budget*	Max. Number of PDs supported	
95 W PoH PSE	75 W max.	Class 4 PD@25 W	3 units
		Class 3 PD@12.9 W	4 units
		Class 2 PD@7 W	4 units
90 W 802.3bt PoE++ Type 4 PSE	75 W max.	Class 4 PD@25 W	3 units
		Class 3 PD@12.9 W	4 units
		Class 2 PD@7 W	4 units
60 W 802.3bt PoE++ Class Type 3 PSE	50 W max.	Class 4 PD@25 W	2 units
		Class 3 PD@12.9 W	3 units
		Class 2 PD@7 W	4 units
30 W 802.3at PoE+ PSE	25 W max.	Class 3 PD@12.9 W	1 unit
		Class 2 PD@7 W	3 units

Notes:

- The PoE output budget means the aggregated power output of the 4 PSE ports.
- The aggregated power consumption will be below 60 W if with PoE+ PSE.
- Check the power input LED for optimal power output.

Technical specifications

Model	POE304-EX-4P-V2
Hardware specifications:	
Network connector	PoE In Port Two 10/100/1000BASE-T Ethernet with 802.3bt PoE++ “Data + DC” in Auto MDI/MDI-X, auto-negotiation RJ45 connector
	PoE Out Port Four 100/1000BASE-T Ethernet with IEEE 802.3af/at PoE “Data + DC” out Auto MDI/MDI-X, auto-negotiation RJ45 connector
Switch architecture	Store-and-Forward switch architecture
MAC address table	2K MAC address table with auto learning function
Switch fabric	10 Gbps
Switch throughput	7.44 Mbps @ 64Bytes
Flow control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
Jumbo frame	9 Kbytes
ESD protection	Air 8K VDC Contact 6K VDC
Surge protection	6K VDC
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount ear
Dimensions (W x D x H)	32 x 87.8 x 135 mm
Weight	430 g
Power consumption	5.6 W/19.11 BTU (Power On)
Power over Ethernet:	
PoE standard	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
	Per PoE Out Port IEEE 802.3at Power over Ethernet Plus end-span PSE
PoE power	PoE in Port 50 to 57 VDC, max. 95 W Per PoE Out Port 44 to 55 VDC, max. 30.8 W
Power in assignment	PoE in Port 1/2(-), 3/6(+), 4/5(+), 7/8(-) or 1/2(+), 3/6(-), 4/5(+), 7/8(-) Per PoE out Port 1/2(+), 3/6(-)

PoE power budget	75 W (max.) @ 802.3bt PoE++ Type 4 input 60 W (max.) @ 802.3bt PoE++ Type 3 input 75 W (max.) @ PoH input 25 W (max.) @ 802.3at PoE+ input
Standards conformance:	
Regulatory compliance	FCC Part 15 Class A, CE
Stability testing	IEC60068-2-32 free fall IEC60068-2-27 shock IEC60068-2-6 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 to +75C°
Humidity	5 to 95% (non-condensing)
Storage temperature and humidity	-40 to +85C° 5 to 95% (non-condensing)