A1 SECURITY CAMERAS
The First Name in Security

alhua TECHNOLOGY

Single-port EoC Extender
Transmission and Receiver Options

- Converts between CAT5E/CAT6 and Coaxial Cable Transmission
- Extends EoC Long-distance Transmission to non ePoE-enabled Edge or Head-end Devices.
- Supports PoE Transmission, up to 1000 m (3280 ft)
- Supports IEEE802.3af and IEEE8022.3at Power Supply Standards
- Supports the IEEE802.3 and IEEE802.3u Standards
- Supports MDI/MDX Self-adaptation

ePoE

System Overview

The LR1002-1ET and the LR1002-1EC Single-port EoC Extenders serves two purposes: first it converts between a PoE signal and Dahau's innovative Enhanced Power over Ethernet technology. Second, the extenders convert signals between coaxial cable and CAT5E/CAT6 Ethernet cable. These extenders allow non ePoE-enabled devices to take advantage of the long transmission distances that ePoE technology delivers.

Enhanced Power over Ethernet (ePoE) Technology

Dahua's innovative ePoE technology offers a plug-and-play solution to transmit power and data over long distances via Ethernet or coaxial cables, reducing installation time and saving money. ePoE technology is a viable, cost-effective solution for extending transmission distances and for converting existing, coax-based analog systems into IP systems. For video security and surveillance installers, ePoE technology saves time and money by reducing overall cabling requirements, allowing for existing coax cable to be used, and minimizing the number of peripheral devices needed. For new installations, ePoE offers the ability to design long-distance applications without the need for additional repeaters.

Enhanced PoE encompasses pure IP systems where a single CAT 5 cable can carry signals up to 800 m (2624 ft), and IP/Analog hybrid systems where the technology leverages existing analog infrastructure to transmit power and data up to 1000 m (3281 ft) over RG59 coaxial cable. Enhanced PoE is compatible with three connection modes operating over the same network simultaneously: traditional IP networks, long-distance ePoE networks and coaxial networks. ePoE technology seamlessly integrates the latest high-definition IP cameras with a coaxial infrastructure using the Ethernet over Coaxial (EoC) protocol to convert between analog and IP power and data transmissions.

Technical Specification

Functional Ports	One (1) RJ45, 10/100 Mbps Base-TX One (1) BNC
Transmission Distance	100 Mbps: 400 m (1312 ft) 10 Mbps: 1000 m (3280 ft)
Power Consumption	< 2 W
Transmission Bandwidth	RG59 Coaxial Cable: 400 m (1312 ft) at 100 Mbps, 1000 m (3280 ft) at 10 Mbps
PoE Protocol	IEEE802.3af (PoE) and IEEE802.3at (PoE+)
Network Standards	IEEE802.3, IEEE802.3u, IEEE802.3x
Operating Temperature	− 30 °C to 65 °C (− 22 °F to 149 °F)
Application Humidity	5% to 95%
Lightning Protection	Common Mode: 4 KV Differential Mode: 2 KV
Dimensions (W x D x H)	79.0 mm x 52.0 mm x 23.0 mm (3.11 in. x 2.05 in. x 0.91 in.)
Weight	0.61 kg (1.34 lb)

Ordering Information

Type	Part Number	Description
Single-port EoC Transmitter	LR1002-1ET	One (1) 100 Mbps Base-TX Ethernet Cable, RJ45 One (1) RG59 Coaxial Cable, BNC 400 m (1312 ft) at 100 Mbps 1000 m (3280 ft) at 10 Mbps
Single-port EoC Receiver	LR1002-1EC	One (1) 100 Mbps Base-TX Ethernet Cable, RJ45 One (1) RG59 Coaxial Cable, BNC 400 m (1312 ft) at 100 Mbps 1000 m (3280 ft) at 10 Mbps
ePoE Accessory	LR1002	EoC Passive Converter

www.dahuasecurity.com/en/us
Available from A1 Security Cameras
www.a1securitycameras.com email: sales@a1securitycameras.com

EoC Transmission Distances

Via RG-59 Coaxial Cable
ePoE supply voltage 48 V
Maximum DC resistance < 5 Ω/100 m

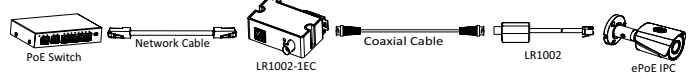| Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	50	IEEE/E100
200 (656)	100	25.5	30	E100
300 (984)	100	18	18	E100
400 (1312)	100	15	15	E100
500 (1640)	10	12	12	E10
800 (2625)	10	6	6	E10
1000 (3281)	10	5	5	E10

Via RG-59 Coaxial Cable
ePoE supply voltage 53 V
Maximum DC resistance < 5 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	52	IEEE/E100
200 (656)	100	25.5	48	E100
300 (984)	100	25.5	30	E100
400 (1312)	100	20	23	E100
500 (1640)	10	16	16	E10
800 (2625)	10	10	10	E10
1000 (3281)	10	8	8	E10

EoC Applications

EoC with Single-port EoC Receiver

PoE Switch — Network Cable — LR1002-1EC — Coaxial Cable — LR1002 — ePoE IPC

EoC with Single-port EoC Transmitter

ePoE Switch — LR1002 — Coaxial Cable — LR1002-1ET — Network Cable — PoE IPC
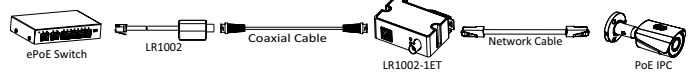
EoC with PoE at Head-end and Edge

PoE Switch — Network Cable — LR1002-1EC — Coaxial Cable — LR1002-1ET — Network Cable — PoE IPC

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Available from A1 Security Cameras
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