



Total Empowerment –  
with SmartZone™ Power  
Management Solutions

**PANDUIT®**



## The Ultimate Capacity and Power Management Solutions

### Implement, Monitor and Report with Fast Payback

New technologies and unprecedented business demands over the last decade have left IT and facilities professionals struggling to balance efficiency and uptime. Increased computing demand and energy costs with contracting IT budgets have only compounded these issues, putting both legacy and newly built data centers under immense pressure to deliver on IT capacity.

This pressure brings about major operational management challenges, specifically power and energy management. Power is an essential and increasingly precious commodity for any data center or enterprise and achieving the right balance for running and cooling IT operations can be a major headache. Over-provisioning means waste and unnecessary expenditure but too little can increase risk of unplanned downtime and jeopardize the resilience of the entire data center. Added to this dilemma, Data Center Infrastructure Management (DCIM) providers have to date delivered only broad and unfocused systems and deployments, which often lack a structured development path.

### Time for Action with SmartZone™ Power Management Solutions

Panduit® SmartZone™ Power Solutions enable comprehensive energy and physical infrastructure efficiency in data centers, facilities and enterprise estates which focuses visibility of power, space and environmental information that is accurate and actionable for operational optimization.

An essential and practical step towards effective power management is through the deployment of real-time monitoring and data collection solutions capable of generating accurate and actionable information on critical areas of power and energy performance. The goal of these solutions is to quickly provide IT and facilities professionals with a clearer understanding of actual utilization and capacity, resulting in optimized operational efficiencies, reduced operational expenses (OpEx), and increased resiliency of facilities in support of Service Level Agreements (SLAs).

According to a recent Uptime

Institute DCIM User Survey,

***“Complete Capacity Management”***

**is the ultimate goal.**

Most DCIM Systems:

- Are too large
- Take too long to implement
- Require significant financial investment with lengthy ROI paybacks

***“The maturity level of the***

***DCIM market is low” –***

according to 451 Research. The

lack of manageable systems and

deployment plans has made it

difficult to make informed and

measurable decisions.

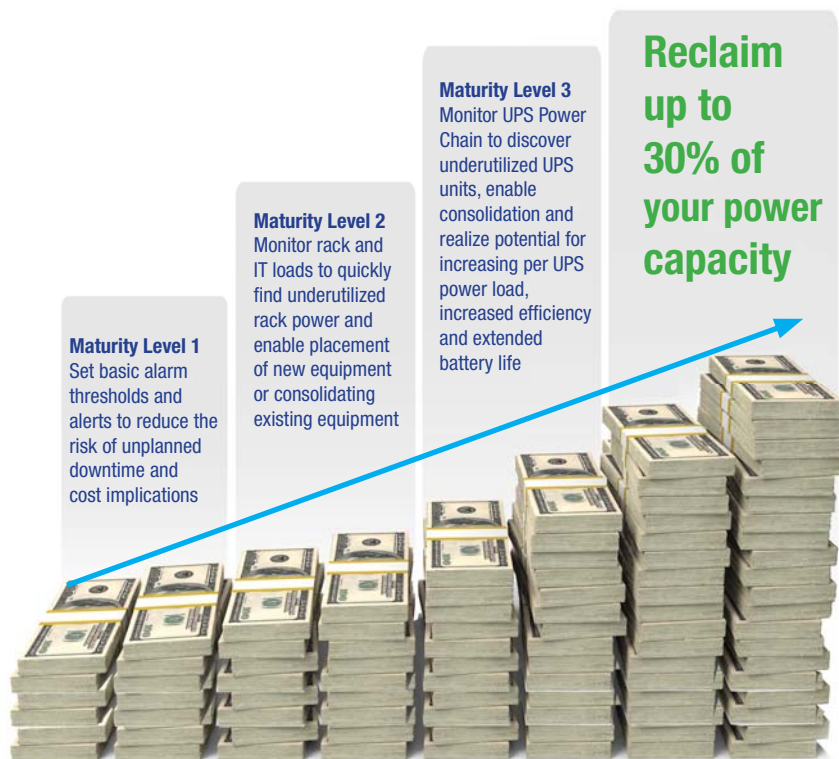
# The Panduit SmartZone™ Approach

SmartZone™ Solutions allow you to implement DCIM in a cost-effective modular fashion based on your data center's level of 'DCIM Maturity'. We begin by developing a DCIM Maturity Roadmap which aligns to your data center strategy, and focuses on increasing levels of DCIM intelligence in power, cooling and asset management, with the aim of achieving the greatest ROI in the shortest period of time.

No matter what your requirement or existing levels of DCIM intelligence, SmartZone™ Solutions can provide, extend and improve your DCIM solution to help you reach the ultimate goal of achieving comprehensive capacity management.

## The Benefits of Power and Environmental Monitoring:

- Find and reclaim underutilized or “stranded” power capacity to maximize existing IT resources
- Understand the operational situation including actual power and cooling required
- Provision optimized power and cooling to fulfil demand
- Learn the best asset deployment and configuration options for optimal power and cooling distribution



Panduit SmartZone™ Solutions allow you to gain actionable DCIM information quickly to meet current demands and apply capabilities as needed

# A Total End-to-End Power Monitoring Solution

Panduit SmartZone™ Solutions comprise a powerful, centralized, and granular reporting software suite combined with an extensive range of intelligent, fully integrated power monitoring hardware devices. Together these solutions provide the information necessary to regain and maintain control of power, cooling, and capacity in your data centers, facility domains and extended enterprises.

## Professional DCIM Services

As an integral part of our total solutions approach, your organization, large or small, can also rely on our Panduit Advisory Services team of highly qualified experts to support you every step of the way. Through comprehensive DCIM consulting and implementation services, our Advisory Services team ensures that you can initiate and remain focused on achieving manageable, measurable and cost-effective DCIM strategies.

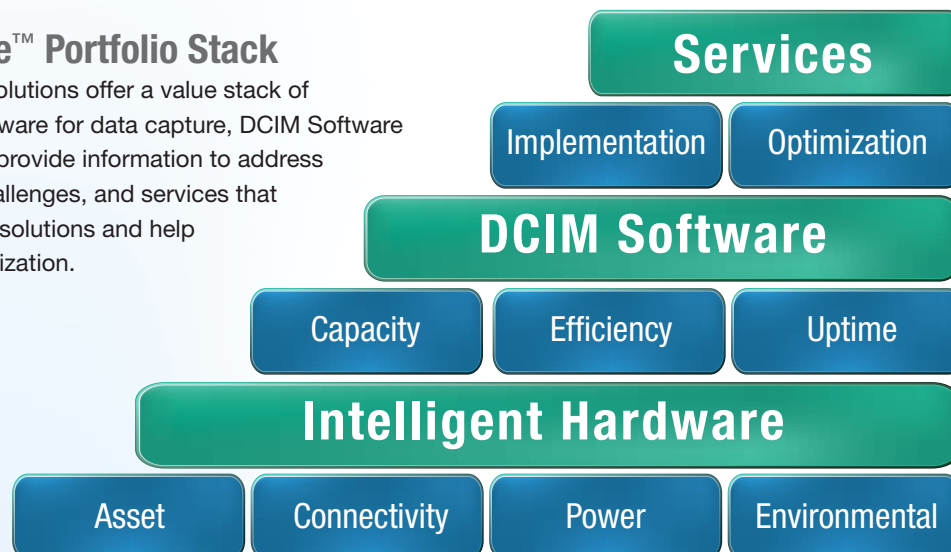
A thorough evaluation of your facility's power and thermal performance is always undertaken with a remediation plan, followed by deployment of the appropriate SmartZone™ monitoring solutions. Regular performance assessments and any necessary adjustments will ensure maximum power optimization, and ROI benefits are realized and maintained as quickly as possible.

With our Advisory Services team, you can be assured of direct access to the brightest minds in DCIM delivery:

- Strong technology alliances
- Participation in standards bodies and compliance to industry standards
- World class research and development team
- Reference architecture models integrating flexible and modular design elements
- Proven methodologies to streamline and accelerate engagement

### SmartZone™ Portfolio Stack

SmartZone™ Solutions offer a value stack of intelligent hardware for data capture, DCIM Software platforms that provide information to address operational challenges, and services that implement the solutions and help enhance optimization.





# SmartZone™ Software

## Decision Making Power at Your Fingertips

SmartZone™ DCiQ™ Software provides centralized, real-time and historical visibility of power, environmental conditions, capacity and security in your data center or building using granular operational data captured by SmartZone™ and third-party rack PDU and metering devices. The software monitors, documents and displays vital operational parameters surrounding energy consumption and environmental status to keep you informed at all times.

## Scalable, Flexible Management Capabilities

SmartZone™ DCiQ™ Software effectively bridges the gap between IT and facilities professionals, enabling them to work smarter together. The scalable software easily extends beyond IT power and environmental monitoring to provide reporting across all the other critical areas found in data center and extended enterprise facilities. You can choose to gather information on building utility metering (Point of Entry) as well as HVAC, CRACS, chillers, UPS, AHUs, lighting circuits and branch PDUs, to individual racks and server IT loads at the outlet level.

## Information at a Glance

The ERM (Enhanced Reporting Module) that is included with the DCiQ™ Software uses granular data from DCiQ™ and delivers additional advanced views of vital power and environmental parameters. The clear, easy-to-read dashboards and reports enable you to swiftly evaluate the health of your data center, facility, or enterprise building to make quick, effectual and well-informed decisions regarding your operations.

SmartZone™ DCiQ™ and ERM Software provide a precise and logical reflection of the 'actual' data center and its operational analytics. Armed with these tools, you have access to accurate information that you can use to optimize operational efficiencies, reduce OpEx and increase the resiliency of your data center environments.

## Key Advantages

- Align enterprise facilities and IT needs for optimized power and cooling, and capacity planning
- Reduce OpEx
- Drive operational advantages, sustainability benefits and optimization programs
- Isolate and resolve issues quickly, preventing outages and downtime
- Allocate costs across entire facilities, specific supporting services, individual rooms, groups of racks, and individual servers
- Facilitate mandatory legislative reporting (carbon reduction audit/evidence pack, CO<sub>2</sub> footprint analysis)



**Live and historical views of power consumption and environmental conditions using SmartZone™ DCiQ™ and ERM Software**



## Features Include:

- Pinpoint accuracy, offering unrivaled levels of granularity in power and environmental monitoring
- On-site or remote management via web-based console
- Alarm reporting and alerting against user defined thresholds
- Real time and historical monitoring and reporting of load draw, kVA, kW, kW/hrs, RMS volts and amps, power factor and frequency
- Dynamic and historical reporting of key data center metrics (i.e. PUE/DCiE)
- Works seamlessly with a comprehensive range of SmartZone™ and third-party devices
- Supports door access controls for physical cabinet security

## Fast, Accurate Environmental Reporting

Alongside power monitoring, SmartZone™ Solutions enable environmental monitoring of IT, cooling, and supporting facilities equipment. Sensors connect to SmartZone™ Gateways or directly to available sensor ports on network-enabled rack PDUs to capture and analyze real-time, historical and permissible user-defined performance data about operating temperatures, humidity and other environmental elements.

Using SmartZone™ DCiQ™ Software, this data can be managed, recorded and documented to assist with meeting mandatory legislative reporting requirements such as carbon reduction auditing and CO<sub>2</sub> footprint analysis.

## SmartZone™ Hardware

### The Power to Make Intelligent Choices

SmartZone™ Hardware addresses your mission-critical power infrastructure from every angle, putting you firmly in control when it comes to ensuring power quality, levels of redundancy and emergency back-up. Our world-class solutions comply with applicable IEC standards and all recognized national deviations including UL, CSA, EN, AS/NZ.

Legacy, newly built and micro data centers benefit from our decades of experience in the design and manufacture of monitoring hardware.

### World Class Breadth of Power Monitoring

Architecturally, Panduit offers two approaches for intelligent power monitoring:

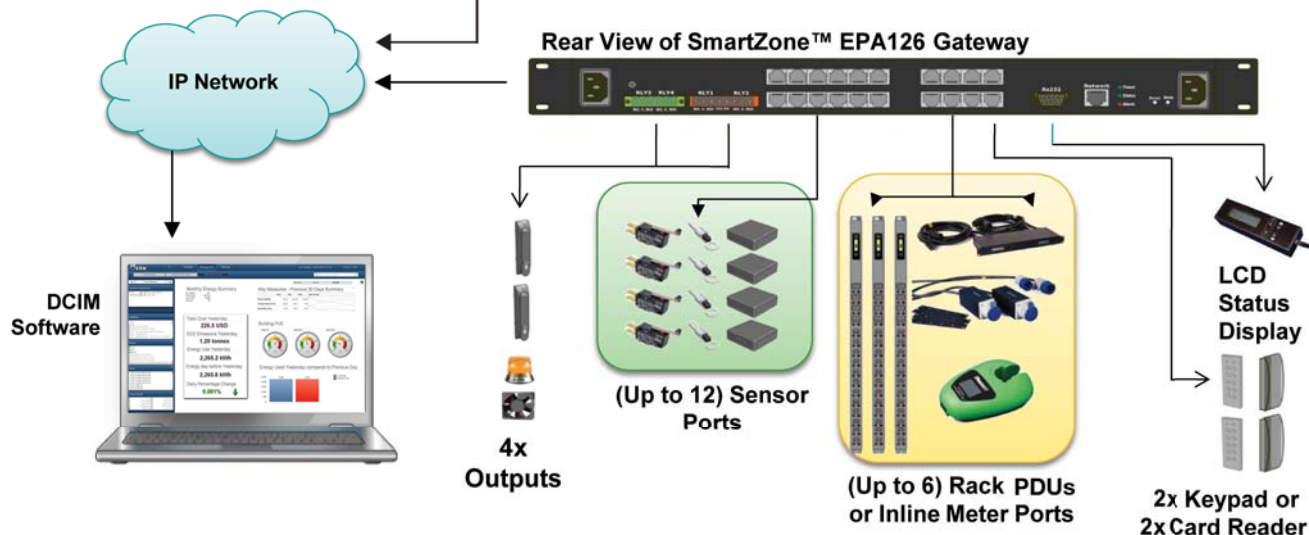
#### Network-Enabled Rack PDU Architecture

These traditional network-enabled rack PDUs attach directly to a network graphic connection as standalone units for typical power deployments in racks or cabinets.



#### Gateway-Enabled Rack PDU Architecture

Our system allows gateway-enabled rack PDUs and inline meters to connect to the network through a unique and cost-effective SmartZone™ Gateway infrastructure topology. This simplifies the network by consolidating the monitoring and management of connected rack PDU devices (as well as an assortment of other devices) through a single IP address.



## World Class Depth of Power Monitoring

The sheer depth of functionality included throughout our range of rack PDUs brings flexibility and choice.

### Manage Power on Your Terms

With a variety of monitored, monitored per outlet, monitored with switch, and monitored and switch per outlet controls to choose from, there are extensive options available to satisfy the vast majority of 'off the shelf' monitoring requirements.

To extend choice and flexibility, Panduit supports rack PDU customization options, from unique assembly designs to customized engineering and tooling...all to meet your exact project requirements.

### Maximize Your Existing Resource Investment with Intelligent Inline Meters

If you have a data center with existing basic rack PDUs to which you would like to add intelligence, Panduit offers options for maximizing your current assets:

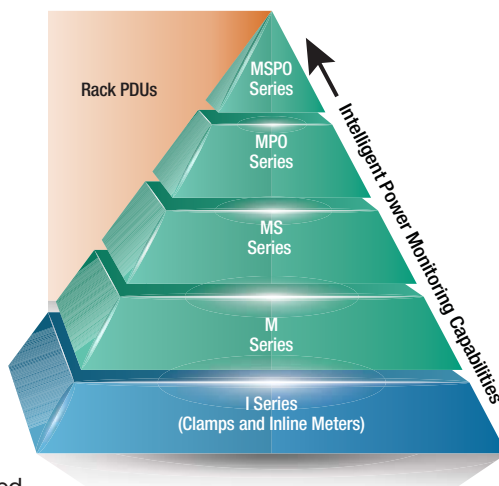
- **Clamp Meters** - SmartZone™ Clamp Meters capture basic power consumption data from basic rack PDUs by attaching the clamp meter casing directly over a live power cable, without service interruption
- **Zero RU Inline Meters** - SmartZone™ Zero-RU Inline Meters capture aggregate power from basic PDUs by quickly installing between rack PDUs power plugs and their primary power source with minimal downtime
- **1RU Inline Meters** - SmartZone™ 1RU Inline Meters are rack mountable meters that capture aggregate power from two individual basic PDUs

Inline meters are also a perfect option to monitor freestanding equipment such as mainframes or storage cabinets.

### Need a Simple Solution for Your Small Data Center?

If you have a data center with 30 or fewer racks or cabinets and want to integrate basic power and environmental monitoring capabilities, Panduit offers simple SmartZone™ Rack Energy Kits. These kits include all hardware, software and accessories necessary to monitor and capture operational data such as current and historical views of power and temperature, alerts and notifications, and documentation and reports.

Regardless of the size or complexity of your data center, Panduit can help you design, build and operate a power solution that will lead to better optimized operational efficiencies, reduced OpEx and increased resiliency of facilities.



## Power to Suit Your Every Need

Our breadth and depth of power options include:

### Basic Power (non-intelligent)

- Basic Rack PDUs for power distribution only
- Basic Rack PDUs with local meter that offer an on-unit display to provide real-time rack PDU power consumption

### Intelligent Power

- SmartZone™ Network-Enabled Rack PDUs
  - M Series (Aggregate Monitoring)
  - MS Series (Aggregate Monitoring with Switching)
  - MPO Series (Aggregate and Per Outlet Monitoring)
  - MSPO Series (Aggregate and Per Outlet Power Monitoring with Switching)
- SmartZone™ Gateway-Enabled Rack PDUs
  - M Series (Aggregate Monitoring)
  - MS Series (Aggregate Monitoring with Switching)
  - MPO Series (Aggregate and Per Outlet Monitoring)
  - MSPO Series (Aggregate and Per Outlet Power Monitoring with Switching)
- SmartZone™ Inline Meters (I Series)
  - Clamp Meter
  - Zero-RU Inline Meter
  - 1RU Inline Meter
- SmartZone™ Rack Energy Kits
  - Kits with Clamp Meters
  - Kits with Zero-RU Inline Meters
  - Kits with 1RU Inline Meter
  - Kits with Rack PDUs



## 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.***

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