Powered Fiber Cable System

COMPLETE “RACK TO DEVICE” SOLUTION FOR POWERING AND COMMUNICATING WITH HD CAMERAS, WI-FI HOTSPOTS, SMALL CELL AND OTHER NETWORK DEVICES.
SIMULTANEOUSLY POWER & COMMUNICATE WITH NETWORK DEVICES

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

DATA RATE AND POWER LIMITATIONS OF POWER OVER ETHERNET (POE, POE+)

Powered fiber cable systems can deliver Power over Ethernet (PoE) at up to 30 times the distance of a CAT cable system.
POWERED FIBER OPTIC CABLE

- UP TO 12 OPTICAL FIBERS SMF OR MMF
- EXTREMELY FLEXIBLE CABLE DUE TO SPECIAL STRANDED CONDUCTORS
- AVAILABLE IN 12 AWG OR 16 AWG SMF OR MMF

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
SYSTEM OVERVIEW

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

GOAL

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)
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: Campus Environment**

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.