



Infrastructure to Support **Multi-Tenant Data Center** Solution Guide

EMEA

PANDUIT™

infrastructure for a connected world

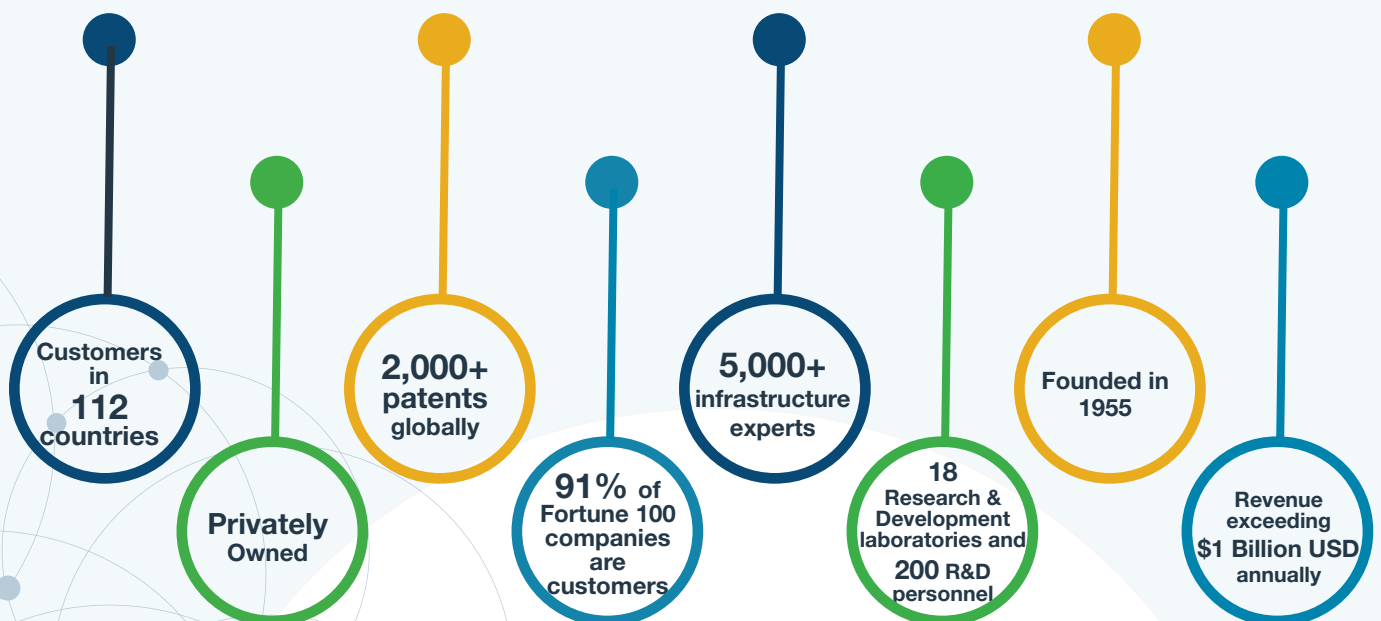
Infrastructure for a Connected World

Let's face it, go-live dates never get pushed out. You need a physical infrastructure that supports last minute design changes while reducing the "book to build" time.

Panduit physical infrastructure supports network connections from the meet-me-rooms, to the network cabinets, up to the office, out to operations, and most importantly to your client areas. Partner with Panduit for best-in-class solutions throughout your data center campus that scale around the globe.

A culture of curiosity, a history of innovation

From the first product, a panel conduit that gave us our name, we understood the value of thinking differently. Here's where it's gotten us:



Panduit's global support structure for manufacturing, warehousing, sales, technical and customer service enables real-time responses within each region.

World Class Global Manufacturing and Distribution Ecosystem

500+
sales &
technical
employees

9
manufacturing
locations

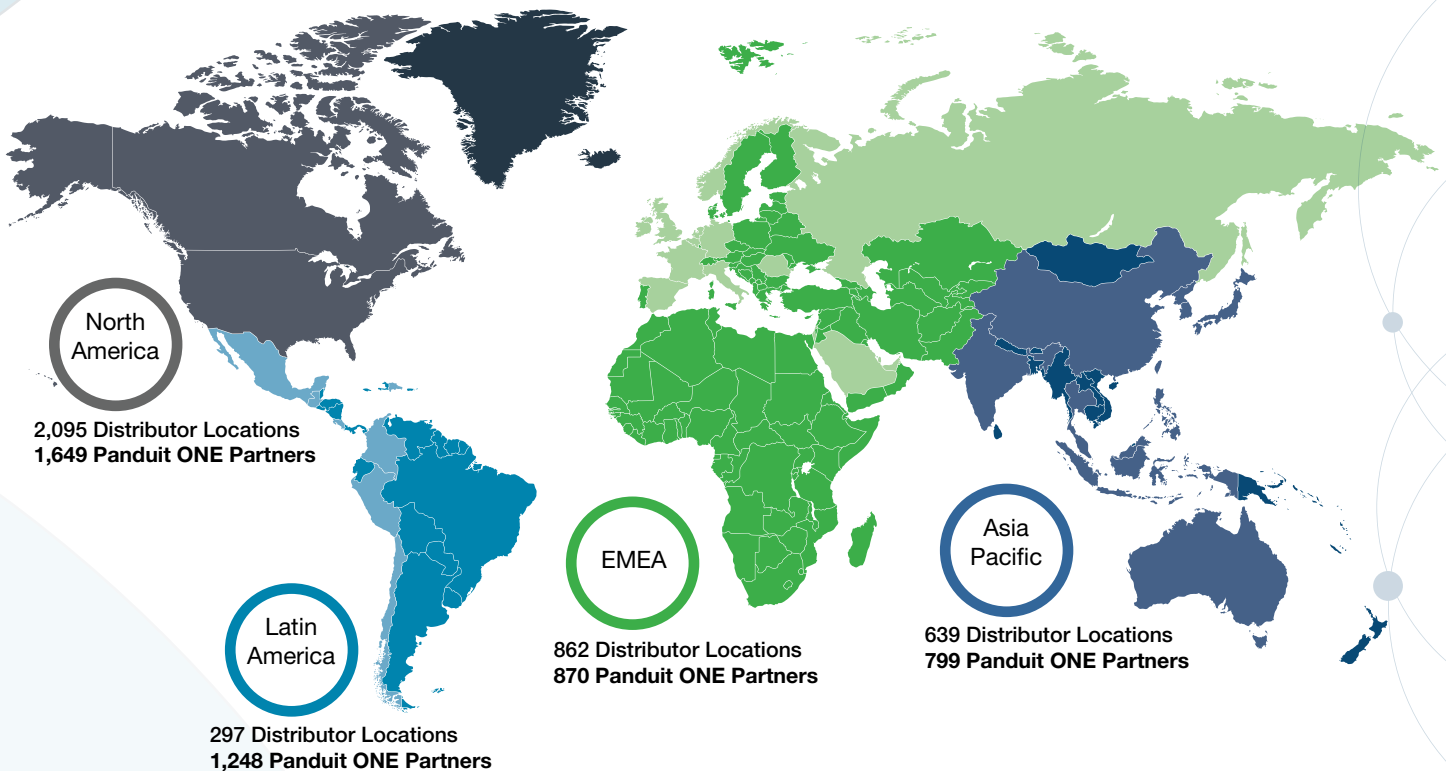
10
warehouse
sites

62
offices

9
customer
briefing
centers

18
laboratories

1
research &
development
facility



A World of Connections

When it's your vision to connect technology, systems, and people on a global scale, you don't go it alone. That's why we built a support team that is committed to earning your trust and providing a superior customer experience the world over, and a partner ecosystem that spans the project lifecycle, from planning and design to delivery, deployment, maintenance, and operation.

Partner Smarter

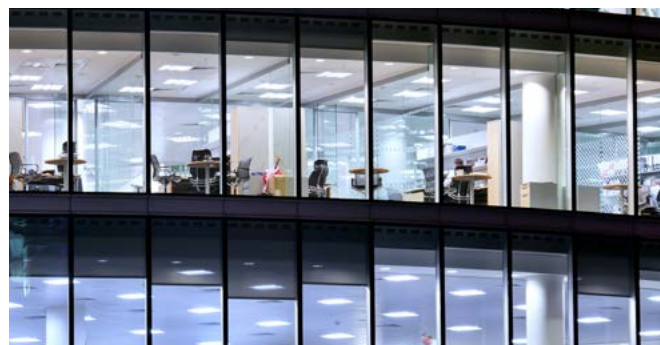
Our global network of distributors provides local inventory, product support, and logistics services so our customers can expect to receive exactly what they need when they need it.



Our Panduit One partners include highly skilled installers, contractors, and system integrators who are trained and certified to design, develop, and deploy high-performance electrical and network infrastructures.

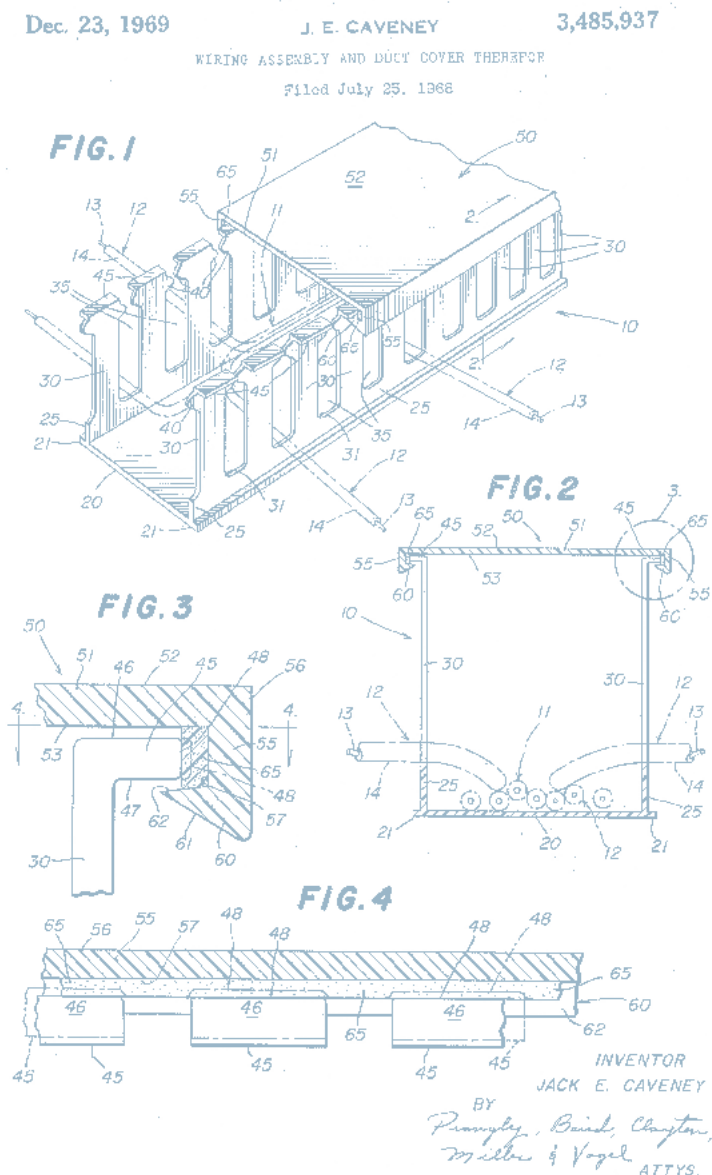
Network and Electrical Infrastructure: Your key to staying connected

Dependable, scalable network connectivity and robust, reliable electrical infrastructure are now mission-critical for modern enterprises. Good thing Panduit's innovative infrastructure solutions enable the future-forward connectivity that global enterprises need to make more meaningful connections – and thrive.



Business advantage comes from being first.

You need an infrastructure partner that helps set the pace, not simply keeps up. From the beginning, we've worked with our customers to overcome their greatest technology challenges. Over the years, we've contributed to some of the industry's most significant breakthroughs, from development of industry standards for high-speed Ethernet in enterprise and factory environments, to reduced design time and installation costs for system integrators, OEMs and construction companies, and enhanced worker safety. We do it all to help you push your own boundaries.



White Space and Grey Space

There are two unique application environments that include traditional data center white space and electrical infrastructure grey space. Panduit is uniquely positioned as a supplier to both of these customer environments.

White Space

White space also known as 'data hall' in data centers is the space allocated for IT equipment or the space where IT equipment is placed. So every organization has to be very careful when designing the white space area because this is the only productive area where you are utilizing the space for what the data centers are meant to be.

White space includes servers, storage, network gear, racks, air conditioning units, power distribution systems.



Grey Space

Grey space in data centers is the area where back-end equipment is located. This includes switch gear, UPS, transformers, chillers and generators. Typically, an IT engineer may not be engaged with grey floor areas and the main functionalities over here will be carried out by electrical and mechanical engineers.

Grey space area which is required to build for a data center is depending upon the area required for white space. Because the primary function of the grey floor is to support white space area and the more white space required, more backend structures to support.



White Space Solutions at the Cage Level

Reduce time from book to bill with a single source provider of all layer 1 infrastructure solutions needs in the white space. Cabinets, power distribution, hot and cold aisle containment, low-voltage connectivity, copper and fiber cable, and connectivity, thermal sealing, and grounding and bonding solutions that protect your critical connections.

Cable Routing Systems

Segregate, route, and protect fiber optic and high-performance copper cabling from distribution areas to equipment cabinets or racks.

Pages 12-13

Cabinets

Accelerate deployment with a next-generation cabinet with custom configurations to meet your network needs.

Pages 14-15

Power Distribution and Management

Monitor data center power by continuously scanning for electrical circuit overloads and environmental conditions that place critical IT equipment at risk.

Pages 16-18

Environmental Monitoring and Control

Manage risk and change with real-time data on the status of power, cooling, connectivity security, and environments to individual devices.

Page 19

Containment

Reduce cooling energy consumption by as much as 40% and optimize the separation of hot and cold air enabling higher per cabinet density, reclaiming 10% of existing cooling capacity.

Page 20-22

Optical Distribution Frame

Versatile front-access cabling system that provides the necessary protection for critical connections.

Pages 9-11

Fiber and Copper Connectivity

Comprehensive fiber optic and copper systems that support advanced bandwidth and mission-critical physical infrastructures that deliver high performance, reliability, and scalability.

Pages 21-23

Grounding and Bonding

Maintain system performance and protect personnel and equipment with high quality, visually verifiable connections, and dedicated grounding paths.

Page 18

Labeling and Identification

Improving productivity, accuracy, and workplace safety with innovative labeling and identification.

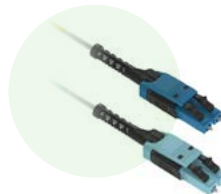
Pages 29-30





PanMPO™ Connectors

Easily convert between male and female gender, and between key-up and key-down polarity for a standards-compliant 10G or 40G/100G Ethernet installation.



Opti-Core® Uniboot Patch Cords

Provide interconnect and cross-connect of network applications in main distribution, horizontal distribution, and equipment distribution areas.



SmartZone™ G5 Security Handle

Intelligent access control to a rack or cabinet in a data center and with real-time physical status.



SmartZone™ G5 Power Distribution Units

Provide transparency to true power consumption and thermal conditions at the cabinet or individual outlet level.



Cable Management

Vertical and horizontal cable management, and rack solutions reduces the space required to route, manage, and protect high-cable capacities.



Thermal Accessories

Optimize data center airflow within cabinets to protect active equipment.



FlexCore™ Optical Distribution Frame

The FlexCore™ ODF is a versatile front-access cabling system that provides the necessary protection for critical connections.



RapidID™ Network Mapping System

RapidID Network Mapping System automates the labor-intensive and error-prone cable documentation process, resulting in a faster, easier way to place and trace cables and patch cords.

Meet-Me Room (MMR)

Meet-Me Rooms need to be designed to distribute data center traffic more cost-effectively and efficiently in a safe and secure environment. Distribution frames, splice enclosures, pathways, and fiber assemblies are the main components of the Meet-Me Room and are used to reliably transfer data from ISPs/Carriers to each tenant's cage.



FlexCore™ Optical Distribution Frame Solution

Discover the FlexCore™ ODF, empowering you to optimize floor space, reduce risks, and simplify moves, adds, and changes (MAC).

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HD Fusion Fiber Wall Mount Splice Enclosure

The Wall Mount Fiber Splice Enclosure houses, organizes, manages, and protects cable to cable fusion splice connections. It can accommodate individual or ribbon fibers. This enclosure features split doors and supports up to 3456 or 6912 ribbon fibers.

[Find out more here about the Wall Mount Splice Enclosure](#)



FiberRunner™ Cable Routing Solutions

The FiberRunner™ Cable Routing System ensures maximum network reliability and reduced cost of ownership.

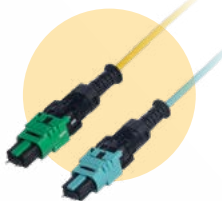
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Opti-Core™ Uniboot Patch Cords

Ideal for high density applications, the Uniboot fiber patch cord features a small 2mm unitary cable with a push-pull boot that provides easier access to insert/remove without disturbing adjacent circuits.

[Page 25](#)



PanMPO™ Fiber Assemblies

The only MPO products that offer the ability to quickly change polarity and gender without the need for tools. Includes a push-pull boot that enables easy access without disturbing adjacent circuits.

[Page 25](#)



RapidID™ Network Mapping System

RapidID is a software-enabled network mapping system that simplifies the ability to determine the location of every connected port. Works with all Panduit fiber patch cords and interconnects.

[Page 30](#)

Opti-Core™ Fiber Indoor-Outdoor Ribbon Cables

Learn more [here](#) on how you can optimize space, deploy faster, save costs, and improve on time



FlexCore™ Optical Distribution Frame

Optical distribution frames (ODF's) are an all-important network element at the heart of the fiber network. Representing <5% of a typical IT project investment, high density, performance, and quality are pivotal attributes for an ODF ensuring business continuity 24/7/365.

Offering the Ultimate in Flexibility, Manageability, Scalability, and Security

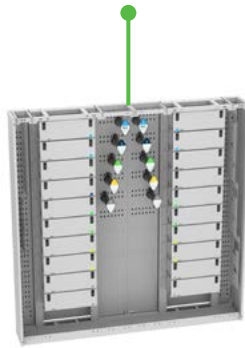
- Highly intuitive cable routing paths remove guesswork and prevents 'rip and replace' costs
- Innovative cable management and lockable vertical cable manager doors eliminate circuit risk and downtime
- Up to 3,168 fibers per frame when using standard 24 fiber cassettes
- Data center floor space can be reduced by 50%*
- Simplifies and reduces the time for moves, adds, and changes
- Multiple form factor (width) cassettes optimize rack space across wider applications
- Patch cords consolidated to a single length – freeing up capital locked in maintaining inventory
- Multi-layer security with lock capability available at both 4RU enclosure and ODF doors

Common Frame Arrangements

Single Cross Connect Frame, recommended patch cord length 4m



Double Cross Connect Frame, with end panels, recommended patch cord length 4m



Cross Connect, four frame line-up, with end panels and over-length storage (300mm wide intermediate VCM). Recommended patch cord length between two double frames is 10m



Double Cross Connect Back-to-Back, fully enclosed. Recommended patch cord length 4m



Interconnect or Splice Through frame with end panels

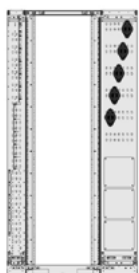
Optimal Locations to Implement include:

- ✓ Building Entry
- ✓ Meet-Me Room (MMR)
- ✓ Main Distribution Area (MDA)
- ✓ Intermediate Distributed Area (IDA)

The FlexCore™ Optical Distribution Frame can be installed in additional optimal locations.

*Assumes 4 double frames (2 double frames in a 'back-to-back' arrangement). Design conditions and configuration specifics apply.

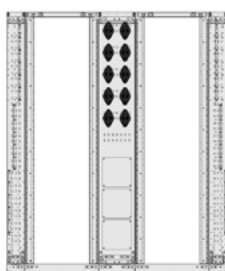
Step 1: Select a Frame



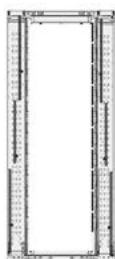
Single Frame
Cross Connect
(LH)



OR
*Assemble as
opposite hand
(RH)



Double Frame (Compact)
Cross Connect



Splice Through OR Interconnect

Description	QTY	Part Number*	Maximum Capacity**	Dimensions (mm) ^{††}
Frame 600mm	1 [†]	FDFF45GY	3168F per single frame	Height – 2133 (2159-2200 with leveling feet)
VCM 150mm	1 [†]	FDFVCM1545GY		
VCM 300mm	1 [†]	FDFVCM3045GY	132 × 24F (LC) Cassettes	Width – 1050
Spool Kit (x6)	1 [†]	FDUSP6	11 × 4RU Enclosures	Depth – 300
			12 Trays per 4RU Enclosure	
Frame 600mm	2	FDFF45GY	6336F per double frame	Height – 2133 (2159-2200 with leveling feet)
VCM 150mm	2	FDFVCM1545GY		
VCM 300mm	1	FDFVCM3045GY	132 × 24F (LC) Cassettes	Width – 1800
Spool Kit (x6)	2	FDUSP6	11 × 4RU Enclosures	Depth – 300
			12 Trays per 4RU Enclosure	
Frame 600mm	1	FDFF45GY	6336F Splice only – Ribbon	Height – 2133 (2159-2200 with leveling feet)
VCM 150mm	2	FDFVCM1545GY	3168F Splice only – shrink down (single fiber)	Width – 900
			3168F Interconnect (LC Cassette)	Depth – 300
			11 × 4RU Enclosures	
			12 Trays per 4RU Enclosure	

Frames are supplied with leveling feet and wall mount bracket.

150mm VCM illustrated is supplied with 4 x cable management plates

Refer to design guides for configuration specifics

VCM can be assembled for top (as illustrated) or bottom cable entry/exit.

[†]for a 2100mm wide double cross connect frame (where both LH + RH version is needed) double quantity shown

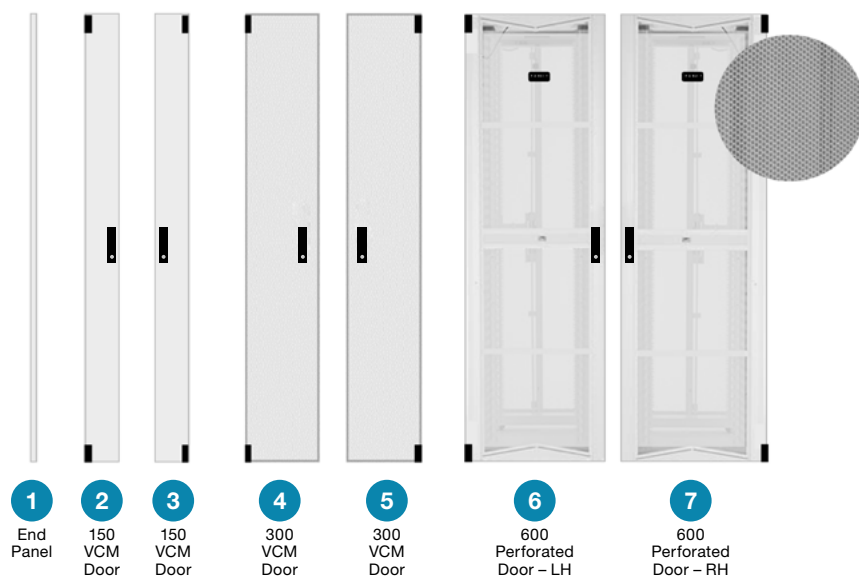
^{††}Width and depth stated excludes end panel(s) and door(s)

*Change "GY" to "BL" in part number for black.

**maximum fiber capacity (stated) applies to single, double and quad (quad = double frame placed back-to-back) frame arrangements in combination with 24F LC cassettes. If using a line-up of >2 frames side by side the maximum number of 4RU enclosure is 10 off (2880F per frame) to allow bottom patch cord pass-through (trough) to be used.

Step 2: Select a Surround

LH - Left Hinged
RH - Right Hinged

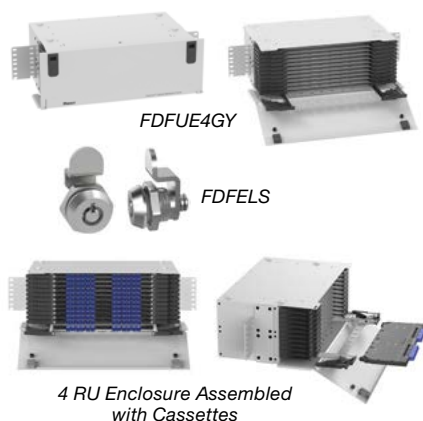


Ref.	Part Number**	Description
1	FDFEP45GY	*End Panel
2	FDUFD1545SLGY	150mm VCM Door LH
3	FDUFD1545SRGY	150mm VCM Door RH
4	FDUFD3045SLGY	300mm VCM Door LH
5	FDUFD3045SRGY	300mm VCM Door RH
6	FDUFD6045PLGY	600mm Perforated Door LH
7	FDUFD6045PRGY	600mm Perforated Door RH

*for multi-rack lineups an end panel is only required at the end of each row

**change "GY" to "BL" in part number for the part in black

Step 3: Select a FlexCore™ Enclosure



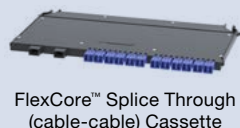
Part Number	Description
FDFUE4GY	ODF Front Access Universal Enclosure, 4RU, Gray
Change "GY" to "BL" in part number for black	12 x Slide out trays
FDFELS	Enclosure Locking Kit
	Standard, Keyed Alike
	Each it supplied with two locks

Additional Items to Order

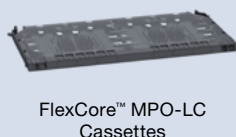
FlexCore™ Cassettes



FlexCore™ LC Splice Cassettes



FlexCore™ Splice Through (cable-cable) Cassette



FlexCore™ MPO-LC Cassettes



FlexCore™ Tethered Cassette

FlexCore™ Accessories



Patch Cords

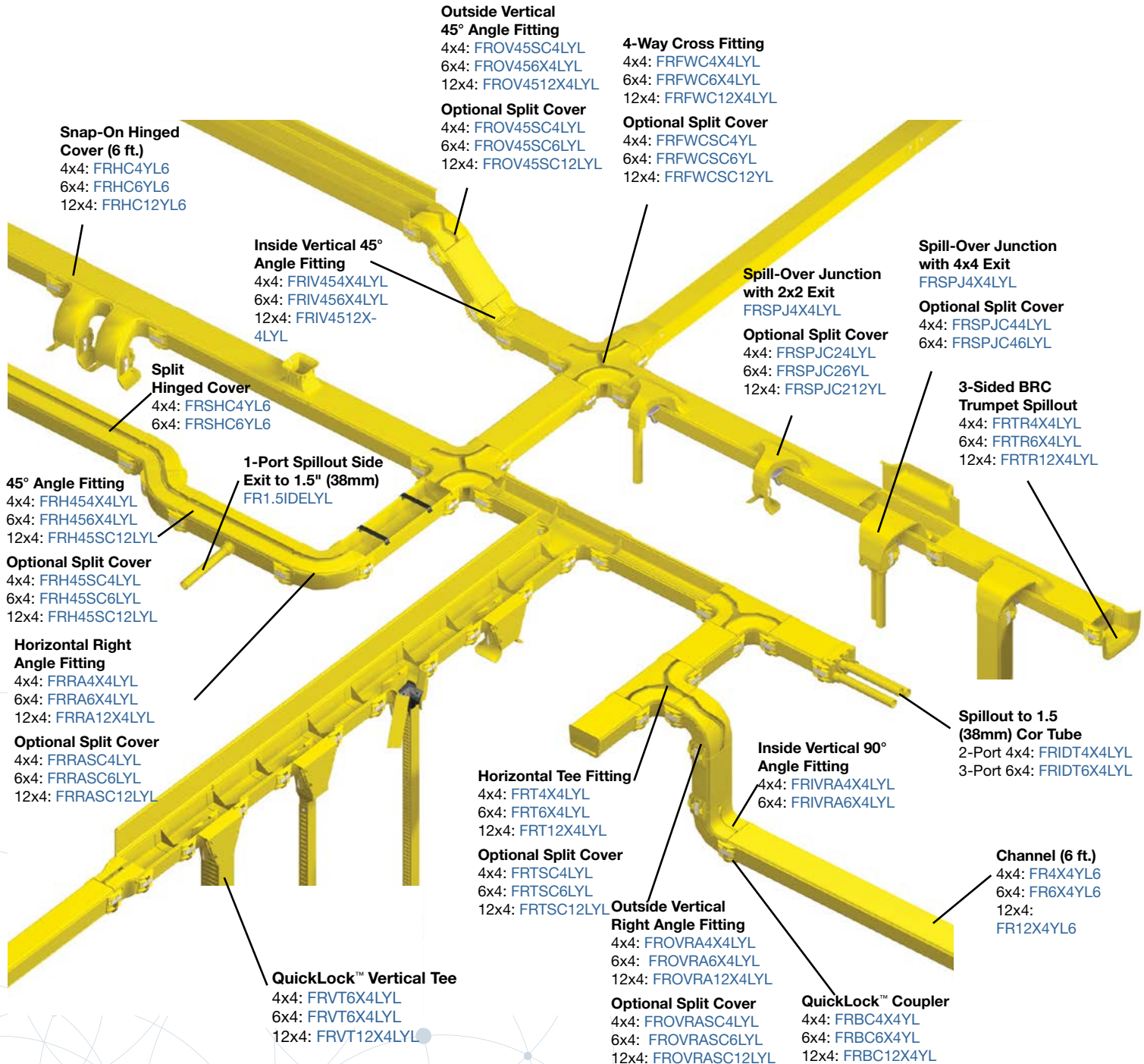


For more information visit
www.panduit.com/flexcore-odf

Cable Routing Systems

FiberRunner™ Pathway Solutions

The FiberRunner™ Cable Routing System ensures maximum network reliability and reduced cost of ownership. Robust, highly engineered components with integral bend radius control surfaces can be configured to meet virtually any network application to provide optimum cable protection and assure network performance. Fast and easy to deploy, this scalable cable routing solution reduces installation cost and speeds implementation of new services.



For other colors, replace YL (Yellow) with BL (Black).

FiberRunner™ Accessories



Adjustable Ladder QuickLock™ Bracket
4x4: [FR6ALB](#)
6x4: [FR6ALB](#)
12x4: [FR12ALB](#)



Corrugated Loom Tube Slit Wall
1.5" (38mm) x 10' (3.0m)
Yellow: [CLT150F-D4](#)
Black: [CLT150F-X20](#)



New Threaded Rod QuickLock™ Bracket
4x4: [FR6TRBN58](#)
6x4: [FR6TRBN58](#)
12x4: [FR12TRBN58](#)



6x4 FiberRunner™ to 4x4 Fiber-Duct™ with Cover
[FRRF64YL](#)



2-Piece Ladder Rack Bracket 5/8" Threaded Rod
[F2PCLB58](#)



12x4 to 6x4 FiberRunner™ Reducer Fitting
[FRRF126LSYL](#)
Optional Split Cover
[FRRF126SCLYL](#)



Ladder Rack QuickLock™ Bracket
4x4: [FR6LRB](#)
6x4: [FR6ALB](#)



6x4 FiberRunner™ to 4x4 Fiber-Duct™ with Cover
[FRRF64YL](#)
Optional Split Cover
[FRRF6FR4SCLYL](#)



Adjustable Cabinet QuickLock™ Bracket
4x4: [FR6ACAB](#)
6x4: [FR6ACAB](#)
12x4: [FR12ACAB](#)



6x4/4x4 2-Port Spillout
[FIDT4X4LBL](#)



Existing Threaded Rod QuickLock™ Bracket
1/2" Threaded
4x4: [FR6TRBE12](#)
6x4: [FR6TRBE12](#)
5/8" Threaded
4x4: [FR6TRBE58](#)
6x4: [FR6TRBE58](#)
12x4: [FR12TRBE58](#)



2x2 1-Port Spillout
[FIDT2X2LYL](#)



FiberRunner™ Side Clamps
[FRQMC-X](#)

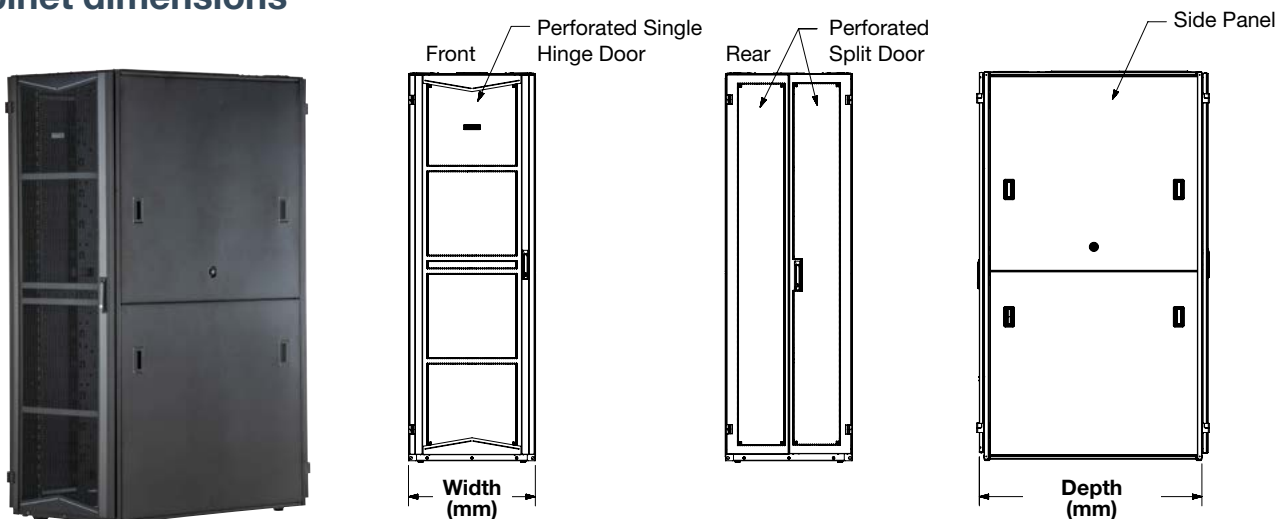


ADC Transition Fittings
4x4 to 4x4: [FRADC4X4BL](#)
6x4 to 6x4: [FRADC6X4YL](#)
12x4 to 12x4: [FRADC12X4BL](#)

Next-generation cabinet with custom configurations to meet your network needs.

- Easy to adjust E-rails, PDU installation and accessories to reduce installation time
- Solid construction with best-in-class load rating for secure installation
- Choice of key lock, 3-digit combo or HID electronic and/or keypad lock
- Choice of tool-less fingers, vertical cable manger or front-to-back cable manager
- Turnkey deployment with pre-configured PDU, access control and environmental monitoring
- Universal design for server or network applications
- 80% perforated doors for increasing power density in newer deployments
- Configuration platform to create cabinet to meet your specification and requirements

Cabinet dimensions



Ordering information

Part Numbers	Width (mm)	Rack Units (RU)	Depth (mm)	Side Panels	Color	Top Cab Type	Doors	PDU Mounting Bracket	Cable Management Fingers	Vertical Cable Management Bracket	Casters	PDU Included
XG64529BS001F	600	45	1200	None	Black	Brush Seal	None	Both Sides	One Short Set	Yes	Yes	No
XG64529BS001E				Included			Included					
XG64522BS001E				Included			Included					
XG64829BS001F				None			None					
XG64829BS001E		Included		Included								
XG64822BS001E		Included		Included								
XG64829WS001F		None		None								
XG64829WS001E		Included		Included								
XG64822WS001E		Included		Included								
XG65129BS001F		51		None	Black		None		None			
XG65129BS001E							Included		Included			
XG65122BS001E							None		None			
XG65129WS001F							Included		Included			
XG65129WS001E				White	None		None					
XG65122WS001E					Included		Included					
XG84829BS001G					Black		None		None			
XG84829BS001H	Included		Included									
XG84822BS001H	None	None										
XG84829WS001G	Included	Included										
XG84829WS001H	White	None	None									
XG84822WS001H		Included	Included									
XG85129BS001G		Black	None	None								
XG85129BS001H			Included	Included								
XG85122BS001H	Included		Included									

More more information about the FlexFusion™ Cabinet offering visit www.panduit.com/flexfusion.

To configure FlexFusion™ Cabinets with additional design options, visit www.panduit.com/configure-cabinet.

FlexFusion™ Accessories

Cable Management Fingers



Part Number	RU	Length (In.)	Color
XG-FML45B	42 – 45	6	Black
XG-FML45W			White
XG-FML48B	48		Black
XG-FML48W			White
XG-FMS45B	42 – 45	4	Black
XG-FMS45W			White

PDU Mounting Brackets



Part Number	Description	Color
XG-PBRB	FlexFusion™ PDU Mounting Bracket	Black
XG-PBRW		White

Vertical Cable Management Panels



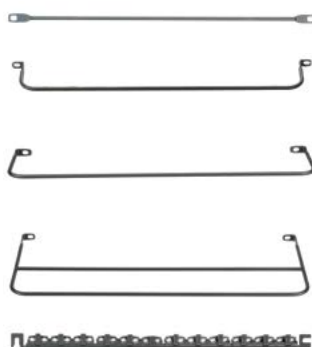
Part Number	RU	Color
XG-VCM42B	42	Black
XG-VCM42W		White
XG-VCM45B	45	Black
XG-VCM45W		White
XG-VCM48B	48	Black
XG-VCM48W		White

Thermal Sealing Accessories



Part Number	Description	Color
TLBP1S-V	1 RU tool-less blanking panel, square hole 19" (483mm) width for 3/8" cage nut holes (may be used with or without cage nuts installed).	Black
TLBP2S-V	2 RU tool-less blanking panel, square hole 19" (483mm) width for 3/8" cage nut holes (may be used with or without cage nuts installed).	
FLBSIM-51	Full-length blanking shade blanks out 1 – 51 consecutive rack units on standard 19" (482.6mm) wide vertical mounting rails.	
BFS100X2000	Adhesive-backed foam strips, 1/16" (1.6mm) closed-cell vinyl foam, perforated to create multiples of 1.00 inch x 20.00 inch strips.	

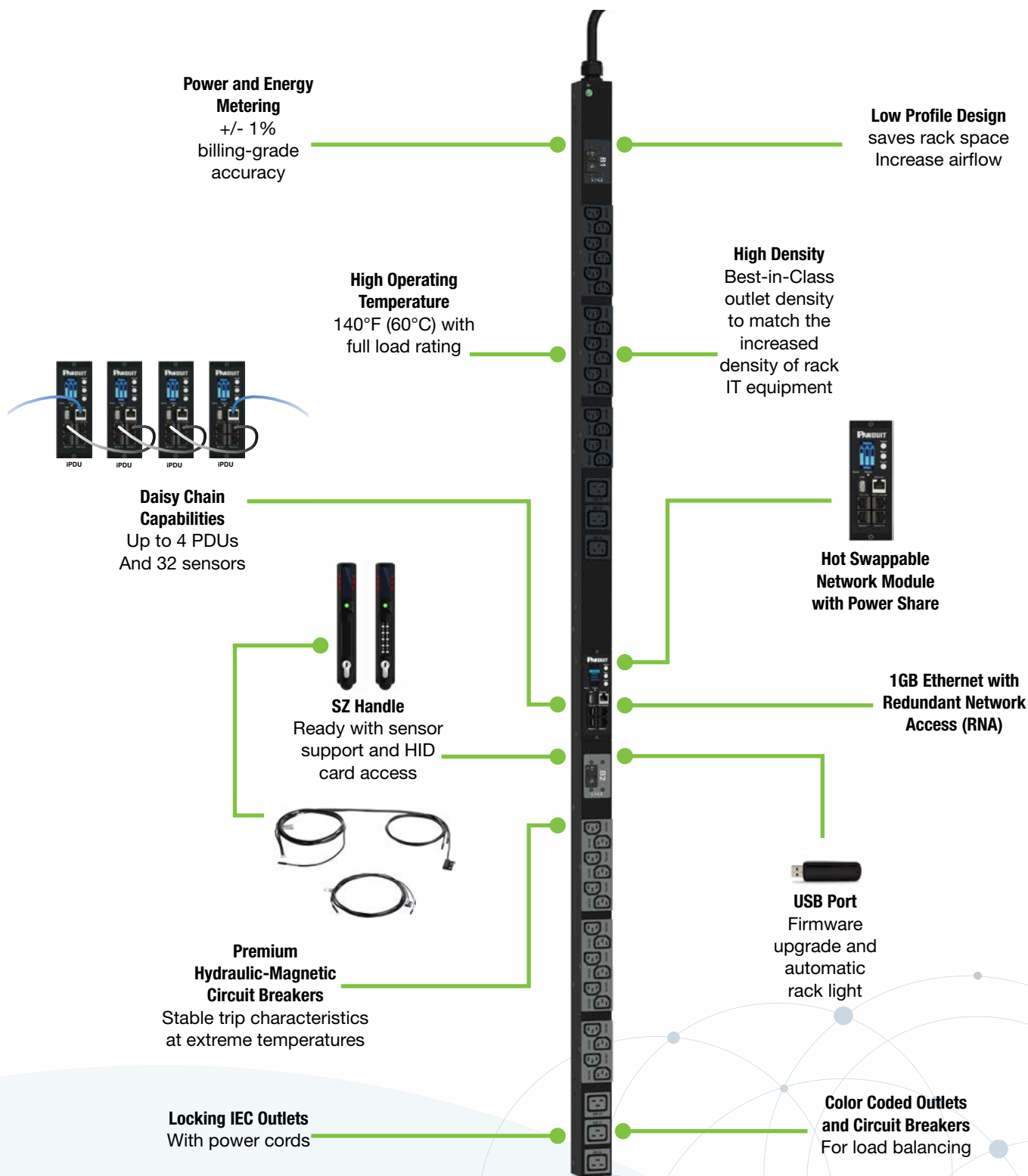
Strain Relief Bars



Part Number	Description	Rack Units
SRBS19BL-X	Strain relief bar, straight; to support and manage cable.	Black
SRB19BLY	The strain relief bar is a metal bar that extends 2.8 inches from the rear of a rack and provides support to cables exiting the back of a patch panel. Optional quick release brackets enable strain relief bars to be removed and re-installed without the use of tools.	
SRB19D5BL	The strain relief bar is a metal bar that extends 4.5 inches from the rear of a rack and provides support to cables exiting the back of a patch panel. Inward mounting tabs provides a wider opening. Optional quick release brackets enable strain relief bars to be removed and re-installed without the use of tools.	
SRB19D7BL	The strain relief bar is a metal bar that extends 7.6 inches from the rear of a rack. An added cross bar provides support to heavier cables exiting the back of a patch panel. Inward mounting tabs provide a wider opening. Optional quick release brackets enable strain relief bars to be removed and re-installed without the use of tools.	
SRBWYCY	Strain relief bar with integrated adjustable clips; to support and manage up to 24 cables.	

SmartZone™ G5 Intelligent PDUs

The SmartZone™ G5 PDUs monitor the data center power and the environment by continuously scanning for electrical circuit overloads and physical environmental conditions that place critical IT equipment at risk. By monitoring physical access points, the PDUs increase cabinet security to protect your systems and data. With some of the highest outlet densities and the smallest form factors available in the market, your cabinets will be functioning at their most resourceful state.



Ordering information

Part Number	Input Current Per Phase	Form Factor	Input Plug Type	Apparent Power (kVA)	Outlet Count	Outlet Configuration	Length (mm)	Width (mm)	Depth (mm) at Outlet Position	Std. Pkg. Qty.
Basic Power Distribution Units (Non-Network)										
200-240/346-415 VAC, 3-Phase										
P06B37M	16	1U	IEC 60309 3P+N+E 6h 16A	11.0	6	(6)C19	44.0	443.5	269.8	1
P06B38M	32	1U	IEC 60309 3P+N+E 6h 32A	22.0	6	(6)C19	44.0	443.5	269.8	1
P42B44M	16	0U MID	IEC 60309 3P+N+E 6h 16A	11.0	42	(24)C13, (6)C19	1490.0	85.0	53.0	1
P30B13M	16	0U MID	IEC 60309 3P+N+E 6h 16A	11.0	30	(36)C13, (6)C19	1490.0	52.0	53.0	1
P24B12M	32	0U FULL	IEC 60309 3P+N+E 6h 32A	22.0	24	(12)C13, (12)C19	1750.0	52.0	53.0	1
P42B11M	32	0U FULL	IEC 60309 3P+N+E 6h 32A	22.0	42	(30)C13, (12)C19	1750.0	52.0	53.0	1
Monitored Input (MI) Power Distribution Units										
200-240/346-415 VAC, 3-Phase										
P06D38M	16	1U	IEC 60309 3P+N+E 6h	11.0	6	(6)C19	44.0	443.5	269.8	1
P06D39M	32	1U	IEC 60309 3P+N+E 6h	22.0	6	(6)C19	44.0	443.5	269.8	1
P30D05M	16	0U MID	IEC 60309 3P+N+E 6h	11.0	30	(24)C13, (6)C19	1490.0	52.0	53.0	1
P42D42M	16	0U FULL	IEC 60309 3P+N+E 6h	11.0	42	(36)C13, (6)C19	1750.0	52.0	53.0	1
P24D43M	32	0U FULL	IEC 60309 3P+N+E 6h	22.0	24	(12)C13, (12)C19	1750.0	52.0	53.0	1
P42D04M	32	0U FULL	IEC 60309 3P+N+E 6h	22.0	42	(30)C13, (12)C19	1750.0	52.2	53.0	1
Monitored Switch (MS) Power Distribution Units										
200-240/346-415VAC, 3-Phase										
P24E02M	16	0U FULL	IEC 60309 3P+N+E	11.0	24	(18)C13, (6)C19	1750.0	52.0	53.0	1
P36E08M	16	0U FULL	IEC 60309 3P+N+E 6h	11.0	36	(30)C13, (6)C19	1750.0	52.0	53.0	1
P24E03M	32	0U FULL	IEC 60309 3P+N+E 6h	22.0	24	(12)C13, (12)C19	1750.0	52.0	53.0	1
P36E09M	32	0U FULL Wide	IEC 60309 3P+N+E 6h	22.0	36	(24)C13, (12)C19	1750.0	85.0	53.0	1
Monitored Per Outlet (MPO) Power Distribution Units										
415VAC, 3-Phase										
P36F12M	16	0U FULL	IEC 60309 3P+N+E 6h	11.0	36	(30)C13, (6)C19	1750.0	52.0	53.0	1
P24F08M	32	0U FULL	IEC 60309 3P+N+E 6h	22.0	24	(12)C13, (12)C19	1750.0	52.0	53.0	1
P36F13M	32	0U FULL - wide	IEC 60309 3P+N+E 6h	22.0	36	(24)C13, (12)C19	1750.0	85.0	53.0	1
Monitored and Switched Per Outlet (MSPO) Power Distribution Units										
200-240/346-415 VAC, 3-Phase										
P36G15M	16	0U FULL	IEC 60309 3P+N+E 6h	11.0	36	(30)C13, (6)C19	1750.0	52.0	53.0	1
P24G08M	32	0U FULL	IEC 60309 3P+N+E 6h	22.0	24	(12)C13, (12)C19	1750.0	52.0	53.0	1
P36G16M	32	0U FULL Wide	IEC 60309 3P+N+E 6h	22.0	36	(24)C13, (12)C19	1750.0	85.0	53.0	1

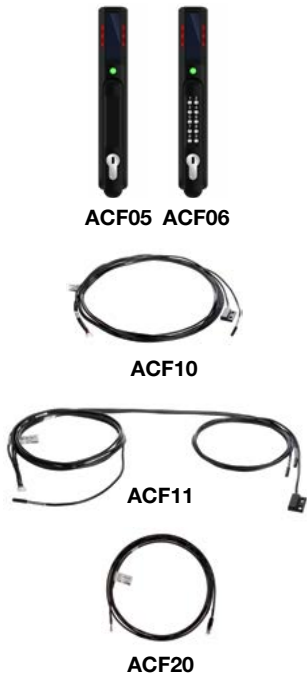
For the complete offering of power distribution units, reference the SmartZone™ iPDU Selection Guide found at www.panduit.com/pdu.
To configure your own power distribution unit part number, visit www.panduit.com/configure-pdu.

Locking Power Cords



Part Number	Description	Length (Ft.)
LPCA11-X	Dual Locking Power Cord, IEC C14 to IEC C13, 10 Pack, Black.	2
LPCA12-X		4
LPCA13-X		6
LPCA14-X		8
LPCB11-X	Dual Locking Power Cord, IEC C20 to IEC C19, 10 Pack, Black.	2
LPCB12-X		4
LPCB13-X		6
LPCB14-X		8

SmartZone™ G5 Accessories



Part Number	Description
ACF05	SmartZone™ Security Handle with dual frequency (125 kHz and 13.56 MHz) card reader and integral humidity sensor. All handles feature the base tumbler (TU020X) pre-installed at the factory.
ACF06	SmartZone™ Security Handle with dual frequency (125 kHz and 13.56 MHz) card reader, integral humidity sensor, and keypad for dual authentication. All handles feature the base tumbler (TU020X) pre-installed at the factory.
ACF10	SmartZone™ Security Handle Temperature and Door Sensor. Connects only to ACF05 and ACF06.
ACF11	SmartZone™ Security Handle (3) Temperature and Door Sensor. Connects only to ACF05 and ACF06.
ACF20	SmartZone™ Security Handle to Panduit G5 iPDU harness (JST to RJ45 male).
MA030	SmartZone™ Security Handle Patch Cord Extension (RJ45 female to RJ45 male).
MA031	SmartZone™ G5 iPDU Power Share Patch Cord (RJ45 male to RJ45 male).
EC001	SmartZone™ G5 Three Temperature and One Humidity Sensor for cold aisle applications, for use with PDU controller only.
EA001	SmartZone™ G5 Temperature Sensor for hot aisle applications, for use with PDU controller only.

Grounding and Bonding Solutions

Grounding and Bonding Equipment Bonding Jumper Kit



Part Number	MCBN Conductor Size AWG	Description
RGCBNJ660P22	HTCT2-2.1	#6 AWG (16mm ²) jumper; 60" (1.52m) length; 45° bent lug on grounding strip side; provided with .16 oz. (5cc) of antioxidant, two each #12-24 x 1/2", M6 x 12mm, #10-32 x 1/2" and M5 x 12mm thread-forming screws and a copper compression HTAP* for connecting to the MCBN.

Grounding Busbar



Part Number	Description
Grounding Busbar Kits for Threaded Rail Fasteners	
RGRB19U	Grounding busbar; 19" (483mm) length; tin-plated; 20 holes arranged for flexibility in mounting with 20 #12-24 x 1/2" hex head screws installed; mounting hole sets have 5/8" (15.9mm) spacing; provided with two each #12-24 x 1/2", M6 x 12mm thread-forming screws, and two #12 flat washers for mounting.

Grounding Strip



Part Number	Description
RGS134-1Y	Grounding strip; 78.65" (2m) length; .67" (17mm) width; .05" (1.27mm) thickness; provided with .16 oz. (5cc) of antioxidant, one grounding sticker and three each #12-24 x 1/2" and M6 x 12mm thread-forming screws.

Green Bonding Cage Nut Kit



Part Number	Description
CNBK	Green bonding cage nut, includes 50 #12-24 bonding cage nuts (.06 – .11 thick panel) and 50 #12-24 x 1/2" bonding screws with #2 Phillips/slotted combo hex head (use 5/16" or 8mm socket).

Real-time Information for Complete Data Center Infrastructure Management

SmartZone™ Cloud Software is Panduit's next generation DCIM solution. A true cloud-native platform, built from the ground up to take advantage of cloud flexibility and scalability as well as enhanced manageability, security, and operations ease of use and efficiency to manage Data Center, Enterprise, and Edge Infrastructures. Supports the management, monitoring, and alerting for power, cooling, environmental, IT, and connectivity.



APPLICATION



ASSET
TRACKING



POWER
ACCESS



CABINET
ACCESS



ENVIRONMENTAL
MONITORING

Although SmartZone™ Cloud is agnostic and supports multiple vendor IT and facilities devices, it tightly aligns with Panduit SmartZone™ G5 Intelligent PDU and SmartZone™ UPS product lines, to visualize rack-level power, environment, and cabinet physical security access, enabling a single pane of glass to manage the entire data center infrastructure resources. In addition to floorplan layout and rack elevation, power path visualization enables operators to identify a single point of failure, reduce overprovisioning, and assess risk.

SmartZone™ Cloud is a self-served solution which eliminates the need for professional services and with our open REST APIs that have all product functionality documented, customers can easily integrate with existing applications such as CMDB, ITSM, BMS, and ticketing system. This ensures a solution that is quick to deploy, intuitive to use, and simple to maintain.

Part Number	Description
SZC-ITIA1Y	1-year subscription per IT infrastructure asset (IT rack, server, storage, network, etc.)
SZC-PEIA1Y	1-year subscription per power and environmental infrastructure asset (UPS, RPP/PDU, rack PDU, cooling, etc.).

For more information visit
www.panduit.com/dcim

NetContain™ Universal Aisle Containment Solutions

The Net-Contain™ Universal Aisle Containment System allows users to reclaim underutilized cooling capacity, reduce energy expense, and reduce OpEx by retrofitting their existing data center with a versatile containment system. The system includes an independent support structure, sliding doors, vertical blanking panels, and roof structure. This flexible offering can be configured in Hot Aisle and Cold Aisle containment and allows the addition of cabinets of varying sizes and design as needed, reducing deployment time and capital investment.

Reclaim Cooling Capacity:

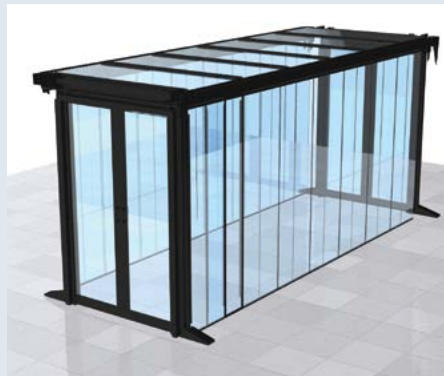
Retrofitting the Net-Contain™ Universal Aisle Containment System into your existing data center allows you to optimize the separation of hot and cold air enabling higher per cabinet density, reclaiming 10% of existing cooling capacity.

Reduce Operational Expense

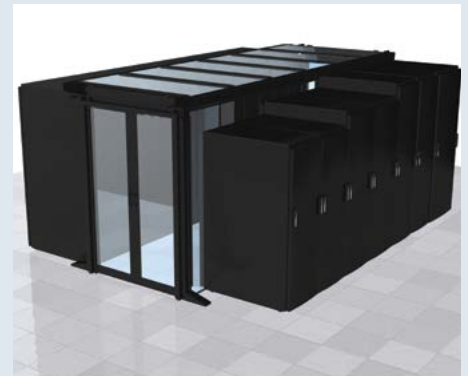
Containment reduces cooling energy consumption by as much as 40%.

Reduce CapEX:

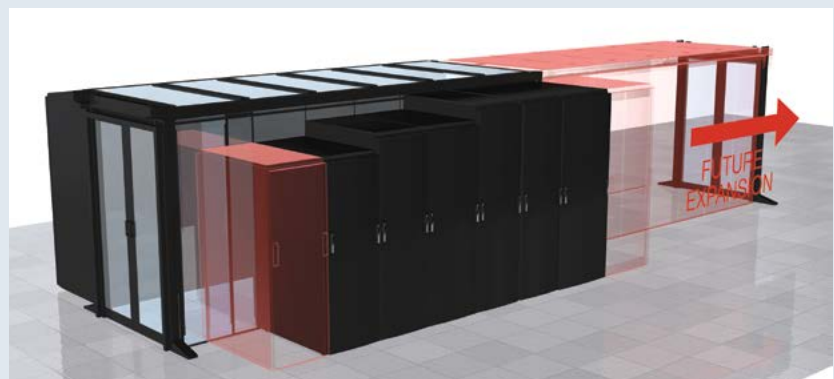
The Net-Contain™ Universal Aisle Containment System provides you with the flexibility to build a containment system and then add cabinets of varying sizes and design as your needs dictate, reducing the time and capital investment.



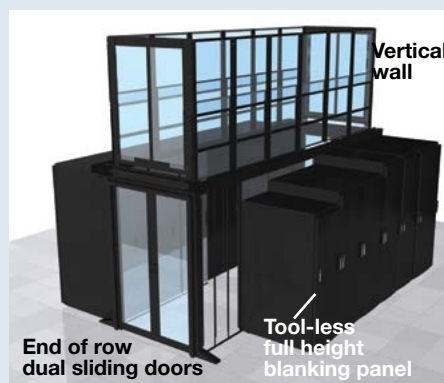
Day 1 – Containment built without any cabinets.



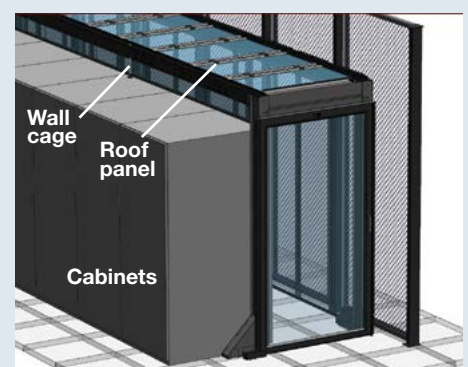
Day 2 – Add cabinets, as your needs dictate enables fast implementation.



Expansion



Vertical wall containment typically used for Passive Hot Aisle Containment or Ceiling Discharge Cold Aisle Containment.



Last row compatible

Let us customize to your containment configuration,
contact your Panduit Sales Representative.

Net-Contain™ Universal Containment System

End of Row Frames

- End of row frames form the Universal Aisle Containment structure at each end of a containment pod.



Part Number	Aisle Width Ft. (mm)	Frame Height	Color
CUEFRT8W04**	4 (1200)	42 RU/45 RU	**Add B1 for Black **Add W1 for White
CUEFRT8W06**			
CUEFRT9W04**	6 (1800)	48 RU/52 RU	
CUEFRT9W06**			

Wall Beams



CUWBPS08ST02B1

Part Number	Roof Containment	Vertical Wall Containment	Length mm	Description	UAC/USRC
CUWBPS06ST02**	X	X	600	2 Piece	UAC/USRC
CUWBPS07ST02**			700		
CUWBPS08ST02**			800		
CUWBPS24ST02**			2400		

**B1 = Black, W1 = White

Rigid Roof Sections



Part Number	Dimensions (Panel Length x Aisle Width)	Color
CURFS06F04HB**	600mm x 1200mm	**Add B1 for Black **Add W1 for White
CURFS06F06HB**	600mm x 1800mm	
CURFS07F04HB**	700mm x 1200mm	
CURFS07F06HB**	700mm x 1800mm	
CURFS08F04HB**	800mm x 1200mm	
CURFS08F06HB**	800mm x 1800mm	



Part Number	Roof Containment	Vertical Wall Containment	Aisle Width mm	Description	Compatible With CAC/HAC
CUD1SD**	X	X	1200/1800	Double Sliding Door	CAC/HAC
CUD2SD**				Double Sliding Door, Packaged as a Pair	

Part Number	Height Range In. (mm)	Aisle Width mm	Color
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Vertical Wall (Mounted Above End of Row Frame)



C2HACERI1626**	16-26 (406-660)	1200	**Add B1 for Black **Add W1 for White
C2HACERI2638**	26-38 (660-965)		
C2HACERI3866**	38-66 (965-1676)		

Part Number	Description	Color
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Vertical Wall Brace (Mounted Onto UAC Frame)



CUVWB12S12ST**	Vertical wall brace is mounted across the aisle between wall beams to provide extra stability in aisle containment.	**Add B1 for Black **Add W1 for White
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Part Number	Size	Color
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Vertical Wall Adapter

- Vertical wall adapter used to mount Vertical Walls to UAC frame in aisle containment.



CUVWA06S06ST**	600mm Adapter for 1200mm Aisle Width	**Add B1 for Black **Add W1 for White
CUVWA07S07ST**	700mm Adapter for 1200mm Aisle Width	
CUVWA08S08ST**	800mm Adapter for 1200mm Aisle Width	

Net-Contain™ Universal Containment System



Part Number	Panel Height	Color
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Full Height Blanking Panels

- Full blanking panel used to fill gap in containment where cabinets have not been deployed.

CUFBPR4206HB**	42 RU	**Add B1 for Black **Add W1 for White
CUFBPR4506HB**	45 RU	
CUFBPR4806HB**	48 RU	
CUFBPR5206HB**	52 RU	



Part Number	Description
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Top of Cabinet Blanking Panel

CUTBPR0610HBN1	Top of cabinet blanking panel used to fill gaps above cabinets; needed when cabinet height is less than UAC frame size.
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Part Number	Height Range In. (mm)	Width mm	Color
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Vertical Wall (Mounted Onto UAC Frame)

- Adjustable vertical wall mounted onto UAC frame to seal gap up to ceiling in aisle containment.

C2HAC06I1626**	16-26 (406-660)	600	**Add B1 for Black **Add W1 for White
C2HAC06I2638**	26-38 (660-965)		
C2HAC06I3866**	38-66 (965-1676)		
C2HAC07I1626**	16-26 (406-660)	700	
C2HAC07I2638**	26-38 (660-965)		
C2HAC07I3866**	38-66 (965-1676)		
C2HAC08I1626**	16-26 (406-660)	800	
C2HAC08I2638**	26-38 (660-965)		
C2HAC08I3866**	38-66 (965-1676)		



CUEORF04DPB1

Part Number	Roof Containment	Vertical Wall Containment	Aisle Width mm	Cabinet Width mm	UAC/USRC
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End of Row Kits for Drop Away Panels

CUEORF04DP**	X	X	1200	X	UAC
CUEORF06DP**			1800		

**B1 = Black, W1 = White



Part Number	Roof Containment	Vertical Wall Containment	Row Width mm	Cabinet Width mm	UAC/USRC
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Drop Away Panels

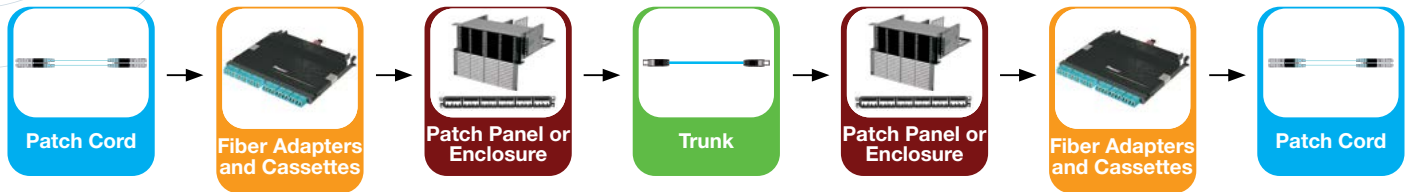
CUCGF04DP**	X	-	1200	X	UAC
CUCGF06DP**			1800		

**B1 = Black, W1 = White

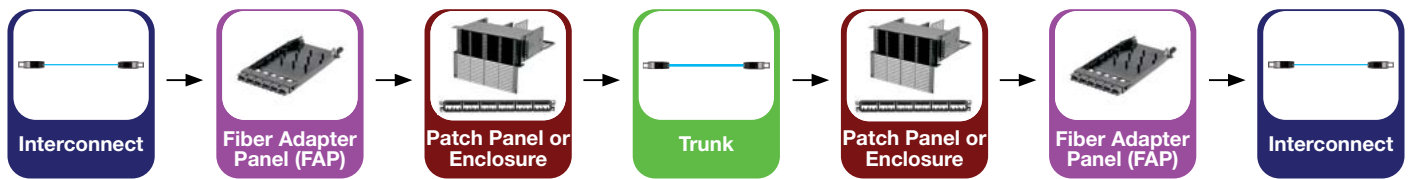
Fiber Connectivity

1. Chose your connectivity application solution (A or B below).
2. Build your chosen solution from components on the following pages.

A. Duplex Example (10G-10G), 40G BiDi, 4, 8, 16, 32G Fibre Channel SAN App



B. Parallel to Duplex Example (40G-10G), (100G-10G)



Fiber Adapters and Cassettes

Mini-Com™ Duplex LC Adapter Modules



Part Number	Adapter Type	Adapter Color	Module Color
CMDSAQLCZBL	Multimode Duplex LC	Aqua	Black
CMDSLCZBU	Singlemode Duplex LC	Blue	Blue

QuickNet™ SFQ MPO Fiber Adapter Panels



Part Number	Polarity	Color
FQMAP66CG	Method B, Key-Up/Key-Up	Charcoal Grey
FQMAP65BL	Method A, Key-Up/Key-Down	Black

QuickNet™ SFQ Universal Fiber Cassettes, 12 fiber, 6 Blue LC Adapters



Part Number	Fiber Type	Performance
FQZO-12-10U	OM4	Optimized
FQ9N-12-10U	OS2	Standard

HD Flex™ High Density Fiber Cassettes



CASSETTES



FAP

Part Number	Type	Connectors	Fiber Type	Polarity
FHC9N-12-10U	Cassette	1 MPO-6 Duplex LC	OS2	Standard IL, Universal
FHS9N-12-10N		6-port LC Duplex Splice/No Pigtailed	OS2	N/A
FHS9N-12-10P		6-port LC Duplex Splice/12 Pigtailed	OS2	Standard IL
FHCZO-12-10U		1 MPO-6 Duplex LC	OM4	Optimized IL, Universal
FHSXN-12-10N		6-port LC Duplex Splice/No Pigtailed	OM3	N/A
FHSZO-12-10P		6-port LC Duplex Splice/12 Pigtailed	OM4	Optimized IL
FHMP-6-ABL	FAP	6-port MPO	N/A	Type A (Key Up, Key Down)

Patch Panels



Part Number	Description	No. Ports	No. RU
Mini-Com™ Modular Patch Panels			
CPPL24WBLY	The Mini-Com™ Faceplate Modular Patch Panel accepts individual Mini-Com™ Modules, offers front access, and includes label pockets for easy identification.	24	1
CPPL48WBLY		48	2
CPP48HDEWBL	The Mini-Com™ High Density Modular Patch Panel accepts individual Mini-Com™ Modules, is flush mount and can be identified with adhesive labels.	48	1
QuickNet™ Patch Panels			
QPP24BL	The QuickNet™ Patch Panel accepts QuickNet™ Pre-Terminated Cassettes and Patch Panel Adapters and mount to standard EIA 19" racks or 23" racks with optional extender brackets.	24	1
QPP48HDBL		48	1
QuickNet™ Patch Panel Accessories			
FQCBRUA	QuickNet™ Zero RU Bracket accepts up to two fiber QuickNet™ SFQ Cassettes or up to two QuickNet™ Pre-Terminated Copper Cassettes without occupying RU space. Mounts to any EIA-310-D compliant rack rail.	—	—
QPPBBL	QuickNet™ Patch Panel Blank promotes proper airflow and cooling throughout data centers.		
QPPABL	QuickNet™ Adapter accepts up to six Mini-Com™ Modules for unshielded, fiber optic, and audio/visual applications.		

HD Flex™ High Density Fiber Enclosures



FLEX1U06

Part Number	Cassettes/FAP Capacity	Cassette Type	Rack Units (RU)	Max Fiber Capacity
FLEX1U06	12	6 Port	1	144
FLEX2U06	24		2	288
FLEX4U06	48		4	576

HD Flex™ High Density Fiber Accessories



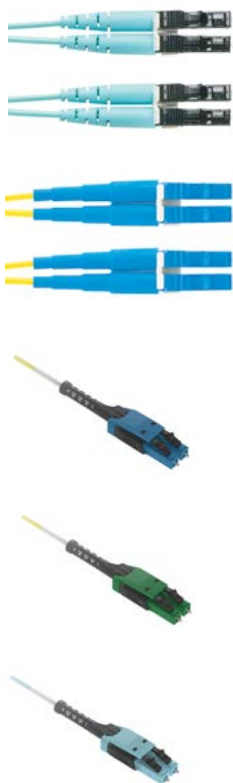
FLEX-PLATE1U



FLEX-CM12S

Part Number	Description
FLEX-PLATE1U	HD Flex™ Enclosure Trunk Slack Plate – 1 RU.
FLEX-PLATE4U	HD Flex™ Enclosure Trunk Slack Plate – 4 RU.
FLEX-CM12S	HD Flex™ Universal Rear Cable Manager, 12-position transition managers with a screw mount bracket.
FLEX-CM18S	HD Flex™ Universal Rear Cable Manager, 18-position transition managers with a screw mount bracket.

Fiber Patch Cords



Part Number	Fiber Type	Fiber Count	Cable Type (mm)	Jacket Type	Connectors	Polarity	Length (m)
Fiber Patch Cords LC-LC Duplex							
FZ2ELLNLNSNM001	OM4	2	1.6	LSZH	LC Duplex to LC Duplex	Standard IL	1
FZ2ELLNLNSNM002							2
FZ2ELLNLNSNM003							3
FZ2ELLNLNSNM005							5
F92ELLNLNSNM001	OS2	2	1.6		LC Duplex to LC Duplex	Standard IL	1
F92ELLNLNSNM002							2
F92ELLNLNSNM003							3
F92ELLNLNSNM005							5
Fiber Patch Cords LC-LC (Uniboot)							
F92RLU1U1ONM004	OS2	2	2	LSZH	LC-LC (Uniboot)	Optimized IL	4
F92RLU1U1ONM010					Optimized IL	10	
F92RLU2U2ONM004					LC APC-LC APC (Uniboot)	Optimized IL	4
F92RLU2U2ONM010					Optimized IL	10	
FZ2RLU1U1ONM004	OM4	2	2		LC-LC (Uniboot)	Optimized IL	4
FZ2RLU1U1NNM004	OM4+					Ultra IL	4
FS2RLU1U1NNM004						Ultra IL	4
FZ2RLU1U1ONM010	OM4					Optimized IL	10
FZ2RLU1U1NNM010	OM4+					Ultra IL	10
FS2RLU1U1NNM010						Ultra IL	10

To configure your own fiber patch cords, visit www.panduit.com/configure-fiber-patch-cord.

Fiber Trunk Assemblies



Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (m)	
FYZTB77Y001M030*	OM3	12	Euro-Class B2ca	PanMPO™ Female to PanMPO™ Female with 1m breakouts, pulling eye end A	Method B, Optimized IL	30	
FYZUB77Y001M030*		24					
FY9TB77B001M030*	OS2	12		PanMPO™ Female to PanMPO™ Female with 1m breakouts, pulling eye end A	Method B, Standard IL		
FY9UB77B001M030*		24					

*The last 3 digits indicate length. Fiber trunks are available in lengths 005 to 999 meters.

To configure your own fiber trunk assemblies, visit www.panduit.com/configure-fiber-trunk.

For additional fiber application solutions and components, reference the [Data Center Connectivity Guide FBCB49--SA-ENG](#).

Fiber Interconnects



Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (m)
FRZTL77Y001M001	OM4	12	LSZH	PanMPO™ Female to PanMPO™ Female	Method B Optimized IL	1
FRZTL77Y001M002						2
FRZTL77Y001M003						3
FRZTL77Y001M005						5
FR9TL77B001M001	OS1/2	12		PanMPO™ Female to PanMPO™ Female	Method B Standard IL	1
FR9TL77B001M002						2
FR9TL77B001M003						3
FR9TL77B001M005						5

High Count Ribbon Fiber Optic Cable



Part Number	Cable Construction	EuroClass	Available Fiber Types	Available Fiber Counts
High Count Ribbon Fiber Cables				
FFDCBF144-14F	Indoor Distribution, LSZH CPR, Flat Ribbon, FT	B2ca-s1a-d1-a1	Singlemode	144
FFDBBF144-18M	Indoor Distribution, OFNR LSZH CPR, Flat Ribbon, MT	B2ca-s1a-d0-a1		144
FFCDBX144-28M	Indoor-Outdoor, OFNR LSZH CPR, Flexible Ribbon, MT	Ca-s1a-d0-a1		144
FFCCBX288-24F	Indoor-Outdoor, LSZH CPR, Flexible Ribbon, FT	Cca-s1a-d1-a1		288
FFCDBX288-28M	Indoor-Outdoor, OFNR LSZH CPR, Flexible Ribbon, MT	Cca-s1a-d0-a1		288

Rack Mount Fiber Cassette Enclosures



FCE1U

Part Number	Description	Cassette/FAP/FOSM Openings
FCE1U**	Rack mount fiber enclosure 1 RU, with sliding/tilt drawers.	4
FCE1UA**	Rack mount fiber enclosure 1 RU, open access.	

**Offered in White (add WH to part number for White).

Fiber Adapter Panels

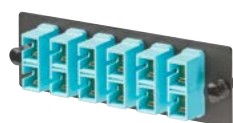


FAP12WAQDLCZ

Part Number	No. of Ports	Adapter Type	Color	Split Sleeve	Fibers
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LC Fiber Adapter Panels

FAP6WAQDLCZ	6	Duplex LC	Aqua	Zirconia	12
FAP8WAQDLCZ	8				16
FAP12WAQDLCZ	12				24
FAP6WBUDLCZ	6		Blue		12
FAP8WBUDLCZ	8				16
FAP12WBUDLCZ	12				24
FAP6WAGDLCZ	6	Duplex LC/APC	Green		12
FAP12WAGDLCZ	12	Simplex LC	Blue		24
FAP12WBULCZ					



FAP6WAQDSCZ

SC Fiber Adapter Panels

FAP3WAQDSCZ	3	Duplex SC	Aqua	Zirconia	6
FAP6WAQDSCZ	6				12
FAP3WBUDSCZ	3		Blue		6
FAP6WBUDSCZ	6				12
FAP3WAGDSCZ	3	Duplex SC/APC	Green		6
FAP6WAGDSCZ	6				12
FAP12WBUSCZ	12	Simplex SC	Blue		24
FAP12WAGSCZ	12	Simplex SC/APC	Green		

HD Fusion Splicing Enclosure



FWMHSSGS-3456



FRMHSS-4RU

Part Number	Description
FRMHSS-4RU	HD Fusion - fiber rack mount hyperscale splicing solution 4 RU that can splice up to 576 single fibers and 864 ribbon fibers. Splice trays sold separately.
FWMHSSGS-3456	Fiber Wall Mount Hyper Scale Splicing Enclosure With Split Doors, Grey, 3456 Fibers.

Raised Floor Enclosure



FLEX-ZRFEG

Part Number	Description
FLEX-ZRFECG	HD Flex™ Zone Raised Floor Enclosure Cover, Grey.
FLEX-ZRFEG	HD Flex™ Zone Raised Floor Enclosure, Grey.

Copper Connectivity

Copper Bulk Cable



Part Number	Description	Flammability Rating	EuroClass	Color
PUL6004WH-FE	Copper cable, Category 6, 4 pair, 23 AWG, U/UTP, 1000 ft/305m.	LSZH-1 and LSZH-3-22	Dca-s2-d2-a1	White
PUY6004WH-HE		LSZH-1	Cca-s1a-d1-a1	White

Mini-Com™ Category 6 UTP Jack Modules



1/Package	24/Package	100/Package	Color
CJ688TGBU	CJ688TGBU-24	CJ688TGBU-C	Blue
CJ688TGBL	CJ688TGBL-24	CJ688TGBL-C	Black
CJ688TGWH	CJ688TGWH-24	CJ688TGWH-C	White

Category 6 28 AWG Small Diameter UTP Copper Patch Cords



8 inch	1 foot	3 feet	7 feet	Color
UTP28SP8IN	UTP28SP1	UTP28SP3	UTP28SP7	White
UTP28SP8INBU	UTP28SP1BU	UTP28SP3BU	UTP28SP7BU	Blue

For lengths 1 to 20 feet (increments of one foot) and 25, 30, 35, 40 feet, change the length designation in the part number to the desired length.

Patch Panels



Part Number	Description	No. Ports	No. RU
Mini-Com™ Modular Patch Panels			
CPPL24WBL	The Mini-Com™ Faceplate Modular Patch Panel accepts individual Mini-Com™ Modules, offers front access, and includes label pockets for easy identification.	24	1
CPPL48WBL		48	2
CPP48HDEWBL	The Mini-Com™ High Density Modular Patch Panel accepts individual Mini-Com™ Modules, is flush mount and can be identified with adhesive labels.	48	1



QuickNet™ Patch Panels			
QPP24BL	The QuickNet™ Patch Panel accepts QuickNet™ Pre-Terminated Cassettes and Patch Panel Adapters and mount to standard EIA 19" racks or 23" racks with optional extender brackets.	24	1
QPP48HDBL		48	1



QuickNet™ Patch Panel Accessories			
FQCBRUA	QuickNet™ Zero RU Bracket accepts up to two fiber QuickNet™ SFQ Cassettes or up to two QuickNet™ Pre-Terminated Copper Cassettes without occupying RU space. Mounts to any EIA-310-D compliant rack rail.	—	—
QPPBBL	QuickNet™ Patch Panel Blank promotes proper airflow and cooling throughout data centers.		
QPPABL	QuickNet™ Adapter accepts up to six Mini-Com™ Modules for unshielded, fiber optic, and audio/visual applications.		

Cable Assemblies



Part Number	Assembly Type	Description
QZLWCCL0001M010	Cassette to Cassette	Copper QuickNet Assembly, Category 6A, UTP VariMatrix LSZH White Cable, 10 Meters
QZLWCJL0001M010	Cassette to Jack	Copper QuickNet Assembly, Category 6A, UTP VariMatrix LSZH White Cable, Standard Packaging, 10 Meters
QZLWCPL0001M010	Cassette to Plug	Copper QuickNet Assembly, Category 6A, UTP VariMatrix LSZH White Cable, Standard Packaging, 10 Meters

Visit www.panduit.com for the complete copper cabling system offering. To configure your own copper QuickNet™ Assemblies or copper patch cords, visit our parts configurator page at www.panduit.com/part-configurators.

Labeling & Identification

Panduit has a full line of labeling products, software, and printers to assist you with your labeling requirements. We also offer signs and permanent identification solutions to deliver improved productivity and workplace safety.

MP300/E and MP100/E Mobile Label Printers



Part Number	Description
MP300/E	Includes MP300/E printer, one (1) cassette of S100X150VAM self-laminating labels, rechargeable Li-ion Battery Pack, hard carrying case, AC power adapter, USB cable, magnetic attachments and quick reference card.
MP100/E	Includes MP100/E printer, protective impact bumper, 1 cassette of T100X000VPM-BK continuous vinyl tape, AC power adapter, USB cable, and quick reference card.

MP Cassette Labels



Part Number	Description
S100X150VAM	Vinyl self-laminating label cassettes, can easily be installed on existing terminated wires and assemblies and does not require disconnecting wires or cables. Adhesive labels for wire/cable identification with white print-on area and clear overlamine. Label is 1.0" x 1.5", with 1.0" x 0.5" print-on area. Designed for cat. 5/5e/6 cable. 175 labels per cassette.
R100X150V1M	Turn-Tell label cassettes, have an innovative design that allows label rotation to any angle for improved visibility, aesthetics, and easy repositioning. Label is 1.0" x 1.5" with 1.0" x 0.5" white print-on area and clear overlamine. It can easily be installed on existing terminated wires and assemblies and does not require disconnecting wires or cables. For use with Panduit MP series printers. 100 labels per cassette.

Tak-Tape Hook and Loop Roll



Part Number	Description
TTR-35RX0	Tak-Tape™ Hook and Loop Cable Roll is 35' L x 0.75" W (6.1m x 19.1mm). The cable roll comes in packages of 10.

PanView™ iQ Power Supply



Part Number	Description
PVQ-C14ADPTR-S	PanView iQ™ IEC60320 C14 to NEMA5-15R adapter.

Cage Fit Out Accessories

Open-Access™ Cable Management System

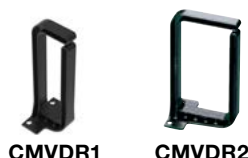
The Open-Access™ Cable Manager provides open and efficient access to power, coaxial, and communications cables. Made of a steel frame with modular plastic snap-in D-rings, the cable manager is lightweight and durable, but flexible enough to endure seamless moves, adds, and changes. It is compatible with any standard EIA 19 inch (483mm) rack or cabinet. Color: Black.



Part Number	RU	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)
CMPH1	1	1.7 (43)	19 (482)	8.6 (218)
CMPH2	2	3.5 (88)	19 (482)	8.6 (218)
CMPHF1	1	1.7 (43)	19 (482)	3.4 (87)
CMPHF2	2	3.5 (88)	19 (482)	3.4 (87)

Open-Access™ Vertical D-Rings, Black

The Open-Access™ Vertical D-Ring is used on standard communication racks. The flexible arm provides open access that allows installation of complete cable bundles.



Part Number	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)
CMVDR1	2.38 (60.5)	2.05 (52.1)	5.72 (145.2)
CMVDR1	2.38 (60.5)	3.30 (83.8)	5.72 (145.2)

RapidID™ Network Mapping System



Cable Documentation. Automated.

Keeping track of patch cord connections can be time-consuming and labor intensive. Labeling, tracing, and troubleshooting are tedious, repetitive, and notoriously prone to human error. All this leads to wasted time, effort, and money.

The available solutions to address these issues are neither practical nor cost-efficient, until now.

RapidID is a software-enabled network mapping system from Panduit, the leading provider of network infrastructure for smart, scalable, and efficient connectivity solutions.

For network engineers and data center managers, *RapidID* is a practical, affordable alternative to traditional manual approaches. It does not require special panels or cabling, and is ideal for building a new telecom room, locating installed cabling, or replacing a network switch.



Bluetooth®-enabled handheld barcode scanner and pre-labeled cable
Part #: [RPDSCN](#)

The *RapidID* solution includes:

- Pre-labeled copper and fiber patch cords for easy installation and identification
- Feature-rich mobile app
- Bluetooth-enabled handheld barcode scanner



Key Features	Benefits
Patch cords are pre-labeled	Automates labor-intensive and error-prone cable documentation process that can lead to an outage
Easy-to-use scanner	• Saves time on tracing, labeling, and documenting • Free-up network engineers to focus on more rewarding and strategic initiatives
Feature-rich mobile app	• Reduce time and cost of patch cord documentation by up to 50%* • Control cost and risk associated with cable installation and management

*Panduit internal time study, May 2021.

RapidID...Easy as 1, 2, 3



1 INSTALL

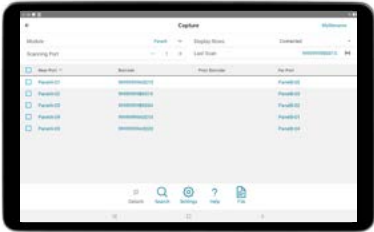
Panduit cables pre-labeled with unique barcode labels.

2 DOWNLOAD

The mobile app from iOS or Android app stores to a tablet device.

3 SCAN

Barcodes using the Bluetooth-enabled handheld scanner.



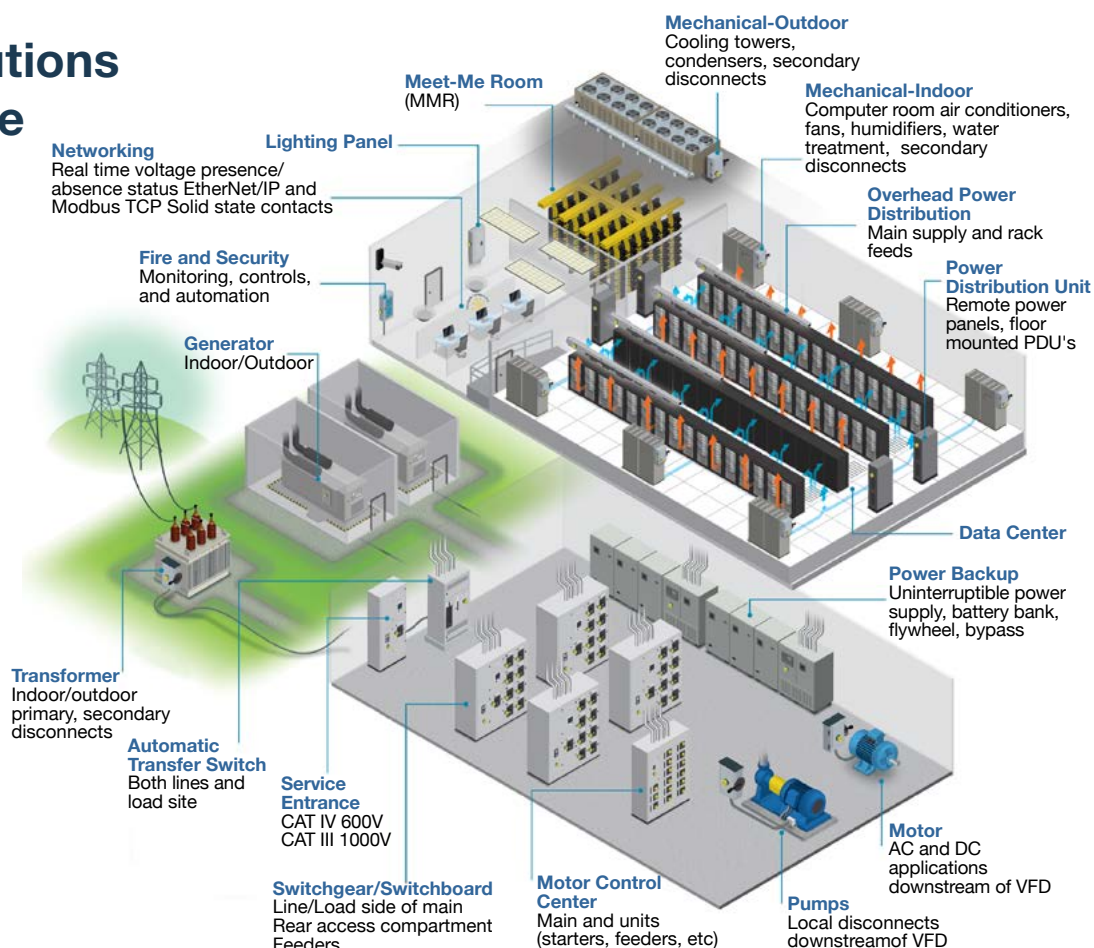
The mobile app **captures and verifies** cable locations as they are scanned. Data can be exported to reduce or eliminate manual, error-prone data entry.



The mobile app **matches** the opposite end of a scanned cable. The software offers notifications when the right end is found, which expedites a tedious process to free up network engineers for more rewarding initiatives.

Gray Space Solutions Outside the Cage

To support data centers, the gray space consists of many products that support back-end function allowing the white space to continue to function smoothly and safely. Absence of Voltage Testers, cable cleats, switch gear, and various other products build an infrastructure that increases safety, reduces risk to workers, and saves unnecessary downtime by using innovative electrical solutions within data center gray space.



VeriSafe™ Absence of Voltage Tester

The VeriSafe™ Absence of Voltage Tester minimizes risk by verifying the absence of voltage before equipment is accessed, making it easier for workers to verify an electrically safe work condition has been established in a fraction of the time compared to using hand-held portable test instruments.



Part Number	Power Specifications	System Cable Length	Sensor Lead Length
VeriSafe™ Absence of Voltage Testers			
VS-AVT-C02-L03	1, 2, or 3-phase AC or DC systems up to 600 V	2 ft. 610 mm	3 ft. 915 mm
VS-AVT-C08-L10		8 ft. 2440 mm	10 ft. 3050 mm



Part Number	Conductor Gauge AWG	No. of Connectors	No. of AVTs Kit can be Installed With
Sensor Lead Connection Kits			
VS-CKP14-6	14 to 6	3	1
VS-CKP4-000	4 to 3/0		
VS-CKP1K4/0-500*	4/0 to 500MCM		

*Rated for 1KV installations

Part Number	Description
Accessories	
VS-ACK-BATTERY	Battery pack for use with VeriSafe™ Access Control Kit (VS-ACK-CPWR).

Visit www.panduit.com/verisafe for more information.

Cable Cleat Solutions for Short Circuit Protection

Available in a variety of sizes, Panduit's extensive line of cable cleat solutions ensures cables remain contained in the event of a short circuit fault, minimizing disruption and damage to personnel and property. Panduit's Cable Cleats are uniquely engineered for ease of installation in a range of applications and harsh environments. With a variety of cable cleats, Panduit has the right product to fit your needs while providing on the job productivity, reliability and safety.

Reduce Project Costs and Reduce Installation Time



Simple and intuitive design
leads to increased productivity



Compatible with a variety of
ladder racks and cables



Industry-unique mounting brackets
and installation tool



Tested to IEC 61914:2015, the latest
and most globally recognized cable
cleat testing standard



Collaborative and consultative
approach to cable cleat specification,
supported by a team



Why Cable Cleats?

IEC 61914:2015 is the latest, most comprehensive and globally accepted cable cleat testing standard. It provides requirements for:

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none">• Temperature rating• Adequate resistance to flame propagation | <ul style="list-style-type: none">• Lateral load testing• Axial load testing | <ul style="list-style-type: none">• Impact resistance• UV resistance | <ul style="list-style-type: none">• Resistance to electromechanical forces• Corrosion resistance |
|---|---|---|---|



During a short circuit fault, maximum electromechanical stress between conductors occurs at or before 0.005 second

Typical circuit breakers and other protection devices trip and interrupt a fault between 0.06 to 0.1 second

Cable cleats perform their function within those first 0.005 second (i.e. at peak kA) before a circuit breaker trips and interrupts a fault

Selecting the right Cable Cleat has never been so easy

Prevent damages resulting from a short circuit fault by specifying and installing Panduit Cable Cleats

SELECT cable layout
INPUT peak short circuit current
INPUT cable diameter

App provides part recommendations and IEC 61914:2015 short circuit test compliant cleat spacing.

Cleat kAlculator™ is available for download in the Apple Store or Google Play, and Panduit.com/cablecleat.



Cable Cleats

To protect electrical infrastructure when using power cables in a tray, installing an IEC 61914:2015-compliant cable cleat is the best option when facing a peak short circuit fault. Panduit cable cleat solutions were designed to withstand the stress of a short circuit event using a state-of-the-art ANSYS simulation software to model the dynamic forces at play.



Locking Strap Cable Cleats

Part Number	Trefoil Double Loop Cable Diameter Range				Flat Multicore Double Loop Cable Diameter Range										Std Pkg Qty
	From		To		From		To								
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
MLT4DH-L	0.472	12	1.654	42	0.472	12	3.740	95	0.31	7.9	0.010	0.25	28.0	711	50
MLT4DEH15-Q316									0.50	12.7			29.5	749	
MLT4DSH-Q316									0.63	15.9					
MLT4DSH-Q															
MLT6DEH15-Q316	1.654	42	2.835	72	3.740	95	5.906	150	0.50	12.7	0.015	0.38	41.5	1054	25
MLT6DSH-Q316									0.62	15.9					
MLT6DSH-Q															
MLT8DEH15-Q316	2.835	72	3.937	100	5.906	150	7.677	195	0.50	12.7					53.5
MLT8DSH-Q316									0.63	15.9					
MLT8DSH-Q															

Buckle Strap Cable Cleats

Part Number	Trefoil Double Loop Cable Diameter Range				Trefoil Triple Loop Cable Diameter Range				Flat Multicore Double Loop Cable Diameter Range				Width		Thickness		Length		Std Pkg Qty
	From		To		From		To		From		To								
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			
MS4W75T30-Q6	0.472	12	0.787	20	—	—	—	—	0.472	12	1.772	45	0.75	19.1	0.03	0.76	19.6	498	25
MS6W75T30-Q6	0.787	20	1.181	30	0.472	12	0.787	20	1.772	45	2.756	70					25.9	658	
MS8W75T30-Q6	1.181	30	1.654	42	0.787	20	1.024	26	2.756	70	3.740	95					32.1	815	
MS10W75T30-Q6	1.654	42	2.283	58	1.024	26	1.378	35	3.740	95	4.724	120					38.4	975	
MS12W75T30-Q6	2.283	58	2.835	72	1.378	35	1.732	44	4.724	120	5.906	150					44.7	1135	
MS14W75T30-Q6	2.835	72	3.386	86	1.732	44	2.087	53	5.906	150	6.693	170					50.1	1273	

(continued on next page)

Cushion Sleeves

Part Number	Material	Length		Width		Thickness		Std Pkg Qty
		ft	m	in	mm	in	mm	
PCSLSH-B-CR	TPE Low Smoke, Halogen Free	100	30.5	1.05	26.8	0.08	2.2	1
PCSSH-B-CR	MIL-R-6855 Spec Neoprene			0.97	23.1	0.12	3.1	

UC Series Brackets

Part Number	Description	Std Pkg Qty
UCSQ1-V316	Mounting bracket – Strut Type, 316L stainless steel	5
UCIB1-V316	Mounting bracket – I-Beam, 316L stainless steel	

Aluminum Cable Cleats



Aluminum Trefoil Cable Cleats

	Cable Diameter Range		Height (H)		Width (W)		Depth (D)		Weight		Mounting Holes	Std Pkg Qty
Part Number	in	mm	in	mm	in	mm	in	mm	lb	g		
CCALTR2326-X	0.91 – 1.02	23 – 26	3.94	100	3.98	101	2.17	55	0.81	370	1 x M8	10
CCALTR2528-X	0.98 – 1.10	25 – 28	4.06	103	4.13	105			0.85	385		
CCALTR2730-X	1.06 – 1.18	27 – 30	4.21	107	3.85	98			0.87	397		
CCALTR2932-X	1.14 – 1.26	29 – 32	4.33	110					0.92	418		
CCALTR3135-X	1.22 – 1.38	31 – 35	1.57	116	3.97	101			0.93	424		
CCALTR3438-X	1.34 – 1.50	34 – 38	4.76	121	4.18	106			0.98	448		
CCALTR3741-X	1.46 – 1.61	37 – 41	4.99	127	4.41	112			1.05	477		
CCALTR4044-X	1.57 – 1.73	40 – 44	5.24	133	4.64	118			1.14	516		
CCALTR4347-X	1.69 – 1.85	43 – 47	5.52	140	4.85	123			1.23	558		
CCALTR4651-X	1.81 – 2.01	46 – 51	5.83	148	5.05	128			1.32	602		
CCALTR5056-X	1.97 – 2.20	50 – 56	6.22	158	5.50	140			1.42	647		
CCALTR5561-X	2.17 – 2.40	55 – 61	6.57	167	5.72	145			1.55	706		
CCALTR6067-X	2.36 – 2.64	60 – 67	7.01	178	6.15	156			1.73	787		
CCALTR6675-X	2.60 – 2.95	66 – 75	7.6	193	6.72	171						

(continued on next page)

Aluminum Two-Hole Cable Cleats

Part Number	Cable Diameter Range		Height (H)		Width (W)		Depth (D)		F		Weight		Mounting Holes	Std Pkg Qty
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	g		
CCAL2H3846-X	1.50 – 1.81	38 – 46	2.01	51	3.98	101	1.64	42	2.91	74	0.50	226	2 x M10	10
CCAL2H4658-X	1.81 – 2.28	46 – 58	2.36	60	4.52	115	1.69	43	3.39	86	0.64	291		
CCAL2H5870-X	2.28 – 2.76	58 – 70	2.87	73	5.20	132	1.77	45	3.97	101	0.89	404		
CCAL2H7083-X	2.76 – 3.27	70 – 83	3.39	86	5.71	145	1.81	46	4.48	114	1.09	496		
CCAL2H8397-X	3.27 – 3.82	83 – 97	3.94	100	6.37	162	1.85	47	5.07	129	1.39	630		
CCAL2H97109-X	3.82 – 4.29	97 – 109	4.53	115	3.89	175	1.93	49	5.55	141	1.66	754		
CCAL2H109120-X	4.29 – 4.72	109 – 120	5.04	128	7.33	186	1.98	50	5.99	152	1.92	873		

Aluminum One-Hole Cable Cleats

	Cable Diameter Range		H		W		D		E		S		Weight		Mounting Holes	Std Pkg Qty
Part Number	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	g		
CCAL1H1013-X	0.39 – 0.51	10 – 13	0.91	23	1.57	40	1.61	41	0.48	12	0.79	20	0.11	50	1 x M10	10
CCAL1H1316-X	0.51 – 0.63	13 – 16	1.02	26	1.72	44					0.83	21	0.13	59		
CCAL1H1619-X	0.63 – 0.75	16 – 19	1.14	29	1.88	48					0.51	13	0.91	23		
CCAL1H1923-X	0.75 – 0.91	19 – 23	1.26	32	2.04	52			0.99	25			0.17	77		
CCAL1H2327-X	0.91 – 1.06	23 – 27	1.42	36	2.28	58			0.55	14	1.07	27	0.20	89		
CCAL1H2732-X	1.06 – 1.26	27 – 32	1.57	40	2.44	62					1.19	30	0.24	107		
CCAL1H3238-X	1.26 – 1.50	32 – 38	1.77	45	2.68	68	1.65	42	0.55	14	1.30	33	0.27	125		
CCAL1H3846-X	1.50 – 1.81	38 – 46	2.01	51	2.98	76					1.45	37	0.33	149		
CCAL1H4651-X	1.81 – 2.01	46 – 51	2.36	60	3.26	83					1.58	40	0.40	181		
CCAL1H5157-X	2.01 – 2.24	51 – 57	2.56	65	3.49	89	1.66	1.70			43	0.44	202			

Visit www.panduit.com/cable-cleats for the complete cable cleat offering and access the Cleat kAlculator™ to determine which cable cleat is appropriate for your application.

Installation Tools



BT2HTI



BT75SDT



PBTMT/E



RT2HT

Part Number	Description	Length		Width		Used With	Std Pkg. Qty.
		In.	mm	In.	mm		
BT2HTI	Installation tool for use with MS75 buckles.	6.94	176	7.64	194	Stainless Steel Buckle Strap Cleat	1
BT75SDT	Screw drive tension mechanism provides high tension with minimal effort, reducing operator fatigue; Heavy duty construction offers a longer service life; Strapping side entry allows quick side entry of the strap into tool to speed installation.	15	381	8	203		1
PBTMT/E	Battery powered installation tool, for use with Pan-Steel™ Heavy, Extra-heavy, and Super-Heavy, Cross Section MLT Style Ties, and MLTD Double Wrapped Style Ties, 2 –12 volt lithium-ion batteries and 115 volt, 60 Hz charger included.	10.33	262.4	3.17	80.5	Stainless Steel Locking Strap Cleat	1
RT2HT	Hand Operated Tool for use with Extra-Heavy and Super-Heavy Cross Section Pan-Steel™ Type MLT Ties.	7.1	180	4.05	103		1

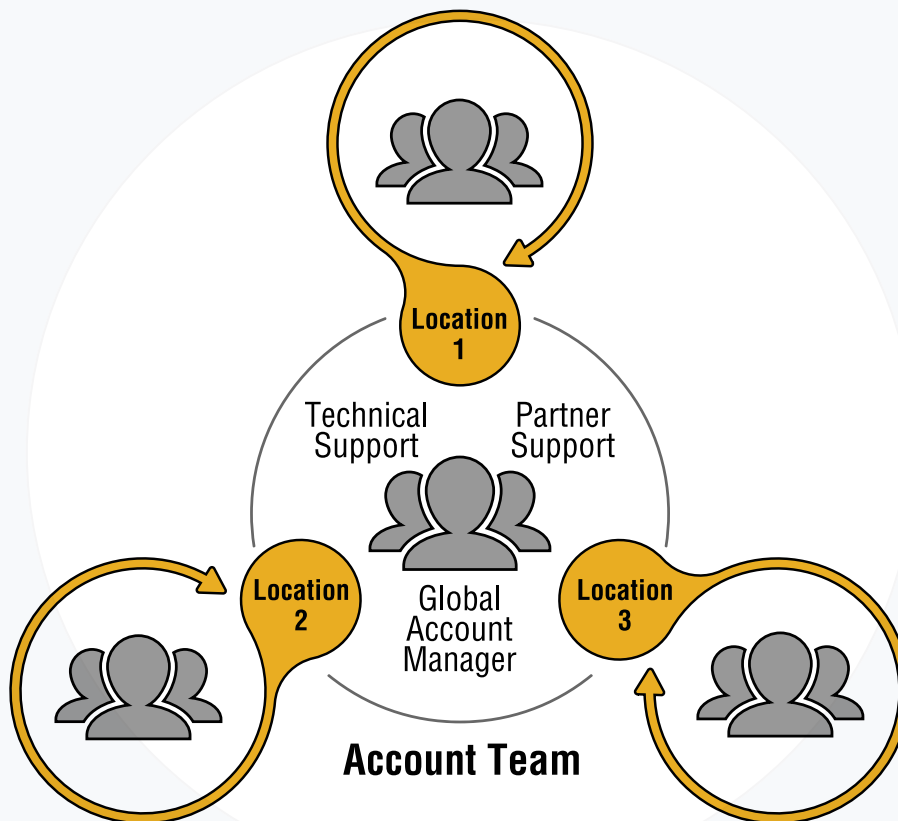
Global Subject Matter Expertise

Structure to Ensure Program Consistency Where You Conduct Business

Panduit Account Manager

One Customer, One Team

- Serves as your primary point of contact
- Access to professionals focused on your needs
- Expertise across planning deployment, and support
- Conducts ongoing needs assessment and planning to ensure program success
- Executes against support and delivery plans



Our most important connection is with you.

We have the knowledge and experience to help you make the most of your infrastructure investment.

Let's connect.

Please visit www.panduit.com/mtdc or email mtdc@panduit.com.



The Jack E. Caveney Innovation Center

Since 1955, Panduit has been at the forefront of innovation and quality. We have created a competitive advantage with our unwavering commitment to research and development, product design, and engineering excellence.

Visit the Jack E. Caveney Innovation Center in Tinley Park, Illinois, USA and European Panduit Briefing Centers to discover how our innovations in physical infrastructure are creating the critical connections to unlock the full potential of your enterprise.

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