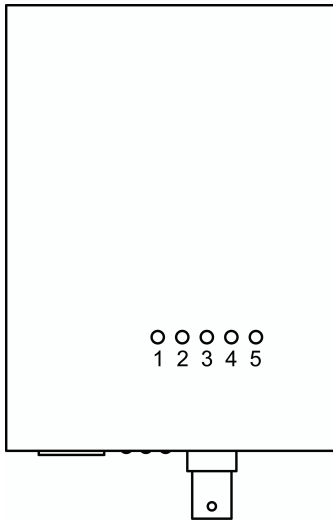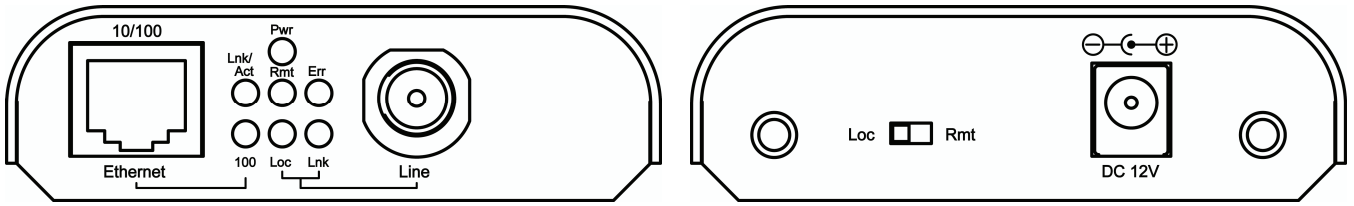## *10/100Base-TX Industrial Ethernet Extender*

This quick start guide describes how to install and use the Ethernet Extender. The Ethernet Extender introduced here provides one channel for Ethernet over existing coaxial cable.

Product Overview

Use DIN-Rail Mounting Kit:

Fit the DIN-Rail mounting kit onto the bottom of the unit and fasten the screws. The Ethernet Extender can use DIN-Rail mounting kit to fix on the DIN-Rail.
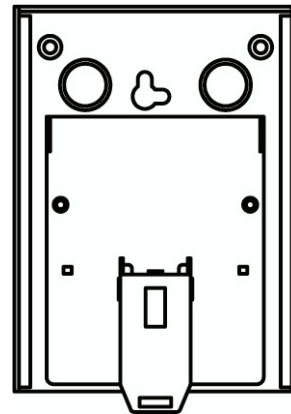
Product Features

- Complies with EN61000-6-2 & EN61000-6-4 EMC Generic standard immunity for Industrial environment.
- Operates transparent to higher layer protocols.
- One Ethernet port (RJ-45 connector): 10/100Mbps-Full/Half-duplex, Auto-negotiation, Auto-MDI/MDIX.
- Complies with IEEE802.3 10Base-T and IEEE802.3u 100Base-TX standards.
- One Ethernet Extender port (BNC connector): Symmetrical on the VDSL, high-speed Full-duplex 85Mbps communications link over existing coaxial cable.
- Provides BNC to F-Type connector.
- Supports one DIP switch to select local or remote side.
- Ten reference speeds supports up to 85Mbps @ about 200 meters (656ft.), down to 1Mbps @ about 2,600 meters (8,530ft.).
- External AC to DC power adapter.
- Operating voltage and Max. current consumption: 0.5A @ 12VDC. Power consumption: 6W Max.
- -10℃ to 60℃ (14℉ to 140℉) operating temperature range. UL508 Industrial Control Equipment certified Maximum Surrounding Air Temperature @ 60℃ (140℉).
- For use in Pollution Degree 2 Environment.
- Hardened aluminum case.
- Supports DIN-Rail or Wall Mounting installation.
- Used as a stand-alone device or with a chassis.
- Hot-swappable when used with a chassis.

Ethernet Extender Mode Settings

Ethernet Extender mode settings are made very simple by means of a switch at the rear panel of the Ethernet Extender. The switch has two positions for Ethernet Extender mode settings. Refer to the table below for more details. One device must be set to Loc and the other to Rmt when two devices are connected.

Loc	Rmt
The device operates in local mode	The device operates in remote mode

Connecting to Power

This Ethernet Extender is a plug-and-play device. Connect the supplied AC to DC power adaptor to the receptacle on the rear panel of the Ethernet Extender, and then attach the plug into a standard AC outlet.

Front Panel & LEDs

The LED indicators give you instant feedback on status of the Ethernet Extender:

LEDs	State	Indication
Pwr	Steady	Power on, Pwr stands for POWER
Pwr	Off	Power off
Rmt	Steady	The device operates in remote mode
Loc	Steady	The device operates in local mode
Err	Steady	Error occurred
Lnk	Steady	A valid connection established
Ethernet		
Lnk/Act	Steady	A valid Ethernet connection established, Lnk stands for LINK
Lnk/Act	Flashing	Transmitting or receiving Ethernet data, Act stands for ACTIVITY
Lnk/Act	Off	Neither valid Ethernet connection established nor transmitting/receiving Ethernet data
100	Steady	Ethernet Connection transferring at 100Mbps
100	Off	Ethernet Connection transferring at 10Mbps

Ethernet Extender		
1	Green	Link Speed: 1~5Mbps, Distance: 2,600 meters (8,530ft.)
1	Amber	Link Speed: 6~10Mbps, Distance: 2,400 meters (7,874ft.)
2	Green	Link Speed: 11~16Mbps, Distance: 2,000 meters (6,561ft.)
2	Amber	Link Speed: 17~20Mbps, Distance: 1,800 meters (5,905ft.)
3	Green	Link Speed: 21~29Mbps, Distance: 1,600 meters (5,249ft.)
3	Amber	Link Speed: 30~43Mbps, Distance: 1,400 meters (4,593ft.)
4	Green	Link Speed: 44~54Mbps, Distance: 1,200 meters (3,937ft.)
4	Amber	Link Speed: 55~63Mbps, Distance: 1,000 meters (3,280ft.)
5	Green	Link Speed: 64~74Mbps, Distance: 600 meters (1,968ft.)
5	Amber	Link Speed: 75~85Mbps, Distance: 200 meters (656ft.)

Self-diagnostic Test Procedure

- Two Industrial Ethernet Extenders are connected in pairs by BNC connectors over coaxial cable.
- One Industrial Ethernet Extender is configured as local unit located at local site of Ethernet extension by setting mode switch at rear panel of this Industrial Ethernet Extender to Loc (local mode).
- The other Industrial Ethernet Extender is configured as remote unit located at remote site of Ethernet extension by setting mode switch at rear panel of this Industrial Ethernet Extender to Rmt (remote mode).
- Connect supplied AC to DC power adaptors to receptacle on rear panel of these two Industrial Ethernet Extenders and then attach plugs into standard AC outlet sockets to power on these two Industrial Ethernet Extenders.
- LED 5 on top panel of these two Industrial Ethernet Extenders might light on in amber or green color if these two Industrial Ethernet Extenders are connected in pairs by BNC connectors over a short coaxial cable (less than 200 meters). This means that these two Industrial Ethernet Extenders could operate in normal condition since they finally negotiate a best performance for symmetrical transmission.