



Powered fiber cable system

Providing power and communication to remote devices

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 haves" 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/en/us/solutions/collateral/service-provider/global-cloud-index-gci/white-paper-c11-738085.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

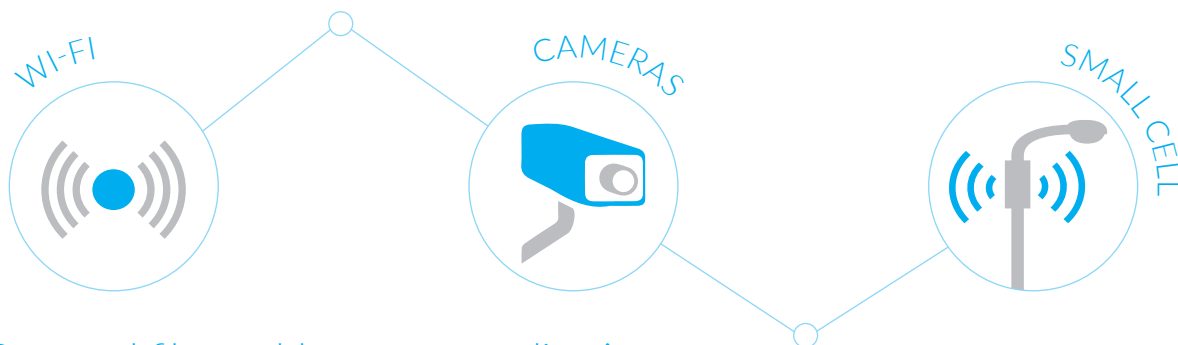
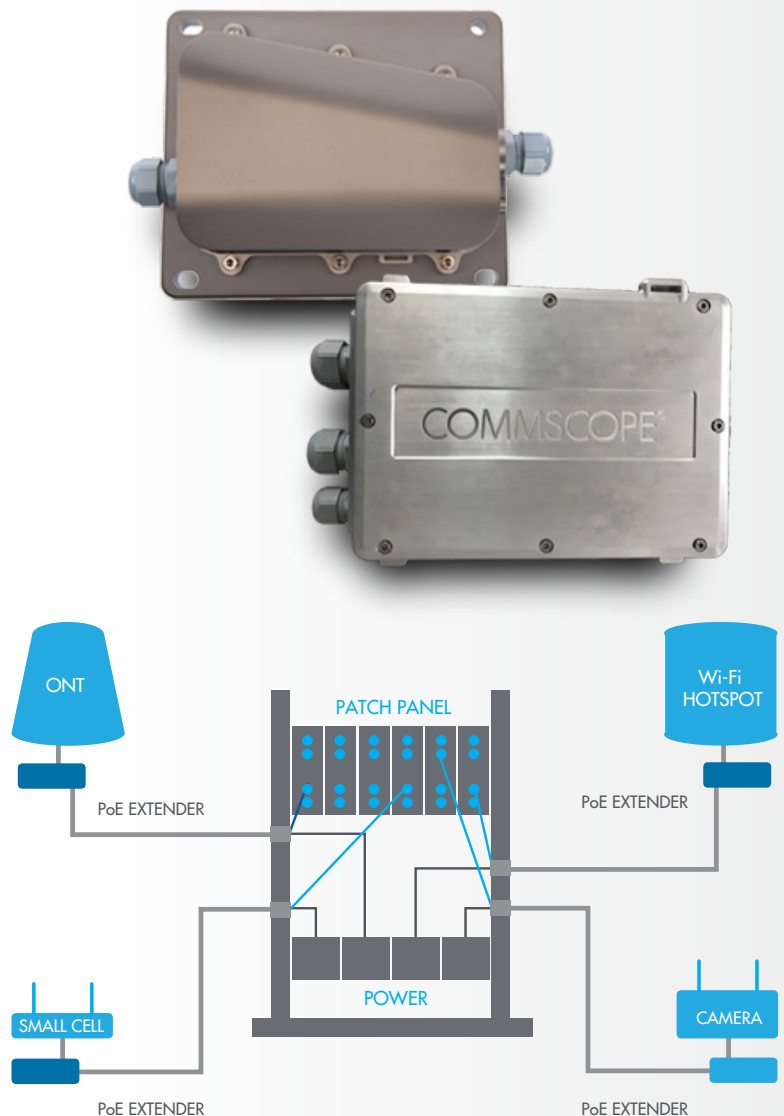


Easy to deploy: High-performance, bend-tolerant fiber to make our cabling pliable and effortless to pull

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 Cabling System (PFCS) 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, PFCS allows networks to deliver low voltage power from a centralized source without the need of installing extra conduits, transformers or remote uninterrupted power supplies (UPS).



Powered fiber cable system applications

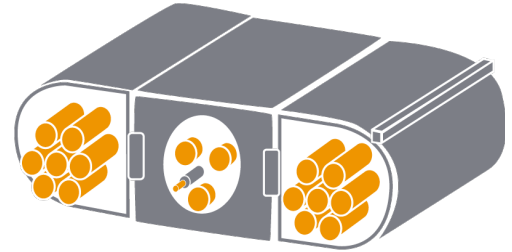
- PoLAN
- HD surveillance cameras
- Wi-Fi access points
- PoE or PoE+ extension
- Digital signage
- Small cells

Benefits of powered fiber cabling system (PFCS)

CommScope's powered fiber cabling 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, PFCS 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. PFCS also features an "easy peel" cable design that allows for quick deployment without requiring special tools to install. Despite being two cables in one, PFCS is a compact, slim cable that fits in standard electrical conduit.

As part of a low voltage/NEC Class II circuit, PFCS 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. PFCS 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. PFCS can therefore be installed anywhere Category cables are installed.



12 AWG or 16 AWG conductors

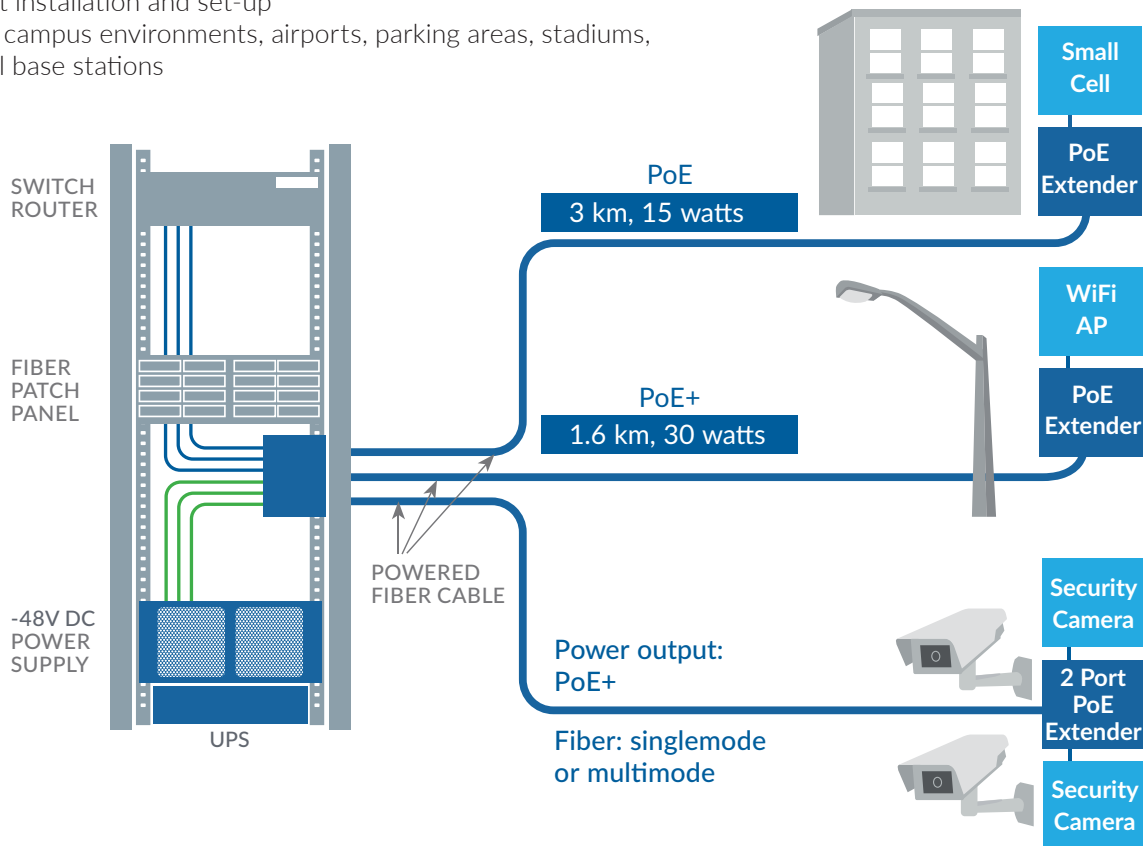
Up to 12 optical fibers SMF or MMF

Extremely flexible cable due to special stranded conductors



Application overview

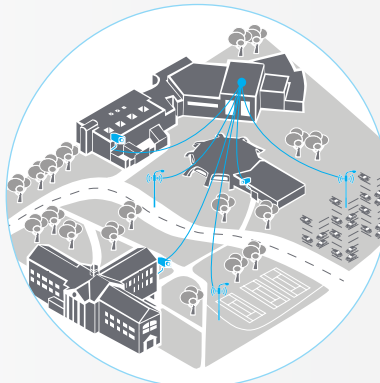
- Complete power and data system for IP devices
- Low voltage power provided by centralized source/backup UPS
- Up to 32 devices simultaneously from one power supply
- Extends PoE distance up to 3km
- Low-cost installation and set-up
- Ideal for campus environments, airports, parking areas, stadiums,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



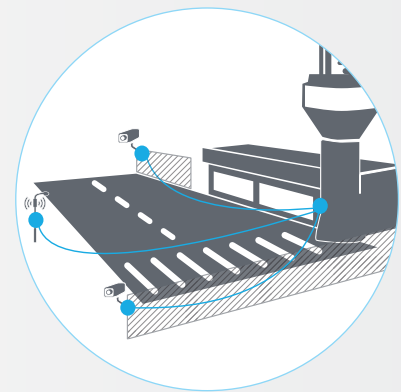
Application examples



Small cell
basestations



Campus environments



Airports

Ordering information

Powered Fiber Cabling System

- Utilizes globally existing, proven and inexpensive FTTH-style flat cable hardware
- Outdoor and riser/LZSH, 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

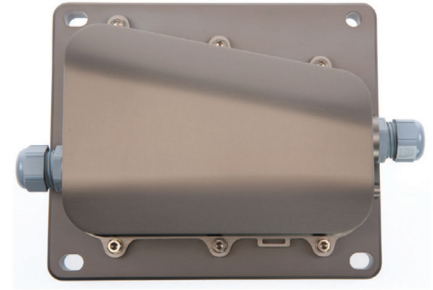


Description	Part Number
PFC, singlemode, 2F, I/O, 12AWG	PFC-S02L12
PFC, singlemode, 2F, I/O, 16AWG	PFC-S02L16
PFC, singlemode, 2F, outdoor, 12AWG	PFC-S02O12
PFC, singlemode, 2F, outdoor, 16AWG	PFC-S02O16
PFC, singlemode, 4F, I/O, 12AWG	PFC-S04L12
PFC, singlemode, 4F, I/O, 16AWG	PFC-S04L16
PFC, singlemode, 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 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



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

Description	Part Number
2-Port PoE Extender	PFU-P-C-O-060-01



Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.



commscope.com

Visit our website or contact your local CommScope representative for more information.

© 2017 CommScope, Inc. All rights reserved.

All trademarks identified by ® or ™ are registered trademarks or trademarks, respectively, of CommScope, Inc. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services.

BR-110984-EN (3/17)