

# 1-Port 10/100TX over UTP Long Reach Ethernet Extender



### Easy Connection to Ethernet over UTP Extender

To fulfill the needs of long distance Ethernet over UTP or phone wire applications, PLANET Technology offers a new-generation Ethernet over UTP Extender, LRE-101. It features 1 10/100 BASE-TX RJ45 port and 1 UTP RJ45 connector with a compact-sized metal housing, making the placement of the unit convenient. The LRE-101 provides a total duplex data rate of 100Mbps which can extend a maximum distance of up to 1.2km. It is ideal for extending the distance and signal conversion by transmitting the Ethernet data from the UTP cable or Phone wire to another 100-meter UTP cable for any type of IP network device such as HD IP camera, wireless access point, NVR and digital signage.



### IP Ethernet over Long Distance Existing UTP Cables

PLANET LRE-101 is also a Long Reach Ethernet (LRE) solution which provides a quick replacement and smooth migration solution from existing analog system to full digital system. A normal UTP cable can only be extended up to 100 meters, but with the LRE-101, the distance for Ethernet networking can be extended up to 700 meters (Cat.5E UTP) and 1200 meters (Phone wire), which are ideal for the following network applications:

- Long-distance IP network devices
- IP digital signage
- Cable TV to IPTV
- Distance video education
- Electronic billboards
- Other applications

### Product Features

- 10/100Mbps RJ45 port, auto-negotiation and half/full duplex mode
- Supports Phone wire and Cat.5E UTP cable or above
- Long distance Ethernet data transmission up to 1.2km
- Master/Slave mode selectable via DIP switch
- Maximum 1522 bytes packet size, IEEE 802.1Q VLAN tag transparent
- Advantage of minimum installation time (Simply by Plug-and-Play)
- Supports extensive LED indicators for network diagnosis
- Compact in size and easy to install
- Works with PLANET media converter chassis (MC-700/MC-1500/ MC-1500R/MC-1500R48)

If you have Cat.5E UTP cable or Phone wire in your existing environment, you can install a pair of the LRE-101 very simply without the need to build additional network wires, thus saving costs for network construction.

#### *Easy and Flexible Installation*

The LRE-101 offers two operation modes, the client-side “**Slave**” and central-side “**Master**”, making any network applications easy and flexible. The “**Slave**” or “**Master**” mode can be adjusted by using the built-in DIP switch. For point-to-point connection, one LRE-101 in “**Slave**” mode and the other one in “**Master**” mode must be set up as a pair of converters to perform the connection. This enables the administrator to efficiently manage the network over UTP cable, making long-distance transmission better.



#### *Low Power Consumption*

The LRE-101 has a low power consumption of only 1.55 watts when in full operation.

#### *Easy Chassis Installation*

The LRE-101 Long Reach Ethernet Extender can be used as a stand-alone unit or as a slide-in module to the PLANET Media Converter Chassis (MC-700 and MC-1500 chassis series). The media chassis can assist in providing DC power to LRE-101. It can be DIN-rail or wall mounted for efficient use of cabinet space.

## Optional installation method



Media Chassis Installation



DIN-rail Installation



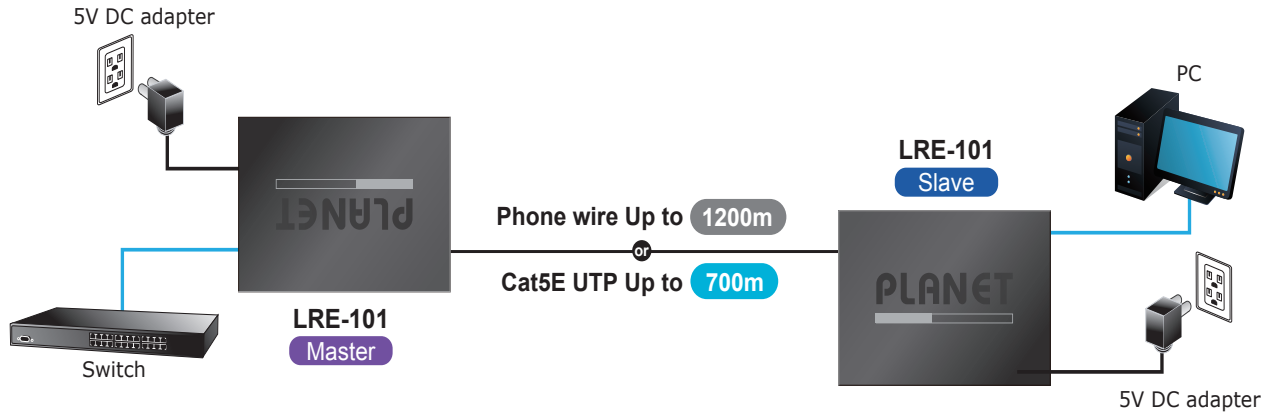
Wall-mount Installation

## Applications

### Point-to-Point Application -- LAN to LAN Connection

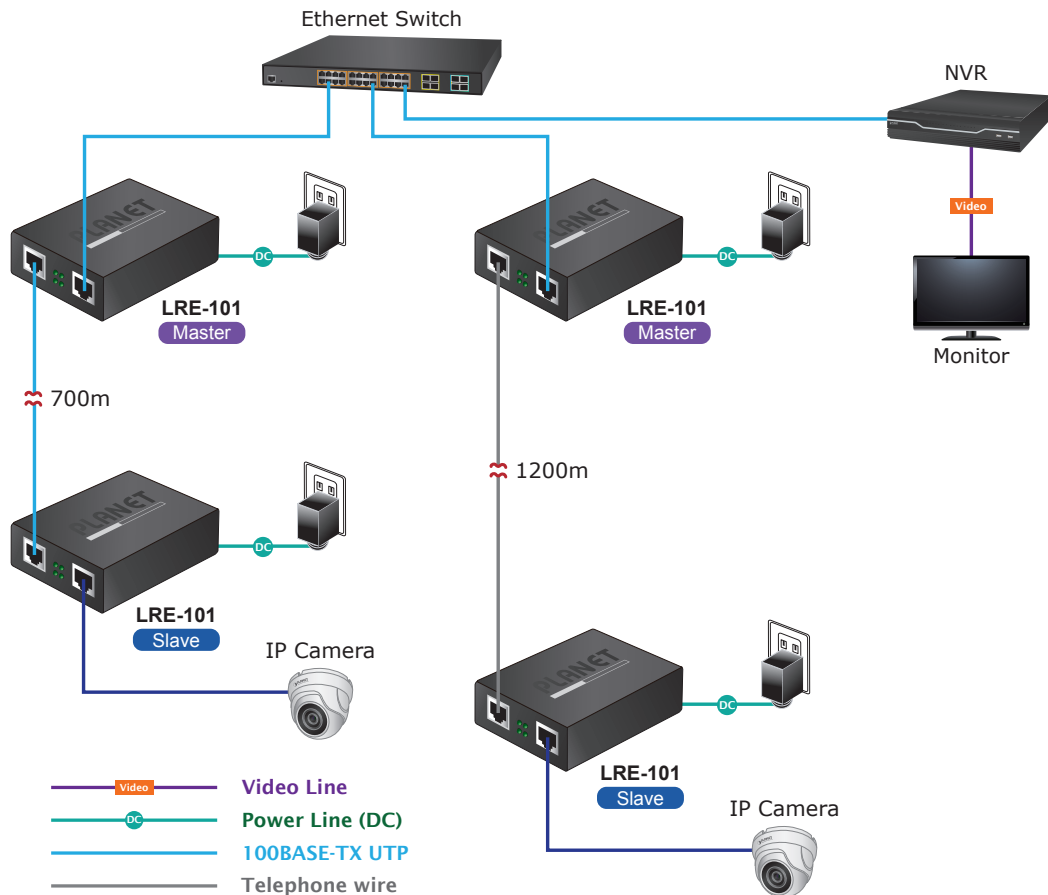
One set of the LRE-101 Extender could be used to link two local area networks that are located in different places. Through the Cat.5e UTP cable or Phone wire, it could set up a 100Mbps backbone, but one must be **Master (CO mode)** and the other one is **Slave (CPE mode)**.

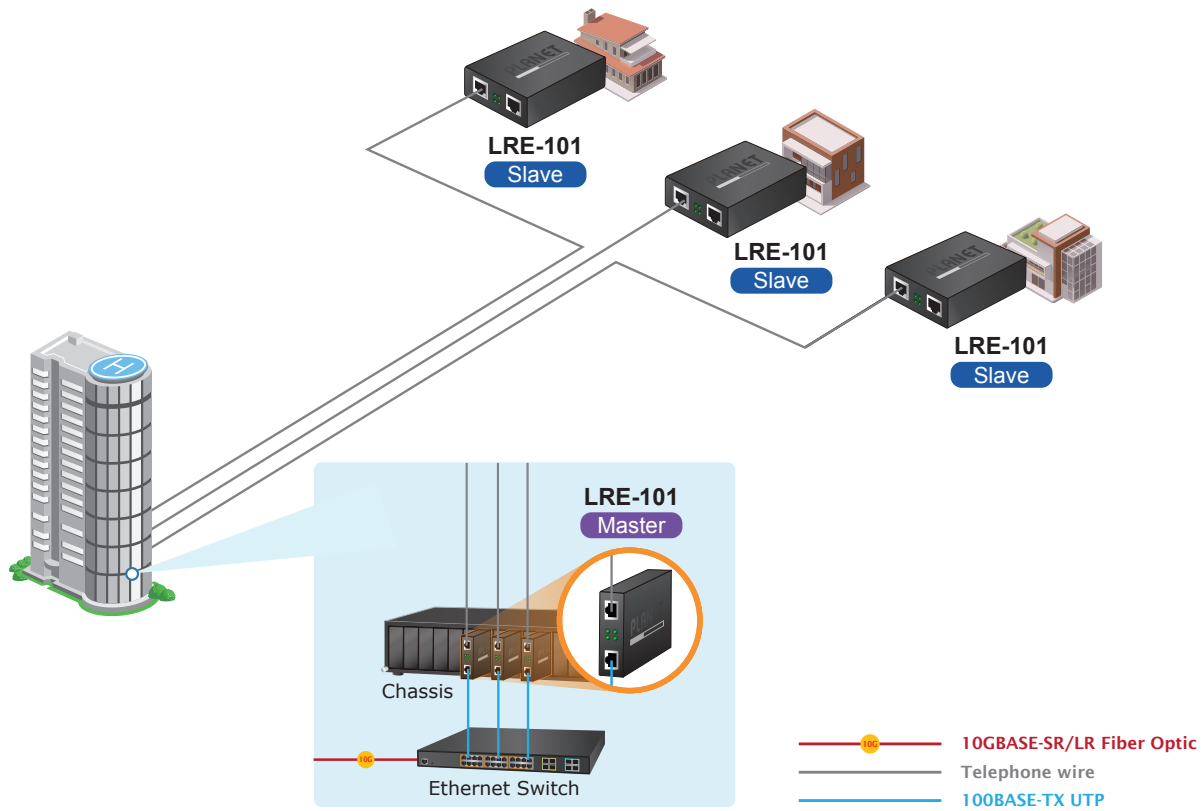
### Point to Point Application



### Community/Campus Surveillance and Security over IP

To take advantage of digital surveillance system and keep the benefits of UTP cable, the LRE-101 helps the community, campus and enterprises to upgrade analog camera system to IP camera surveillance without using additional new wires. The LRE-101 is a switching architecture with one RJ45 port and one Long Reach Ethernet interface. Just plug in the UTP cable of IP camera to Ethernet port and the existing UTP cable or Phone wire to the UTP connector to easily deploy and extend the distance with signal conversion by transmitting the Ethernet data from the standard UTP cable.

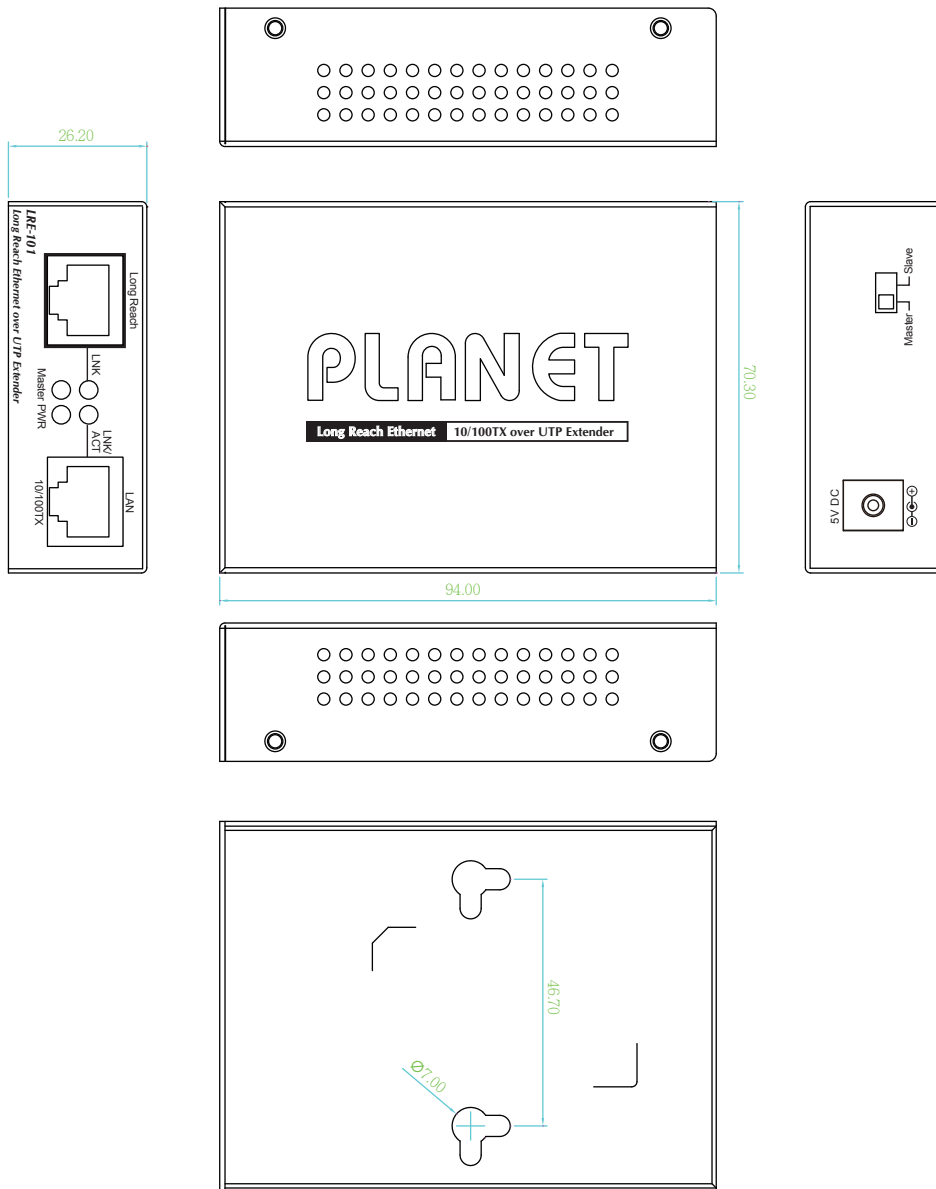




## Specifications

Product	LRE-101		
<b>Hardware Specifications</b>			
LAN Ethernet interface	1 10/100BASE-TX RJ45 Copper port, auto-negotiation / auto-MDI/MDI-X		
	Cabling	Cat5e UTP or above	
	Maximum Distance	100 meters	
	Maximum Frame Size	1522 bytes	
Long Reach Interface	1 RJ45 female Ethernet over UTP		
	Cabling	Cat5e UTP or above Telephone wire (RJ11)	
	Maximum Distance	Max.800m with data transmission (RJ45) Max.1200m with data transmission (RJ11)	
	Long Reach Ethernet Standard	IEEE 1901	
	Modulation Type	Wavelet-OFDM	
	Security	128-bit AES encryption	
	Frequency Band	2~28MHz	
	Performance*	Distance	Data Rate (Upstream/Downstream)
		<b>RJ45</b>	
		200m	89/88Mbps
		400m	60/58Mbps
		600m	29/29Mbps
		700m	14/33Mbps
		<b>RJ11</b>	(Upstream/Downstream)
200m		81/80Mbps	
400m		59/52Mbps	
600m		52/44Mbps	
800m	28/22Mbps		
1000m	48/36 Mbps		
1200m	11/6 Mbps		
Functionality	DIP Switch	Select Master or Slave mode	
Dimensions (W x D x H)	97 x 70.3 x 26 mm		
Weight	189g		
Housing	Metal		
Power Requirement	5V DC, 2A external power		
LED Indicators	Power: <b>Green</b> LAN: <b>Green</b> , 10/100Mbps LNK/ACT Long Reach: <b>Green</b> , LNK Master: <b>Green</b>		
<b>Standards Conformance</b>			
Standards Compliance	IEEE 802.3/ 802.3u Ethernet standard compliant IEEE 802.3x Full-duplex flow control IEEE 802.1q Tag VLAN Transparent, Multicast pass-through		
Regulatory Compliance	FCC Part 15 Class A, CE		
<b>Environment</b>			
Temperature	Operating: 0~50 degrees C Storage: -10~70 degrees C		
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)		

## Dimensions



Unit: mm

## Ordering Information

LRE-101	1-Port 10/100TX over UTP Long Reach Ethernet Extender
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## Related Products

LRE-101C	1-Port 10/100TX over Coaxial Long Reach Ethernet Extender
MC-1500	15-Slot Media Converter Chassis
MC-1500R	15-Slot Media Converter Chassis (AC Power)
MC-1500R48	15-Slot Media Converter Chassis (DC Power)
MC-700	7-Slot Media Converter Chassis

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LRE-101