

## LRP-111U-KIT

# Industrial 1-Port 10/100TX 802.3bt PoE + 1-Port UTP Long Reach PoE Kit



PLANET **Long Reach PoE solution** is designed to extend IP Ethernet transmission and inject power simultaneously into a remote PoE compliant powered device (PD) beyond the 100 meters distance limit of Ethernet.

### Convenient PoE over UTP Extender in Harsh Environment

The LRP-111U-KIT, a PLANET brandnew industrial-grade Long Reach PoE solution, is a **Single-port PoE over UTP Extender Kit** featuring long range data and power transmission for distance up to **800m (2,624ft.)** over **UTP/STP** cable, and another Ethernet cable to remote PoE IP camera, PoE wireless AP or access control systems complied with **802.3at/bt PoE**. The LRP-111U-KIT provides point to point application for easy plug-n-play operation and deployment in climatically demanding environments with wide temperature range from **-40 to 75 degrees C**. Without the problem of power source, it makes the installation of remote PoE powered devices easier and more efficiently.



### Composition of Long Reach PoE over UTP Extender Kit

The LRP-111U-KIT consists of a **Long Reach PoE injector** and a **Long Reach PoE extender** set which can work in pair anywhere on your network infrastructure. It contains two brand-new products:

- **LRP-111UH**: 1-Port 10/100TX 802.3bt PoE PD + 1-Port UTP Long Reach PoE Injector
- **LRP-111UE**: 1-Port 10/100TX 802.3bt PoE + 1-Port UTP Long Reach PoE Extender

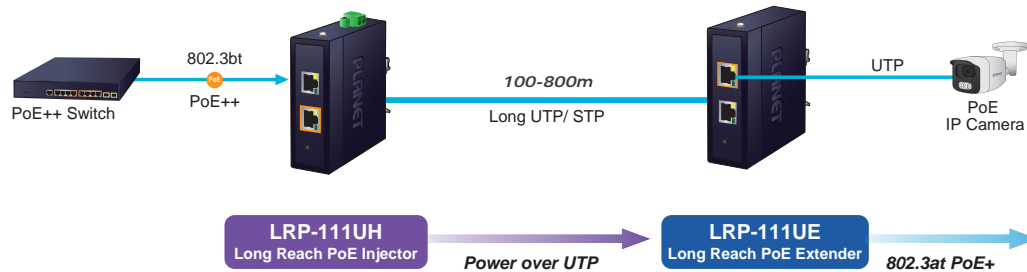
### PoE over Long UTP

- Eliminates power cabling with PoE over UTP
- Supports Power over Ethernet PSE (PoE Injector)
- Power and Ethernet data transmission of 800m over UTP/STP cabling
- Complies with IEEE 802.3af/IEEE 802.3at/IEEE 802.3bt Power over Ethernet PD on RJ45 port
- Supports Long Reach PoE power up to 70 watts (depending on power source and cable distance)
- Supports PoE Power up to 60 watts (depending on power source and cable distance)
- Auto detects remote powered device (PD)
- Plug and Play; no PC required

### Industrial Case and Installation

- Supports extensive LED indicators for network diagnostics
- Metal case protection
- Compact size, DIN-rail and wall-mount design
- Supports Ethernet ESD protection of 6KV DC
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries
- 52~54V DC power with reverse polarity protection (LRP-111UH only)

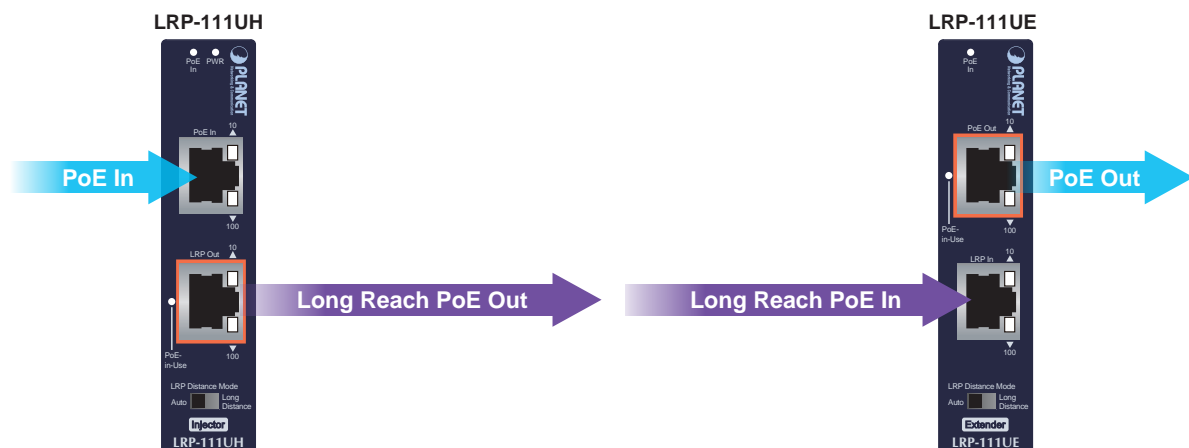
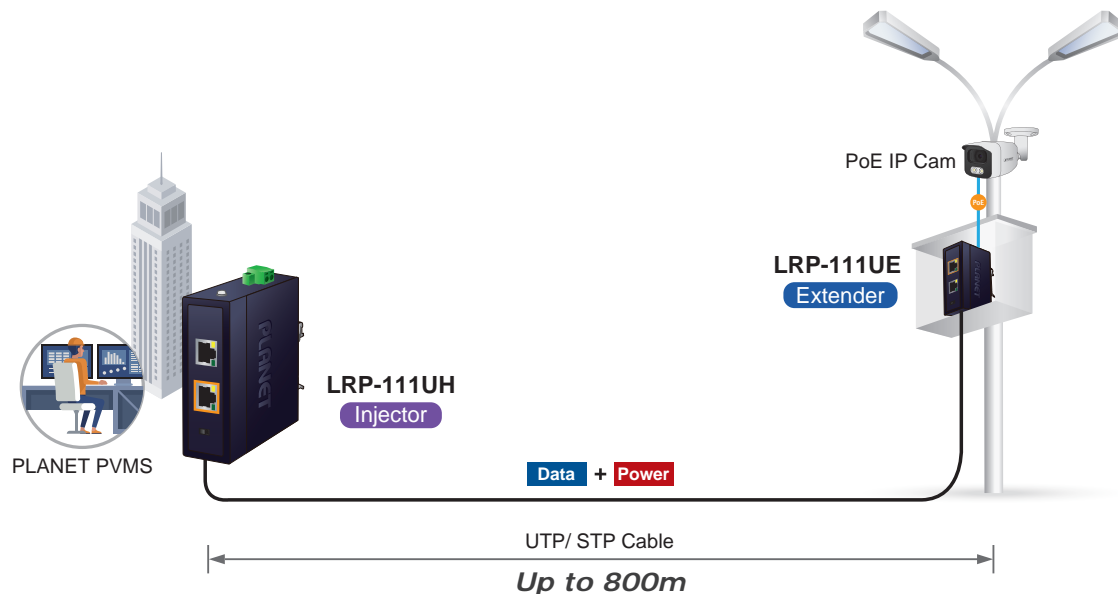
The LRP-111UH transmits data and power over UTP/STP cable to the LRP-111UE, which can be located as far as 800m away. It will then deliver the data and power output with a maximum of up to 60 watts to a PoE PD over Ethernet cable, thus expediting the IP surveillance network or wireless LAN infrastructure in long distance. Both of the two products come in a compact but rugged metal housing rated IP30, ensuring durability. Their wall-mounted design fits easily in any space-limited location.



Functions	LRP Injector	LRP Extender
	LRP-111UH	LRP-111UE
Power Input	RJ45 with 802.3bt PoE input or power supply with 52~54V DC in	UTP with DC power over UTP input
Power Output	UTP with DC power over UTP output	RJ45 with 802.3bt PoE output
LAN Connection	NVR or 802.3bt PoE Ethernet switch at head-end	PoE IP camera, PoE wireless AP, PoE access control at remote site

#### IP Ethernet and Power over Long UTP

A normal UTP cable can only be extended up to 100 meters, but the LRP-111U-KIT can extend PoE networking up to **800 meters (2,624ft.)**, enabling stable, **high-quality video transmission**. It eliminates the need for additional remote site power while allowing a single power source to provide power to both LRP extenders and the PoE IP camera at long range.



### Stable Operating Performance under Difficult Environments

PLANET Long Reach PoE Extender Kit is the perfect solution for distance extension for PoE or non-PoE networking for warehouses, parking lots, campuses, entertainment venues, and many more. They can operate stably under temperature ranging from **-40 to 75 degrees C** to enable the users to conveniently operate the kit in almost any location.

### Plug and Play Installation

With the Plug and Play feature, PLANET Long Reach PoE Extender Kit can be used immediately without the need of configuration and is also compliant with all kinds of IP network protocols. Moreover, the rich diagnostic LEDs on the front panel show the operating status of the individual port and the whole system, enabling the administrator to efficiently manage the network.

### Flexible and Easy Installation with Limited Space

The compact-sized LRP-111-KIT is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexible and easier in any space-limited location.

### Optional installation method



\* The above pictures are for illustration only.

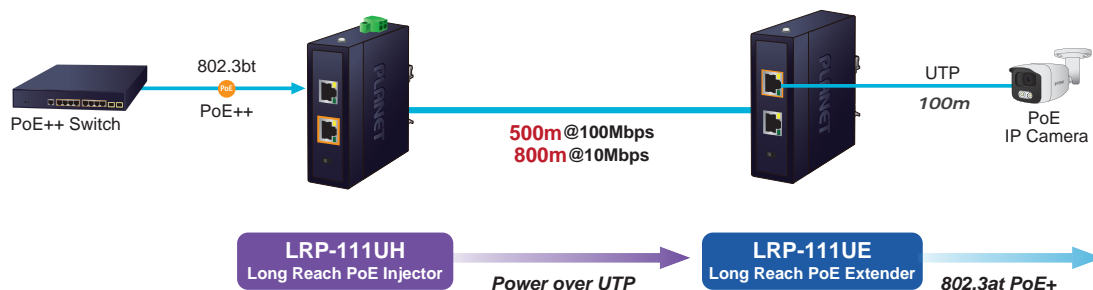
## Applications

The LRP-111U-KIT includes two products: The LRP-111UH, an UTP Long Reach 802.3bt PoE Injector (LRP injector), and the LRP-111UE, an UTP Long Reach 802.3bt PoE Extender (LRP extender). Working in pair, the LRP-111UH can be powered by either external DC power supply or PoE++ Ethernet switch, and from there, the LRP-111UE's 802.3bt standard PoE output goes to PoE Powered Device (PDs). The LRP-111U-KIT can be widely used in Intelligent Transportation Systems (ITS), traffic surveillance, security monitoring, automation control, intelligent residential districts and so on.

The LRP-111U-KIT can function in two different kinds of combinations:

### Type 1: LRP-111UH with PoE power input and LRP-111UE with PoE power output

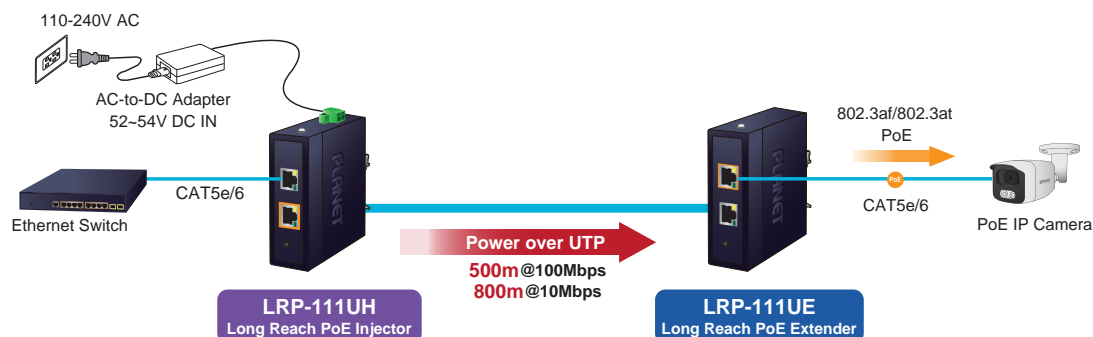
The LRP-111UH injector is powered by IEEE 802.3bt PoE source and it transmits data and power over UTP cable to the LRP-111UE extender. An IEEE 802.3bt compliant PoE PD will then automatically be powered by the LRP-111UE via UTP cabling.



Functions	LRP Injector	LRP Extender
	LRP-111UH	LRP-111UE
Power Input	RJ45 with 802.3bt PoE input	UTP with DC power over UTP input
Power Output	UTP with DC power over UTP output	RJ45 with 802.3bt PoE output

## Type 2: LRP-111UH with 52~54V DC power input and LRP-111UE with PoE power output

The LRP-111UH injector is powered via the DC power supply and it transmits data and power over UTP cable to the LRP-111UE extender. An IEEE 802.3bt compliant PoE PD will then automatically be powered by the LRP-111UE via UTP cabling.



Functions	LRP Injector	LRP Extender
	LRP-111UH	LRP-111UE
Power Input	Power supply with 52~54V DC in	UTP with DC power over UTP input
Power Output	UTP with DC power over UTP output	RJ45 with 802.3bt PoE output

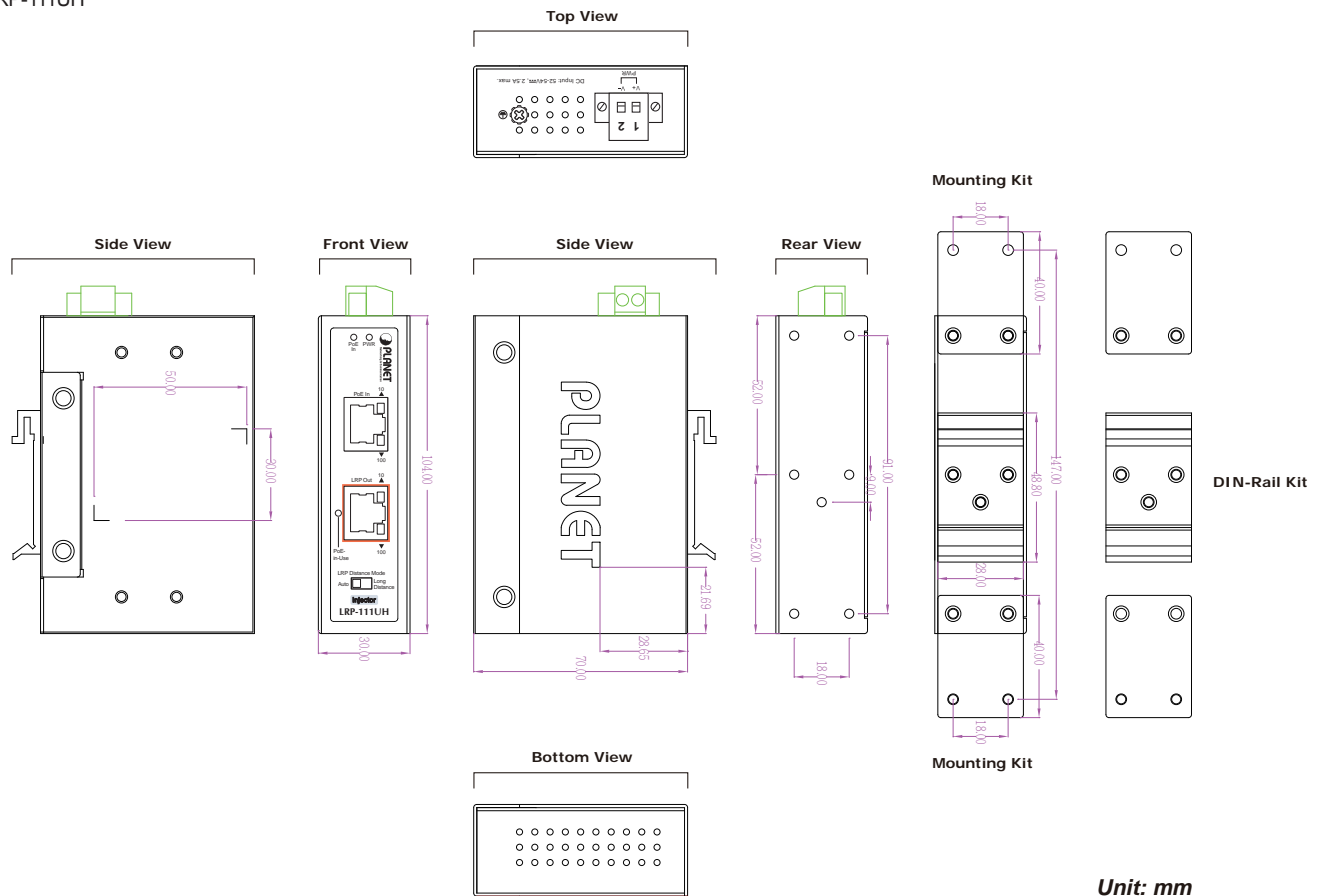
## Specifications

Model		LRP-111UH		LRP-111UE		
Functions		Long Reach PoE Injector		Long Reach PoE Extender		
Hardware Specifications						
Ethernet Interface	Copper	10/100BASE-TX RJ45 Half- or Full-duplex/Auto-Sensing, MDI/MDI-X				
	Power over Ethernet Standard	IEEE 802.3bt PoE PD (Powered Device)		IEEE 802.3bt PoE PSE (Power Source Equipment)		
	PoE Input	Supports both mid-span and end-span PSE Input Range: 52~54V DC		Supports both mid-span and end-span PSE		
	PoE Output	-		54V DC, 1.1A max.		
	PoE Budget	-		Up to 60 watts		
	PoE Mode	-		End-span + Mid-span , RJ45 Pin 1/2(-), 3/6(+),4/5(+),7/8(-)		
	Data Rate	10/100Mbps				
	Cabling	Cat5e or above UTP cable				
	Maximum Distance	100m				
	Maximum Frame Size	1522bytes				
Long Reach PoE Interface	Connectivity	1 x 10/100Mbps RJ45 connector Long Reach PoE over UTP PSE		1 x 10/100Mbps RJ45 connector Long Reach PoE over UTP PD		
	Power Input	-		52-54V DCN/A		
	Power Output	54V DC		-		
	Power Pin assignment	RJ45 Pin 1, 2, 4, 5 VCC+		RJ45 Pin 1, 2, 4, 5 VCC+		
		RJ45 Pin 3, 6, 7, 8 VCC-		RJ45 Pin 3, 6, 7, 8 VCC-		
	Cabling	Cat.5e or above UTP cable (100 meters, max.)				
	Maximum Distance	Max. 500m with PoE++ output at 100Mbps (328ft.) Max. 800m with PoE++ output at 10Mbps (1,640ft.)				
	Performance**	Distance	Data Rate*	LRP-111UE 802.3bt PoE Output Capability**		
				LRP-111UH with 54V DC in	LRP-111UH with bt PoE++ in	
			100m	100Mbps	65.62W	66.74W
			200m	100Mbps	53.42W	57.77W
			300m	100Mbps	38.82W	39.9W
			400m	100Mbps	34.2W	35.37W
			500m	100Mbps	27.26W	29.6W
			600m	10Mbps	22.6W	23.75W
700m			10Mbps	17.91W	17.91W	
800m	10Mbps	15.56W	15.56W			

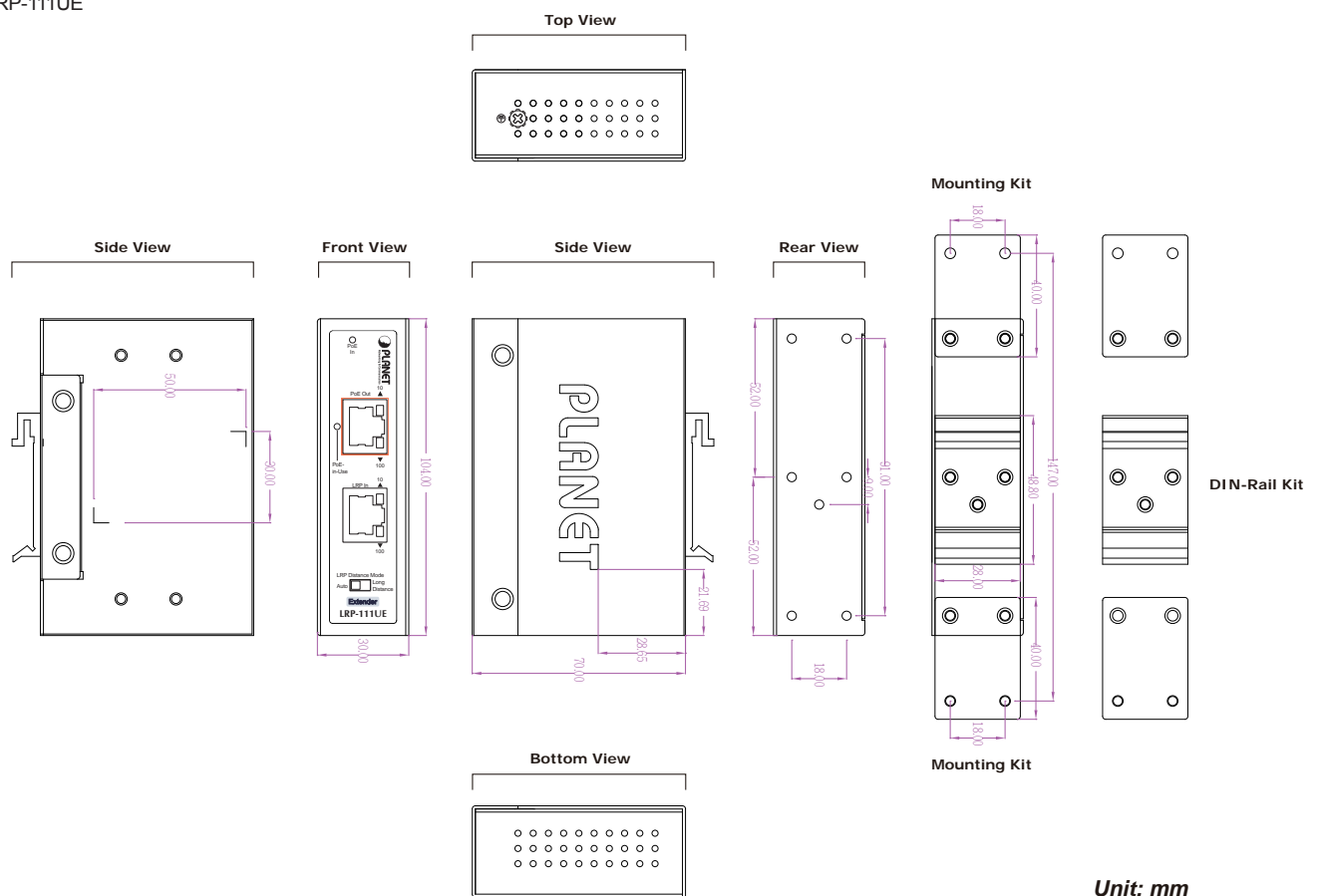
DIP Switch	Long Reach port mode: - <b>Auto:</b> Auto-negotiation mode with maximum 100Mbps data rate and 500 meters UTP cable distance - <b>Long Distance:</b> Long Reach port congigured with 10Mbps data rate and supports up to 800 meters UTP cable distance	
Connector	Removeable 2-pin terminal block	
Power Requirements	■ RJ45 PoE Input: 802.3bt 52~54V DC ■ DC Input: 52~54V DC	Power over RJ45 Input: 52~54V DC
Power Consumption	Max. 3 watts (System On) Max. 98 watts (Ethernet + PoE Full Loading)	Max. 4 watts (System On) Max. 98 watts (Ethernet + PoE Full Loading)
Dimensions (W x D x H)	30 x 70 x 104 mm	
Weight	240g	238g
Enclosure	IP 30 compact size Metal case	
Installation	DIN-rail kit or wall-mount ear	
ESD Protection	6KV DC	
LED Indicators	5 x LEDs ■ PWR ■ PoE In ■ PoE In use ■ Lan Speed (10:Green 100: Amber) ■ LRP Speed (10:Green 100: Amber)	4 x LEDs ■ PoE In ■ PoE In use ■ Lan Speed (10:Green 100: Amber) ■ LRP Speed (10:Green 100: Amber)
Standards Conformance		
Regulation Compliance	FCC Part 15 Class A, CE	
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)	
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3af Power over Ethernet (802.3at Type 1) IEEE 802.3at Power over Ethernet (802.3at Type 2) IEEE 802.3bt Power over Ethernet (802.3bt Type 3) IEEE 802.3bt Power over Ethernet (802.3bt Type 4)	
Environment		
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C	
Humidity	Operating: 5~90% (non-condensing) Storage: 5~95% (non-condensing)	
Note	The speed and performance of the LRP-111U-KIT are related to the quality of the cable used.	

## Dimensions

### ■ LRP-111UH



### ■ LRP-111UE



## Ordering Information

LRP-111U-KIT	Industrial 1-Port 10/100TX 802.3bt PoE + 1-Port UTP Long Reach PoE Kit
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## Related Products

LRP-101C-KIT	1-Port Long Reach PoE over coax Extender Kit (LRP-101CH + LRP-101CE)
LRP-101U-KIT	1-Port Long Reach PoE over UTP Extender Kit (LRP-101UH + LRP-101UE)
LRP-822CS	8-port Long Reach PoE + 2-port 10/100/1000T + 2-port 100/1000X SFP Managed Switch
LRP-1622CS	16-port Coax + 2-port 10/100/1000T + 2-port 100/1000X SFP Long Reach PoE over Coaxial Managed Switch
LRP-422CST	Industrial 4-port Coax + 2-port 10/100/1000T + 2-port 100/1000X SFP Long Reach PoE over Coaxial Managed Switch

## Related PoE Products

IGS-6325-24UP4X	Industrial L3 24-Port 10/100/1000T 802.3bt PoE + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-6329-8UP2S4X	Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-8UP2S2X	Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + 2-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-4UP2X	Industrial L3 4-Port 2.5GBASE-T 802.3bt PoE + 2-Port 10G SFP+ Managed Ethernet Switch
IGS-6329-8UP2S2X	Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + 2-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-8UP2S	Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + Managed Ethernet Switch
IGS-5225-4UP1T2S	Industrial L2+ 4-Port 10/100/1000T 802.3bt PoE + 1-Port 10/100/1000T + 2-Port 1G/2.5G SFP Managed Ethernet Switch
IGS-4215-8UP4X	Industrial L2/L4 8-Port 10/100/1000T 802.3bt PoE + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-4215-8UP2T2S	Industrial 8-Port 10/100/1000T 802.3bt PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch
IGS-4215-16P2T2S	Industrial 16-Port 10/100/1000T 802.3bt PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Ethernet Switch
IGS-4215-4UP4T2S	Industrial 4-Port 10/100/1000T 802.3bt PoE + 4-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch
ICA-3480	H.265+ 4MP Smart IR Bullet IP Camera
ICA-3480F	H.265+ 4MP Full Color Bullet IP Camera
ICA-4480	H.265+ 4MP Smart IR Dome IP Camera
ICA-4480F	H.265+ 4MP Full Color Dome IP Camera
ICA-M3580P	H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote Focus and Zoom
ICA-M4580P	H.265 5 Mega-pixel Smart IR Dome IP Camera with Remote Focus and Zoom
WDAP-850AC	Dual Band 802.11ax 1200Mbps Wave 2 Outdoor Wireless AP
WDAP-3000AX	Dual Band 802.11ax 3000Mbps Outdoor Wireless AP (IP67, 802.3at PoE+, 4 x N-type connector)
WBS-512AC	5GHz 802.11ac 900Mbps Outdoor Wireless CPE
WDAP-W1800AXU	Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point w/802.3at PoE+ and Type C USB

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