Security and Surveillance Cabling Systems

The video security industry is growing and ever-changing, offering a wealth of opportunity for today’s security professionals. Greater responsibility is being placed on IT professionals to design, integrate and administer their video security components without compromising network integrity or performance. Today’s converging network technologies require increased bandwidth, Quality of Service for prioritized traffic, and the transmission of all IP based technologies over a common network.

This document outlines two types of media and describes product configuration for each of them. The two types of media are fiber optic and unshielded twist pair (UTP).
Fiber Optic

Fiber optic is the media offering the greatest bandwidth performance. As the trend in security systems is migrating to Internet Protocol networks, fiber optic is becoming an ideal media to integrate multiple systems. It can securely and clearly carries high-quality analog and digital transmissions over distances up to 2 km for multimode fiber and up to 120 km for single mode fiber.

Furthermore, fiber optic media has the particularity to be immune to electromagnetic interference, radio frequency interference, power surge, and makes it impossible to tap the signals it transmits.

### Indoor Surveillance System

- **Indoor Monitored Area** Related Products
  1. Fiber optic patch cords
  2. Field installable connectors
- **Telecommunications Room** Related Products
  1. Fiber optic patch cords & pigtails
  2. Media converters and SFP transceivers
  3. Fiber optic patch panels
  4. Splice trays
  5. Adapters and adapter strips
  6. Multifiber cable assemblies
  7. CAT5e, CAT6 patch panels
  8. CAT5e, CAT6 Keystone jacks
  9. CAT5e, CAT6 horizontal cables
  10. CAT5e, CAT6 patch cords
- **Control Room** Related Products
  11. Faceplates
  12. CAT5e, CAT6 Keystone jacks
  13. CAT5e, CAT6 patch cords

### Outdoor Surveillance System

- **Monitored Outdoor Area** Related Products
  1. Fiber optic patch cords and pigtails
  6. Adapters & adapter strips
  5. Splice trays
  13. Outdoor fiber enclosures
  14. Outdoor fiber optic cables
- **Telecommunications Room** Related Products
  2. Fiber optic patch cords & pigtails
  3. Media converters and SFP transceivers
  4. Fiber optic patch panels
  5. Splice trays
  6. Adapters and adapter strips
  7. Multifiber cable assemblies
  8. CAT5e, CAT6 patch panels
  9. CAT5e, CAT6 Keystone jacks
  10. CAT5e, CAT6 horizontal cables
  11. CAT5e, CAT6 patch cords
- **Control Room** Related Products
  12. Faceplates
  9. CAT5e, CAT6 Keystone jacks
  11. CAT5e, CAT6 patch cords

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**Indoor Surveillance System**

- **Monitored Area**
  - Surveillance Camera

- **Telecommunications Room**
  - Ethernet Switch
  - UTP Patch Panel
  - Fiber optic Patch Panel
  - Transceiver/Media Converter

- **Control Room**
  - Server
  - Workstation

**Outdoor Surveillance System**

- **Monitored Area**
  - Surveillance Camera
  - Field Distribution Point
  - Camera

- **Telecommunications Room**
  - Ethernet Switch
  - UTP Patch Panel
  - Fiber optic Patch Panel
  - Transceiver/Media Converter

- **Control Room**
  - Server
  - Workstation

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Copper (UTP)

This transmission method allows for the installation of an IP-based video surveillance system connecting the cameras directly to the Local Area Network (LAN). Unshielded twisted pair (UTP) cabling transports digital video across the IP network and therefore allowing integration to any PC, or server in the network.

Indoor Surveillance System

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Control Room Related Products

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Outdoor Surveillance System

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**Indoor Surveillance System**

- **Monitored Area**: Surveillance Camera
- **Telecommunications Room**: Ethernet Switch, UTP Patch Panel, Workstation
- **Control Room**: Server, Workstation

**Outdoor Surveillance System**

- **Monitored Area**: Cameras
- **Telecommunications Room**: Ethernet Switch, UTP Patch Panel, Workstation
- **Control Room**: Server, Workstation

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Security & Surveillance

Typical Bill of Material for Surveillance Camera Systems

Fiber Optic and Copper Patch Cords (UTP Cat5e and Cat6)

Indoor/Outdoor Cables
Fiber Optic, UTP Cat5e and Cat6

Multi Fiber Cable Assemblies

Field Installable Connectors

UTP Patch Panels and Modules

Keywerks Faceplates

Indoor/Outdoor Cables
Fiber Optic, UTP Cat5e and Cat6

Splice Trays

Fiber Optic Rack Mount Patch Panels 1U

Fiber Optic Rack Mount Patch Panels 2U

Fiber Optic Rack Mount Patch Panels 4U

SFP Transceivers

Chassis for Media Converters

Media Converters

Outdoor Fiber Enclosures

Adaptors and Adaptor Strips

Typical Bill of Material for Surveillance Camera Systems

Fiber Optic product
Copper product

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