PANDUIT

PoE Extenders

© Panduit Corp. 2018

Part Number(s): POEXTX1, POEXRX1, POEXRX4, POEXKIT1, POEXKIT4

INSTALLATION INSTRUCTIONS

PN636

Installation Steps for Extender Kits

- Remove the PoE Extender transmitter (POEXTX1) and receiver (POEXRX1 or POEXRX4) 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 or POEXRX4) port marked "TO TX".
- Using a copper cable or patch cord, connect the IP devices to the receiver (POEXRX1 or POEXRX4) port marked "TO IP DEVICE"
- If using the local power option (supplied with POEXKIT1 or POEXKIT4), 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 110W is recommended for POEXRX4; 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.
 - 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 or POEXRX4
- 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

4-Port PoE Extender Kit (POEXRX4 + POEXTX1 + 110W, 55V Power Supply)





INSTALLATION INSTRUCTIONS

PoE Length Guidelines for 1-Port Extender Kit

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

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

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

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

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

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

PoE Length Guidelines for 4-Port Extender Kit

Scenario 1: 4 Port (POEXRX4) Receiver Box Powered by 50W Power Sourcing Switch (assuming 55VDC output)

		Total	Under		TX1 - RX	4 - Cable	
PoE		Wattage	Voltage		Distance (ft)		
Class	Standard	Available	Lockout at	PSE - TX1	23AWG	24AWG	RX4 - PD(s)
(4 ports)		for PD(s)*	PD		1.04Ω/100ft	1.43 Ω /100ft	
•							
1	802.3af	15.36	37		2000	2000	
2	802.3af	25.96	37		1791	1303	
3	802.3af	N/A	N/A	50ft	N/A	N/A	50ft
4	802.3at	N/A	N/A		N/A	N/A	
5	802.3bt	N/A	N/A		N/A	N/A	
6	802.3bt	N/A	N/A		N/A	N/A	

* - Total wattage available refers to the maximum amount of power available at the PD. For example, in Class 2 scenario above which shows 25.96 W available this can support four Class 2 devices or two Class 3 devices.

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

PoE		Total	Under		TX1 - RX	4 - Cable	
Class	Standard	Wattage	Voltage	SW - TX1	Distance (ft)		RX4 - PD(s)
(4 ports)		Available	Lockout at		23AWG	24AWG	
		for PD(s)*	PD		1.04Ω/100ft	1.43 Ω/ 100ft	
1	802.3af	15.36	37		2000	2000	
2	802.3af	25.96	37		1798	1303	
3	802.3af	N/A	N/A	Up to 100m	N/A	N/A	50ft
4	802.3at	N/A	N/A		N/A	N/A	
5	802.3bt	N/A	N/A		N/A	N/A	
6	802.3bt	N/A	N/A		N/A	N/A	

* - Total wattage available refers to the maximum amount of power available at the PD. For example, in Class 2 scenario above which shows 25.96 W available this can support four Class 2 devices or two Class 3 devices.

Scenario 3: 4 port (POEXRX4) Receiver Box Locally powered (PoE Switch at head end)

PoE		Total	Under		TX1 - RX	4 - Cable	
Class	Standard	Wattage	Voltage	PSE - TX1	Distance (ft)		RX4 - PD(s)
(4 ports)		Available	Lockout at		23AWG	24AWG	
		for PD(s)*	PD		1.04Ω/100ft	1.43 Ω/ 100ft	
1	802.3af	15.36	37		2000	2000	
2	802.3af	25.96	37		2000	2000	
3	802.3af	51.8	37	50ft	2000	2000	50ft
4	802.3at	102	42		2000	2000	
5	802.3bt	N/A	N/A		N/A	N/A	
6	802.3bt	N/A	N/A		N/A	N/A	

* - Total wattage available refers to the maximum amount of power available at the PD. For example, in Class 2 scenario above which shows 25.96 W available this can support four Class 2 devices or two Class 3 devices.

Safety Considerations

These instructions provide basic installation information necessary for the proper and safe functioning of this equipment. Persons 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):

Earth Ground is provided in the POEXKIT1 or POEXKIT4 through the 15A three-wire AC power cord. If replacing this cord, use a cord of the same gauge, insulation, number of conductors, and usage ratings. POEXTX1, POEXRX1 and POEXRX4 have 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 TIA568 specification such as ANSI-J-STD-607-A: Commercial Grounding (Earthing) and Bonding Requirements for Telecommunications.

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.

For Instructions in Local Languages and Technical Support:





E-mail: techsupport@panduit.com Phone: 866-405-6654

Document No. 445-0014-A