

Safety Considerations

These instructions provide basic installation information necessary for the proper and safe functioning of this equipment. Individuals installing or maintaining this product must read all the safety instructions and the parts of system grounding, which are applicable to the system being maintained. Only trained, qualified service personnel shall install or maintain this product. Do not attempt to install or service this equipment unless you are skilled in the installation and maintenance of electronic telecommunications equipment and have successfully completed specific training for this equipment.

System Grounding (Earthing)

Power Cord

Earth Ground is provided in the POEXKIT1 through the 15 A three-wire AC power cord. If replacing this cord, use a cord of the same gauge, insulation, number of conductors, and usage ratings. The POEXRX1 has no earth ground connection unless it is provided by shielded, grounded RJ45 connectors. Refer to your cable manufacturer's earthing ground recommendations and standards listed in the ANSI/TIA-568 specification such as ANSI/TIA-607: Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.

Surge Protection

Surge Protection Devices (SPDs) should be installed at both ends of the cable run, i.e. two SPDs are recommended for each cable run.

- SPDs should each have a separate path to ground.
- Grounding lugs/wires on the SPDs should not be "daisy-chained" (connected to each other in series).
- Use of a grounding bus bar is **strongly recommended** to terminate SPD ground connections to existing electrical grounding leads.
- Utilization of twist-on wire connectors is **not recommended**.
- The conductor length between the POEX device and the SPD should be a **minimum** of 3 feet/1 meter long to ensure sufficient compensation time in the event of an occurrence.
- The following are examples of recommended Ethernet UL 497 approved SPDs:
 - [DTK-MRJPOES-MRJETHS-191529-R9](#)
 - [DTK-RMxxNETS-EXTS-191605-R1-5](#)
- Ensure that field wiring (unprotected wires) and protected wiring are placed in separate conduit feeds.
- Note the following requirements:
 - Service Voltage: <60VDC
 - Clamping Voltage: >60VDC
 - Impedance: 100Ω for UTP cable

Ingress Protection

Far-end and/or external POEX devices should be installed in NEMA/IEC IP-rated enclosures appropriate for the required level of protection.

WARNINGS:

FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN IMPROPER EQUIPMENT OPERATION AND/OR RISK OF ELECTRICAL SHOCK. ANY CONNECTION TO AN OUTSIDE PLANT LEAD, AN OFF-PREMISE APPLICATION, OR ANY OTHER EXPOSED PLANT APPLICATION MAY RESULT IN A FIRE OR SHOCK HAZARD, AND/OR DEFECTIVE OPERATION AND/OR EQUIPMENT DAMAGE.

Keep these instructions with the equipment.

Installation Steps for Extender Kits

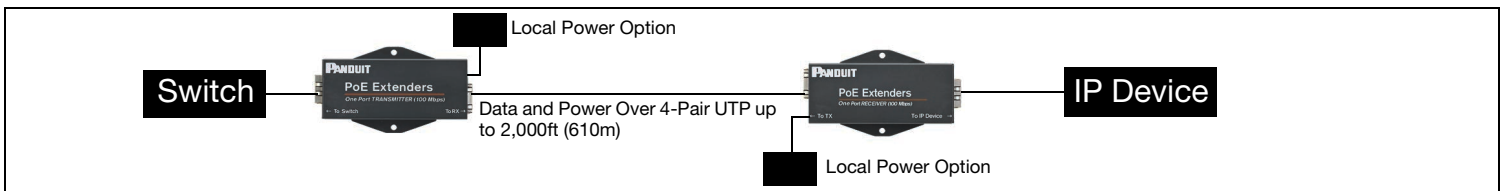
- Remove the PoE Extender transmitter (*POEXTX1*) and receiver (*POEXRX1*) from their packaging.
- Ensure your cable is properly terminated before connecting to any PoE Extender product.
- Connect the transmitter (*POEXTX1*) port marked "TO SWITCH" to a port on the switch.
- Connect the Category 5e or higher (Category 6 recommended) copper cable from the transmitter (*POEXTX1*) port marked "TO RX" to the receiver (*POEXRX1*) port marked "TO TX".
- Using a copper cable or patch cord, connect the IP devices to the receiver (*POEXRX1*) port marked "TO IP DEVICE".
- If using the local power option (supplied with *POEXKIT1*), remove the power supply and cord from the carton.
 1. Plug the DC barrel connector of the power supply into the PoE Extender box to be locally powered. The 60W supply can power either the *POEXTX1* or *POEXRX1*.
 2. Plug the AC power cord, into the power supply and then into a local AC, grounded outlet (NEMA 5-15R or equivalent).
 3. If the PoE receiver is locally powered and the PoE transmitter is not, the port on the switch or device the PoE transmitter is connected to must be PoE capable.



Bandwidth Availability

100Mbps full duplex, symmetrical to 2,000 feet (610m) over 4-Pair UTP Copper Cable

1-Port PoE Extender Kit (*POEXRX1* + *POEXTX1* + 60W, 55V Power Supply)



Product Details (*POEXTX1*)

- Paired with *POEXRX1*
- Up to 50W PoE
- Need to be locally powered when non-PoE switch is used
- IEEE compliant

Product Details (*POEXRX1*)

- Paired with *POEXTX1*
- Up to 50W PoE
- PoE on 4 pairs
- IEEE compliant
- Can be locally powered for additional PoE delivery

PoE Length Guidelines for 1-Port Extender Kit

Scenario 1: 1 Port (POEXTX1) Transmitter Box Powered by 50W Power Sourcing Switch (assuming 55VDC output)

PoE Class	Standard	Max Wattage at PD	Under Voltage Lockout at PD	PSE - TX1	TX1 - RX1 - Cable Distance (ft)		RX1 - PD
					23AWG 1.04Ω/100ft	24AWG 1.43Ω/100ft	
1	802.3af	3.84	37	50ft	2000	2000	50ft
2	802.3af	6.49	37		2000	2000	
3	802.3af	12.95	37		1791	1303	
4	802.3at	25.5	42		1257	914	
5	802.3bt	40	42		N/A	N/A	
6	802.3bt	51	41		N/A	N/A	

Scenario 2: 1 Port (POEXTX1) Transmitter Box Locally powered (55VDC output)

PoE Class	Standard	Max Wattage at PD	Under Voltage Lockout at PD	SW - TX1	TX1 - RX1 - Cable Distance (ft)		RX1 - PD
					23AWG 1.04Ω/100ft	24AWG 1.43Ω/100ft	
1	802.3af	3.84	37	Up to 100m	2000	2000	50ft
2	802.3af	6.49	37		2000	2000	
3	802.3af	12.95	37		1798	1303	
4	802.3at	25.5	42		1263	915	
5	802.3bt	40	42		N/A	N/A	
6	802.3bt	51	41		N/A	N/A	

Scenario 3: 1 Port (POEXRX1) Receiver Box Locally powered (PoE Switch at head end)

PoE Class	Standard	Max Wattage at PD	Under Voltage Lockout at PD	PSE - TX1	TX1 - RX1 - Cable Distance (ft)		RX1 - PD
					23AWG 1.04Ω/100ft	24AWG 1.43Ω/100ft	
1	802.3af	3.84	37	50ft	2000	2000	50ft
2	802.3af	6.49	37		2000	2000	
3	802.3af	12.95	37		2000	2000	
4	802.3at	25.5	42		2000	2000	
5	802.3bt	40	42		2000	2000	
6	802.3bt	51	41		N/A	N/A	