



# Connected Building Solutions

**PANDUIT**<sup>®</sup>

building a smarter,  
unified business foundation  
Connect. Manage. Automate.



## New Solutions for New Business Challenges

### Building Systems Consolidation Meets Technology Convergence.

Today's enterprises require a broad range of building systems and cutting edge technologies. Traditional dedicated building systems, such as lighting, security, HVAC, monitoring and energy management must now coexist with communications technologies including IP-based voice, data and video.

Historically, building system cabling infrastructures were designed, installed and maintained independently from IT network systems and retrofit into existing buildings. This approach, in addition to imposing fundamental financial inefficiencies, restricts scalability, interoperability, reliability and security, and prohibits effective space utilization.

Because enterprises will continue to face stringent demands, and due to the complexities of these demands on physical infrastructures, a unified approach to physical and logical systems architecture is imperative to pave the way for progressive and innovative solutions that address demands for agility, sustainability, availability and security. All, at a lower total cost of ownership.



## Turning Buildings Into Assets

### Overcome Challenges. Optimize Advantages.

Enterprises have the opportunity to transform their business properties into profitable assets if they are able to effectively meet a broad array of rapidly changing needs:

- Robust and diverse applications
- Multiple geographies
- Availability and flexibility
- Real-time data and services delivery
- Rising energy costs
- Sustainability
- Greater performance requirements
- Space limitations

The potential for risk increases with enterprise consolidation of multiple building systems and convergence of new technologies. For example, a physical security breach can lead to a compromised network or application, which in turn results in downtime that then interrupts business operations.

To avoid these interdependent risks, a unified management system must leverage a physically mapped logical network to provide the monitoring and reporting capabilities that are crucial to efficient infrastructure diagnosis and troubleshooting. The ability to view both the physical and logical topology of an infrastructure extends real-time intelligence through both layers.

A unified approach to infrastructure architecture also offers enterprises distinct business advantages:

- Multi-technology architecture that extends the reach of cabling infrastructures to all end point devices, creating seamless integration of building systems with new services like IP telephony, wireless connectivity, digital media and unified communications
- Flexibility to accommodate ever-changing user needs, from mobility services to environmental controls that optimize worker comfort
- Greater visibility and control of critical systems that identify, monitor and resolve problems before they affect tenants, enhancing overall security and safety
- New levels of technology convenience that ultimately work to differentiate an owner's building, and attract tenants who require robust network applications
- Minimized installation of disparate systems wiring, which reduces initial deployment and maintenance costs throughout the lifecycle of the building
- Converged networks that enable enhanced commissioning and help meet energy performance requirements for a LEED rating

**PANDUIT**<sup>®</sup>



## Key Benefits

- Leverage real-time information to enhance visibility, security, safety and compliance across the enterprise
- Reduce infrastructure and systems complexities while increasing functionality and manageability of mission critical capabilities
- Achieve flexibility through deployment of a platform-agnostic, open standards-based architecture
- Improve productivity and customer satisfaction by delivering higher levels of availability and reliability
- Converge and optimize critical systems, leveraging and reusing existing assets/ investments for maximum ROI
- Drive tangible infrastructure and business process improvements while reducing operational costs and mitigating risk
- Create a sustainable infrastructure for securing energy efficiencies and establishing global best practices

## Unified Physical Infrastructure



## Panduit's Unified Physical Infrastructure: A Guiding Vision

### For a Smarter, Unified Business Foundation

The growing interdependence of systems and applications, and the increased demands that they place on physical infrastructures, requires the integration of traditionally disparate and proprietary systems. This trend is dramatically changing infrastructure design, management strategies and effective synchronization of critical systems, opening the door for seamless convergence and interoperability of all core business systems.

Panduit provides flexible, end-to-end solutions for the physical infrastructure that drive operational and financial advantages, allowing businesses to minimize risk and heighten agility. Tailored by industry and customized by application, Panduit solutions span the core systems necessary to transform a business, from data center to facility operations, to next generation intelligent buildings.

Panduit has developed the industry's most comprehensive and holistic approach to a Unified Physical Infrastructure and can help enterprises align, converge and optimize critical systems – communication, computing, control, power and security – to build a smarter, unified business foundation.

This approach enables the use of an open standards-based, service-oriented architecture framework and is designed to deliver tangible infrastructure and business process improvements for increased functionality, interoperability and manageability of mission critical operations across the enterprise.



## Empowering the Connected Building as a Unified Physical Infrastructure

### Minimize Risk. Maximize Performance.

Panduit understands today's vital business and technology challenges and how they impact enterprises. Panduit's Connected Building Solutions embody the next wave of integration and risk management by aligning and harmonizing critical systems to provide a highly interoperable physical infrastructure with greater visibility and control of all critical systems, and smart devices across a building or global campus.

Driven by the industry's most comprehensive approach to physical infrastructure unification, Panduit can help manage integration of key elements with solutions that enable systems consolidation and network convergence, reducing the risks associated with availability, interoperability and security.

Panduit, in collaboration with our technology partners, combines best practice methodologies, physical and logical architectures, and a comprehensive portfolio of solutions to deliver robust, scalable physical infrastructure enabling the integration of a broad range of applications from security and lighting to HVAC and IP networks which facilitates the deployment of technologies to meet current and future requirements:

**Security:** Multiple systems notification when an employee or tenant accesses a facility, prompting environmental changes (lighting/HVAC), elevator access, network and PoE port enabling, and video security measures, all with the swipe of an ID card.

**Safety:** If a fire alarm is activated, automatic responses are simultaneous: building doors unlock, automated announcements begin and emergency shutdown or containment of specific sites is triggered.

**Efficiency:** When energy demands spike, lighting systems should self-adjust to reduce output, HVAC systems should regulate to conserve power, while informational announcements are made automatically by email or IP phone.

**Comfort:** When temperatures surge outside, area sensors enable HVAC systems to accommodate tenant comfort, while maximizing energy efficiency and enabling cost savings.

### Unified Physical Infrastructure



**PANDUIT**<sup>®</sup>



## Connect. Manage. Automate.

### Panduit's Full Range of Connected Building Solutions

*Based on the principles of a Unified Physical Infrastructure<sup>SM</sup> approach, Panduit is the industry's only single source supplier of complete end-to-end solutions for connected buildings.*

**Connectivity and Cabling** – Comprehensive end-to-end copper and fiber cabling systems that offer ease of deployment and proven performance to ensure availability, reliability and scalability of mission critical systems.

**Cabinets, Racks and Cable Management** – A portfolio of innovative products with modular designs that offer greater thermal management and energy efficiency, as well as accessibility, flexibility and effective space utilization while managing, showcasing and protecting equipment.

**Physical Infrastructure Management** – Visibility and control for monitoring, managing and automating of networks through intelligent asset identification and tracking to the physical layer.

**Zone Cabling** – A complete line of products for open office architecture applications, telecommunications enclosures, data centers, wireless deployments and network integration of building automation systems. Designed to optimize network flexibility, accessibility and efficiency.

**Routing** – Manage and protect high performance communication, computing and/or power cables under floors and through overhead channels to ensure system performance, reliability, scalability and reduced cost of ownership.

**Grounding** – A visually verifiable and dedicated grounding path to maintain system performance, improve network reliability and protect both personnel and equipment.

**Labeling and Identification** – Printers and software systems for more effective asset management, safety compliance and simplification of moves, adds and/or changes.

**Power Over Ethernet (PoE)** – Extend PoE over a wide range of locations and applications to offer network design flexibility and enhanced system reliability, as well as decreased installation and operating costs.

## The Panduit Difference

### Realize Benefits Across the Enterprise.

Panduit provides the ability to align the physical infrastructure to the logical systems infrastructure by creating reference architectures that are mapped to industry-wide best practices.

All of Panduit's solutions meet or surpass rigorous quality management standards to assure compliance with industry requirements. Our unique, robust partner ecosystem combined with our lifecycle services offer innovative modeling, predictable execution and operational excellence.

Panduit is the only vendor in the industry with a fully integrated physical infrastructure solution portfolio. For example, Panduit's comprehensive data center infrastructure, ranging from high speed data connectivity, thermal management, cable management and infrastructure management software, provides an integrated solution designed as a "system" rather than discrete components. Specifically, Panduit's data center cooling systems enable both application uptime assurance and energy conservation by applying our fully integrated infrastructure. From our small diameter C6A cable to our Cool Boot floor grommets to our chimney equipped cabinets designed through computational fluid dynamics, we address cooling from a solutions perspective. This comprehensive approach to infrastructure design, deployment and management allows benefits to be realized across the entire enterprise.



**PANDUIT**<sup>®</sup>

## Real-World Solutions to Ensure the Success of Our Customers

*With a proven reputation for excellence and technology innovation, a robust ecosystem of global partners and long-term alliances with top industry leaders, Panduit is a valuable, trusted partner offering strategic vision and real-world solutions to ensure the success of our customers.*



### Innovative Technology Leadership

Panduit is an industry leader in developing innovative technology solutions that meet the rapidly evolving needs of our customers around the world. Our commitment to continued leadership is supported by significant ongoing investment, dedicated manufacturing facilities, strategic technology alliances and collaborative R&D with other industry leaders.



### Global Business & Commitment

Panduit's ongoing commitment to excellence and our technology alliances with key industry leaders such as Cisco Systems, EMC, Emerson, IBM, etc., enables our highly skilled and knowledgeable global sales, systems engineering and technical support teams to engage with critical customer challenges that range from initial problem determination all the way to resolution. Local specialists, trained to global standards and competencies, provide consistent regional support that brings value to local business. Our global value chain, which combines manufacturing, distribution and service, provides prompt responses to customer-related issues, and streamlines procurement and delivery to any global destination.



### Best-in-Class Partner Ecosystem

Panduit employs a consultative approach to identify customer needs and engage appropriate partners in a collaborative fashion to serve our customers. Panduit's robust ecosystem of architects, consultants, engineers, designers, systems integrators, contractors and distributors offer a full portfolio of lifecycle services. Our partners are trained on relevant services to Plan & Design, Build & Deploy, and Maintain & Operate to deliver predictable and measurable results.



### Worldwide Alliances

Panduit has established long-term strategic alliances with top global industry leaders such as Cisco Systems, EMC, HP, IBM, Liebert and Rockwell Automation to develop and integrate innovative, holistic solutions for our customers. We continually invest in relationships and resources for solving our customers' greatest business challenges.



### Eco-Sustainability & Global Citizenship

With a long-standing commitment to environmental excellence, Panduit continually develops and implements solutions designed to protect, replenish and restore the world in which we live and operate. This commitment is demonstrated by Panduit's LEED-certified new world headquarters and future green building plans using its own revolutionary Unified Physical Infrastructure<sup>SM</sup> vision to enable convergence of critical systems for driving sustainability.

*Transform Your  
Physical Infrastructure.  
Call or visit us online,  
we can show you how.*

**Panduit Corp.**  
Worldwide Headquarters  
Tinley Park, IL 60477-3091

[www.panduit.com/cbs](http://www.panduit.com/cbs)  
[cs@panduit.com](mailto:cs@panduit.com)

US and Canada: 800.777.3300  
Europe, Middle East and Africa:  
44.208.601.7200  
Latin America: 52.33.3777.6000  
Asia Pacific: 65.6305.7575

**PANDUIT**<sup>®</sup>