



Colocation and Cloud Hosting Solutions

Build a strong and efficient physical infrastructure
that delivers service reliability and profitability

PANDUIT®



Dependability and Deployment Speed that Improves Your Bottom Line

With the enormous expense of building a new data center today, recent research indicates that the growth of new construction by individual organizations is flat, with an increase of only +1.2% projected in 2015¹. To better control costs and meet service level agreements, many organizations are turning to providers of retail colocation data centers, hosted colocation data centers and cloud-based facilities.

As a colocation or cloud hosting provider, you have a paramount responsibility to maintain uptime for (in many cases) multiple customers. Because of this, you need ways to optimize cooling, better manage power usage, and to build a scalable, strong physical infrastructure that can scale to meet your customers' growing demands. And you must do all of this while keeping costs under control.

Panduit offers a complete family of Converged Infrastructure Solutions for colocation and cloud hosting providers that include hardware, software, and services that can help you:

- Maximize your revenue and profitability through optimized cooling, space utilization, lowered power, and new value-added service opportunities
- Improve productivity by accelerating data center deployment tasks and enabling intelligent management of data center assets, freeing up staff resources to work on more strategic projects
- Develop a positive path forward for your business to cost-effectively support and adapt to evolving technologies and changing business demands
- By addressing unique physical infrastructure power, cooling, space and connectivity requirements, Panduit enables you to optimize and maintain operational performance while reducing costs to achieve a faster return on investment (ROI)

❑ A recent Gartner Critical Capabilities Report scored Panduit 4.23 out of 5 for typical colocation provider use case applications related to use of DCIM tools to monitor and manage their facility.

— Critical Capabilities for Data Center Infrastructure Management Tools

¹Uptime Institute Annual Data Center Industry Survey



Realize Profit from Cooling Costs

Colocation Company Optimizes Cooling—and Reduces Costs

A large colocation company with a 75,000 ft₂ data center and 3,119 sense points invested \$1.1M in the SynapSense™ DCIM Cooling Optimization Solution and experienced the following benefits:

- \$597,000 in annual energy cost savings
- 3,500 MWh annual energy savings
- \$600,000 rebate from energy provider

Reduce operating costs and drive greater probability by improving or maintaining defined temperature set points with optimized cooling and airflow capabilities.

SmartZone™ DCIM Cooling Optimization Solutions

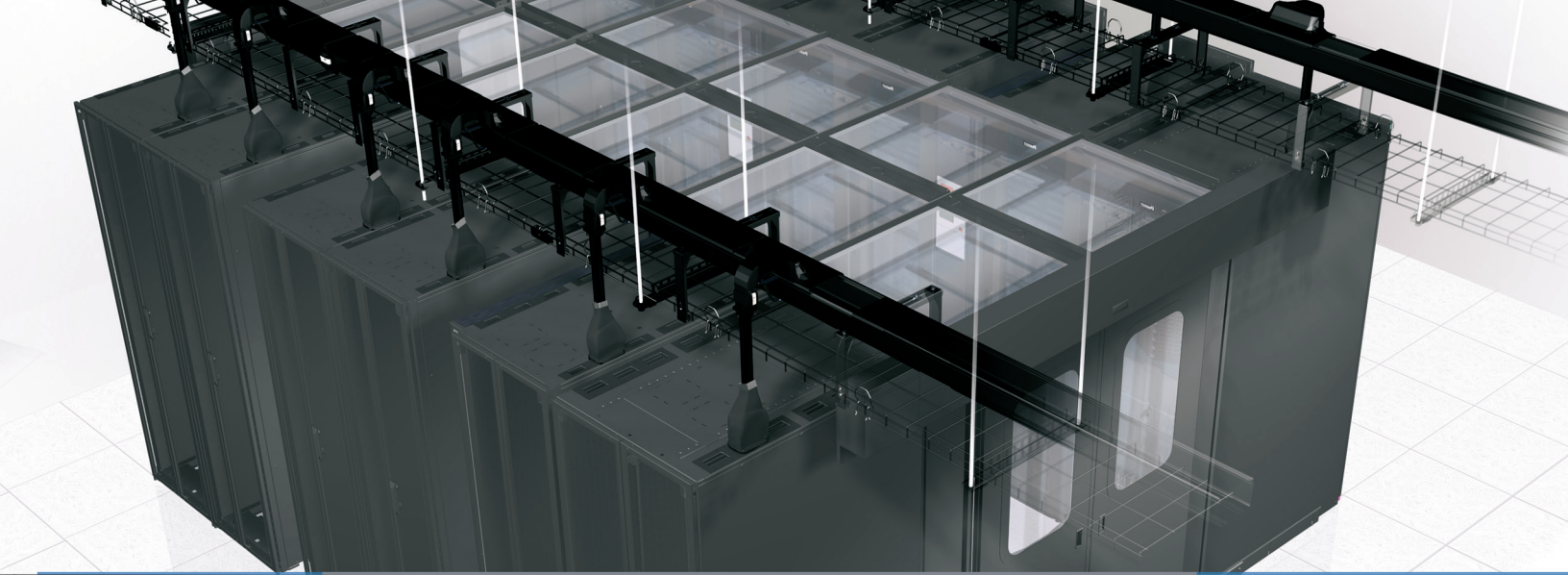
To help optimize cooling, increase current capacity, reduce costs and rapidly deliver tangible ROI, Panduit offers SynapSense™ DCIM Cooling Optimization Solutions, a turnkey, wireless monitoring and cooling control solution that is comprised of intelligent software and leading-edge wireless nodes that can deliver:

- Reduction in cooling energy utilization up to 50%
- Identifies and resolves inefficiencies such as hot spots or over-cooled areas, humidity levels, air delivery challenges and over-pressurized plenums
- Automated management of CRAH (Computer Room Air Handler) temperature set points and variable fan speeds to maintain energy savings

Panduit Thermal Management

Contain cooling with enhanced sealing. Leaks allow hot air recirculation, forcing IT equipment inlet fans to work harder, consume more energy and limit per-cabinet power usage. Panduit Thermal Management Solutions improve air separation and provide superior energy savings and increased profitability through:

- Raised floor sealing grommets and RU blanking panels to seal airflow
- Cabinet ducting that directs a cool air path to the air intakes on the sides of active cabinet equipment
- Aisle containment offerings that ensure uniform cooling air temperature is delivered to equipment in high-density PODs



Maximize Revenue Through Space Utilization

Panduit's Converged Infrastructure Solutions are also designed to maximize revenue per square foot and improve profitability by optimizing space utilization and reducing implementation times.

Energy Efficient Cabinets

Panduit Net-Access™ Cabinets provide a cost effective cabinet platform for server, network, and pre-configured applications with an innovative design that offers:

- Up to 5% improvement in RU utilization through improved out-set cable entry
- Up to 10% improvement in RU through zero-RU vertical patching
- Up to 15% increased server capacity through maximized RU utilization
- Additional space room to generate supplementary revenue

With improved cabinet sealing, in-cabinet ducting, containment and monitoring, the results reveal improved energy efficiency by up to 40% when the set point temperature is raised in the entire data center.

Offered in a variety of widths, heights, and depths, Net-Access Cabinets can be specified for a variety of applications in any facility to meet the diverse application needs of today's colocation and cloud hosting provider data centers.

- ▣ Panduit Energy Efficient Cabinets enable up to 15% greater space utilization, allowing you to deploy more IT resources in the same space and increasing revenue up to \$1M per year.

- ❑ “Zen Internet required a partner that could provide custom-built, robust power control and environmental monitoring solutions. We also needed the confidence that the partner could suitably scale as we grew our hosting business. Having such a good close working relationship with Panduit has really helped meet all those requirements, and has provided us with the right tools to expand the range of services we provide to our customers in the future.”

- David Horner, Senior Data Center Design Engineer, Zen Internet

Increase Profit from Power

Better Manage Power Consumption

Equally important to optimizing your data center services is the ability to better manage power usage, both to reduce costs and to fully support customer SLAs. Panduit offers a comprehensive portfolio of SmartZone™ DCIM Power Management Solutions that includes rack power distribution units (PDUs), software, and supporting products that help you better manage and monitor power consumption within cabinets and other equipment.

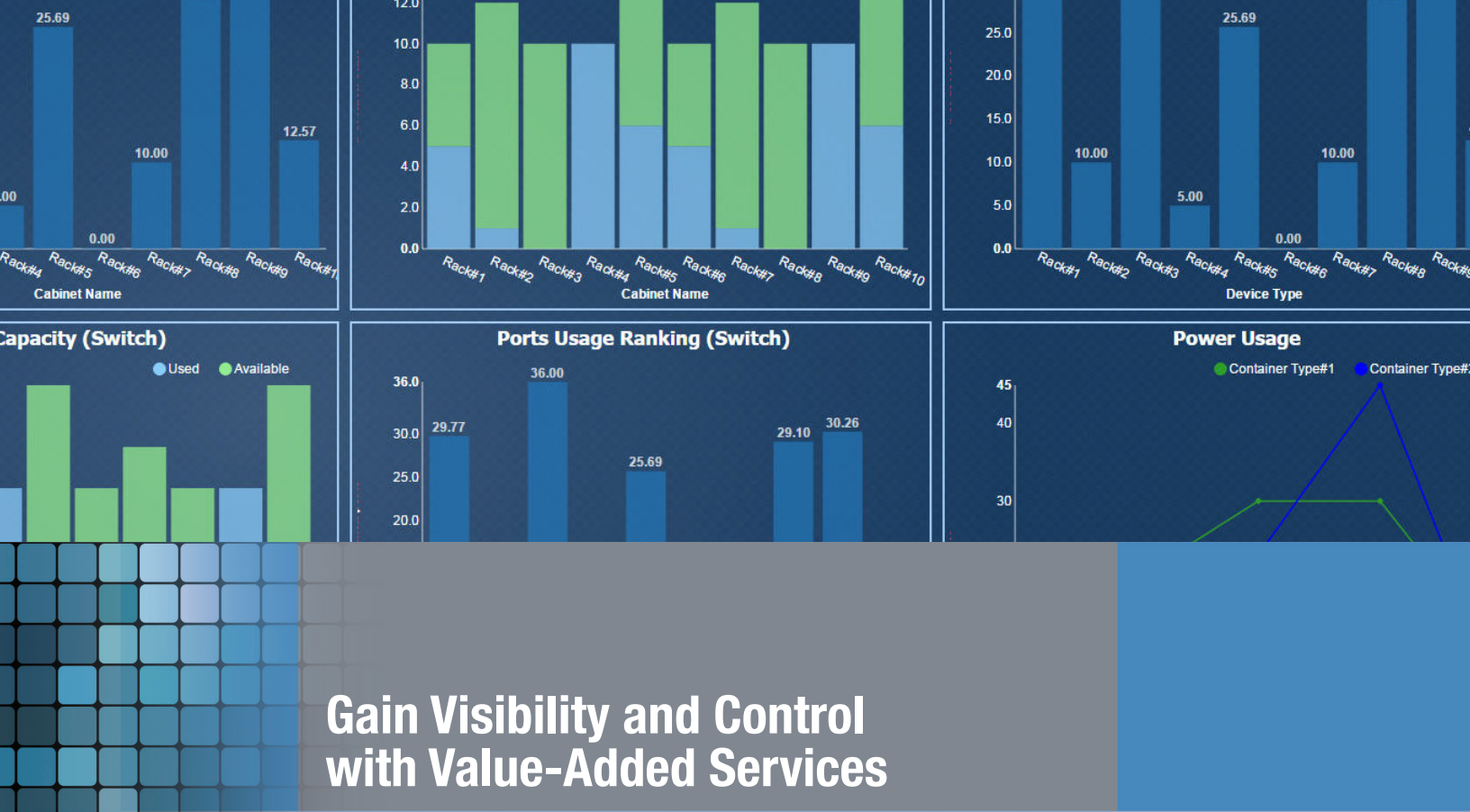
SmartZone DCIM Power Management Solutions deliver visibility to the collective power use all data center rack PDUs, or visibility down to each individual strip or outlet. SmartZone Rack PDUs enable you to maintain a proper balance of power usage within individual circuits against both your cooling and physical capacity, to maximize usage of cabinet space.

You can also create itemized customer power reports or billing (if required or desired), to help increase profitability through lower power consumption.

Designed to work seamlessly either with the Panduit SmartZone™ DCIM Software Suite or with your existing software, these power management solutions provide complete visibility into all power consumption by monitoring power usage within:

- Entire rooms and within individual cabinets
- Individual power strips and outlets





Gain Visibility and Control with Value-Added Services

Simplify Multi-tenant Usage with Transparency into Usage

Managing multi-tenant usage is another challenge unique to data center service providers. The SmartZone™ Software Suite enables you to group racks into cages and restrict user access to only view specific cages. The SmartZone™ DCIM Software Suite dashboard provides transparency into each of your customers' cabinets, rack unit (RU) space or cages, so you can get granular details on:

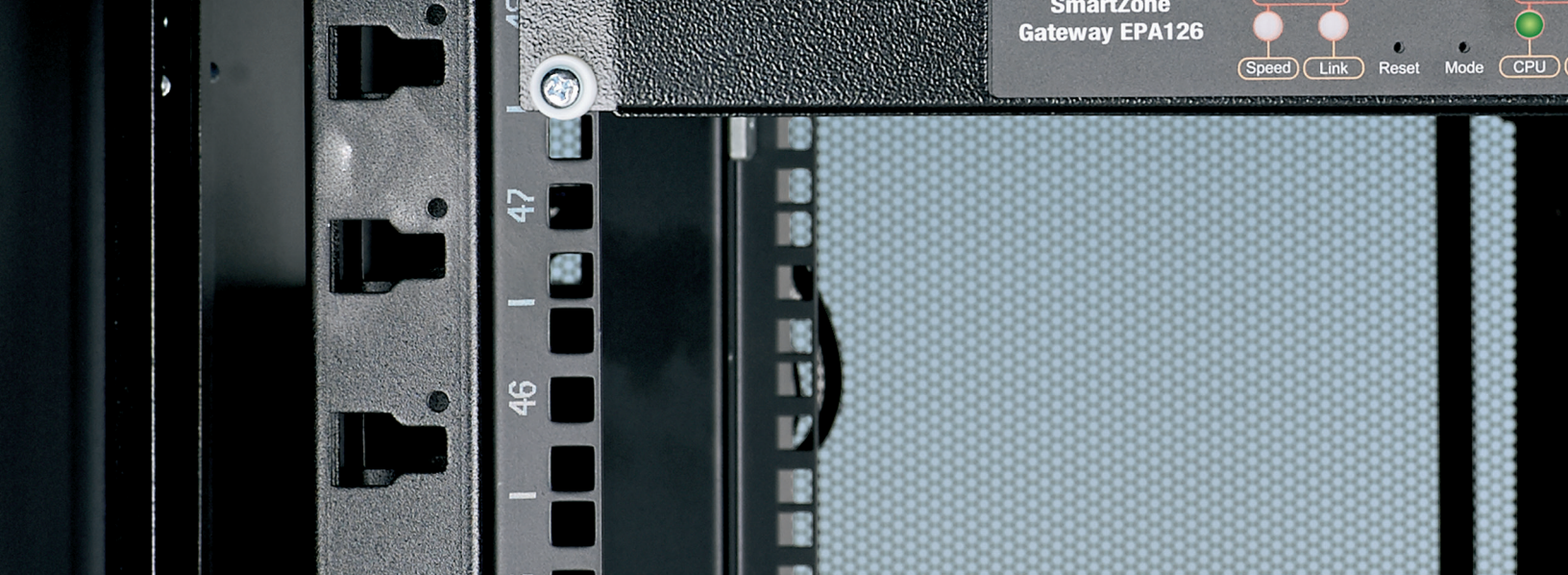
- Environmental conditions
- Power consumption
- Connectivity utilization
- Asset tracking
- Physical access security

This precise visibility enables you to optimize operations and to even share itemized billing information with your customers, either as a value-added or revenue-generating service.

In addition, SmartZone™ DCIM Software Suite helps to easily document operational data that demonstrates compliance with uptime requirements - so you can avoid penalties for missed SLAs. Also, you can provide your customers with managed remote access and/or visibility services to their hosted environment for additional revenue opportunities.

❑ “CyrusOne provides key temperature data to our customers, and we believe operational transparency drives efficiency for both the customer and CyrusOne.”

- Amanya Souarez, Vice President of Data Center Systems



Improve Your Productivity

Quick deployment of the physical infrastructure is crucial to your ability to capture new customers and build revenue faster than your competition. Likewise, management of your the data center also needs to be adaptable, actionable, and accelerated to minimize time-consuming manual tasks that take time away from your staff.

SmartZone™ DCIM Solutions

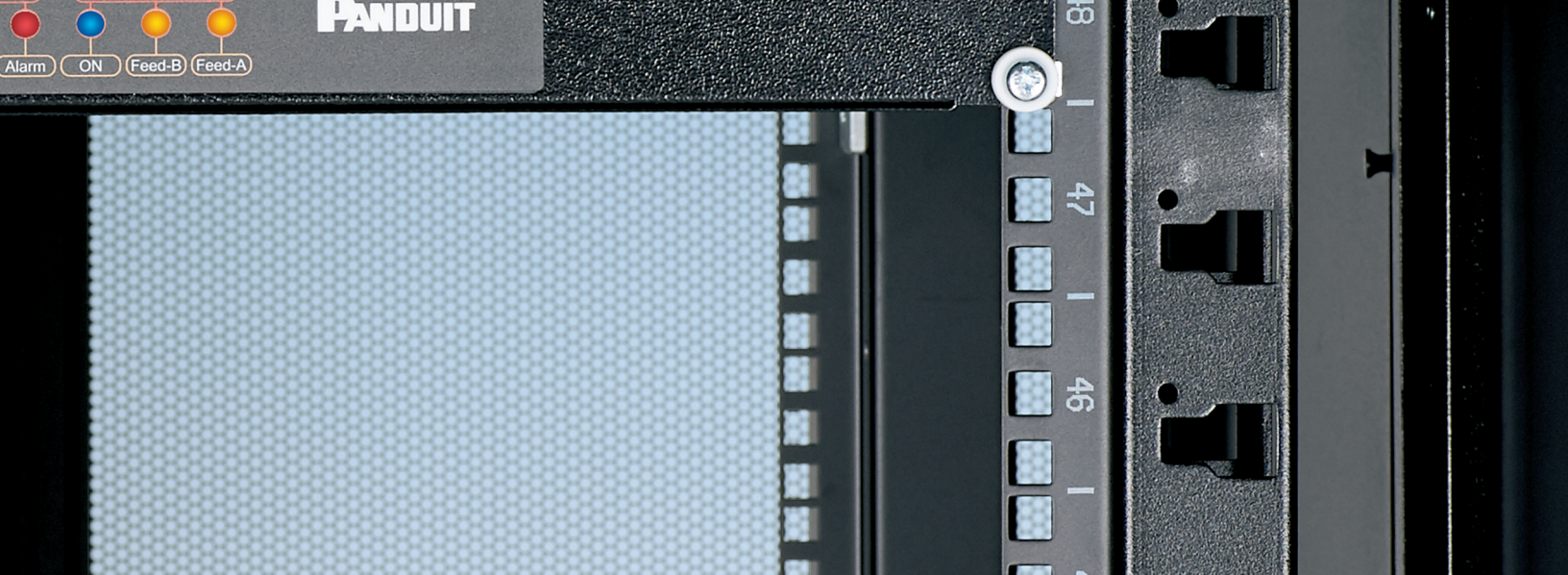
Panduit SmartZone™ Solutions include intelligent hardware, modular software platforms, and services that provide granular and actionable insight into data center power, cooling, space, and connectivity. These solutions can help to identify and address capacity constraints, power and energy usage challenges, environmental inefficiencies, asset tracking, and physical security needs resulting in:

- Up to 30% improvement of operational and energy efficiencies
- Up to 75% faster moves, adds, and changes (MACs)
- Up to 80% faster mean time to repair (MTTR)

Converged Infrastructures

More and more data centers are adopting modular and repeatable designs. Panduit utilizes reference designs engineered with our partners to increase individual cabinet densities in a repeatable way, enabling rapid implementation and flexible placement of single cabinets or multi-cabinet PODs for larger scale deployments. This results in:

- Up to 80% reduction in deployment times
- Mitigated risk of adopting new technologies like integrated stacks of network, compute and storage



Pre-Terminated Copper and Fiber Cabling Systems

An integrated approach to deploying and managing the network infrastructure is critical. Panduit Pre-Terminated Copper and Fiber capabilities connect server, storage, and network devices with superior performance and scalability while eliminating the need for on-site bundling, terminating, and testing, resulting in:

- 75% faster installation than field-termination methods

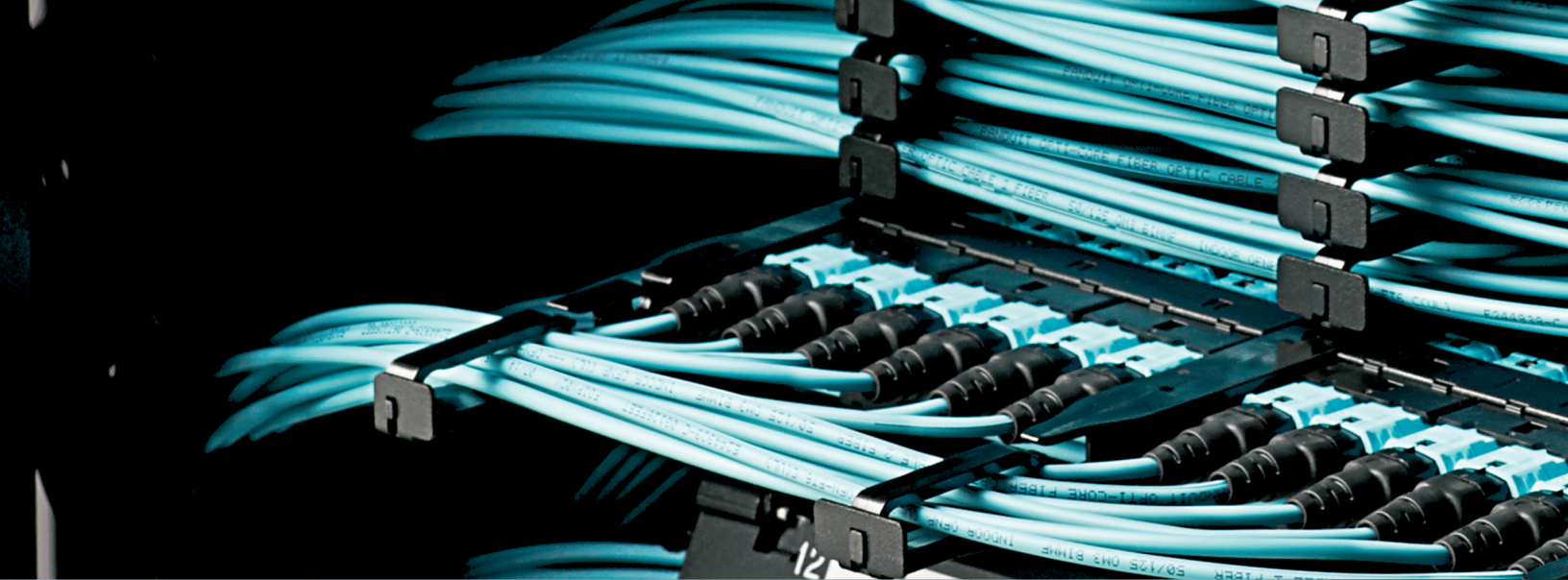
Pathways

Panduit provides the best methods to route and manage the growing amount of data and power cabling while ensuring high levels of network performance through an adaptable and simplified design that offers:

- 50% faster installations
- Elimination of the need to cut pathway sidewalls, such that you can install or reposition intersections and snap-on waterfalls anywhere along the length of the pathway—where you need them, when you need them

Ease of Fiber Distribution and Cable Management

The Panduit HD Flex™ Fiber Cabling system is purpose-built to provide serviceability and manageability in next-generation data centers, helping you both to reduce latency and minimize risk during moves, adds and changes, enabling you to ease and speed deployments and promote compatibility across your infrastructure



Protect Your Data Center

The physical infrastructure within a data center is critical to maintaining the highest quality of service and ensuring a reliable environment for your customers' assets. Panduit offers a comprehensive portfolio of solutions that provide the agility you need to accommodate ever-evolving technologies. They are specifically engineered for repeatability, so you can simplify deployment of new PODs or cabinet groups as you scale up.

Strengthen Security and Compliance

As part of our SmartZone™ DCIM Solutions, Panduit offers security locks on cabinet doors that can be opened via HD Card Reader access, keypad access, or unlocked through the software interface. Fully integrated with the SmartZone™ DCIM Software Suite, additional features can help strengthen both security and compliance, and are especially ideal for co-location facilities that need to document who accessed a cabinet and when. Optional features include:

- Software-documented access to the cabinet via HID Card Reader or keypad for security records
- Sensor-triggered access alerts transmitted to network operations managers
- Alarms triggered in cases of unauthorized access
- Software-initiated locking to enabling remote lock-and-unlock capabilities for a network operations manager
- Webcams sited on the cabinet for additional access documentation

In addition, whether you need to meet requirements for regulations like the Health Insurance Portability and Accountability Act (HIPPA) or the Payment Card Industry Data Security Standards (PCI DSS), or you need to prove reliability during audits for systems like SSAE 16 SOC 1 Type I and Type II, the Panduit SmartZone™ DCIM Solution provides you with the ability to ensure you are meeting mandates to protect customer data.





Learn more about Panduit's Converged Infrastructure Solutions at www.panduit.com/en/solutions/data-center-solutions.

Additionally, through our close collaboration with world-class technology partners, you have the assurance of knowing that Panduit remains on the cutting edge of new technologies, anticipating your needs as you expand your data center capabilities well into the future.

Whether you need to build a new infrastructure or strengthen your existing environment, Panduit's industry-leading offerings can help you to protect your investment and those of your customers.

Conclusion

Through decades of experience and hundreds of engagements with our data center provider customers, Panduit understands the unique challenges you face around controlling costs, meeting SLAs, increasing efficiencies and simplifying data center management, even across multiple customers. As an established and trusted leader in providing a complete range of world-class data center solutions you—and your customers—can have the confidence of knowing that we can assist you in building or strengthening a data center that addresses the needs of today while providing the agility and scalability to meet the demands of the future.

¹ 451 Research, Datacenter Market Sizing Model, Q4 2014



PANDUIT®

**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