Intelligent Power and Environmental Management – with SmartZone™ DCIM Software Suite

It’s no secret that power management is one of the biggest operational data center concerns. With energy prices skyrocketing, and pressure to be ‘green’ and efficient, it’s important to be both well-equipped and well informed when it comes to managing your data center. The SmartZone™ DCIM Power Module, part of the SmartZone™ DCIM Software Suite, provides all you need to keep on top of power utilization and environmental health. Centralized, real-time and historical visibility of power, cooling, and physical security within your data center or building allows you to work on-site or remotely to optimize capacity, improve efficiencies, and maximize uptime.

Granular Data - At Every Level
Using highly accurate operational data captured by power monitoring hardware and third party devices, the SmartZone™ DCIM Power Module is capable of monitoring, documenting, and displaying vital operational parameters surrounding power consumption and environmentals from building level, through to UPS, CRACS, chillers, CRAHs, lighting circuits and branch PDUs, all the way down to individual racks and server payloads.

Transcend Information Silos
The SmartZone™ DCIM Power Module bridges the information gap between IT and Facilities Management groups by providing an integrated and holistic view of the entire enterprise and data center, while dashboards also ensure you’re provided with clear, actionable information – not overloaded with unnecessary data.

Monitoring, Alerting and Historical Trending
The SmartZone™ DCIM Power Module provides alerting and notifications within the software or via email of breached user-defined thresholds. Historical trending allows for calculation of Dynamic PUE, giving a much more accurate indication of current efficiencies and any time sensitive fluctuations that may highlight optimization opportunities.

On-Site or Remote Management
The web-based console allows you to monitor and control hundreds to thousands of devices from a single pane of glass. Through the secure web interface (with Secure Socket Layer (SSL) support for web security), you can view the infrastructure from any browser within your organization’s intranet.

SmartZone™ DCIM Power Module helps you…

• Improve capacity planning and management with an in-depth understanding of total and detailed resource utilization, and the actionable information on power and environmental status required for best-fit deployments

• Understand the power consumption of equipment supporting the data center including individual plant equipment - to help with utilities and budget planning

• Identify inefficient resource utilization with power utilization trending and dynamic PUE calculation that highlights optimization opportunities

• Gain an accurate view of overall and individual IT equipment energy usage for efficiency analysis and cost breakdown reporting

• Gain greater visibility of environmental characteristics and power/energy consumption at cabinet and standalone equipment level

• Understand emissions performance including CO₂ tonnage, for compliance with regulatory reporting requirements

• Gain greater visibility of resources entering the building to aid with billing reconciliation, rough PUE calculation, variance analysis and predictive forecasting

• Improve the accuracy of PUE calculation and reporting with detailed energy consumption data at every level down to individual servers, in support of the most accurate PUE 2 Categories 2 & 3
Enhanced Reporting for Every Stakeholder

The SmartZone™ DCIM Power Module dashboard delivers advanced views of vital power and environmental parameters. By highlighting information that’s relevant to the day-to-day tasks of operational groups, while also summarizing overall performance and OpEx for executive dashboards, the SmartZone™ DCIM Power Module delivers comprehensive reporting and actionable intelligence for every level of your organization. Examples of these reports include:

**Power Capacity**
Includes clear information regarding the power draw at room and rack level. This enables IT professionals to choose the best possible placements for new equipment based on available power, gain an understanding of utilized and available power capacity, and keep an eye on power draw levels against thresholds in order to maintain resiliency. At a higher level, the report makes clear the distribution of power draw between different rooms which can assist in identifying unnecessarily power-hungry configurations, and potential areas for efficiency optimization.

**UPS Capacity**
Includes concise, immediate indication of power draw from your UPS, how much capacity remains for the addition of new equipment or failure scenarios, the risk of potential downtime as a result of over-draw, and the overall UPS health. Facilities professionals can also choose to view, individually or as a percentage, how much power is being drawn from each building or room; this is useful for optimization purposes (and billing, in the case of co-location services).

**Power Chain**
Helps the Facilities group understand where the power is going throughout the entire facility. This data assists in identification of power 'leaks', and is vital for accurate calculation of PUE 2 – the more accurate PUE metric – as it provides data on power consumption from all facility equipment.

Features of SmartZone™ DCIM Power Module:

- Data on power consumption, temperature, humidity, emissions, leak detection and cabinet security
- Quick view of power and environmental alarms, trends and statuses of devices and service
- Gather trend and spot data for all active equipment at the individual outlet level
- Map view of alarms, environmental, power/current and security
- Alarm reporting and alerting against user defined thresholds
- Always-visible ‘traffic-light’ alert indicator for constant guidance on health status
- Dynamic and historical reporting of key data center metrics (i.e. PUE/DCiE)
- Real-time and historical monitoring and reporting of load draw, kVA, kW, kWh, RMS volts and amps, power factor and frequency
- Enriched dashboards and reporting for every operational function via the included Enhanced Reporting Module (ERM)
Management Summary
Includes a concise overview of high level performance factors. Executives can view energy consumption by day, understand the total cost of resource utilization, and monitor total CO₂ emissions. A Percentage Change rate makes it clear how well your data center, facility or enterprise is performing in comparison to previous time periods, allowing you to evaluate or identify a need for optimization strategies.

These and many other dashboards and reports available within the SmartZone™ DCIM Power Module complement flexible management and reporting capabilities to provide actionable information which enables you to improve energy efficiency, manage capacity, reduce costs and increase resilience.

Environmental Monitoring
The SmartZone™ DCIM Power Module measures and displays humidity and temperature levels within a cabinet as well as providing data on emissions and leak detection, for early identification of environmental concerns.

Physical Security – Cabinet Access and Control
The SmartZone™ DCIM Power Module works in conjunction with SmartZone™ Door and Access Controls devices such as HID card reader, keypads, and a portfolio of door contact sensors to provide real-time monitoring and alerting of unauthorized or unplanned cabinet entry, as well as audible local and remote access and control.

Security – User Access
The SmartZone™ DCIM Power Module provides user authentication and logging of all user activity, making it easy for administrators to identify and track who’s doing what, and when. Reports include:
  - Users Login Audit Report
  - Management Application Configuration Change Audit Report
  - Configuration Change Report
  - Installed Device Report