

Passive Optical LAN Solution



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unified business foundation

Connect. Manage. Automate.

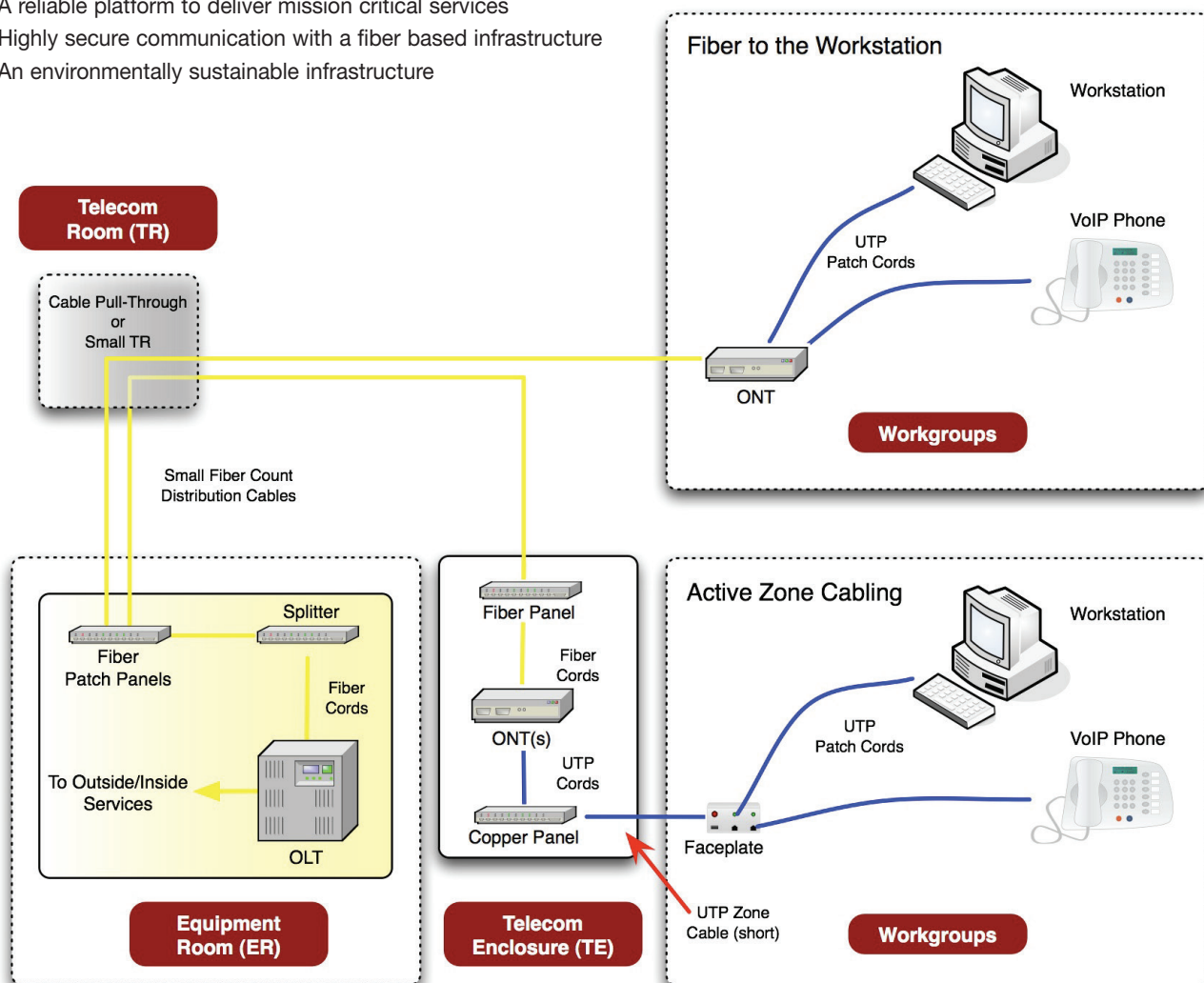
Passive Optical LAN

A Passive Optical Network (PON) is a point-to-multipoint architecture that employs a single strand of singlemode fiber and unpowered optical splitters to deliver converged IP voice, video, data and building automation to multiple users (or devices). PONs, widely deployed by service providers in the outside plant for over 20 years, leverage the distance and bandwidth capabilities of singlemode fiber to cost effectively distribute their data-rich services. Passive Optical LAN (POL), which is based upon mature PON standards, is an emerging network architecture for the premises environment.

The three main network components of POL (Passive Optical LAN) are the Optical Line Terminal (OLT), the Passive Optical Splitter, and the Optical Network Terminal (ONT). By using passive optical splitters, POL is able to substitute the distribution switching layer, present in traditional active Ethernet architectures, and reduce the amount of infrastructure required. Optical LANs built with PON technology delivers voice, data and video at gigabit speeds over secure optical fiber.

The benefits of a Passive Optical LAN include:

- Cost effective installation and operation
- A reliable platform to deliver mission critical services
- Highly secure communication with a fiber based infrastructure
- An environmentally sustainable infrastructure



Panduit provides a complete line of products for POL installations

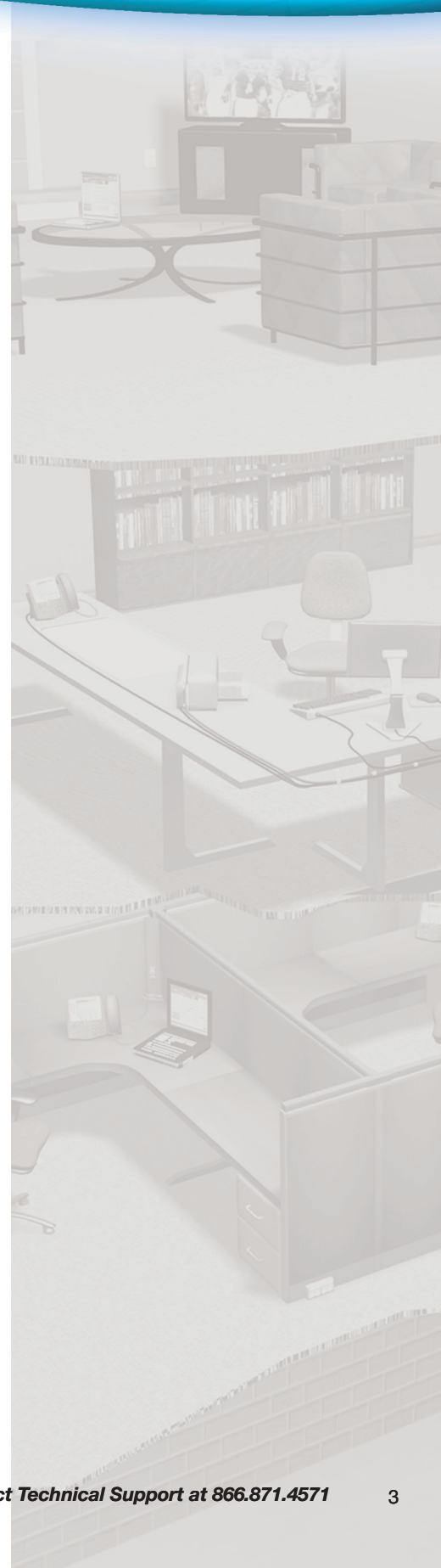
Panduit provides a complete line of products for POL installations. In cases where network owners prefer a structured approach to cabling infrastructure, Panduit offers active zone cabling components which minimize installation costs while providing a flexible and manageable cabling solution.

Zone cabling products for open office applications are typically used to deploy wireless access points, Ethernet workgroup switches and connected building gateways. In POL deployments using zone cabling, the ONT(s) are secured from end users in zone enclosures residing close to users in the ceiling, floor or mounted to a wall. Singlemode fiber cabling is terminated in a small patch panel inside the enclosure and patched to the ONT(s) with fiber patch cords. Short runs of copper cabling are terminated in the enclosure in a patch panel and run to end user outlets.

Each zone enclosure serves as a cabling distribution point for a particular zone increasing network flexibility, manageability, accessibility, and efficiency. Utilizing a distributed network and a zone cabling topology for your physical infrastructure can solve telecommunication room congestion. In addition, PON fiber backbone cables to the zone enclosures extend the reach of your network beyond copper limitations.

In summary, Active Zone architectures provide:

- Cabling systems that are TIA/EIA-568-C compliant
- Accessibility and flexibility to reconfigure offices to meet frequently changing organizational requirements
- Utilization of existing UTP at the end user outlet
- Reduction of telecommunication room congestion and less real estate in pathway and spaces
- Ease of implementing convergence technologies, higher bandwidth channels and overlay systems such as DAS which share a similar cable model



Equipment Room POL Product Solutions



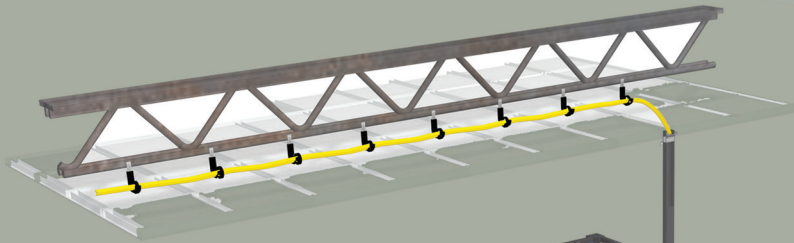
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Panduit provides leading-edge cabinets, racks, cable management, pathways and grounding and bonding systems in support of Equipment Rooms (ERs) and Telecom Rooms (TRs) that house ONT chassis and related cabling infrastructure. These products, along with the fiber distribution and cabling elements covered in this guide, comprise end-to-end solutions for managing, protecting and showcasing network cabling infrastructure that support your POL network.

Work Area POL Product Solutions



Fiber to the Workstation

Panduit provides open office cabling elements for delivering fiber to ONTs residing near work spaces. Modular components at the user outlet can support ONT uplinks alongside traditional copper or multimedia outlets.



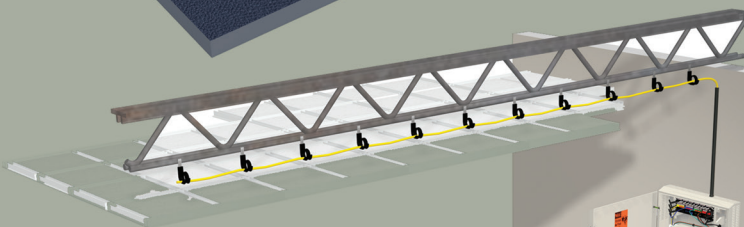
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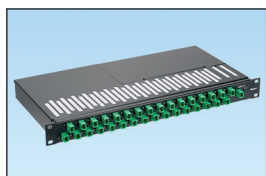
Active Zone



In situations requiring physical isolation/security of the ONTs, Panduit Zone cabling products accommodate the POL “active zone” cabling model from the ER to the user outlet. Active Zone Cabling enclosures can be used in floor, ceiling and wall mount applications and preclude the need for floor space to house and secure ONTs.

Passive Optical Network (PON) Splitter

- Cost effective offering for Passive Optical LAN (POL) networks providing fiber-to-user solutions
- Can be combined with existing Panduit solutions to integrate within end-to-end POL infrastructure
- Pre-terminated or splice ready with 1x8, 1x16, 1x32, 2x8, 2x16 and 2x32 configurations (1 or 2 input ports and 8 to 32 output ports)



Part Number	Description
Passive Optical Network (PON) LAN Splitter Tray	
FCP9SP-1083GG	PON Splitter Tray; 1x8 splitter; single splice input; 8 SC-APC outputs
FCP9SP-1163GG	PON Splitter Tray; 1x16 splitter; single splice input; 16 SC-APC outputs
FCP9SP-1323GG	PON Splitter Tray; 1x32 splitter; single splice input; 32 SC-APC outputs
FCP9SP-2083GG	PON Splitter Tray; 2x8 splitter; dual splice inputs; 8 SC-APC outputs
FCP9SP-2163GG	PON Splitter Tray; 2x16 splitter; dual splice inputs; 16 SC-APC outputs
FCP9SP-2323GG	PON Splitter Tray; 2x32 splitter; dual splice inputs; 32 SC-APC outputs
FCP9PP-1083GG	PON Splitter Tray; 1x8 splitter; single SC-APC input; 8 SC-APC outputs
FCP9PP-1163GG	PON Splitter Tray; 1x16 splitter; single SC-APC input; 16 SC-APC outputs
FCP9PP-1323GG	PON Splitter Tray; 1x32 splitter; single SC-APC input; 32 SC-APC outputs
FCP9PP-2083GG	PON Splitter Tray; 2x8 splitter; dual SC-APC inputs; 8 SC-APC outputs
FCP9PP-2163GG	PON Splitter Tray; 2x16 splitter; dual SC-APC inputs; 16 SC-APC outputs
FCP9PP-2323GG	PON Splitter Tray; 2x32 splitter; dual SC-APC inputs; 32 SC-APC outputs

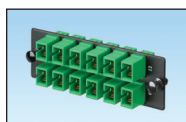
Fiber Components



FCE1U



FCE4U



FAP12WAGSCZ



FWME2



FOSMF



MS24HD



MS24B

Part Number	Description
Opticom® Rack Mount Fiber Cassette Enclosures	
FCE1U	Holds up to four QuickNet™ Cassettes, FAP adapter panels, or FOSM splice modules. Dimensions: 1.73"H x 17.60"W x 16.30"D (43.9mm x 447.0mm x 414.0mm)
FCE4U	Holds up to twelve QuickNet™ Cassettes, FAP adapter panels, or FOSM splice modules. Dimensions: 6.98"H x 17.60"W x 16.30"D (177.0mm x 447.0mm x 414.0mm)
Opticom® Fiber Adapter Panels	
FAP12WAGSCZ	SC APC FAP loaded with twelve SC APC simplex singlemode fiber optic adapters (Green) with zirconia ceramic split sleeves.
Opticom® Wall Mount Enclosures	
FWME2	Holds Fiber Adapter Panels (FAPs)
Fiber Cable Management Accessories	
FOSMF	Fiber optic splice module holds and protects up to 24 fusion splices. For use with FCE*U, FRME*U, and FMT series enclosures.
Media Distribution Enclosures	
MS24HD	14" x 24" framed hinged door with lock and key. 25.81"H x 15.75"W x .87"D (655.6mm x 400.00mm x 22.1mm).
MS24B	14" x 24" media distribution enclosure base. 24.25"H x 14.25"W x 4.00"D (616.0mm x 362.00mm x 101.6mm).

Fiber Components (continued)



PZICEA



PZICE



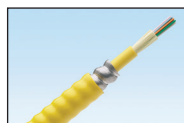
PZAEWM3

Part Number	Description
PanZone® In-Ceiling Enclosures	
PZICEA	Fully assembled in-ceiling active enclosure. Accepts up to 2 RU of active network equipment and up to 6 RU of passive product. Includes mounting brackets, integrated horizontal slack manager, AC power provisions, fan assembly, air dam, and electrical junction box. External dimensions: 13.50"H x 25.50"W x 27.50"D (342.9mm x 647.7mm x 698.5mm). Internal dimensions: 11.49"H x 22.31"W x 22.46"D (291.8mm x 566.7mm x 570.5mm).
PZICE	Fully assembled in-ceiling enclosure. Accepts up to 8 RU of standard 19" patch panels. Includes mounting brackets and integrated horizontal slack manager. Dimensions: 23.50"H x 23.50"W x 13.43"D (596.9mm x 596.9mm x 341.1mm).
PanZone® Active Wall Mount Enclosures	
PZAEWM3	Active wall mount enclosure includes mounting template for quick installation. Dimensions: 38.50"H x 27.92"W x 8.61"D (977.9mm x 709.2mm x 218.7mm).

Fiber Cable



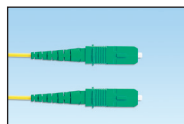
FSDP912Y



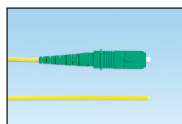
FSPP906Y



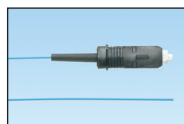
FSPD912



F9S3A-3AM1



F9B3A-NM1



F91BN3NNNSNM001

Part Number	Description
Opti-Core® Fiber Optic Cable	
FSDP912Y	12-fiber OS2 singlemode plenum rated distribution cable.
FSPP906Y	6-fiber OS2 singlemode plenum rated indoor interlocking aluminum armored cable.
FSPD912	12-fiber OS2 dielectric conduited, LSZH-Riser rated, singlemode indoor distribution cable for use in horizontal installations and backbones within buildings. No grounding, bonding is required and offers six times the crush resistance of unarmored cable.
Opti-Core® SC APC – SC APC Patch Cords and Pigtails	
F9S3A-3AM1	SC APC to SC APC singlemode simplex patch cord, 3mm jacketed cable (one SC APC connector on each end) – 9/125µm.
F9B3A-NM1	SC APC to pigtail singlemode simplex pigtail, 900µm buffered fiber (one SC APC connector on one end and open on the other end) – 9/125µm.
Opti-Core® Fiber Optic Patch Cords and Pigtails	
F91BN3NNNSNM001	OS1/OS2 1-fiber, 900µm buffered, patch cord with no jacket, SC to pigtail, Std. IL.

Copper Cable



PUP6004BU-W



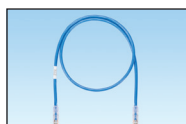
PUP6ASD04BU



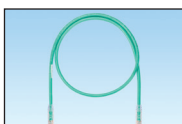
PUR6ASD04BU

Part Number	Description
Category 6 and Category 6A Copper Cable	
PUP6004BU-UG	Copper cable, enhanced Category 6 UTP, plenum (CMP), 23AWG, blue.
PUR6004BU-UG	Copper cable, enhanced Category 6 UTP, riser (CMR), 23AWG, blue.
PUP6AM04BU-UG	Copper cable, Category 6A UTP with Advanced Matrix technology, plenum (CMP), 23AWG, blue.
PUR6AM04BU-UG	Copper cable, Category 6A UTP with Advanced Matrix technology, riser (CMR), 23AWG, blue.
PUP6ASD04BU-UG	Copper cable, Small Diameter Category 6A UTP with Matrix technology, plenum (CMP), 26AWG for installations up to 70 meters, blue.
PUR6ASD04BU-CG	Copper cable, Small Diameter Category 6A UTP with Matrix technology, riser (CMR), 26AWG for installations up to 70 meters, blue.

Copper Components



UTP6ASD**BU



UTP6ASD*GR



CFKE2A5U5J



UXJPBU25*BL



CJ6X88TG**



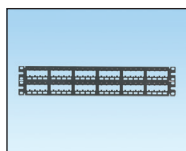
CFPL4**Y



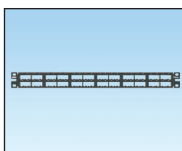
CFPSL4**Y



CBX4**-AY



CPP48FMWBLY



CPP48HDEWBL

Part Number	Description
Category 6A SD Patch Cords	
UTP6ASD**	Cat 6A patch cord, SD, Off White UTP cable; ** = available in 3, 5, 7, 10, 14 and 20 feet
UTP6ASD*BU	Cat 6A patch cord, SD, Blue UTP cable; * = available in 3, 5, 7, 10, 14 and 20 feet
UTP6ASD*YL	Cat 6A patch cord, SD, Yellow UTP cable; * = available in 3, 5, 7, 10, 14 and 20 feet
UTP6ASD*GR	Cat 6A patch cord, SD, Green UTP cable; * = available in 3, 5, 7, 10, 14, and 20 feet
Mini-Com® Executive Series Faceplate Kits with Jack Modules	
CFKE2A5U5J	Includes 2-port executive faceplate with two Mini-Com® Category 5e Jack Modules (BU, OR).
Mini-Com® Cat 6A UTP Jack Module	
CJ6X88TG**	Cat 6A jack module, UTP 8 pos, 8 wire, TG style; ** = available in Blue, Black, Yellow, White, Orange and Green
Mini-Com® Classic Series Faceplates	
CFPL2**Y	2 position classic faceplate with label; ** = available in IW (Off White) and WH (White)
CFPL4**Y	4 position classic faceplate with label; ** = available in IW (Off White) and WH (White)
CFPSL2**Y	2 position classic sloped faceplate with label; ** = available in IW (Off White) and WH (White)
CFPSL4**Y	4 position classic sloped faceplate with label; ** = available in IW (Off White) and WH (White)
Mini-Com® Surface Mount Boxes	
CBX2**-AY	2 position surface mount box; ** = available in IW (Off White) and WH (White)
CBX4**-AY	4 position surface mount box; ** = available in IW (Off White) and WH (White)
Mini-Com® Patch Panels	
CPP24FMWBLY	24 port Flush Mount Flat Modular patch panel
CPP48FMWBLY	48 port Flush Mount Flat Modular patch panel
CPP48HDEWBL	48 port High Density Flat Modular patch panel
PanZone® Cable Assemblies	
UXJPBU25*BL	Category 6A (SD), UTP, solid, plenum, blue cable with TX6A™ 10Gig™ Jack Module to TX6A™ 10Gig™ Modular Plug.

Real-World Solutions

With a proven reputation for excellence and innovation, Panduit and our partners work with you to overcome challenges and implement real-world solutions that create a competitive business advantage. Panduit offers the broadest range of solutions, from data centers and intelligent buildings to manufacturing operations, to help you build a **smarter, unified business foundation**.



Technology Leadership

Panduit develops innovative physical infrastructure solutions that meet the rapidly changing needs of our clients, from hardware and software to advisory services. This commitment is supported by investment in advanced research, solutions-focused product development, world-class manufacturing, and collaboration with customers at the forefront of technology.



Partner Ecosystem

Our best-in-class partner ecosystem offers a comprehensive portfolio of services that span the project lifecycle, from planning and design to delivery, deployment, maintenance, and operation. Panduit business partners – distributors, and certified architects, consultants, engineers, designers, system integrators, and contractors – are qualified to help you achieve your objectives and realize predictable and measurable results.



Strategic Alliances

Panduit cultivates long-term strategic alliances with industry leaders, including Cisco Systems, EMC, IBM, and Rockwell Automation, to develop, optimize, and validate solutions for our customers. This investment in people and resources helps solve our customers' greatest business challenges.



Global Business Commitment

Panduit is committed to delivering a consistently high level of quality and service the world over. With a presence in more than 100 countries, local Panduit sales representatives and technical specialists offer guidance and support that bring value to your business. Our global supply chain, which includes manufacturing, customer service, logistics, and distribution partners, provides prompt response to your inquiries and streamlines delivery to any worldwide destination.



Sustainability

With a commitment to environmental sustainability, Panduit develops and implements solutions that protect, replenish, and restore the world in which we live. This commitment is demonstrated by Panduit's LEED Gold certified World Headquarters, leveraging the Unified Physical InfrastructureSM approach to enable convergence of critical building systems to drive energy efficiency and ongoing operational improvement.

*Transform Your
Physical Infrastructure*

*Call or visit us online,
we can show you how.*

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