

Quick Installation Guide

PET-102GT++

Industrial High Power Extender

Introduction





The **PET-102GT++** is a high power PoE extender and compatible with IEEE802.3at/af standard. With one 10/100/1000TxBase-T(X) P.D. input port and two 10/100/1000TxBase-T(X) P.S.E. output ports, the device can not only deliver Ethernet data but also forward power from the previous PoE device to the next device. Furthermore, the **PET-102GT++** can be powered by external DC power sources. By using external DC power to compensate for power losses caused by long-haul transmission, users can continue to use the PoE extender to enlarge the distance unlimitedly. With the ability to provide 90Watts PoE power per port, the **PET-102GT++** is surely a user-friendly and high-power PoE extender.

Features

- Support 1 port PoE P.D. input to 2 port POE P.S.E output with 10/100/1000Base-T(X) for power and data extender
- Supports P.S.E. based on IEEE 802.3af/at standard
- PoE P.D. input support 90watts max.
- PoE P.S.E. output support 90watts max. per port
- Support auto-negotiation and auto-MDI/MDI-X
- Multiple unit, daisy-chain installation support
- High reliability and rigid IP-30 housing
- DIN-Rail and wall mounting enabled

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
PET-102GT++		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2

Preparation

Before installation, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings



Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.



Reduced Air Flow: Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation.

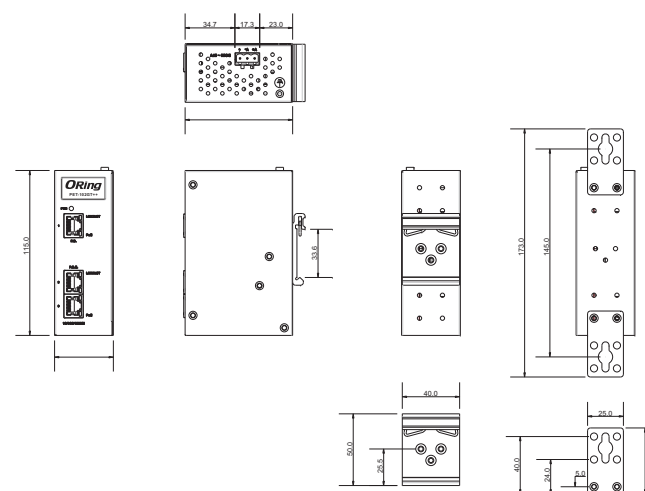


Mechanical Loading: Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.



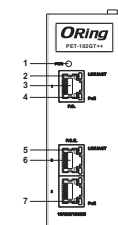
Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension



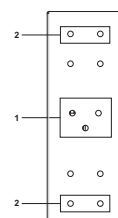
Panel Layouts

Front Panel



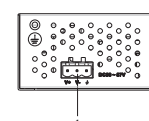
1. Power LED
2. LNK/ACT indicator for P.D. port
3. P.D. port
4. PoE status LED for P.D port
5. LNK/ACT indicator for P.S.E. port
6. P.S.E. LED
7. PoE status LED for P.S.E port

Rear Panel



1. Din-rail screw holes
2. Wall-mount screw holes

Top Panel



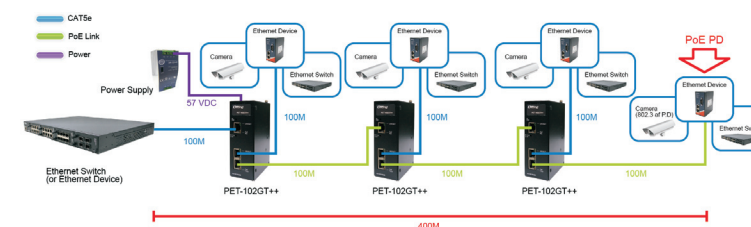
1. Terminal block

Installation and Distance

Power input on the first unit	50VDC	57VDC
P.D. attached on the last unit		
IEEE802.3at (25.5W)	Extended 2 unit Max. Distance up to 300 meters	Extended 3 units Max. Distance up to 400 meters
IEEE802.3af (12.95W)	Extended 4 units Max. Distance up to 500 meters	Extended 5 units Max. distance up to 600 meters
NO P.D. on the last unit	Extended 5 units Max. Distance up to 600 meters	Extended 6 units Max. Distance up to 700 meters

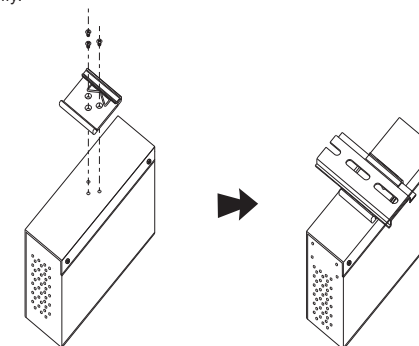
Note : The test result is with one P.D. device connected to the last unit and only for reference.

Example for 57VDC power input and attached IEEE802.3at P.D.



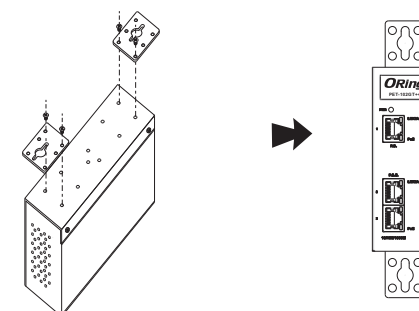
DIN-rail

- Step 1:** Slant the device and screw the Din-rail kit onto the back of the device, right in the middle of the back panel.
- Step 2:** Slide the device onto a DIN-rail from the Din-rail kit and make sure the device clicks into the rail firmly.



Wall-mount

- Step 1:** Screw the two pieces of wall-mount kits to the top and bottom panels of the device. A total of eight screws are required, as shown below.
- Step 2:** Use the device, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
- Step 3:** Insert a screw head through middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.





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● Network Connection

The device has three standard Ethernet ports. According to the link type, the device uses CAT 3,4,5,5e UTP cables to connect to any other network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

For pin assignments for different types of cables, please refer to the following tables.

10/100 Base-T(X)

RJ-45 Input (Data Only)			RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+ (Vdc1+)	Data Receive and Feeding power(+)
2	Rx-	Data Receive	Rx- (Vdc1+)	Data Receive and Feeding power(+)
3	Tx+	Data Transmit	Tx+ (Vdc1-)	Data Transmit and Feeding power(-)
4	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)*
5	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)*
6	Tx-	Data Transmit	Tx- (Vdc1-)	Data Transmit and Feeding power(-)
7	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)*
8	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)*

1000 Base-T

RJ-45 Input (Data Only)			RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+	Data BI_DA+	BI_DA+ (Vdc1+)	Data BI_DA+ and Feeding Power(+)
2	BI_DA-	Data BI_DA-	BI_DA- (Vdc1+)	Data BI_DA- and Feeding Power(+)
3	BI_DB+	Data BI_DB+	BI_DB+ (Vdc1-)	Data BI_DB+ and Feeding Power(-)
4	BI_DC+	Data BI_DC+	BI_DC+ (Vdc2+)	Data BI_DC+ and Feeding Power(+)*
5	BI_DC-	Data BI_DC-	BI_DC- (Vdc2+)	Data BI_DC- and Feeding Power(+)*
6	BI_DB-	Data BI_DB-	BI_DB- (Vdc1-)	Data BI_DB- and Feeding Power(-)
7	BI_DD+	Data BI_DD+	BI_DD+ (Vdc2-)	Data BI_DD+ and Feeding Power(-)*
8	BI_DD-	Data BI_DD-	BI_DD- (Vdc2-)	Data BI_DD- and Feeding Power(-)*

**: Only valid for PoE++ connection

✚ Configurations

After installing the device and connecting cables, the green power LED should turn on. Please refer to the following tablet for LED indication.

LED	Color	Status	Description
Power	Green	On	DC power module activated
	Green	On	Power is received
PoE Input	Amber	On	PoE input module activated
	Green	On	Power is transmitted
PoE Output	Amber	On	PoE output module activated

✚ Specifications

ORing Injector Model	PET-102GT++
Physical Ports	
RJ-45 Ethernet Port with P.D. Input	1
RJ-45 Ethernet Port with P.S.E. Output	2
Operating Voltage	
Input Voltage	50~57VDC
Output Power	90 Watts max(*Note) per port
Protection	
Short Circuit protection	Present
Over Load protection	Present
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	41(W) x 75 (D) x 115(H) mm (1.61 x 2.95 x 4.52 inch)
Weight (g)	349 g
Environmental	
Storage Temperature	-40 to 80°C (-40 to 176°F)
Operating Temperature	-20 to 70°C (-4 to 158°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5 years

*Note : LTPoE++™ PSE technology is applied on this product. Only when an LTPoE++™ Powered Device (PD) is attached can the PSE port deliver up to 90W of output power.

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