

Intelligent Data Center Solutions



PANDUIT[®]

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



Prepare Your Data Center for the Future

Panduit's Unified Physical Infrastructure (UPI): a Guiding Vision

A unified approach to physical and logical systems architecture is imperative for solutions to fully address the need for availability, agility, integration, and security.

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.

Mitigate Risk – Efficient physical infrastructure management enables seamless integration to reduce risks that can occur throughout core systems.

Lower Cost – Panduit physical infrastructure solutions drive financial advantages to reduce energy and occupancy costs, and help secure competitive advantage.

Increase Agility – A high level of integration within the physical infrastructure enables flexibility and improved business agility.

Enhance Sustainability – UPI-based solution offerings enable organizations to meet sustainability goals by driving resource and energy efficiencies across the physical infrastructure.

As a Data Center Manager, you are faced with an increasingly complex range of operational challenges to consider. Whether you are designing new or making changes to an existing data center, migrating to a cloud architecture, or just managing the day-to-day operations, your ability to be agile, forward-thinking, and more efficient can be strained. Consequently, you are challenged to dedicate the appropriate time to manage your budget, SLA's, and staff; and to evaluate the interdependencies of bandwidth, power, cooling, space, and their imminent effect on your network's performance.

What if you could have...

- Better operational control
- Confidence in layer 1 stability
- Minimized unplanned outages
- More time to be proactive and strategic
- Documented and approved provisioning process

Your data center is a mission-critical facility. As data center consolidation, server virtualization, and private cloud initiatives intensify, continuing a silo-based approach to designing, deploying, and managing the physical infrastructure is becoming a costly and time consuming process. As a result of the constantly changing, complex IT landscape, your data center will continue to face unique demands on its physical infrastructure. A number of years ago, these requests would be unreasonable.

While these architectures are elevating enterprises to new heights of agility, flexibility and efficiency in IT manageability, success in achieving these benefits relies on critical infrastructure considerations. Not only must the physical infrastructure be able to support the requirements of the data center, it must perfectly align to the logical network design.

We understand your challenges.

Panduit draws upon a deep expertise in providing world-class data center solutions and designs based on industry best practices, offering you a combination of services, software, and products that result in optimized physical infrastructures allowing you to focus on being more responsive, improve operational efficiency, and increase your organization's strategic relevance to the business.

Unified Physical Infrastructure





Innovative Data Center Infrastructure Solutions

Panduit provides a comprehensive, intelligent data center offering that supports best practice methodologies. Our data center solutions enable physical to logical architecture integration, and deliver robust, scalable physical infrastructures that address:

- **Visibility and control** for managing and automating real-time data processes and documentation
- **Convergence** of new technologies and high-speed data applications
- **Operational efficiency** through process improvement and IT initiatives, such as cooling conservation through energy efficient data cabinets
- **Capacity management** for greater real estate utilization
- **Modular pods** designed to support high-density applications and provide consistent, reliable deployments while lowering infrastructure risk and costs

Panduit's intelligent data center solutions facilitate faster implementation and simple specification, streamlining the process of designing, specifying, installing, and managing the increasingly complex physical infrastructure necessary to optimize your data center.

Panduit knows the data center space intimately.

We help you discover tangible infrastructure and business process improvements that increase functionality, interoperability, and manageability of mission critical operations across your entire organization.

UPI Integration with Partner Ecosystem

Panduit's partner ecosystem supports our systems engineered approach to intelligent data center deployment and management. Partners are chosen because they have proven expertise and a commitment to providing quality solutions that support Panduit's vision and eco-sustainability initiatives.

As the only organization in the industry with a tightly integrated portfolio of innovative physical infrastructure solutions, Panduit collaborates closely with industry and technological leaders to build comprehensive data center deployments.

This unique, robust partner ecosystem offers a lifecycle of services for innovative modeling, predictable execution, and operational excellence. This comprehensive approach to infrastructure design, deployment, and management also allows benefits to be realized across the entire enterprise via systems supported by the data center.



A Complete End-to-End Solution

Data centers are constantly transforming to keep up with the demands of efficiently delivering voice, data, video, and security applications. Panduit and our partners have integrated physical to logical architectures into these environments to increase business agility and network performance, while providing interoperability and security to establish an enhanced infrastructure design that meets private cloud and enterprise requirements in today's intelligent data centers.

Strengthen Your Network Architecture

While businesses demand flexibility to support new switching technologies and application requirements, it is still critical to design a data center with well planned network architectures. As the primary physical infrastructure technology and go-to-market partner for industry leading network providers, Panduit develops physical layer infrastructures to optimize their solutions.

Consolidating Operations for Maximum Performance

Data Center Managers are being tasked with more involvement in business operations. Almost every building system (HVAC, lighting, security, and communications) uses some form of IT networking for management and control. Panduit's innovative approach to consolidating these systems is the Unified Operations Center (UOC). The UOC provides state-of-the-art IP-based information monitoring and control over all vital building systems through one integrated, aligned, unified, and intelligent infrastructure. By combining and integrating traditionally segmented operations like security, network, and facility into a single room, the UOC allows data to be shared across a spectrum of applications, improving operational awareness and response, resulting in greater operational efficiencies and performance.



By addressing network, compute, storage, and unified operations (including physical infrastructure management), Panduit helps you build a smarter business foundation.

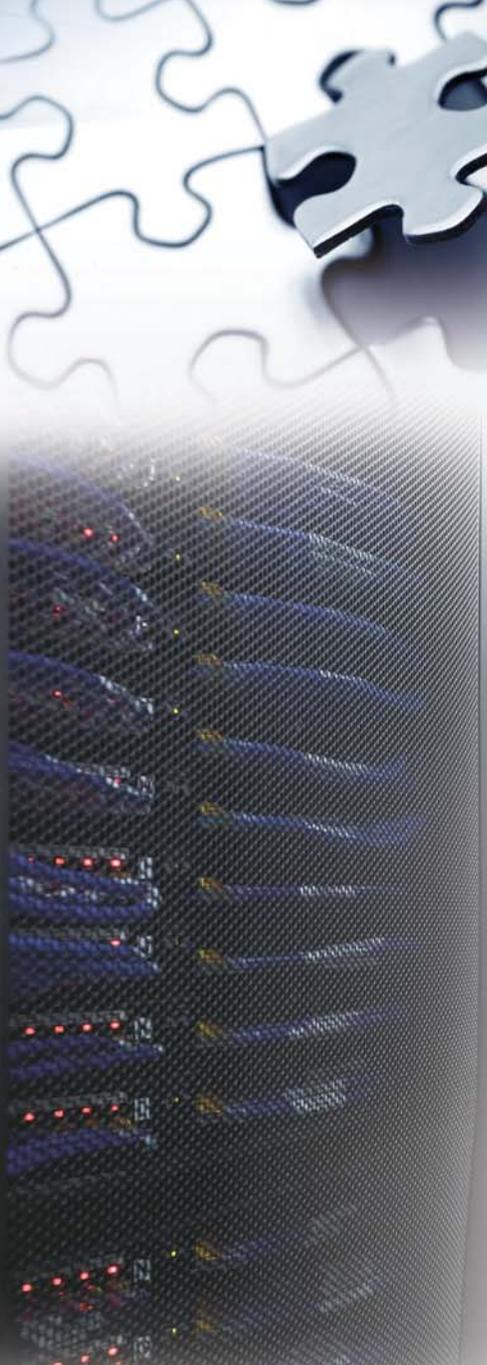


Optimizing Storage Networking

Whether deploying today's best-in-class storage networks (NAS or SAN) or preparing for tomorrow's converged I/O fabrics, your need for a high-performance, highly-agile physical infrastructure becomes even more critical. With Panduit, your physical infrastructure will be able to grow as your data storage and information exchange needs grow. Your data center will be agile enough to easily implement network reconfigurations as your business needs change, ensuring you have suitable bandwidth for proper application performance.

Meeting the Demands of Computing and Processing Power

Server virtualization has increased the utilization of computing and processing power in today's data center. Panduit solutions for server virtualization ensure that the data center power and cooling delivered meets the physical infrastructure demands while optimizing space utilization. This solution will result in improved uptime and availability to mitigate risk.



Panduit's Intelligent Data Center Solution Elements

Panduit's Unified Physical InfrastructureSM (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. The key pillars of Panduit's Intelligent Data Center Solution include:

Data Center Advisory Services

Panduit's Data Center Advisory Services leverage best-practice methodologies to assist you with data center consolidation, virtualization and automation. By integrating the physical and logic infrastructures, this systems' engineered

method can minimize risk, increase modularity, expand flexibility, and deliver maximum performance throughout your data center.

By working with our partners, 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.



Intelligent Software and Hardware

Panduit's Physical Infrastructure Manager[™] (PIM[™]) Software Platform works seamlessly with PanView iQ[™] (PVIQ[™]) System Hardware and select third-party devices providing an end-to-end physical to logical view of your data center and extended enterprise. PIM[™] Software centralizes the collection and representation of a rich set of asset attributes including connectivity, space/port availability, and power/environmentals to ensure your physical infrastructure supports mission-critical applications. Panduit's Intelligent Software and Hardware enables 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)*.

Providing complete data center infrastructure management (DCIM) functionality, these systems allow you to leverage the information you need to make operational decisions with more agility.



Energy Efficient Cabinets

Panduit draws from proven methodologies and global best practices to develop innovative, highly reliable and scalable physical infrastructure solution elements. Panduit's Energy Efficient Cabinets utilize modular components that address power, cooling, space, and cable management challenges, enabling a 25% reduction in energy consumption*, speed to deploy, and optimized space utilization.

Supporting switches, servers, and storage equipment from industry leading partners, our cabinets are the first choice for applications that require maximum thermal management capability, and the capacity to manage the high cable densities that result from consolidation and server virtualization.

Pre-Configured Physical Infrastructures

More data centers are adopting modular design philosophies to meet the demands of consolidation, virtualization, and implementing cloud architectures. Panduit helps 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.



High Speed Data Transport (HSDT) Copper and Fiber Cabling Systems

Panduit's 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. Interoperable and scalable, these solutions include copper and fiber cabling systems that address the needs for latency, thermal management, power consumption, operational efficiency, and can provide a 10% improvement in network throughput*.

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: Serve as a main distribution point for a particular zone, increasing network flexibility, manageability, accessibility, and efficiency

Bonding and Grounding: Provide 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

These elements are a critical functioning part of the entire intelligent data center. Up to a 50% savings* on installation labor costs can be realized when deploying these foundational products as well as providing operational efficiencies to support uptime goals.

***Note: These numbers are dependent upon various conditions. Speak to a Panduit representative for details.**

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, and IBM, 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, IBM, 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 Gold certified new world headquarters and future sustainable building plans using its own revolutionary Unified Physical InfrastructureSM approach to enable convergence of critical systems for driving energy efficiency.

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