



**Panduit Infrastructure Management  
Software for Data Centers  
and Beyond**

**PANDUIT®**



## Nearly 60 Years of Infrastructure Leadership

**Today, 84% of Fortune 100 companies deploy Panduit solutions. Each member of the Fortune Top 10 is a Panduit strategic customer.**

With rapid increases in data center complexity and density together with spiraling energy costs, pressures to reduce operational expenses, critical reliance on IT for business continuity, and the ever-increasing financial impact of downtime — managing your data center and IT infrastructure is an enormous challenge. Unfortunately, you simply cannot manage what you do not measure.

Leveraging our history of infrastructure leadership, we have developed the industry's most holistic portfolio of software, hardware, and service solutions providing a complete, comprehensive, and granular understanding of your data center and enterprise infrastructure throughout its lifecycle, with critical insight into power consumption, cooling, capacity, assets and security.

### **Expanding the Benefits of DCIM with Panduit SmartZone™ Solutions**

Today, it is becoming increasingly difficult to manage data centers and extended enterprise sites that are dynamically growing in scale, density, and complexity in response to increasing business demands. Complicating factors include budget constraints, manual processes, remote locations, audits, and increasing operational expenditures, which combine to make it difficult to optimize existing IT assets and resources. As a result, IT professionals are turning to data center infrastructure management (DCIM) technologies to gain greater control over their operations.

Panduit addresses the need for DCIM and expands beyond it with a portfolio of Panduit SmartZone™ Solutions that deliver comprehensive energy and physical infrastructure efficiency in data centers, building facilities, and remote enterprise sites through intelligent products, systems, and services. By leveraging our pioneering 6 Zone™ infrastructure methodology for assessment, plan/design, integration, and operation, our SmartZone™ Solutions provide a holistic view of connectivity, energy, and environmental parameters in the data center and extended enterprise. This can help to immediately improve operational and energy efficiencies, achieve rapid and significant cost reductions, and improve overall facility performance, with the intention of helping you align with corporate energy initiatives and take advantage of any governmental financial incentives.

At the forefront of the SmartZone™ Solutions portfolio is infrastructure management software that collects, filters, and processes real-time data to provide visibility across your entire infrastructure. This software addresses power and energy usage challenges, capacity constraints, environmental issues (temperature, humidity and CO<sub>2</sub> footprint), asset tracking, remote management, and security to provide the tools and information needed to make intelligent decisions.

By combining real-time asset and connectivity data with power and energy management insights, Panduit SmartZone™ Solutions empower you with valuable infrastructure information, and enable Data Center and Facilities Management to work together to ensure effective understanding and management of your data centers, facilities, and remote IT infrastructure. Together, you can create optimization strategies to improve energy efficiency and prevent infrastructure related downtime, while providing ongoing monitoring and actionable information regarding data center and infrastructure capacity.

# Panduit Physical Infrastructure Manager™ (PIM™) Software Platform

As part of the SmartZone™ Solutions portfolio, the Panduit Physical Infrastructure Manager™ (PIM™) Software Platform provides complete visibility of the data center and extended enterprise through software-based automation, pre-defined dashboards and reports, change management, and related documentation, and combines with intelligent devices for increased functionality. In addition, the PIM™ Software Platform integrates with higher-level network management and service desk platforms to optimize data center operations.

The PIM™ Software Platform is an enterprise-class DCIM tool that combines connectivity management data and dashboards with asset tracking, allocation, and utilization information, enabling you to reclaim and repurpose IT assets effectively. PIM™ Software Platform centralizes the collection and visual representation of a rich set of asset attributes, such as connectivity, space/port availability, and power/environmental data to ensure that your physical infrastructure supports mission-critical applications, and enables effective optimization of your data center's space, power, and cooling resources.

## Monitor and Manage Your Network, Remote Locations, and Connectivity in Real-Time

The PIM™ Software Platform offers visibility into:

- Process documentation of IT assets, moves, adds, and changes (MACs)
- Power consumption, temperature, and humidity measurement of active equipment
- Precise location and utilization data for assets and connections
- Centralized monitoring of IT assets through a single platform
- Underutilized assets and resources
- Unauthorized patch field changes
- Potential physical network security breaches
- Root cause analysis of physical network problems
- Capacity limits

Panduit's modular approach to delivering DCIM functionality enables you to customize the solution to meet the needs of your organization both now and in the future. Process-driven integration with your current network management and service desk platforms delivers a stream-lined interface to support management of IT assets with related attributes and physical infrastructure components of your data center and extended enterprise.

## The Panduit® SmartZone™ Solutions Portfolio Includes:

- **SmartZone™ Infrastructure Management Software Platforms**
  - Asset Tracking and Management
  - Remote Management and Connectivity
  - Capacity Planning and Management
  - Power and Environmental Management (cabinet level)
  - Power and Energy Management (facility wide)
- **SmartZone™ Services**
  - Energy Management Services
  - Physical Infrastructure Assessment Services
  - Thermal Assessments and Optimization
  - Implementation Services
  - Design Services
- **SmartZone™ Gateways**
  - Platform-based solutions providing scalable, highly accurate energy, environmental, and physical security monitoring
  - Unrivaled levels of granular monitoring and enhanced resilience utilizing a single IP address
- **SmartZone™ Intelligent Devices**
  - Power Monitoring Devices
  - Power Distribution Units (PDUs)
  - Intelligent Patch Panels
  - Sensors
  - Security Devices

# Leverage the Information Needed to Make Meaningful Operational Decisions

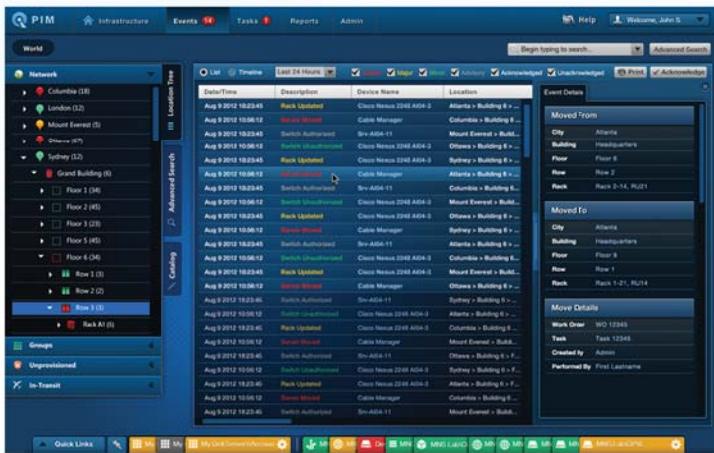
The PIM™ Software Platform is comprised of an enterprise-class suite of software modules that work seamlessly with PVIQ™ System Hardware and select third-party devices, and enables the tracking, allocation and utilization of critical IT assets within your data center and throughout your enterprise.



## PIM™ Base Module

Whether you are looking for connectivity, power, or environmental data, it all starts with PIM™ Base, which serves as the required foundation for all the individual software modules. Included with this module is system administration, location management, event management, networking discovery, and reporting, along with rack-level and room-level elevation views.

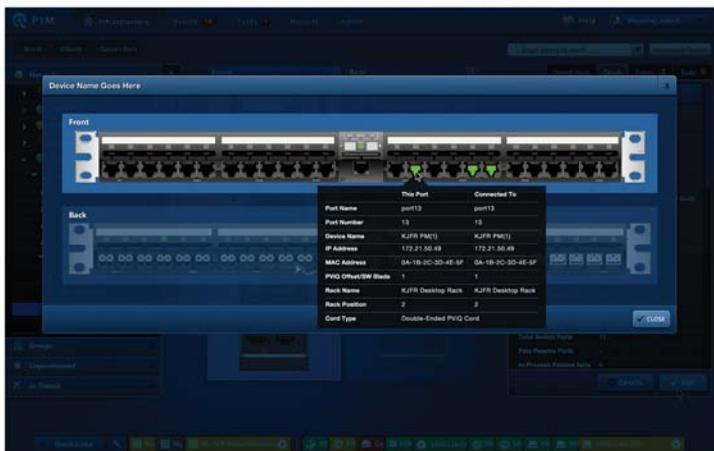
Real-time reporting is built into all PIM™ Modules, documenting items such as patch field configuration changes and all asset movements while automatically updating database information. In addition, detailed reports on power utilization, environmental conditions, and space utilization allows IT managers to automate and generate standard and customizable audible reports. These reports may be used to assist compliance with corporate and industry regulations and to support energy conservation goals and other sustainable IT initiatives.



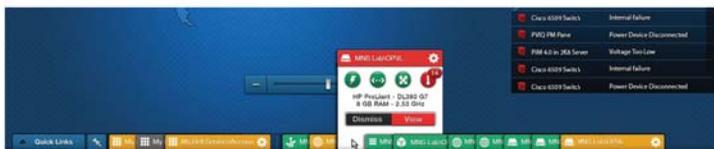
## PIM™ Software Platform

### Key Benefits:

- Mitigate business risks
- Drive operational advantages and sustainability benefits
- Reduce OpEx and CapEx
- Optimize capacity management
- Support centralized remote management
- Deliver a single pane of glass to drive efficiency



Panduit intelligent software and hardware solutions can enable effective optimization of your data center's space, power, and capacity planning through up to 10% OpEx savings in energy costs, 75% faster moves, adds, and changes (MACs), and 80% faster mean time to repair (MTTR).



## Asset Tracking, Allocation and Utilization

### Key Benefits:

- On- and off-networking tracking of active devices
- Ability to add supplemental devices
- Customizable asset definitions

## PIM™ Asset Module

The PIM™ Asset Module provides active asset tracking and utilization through automatic detection and reporting, with supplemental asset details available through manual data entry and data import. Users are notified when a device is connected or disconnected from the active network. You are provided with accurate and dynamic representation of your IT assets across the full lifecycle through automated documentation and processes in support of ITIL and ITSM initiatives. Through analytics and reporting, PIM™ Software enables you to reclaim, repurpose, and deploy assets more effectively, while at the same time optimizing the utilization of valuable space, power, and cooling resources and network port capacity.

Benefits of PIM™ Asset include collection and consolidation of critical IT asset attributes including location, connectivity, power, and environmental information, in order to maximize utilization of IT resources and support real-time views into current and future capacity allocation.

## PIM™ Connect Module

The PIM™ Connect Module provides real-time monitoring and management of all patch field connectivity to capture planned and unplanned changes. This module features a multi-select, fast-opening, flexible location tree for customized topology creation, that provides intelligent interconnect to active and passive devices. When used with PVIQ™ Patch Panels, Intelligence Modules, and PVIQ™ Patch Cords, the PIM™ Connect Module enables you to make guided moves, adds, and changes, as well as guided patch cord tracing.



## PIM™ Power Module

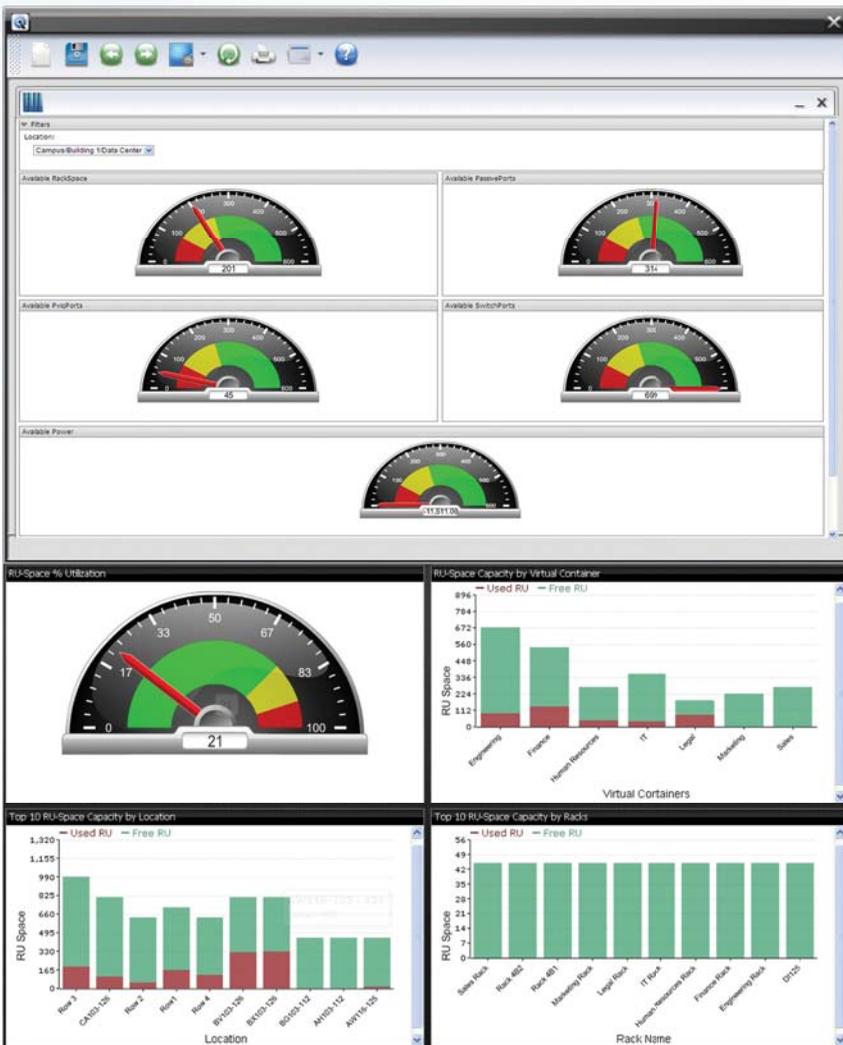
The PIM™ Power Module enables power measurement and threshold monitoring of temperature and humidity levels within a data center and the extended enterprise. You will benefit from power and environmental specific reports associated with the management of intelligence-enabled Power Distribution Units (PDUs) with environmental sensors, as well as select third-party PDUs. You will be empowered through your ability to monitor and catalog data center performance, energy consumption, and environmental conditions over user-defined periods for enhanced system management and reliability.

## DCIQ™ Energy Management Software

DCIQ™ Software helps bridge the gap between IT and Facilities Management by providing a single, integrated and holistic view of the entire data center through the monitoring and management of all power and environmental conditions from building point-of-entry to individual cabinet payload.

Through the centralized monitoring, data collection, management, consolidation and detailed reporting of the key elements across IT and Facilities, you can truly understand and manage the interdependencies between Facility and IT infrastructures.





## PIM™ Advanced Dashboard and Reports Module

The PIM™ Dashboard and Reports Module provides enhanced visibility into operational metrics that include critical parameters needed to manage a data center – power, space, connectivity, and asset tracking – through a number of pre-defined dashboards and reports. Users have the ability to define custom reports and dashboards using an extensive array of data visualization components such as gauges, charts, and dials. This module provides the ability to filter data in real-time to refine or isolate the data set as needed. Access, analyze, and drill down through a wealth of information for effective decision making.

## PIM™ Integration Modules

Integration with third-party applications through Application Programming Interfaces (APIs) allows PIM™ Software to augment existing network management systems and service desks for complete end-to-end management of network elements.

## Connectivity Management

### Key Benefits:

- Automated documentation of connectivity
- Provisionless interconnect to all network devices
- Elimination of serial task implementation and re-provisioning
- Secure violation visibility
- Workflow improvement

## Power Distribution Unit Monitoring

### Key Benefits:

- Power measurement and thresholds monitoring of temperature and humidity levels
- Central management of multiple PDUs
- Automated documentation of power utilization and of environmental data
- Trending analysis and visualization of multiple environmental inputs

## DCIQ™ Energy Management Software

### Key Benefits:

- Helps recover capacity in power and cooling
- Monitoring data from building 'point of entry' to individual payload within the cabinet will enable the apportioning of costs where appropriate

## Dashboard and Reports

### Key Benefits:

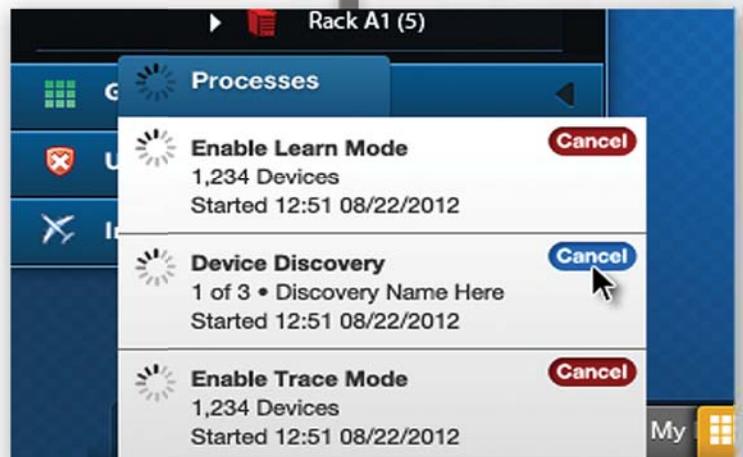
- Instant snapshots of data center metrics with dashboard-style presentation
- Rapidly create and view multiple representations of power, space, connectivity, and asset tracking data
- Pre-defined dashboards and reports provide an at-a-glance perspective of an operational scenario
- Filter data displayed in the report in real-time to refine or isolate the data set as needed

## Advantages of PIM™ Software Platform

### Provides Visualization of Data Center and Enterprise Environments

Visualization of floor layouts, telecom closets and related connectivity components. Consolidates multiple critical metrics into one view, simplifying operations and empowers cost-effective network management and access to vital network information from anywhere in the world.

Visibility and connectivity management functions are accessible to all locations in the enterprise, from a single web-accessed administration terminal.



### Automated Documentation

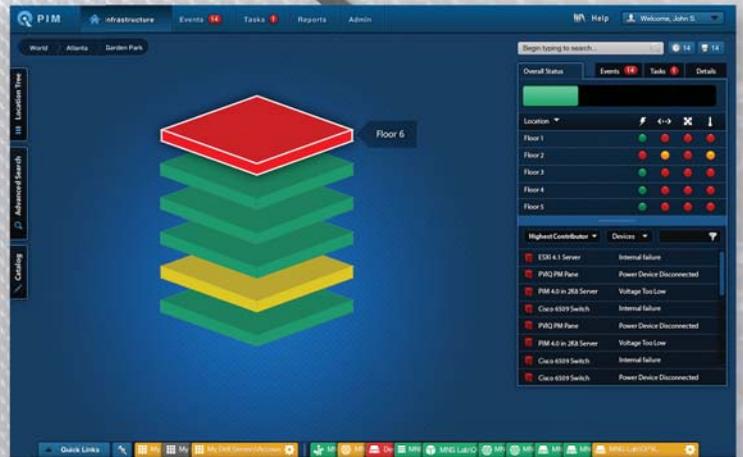
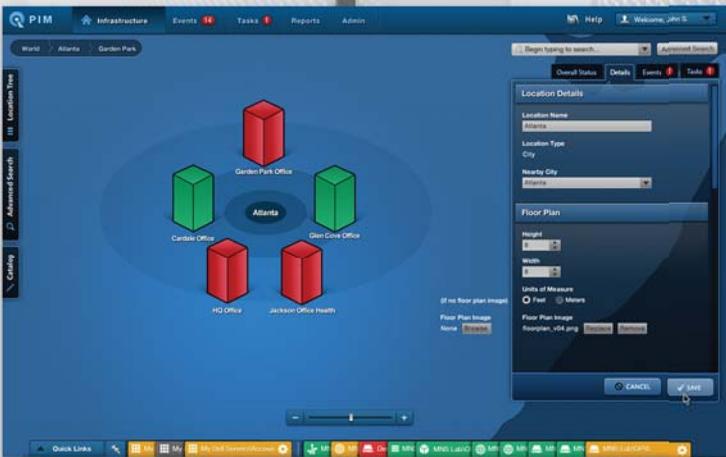
You can capture connectivity changes, graphically display them in real-time, and automatically update your database. This provides an accurate representation of connectivity status for quicker change planning, issue resolution, and reduced downtime.



### Single Pane of Glass User Interface

PIM™ 5.0 provides a superior user experience with a robust user interface and brings all functionality together under an intuitive, platform-independent “single pane of glass” view with consistent navigation. Current activities and views are visible in color-coded tabs, together with user-defined “Quick Link” tabs.

The flexible discovery architecture provides a real-time representation of your network and devices – while preventing any proliferation of outdated information – providing only accurate and actionable data. A fast and flexible device discovery process results in reduced network traffic and increases responsiveness.



### Remote Accessibility

The PIM™ 5.0 Software Platform empowers you with access to vital network information to and from anywhere in the world including remote site through any web-browser application.



### Health Metrics

Health metrics including power, space, temperature, and network are available. PIM™ Health Metrics provide high-level system status information at-a-glance. This saves time and resources, providing you with peace of mind, and relevant information to guide informed decisions. Visibility into system health in this way improves efficiency and decreases MTTR by highlighting potential problems.

Color coding (Red, Orange, Green) indicates status for a chosen location, room or rack.



# Infrastructure Management Software for Data Centers and Enterprises

## A Part of Panduit's Intelligent Data Center Solutions

Panduit's Unified Physical Infrastructure<sup>SM</sup> (UPI)-based Intelligent Data Center Solutions embody the next wave of systems integration and risk management by aligning and harmonizing critical systems to support the delivery of secure, energy-efficient, always-on, real-time data and services. Intelligent Software, Hardware, and Advisory Services are key pillars of the Panduit Intelligent Data Center Solutions that include:

**Intelligent Software and Hardware** — Panduit Physical Infrastructure Manager<sup>™</sup> (PIM<sup>™</sup>) Software Platform works seamlessly with PanView iQ<sup>™</sup> (PViQ<sup>™</sup>) System Hardware and select third-party devices to provide an end-to-end physical to logical view of your data center and extended enterprise. Panduit's Intelligent Software and Hardware can enable effective optimization of your data center's space, power, and capacity planning through 10% OpEx savings in energy costs, 75% faster moves, adds, and changes (MACs), and 80% faster mean time to repair (MTTR).

**Data Center Advisory Services** — Panduit Data Center Advisory Services provide a full range of physical infrastructure layer services to help you assess, design, and maintain resilient, sustainable solutions that deliver operational flexibility to reduce costs by up to 20%, and meet future requirements.

**High Speed Data Transport (HSDT) Copper and Fiber Cabling Systems** — Panduit HSDT Solutions are both protocol and media agnostic, delivering maximum flexibility during planning, designing, commissioning, and operation of the data center. Our HSDT Solutions enable advanced network architectures such as 10/40/100 Gig Ethernet LANs and 8/16/32 Gig Fibre Channel SANs and can provide a 10% improvement in network throughput.

**Pre-Configured Physical Infrastructures** — Panduit can help reduce deployment times up to 65% and mitigates the risk of adopting new technologies with reliable and robust Pre-Configured Infrastructures. Panduit utilizes optimized reference designs collaboratively engineered with our partners, to enhance the physical infrastructure of their technology platforms and seamlessly integrate physical and logical systems.

**Physical Infrastructure Foundation** — Critical to the deployment of our Intelligent Data Center solution is the physical infrastructure foundation in the data center, which includes such items as:

**Pathways:** Provide the best method to route and manage the growing amount of data and power cabling while ensuring high levels of network performance

**Zone Cabling:** Serves as a main distribution point for a particular zone, increasing network flexibility, manageability, accessibility, and efficiency

**Bonding and Grounding:** Provides a high quality, visually verifiable and dedicated grounding path to maintain system performance, improve network reliability, and protect network equipment and personnel

**Identification and Labeling:** Enhance the appearance of installations by presenting a clear and efficient way to label according to TIA/EIA-606-A standards

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## Real-World Solutions

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



### Technology Leadership

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



### Partner Ecosystem

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



### Strategic Alliances

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



### Global Business Commitment

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



### Sustainability

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

*Transform Your  
Physical Infrastructure*

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

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)

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