

## UP-EXT-SET en

IP / PoE extender via coaxial or UTP cable

- IP/PoE extender for coaxial or UTP cable
- Distances up to 300m
- PoE 802.1af and at
- Power supply via PoE or 48-56VDC



The UP-EXT-SET series extenders transmit 10/100Mbps Ethernet and PoE/PoE+ via coaxial cable or paired UTP cable up to a distance of 300m. The units are supplied and used in pairs, the UP-EXT-CAM on the camera side, the UP-EXT-SERV on the server side. The extenders enable the PoE power supply of e.g. a midspan to be passed on directly via coaxial or UTP cable. Power is supplied via PoE or via a power supply unit on the central side. The units do not require any software configuration. Diagnostic LEDs provide an overview of the operating status. The individual units can be mounted on a panel with a pair of supplied holding flanges, or up to 16 units can be mounted on 2U using the 19" subrack UP-R2, which can be ordered separately.

### More information

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#### System notes

Connecting several pairs of units via the same UTP cable can lead to transmission problems due to crosstalk of the different signals in the cable. Ideally, therefore, each device connection is realised via separate cables.

If several cables have to be lined up on a connection route, it is important that these transitions are technically as good as possible. I.e. ideally, professionally assembled RJ45 plugs are used for the transitions. If this is not possible, e.g. when using telephone cables, care should be taken to ensure that the stranding of the wire pairs is kept to a minimum. The contact between the cores of the cables to be connected must be galvanically as good as possible.

Shielded UTP cables can cause problems due to potential equalisation currents.

Especially when several cables are brought together in a central unit, we recommend not earthing the shields in the central unit.



## Technical data

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### General properties

supply voltage	Power supply via PoE or Supply with 48-56VDC on the central side, hollow plug 2.5 / 5.5mm
power consumption	approx. 2W without PoE
MTBF	
operating temperature	UP-EXT-CAM: -40 to +55°C UP-EXT-SERV: 0 to +55°C
dimensions	82 x 25 x 63mm, LxWxH, dimensions without connectors
weight	0,14kg per unit



## interfaces

copper ports	<p>1 x 10/100BaseT, RJ45, Poe and PoE+.</p> <p>The PoE power that can be called up on the camera side is strongly dependent on the cable length and cable quality.</p> <p>By raising the PoE voltage on the central side to the maximum permitted 56VDC, the camera-side power can be increased.</p> <p>the power on the camera side can be increased.</p>
extender ports	<p>The UP-EXT-SET units allow connection via data cable Cat5e or better, via coaxial cable or via paired cable such as telephone cable. Accordingly, both interfaces are also available on the extenders. For transmission via telephone cable, the supplied BNC to two-wire terminal adapter is used.</p> <p>Important: Only one of the interfaces can be used at a time.</p> <p>Transmission via coaxial cable: BNC socket (female)</p> <p>Transmission via telephone cable: BNC socket and supplied adapter</p> <p>Transmission via data cable: RJ45 socket</p>
transmission cable	<p>Data cable Cat5e or better, via RJ45 socket</p> <p>Coaxial cable, via BNC socket</p> <p>Paired cable, e.g. telephone cable, via BNC socket and BNC to two-wire adapter</p>
Transmission distance	<p>The maximum transmission distance when using the above cable types is approx. 300m.</p> <p>The maximum <b>data rate</b> is between 90MBit/s and 10MBit/s.</p> <p>The possible data rate depends on the distance, the cable type, the core cross-section and the cable quality.</p> <p>The following parameters have a positive effect on the possible data rate: Short cable length, high-quality cable type (coax &gt; Cat7 &gt; Cat6 &gt; Cat5e &gt; telephone cable), large core cross-section.</p> <p>The <b>PoE power</b> available at the camera side decreases continuously with increasing distance. Furthermore, the available PoE power depends on the wire cross-section. Coaxial cables have small wire cross-sections. Data cables are available with different core cross-sections. The AWG number describes the wire cross-section. The smaller the AWG number, the larger the wire cross-section. The PoE input voltage has a great influence on the available PoE power. If possible, the voltage should be set as high as possible, maximum 57VDC.</p> <p>With coaxial cables, the maximum PoE power after 200m is less than 10W.</p> <p>With Cat7 cables with AWG24, the maximum PoE power after 200m is approx. 20W.</p>



## network properties

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### PoE Management

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standards	Compatible with multiple network protocols including IEEE802.3, 802.3u, 802.3x Supports jumbo frames Tag transparent
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## Product variants

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**Extender side**



**LAN side**



**Supplied mounting brackets**



**BNC to 2-wire adapter, supplied**

With the adapter, IP and PoE can be transmitted with a twisted pair cable.



**UP-R2**

19" rack for max. 16 UP-EXT units, 2U  
To be ordered separately

*Version 20.09.2023, Changes without notice*