701EPI/101EPI, 701CPI/101CPI
Long Reach Ethernet Extenders
Quick Installation Guide

Version: 1.00

Overview

The 701EPI and 101EPI Long Reach Ethernet Extenders feature a pair of plug-n-play solution for carrying Ethernet traffic and power over Ethernet cables up to 800 meters. The 701CPI and 101CPI Ethernet-over-Coax Extenders deliver data and power over coaxial cables up to 1 km. The 701EPI and 701CPI are designed to locate at network sides where the 101EPI and 101CPI are located at the remote sides.

Specifications

Model Name		701EPI	101EPI	701CPI	101CPI
LINE Interface	Connector	RJ45 x 1		BNC 75 ohm x 1	
	Compliance	IEEE 802.3/802.3u			
	PoE	Passive PoE PSE	Passive PoE PD	Passive PoE PSE	Passive PoE PD
LAN Interface	Connector	RJ45 x 1			
	Compliance	IEEE 802.3/802.3u	IEEE 802.3/802.3u/802.3at/802.3af	IEEE 802.3/802.3u	IEEE 802.3/802.3u/802.3at/802.3af
	PoE		PSE		PSE
Power Input		2-pin Terminal Block 55 ~ 57 VDC	Powered by LINE interface	2-pin Terminal Block 55 ~ 57 VDC	Powered by LINE interface

NOTE: Power Sourcing Equipment (PSE), Powered Device (PD)

LED Indicators

(1) LED Indicators of System
▪ There are three LEDs on the front panel of the 701EPI and 701CPI.
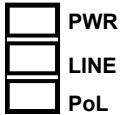
□ **PWR**
□ **LINE**
□ **PoL**

| LED	Color	On	Off
PWR	Green	Device Power On	Device Power Off
LINE	Green	Line LINK UP	Line LINK DOWN
PoL (Power over LINE)	Green	Powered Device Connected	Powered Device Disconnected

▪ There are three LEDs on the front panel of the 101EPI and 101CPI.

□ **PWR**
□ **LINE**
□ **PoE**

| LED	Color	On	Off
PWR	Green	Device Power On	Device Power Off
LINE	Green	Line LINK UP	Line LINK DOWN
PoE (Power over LAN)	Green	Powered Device Connected	Powered Device Disconnected

(2) LED Indicators of Ethernet Port

100M   10M
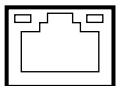
LAN

LED	Blinking	On	Off
10M	Data Transmitting	10Mbps LINK UP	LINK DOWN
100M	Data Transmitting	100Mbps LINK UP	LINK DOWN

RJ45 Pin Assignments

8-pin RJ45

1   8
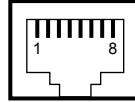
Both 701EPI/101EPI LAN and LINE interfaces and the 701CPI/101CPI LAN interfaces are standard 8-pin RJ45 connectors. The following tables display the pinouts.

▪ The MDI/MDI-X pinouts of the 701EPI/101EPI LAN and LINE interfaces and the 701CPI/101CPI LAN interfaces.

MDI Port Pinouts		MDI-X Port Pinouts	
Pin	Description	Pin	Description
1	TX+	1	RX+
2	TX-	2	RX-
3	RX+	3	TX+
4	Not used	4	Not used
5	Not used	5	Not used
6	RX-	6	TX-
7	Not used	7	Not used
8	Not used	8	Not used

▪ The PoE pinouts of the 701EPI/101EPI LINE interfaces.

PoE Pinouts			
Pin	Description	Pin	Description
1	V+	5	V+
2	V+	6	V-
3	V-	7	V-
4	V+	8	V-

▪ The PoE pinouts of the 101EPI/101CPI LAN interfaces.

PoE Pinouts			
Pin	Description	Pin	Description
1	V+	5	Not used
2	V+	6	V-
3	V-	7	Not used
4	Not used	8	Not used

CFG (DIP Switch)
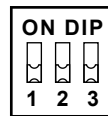
ON DIP
1 2 3
CFG

▪ The configuration descriptions of the 701EPI and 701CPI.

DIP Switch	Mode	ON	OFF
1	PoL (Power over LINE)	PoE Output Enabled	PoE Output Disabled
2	LFPT (Link Fault Pass Through)	LFPT Enabled	LFPT Disabled
3	Auto	100Mbps/10Mbps Auto Speed	10Mbps

▪ The configuration descriptions of the 101EPI and 101CPI.

DIP Switch	Mode	ON	OFF
1	PoE (Power over LAN)	PoE Output Enabled	PoE Output Disabled
2	LFPT (Link Fault Pass Through)	LFPT Enabled	LFPT Disabled
3	Auto	100Mbps/10Mbps Auto Speed	10Mbps

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LFPT Behavior

Link Fault Pass Through (LFPT) is used for notifying the network administrator to get the long-distance cable status, as well as powering on and off the powered device located at the remote site. The following instructions explain the LFPT modes of DIP switches are in ON state for both the master 701EPI/701CPI and the remote 101EPI/101CPI devices.

1. The 701EPI/701CPI detects LINK DOWN at its LINE interface when the cable is broken, it will pass this status to the network administrator by triggering LINK DOWN at its LAN interface.
2. The 701EPI/701CPI detects LINK UP at its LINE interface when the cable is connected, it will pass this status to the network administrator by triggering LINK UP at its LAN interface.
3. The 701EPI/701CPI detects LINK DOWN at its LAN interface when the cable is broken or the network administrator acts LINK DOWN, it will pass this status to the 101EPI/101CPI by triggering LINK DOWN at its LINE interface.
4. The 101EPI/101CPI detects LINK DOWN at its LINE interface when the cable is broken or the 701EPI/701CPI acts LINK DOWN, it will turn off the PoE power output to the powered device connected to its LAN interface.
5. The 701EPI/701CPI detects LINK UP at its LAN interface when the cable is connected or the network administrator acts LINK UP, it will pass this status to the 101EPI/101CPI by triggering LINK UP at its LINE interface.
6. The 101EPI/101CPI detects LINK UP at its LINE interface when the cable is connected or the network administrator acts LINK UP, it will turn on the PoE power output to the powered device connected to its LAN interface.

Power Connection

701EPI
Power Input Interface

701CPI
Power Input Interface

LINE   55~57Vdc − +   LINE   55~57Vdc − +
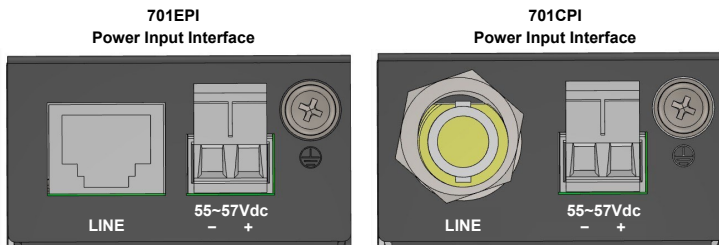
▪ The power input interfaces of the 701EPI and 701CPI are the 2-pin terminal block and are provided the power input voltage 55 ~ 57 VDC from the power supply.
▪ Insert the positive and negative wires into V+ and V- contact on the terminal block and tighten the wire-clamp screws to prevent the wires from being loosened.

Ground Connection

55~57Vdc − +
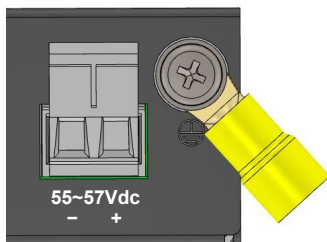
To prevent the effects of noise from electromagnetic interference (EMI), run the ground connection from the ground screw to the grounding surface before connecting the devices.

Wall Mounting

STEP 1: At the rear side of the Ethernet Extender, use two screws to install the bracket, as shown in Figure 1.
> **NOTE:** Each screw is flat head M3 x 4 mm.

STEP 2: Use the screws to attach the bracket of the Ethernet Extender for wall mounting, as shown in Figure 2 and Figure 3.
> **NOTE:** These screws are not included in the package. The head of each screw is less than 7 mm in diameter, the shaft is less than 3 mm in diameter, and the length is less than 10 mm in diameter.

Figure 1   **Figure 2**   **Figure 3**
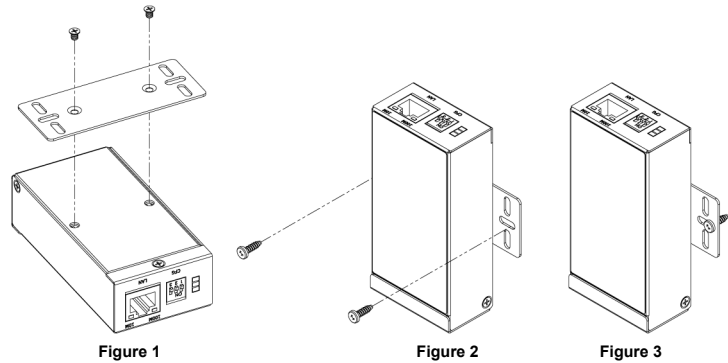
⚠ ATTENTION: Safety Warning

- Disconnect all power from devices before attempting installation.
- This device is intended for installation only in **restricted access locations** as defined where both these conditions apply:
  - Access is through the use of a lock or tool and key, or other means of security, and is controlled by the authority responsible for the location.
  - Access can only be gained by service persons or by users who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.
- All electric installations must be carried out in accordance with local and national regulations.
- Do not work on the system, connect or disconnect cables during periods of lightning activity.
- The equipment must be connected to earth.
- Shield of RJ45 cables has to be connected to the same earth potential as the equipment.
- Please remove the ground connection lastly if you need to remove the device after installation.
- If the LINE interface is used for the connection between two buildings, all necessary protective measures must be ensured externally.
- This equipment relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 1A is used.

NOTE

- Please scan below QR Code to download online resources.
  (1) 701EPI/101EPI download link: https://www.proscend.com/en/product/701-101E.html
  (2) 701CPI/101CPI download link: https://www.proscend.com/en/product/701-101C.html

701EPI/101EPI   701CPI/101CPI