

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

**PANDUIT**<sup>®</sup>

infrastructure for a connected world

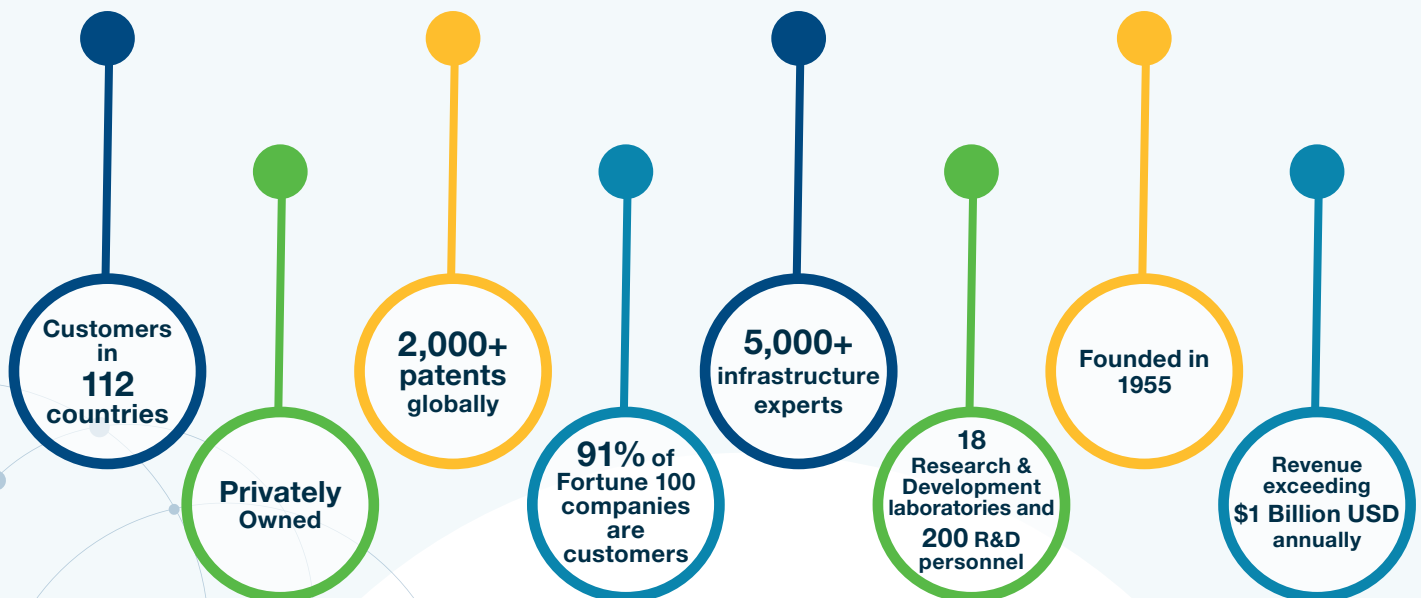
# Infrastructure for a Connected World

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.

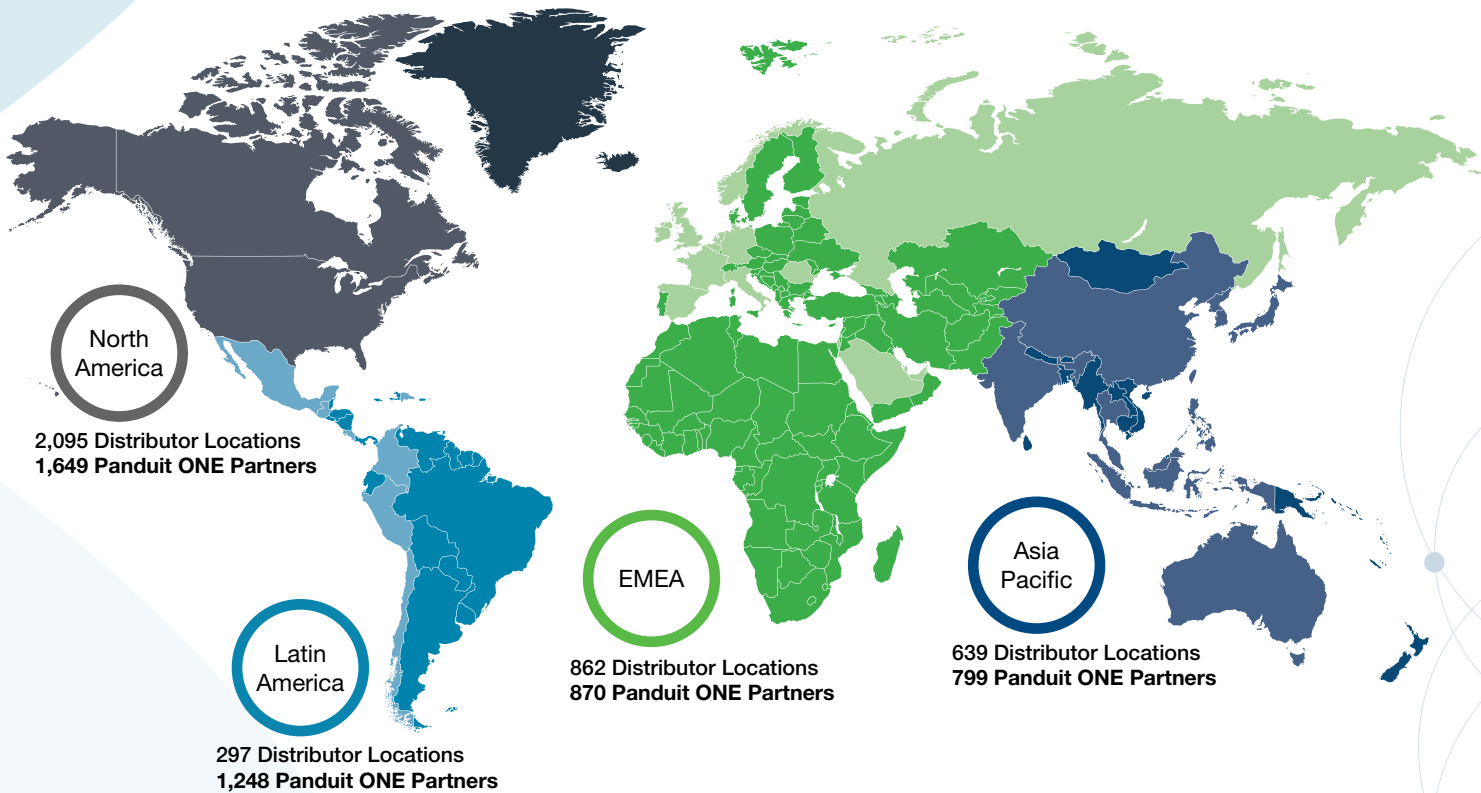
## A culture of curiosity, a history of innovation

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



### 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.

# 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, connectivity, thermal sealing, and grounding and bonding solutions that protect your critical connections.

## Conveyance Solutions

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

**Pages 10-11**

## Cabinets

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

**Pages 12-13**

## 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 14-16**

## 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 17**

## 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 18**

## Optical Distribution Frame

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

**Pages 7-9**

## 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 19-22**

## Grounding and Bonding

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

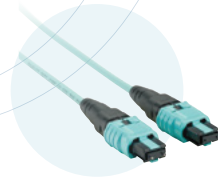
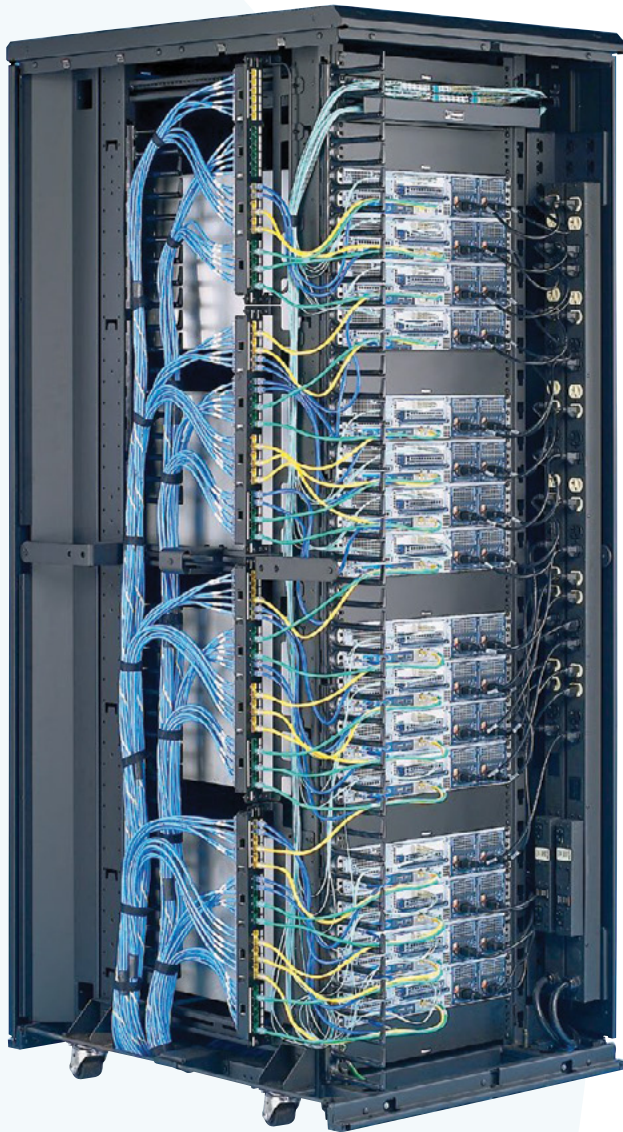
**Page 16**

## Labeling and Identification

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

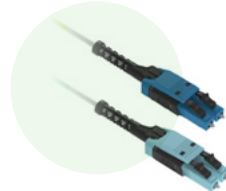
**Pages 23-24**





### 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)

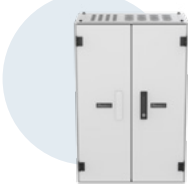
Meet-Me Rooms need to be designed to distribute data center traffic more cost-effectively and efficiently in a safe and secure environment. Distribution frames, splice enclosures, pathways, and fiber assemblies are the main components of the Meet-Me Room and are used to reliably transfer data from ISPs/Carriers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

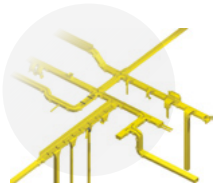
Page 7



## 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.

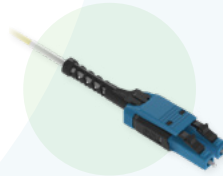
Find out more here about the Wall Mount Splice Enclosure



## FiberRunner® Pathway Solutions

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

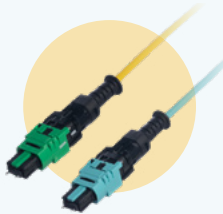
Page 10



## 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 21



## 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 21



## 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 24



## 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

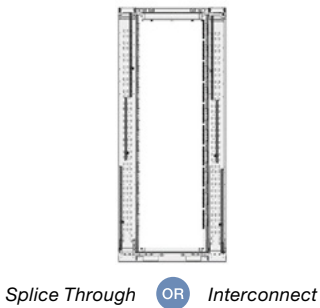
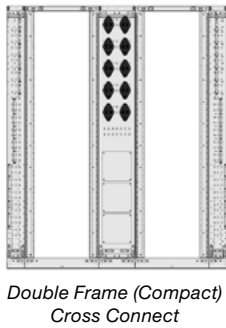
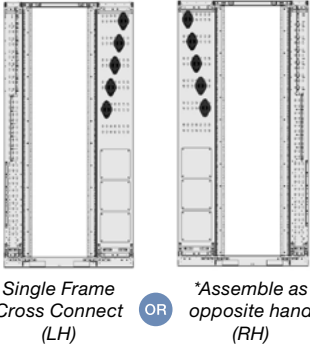
### *Optimal Locations to Implement include:*

- ✓ 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



Description	QTY	Part Number*	Maximum Capacity**	Dimensions (mm)**
Frame 600mm VCM 150mm VCM 300mm Spool Kit (x6)	1† 1† 1† 1†	<b>FDF45GY</b> <b>FDFVCM1545GY</b> <b>FDFVCM3045GY</b> <b>FDUSP6</b>	3168F per single frame  132 x 24F (LC) Cassettes  11 x 4RU Enclosures  12 Trays per 4RU Enclosure	Height – 2133 (2159-2200 with leveling feet)  Width – 1050  Depth – 300
Frame 600mm VCM 150mm VCM 300mm Spool Kit (x6)	2 2 1 2	<b>FDF45GY</b> <b>FDFVCM1545GY</b> <b>FDFVCM3045GY</b> <b>FDUSP6</b>	6336F per double frame  132 x 24F (LC) Cassettes  11 x 4RU Enclosures  12 Trays per 4RU Enclosure	Height – 2133 (2159-2200 with leveling feet)  Width – 1800  Depth – 300
Frame 600mm VCM 150mm	1 2	<b>FDF45GY</b> <b>FDFVCM1545GY</b>	6336F Splice only – Ribbon  3168F Splice only – shrink down (single fiber)  3168F Interconnect (LC Cassette)  11 x 4RU Enclosures  12 Trays per 4RU Enclosure	Height – 2133 (2159-2200 with leveling feet)  Width – 900  Depth – 300

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)

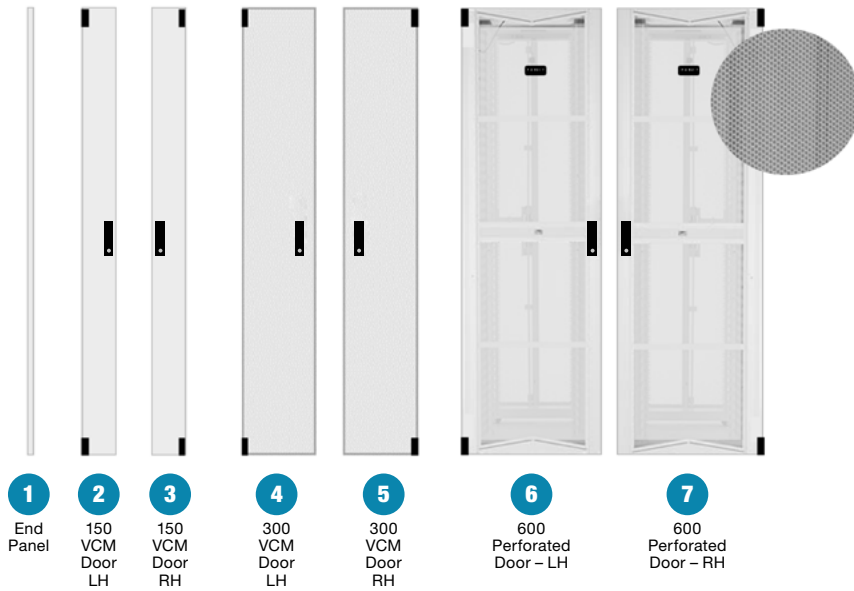
\*Change “GY” to “BL” in part number for black.

\*\*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

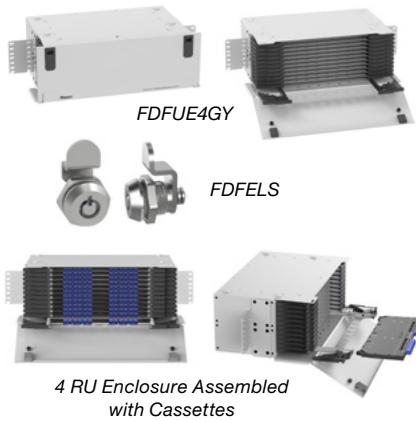


Ref.	Part Number**	Description
1	FDFEP45GY	*End Panel
2	FDUFD1545SLGY	150mm VCM Door LH
3	FDUFD1545SRGY	150mm VCM Door RH
4	FDUFD3045SLGY	300mm VCM Door LH
5	FDUFD3045SRGY	300mm VCM Door RH
6	FDUFD6045PLGY	600mm Perforated Door LH
7	FDUFD6045PRGY	600mm Perforated Door RH

\*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

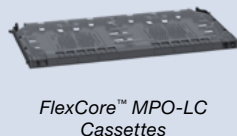
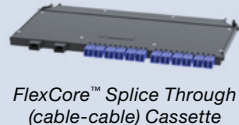
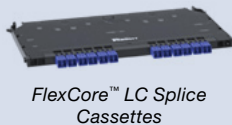
## Step 3: Select a FlexCore™ Enclosure



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™ Accessories



### Patch Cords

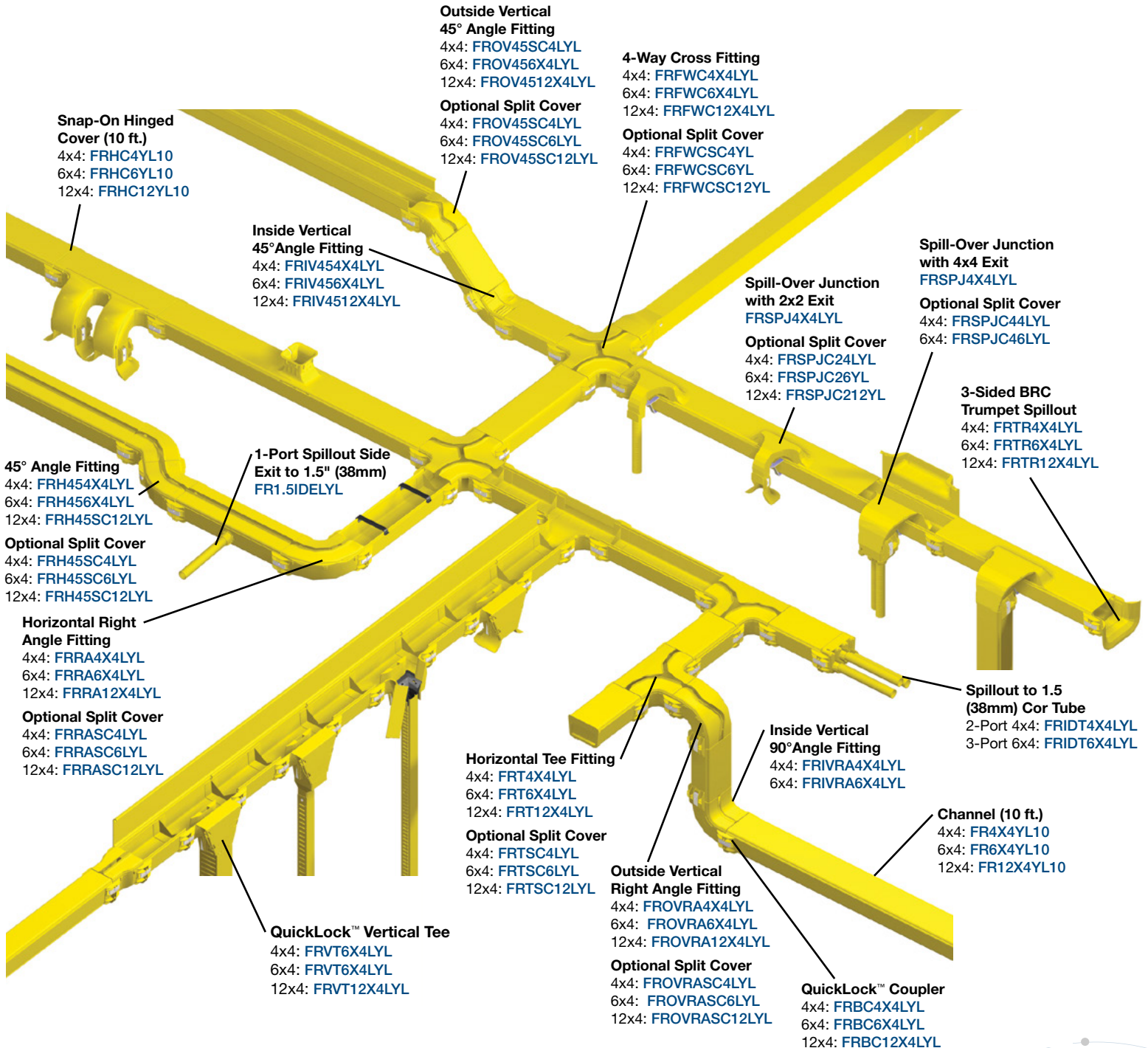


For more information visit  
[www.panduit.com/flexcore-odf](http://www.panduit.com/flexcore-odf)

# Conveyance Solutions















## 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).

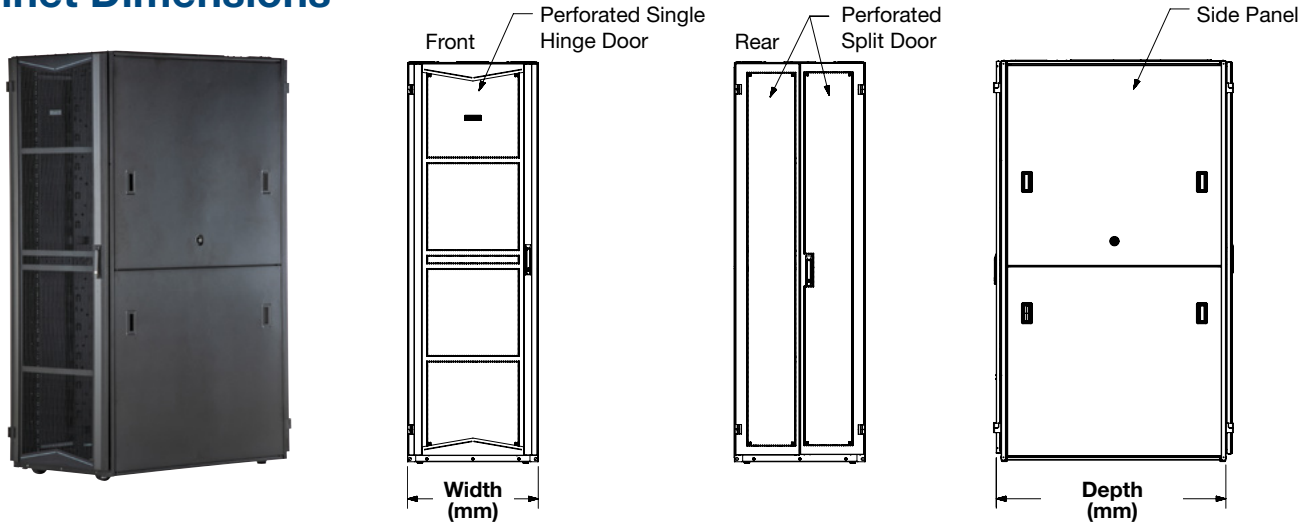
# FiberRunner® Accessories

	<p><b>Adjustable Ladder QuickLock™ Bracket</b>            4x4: <a href="#">FR6ALB</a>            6x4: <a href="#">FR6ALB</a>            12x4: <a href="#">FR12ALB</a></p>		<p><b>Corrugated Loom Tube Slit Wall</b>            1.5" (38mm) x 10' (3.0m)            Yellow: <a href="#">CLT150F-X4F</a>            Black: <a href="#">CLT150F-X20</a></p>
	<p><b>New Threaded Rod QuickLock™ Bracket</b>            4x4: <a href="#">FR6TRBN58</a>            6x4: <a href="#">FR6TRBN58</a>            12x4: <a href="#">FR12TRBN58</a></p>		<p><b>12x4 to 6x4 FiberRunner® Reducer Fitting</b>  <a href="#">FRF126LSYL</a>  <b>Optional Split Cover</b>  <a href="#">FRF126SCLYL</a></p>
	<p><b>2-Piece Ladder Rack Bracket 1/2" Threaded Rod</b>  <a href="#">F2PCLB12</a></p>		<p><b>6x4 to 4x4 FiberRunner® Reducer Fitting</b>  <a href="#">FRF6FR4LYL</a></p>
	<p><b>Ladder Rack QuickLock™ Bracket</b>            4x4: <a href="#">FR6LRB</a>            6x4: <a href="#">FR6ALB</a></p>		<p><b>6x4 FiberRunner® to 4x4 Fiber-Duct™ with Cover</b>  <a href="#">FRF64YL</a>  <b>Optional Split Cover</b>  <a href="#">FRF6FR4SCLYL</a></p>
	<p><b>Adjustable Cabinet QuickLock™ Bracket</b>            4x4: <a href="#">FR6ACAB</a>            6x4: <a href="#">FR6ACAB</a>            12x4: <a href="#">FR12ACAB</a></p>		<p><b>6x4/4x4 2-Port Spillout</b>  <a href="#">FIDT4X4LBL</a></p>
	<p><b>Existing Threaded Rod QuickLock™ Bracket</b>            1/2" Threaded            4x4: <a href="#">FR6TRBE12</a>            6x4: <a href="#">FR6TRBE12</a>            5/8" Threaded            4x4: <a href="#">FR6TRBE58</a>            6x4: <a href="#">FR6TRBE58</a>            12x4: <a href="#">FR12TRBE58</a></p>		<p><b>2x2 1-Port Spillout</b>  <a href="#">FIDT2X2LYL</a></p>
	<p><b>FiberRunner® Side Clamps</b>  <a href="#">FRQMC-X</a></p>		<p><b>ADC Transition Fittings</b>            4x4 to 4x4: <a href="#">FRADC4X4BL</a>            6x4 to 6x4: <a href="#">FRADC6X4YL</a>            12x4 to 12x4: <a href="#">FRADC12X4BL</a></p>

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																	
XG64529BS001E				Included			Included																			
XG64522BS001E				None			None																			
XG64829BS001F				Included			Included																			
XG64829BS001E				None			None																			
XG64822BS001E				Included			Included																			
XG64829WS001F		48		51	None		White						Brush Seal	None	Both Sides	One Short Set										
XG64829BS001E					Included									Included												
XG64822WS001E					None									None												
XG65129BS001F					Included									Included												
XG65129BS001E					None									None												
XG65122BS001E					Included									Included												
XG65129WS001F	51	51	None	White	Brush Seal	None	Both Sides	One Short Set																		
XG65129BS001E			Included			Included																				
XG65129WS001E			None			None																				
XG65122WS001E			Included			Included																				
XG84829BS001G			800			48						None		Black						Brush Seal	None	Both Sides	One Long Set			
XG84829BS001H												Included									Included					
XG84822BS001H	None	None																								
XG84829WS001G	Included	Included																								
XG84829WS001H	None	None																								
XG84822WS001H	Included	Included																								
XG85129BS001G	51	51	None	Black		Brush Seal						None	Both Sides	One Long Set												
XG85129BS001H			Included									Included														
XG85122BS001H			Included		Included																					

More information about the FlexFusion™ Cabinet offering visit [www.panduit.com/flexfusion](http://www.panduit.com/flexfusion).  
 To configure FlexFusion™ Cabinets with additional design options, visit [www.panduit.com/configure-cabinet](http://www.panduit.com/configure-cabinet).

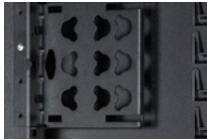
# FlexFusion™ Accessories

## 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



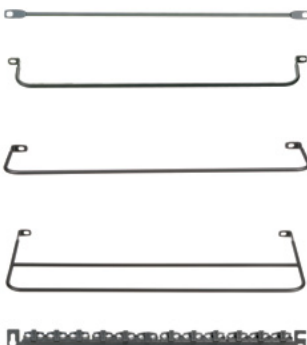
Part Number	RU	Color
XG-VCM42B	42	Black
XG-VCM42W		White
XG-VCM45B	45	Black
XG-VCM45W		White
XG-VCM48B	48	Black
XG-VCM48W		White

## 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.	

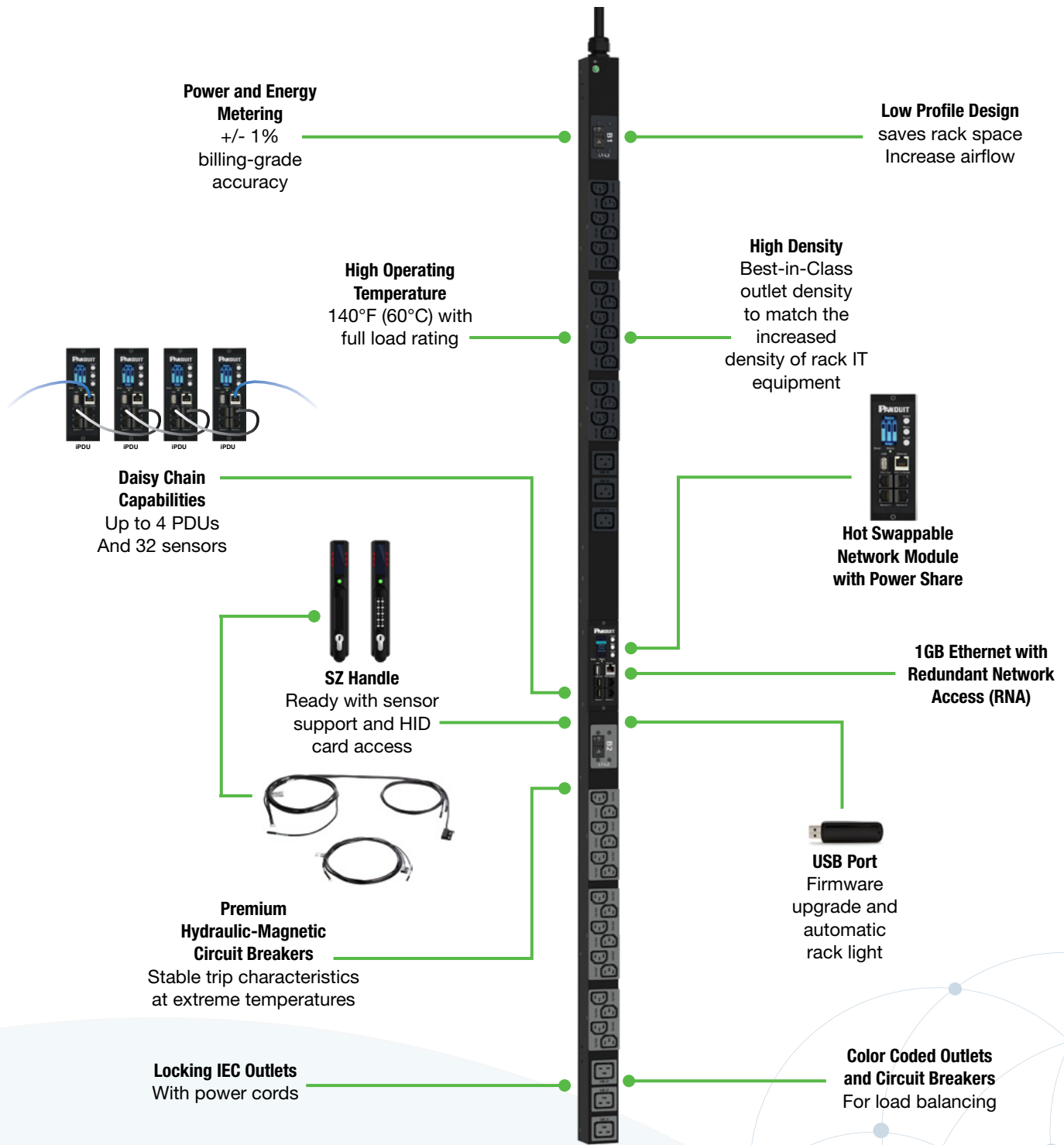
## Strain Relief Bars



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.	
SRBWYC	Strain relief bar with integrated adjustable clips; to support and manage up to 24 cables.	

# SmartZone™ G5 Intelligent PDUs

The SmartZone™ G5 iPDUs 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	Form Factor	# of CB's	Apparent Power (kVA)	Input Current per Phase	Input Phase	Input Plug Type	Input Voltage Range	Phase Connection	Outlet Count	Outlet Type
<b>Basic Power Distribution Units (Non-Network)</b>										
P12B01M	1U	0	1.4	15	1	NEMA 5-15P	100-120VAC	Single Phase, L-N	12	(12)5-20R
P22B10M	0U HALF	0	3.3	20	1	NEMA L6-20P	100-120VAC	Single Phase, L-L or L-N	22	(20)C13, (2)C19
<b>Monitored Input (MI) Power Distribution Units</b>										
P24D07M	0U MID	2	5.0	30	1	NEMA L6-30P	100-120VAC	Single Phase, L-L	24	(20)C13, (4)C19
P38D28M	0U FULL	3	8.6		3	3	NEMA L21-30P	100-120/200-240VAC, WYE	3 Phase Wye, L-L, L-N	38
P24D05M		6	17.3	IEC 60309 3P+N+E 6h 30A (IP44)			415VAC	3 Phase Wye, L-L	24	(12)C13, (12)C19
P36D03M		6	17.3	60	IEC 60309 3P+E 9h 60A	200-240VAC, DELTA	3 Phase Delta, L-L	36	(24)C13, (12)C19	
P24D34M		6	17.3	60	IEC 60309 3P+E 9h 60A	200-240VAC, DELTA	3 Phase Delta, L-L	24	(12)C13, (12)C19	
<b>Monitored Switch (MS) Power Distribution Units</b>										
P36E35M	0U FULL	3	8.6	30	3	NEMA L21-30P	100-120/200-240VAC, WYE	3 Phase Wye, L-L	16	(30)C13, (6)C19
P24E09M		6	17.3			IEC 60309 3P+N+E 6h 30A (IP44)	415VAC		24	(12)C13, (12)C19
P36E04M	0U FULL - Wide	6	17.3	60	IEC 60309 3P+E 9h 60A	200-240VAC, DELTA	3 Phase Delta, L-L	36	(24)C13, (12)C19	
P24E32M	0U FULL	6	17.3	60	IEC 60309 3P+E 9h 60A	200-240VAC, DELTA	3 Phase Delta, L-L	24	(12)C13, (12)C19	

For the complete offering of power distribution units, including Monitored per Outlet (MPO) and Monitored and Switched per Outlet (MSPO) reference the SmartZone™ iPDU Selection Guide found at [www.panduit.com/pdu](http://www.panduit.com/pdu).  
To configure your own power distribution unit part number, visit [www.panduit.com/configure-pdu](http://www.panduit.com/configure-pdu).

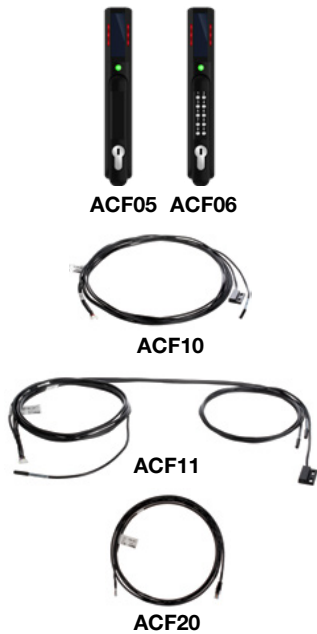
## Locking Power Cords



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

Visit [www.panduit.com](http://www.panduit.com) for other colors and lengths.

## 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 <sup>2</sup> ) 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
<b>Grounding Busbar Kits for Threaded Rail Fasteners</b>	
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

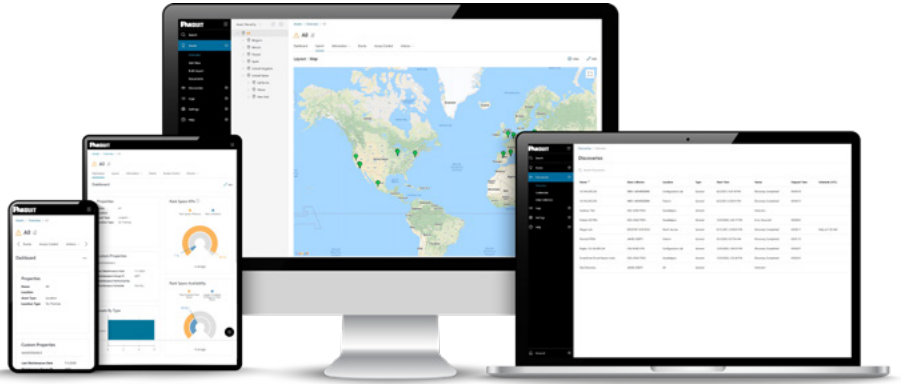


Part Number	Description
CNBK	Green bonding cage nut, includes 50 #12-24 bonding cage nuts (.06 – .11 thick panel) and 50 #12-24 x 1/2" bonding screws with #2 Phillips/slotted combo hex head (use 5/16" or 8mm socket).



# 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.



Its secure cloud-based platform includes encryption on data at rest and in transit, two-factor authentication, fine-grained access control, security-focused development lifecycle, and hardened with multiple industry-leading security scanning and assessment solutions designed to thoroughly analyze today's complex web applications and web services for security vulnerabilities.



APPLICATION



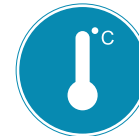
ASSET TRACKING



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-serviced 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.).

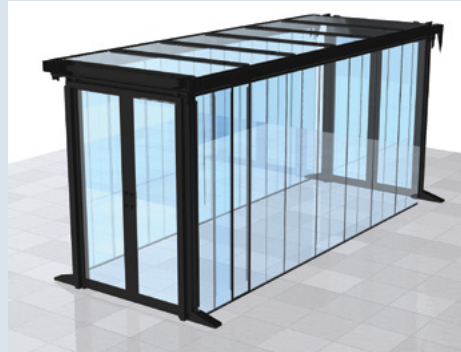
For more information visit  
[www.panduit.com/dcim](http://www.panduit.com/dcim)

# NetContain™ Universal Aisle Containment Solutions

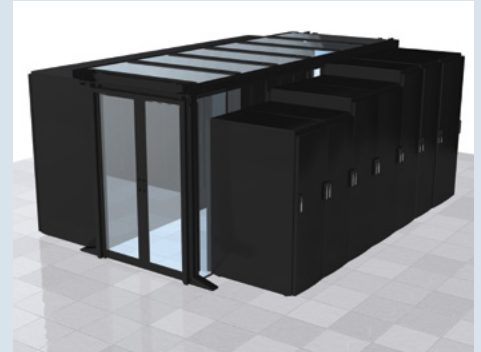
The Net-Contain™ Universal Aisle Containment System allows users to reclaim underutilized cooling capacity, reduce energy expense, and reduce OpEx by retrofitting their existing data center with a versatile containment system. The system includes an independent support structure, sliding doors, vertical 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.



Day 1 – Containment built without any cabinets.



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

## Reduce Operational Expense:

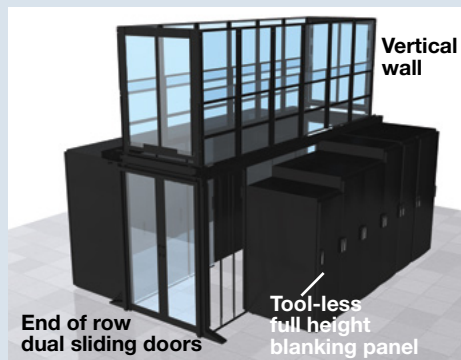
Containment reduces cooling energy consumption by as much as 40%.



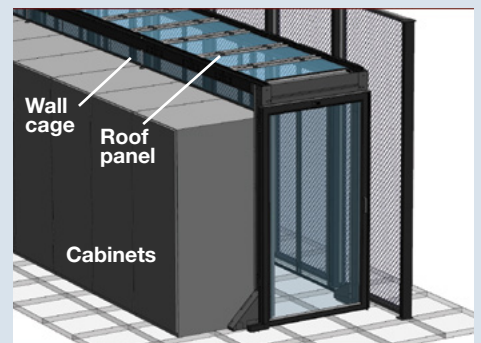
Expansion

## 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.



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



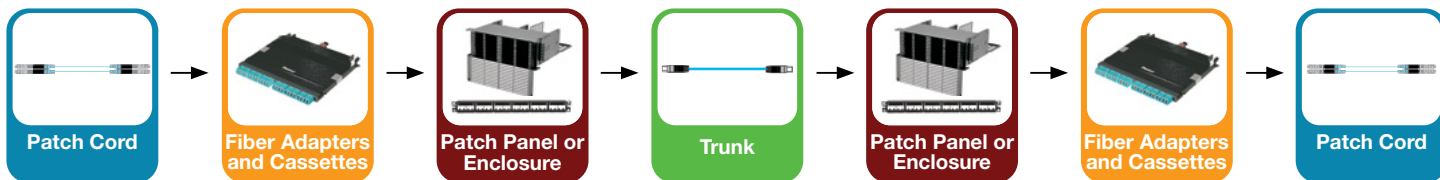
Last row compatible

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

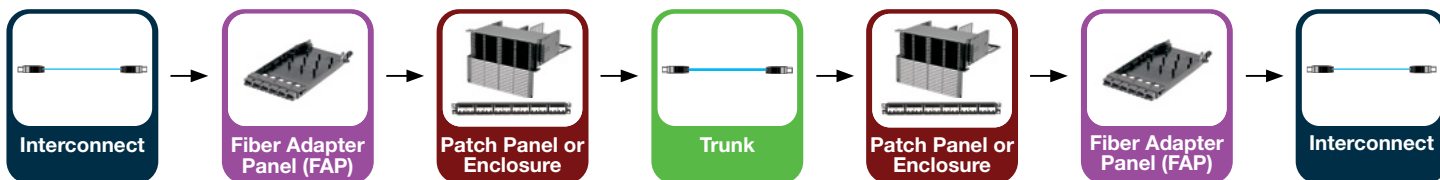
# Fiber Connectivity

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 Example (40G-10G), (100G-10G)



## Fiber Adapters and Cassettes

### Mini-Com® Duplex LC Adapter Modules



Part Number	Adapter Type	Adapter Color	Module Color
<a href="#">CMDSAQLCZBL</a>	Multimode Duplex LC	Aqua	Black
<a href="#">CMDSLCZBU</a>	Singlemode Duplex LC	Blue	Blue

### QuickNet™ SFQ MPO Fiber Adapter Panels



Part Number	Polarity	Color
<a href="#">FQMAP66CG</a>	Method B, Key-Up/Key-Up	Charcoal Gray
<a href="#">FQMAP65BL</a>	Method A, Key-Up/Key-Down	Black

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



Part Number	Fiber Type	Performance
<a href="#">FQZO-12-10U</a>	OM4	Optimized
<a href="#">FQ9N-12-10U</a>	OS2	Standard

## HD Flex™ High Density Fiber Cassettes



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

4 and 12 port cassettes are also available

## Patch Panels

### QuickNet™ Patch Panels



Part Number	Description	No. Ports	No. RU
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



Part Number	Description	No. Ports	No. RU
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.	12	—
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.	6	—

## 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



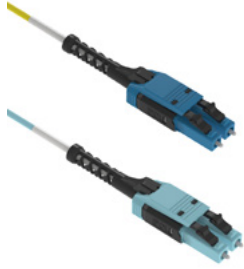
FLEX-PLATE1U



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.

## Uniboot Patch Cords



Part Number	Fiber Type	Fiber Count	Cable Type (mm)	Jacket Type	Connectors	Polarity	Length (m)
FZ2RPU1U1ONM001	OM4	2	2	Riser (OFNR)	LC Duplex to LC Duplex	Standard IL	1
FZ2RPU1U1ONM002							2
FZ2RPU1U1ONM003							3
FZ2RPU1U1ONM005							5
F92RPU1U1ONM001	OS2	2	2		LC Duplex to LC Duplex	Standard IL	1
F92RPU1U1ONM002							2
F92RPU1U1ONM003							3
F92RPU1U1ONM005							5

To configure your own fiber patch cords, visit [www.panduit.com/configure-fiber-patch-cord](http://www.panduit.com/configure-fiber-patch-cord).

Pre-labeled fiber patch cords all come standard with *RapidID* labels for easy installation and identification. To learn more about our *RapidID* offering, please visit page 24.

## Fiber Trunk Assemblies



Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (Ft.)
FYZTP77005F100*	OM4	12	Plenum (OPNP)	PanMPO™ Female to PanMPO™ Female with 1m breakouts, pulling eye end A	Method B, Optimized IL	100
FYZUP77005F100*		24				

Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (Ft.)
FY9TP77B005F100*	OS2	12	Plenum (OPNP)	PanMPO™ Female to PanMPO™ Female with 1m breakouts, pulling eye end A	Method B, Standard IL	100
FY9UP77B005F100*		24				

\*The last 3 digits indicate length. Fiber trunks are available in lengths 015 to 999 feet.

To configure your own fiber trunk assemblies, visit [www.panduit.com/configure-fiber-trunk](http://www.panduit.com/configure-fiber-trunk).

## Fiber Interconnects



Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (Ft.)
FRZTP77Y001F001*	OM4	12	Plenum (OPNP)	PanMPO™ Female to PanMPO™ Female	Method B Standard IL	1
FRZTP77Y001F002*						2
FRZTP77Y001F003*						3
FRZTP77Y001F005*						5

Part Number	Fiber Type	Fiber Count	Jacket Type	Connectors	Polarity	Length (Ft.)
FR9TP77B001F001*	OS1/2	12	Plenum (OPNP)	PanMPO™ Female to PanMPO™ Female	Method B Standard IL	1
FR9TP77B001F002*						2
FR9TP77B001F003*						3
FR9TP77B001F005*						5

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

\*The last 3 digits indicate length. Fiber interconnects are available in lengths 001 to 300 feet.

Pre-labeled fiber interconnects all come standard with *RapidID* labels for easy installation and identification. To learn more about our *RapidID* offering, please visit page 24.

# Copper Connectivity

## Copper Bulk Cable



Part Number	Description	Flammability Rating	Color
PUP6C04BU-ULP	Copper cable, Category 6, 4 pair, 23 AWG, U/UTP, 1000 ft/305m.	Plenum (CMP)	Blue
PUR6C04BU-U		Riser (CMR)	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.

Pre-labeled copper patch cords all come standard with *RapidID* labels for easy installation and identification. To learn more about our *RapidID* offering, please visit page 24.

## Patch Panels



Part Number	Description	No. Ports	No. RU
<b>Mini-Com® Modular Patch Panels</b>			
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



<b>QuickNet™ Patch Panels</b>			
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



<b>QuickNet™ Patch Panel Accessories</b>			
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.		

Visit [www.panduit.com](http://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](http://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 Mobile Label Printer



Part Number	Description
<b>MP300</b> North America Power Cord*	The Panduit MP300 mobile label printer is the ideal solution for labeling in the field. Our printer offers a wide variety of die-cut and continuous label sizes up to 1.5" wide and an automatic cutter with capabilities for full and half cuts. With 360 dpi resolution and fast printing speed, the MP300 increases labeling productivity. Printer comes with one label cassette, hard carrying case, rechargeable battery pack, magnetic attachments, USB cable, and power adapter. Available only in North America.

\*For use outside of North America, please use the following part #: [MP300/E EuroPlug & UK Power Cords](#)

## MP Cassette Labels



Part Number	Description
<b>S100X150VAM</b>	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.
<b>R100X150V1M</b>	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
<b>TTR-35RX0</b>	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
<b>PVQ-C14ADPTR-S</b>	PanView iQ™ IEC60320 C14 to NEMA5-15R adapter.

# Cage Fit Out Accessories

## Open-Access™ Cable Management System

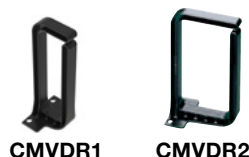
The Open-Access™ Cable Manager provides open and efficient access to power, coaxial, and communications cables. Made of a steel frame with modular plastic snap-in D-rings, the cable manager is lightweight and durable, but flexible enough to endure seamless moves, adds, and changes. It is compatible with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



Part Number	RU	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)
<b>CMPH1</b>	1	1.7 (43)	19 (482)	8.6 (218)
<b>CMPH2</b>	2	3.5 (88)	19 (482)	8.6 (218)
<b>CMPHF1</b>	1	1.7 (43)	19 (482)	3.4 (87)
<b>CMPHF2</b>	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)
<b>CMVDR1</b>	2.38 (60.5)	2.05 (52.1)	5.72 (145.2)
<b>CMVDR1</b>	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 #: RPDCSN

## 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
<b>Patch cords are pre-labeled</b>	Automates labor-intensive and error-prone cable documentation process that can lead to an outage
<b>Easy-to-use scanner</b>	<ul style="list-style-type: none"><li>• Saves time on tracing, labeling, and documenting</li><li>• Free-up network engineers to focus on more rewarding and strategic initiatives</li></ul>
<b>Feature-rich mobile app</b>	<ul style="list-style-type: none"><li>• Reduce time and cost of patch cord documentation by up to 50%*</li><li>• Control cost and risk associated with cable installation and management</li></ul>

\*Panduit internal time study, May 2021.

## RapidID...Easy as 1, 2, 3



### 1 INSTALL

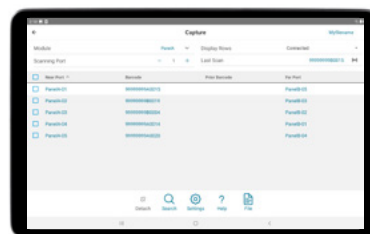
Panduit cables pre-labeled with unique barcode labels.

### 2 DOWNLOAD

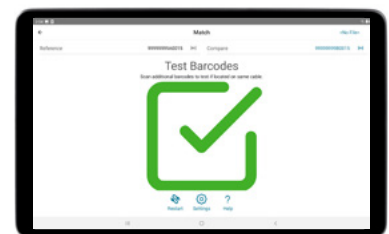
The mobile app from iOS or Android app stores to a tablet device.

### 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.

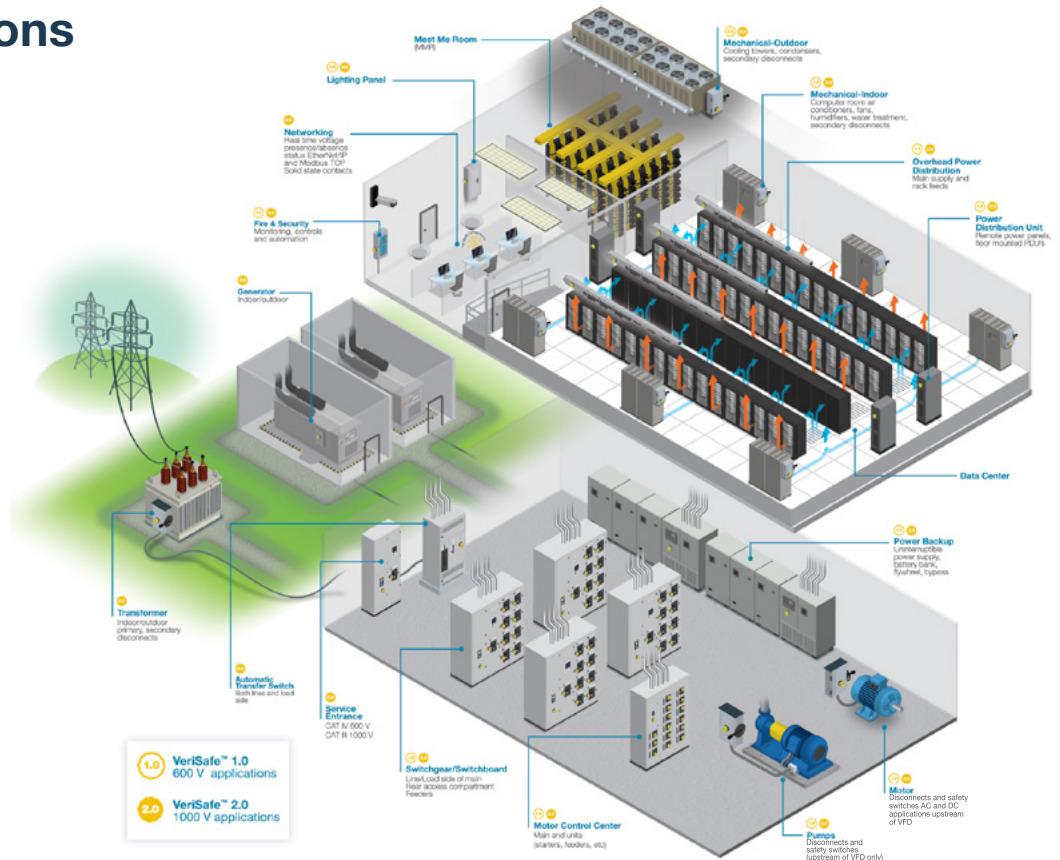


The mobile app **matches** the opposite end of a scanned cable. The software offers notifications when the right end is found, which expedites a tedious process to free up network engineers for more rewarding initiatives.



# 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 (Ft.)	Sensor Lead Length (Ft.)
<b>VeriSafe™ Absence of Voltage Testers</b>			
VS-AVT-C02-L03	1, 2, or 3-phase AC or DC systems up to 600 V	2	3
VS-AVT-C08-L10		8	10



Part Number	Conductor Gauge AWG	No. of Connectors	No. of AVTs Kit can be Installed With
<b>Sensor Lead Connection Kits</b>			
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
<b>Accessories</b>	
VS-ACK-BATTERY	Battery pack for use with VeriSafe™ Access Control Kit (VS-ACK-CPWR).

Visit [www.panduit.com/verisafe](http://www.panduit.com/verisafe) for more information.

# 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				Width		Thickness		Length	
	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
MLT4DEH15-Q316									0.50	12.7				
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
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			0.015	0.38
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	
	From		To		From		To		From		To							
	In.	mm	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
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

## Cushion Sleeves

Part Number	Material	Length		Width		Thickness	
		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
PCSSH-B-CR	MIL-R-6855 Spec Neoprene			0.97	23.1	0.12	3.1

## UC Series Mounting Brackets

Part Number	Description
UCSQ1-V316	Strut Type, 316L stainless steel
UCIB1-V316	I-Beam, 316L stainless steel

## Aluminum Trefoil Cable Cleats



CCALTR2932-X

Part Number	Cable Diameter Range		Height (H)		Width (W)		Depth (D)		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	g	
CCALTR2326-X	0.91 – 1.02	23 – 26	3.94	100	3.98	101	2.17	55	0.81	370	1 x M8
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					

## Aluminum Two-Hole Cable Cleats



CCAL2H7083-X

Part Number	Cable Diameter Range		Height (H)		Width (W)		Depth (D)		F		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	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
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



CCAL1H1013-X

Part Number	Cable Diameter Range		H		W		D		E		S		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	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
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	0.15	68	
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					1.07	27	0.20	89	
CCAL1H2732-X	1.06 – 1.26	27 – 32	1.57	40	2.44	62	1.65	42	0.55	14	1.19	30	0.24	107	
CCAL1H3238-X	1.26 – 1.50	32 – 38	1.77	45	2.68	68					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					1.70	43	0.44	202	

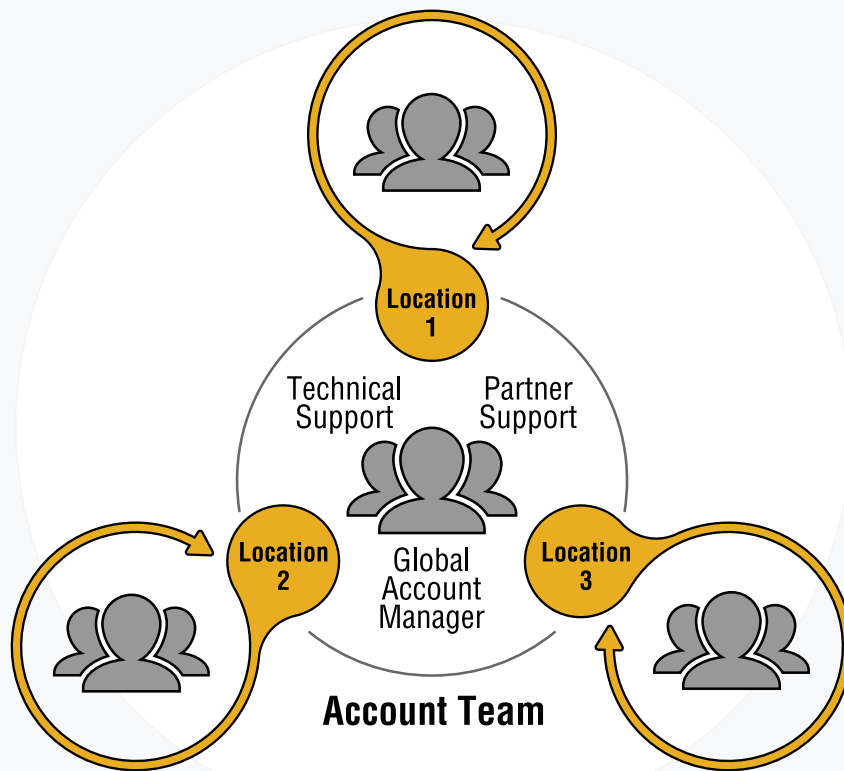
Visit [www.panduit.com/cable-cleats](http://www.panduit.com/cable-cleats) for the complete cable cleat offering and access the Cleat kAlculator™ to determine which cable cleat is appropriate for your application.

# 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.

#### Teri Acuna

Strategic Account Manager  
Teri.Acuna@panduit.com  
+1 512 585-4997

#### Glenn Miller

Technical Sales Engineer  
Glenn.Miller@panduit.com  
+1 858 232-9122

For more information visit [www.panduit.com/mtdc](http://www.panduit.com/mtdc) or email [mtdc@panduit.com](mailto:mtdc@panduit.com).

The logo for Panduit, featuring the word "PANDUIT" in a bold, black, sans-serif font with a registered trademark symbol (®) to the upper right.

**Panduit Corp.  
World Headquarters  
Tinley Park, IL 60487**

**cs@panduit.com  
US and Canada: 800.777.3300  
Europe, Middle East, and Africa:  
44.20.8601.7200  
Latin America: 52.33.3777.6000  
Asia Pacific: 65.6305.7575**

**[www.panduit.com](http://www.panduit.com)**