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Security and Surveillance Product Information for Architects and Engineers

PelcoUTP – Going the Distance

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Increasingly, unshielded twisted pair (UTP) is being used in video security systems as an economical alternative to traditional coax cable. With significantly lower cable costs, ease of installation, and nearly universal availability, UTP offers flexibility that is unmatched by coax, without sacrificing image quality. Now, a new and improved series of UTP transmission products from Pelco helps you go the distance. Featuring new patent-pending design and enhanced video quality, the new and improved Pelco CM9700UTP32A multichannel video receiver is a major step forward in active unshielded twisted pair (UTP) technology.

Improved Video Quality

The big challenge for UTP transmission is signal attenuation over long cable runs. Pelco overcomes that challenge with a new patent-pending circuit design that automatically equalizes video signals on a Cat 5, Cat 5e, or Cat 6 UTP cable up to 4,000 feet (1,219 m). This circuit allows for lower frequency response and compensates for color losses, producing better picture quality. The unit's adaptive video equalization technology ensures high-quality video processing by correcting for video transmission losses over UTP cable within the selected distance range.

Simple Configuration

The device's front panel controls and indicators make the unit quick and easy to configure and use. For optimal tuning, users simply adjust the rotary switch to the correct color video range position; the device automatically adjusts the gain and adapts to the cable length. And Pelco will soon be incorporating this new UTP design into all its active UTP transmission products.

Maximize Investment

Architects and engineers are installing UTP everywhere in new construction, and in many older buildings, UTP exists even where there is no fiber or coax. With PelcoUTP it is possible to leverage your infrastructure and get the most value from existing structured cabling.

Reduce Cabling Cost

UTP remains considerably less expensive than traditional 75-ohm coaxial cable, resulting in tremendous savings for many installations. UTP also takes up less conduit space, which means more cabling can run in the same conduit – another source of savings.

UTP and IP Migration: Important Considerations

Since video installations with UTP transmission use Cat5 or higher cable, the question often arises: "Can I use my existing UTP cabling plant to make an easy migration from my current analog cameras to IP cameras?" It seems a reasonable enough proposition. But before you plunge headlong into "overselling" the migration path, it's important to understand some important technical limitations.

Not All CAT Cable Is Equal

Transmission of IP camera signals requires at least CAT5e, or even better – CAT6. Simple CAT5 won't cut it. What's more, IP transmission is more susceptible to physical anomalies of cabling than UTP transmission. Kinks, frays, cracked insulation, and most important – extreme bends – all spell trouble for IP transmission. It is not uncommon for cable plant that works fine for UTP to be nothing but headaches when used for IP transmission. So if you're planning to reuse existing plant, it's important to inspect carefully. Make sure it's CAT5e or CAT 6, and in good condition, observing well-accepted practices of proper IP cabling.

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For more information on these or any consulting or specification issue, please contact Pelco A&E Business Development Manager, Don Tennyson at: dtennyson@pelco.com

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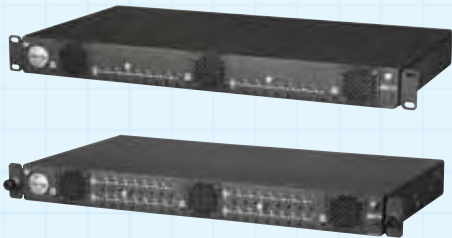
Distance Matters

Although UTP transmitters and receivers support transmission of traditional video signals over very long distances, IP is much more finicky.

It is an axiom of Ethernet that cable runs should not exceed 100m. This is likely the biggest stumbling block to re-using existing cabling, since the appeal of UTP is its cost-effectiveness for long cable runs.

Not All UTP Equipment Is Equal

There are a variety of UTP transmission devices available on the market. Some will support CAT5/CAT6 cabling, but some support only unshielded twisted-pair wiring. So if you're planning on implementing UTP now and migrating to IP in the future, you have to make sure that: 1) you're using CAT5e/6 cabling, and 2) your UTP equipment is properly tuned for CAT5e/6.



Minimize Installation Time

Lighter and smaller than coax, UTP is faster and easier to install, allowing an installer to complete more camera connections in less time – saving time and money.

About PelcoUTP

The PelcoUTP family of products can be used to connect cameras to DVRs, matrix switchers and video multiplexers, as well as to transport video signals from point to point in any application where coax is installed. The passive line of PelcoUTP products provides low-cost, quick and easy installation for short and medium-length runs. The active line of PelcoUTP products meets the needs of longer runs, while providing necessary line conditioning for optimal video quality.

New and Improved Pelco UTP Models

CM9700UTP16A	16-channel active receiver; 16 BNC connectors, four RF-45 video input connectors, and one ribbon cable connector
CM9700UTP32A	32-channel active receiver; 32 BNC connectors, eight RJ-45 video input connectors, and two ribbon cable connectors

Product Features

- 16- or 32-Channel Active Video Receiver
- Full Motion Color/Black-White Video up to 4,000 ft (1,219 m)
- Adaptive Video Equalization Technology Within Defined Distance Range
- Video, Fan, and Temperature Indicators and an Audible Alarm
- UTP Range Selection and Indicators
- Each Channel Has a BNC Connector for Video Output
- Compatible with All Pelco Cameras, Enclosures, and Domes Equipped with Twisted Pair
- Video Ribbon Cable Connectors for Connecting to a CM9700 Series Matrix
- Easy Termination with RJ-45 UTP Connectors
- Optional Patch Panels Convert RJ-45 Connections to Individual Screw Terminal Connections
- Supports NTSC and PAL
- Built-In Surge Suppression for UTP Video Inputs
- Can Be Mounted into a Standard EIA 19-Inch Rack