

Ethernet over UTP

Overview

The Video 1 IPX-U (UTP) is a high performance Ethernet range extender designed for the emerging IP CCTV surveillance market. Built with industry grade components for maximum reliability, it greatly extends the range of a standard IP camera network from 100m to more than 1000m while maintaining a commendable transmission bandwidth.

Complex device settings are not required and the whole operation is transparent to the network. The IPX-U is suitable for new IP camera installations with Cat5e/6 structured cabling infrastructure; its miniature size allows it to fit easily into any tight spaces or camera housings. Not limited to the IP surveillance environment alone, the device can work equally well in any Ethernet network, instantly boosting its range and eliminates the need to use multiple switches or repeaters as conventionally practiced.

Applications

- ✓ Campus
- ✓ Highways
- ✓ Airports
- ✓ Hotels
- ✓ Casinos
- ✓ Commercial complexes
- ✓ Remote parking lots
- ✓ Entry gates

Features

- ✓ Up to 3,000 feet (1km) via Cat5e/6
- ✓ Up to 100/100Mbps Connection speed
- ✓ Supports Base 10/100Mbps Ethernet
- ✓ Automatic Data Error Correction
- ✓ Requires 12VDC (supplied)
- ✓ Surge Suppression
- ✓ Auto-resettable fuse
- ✓ LEDs for power, Ethernet status, VDSL line status
- ✓ Connects directly to any network switches and router



Benefits

• Robust and Long Reach Connections

Enable Ethernet connections that reaches up to 1000m over Cat 5e or Coaxial Cable

• Maximize Wiring Utilization

By using all 4 pairs of twisted pair copper in a single CAT5 cable, IPXtender enables multi dropping of up to 4 devices over a single CAT5 cable.

• Minimize Installation Cost

Save labor cost for wiring and conduit, more cameras can be supported with less cabling.

• Fill In the Gap

Cheaper vs Fiber Optics

Avoid the installation of costly and fragile fiber optics, yet enjoy the long reaching range with IP Cameras over copper line connections.

Longer Range vs Ethernet

Avoid signal drop results from multiple Ethernet switches, and short range of Ethernet connections



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Specification	Description
Hardware Specification	
Ethernet Ports	10/100Base-TX: 1 x RJ-45, Auto-Negotiation and Auto-MDI/MDI-X
Ethernet Extender Port	VDSL2+:1 x RJ-45, female Phone Jack
Phone Port	N/A
DIP Switch	4 position DIP switch
Functionality	CO / CPE mode select Selectable fast and interleaved mode Selectable target 17a / 30a profiles Selectable target SNR mode (6dB/9dB)
Encoding	<ul style="list-style-type: none"> VDSL-DMT ITU-T G.993.2 VDSL2 (Profile 17a/30a Support)
LED Indicators	<ul style="list-style-type: none"> 1 for Power 1 for VDSL2 status 1 for VDSL2 CO/CPE selection 1 for RJ-45 10/100Base-TX port status 1 for RJ-45 10/100Base-TX port speed indicator
Cabling	<ul style="list-style-type: none"> Ethernet 10Base-T: 2-pair UTP Cat.3,4,5 up to 100m (328ft) 100Base-TX: 2-pair UTP Cat.5, up to 100m (328ft) VDSL Twisted-pair CAT5 wires (AWG24 or better) up to 1km
Performance* (Downstream / Upstream)	<ul style="list-style-type: none"> 30a profile 300m -> 50/50Mbps 600m -> 40/30Mbps 900m -> 20/7Mbps
Power Requirement	12V DC, 0.5A
Power Consumption	6Watts
Dimension (L x W x H)	78 x 42 x 28.5 mm
Weight	368g



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Environment	
Operating	Temperature: 0 ~ 50 Degree C Relative Humidity: 10 ~ 90% (non-condensing)
Storage	Temperature: -10 ~ 70 Degree C Relative Humidity: 10 ~ 90% (non-condensing)
Switch Specification	
Switch Processing Scheme	Store-and-Forward
Address Table	2K entries
Flow Control	Back pressure for half duplex IEEE 802.3x Pause Frame for full duplex
Network cables	10/100Base-TX: 2-Pair UTP Cat. 3,4, 5 (100meters, max.) EIA / TIA-568 100-ohm STP (100meters, max.)
Standard Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX • ITU-T - G.993.2 VDSL2 (Profile 30a)



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Application diagram

