

Vari-MaTriX HD Category 6A Copper Cabling

Surface Raceway

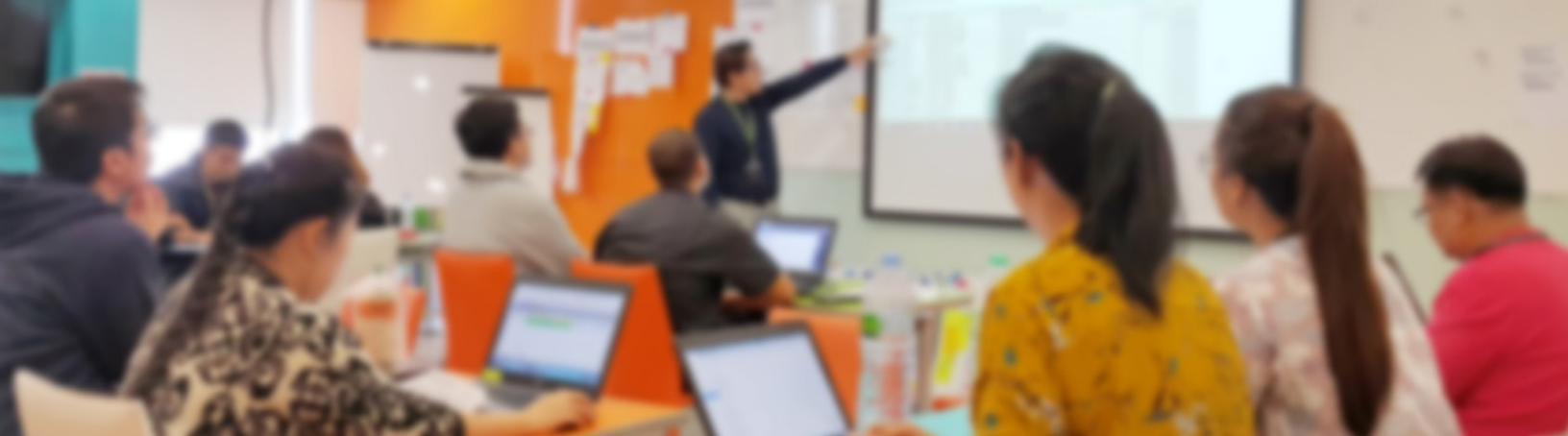
TrueEdge™ Wall Mount Enclosure

Field Term Plug and FieldCord™ Connector

Mini-Com® Jack Modules,  
Faceplates, and  
Surface Mount Boxes

# K-12 Education Infrastructure Solutions by Panduit

**PANDUIT®**



More than ever, technology is a significant factor in how schools teach, and students learn. Typically referred to as Instructional Technology, it can include all manner of digital technology including computer hardware, software, the internet, and other resources that facilitate and enhance student learning in the classroom. The promise is that technology will foster increased collaboration, engagement, and support among faculty and students. However, technology cannot do this on its own, and thoughtful development of curriculum and professional development are required to produce the best results.

The network is vital for connecting technology and infrastructure is foundational to that network. A robust physical layer is critical in ensuring a reliable network throughout the school or campus, to support:

- Always-on wireless connectivity for student, faculty, and staff devices
- Reliable transmission of data between instructors and students and throughout the campus
- Ample bandwidth to support a variety of instruction platforms, communication, and smart building applications
- Power over Ethernet to deliver power and Ethernet through a single cable

Panduit has been more than a supplier to educational facilities since our founding in 1955. We continually innovate and work to ensure we provide the foundational infrastructure needed to provide optimal student and faculty experiences. This infrastructure needs to be reliable and adaptable to support changing needs over many years. Panduit offers a comprehensive array of copper, fiber, and supporting infrastructure products that will support student and educator needs both today and into the future.



## Network Infrastructure Recommendations for Educational Facilities

Networks within schools fall under the guidance of ANSI/TIA-4966: Telecommunications Infrastructure Standard for Educational Facilities. The standard recommends:

- Copper: Category 6A cabling solutions for new installations
- Fiber: LC connectors with OM4 or OM5 cabling for new installations

Beyond meeting the standards, the physical layer should support key systems within a building or across a campus:

- **Wireless:** The move to personal devices in the classroom has been swift. Today, about 9 in 10 public schools (88 percent), have a 1-to-1 computing program that provides every student a school-issued device, such as a laptop or tablet, according to data from the [National Center for Education Statistics](#). These wireless tablets and computers make Wi-Fi the most in-demand system within a school. To meet Wi-Fi demand, Panduit recommends running at least two to four Category 6A cables to every wireless access point. This ensures there is cabling available for future wireless expansion to Wi-Fi 6E and Wi-Fi 7, allowing for elements like link aggregation or additional access points to support spectrum partitioning or extra capacity.
- **Classroom Technology:** software, hardware, web-based or stand-alone, educators use a myriad of digital tools to deliver education in the classroom.
- **Smart Building Systems:** systems like intelligent lights, access control, security cameras, and building automation systems are growing in popularity, requiring a robust network to support the connected devices, as well as space in the telecommunications closet to house the equipment. A wired backbone ensures that connected devices have the data and power needed.
- **Power over Ethernet:** hard wired sensors and equipment can receive data and power over a single Ethernet cable, eliminating concerns over battery monitoring and maintenance.
- **Fault Managed Power Systems (FMPS):** long-distance, reliable power helps schools support more technology while keeping installations simple, safe, and cost-effective. Easily and safely power things like classroom displays, security systems, and lighting without the need for complex wiring.

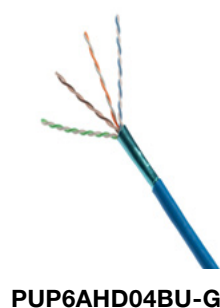
See how Northwest ISD in Texas manages rapid growth and technology advancements in their school district of 30,000 students. [Learn more](#)

# Network Infrastructure for Schools

Panduit Category 6A solutions deliver bandwidth, along with the industry's best thermal properties to manage Power over Ethernet.

## Copper Cable

Panduit cables offer the highest performance in the smallest available form factors.



PUP6AHD04BU-G

Part Number	Performance Level	Flame Rating	AXT Barrier Tape	Cable Diameter (In.)	LP Rating	Packaging	Color
PUP6AHD04BU-G	Category 6A UTP Premium	Plenum (CMP, FT-6)	Vari-MaTriX Cables	0.230	CMP-LP (0.7A)	Reel	Blue
PUR6AV04BU-G		Riser (CMR, FT-4)	Continuous	0.260	CMR-LP (0.5A)		
PUP6XHD04BU-G	Category 6A UTP Standard Compliant Plus	Plenum (CMP, FT-6)	—	0.230	CMP-LP (0.7A)		
PUP6004BU-WLPZ	Category 6 UTP Enhanced	Plenum (CMP, FT-6)	—	0.222	CMP-LP (0.5A)	Easy Payout Carton	
PUR6004BU-W		Riser (CMR, FT-4)	—	0.237	—		
PUP6C04BU-WLPZ	Category 6 UTP Standard Compliant Plus	Plenum (CMP, FT-6)	—	0.205	CMP-LP (0.5A)		
PUR6C04BU-U		Riser (CMR, FT-4)	—	0.210	—		

## Connectors

Panduit Mini-Com® connectors deliver reliability and performance that comes from years of innovation and focus on quality. Quick and easy installation makes the system easier to install and manage.



CJ6X88TGBL



CJ688TGBU

Part Number	Jack Type	Performance Level	Color*	Termination Style
CJ6X88TG*	Unshielded Standard	Category 6A	Black (BL), Blue (BU), Electric Ivory (EI), Green (GR), International Gray (IG), Off White (IW), Orange (OR), Red (RD), Violet (VL), White (WH), Yellow (YL)	TG-Style
CJ688TG*		Category 6		
CJ6X88TG*-24		Category 6A	Black (BL), Blue (BU), White (WH)	
CJ688TG*-24		Category 6		

Continue to next page





**CJUDCAPBU-X**

Part Number	Jack Type	Performance Level	Color*	Termination Style
<b>CJUDCAPBU-X</b>	Unshielded Cable Entry Up/Down+	Category 6A	Blue (BU)	TG-Style
<b>CJLRCAPBU-X</b>	Unshielded Cable Entry Left/Right+			

Replace \* in part number with color code to select color  
 -24 indicates 24 pieces per package  
 + Angled wire caps help to improve bend radius in tight spaces



**FP6X88MTG**

## Plugs

Field terminable plus terminate as easily as a jack to offer simple and reliable terminations for applications like wireless access points and security cameras.

Part Number	Plug Type	Performance Level	Color	Termination Style
FP6X88MTG	Unshielded Straight	Category 6/6A	Black	TG-Style
FP6X88MTG-X				
FPUD6X88MTG	Unshielded 45° Angled			
FPUD6X88MTG-X				

-X indicates 10 pieces per package



**FC-ICCP0.5MBU**

The newest addition to the field terminable family of plugs is the FieldCord Connector, designed with a small plug and cable for use in applications with a small port opening, where the traditional field term plug may be too large.

Part Number	Plug Type	Performance Level	Flammability Rating	Length (m)	Color*
<b>FC-ICCP0.5MBU</b>	Unshielded Connector Cord	Category 6A	CMP	0.5	Blue
<b>FC-ICCP1MBU</b>				1	
<b>FC-ISC</b>	Unshielded Connector Assembly		--	--	Black

\*Also available in white, replace BU in part number with WH to indicate white



UTP28X7BU

## Patch Cords

High-quality and high-performance patch cords with small diameters support any needed connections in your building or classroom. Patch cords are pre-labeled for use with the *RapidID™* Network Mapping System.

Part Number	Performance Level	Cable Type	AWG	Cable Diameter In. (mm)	Flammability Rating	Length^	Color*
UTP28X^*	Category 6A	Unshielded	28	0.185 (4.7)	CM/LSZH	8", 1', 3', 5', 7', 10', 15'	Off White (blank), Black (BL), Blue (BU), Green (GR), Red (RD), Yellow (YL)
UTP28SP^*	Category 6			0.15 (3.8)			
UTP6AX^*	Category 6A		24	0.25 (6.4)	CM	1', 3', 5', 7', 10', 15'	
UTPSP^*Y	Category 6			0.24 (6.0)			
BKA6ASD8INBL	Category 6A		26	—		8"	Black

## Faceplates

With a variety of port densities and styles, these faceplates work with any Mini-Com® Jack Modules. These faceplates allow for rear-mounting of jacks.



CFPL1IWY



CFPSL4IWY



CFPL4SY

Part Number	Ports	Style	Identification	Color
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### Classic Series

CFPL1IWY	1	Flat	Label Pocket	Off White
CFPL2WHY	2			White
CFP2IW			Adhesive	Off White
CFPSL2WHY		Sloped	Label Pocket	White
CFPL4IWY	4	Flat		Off White
CFPSL4IWY		Sloped		

### Executive Series

CFPE2IWY	2	Flat	Label Pocket	Off White
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Part Number	Ports	Style	Identification	Size
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### Stainless Steel

CFPL2SY	2	Flat	Label Pocket	Single Gang
CFPL4SY	4			



## Patch Panels

Panduit pioneered angled patch panels, making it easier to route cables to the side of racks and cabinets, enabling higher density in the telecommunications closet. A variety of port densities, configurations, labeling options, and colors mean you can find the right patch panel for your application.



CPP24FMWBL

Part Number	Number of Ports	Number of Rack Units	Style	Identification	Color
<b>Flush Mount</b>					
CPP24FMWBL	24	1	Flat	Adhesive	Black
CPP48FMWBL	48	2			



CPPL48WBLY

Front Access					
CPP24WBLY	24	1	Flat	Adhesive	Black
CPPL24WBLY				Label Pocket	
CPP48WBLY	48	2		Adhesive	
CPPL48WBLY				Label Pocket	



CPP48HDEWBL

<b>High Density</b>					
CPP48HDEWBL	48	1	Flat	Adhesive	Black
CPP48HDVNSWBL				--	

## Outlet Boxes

Surface mount boxes accept Mini-Com Jack Modules to provide protected connections for a variety of devices.



CBX2WH-AY

Part Number	Ports	Style	Identification	Magnet	Color
CBX1WH-A	1	Elongated	Adhesive	—	White
CBX2WH-AY	2	Elongated		CBM-X	White



## Network Physical Security

Prevent unauthorized network access via network connections with lock-in and block-out devices.



**SKRJ45RD-X**

Part Number	Type	Color
<b>SKRJ45RD-X</b>	SmartKeeper RJ45 Blockout Device	Red
<b>SKUSBA-V</b>	SmartKeeper USB Type A Blockout Device	
<b>SKUSBC</b>	SmartKeeper USB Type C Blockout Device	
<b>SKMKEY</b>	SmartKeeper Master Key	Gray
<b>PSL-DCPLRE</b>	RJ45 Plug Lock-In Device, Recessed	Red
<b>PSL-DCPLE</b>	RJ45 Plug Lock-In Device, Standard	
<b>PSL-DCJB</b>	RJ45 Jack Block-Out Device	

## Fiber Optic Panels, Cassettes, and Enclosures

Enhance your fiber optic system with an assortment of fiber optic panels, cassettes, and enclosures.



**FRE1UBL**



**FWME2**

Part Number	Description	Cassette/FAP/FOSM Openings	Color
<b>Fiber Enclosures</b>			
<b>FRE1UBL</b>	Rack mount fiber enclosure, 1 RU	4	Black
<b>FCE1U</b>	Rack mount fiber enclosure, 1 RU, with sliding/tilt drawers	4	
<b>FWME1BL</b>	Wall mount fiber enclosure	1	
<b>FWME2</b>	Wall mount fiber enclosure	2	

Continue to next page





FAP6WAQDLCZ

Part Number	No. of Ports	Adapter Type	Fibers	Split Sleeve	Color
<b>Fiber Adapter Panels</b>					
FAP6WAQDLCZ	6	Duplex LC	12	Zirconia	Aqua
FAP12WAQDLCZ	12		24		
FAP6WBUDLCZ	6		12		Blue
FAP12WBUDLCZ	12		24		



FCSZO-12-10P

Part Number	Fiber Type	Pigtails	Connector	Performance
<b>Fiber Splice Cassettes</b>				
FCSZO-12-10P	OM4	250µm Pigtails	LC	Optimized
FCS9N-12-10P	OS2			Standard



F91BN1NNNSNM001

Part Number	Fiber Type	Connector Type	Fiber Count	Jacket In. (mm)	Flame Rating	Performance	Length Ft. (m)*
<b>Patch Cords and Pigtails</b>							
FZ2ERLNLNSN M001	OM4	LC Duplex to LC Duplex	2	0.06 (1.6)	Riser	Standard IL	3.2 (1)
FZTBN1NNNSZ M001		LC to Pigtail	12	No Jacket	Not Rated		
F92ERLNLNSN M001	OS2	LC Duplex to LC Duplex	2	0.06 (1.6)	Riser		
F91BN1NNNSN M001		LC to Pigtail	1	No Jacket	Not Rated		

\*All patch cords and pigtails available in lengths 1m - 50m

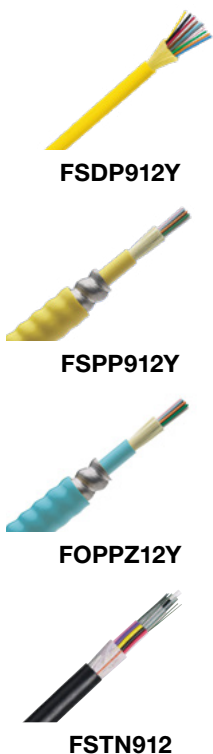
## OmniSplice™ Fiber Optic Connectors

OmniSplice Connectors enable rapid deployment of high performance fusion splice connectors for LANs, public networks, and storage-area networks throughout the campus



FSOCLC9

Part Number	Connector Type	Cable Type	Fiber Type	Color
FSOCLC9	LC-UPC	900µm tight-buffered, 250µm loose-tube, and 250µm with 900µm build-up tubing	Singlemode	Blue
FSOCLCX	LC-PC		Multimode	Aqua/Black
FSOCLCA	LC-APC		Singlemode	Green
FSOCSC9	SC-UPC		Singlemode	Blue
FSOCSCX	SC-PC		Multimode	Aqua/Black
FSOCSCA	SC-APC		Singlemode	Green



## Bulk Fiber Optic Cable

From indoor to indoor/outdoor to outside plant cables, you'll find a wide range of fiber optic cables that are easy to install and provide high-density connectivity.

Part Number	Cable Type	Flame Rating	Fiber Type	Fiber Count
FSDP912Y	Indoor distribution cable	Plenum	9µm Singlemode OS2	12
FODPZ12Y			50µm Multimode OM4	
FSPP912Y	Indoor armored cable		9µm Singlemode OS2	
FOPPZ12Y	Indoor interlocking armored cable		50µm Multimode OM4	
FSCP912Y	Indoor/outdoor all-dielectric cable		9µm Singlemode OS2	
FOCPZ12Y			50µm Multimode OM4	
FSTN912	All-dielectric outside plant cable	Non-rated	9µm Singlemode OS2	
FOTNZ12			50µm Multimode OM4	

## Cable Management Rack Systems

Open frame racks help ensure network availability and peak performance in telecommunication rooms and data centers.



**R2P**

Part Number	Height In. (mm)	Width In. (mm)	Depth In. (mm)	No. of Rack Units	Equipment Rails	Load Capacity Lbs.	Color
<b>R2P</b>	84.0 (2134.0)	20.3 (516.0)	3.0 (76.0)	45	#12-24 Threaded	1000	Black
<b>AR4P</b>	84.12 (2136.9)	20.31 (515.9)	23.0 to 42.0 (584.2 to 1066.8)			2000	

## Cable Managers

Reduce the required space to route, manage, and protect high cable capacities with vertical and horizontal cable management and rack solutions.



**PR2VD06**

Part Number	Height In. (mm)	Width In. (mm)	Depth In. (mm)	No. of Rack Units	Single or Dual Sided	No. of Doors Included	Color
<b>PR2VD06</b>	84.0 (2134.0)	6.0 (152.0)	20.6 (523)	45	Dual	2	Black
<b>WMPVHC45E</b>	83.0 (2108.0)	6.7 (170.0)	14.1 (357)				
<b>PR2HF1</b>	1.79 (45.5)	19.0 (484.0)	7.9 (202.0)	1	Single	1	

## Wall Mount Switch Cabinet

Bring connections closer to devices with the TrueEdge™ Vertical Wall Mount Enclosure.



WME3BL

Part Number	Description
WME3BL	TrueEdge Wall Mount Enclosure houses 36" of active equipment in a low-profile enclosure; 9.5" deep x 42" high
WME31RU	Bracket for TrueEdge Wall Mount Enclosure
WMEGK	Ground Kit for TrueEdge Wall Mount Enclosure
PZAEFAN	Fan Kit for TrueEdge Wall Mount Enclosure
ACF06	SmartZone Security Handle

## Cabinets

House critical network equipment in FlexFusion™ Cabinets, which provide maximum flexibility and the capacity to manage high cable densities.



XG84222BS0001

Part Number	Height In. (mm)	Width In. (mm)	Depth In. (mm)	No. of Rack Units	Color
XG84222BS0001	78.7 (1999.0)	32.0 (800.0)	48.0 (1200)	42	Black

## Cable Pathways

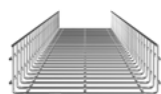
Segregate, route, and protect high-performance cabling systems throughout your buildings.



FR4X4YL6

Part Number	Description	Color
<b>FiberRunner® Routing System</b>		
FR4X4YL6	FiberRunner® 4x4 Routing System, channel with cover, 4.44 inches high x 5.50 inches wide, in 6-foot lengths.	Yellow

### Wire Basket



PWB4X12EZ

PWB4X12EZ	Wire Basket Overhead Cable Tray Routing System, 4.0 inches high x 12 inches wide, in a 12-foot length.	Electro Zinc
GACB-2	StructuredGround™ Auxiliary Cable Bracket for bonding Wire Basket systems together	Zinc Plated
PWBTB12EZ	Wire Basket Mounting Bracket; trapeze bracket for use with existing threaded rods for 12-inch wide pathway	Electro Zinc
PWBSPLEZ	Wire Basket Bolted Style Splice	
PWBHKEZ	Wire Basket Hardware Kit	



PWBSPLEZ



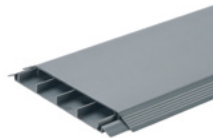
**JP2SBC50RB-L20**

Part Number	Description	Max. Bundle Capacity In. (mm)	Material
<b>J-Hooks</b>			
<b>JP2SBC50RB-L20</b>	J-Hook with screw-on beam clamp for use with flanges up to 0.5-inch thick	2.0 (50.8)	Nylon 6.6 with metal
<b>JP4SBC50RB-X20</b>		4.0 (101.6)	

Visit [www.panduit.com](http://www.panduit.com) to see the full line of channels, brackets, connectors, and accessories for FiberRunner and Wire Basket, along with a broad offering of J-Hooks.

## Raceway

Route, protect, and conceal data, voice, and video cabling along walls or above floors.



**AFR4BCBL6**

Part Number	Description	Interior Dimensions	Length (Ft.)	Color
<b>LD10IW10-A</b>	LD10 Surface Raceway Channel with latching cover and adhesive mounting	1.5" wide x 0.94" deep	10	Off White
<b>AFR4BCBL6</b>	Above Floor Raceway 4-channel base and cover, ADA compliant	6.93" wide x 0.5" deep	6	Black
<b>AFR4TBLGBL</b>	Above Floor Raceway Table Leg Fitting to route cable to a table	6.4" wide x 30" high	—	
<b>T70BIW10</b>	T-70 Surface Raceway Base	4.07" wide x 1.77" deep	10	Off White

Visit [www.panduit.com](http://www.panduit.com) to see additional sizes and colors of raceway available.

## Grounding and Bonding

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



**HTCT250-2-1**

Part Number	Description
<b>GCE250-1/0-Q</b>	E-Style Grounding Connector meets IEEE STD 837-2002 and REV 2014; UL467 and CSA certified for grounding, bonding, and suitable for direct burial in earth or concrete
<b>HTCT250-2-1</b>	Code/Flex Conductor HTAP, Type HTCT for making parallel and multiple tap connections on code and flex conductors

## Uninterruptible Power Supply (UPS)

Depend on Panduit UPS for highly efficient and reliable power protection and backup power for computer IT equipment.



**U02N11L**

Part Number	Description
<b>U02N11L</b>	UPS, 1.5kVA, 2 U, 120V, Single Phase, Lithium-Ion Power Protection with Intelligent Network Card and Rail Kit
<b>U05N11V</b>	UPS, 5kVA, 6 U (3 U UPS + 3 U EBP), 208/240V, VRLA, Single Phase, Double-Conversion On-Line Power Protection with Intelligent Network Card and Rail Kit
<b>UTFMRDU</b>	Step-Down Transformer Distribution Unit is a step-down transformer/voltage converter that provides 120 VAC output power from 208 VAC
<b>U2PTRMT</b>	2-Post Rack-Mount Adapter Kit for Rack-Mount 2 RU UPS/Battery Systems





### Power Distribution Units (PDU)

Customize your power profile to best suit your needs, with basic and intelligent rack PDUs offering best-in-class outlet density and superior reliability.



Part Number	Input Current per Phase	Form Factor	Input Plug Type	Apparent Power kVA	Outlet Count	Outlet Type	Length In. (mm)	Width In. (mm)	Depth In. (mm) at Outlet Position
P36E33M	30	0 U FULL	L6-30	5.0	36	(30) C13, (6) C19	68.9 (1750.1)	2.0 (50.8)	2.1 (58.34)
P24E28M			L6-30P		(20) C13, (4) C19				
P24D23M		0 U MID	L5-30P	2.9	24	(24)5-20R	58.7 (1491.0)		
P24D07M			L6-30P	5.0		(20) C13, (4) C19			
P16D12M		2U	L5-30P	2.9	16	(16)5-20R	3.4 (87)	17.5 (444)	10.6 (270)

### Labeling and Identification

Proper identification of cables, racks, panels, and outlets not only is required to meet standards, but also simplifies management of the network after installation.



Part Number	Description
<b>Printer and Easy-Mark Software</b>	
MP300	MP300 PXE Series Mobile Printer, combines Epson print technology and Panduit labeling and software expertise for industrial grade marking solutions for network and electrical contractors
EMPLUS-DL	Easy-Mark Plus™ Labeling Software, online download

#### Front Access

Part Number	Label Type	Labels per Cassette	Print-On Area Color	Width (In.)	Length (In.)
R100X150V1M	Turn-Tell®	100	Black on White	1.0	1.5
S100X150VAM	Self-Laminating	175	Black on White	1.0	1.5



# PANDUIT®

Since 1955, Panduit's culture of curiosity and passion for problem solving have enabled more meaningful connections between companies' business goals and their marketplace success. Panduit creates leading-edge physical, electrical, and network infrastructure solutions for enterprise-wide environments, from the data center to the telecom room, from the desktop to the plant floor. Headquartered in Tinley Park, IL, USA and operating in 112 global locations, Panduit's proven reputation for quality and technology leadership, coupled with a robust partner ecosystem, help support, sustain, and empower business growth in a connected world.

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

**800.777.3300**

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CPCB254-SA-ENG 7/2025