Structured Cabling Solutions for CCTV and Surveillance

NetClear® ESS
Electronic Safety and Security

Berk-Tek®
A Nexans Company

Ortronics®
The Path to IP starts here...

Traditional CCTV systems required proprietary software and hardware platforms and point-to-point transmission over coaxial cable. Today video surveillance systems are evolving from analog-based systems to an Ethernet IP-addressable system over a standards-based fiber and copper structured cabling network. Selecting a reliable end-to-end cabling system will assure real world performance for today and tomorrow’s electronic safety and security systems.

NetClear® ESS
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NetClear: It simply works better.
Berk-Tek, a Nexans Company and Ortronics/Legrand have assembled a complete portfolio of end-to-end structured cabling systems for security applications with the NetClear ESS solutions. NetClear ESS cabling solutions have evolved out of years of co-engineering experience in the LAN/enterprise environment to address the unique challenges of today's intelligent security applications. NetClear ESS solutions encompass both fiber and copper-based systems and are tailored to meet the requirements of any security application or environment.

Total Solutions Made Easy
Beyond cable and connectivity from Berk-Tek and Ortronics/Legrand, NetClear ESS solutions integrate physical support systems, such as cabinets and open racks, as well as pathways systems from Wiremold/Legrand and Cablofil/Legrand. The combination of Berk-Tek, Ortronics/Legrand and a team of best-in-class affiliates provides a completely integrated solution able to support legacy analog technology as well as provide for future migration to IP-based systems. Simply spec it, install it, forget it.
...and ends with total integration.

The best solutions for today integrate tomorrow’s technology. The most efficient scenario is when each data, voice and video device can speak the same language and use the same or parallel network infrastructure principles. NetClear ESS IP solutions can utilize copper, fiber, or a combination of both to deploy cameras and other building automation devices over one common IP-addressable platform.

NetClear® ESS
Total Fiber and Copper IP Solutions

The Whole Picture: Fiber and Copper

NetClear ESS fiber optic solutions include a wide range of multimode and single-mode cables and connectors, which are ideal when longer distances and elevated bandwidths are essential. Fiber optic cable is immune to environmental electrical elements, such as EMI, RFI and lightning-induced transient voltages. Fiber optic cabling is the preferred media in network backbone between telecom rooms and are terminated into secure fiber panels. From there multiple horizontal runs over either copper or fiber cable to the cameras are specified by distance and environment. Fiber to the camera requires transceivers for media conversion over to copper patch cords directly to the device.

Only NetClear ESS offers Berk-Tek’s unique two-fiber indoor/outdoor, loose tube, tight buffer construction cable, newly designed for security cameras. Or for powering cameras over one cable, our hybrid cable features fiber together with copper conductors in a Siamese construction.

Distributed power, or PoE (Power over Ethernet), data and video signals can be transmitted over the NetClear ESS premium Category 6 UTP cable solution. This advanced technology provides the ability to power the camera reliably using the same cable as the video, and even PTZ (power, tilt, zoom) signals. For security networks that include video, access control, video analytics, and other physical security applications, a NetClear ESS IP solution provides the infrastructure to ensure transparent integration.

IP Copper and Fiber Solution
The biggest hurdle on the path to a total IP-addressable system is converting from legacy analog, and often proprietary signaling to IP-based digital signaling. Installing a standards-based structured cabling system will allow for a seamless transition.

**NetClear® ESS for Analog Cameras**

A NetClear ESS structured cabling solution eases this transition by supporting legacy analog cameras over an unshielded twisted pair (UTP)-based cabling system. A NetClear ESS Category 5e UTP-based structured cabling system is a cost-effective solution that allows you to use your existing camera investment. Through balun technology, NetClear ESS for legacy analog CCTV designs converts unbalanced signals over coax to a balanced signal over UTP cable, which will allow for future migration to an IP-addressable device.

**Benefits of UTP over coaxial cable**

- Lower cost of materials
- Reduced cable installation and termination time
- Reduced conduit and raceway due to smaller diameter cable
- Multiple functionality delivered on one cable (power/video/data)
- Balanced signal eliminates possibility of ground loop

**Analogue Solution**
NetClear® ESS
for Hybrid
CCTV Solutions

Best of both worlds
The recommended cabling solution for a hybrid installation is enhanced Category 6 cable to support high-definition video and advanced analytics. By selecting a solution comparable to the existing data and voice network, a parallel Category 6 network becomes scalable for total IP, and also saves initial costs by utilizing the same product sets and installation practices as today’s I.T. network.

Benefits of Standards-compliant IP-based network
- Increases accessibility to video storage and viewing
- Allows pro-active data analysis
- Reduces installation and operational costs
- Scalability for future IP-based applications

Hybrid Solution

Augment your current analog investment with newer IP technology to create a hybrid scenario. Installing a UTP-based structured cabling system can provide the ability to implement new, intelligent security devices, while offering a balance between performance and price.
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NetClear® ESS Structured Cabling Solutions for Electronic Safety and Security

Associated Devices
- Analog Camera with Balun
- Digital Camera
- Transceiver
- DVR/NVR
- PoE Midspan Injector
- Monitors

NetClear ESS Physical Support Solutions
- Cable Management Systems—Mighty Mo® Cabinets, Racks or Homaco® Racks
- Wiremold® Metal and Nonmetallic Raceway
- Cablofil® Wire Mesh Cable Tray and Underfloor Systems

NetClear ESS for Analog CCTV
- Hyper Plus Category 5e Copper Cable
- TechChoice® 5e Modular 110 Patch Panels
- TechChoice® 5e UTP Patch Cords
- TechChoice® 5e Workstation Modules

NetClear ESS for Analog CCTV
- ADventum® Indoor/Outdoor Loose Tube Fiber/Plenum Fiber optic cable
- Premise Distribution Tight Buffer Riser
- OptiMo® Multimode Adapter Panels and Patch Cords
- OptiMo® FC Series Rack-mount Cabinets

NetClear ESS Fiber Solutions
- LANmark®-1000 Enhanced Category 6 Copper Cable
- Clarity® 6 Category 6 UTP Patch Panels
- Clarity® 6 Category 6 Patch Cords
- Clarity® 6 Category 6 TracJack® or Series II Workstation Modules

NetClear ESS for Hybrid CCTV
- LANmark®-1000 Enhanced Category 6 Copper Cable
- Clarity® 6 Category 6 UTP Patch Panels
- Clarity® 6 Category 6 Patch Cords
- Clarity® 6 Category 6 TracJack® or Series II Workstation Modules

NetClear ESS Total IP and Distributed Power (or PoE)
- Clarity® 6 Category 6 Patch Cords
- Clarity® 6 Category 6 TracJack® or Series II Workstation Modules
- LANmark®-2000 Premium Category 6 Copper Cable
- Clarity® 6 Category 6 UTP Patch Panels