POWERED FIBER CABLE SYSTEM

IN PARTNERSHIP WITH
POWER & COMMUNICATE WITH NETWORK DEVICES SIMULTANEOUSLY

IDEAL FOR WI-FI ACCESS POINTS, HD CAMERAS, ONT’S AND SMALL CELL DEVICES

- 30X THE DISTANCE OF POE
- REDUCE LANDLORD/UTILITY NEGOTIATIONS
- ELIMINATE LOCAL POWER SOURCES
- CENTRALLY LOCATED UPS
- SELV AND NEC CLASS II COMPLIANT

POWERED FIBER CABLE SYSTEM WITH INTEGRATED POWER MANAGEMENT AND MEDIA CONVERSION

Applications include a variety of devices requiring optical communications & DC power

- HD surveillance cameras
- Wi-Fi access points
- Small cells
- PoLAN
- PoE or PoE+ extension
- Digital signage

OVERCOMING THE DISTANCE, DATA RATE AND POWER LIMITATIONS OF POWER OVER ETHERNET (PoE, PoE+)

TE’s powered fiber cable systems can deliver Power over Ethernet at up to 30 times the distance of a CAT cable system.
SYSTEM OVERVIEW

A hybrid copper/fiber system that installs like a “long extension cord”

SYSTEM ELEMENTS

- Hybrid Cable
- PoE Extender
- Safety & Overload Protection
- Cable/Fiber Management
- Power Transmission Management
- Power Supply (PSU)

GOAL

POWERED FIBER CABLE SYSTEM

- Greatly speeds up planning by eliminating DC electrical calculations for voltage/power drop over varying distances
- Up to 32 devices simultaneously from one power supply
- Carrier grade electrical protection
- NEC Class II and SELV compliant
- Allows placing devices exactly where they are needed to maximize coverage

Power output:
- PoE
  - 2.4 km, 15 watts
- PoE+
  - 1.6 km, 30 watts

Fiber: singlemode or multimode

A hybrid copper/fiber system that installs like a “long extension cord”
POWERED FIBER OPTIC CABLE

- 12 AWG OR 16 AWG CONDUCTORS
- PHYSICALLY IDENTIFIABLE POLARITY
- UP TO 12 OPTICAL FIBERS SMF OR MMF
- EXTREMELY FLEXIBLE CABLE DUE TO THE USE OF SPECIAL STRANDED CONDUCTORS

Single hybrid copper/fiber cable design for simplified cable field access.

- Designed for “easy peel” cable access – the cable can be accessed much faster than traditional hybrid cables
- No special tools needed – one ordinary wire strip tool accesses both the optical fiber and conductor elements
- Utilizes globally existing, proven and inexpensive FTTH style flat cable hardware
- Outdoor and Riser/LZSH indoor/outdoor rated versions

PoE EXTENDER

- Termination for hybrid cable input
- Environmentally sealed closure
- Circuit protection electronics
- Electrical power management
- Media conversion
- 1 PoE+ output
- Fits in one hand

SOLVES POWER & COMMUNICATION CHALLENGES

3 LEVELS OF ELECTRICAL PROTECTION

1 PRIMARY
GDT component rated to 40kA surge protection

2 SECONDARY
MOV components rated to 4.5kA

3 TERTIARY
TVS prevents the voltage from rising above 80-100V

POWER MANAGEMENT

- Reduces the need for electrical “system design” by automatically correcting for voltage drop over distance
- Optical signal and power in is converted to CAT5 PoE+ compliant jack
THE POE EXTENDER IS POE+ COMPLIANT AND CONCEALS INSIDE THE MOUNTING ARM OF ARUBA NETWORKS’ AP-270 OUTDOOR WI-FI ACCESS POINTS. THE COMBINED SOLUTION IS IDEAL FOR ARCHITECTURALLY-SENSITIVE SITES OR WHEREVER LONG-HAUL, EMI-RESISTANT, OR HIGH-SPEED OUTDOOR CONNECTIVITY IS REQUIRED.

The innovative AP-270 access points deliver gigabit Wi-Fi to 802.11ac mobile devices, and enable 802.11n clients to operate up to three-times faster than competing products.

Purpose-built for the harshest outdoor environments, the aesthetically-designed access points can withstand exposure to extreme high and low temperatures, persistent moisture and precipitation, and airborne contaminants.

The PoE Extender enables AP-270 access points to be located at unparalleled distances from mains power while delivering high-speed, EMI-resistant connectivity.

APPLICATION EXAMPLE

INDOOR/OUTDOOR CABLE CAN BE ROUTED INSIDE BUILDINGS AND THEN TRANSITION TO OUTSIDE AND UNDERGROUND APPLICATIONS

- Security camera(s) on lamp posts and in parking areas
- Wi-Fi hotspots for data offload
- Small cells for poor coverage areas

PSU LOCATED IN TELECOM CLOSET OR DATA CENTER, WHERE POWER AND FIBER NETWORK ARE AVAILABLE
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Additional Information

For more information on TE Connectivity’s Powered Fiber Cable Systems visit www.te.com/PoweredFiber

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