



PANDUIT™

**Wind Energy
Solutions**

www.panduit.com/renewable-energy

Building the Future of Wind Energy

Panduit is a leading provider of electrical Balance of System (BOS) components for the Wind Power Industry. Our broad portfolio covers cable management, grounding, safety, and data infrastructure – more ground than any other manufacturer. Plus, we offer direct access to Panduit expert consultants to help you maximize efficiencies and decrease total cost of ownership across your entire project.

Panduit solutions benefit all project stakeholders:

DEVELOPERS AND OPERATORS: We're here to help you achieve lowest cost of ownership through maximized uptime and minimized labor costs. Each product is developed and tested for extreme conditions common to wind power fields, so you can confidently rely on our electrical BOS components to keep expensive power generation assets online.

EPCS AND INSTALLERS: Our cable management, grounding, and safety products are designed with installers in mind. Patented solutions reduce complexity to improve productivity and reduce labor costs. Best-in-class labeling solutions simplify installation and future operation and maintenance.

MANUFACTURERS: We partner with major turbine and Battery Energy Storage Solution (BESS) providers to help solve novel cable management challenges, improve reliability, and streamline the manufacturing process for these core renewable energy assets.

The Next Evolution of Wind Energy Technology

OFFSHORE WIND: The potential of offshore wind is enormous, as is the engineering complexity. In addition to our currently available cable management products for harsh marine environments, we are developing undersea cable solutions to carry the power generated by deep-water offshore floating turbines to the grid.

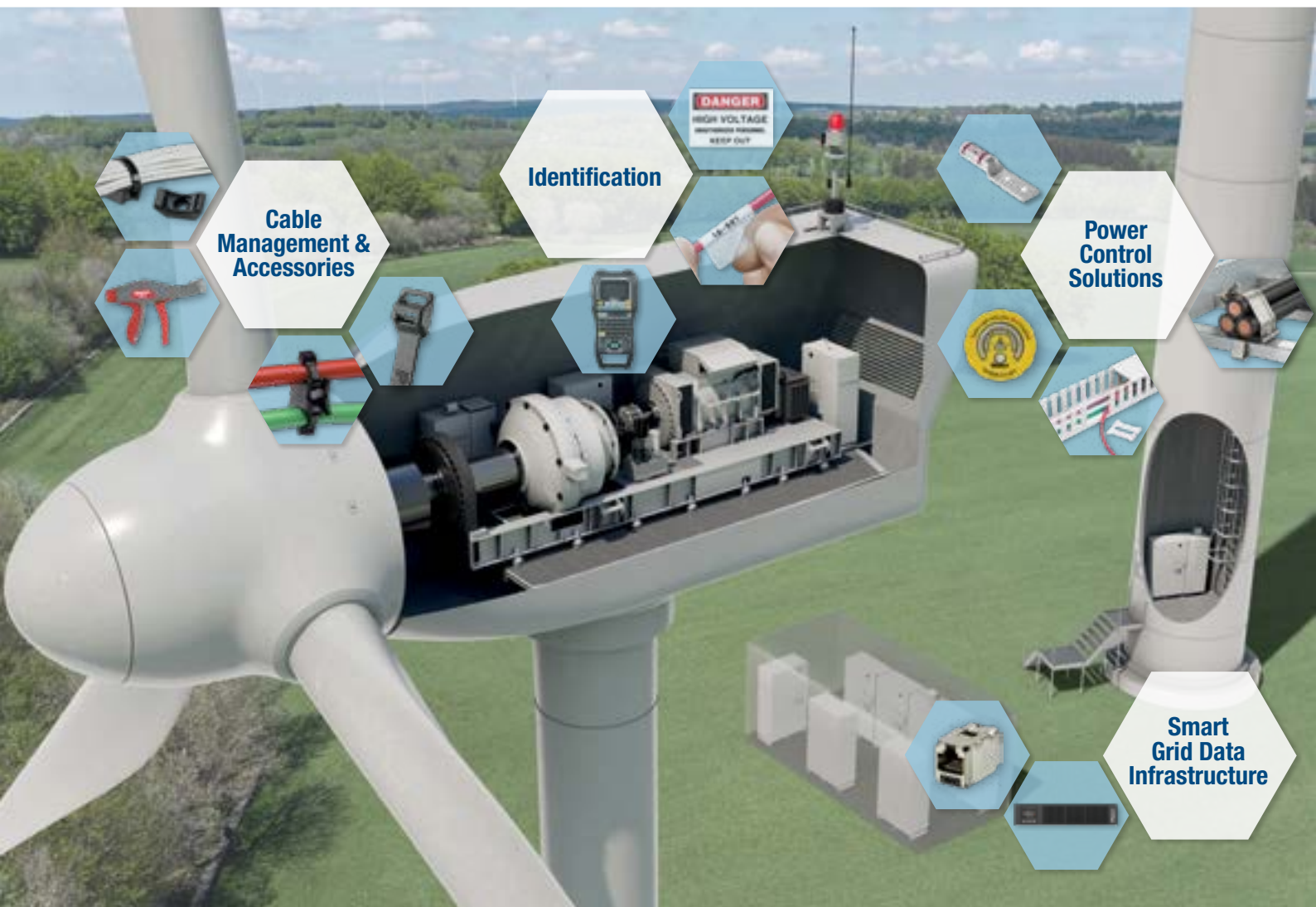
GRID INTEGRATION: Smart grid technology has made it easier to integrate variable renewable energy resources like wind into the electrical grid. Our network solutions help utilities balance electricity generation and consumption to increase the reliability and stability of the grid, allowing greater penetration of wind energy into the overall energy mix.

ENERGY STORAGE: Energy storage technologies directly address the intermittency issue present with all renewable energy sources. We work with manufacturers to integrate innovative components inside and outside the battery bank, optimizing space constraints and improving reliability.

DIGITALIZATION: The use of sensors, big data, and artificial intelligence is revolutionizing the industry by enabling better forecasting, predictive maintenance, and optimization of wind farms. Our network components play a central role in many of the biggest data centers worldwide.



End-to-End Solutions to Power your next Wind Project



Cable Ties & Tools

Weather Resistant Nylon 6.6

Designed to satisfy the needs of general applications, while delivering consistent performance and reliability. Featuring a curved tip to allow for easy pick up from flat surfaces and faster initial threading.

PLT-M0 Series

For a comprehensive list of all cable tie and cable tie tool offerings, visit: [Cable Ties Product Selection Guide](#)



Pan-Steel® 316 Stainless Steel

The Pan-Steel® 316 grade stainless steel cable tie speeds up installation with a patented, wide entry self-locking head that eases band threading and insertion. Unique locking ramp design and strengthening ribs allows the tie to lock into place at any length along the tie body with increased lock strength. Fully rounded edges ensure worker and bundle safety.



Installation Tools

GTS-E

Installs subminiature, miniature, intermediate and standard cross section cable ties.



GTH-E

Installs standard, heavy-standard, light-heavy, and heavy cross section cable ties.



Cable Accessories

Cable Tie Mounts

Various styles of mounts provide anchoring means for cable ties ranging from miniature to heavy cross-section and beyond. Mounts can be affixed with a screw or adhesive.

Featured Products

Heavy Duty Cable Tie Mount

Screw applied extra heavy cable tie mounts are designed for use with Panduit extra-heavy cross section cable ties for mounting cable, large wire bundles, or tubular shapes. Their unique cradle design provides maximum stability for cable bundling, routing and the support of large diameter and heavy cable bundles.



Cable Tie Mount

Screw applied cable tie mounts offer a through hole in the mount in which a screw or rivet can be secured, this offers maximum stability for cable bundles. Install with a #10 (M5) screw. Suitable for miniature, intermediate, standard, and light heavy cross-section cable ties. Made of Nylon 6.6, which increases mechanical strength, heat and wear resistance, and stiffness.



Pan-Steel® Stainless Steel Mounts

Stainless Steel Tie Mounts provide a low profile, one-hole mounting option and can be used with standard, light-heavy, and heavy cross section Pan-Steel® Ties as well as .38 inch (9.5mm) wide strapping.



For more products visit:

[Adhesive Backed Mounts](#)

[Super Grip Cable Ties](#)

[Extra-Heavy Screw Mounts](#)

[Screw Mounts](#)

Cable Cleats

Available in a variety of sizes, Panduit 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. Cable Cleats are uniquely engineered for ease of installation in a range of applications and harsh environments.



[MLT4DSH-Q316](#)



For a comprehensive list of all cable cleat offerings, visit: [Cable Cleat Products for Short Circuit Protection Data Sheet](#)

Cable Cleat Accessories

[Pan-Steel® Cushion Sleeve](#)

Custom Length Cushion Sleeving is designed for use with metal locking strap and buckle strap cable cleats to help protect in the event of a short circuit fault. The cushion sleeving is compatible with super-heavy cross section ties, custom length banding systems, or MS strapping, for use in harsh environments and applications. Features U-shaped channel, black neoprene material, and 100 foot reels.



Grounding Products

[StructuredGround E Style Grounding Connector](#)

The E Style Ground Connector is designed to enhance the crimp process using technology that meets IEEE STD 837-2002 and REV 2014. Has a wide range taking ability, multi-connector design provides flexibility with minimum number of parts. Slotted design allows quick, easy assembly while the pre-applied conductive antioxidant compound ensures a high quality mechanical and electrical bond. UL467 & CSA certified for grounding, bonding and suitable for direct burial in earth or concrete.



Power Connectors

Feature generously beveled entry ports to prevent wire strands from bending back during the wire insertion process. An inspection window allows installers to confirm full conductor insertion has occurred. Tin plating inhibits corrosion. UL Listed and CSA Certified to 35kV and temperatures to 90°C. Meet stringent American Bureau of Shipping standards.



[Terminal Selection Guide](#)

Ferrule wire end sleeves in 16 and 18 AWG reduce the potential for shorts or intermittent system faults. They install quickly and create safe, homogeneous connection points. Brightly colored insulation sleeves simplify troubleshooting.



[Power and Grounding Tool Solutions Catalog](#)

Panduit offers a wide variety of lithium-ion battery-powered terminal and power connector installation tools that are easy to use and create reliable, high-grade terminations. Payback comes quickly through improved productivity. Installers can complete up to 135% more crimps per battery charge than traditional NiCd or NiMH tools.



Abrasion Protection

Abrasion protection products provide an economical and easy way to insulate, protect, bundle and color-code components and cable. A wide variety of sizes and materials are available to meet a broad range of indoor and outdoor applications. To help assure optimum quality, abrasion protection products are designed and manufactured to meet applicable quality standards including International, UL, Military, ISO, and Aerospace.

Featured Products

Corrugated Loom Tubing

Polyethylene Corrugated Loom Tubing protects cables from impact and abrasion. Features a slit for easy installation onto a bundle of wires or a pre-assembled harness assembly, increasing productivity. Hold in place with cable ties and accessories. Suitable for indoor applications. UL94-HB flammability rating and a maximum temperature rating of 122°F (50°C).



Slotted Grommet Edging

The Polyethylene Slotted Grommet Edging protects and prevents wires and cables from chafing against sharp edges of panel walls and knockouts. Slotted edging recommended for use on irregularly shaped and round panel holes. The material is highly flexible, while the adhesive lining ensures the product will stay in place.



Braided Sleeving

The Braided Sleeving provides continuous abrasion resistance for wires, cables, and tubing. The lightweight, durable protection is highly flexible, and the open weave will not trap heat or humidity. Complaint with U.S. and European passenger rail standards. Temperature range: -94°F – 257°F (-70°C – 125°C).



Spiral Wrap

The Tetrafluoroethylene Spiral Wrap Product provides continuous abrasion protection for wires, cables, and tubing. The spiral wrap harnesses cables into a single manageable bundle while allowing for breakouts of single/multiple cables. Lightweight, flexible, durable protection is perfect for irregular shapes. Installation tool supplied. Rated for use up to 356°F (180°C).



Wiring Duct

Panduit offers the most innovative line of Wiring Duct products. Our Halogen-free, Polyphenylene Oxide (PPO) products, offer a special purpose material for use in halogen-free or high-temperature applications. It has a UL 94 flame class of V-0 with a UL recognized continuous use temperature up to 203°F (95°C) and is 20% lighter than PVC. The halogen-free material is environmentally safe and will not release corrosive or toxic gases.

Featured Products

Halogen-Free Slotted Duct

The Panduct® NE Halogen-Free Slotted Wiring Duct has a nominal duct size designed to optimize space. Manufactured with a special purpose material for use in halogen-free or high-temperature applications.



Halogen-Free Cover

The Halogen-Free PPO Wiring Duct Cover features a non-slip, liner to prevent cover slide. The cover is easy to install and remove. The special purpose material is for use in halogen-free or high-temperature applications.



PVC Slotted Duct

The Panduct® Lead-Free PVC Narrow Slot Wiring Duct features a narrow slot/finger design that closely matches the spacing of high-density components. Upper and lower scorelines allow for easy finger/sidewall section removal.



DIN Rail Duct

PanelMax™ DIN Rail Duct

DIN Rail Wiring Duct is a wire management solution that positions DIN rail and components off the panel directly above an integrated wire management channel for up to a 30% smaller footprint; up to 25% material cost savings; and up to 50% faster installation.



For a comprehensive list of all Duct offerings, visit:

[Wiring Duct Product Selection Guide](#)

TDP43ME Desktop Printer

Print a variety of self-laminating labels, component labels, non-laminated labels, heat-shrink labels, marker plates, and continuous tapes up to 4" wide. It includes Easy-Mark Plus Labeling Software.



MP300 Mobile Printer

The Panduit MP300 mobile label printer is the ideal solution for labeling in the field. The 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.



Metal Embossing Hand Tool

The Embossing Tool is lightweight, compact, portable, and embosses 3/16" characters on metal tape. The Metal Embossing Hand Tool includes the tool, additional marking wheel, carrying case, one roll each META (aluminum), and METS (stainless steel) tape.



Embossing System

The PES400 Embossing System delivers a permanent identification solution on-site and on-demand. The system creates raised characters on stainless steel and aluminum marker plates to deliver maximum visibility for medium to high volume applications that are exposed to dirt and paint. Features fast embossing speed of up to 300 plates/hour.



Marker Plate

The Marker Plate provides permanent identification of pipes, valves, cables, and equipment in harsh environments. Designed for use with Panduit Pan-Steel® Cable Ties for fast installation at the lowest cost. For on-site marking, use the Metal Indenting Machine (MIM) or Permanent Identification Systems (PES400).



Electrical Tape

Suitable for primary insulation and splicing up to 600V and can be used as protective jacketing. Offering protects against an array of abrasive and corrosive materials, while providing quality adhesion properties, as well as resistance to UV rays and cold weather.



Safety Labels

Designed to comply with the latest OSHA regulations and standards.



Absence of Voltage Testers

VeriSafe 2.0 Absence of Voltage Tester is an a permanently mounted voltage tester for use in three-phase AC or DC systems up to 1,000 V. Helping to prevent possible exposure to electrical hazards.



Continuous Tapes

Ideal for safety signage and identification. A resin ribbon is recommended. Designed to be used with the Easy-Mark Plus Labeling Software and TDP printers.



Copper Solutions

Find the greatest value on the market, secure future reliability, and provide the foundation for network growth for harsh environmental conditions.



Industrial Copper Cable

The Cat 6A SF/UTP copper cable is constructed of 24/7 AWG stranded copper conductors with HDPE polyethylene insulation. The copper conductors are twisted in pairs and wrapped with a foam polypropylene tape to form a core.

Industrial Copper Faceplates, Outlets & Panels

The IndustrialNet™ Copper DIN Rail Patch Panel is constructed of high impact polycarbonate material. This 8-port DIN rail patch panel mounts to a standard 35mm DIN rail and includes adjustable latches to lock in in place.



Industrial Copper Patch Cords

The IndustrialNet™ Cat 5e Shielded Patch Cord is constructed of industrial grade, 24 AWG, SF/UTP, twisted pair, stranded, CM cable with industrial bulkhead shielded modular plugs with black strain relief boots.



Industrial Copper Connectors

The IndustrialNet™ Cat 5e UTP bulkhead RJ45 coupler module with protective cap is ideal in manufacturing environments. The bulkhead provides an IP67 rated seal that provides protection from dust and temporary immersion in water.



Harsh Environment Fiber Solutions

Industrial Fiber Optic Systems provide advanced bandwidth and physical infrastructures with comprehensive fiber optic systems that deliver high performance, reliability, and scalability to industrial environments.



Industrial Fiber Cable

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

Industrial Fiber Optic Faceplates, Outlets & Adapters

The IndustrialNet™ 8-port DIN Rail Fiber Optic Patch Panel provides fiber protection for terminated distribution style cabling. It can be mounted to a standard 35mm DIN rail and locked in place with adjustable latches, which are designed to allow it to mount on a flat surface.



Outdoor Fiber Closures and Accessories

Industrial Fiber Optic Systems provide advanced bandwidth and physical infrastructures with comprehensive fiber optic systems that deliver high performance, reliability, and scalability to industrial environments. They house, organize, manage and protect fiber optic cables and splices.



Fiber Connectivity Solutions

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



Fiber Optic Cassettes

The HD Flex™ Cassette is OM4 MPO to LC and supports 12 fibers total. It is Ultra IL and uses Method A polarity. The cassette has a black cover with a black MPO connector and 6 aqua duplex LC adapters with integral shutters to prevent contamination.

Fiber Optic Enclosure Accessories

Opticom Fiber Splice Module holds and protects up to 24 fusion and 144 ribbon splices within Panduit Opticom Rack Mount Fiber Enclosures. The self-stacking modules stack 4 high and provide the perfect amount of fiber slack or spool for long-run installations or high-bandwidth applications.



Fiber Optic Enclosures

The HD Flex™ Fiber Enclosure is 1 RU and is configured with sliding front-access drawers to accept up to twelve 6 port HD Flex™ cassettes or Fiber Adapter Panels for a maximum density of 144 fibers.



Fiber Optic Panels

The Opticom® LC Fiber Adapter panel is OS2 and is loaded with 12 LC Duplex Fiber Optic Adapters. The Fiber Optic Adapters are blue with zirconia split sleeves.



Uninterruptible Power Supplies (UPS)

Delivering highly efficient and reliable power protection and backup power for your computer IT equipment, the Uninterruptible Power Supply provides excellent electrical performance, intelligent battery management, and enhanced intelligent monitoring.



UPS/Uninterruptible Power Supply

Provides excellent electrical performance, intelligent battery management, enhanced intelligent monitoring, secure network functions and long lifespan for lithium units. Highly efficient, reliable power protection and backup.

Industrial Uninterruptible Power Supplies (IUPS)

The Uninterruptible Power Supply (UPS) is maintenance free and requires no battery. The UPS is 100W and is 24 V DC. The ultracapacitor technology reduces the risk of downtime from battery failures and saves expenses on battery inspections and replacement.



Batteries

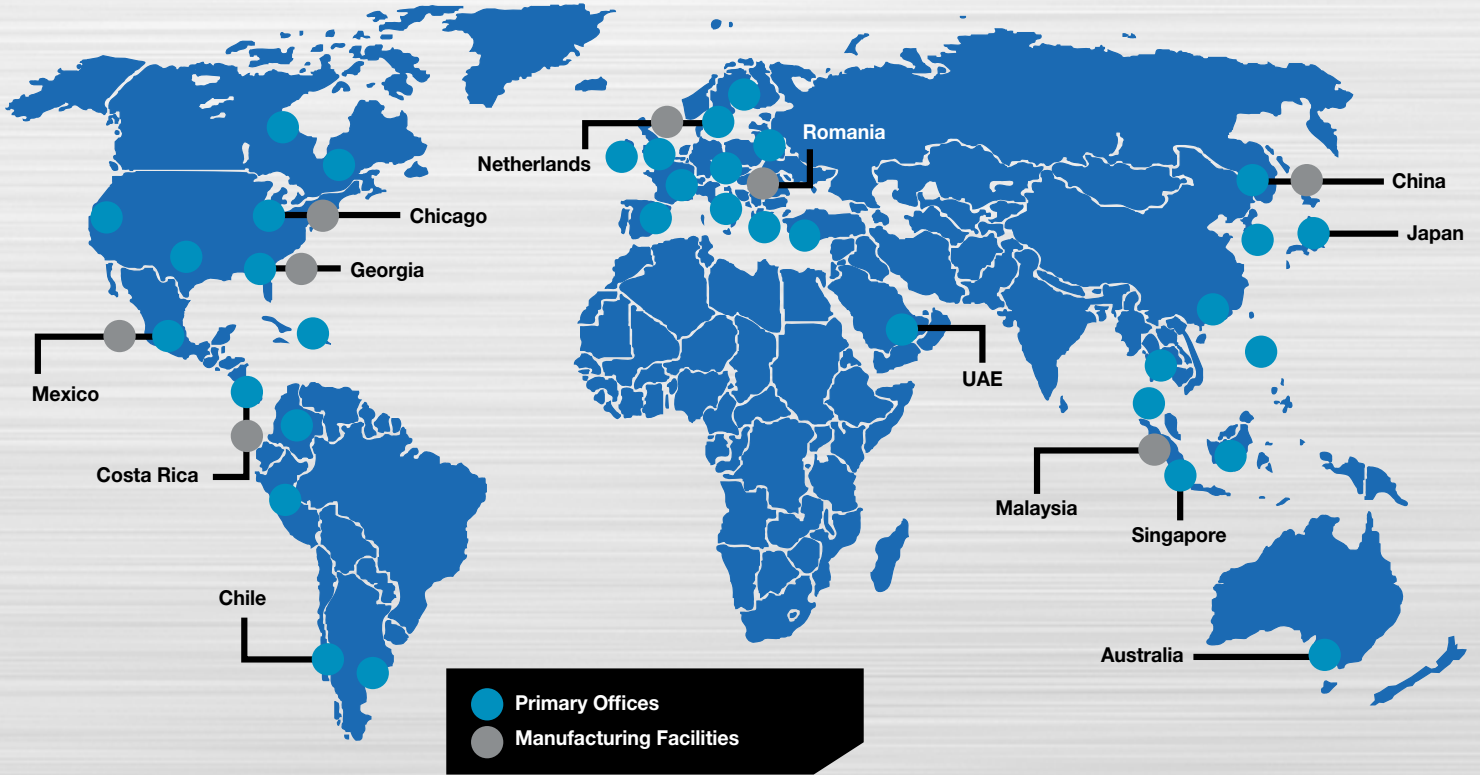
Enhance the production of your UPS with accessories including batteries, tower stabilizer brackets, and network management cards.



Environmental & Security

Power distribution, environmental, humidity sensors and connectivity systems improve availability, scalability, power, cooling efficiency, and product quality leading to a decrease in network downtime and increase in data center productivity.





Global Capabilities

Global Expertise and Support

Global distribution, manufacturing, sales and technical support teams make Panduit solutions readily accessible, allowing the right products to be delivered when and where they are needed.

Worldwide Certifications

Panduit solutions hold a variety of the most common heavy industry certifications and approvals worldwide.



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