

# Power IQ® DCIM Monitoring Software



Data  
Sheet

## DCIM Monitoring Software

### Platform Options:

#### ■ VMware®, Microsoft Hyper-V®, and Linux® KVM Virtual Appliances

Our application software, database, and hardened Linux® operating system are fully tested and ready to load on your VMware, Hyper-V, or Linux KVM platform.

#### ■ Hardware Appliance

Our application software, database, and hardened Linux operating system are loaded onto our enterprise-class, rack-mountable 2U server with dual power supplies and redundant fans.

*“The largest improvement that I see is being able to monitor power usage in our lab and making sure that our PDUs don’t get overloaded. We’ve gone through a few retirement phases and we can track that with the graphs in the PIQ software — we see the power usage going down. Being able to see the temperature throughout our lab is also pivotal.”*

Kiel Anderson | Senior Lab Network Engineer, F5

## Easily Manage Data Center and Facility Energy, Power and Environment

In today’s data center, being efficient with power and cooling resources is just as important as maintaining uptime. Power IQ® (PIQ) software provides the information and controls you need to fully utilize your existing infrastructure resources while alerting you to trouble before it causes downtime. PIQ software can be easily deployed as a standalone DCIM monitoring solution or with Sunbird’s dcTrack® DCIM Operations to provide full asset and change management.

PIQ functionality scales to meet enterprise needs, allowing you to securely monitor all your data centers and labs, including your CRACs, UPS, PDUs, RPPs, Meters, Branch Circuits, Racks, Rack PDUs, Environment Sensors, IT Devices, and Electronic Door Locks—all from a single web browser.

PIQ is vendor neutral and automatically supports a number of devices and manufacturers (see back page). You can easily add support for any other manufacturers with our dynamic plugin capability.

### Utilize Power and Cooling Resources Efficiently and Improve PUE

PIQ software automatically collects power and environmental data from sensors.

- Leverage Free Cooling – Patented Electronic Psychrometric Cooling Charts help you keep cabinets in the ASHRAE® allowable environmental ranges for potential cost savings.
- Identify and Eliminate Ghost Servers – Scheduled email reports pinpoint ghost servers for consolidation.
- Bill Back Energy Costs Based on Usage – Automatically generated bill back reports drive better behavior.

### Make Informed Power and Capacity Planning Decisions

PIQ software tracks actual power load of IT devices under computing stress, providing more accurate planning information.

- Find Stranded Power Capacity – Newly found capacity delays expensive capital expenditure.
- Project Future Power Capacity Needs - Trending and days of supply projections enable accurate forecasting.
- Monitor UPS Capacity and Battery information – End-to-end monitoring easily prevents potential over-capacity situations.

### Monitor Data Center Health to Prevent Costly Unplanned Downtime

Avoid unplanned downtime that can cost hundreds of thousands of dollars per outage and the health of your complete data center, including critical facilities like UPS, CRACs, and Panels.

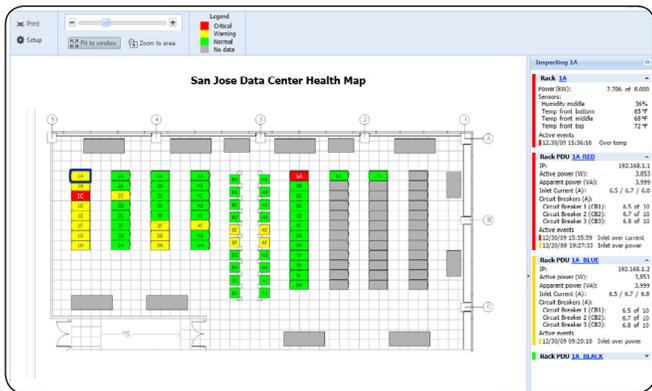
- Simulate Rack Failover – Reports identify available capacity to ensure coverage in case of failure.
- Visualize Data Center and Facility Health Status – Health Map of your data center floor with red, yellow, and green color coding provides an at-a-glance view of rack load levels, line currents, and all environmental conditions.
- Alerting and Alarming of Threshold Violations – Automated emails enable quick identification of hotspots and potential trouble areas.



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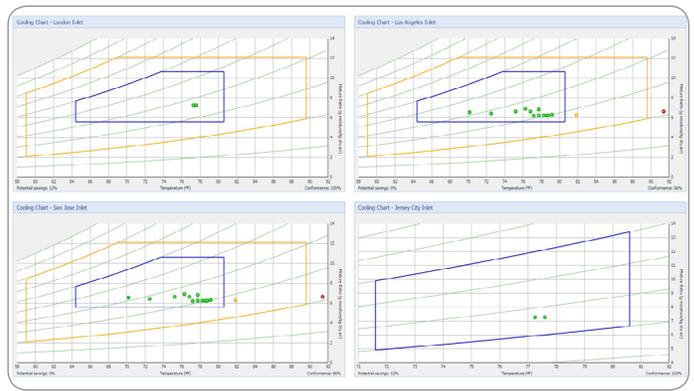
## Health Monitoring

A real-time interactive data center health map increases your uptime by providing advanced warnings of issues such as hot spot formation, SLA violations, overcharges, and loss of redundancy.



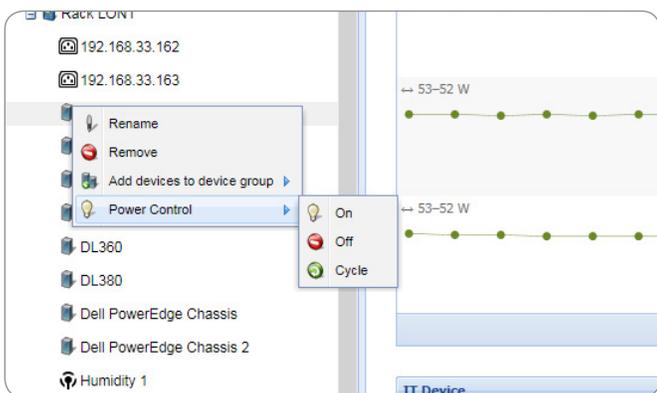
## Avoid Hotspots and Overcooling

Maintain uptime, ensure compliance with manufacturer and industry-accepted recommendations, and achieve project cost savings by increasing the temperature set point.



## Power Control with Outlet Grouping

Easily increase productivity by controlling the powering on/off of outlets, IT devices, and groups of IT devices with power sources spanning multiple rack PDUs, without the need to log into your rack PDUs individually.



## Power Usage Effectiveness (PUE)

See real-time PUE, trends, and current power capacity utilization at any level in your data center or lab (PDU, rack, row, busway, room, etc.) helping to increase data center efficiency.





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## Find Stranded Power Capacity

Power consumption reports provide a quick and easy way to identify what cabinets have available capacity, thereby delaying expensive capital expenditure and improving resource efficiency.



## Simulate Rack Power Failure

Eliminate outage concerns with at-a-glance views and reports that identify available capacity and whether there is enough available in case of failure.

**Rack 1A**

| Rack Summary |  | Capacity (kW) | Load (kW) | Utilization |
|--------------|--|---------------|-----------|-------------|
|              |  | 10.00         | 1.57      | 15.7%       |

| Pair 1                  |              | 192.168.43.106<br>Sample PDU-123 | 192.168.43.106 - 2<br>Sample PDU-123 - 2 | Failover Simulation |             |          |             |
|-------------------------|--------------|----------------------------------|--|---------------------|-------------|----------|-------------|
|                         | Capacity (A) | Load (A)                         | Utilization                              | Load (A)            | Utilization | Load (A) | Utilization |
| <b>Inlet</b>            |              |                                  |  |                     |             |          |             |
| L1                      | 24           | 1.30                             | 5.4%                                     | 0.90                | 3.7%        | 2.20     | 9.2%        |
| L2                      | 24           | 0.90                             | 3.7%                                     | 1.80                | 7.5%        | 2.70     | 11.2%       |
| L3                      | 24           | 1.60                             | 6.7%                                     | 1.40                | 5.8%        | 3.00     | 12.5%       |
| <b>Circuit Breakers</b> |              |                                  |  |                     |             |          |             |
| CB1                     | 20           | 0.70                             | 3.5%                                     | 0.00                | —           | 0.70     | 3.5%        |
| CB2                     | 20           | 0.50                             | 2.5%                                     | 0.80                | 4.0%        | 1.30     | 6.5%        |

## Bill Back Energy Usage

Automatically generate bill back reports that charge individual organizations based on usage, including premium charges for overages, provide equitable distribution of power and energy charges, and drive energy efficiency and sustainability initiatives.

The screenshot shows a report titled 'Customer Bill with Rack Details'. It includes customer information (Customer: Chcvion, Date Range: 2015/05/01 - 2015/05/31) and a table of rack energy usage.

| Rack      | kWh     |
|-----------|---------|
| Rack L0W1 | 679.641 |
| 1B        | 522.330 |
| 1A        | 204.459 |
| 1D        | 179.690 |
| 1F        | 8.851   |

## Electronic Access Security Management

Physically lock down individual cabinets and containment areas in your data center with electronic door management compatible with third-party door locks with RFID. Manage door access within the GUI and create and share status and audit reports to improve productivity and enforce compliance. Ensure no door is left unlocked with a user-configurable auto-relock timer.

The screenshot shows the 'Rear Door' control interface. It includes a 'Door Control' section with 'LOCK' and 'UNLOCK' buttons. Below is a 'Sensors and Door Status' section with 'Sensor Mappings' and 'Available Sensors'.

| Sensor Mappings                  | Status | Available Sensors   | PDU            |
|----------------------------------|--------|---------------------|----------------|
| Door: On/OFF 5, Not wired        | Closed | Dry Contact 1       | 192.168.46.216 |
| Handle: On/OFF 3, Not wired      | Closed | Dry Contact 2       | 192.168.46.216 |
| Lock: PDU-1, 6 Lock in EMMA Door | Locked | On/OFF 2            | 192.168.46.216 |
|                                  |        | On/OFF 3            | 192.168.46.216 |
|                                  |        | On/OFF 4, Not wired | 192.168.46.216 |
|                                  |        | On/OFF 6            | 192.168.46.216 |
|                                  |        | On/OFF 7            | 192.168.46.216 |
|                                  |        | On/OFF 8            | 192.168.46.216 |



# Power IQ® DCIM Monitoring Software

## Monitoring and Management

- Monitor facility objects, including sensors, meters, PDU/RPP/Branch circuits, UPS, CRACs, and electronic door locks
- A central management console consolidates names, polling status, location, model, and firmware onto one screen, saving valuable management time
- Bulk configuration and firmware distribution for Raritan and Server Technology PDUs
- Power and environmental events and notifications
- Autodiscover rack PDUs
- Trap filtering and forwarding
- Multi-tenancy support

## Automated Power Control

- Remote power control of outlets, IT devices, device groups, and racks
- Patented agentless graceful operating system shutdown

## Power and Environmental Data Aggregation

- User-configurable collection intervals ensure desired accuracy while minimizing network traffic
- Aggregate active power, current, temperature and humidity data

## Open Data Model

- Web Services API enables easy scripting and integration with your systems with support for creating, reading, updating and deleting data center items and for power control and reading events.
- Open database connectivity capabilities let you use your existing data warehouse and reporting system to generate custom reports
- Import and export data via CSV file

## Security

- SNMP v1, 2, and 3 with Informs
- Full audit log
- LDAP and Active Directory
- IP Tables firewall
- IP-based access control
- Support for all browsers
- Granular permissions
- Specify unique administrator username and password

## Dynamic Dashboard, Reporting and Charts

- Modern HTML User Interface
- User configurable dashboard with drag-and-drop widgets
- Health and Capacity Floor Map
- Energy, cost, and carbon consumption reports
- Rack Inlet Cooling Chart
- Charge Back Reports
- Cabinet Capacity Report
- Door Status and Audit Report
- Stranded power capacity
- Capacity, trending and status reports
- Thermal analysis, including temperature and humidity
- Compliance Reports
- Power capacity meter with forecasted “days of energy supply”
- Failover simulation charts
- Critical and warning alerts report, display, and email notifications
- Exception reports
- Data archive to retain and chart more raw data

## Create Custom Reports

- Tailor reports to focus on only the relevant timeframe and information
- Sort and filter data on power/energy, temperature, and other metrics to gain more granular insights
- Tags and Tag Groups settings
- Customized tabular reports for active power, energy, and temperature

## Vendor Agnostic Support

- Out of the box support for: APC®, Avocent®, BayTech®, Chatsworth Products, Inc., Cyber Switching®, Cyclades® Eaton, Emerson®, Geist, HP®, Knurr®, Liebert, MRV®, NetBotz, Raritan®, Rittal®, Schleifenbauer®, Schneider Electric, Server Technology®, Sinetica, Starline Track Busway, Tripp Lite, UNITE™, Veris®, and many other devices
- Dynamic plugin capability
- Over 100 dynamic plugins are available free of charge at [addons.sunbirddcim.com](http://addons.sunbirddcim.com)

Call 732.993.4476 or visit [SunbirdDCIM.com](http://SunbirdDCIM.com)

Sunbird Software is changing the way data centers are being managed. With a focus on real user scenarios for real customer problems, we help data center operators manage tasks and processes faster and more efficiently than ever before, while saving costs and improving availability. We strive to eliminate the complexity they have been forced to accept from point tools and home grown applications, removing the dependency on emails and spreadsheets to transform the delivery of data center services. Sunbird delivers on this commitment with unexpected simplicity through products that are easy to find, buy, deploy, use, and maintain. Our solutions are rooted in our deep connections with our customers who share best practices and participate in our user groups and product development process.

Based in Somerset, NJ, Sunbird serves over 1,000 DCIM customers worldwide. For more information, please visit [SunbirdDCIM.com](http://SunbirdDCIM.com).

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