

**Industrial 1-Port 10/100/1000T 802.3bt PoE++ to
4-Port 802.3at PoE+ Wall-mounted Extender**

WGS-E304PT

User's Manual

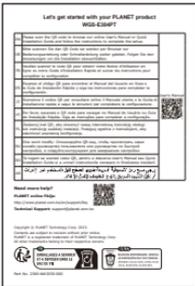
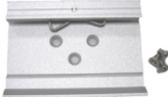
Table of Contents

1. Package Contents.....	3
2. Hardware Introduction	4
2.1 Front Panel	4
2.2 LED Indicators.....	4
2.3 DIP Switch	5
2.4 Physical Dimensions.....	6
3. Installation	7
3.1 Wall-Mount Installation.....	7
3.2 DIN-rail Mounting Installation	9
3.3 Magnet Installation	10
3.4 Connecting WGS-E304PT to PSE	10
3.5 Connecting WGS-E304PT to PD.....	11
4. Power over Ethernet Budget.....	13
5. Technical Specifications	14
Customer Support.....	17

1. Package Contents

Thank you for purchasing PLANET Industrial 1-Port 10/100/1000T 802.3bt PoE++ to 4-Port 802.3at PoE+ Wall-mounted Extender, WGS-E304PT. In the following sections, the term **"Industrial PoE Extender"** means the WGS-E304PT.

Open the box of the WGS-E304PT and carefully unpack it. The box should contain the following items:

Industrial PoE Extender x 1	QR Code Sheet x 1	DIN-rail Kit x 1
		
Wall-mounted Kit x 1	Magnet Kit x 1	RJ45 Dust Cap x 5
		

If any of these are missing or damaged, please 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.

2. Hardware Introduction

This section describes the functionalities of the Industrial PoE Extender's components.

2.1 Front Panel

Figure 2-1 shows the front panel of Industrial PoE Extender.

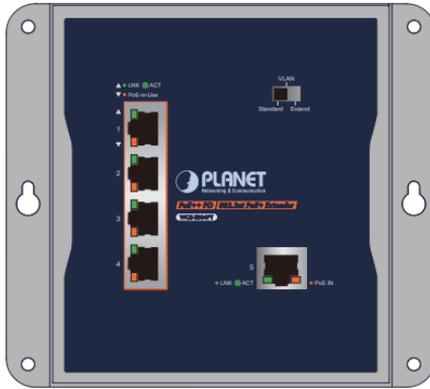


Figure 2-1: WGS-E304PT Front Panel

2.2 LED Indicators

➤ PoE Input Port (Port 5)

LED	Color	Function
LNK/ACT	Green	Lights to indicate the port is linked up.
		Blinks to indicate that the WGS-E304PT is actively sending or receiving data over that port.
PoE-in-Use	Amber	Lights to indicate the port is obtaining PoE power from PSE devices.
		OFF to indicate the port is not obtaining PoE power from PSE devices.

➤ **Per PoE Output Port (Ports 1 ~ 4)**

LED	Color	Function
LNK/ACT	Green	Lights to indicate the port is linked up.
		Blinks to indicate that the WGS-E304PT 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

2.3 DIP Switch

The front panel of Industrial PoE Extender provides one DIP switch for **Standard**, **VLAN** and **Extend** mode selections. The detailed descriptions are shown in the following table.

DIP Switch Mode	Function
Standard (default)	This mode makes the WGS-E304PT operate as a general switch and all ports operate at 10/100/1000Mbps auto-negotiation.
VLAN	This mode makes the WGS-E304PT operate as a VLAN isolation switch and Port 1 to port 4 will isolate respectively. Port 1 to port 4 can only communicate with port 5 (uplink port).
Extend	This mode makes the WGS-E304PT operate as a distance extension switch and port 1 to port 4 can only transmit distance of 250m at speed of 10Mbps.

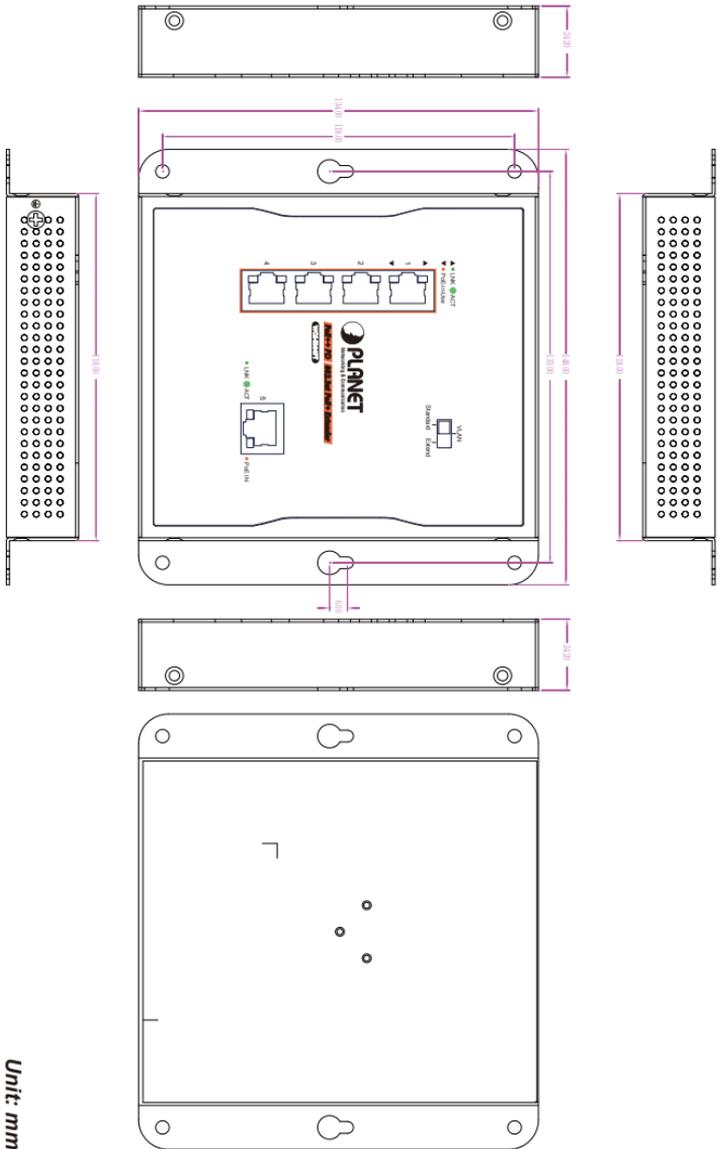


Note

Please reboot the Industrial PoE Extender after adjusting the DIP switch.

2.4 Physical Dimensions

W x D x H: 148 x 24.2 x 134 mm



Unit: mm

3. Installation

This section describes the functionalities of the Industrial PoE Extender's components and guides you to installing it on the wall-mount, DIN rail and magnet Installation. Please read this chapter completely before continuing.



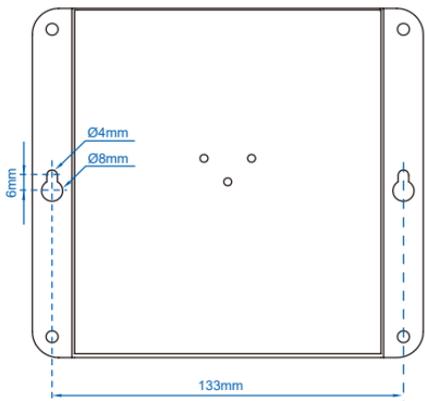
Note

This following pictures show how to install the device. However, the device in the picture is not the WGS-E304PT.

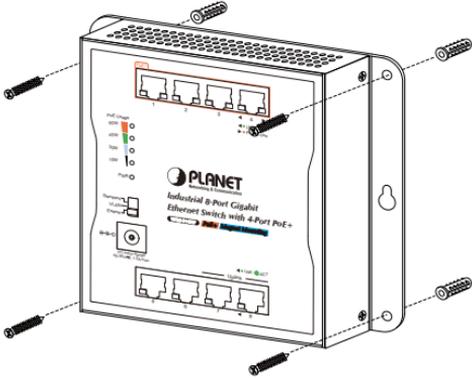
3.1 Wall-Mount Installation

To install the Industrial PoE Extender on the wall, simply follow the following steps:

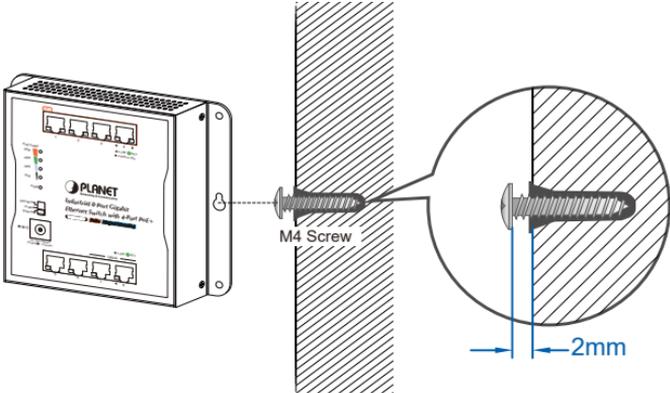
Step 1: Place the Industrial PoE Extender on the wall and mark the four holes with a pencil.



Step 2: Hammer the anchors provided into the four holes and use the four screws to tightly fix the Industrial PoE Extender onto the wall by screwing them.



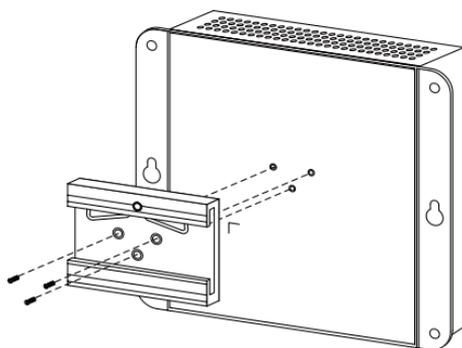
Step 3: Or the Industrial PoE Extender, shown in the picture below, can be hung on the wall by screwing the two screws leaving a space of 2mm apart after the anchors are hammered in.



3.2 DIN-rail Mounting Installation

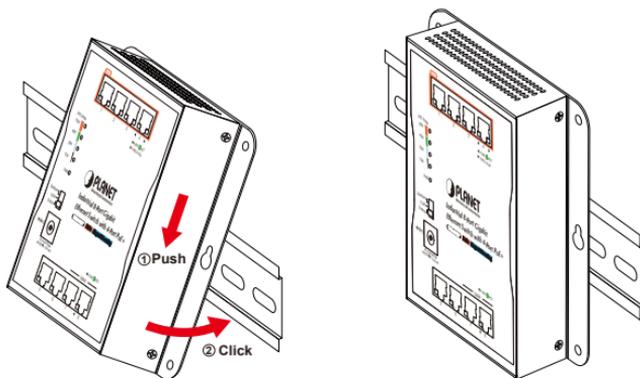
The DIN-rail kit is included in the Industrial PoE Extender package. To hang up the Industrial PoE Extender, follow the steps below:

Step 1: Screw the DIN-rail bracket on the Industrial PoE Extender.



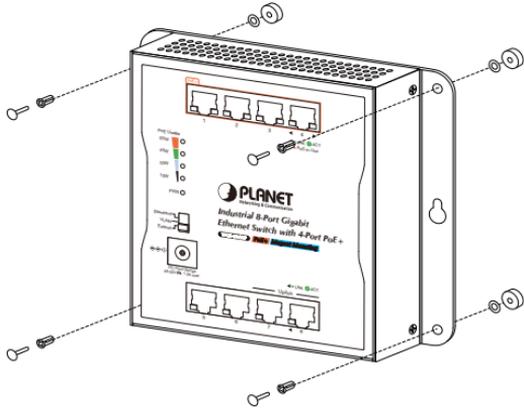
Step 2: Lightly press the bottom of DIN-rail bracket into the track.

Step 3: Check whether the DIN-rail bracket is tightly on the track.



3.3 Magnet Installation

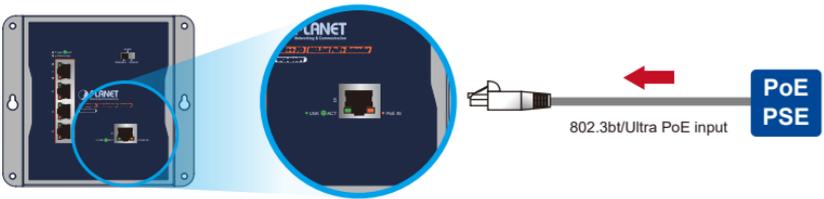
To install the Industrial PoE Extender on a magnetic surface, simply follow the following diagram:



3.4 Connecting WGS-E304PT to PSE

The Industrial PoE Extender has five RJ45 ports of which one is the **PoE++ In** port (Port 5) connected to the PSE and the other four are **PoE+ Out** ports connected to the PDs.

Step 1: Connect a standard Cat5e/6 UTP cable from a remote **PSE**, such as 802.3bt PoE++ switch, to the **"PoE In"** port of the Industrial PoE Extender.



Step 2: The PSE delivers both Ethernet Data and PoE power over UTP cable to the Industrial PoE Extender and the **"PoE IN"** LED will be lit steadily.

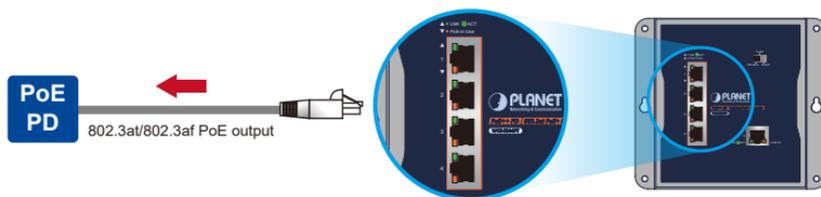


Note

1. When the LED turns steady amber, it means the Industrial PoE Extender is being powered successfully with PoE.
2. If the LED is not lit, please check whether the remote PSE or the cable is connected to a PC or a network device, or the use of cable is correct or not. If not, check whether the power injection going to a PD is correct or not.
3. Never connect any non-standard PoE PSE to the Industrial PoE Extender; it will damage the device permanently.
4. Refer to Chapter 2.2 for more information about LED function.

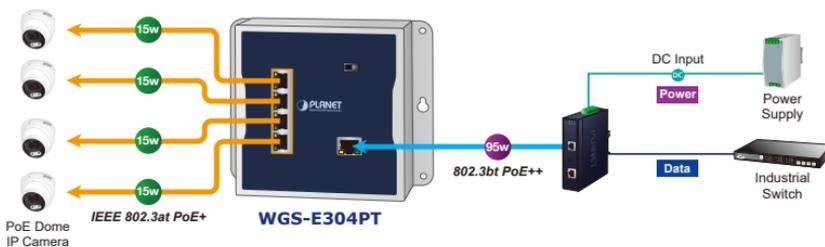
3.5 Connecting WGS-E304PT to PD

Step 1: Connect the additional Cat5e/6 cable from the **PoE+ Out** of the Industrial PoE Extender to a remote **PD**.



Step 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.

Step 3: Once the Industrial PoE Extender 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.



Note

1. 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 Industrial PoE Extender will not be lit steadily.
2. According to IEEE 802.3af/at standard, the Industrial PoE Extender will not inject power to the cable if not connecting to a standard IEEE 802.3af/at device.
3. **DO NOT** connect any PSE to ports 1 to 4 of the Industrial PoE Extender; it may damage the device permanently.

4. Power over Ethernet Budget

The following table lists how many PoE devices can be powered by the Industrial PoE Extender under 1m in distance:

Power Source	PoE Output Budget	Max. Number of PDs supported	
95W 802.3bt PoE++ Type 4 PSE	65 watts max.	Class 4 PD@25 watts	2 units
		Class 3 PD@12.9 watts	4 units
		Class 2 PD@7 watts	4 units
60W 802.3bt PoE++ Type 3 PSE	60 watts max.	Class 4 PD@25 watts	2 units
		Class 3 PD@12.9 watts	4 units
		Class 2 PD@7 watts	4 units
36W 802.3at PoE+ PSE	36 watts max.	Class 3 PD@12.9 watts	2 units
		Class 2 PD@7 watts	4 units

Remarks:

1. The PoE output budget means the aggregated power output of the 4 PSE ports.
2. The aggregated power consumption will be below 70 watts if with PoE+ PSE.
3. Please check the **power input LED** for optimal power output.

5. Technical Specifications

Model	WGS-E304PT
Hardware Specifications	
Network Connector	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
	PoE Out Port - 4 x 10/100/1000BASE-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	10Gbps
Switch Throughput	7.44Mpps @ 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	IP30 metal case
Installation	DIN-rail kit and wall-mount ear
Dimensions (W x D x H)	148 x 24.2 x 134 mm
Weight	457g
LED	PoE Input Port (Port 5): LNK/ACT (Green) PoE: Power-in-use (Amber) PoE Output Ports (Ports 1~4): LNK/ACT (Green) PoE: Power-in-use (Amber)

DIP Switch	Multi-operation mode options (Standard/VLAN/Extend) selection
Power Consumption	8.6 watts/29 BTU (Power On) 82 watts/279 BTU (Full loading with PoE function)
Power over Ethernet	
PoE Standard	PoE in Port - IEEE 802.3bt PoE++ Type 4 standard PD - 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 50~57V DC, max. 95 watts Per PoE out Port 44~55V DC, max. 30.8 watts
Power Pin 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	65-70 watts (max.) @ 802.3bt PoE++ Type 4 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 ~ 75 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource and user's manual on PLANET Web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:

<https://www.planet.com.tw/en/support/faq>

Switch support team mail address:

support@planet.com.tw

Copyright © PLANET Technology Corp. 2023.

Contents are subject to revision without prior notice.

PLANET is a registered trademark of PLANET Technology Corp.

All other trademarks belong to their respective owners.

Trademarks

Copyright © PLANET Technology Corp. 2023.

Contents are subject to revision without prior notice.

PLANET is a registered trademark of PLANET Technology Corp.

All other trademarks belong to their respective owners.

Disclaimer

PLANET Technology does not warrant that the hardware will work properly in all environments and applications, and makes no warranty and representation, either implied or expressed, with respect to the quality, performance, merchantability, or fitness for a particular purpose. PLANET has made every effort to ensure that this User's Manual is accurate; PLANET disclaims liability for any inaccuracies or omissions that may have occurred.

Information in this User's Manual is subject to change without notice and does not represent a commitment on the part of PLANET. PLANET assumes no responsibility for any inaccuracies that may be contained in this User's Manual. PLANET makes no commitment to update or keep current the information in this User's Manual, and reserves the right to make improvements to this User's Manual and/or to the products described in this User's Manual, at any time without notice.

If you find information in this manual that is incorrect, misleading, or incomplete, we would appreciate your comments and suggestions.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Warning



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

