



# Powered Fiber Cable System

Providing power and communication to remote devices

COMMSCOPE®

As the world becomes smaller due to technology, the need for more vigorous public safety networks is also forcing business parks, public facilities and school campuses to beef up their surveillance and security measures. Yesterday's "like to have" security precautions have now become today's "must have" practices. Unfortunately, advanced safety programs such as audio forensics and biometrics like facial recognition that are used to prevent and record crimes are only as effective as the network's reach.

Global mobile data traffic is estimated to balloon nearly eightfold by 2020.

*Cisco VNI Mobile Forecast (2015 – 2020)*

[http://www.cisco.com/c/dam/m/en\\_in/innovation/enterprise/assets/mobile-white-paper-c11-520862.pdf](http://www.cisco.com/c/dam/m/en_in/innovation/enterprise/assets/mobile-white-paper-c11-520862.pdf)

## Helping communication and security networks become more robust

It's no secret that the proliferation of mobile phones, wearable devices and Internet of Things (IoT) has been putting a strain on today's cellular and Wi-Fi networks. But according to a recent Cisco VNI Mobile Forecast, this is just the beginning. Even though global mobile data traffic is estimated to balloon nearly eightfold by 2020, Wi-Fi offload traffic is projected to surpass project mobile traffic by more than 7 exabytes. (One exabyte is equivalent to one billion gigabytes.) Wi-Fi offload traffic is expected to grow at a compound annual growth rate (CAGR) of 62 percent per year through the end of the decade.



**Simple installation:** Uncomplicated electrical designs save on labor and material costs.



**Practical solution:** Hybrid cables deliver reliable fiber optic signals to and from devices along with low voltage DC

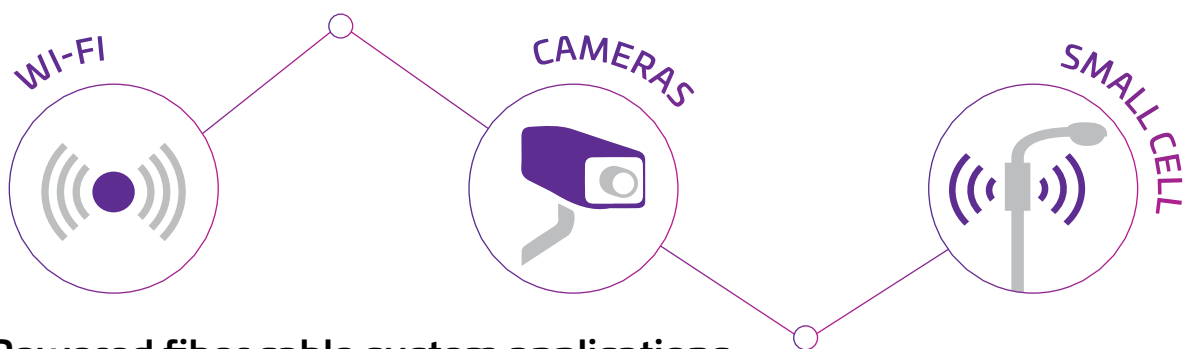
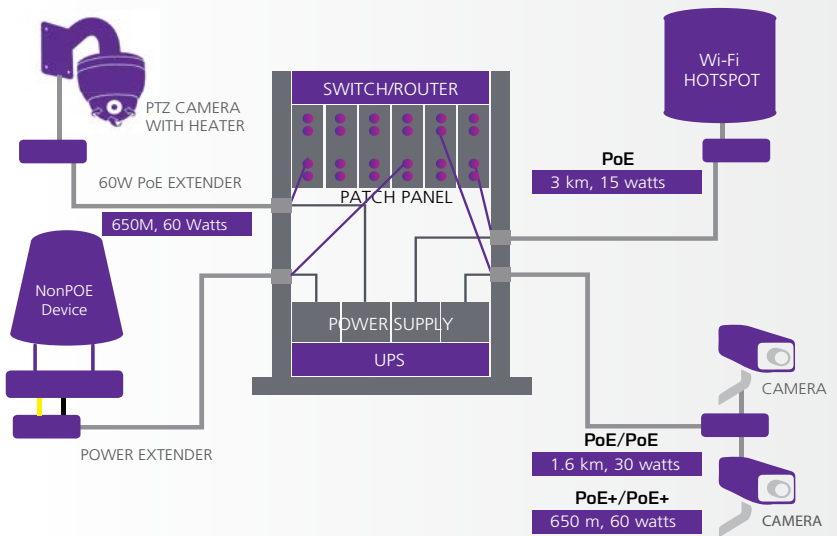


**Easy to deploy:** High-performance, bend-tolerant fiber to make our cabling pliable and effortless to pull

# Challenges to extending your network

When expanding networks to cover the dead zones or fill in blind spots, getting power to remote devices has often become the most difficult obstacle. Either power is available at the desired location, but network operators must negotiate with building owners or utility companies for power usage rights. Or no power is available, and network operators must install new power lines to deliver AC power, which then needs to be rectified to DC power. Plus, depending on the outdoor environment, battery backups may be needed to safeguard against brown-outs, power surges and lightning strikes

CommScope's Powered Fiber Cable System simplifies the addition of new small cells, Wi-Fi access points and IP cameras by distributing power and fiber within the same cable. This allows network operators to locate remote devices anywhere they can run fiber cable. What's more, by providing the necessary DC power alongside optical fiber signals, the Powered Fiber Cable System allows networks to deliver low voltage power from a centralized source without the need of installing extra conduits, transformers or remote uninterruptible power supplies (UPS).

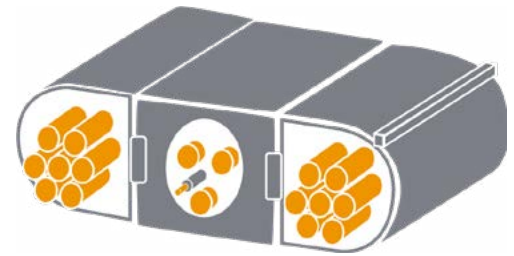


## Powered fiber cable system applications

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

# Benefits of the Powered Fiber Cable System

CommScope's powered fiber cable system gives network operators the best of fiber and copper in a single, rugged cable. By combining singlemode or multimode fibers with stranded conductors, our hybrid cables deliver reliable fiber optic signals to and from devices along with low voltage DC which simultaneously powers them.



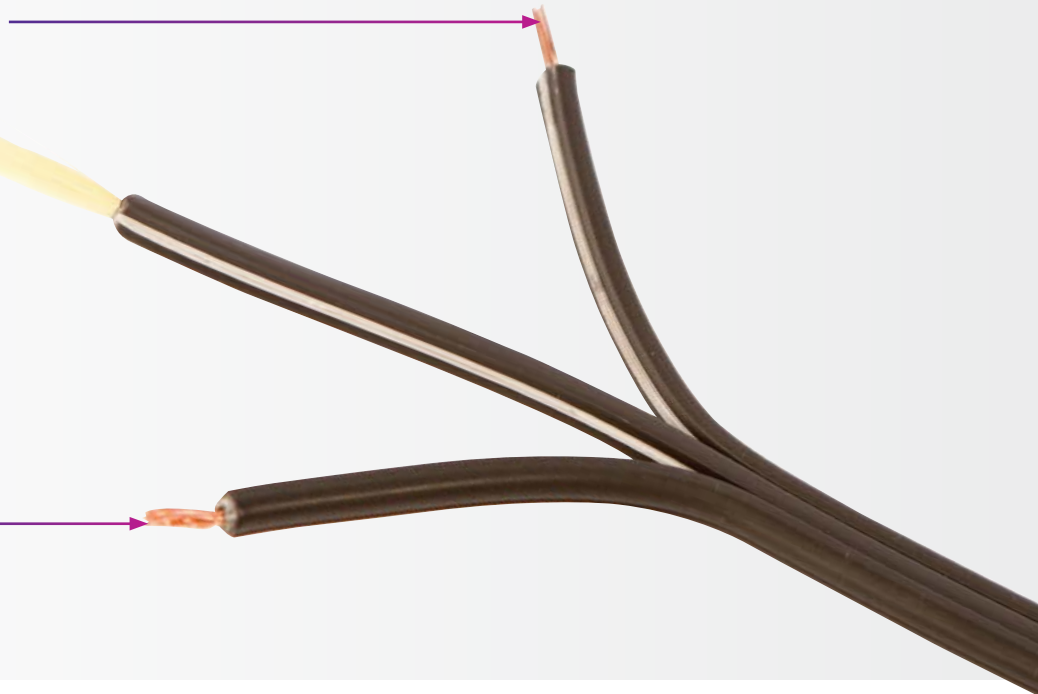
In addition to being practical, it is also easy to deploy. We've merged flexible stranded copper with our high-performance, bend-tolerant fiber to make our cabling pliable and effortless to pull. The powered fiber cable system also features an "easy peel" cable design that allows for quick deployment without requiring special tools to install. Despite being two cables in one, the powered fiber cable system is a compact, slim cable that fits in standard electrical conduit.

As part of a low voltage SELV/NEC Class II circuit, the powered fiber cable system is simple to install. Network installers don't need complicated electrical designs requiring calculation of voltage/power drop over varying distances. They can also save on high labor rates typically accrued for licensed electricians when deploying dangerous alternating current (AC) power lines. The powered fiber cable system allows network installers to save on material costs for separate fiber and electrical cables as well as cutting conduit costs in half by eliminating the need for dedicated conduits for AC electrical cables in order to conform to code. The system can therefore be installed anywhere Category cables are installed.

12 AWG (2 mm) or 16 AWG (1.3 mm)  
conductors

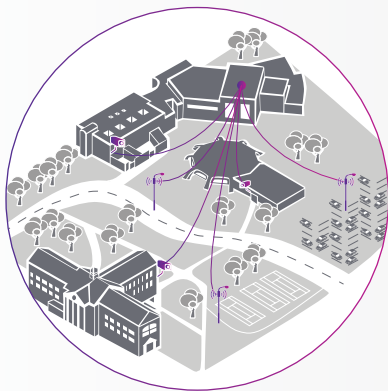
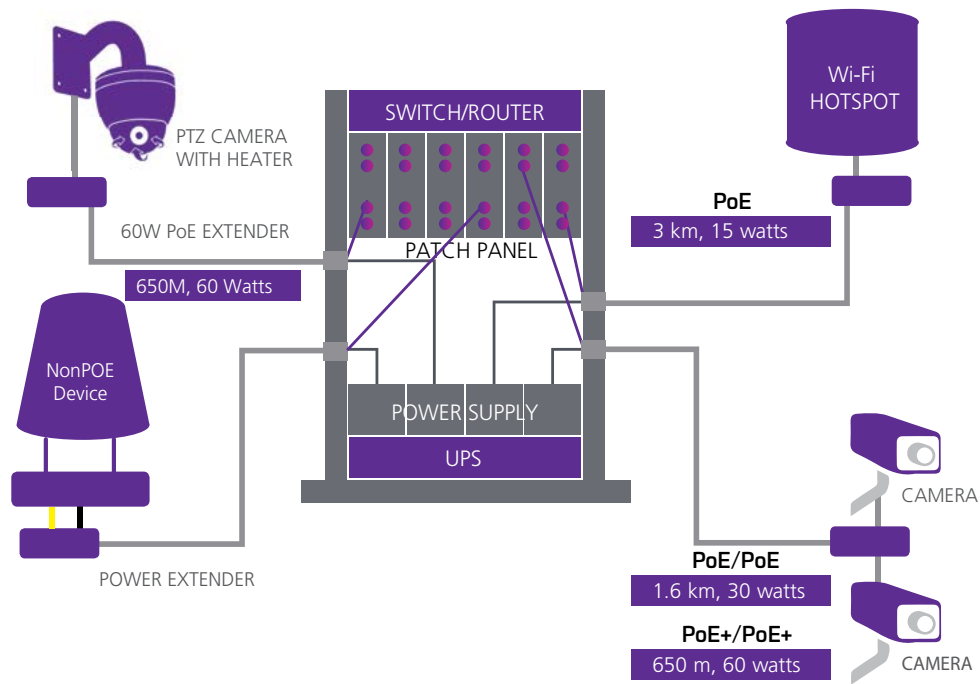
Up to 12 optical fibers  
SMF or MMF

Extremely flexible cable due to  
special stranded conductors

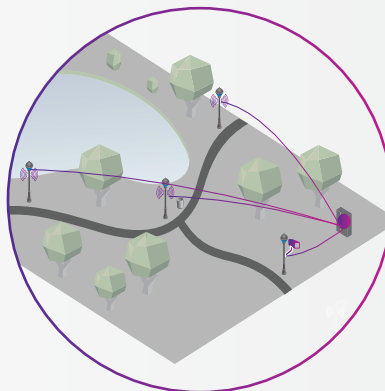


# Application overview

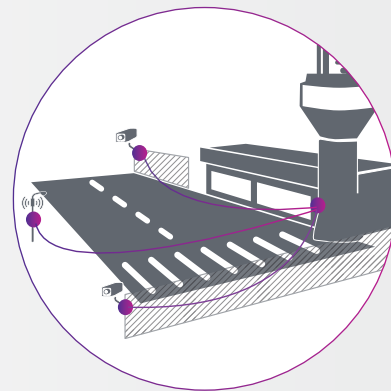
- Complete power and data system for IP devices
- Low voltage power provided by centralized source/backup UPS
- Up to 32 devices simultaneously from one power supply
- Extends PoE distance up to 3km
- Low-cost installation and set-up
- Ideal for campus environments, airports, parking areas, stadiums, small cell base stations



Campus environments



Smart cities



Airports

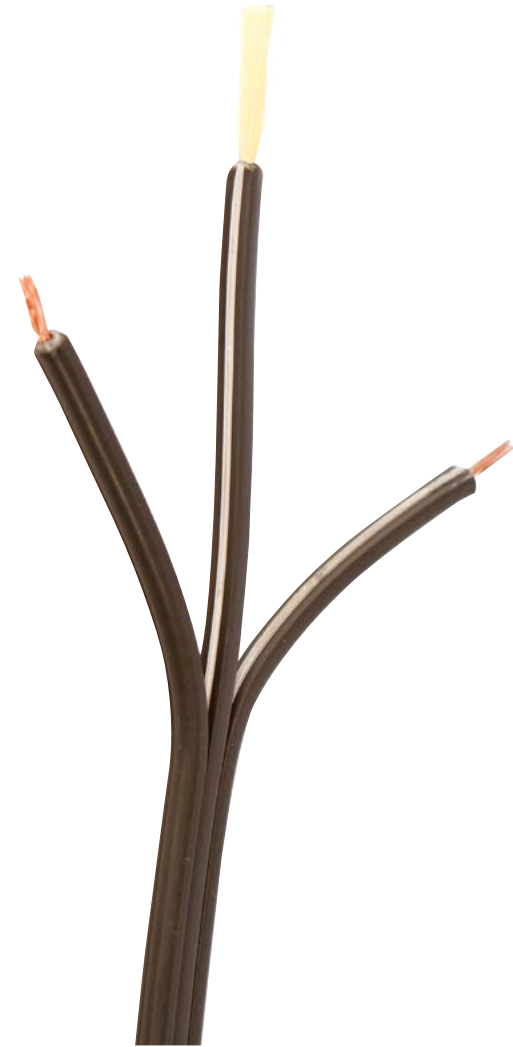
## Application examples

# Ordering information

## Powered Fiber Cable System

- Utilizes globally existing, proven and inexpensive FTTH-style flat cable hardware
- Outdoor and riser/LSZH, indoor/outdoor rated versions
- SELV and NEC Class II compliant
- Fast “banana peel” style cable access
- Utilizes globally existing, proven and inexpensive FTTH-style flat cable hardware

Description	Part Number
PFC, singlemode, 2F, I/O, 12AWG	PFC-S02L12
PFC, singlemode, 2F, I/O, 16AWG	PFC-S02L16
PFC, singlemode, 2F, outdoor, 12AWG	PFC-S02O12
PFC, singlemode, 2F, outdoor, 16AWG	PFC-S02O16
PFC, singlemode, 4F, I/O, 12AWG	PFC-S04L12
PFC, singlemode, 4F, I/O, 16AWG	PFC-S04L16
PFC, singlemode, 4F, outdoor, 12AWG	PFC-S04O12
PFC, singlemode, 4F, outdoor, 16AWG	PFC-S04O16
PFC, singlemode, 12F, I/O, 12AWG	PFC-S12L12
PFC, singlemode, 12F, I/O, 16AWG	PFC-S12L16
PFC, singlemode, 12F, outdoor, 12AWG	PFC-S12O12
PFC, singlemode, 12F, outdoor, 16AWG	PFC-S12O16
PFC, OM3, 2F, I/O, 12AWG	PFC-302L12
PFC, OM3, 2F, I/O, 16AWG	PFC-302L16
PFC, OM3, 2F, outdoor, 12AWG	PFC-302O12
PFC, OM3, 2F, outdoor, 16AWG	PFC-302O16
PFC, OM3, 4F, I/O, 12AWG	PFC-304L12
PFC, OM3, 4F, I/O, 16AWG	PFC-304L16
PFC, OM3, 4F, outdoor, 12AWG	PFC-304O12
PFC, OM3, 4F, outdoor, 16AWG	PFC-304O16



## Power Supplies

- 57VDC Power Supply for use with Powered Fiber Cable System

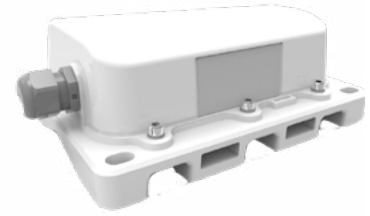
Description	Part Number
Power Express Distribution shelf with alarm module	PFP-PX-S1
Power Express Distribution module supports max. 8 Devices	PFP-PX-8M
Power Express Blank Slot Panel	PFP-PX-SF
SPS Rectifier Power Distribution Shelf	PFP-SPS-S1
1600W SPS Power Rectifier module	PFP-SPS-1600M
SPS Rectifier Controller Display	PFP-SPS-C1
SPS Rectifier Blank Slot Panel	PFP-SPS-SF



## Power over Ethernet (PoE) Extenders

- PoE+ compliant interface to endpoint device
- Automatically corrects for distance voltage drop
- Integrated electrical protection for endpoint

Description	Part Number
PoE Extender with Aruba Bracket	PFU-P-A-O-030-01
PoE Extender with Wall/Pole Mounting Bracket	PFU-P-B-O-030-01



PFU-P-B-O-030-01

## 2-Port PoE Extenders

- Enhances the Powered Fiber Cable System by allowing 2 PoE or PoE+ devices to be connected via one hybrid cable.
- IP67 sealing—designed to terminate the Powered Fiber Cable
- Automatically corrects for distance voltage drop
- 60W Single Port variation combines the total power into a single RJ45 port for applications requiring non-standard 'High PoE' powering such as PTZ cameras with heater block elements.

Description	Part Number
2-Port PoE Extender	PFU-P-C-O-060-02
60W Single Port PoE Extender	PFU-P-C-O-060-01



PFU-P-C-O-060-02



PFU-P-B-O-060-01

## Power Extenders

- Provide the same power management and electrical protection benefits of the PoE Extenders.
- Designed to handle devices which require direct fiber input and DC power.

Description	Part Number
Power Extender with 48VDC output	PFU-48-C-O-060-01
Power Extender with 12VDC output	PFU-12-C-O-060-01



PFU-48-C-O-060-01

CommScope (NASDAQ: COMM) helps design, build and manage wired and wireless networks around the world. As a communications infrastructure leader, we shape the always-on networks of tomorrow. For more than 40 years, our global team of greater than 20,000 employees, innovators and technologists has empowered customers in all regions of the world to anticipate what's next and push the boundaries of what's possible. Discover more at [commscope.com](http://commscope.com)

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