Dahua Single-Port Long Reach Ethernet over Coaxial Extender

User's Manual

V1.0.0

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

Important Safeguards and Warnings

Attention:

Please read the following safeguards and warnings carefully before using the product in order to avoid damages and losses.

Note

- Do not expose the device to lampblack, steam or dust. Otherwise it may cause fire or electric shock.
- Do not install the device at position exposed to sunlight or in high temperature. Temperature rise in device may cause fire.
- Do not expose the device to humid environment. Otherwise it may cause fire.
- The device must be installed on solid and flat surface in order to guarantee safety under load and earthquake. Otherwise, it may cause device to fall off or turnover.
- Do not place the device on carpet or quilt.
- Do not block air vent of the device or ventilation around the device. Otherwise, temperature in device will rise and may cause fire.
- Do not place any object on the device.
- Do not disassemble the device without professional instruction.

Warning:

- Please use battery properly to avoid fire, explosion and other dangers.
- Please replace used battery with battery of the same type.
- Do not use power line other than the one specified. Please use it properly. Otherwise, it may cause fire or electric shock.

Special Announcement:

- This manual is for reference only.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.
- The function of the ITE being investigated to IEC 60950-1 is considered not likely to require connection to an Ethernet network with outside plant routing, including campus environment.
- The installation instructions clearly state that the ITE is to be connected only to PoE networks without routing to the outside plant.

Table of Contents

1 Product Overview

1.1 Product Introduction

Single-port Long Reach Ethernet over Coaxial Extender is a type of converter from RJ45 to BNC port, which supports long range power supply transmission via coaxial cable. It provides one BNC coaxial port and one RJ45 port.

The product is equipped with two transmission modes which are 100Mbps and 10Mbps. It can be modified according to the transmission distance.

1.2 Product Features

- Supports IEEE802.3， IEEE802.3u and IEEE802.3X standards.
- Supports IEEE802.3af and IEEE802.3at power supply standards.
- Port: 1*RJ45 10/100Mbps, 1*BNC.
- Supports RG59 coaxial cable: 400m/100Mbps, 1000m/10Mbps.
- Supports MDI/MDIX self-adaption.
- Supports long range power supply transmission via coaxial cable.
- Operating temperature: -30~65℃.

1.3 Typical Application

The product is divided into transmitter (DH-LR1002-1ET) and receiver (DH-LR1002-1EC), which can be used together with EoC Passive Converter (LR1002). It owns three types of networking schemes, which is shown in Figure 1-1. ePoE switch or ePoE IPC means the specific switch or IPC with the function of long distance.
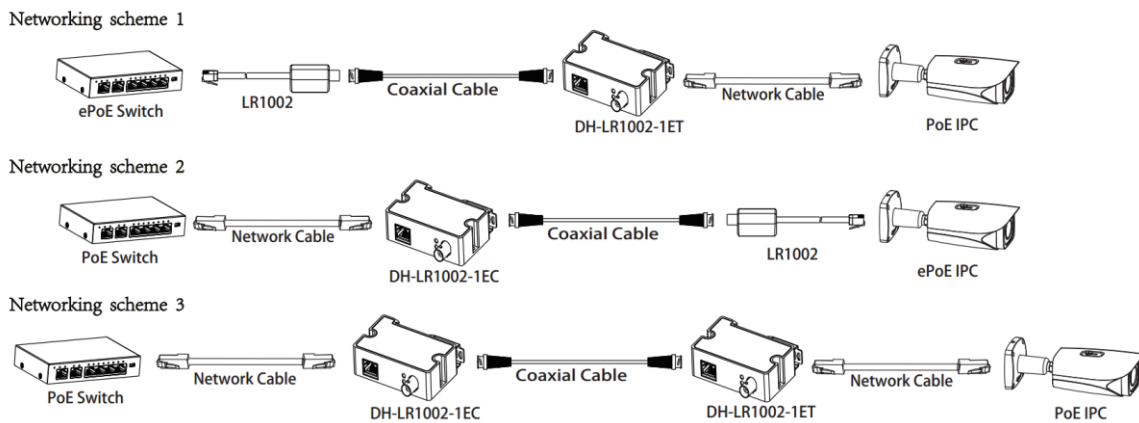

Figure 1-1

2 Device Structure

2.1 Device Panel

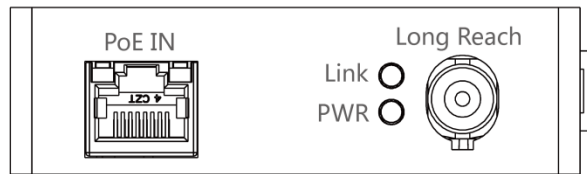The device panel is shown in Figure 2-1 (DH-LR1002-1ET) and Figure 2-2 (DH-LR1002-1EC).

Figure 2-1

Figure 2-2

Please refer to Table 2-1 for more details.

SN	Name	Note
1	PoE OUT	PoE output port
2	PoE IN	PoE input port
3	Link	BNC port Link indicator light E100: On for 3 seconds, off for 1 second E10: On for 1 second, off for 1 second
4	PWR	Power indicator light
5	Long Reach	Coaxial cable port

Table 2-1

3   Installation Guide

3.1   Device Installation

Single-Port Long Range Ethernet over Coaxial Extender supports two installation modes. It can be installed into the junction box or it can support DIN rail mount.

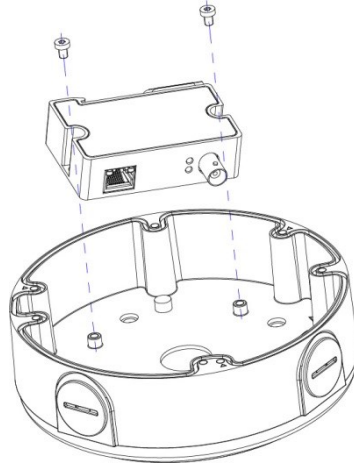Please refer to Figure 3-1 for the installation inside junction box.

Figure 3-1

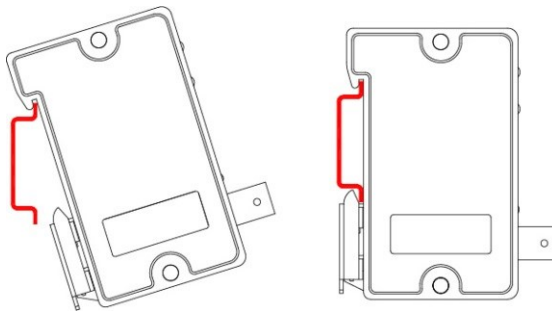Please refer to Figure 3-2 for DIN rail mount.

Figure 3-2

4 Appendix I Technical Specifications

Model	DH-LR1002-1ET	DH-LR1002-1EC
Function Port	1*10/100Mbps Base-TX 1*BNC	
Power Consumption	< 2W	
Transmission Bandwidth	RG59 coaxial cable: 400m/100Mbps, 1000m/10Mbps	
PoE Protocol	IEEE802.3af, IEEE802.3at	
Network Standard	IEEE802.3, IEEE802.3u, IEEE802.3x	
Lightning Protection	Common Mode 4KV Differential Mode 2KV	
Operating Temperature	-30℃ -65℃	
Operating Humidity	5% ～ 95%	
Weight	61g	
Dimension (W×D×H)	79mm×52mm×23mm	

Table 4-1

5 Appendix III ePoE Power Supply Specifications (RG59 Coaxial Cable)

Cable Length (m)	Communication Bandwidth (Mbps)	PoE Max Load Capacity (W)	Network Operating Mode
100	100	21	E100
200	100	15	E100
300	100	11	E100
400	100	9	E100
500	10	7	E10
800	10	5	E10
1000	10	4	E10
PoE switch supply voltage 48V. RG-59, max. DC resistance < 5Ω/100m. Caution: The load capacity can be applied to networking scheme 3. Cable length means the total wire length from switch to transmitter (including network cable and coaxial cable). It can use max. 2m network cable to connection transmitter to IPC.			
100	100	25.5	E100
200	100	24	E100
300	100	19	E100
400	100	16	E100
500	10	13	E10

800	10	8	E10
1000	10	6	E10

PoE switch supply voltage 53V.

RG-59, max. DC resistance < 5Ω/100m.

Caution: The load capacity can be applied to networking scheme 3. Cable length means the total wire length from switch to transmitter (including network cable and coaxial cable). It can use max. 2m network cable to connection transmitter to IPC.

Note

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