

Intelligent infrastructure monitoring for software-defined data centers

Intelligent Power Manager Infrastructure

Simplified IT-centric monitoring



Powering Business Worldwide

Make more effective management decisions with intelligent power, space and environmental condition monitoring.

When you can see and understand the power, space and environmental constraints in your data center, it's easier to plan change, anticipate challenges and make more informed and effective management decisions. That's the power that the new Eaton Intelligent Power™ Manager (IPM) Infrastructure gives you.

Embedded within an Eaton Intelligent Power Controller, the new IPM Infrastructure software provides data center managers with an easy to use and simple to deploy infrastructure monitoring solution.

From the rack view to the data center dashboard, IPM Infrastructure allows IT professionals to understand and monitor data center power, environmental and physical capacity metrics, all within the context of their IT infrastructure.

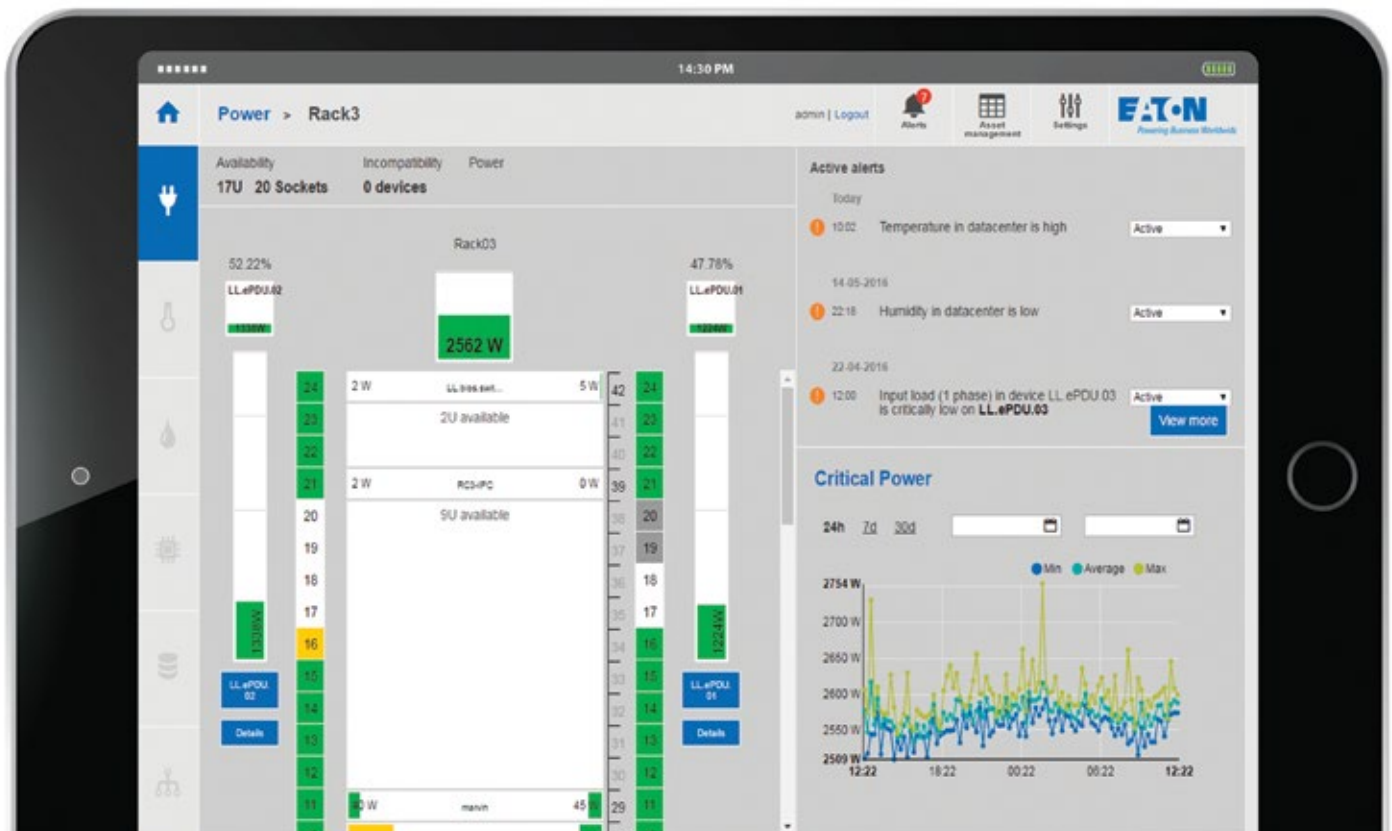
With the flexibility of the 42ITy™ (www.42ITy.org) Open Source data center monitoring software stack, Eaton IPM Infrastructure simplifies complexity – so you can focus on what really matters.

Environmental monitoring including temperature and humidity with more functionality to follow

Simple IT asset management including business prioritization capabilities

Power chain monitoring including power kW, energy consumption (kWh), phase and circuit balancing

Trending analysis via an intuitive web interface with auditable logs and email alerts



Understanding your infrastructure

IPM Infrastructure gives you a unique insight into what's happening in your data center.

Its power chain monitoring capabilities keep you informed about power usage (kW) and energy consumption (kWh), in addition to phase and circuit balancing. Environmental monitoring covers temperature and humidity while IT asset management helps you manage business prioritization.

All the information gathered from these inputs is reported via an intuitive web interface, with email alerts.

Simple and centralized

IPM Infrastructure has been designed from the start to be easy to use. As a powerful monitoring solution, it has a number of valuable features which make comprehensive data center monitoring intuitive, simple and centralized.

Intuitive, drill-down interface

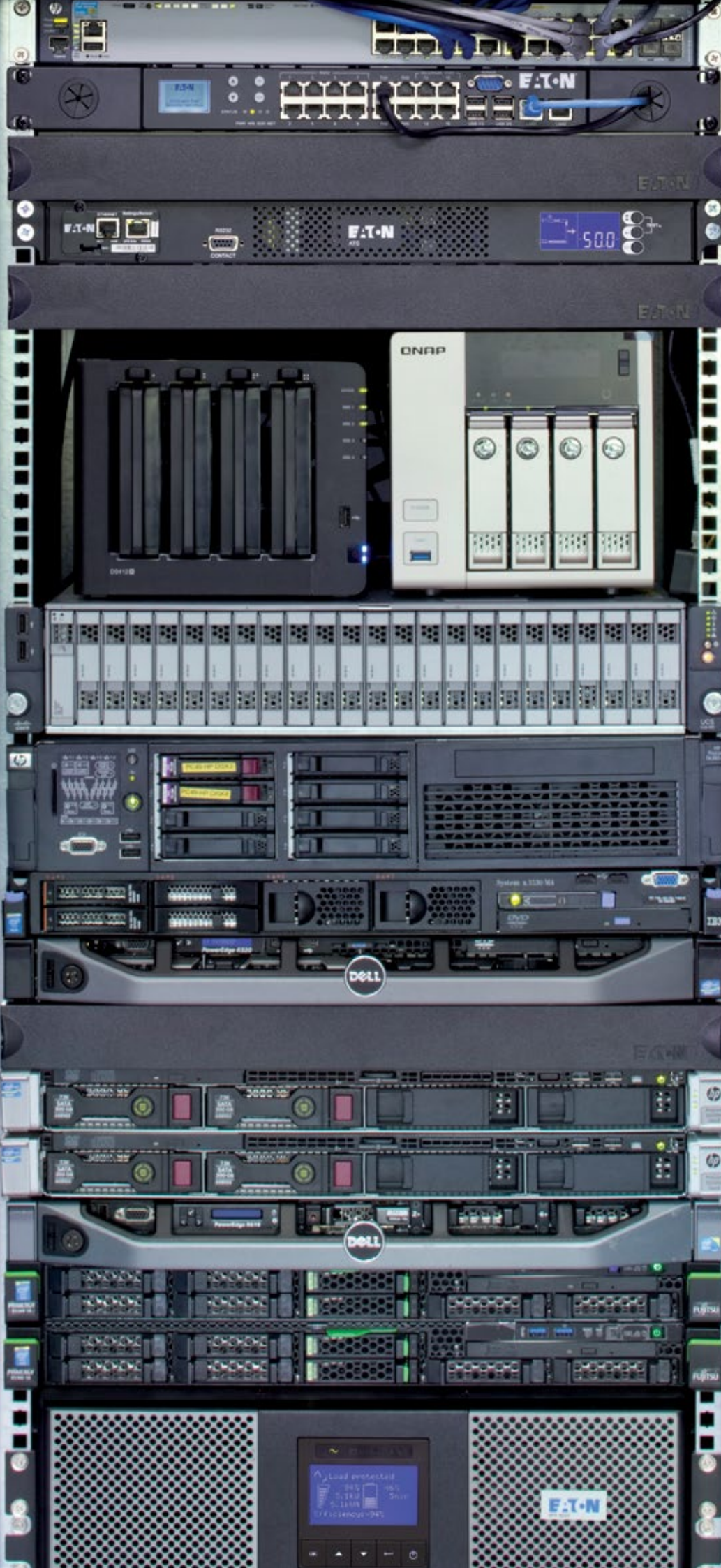
Easily understand physical infrastructure constraints within the context of the IT infrastructure.

Centralized management appliance

The Intelligent Power Controller acts as a local, centralized repository. It is accessible via the network through a powerful, intuitive and responsive HTML5 / AngularJS web interface or SSH.

Simplified capacity management

See and understand the physical infrastructure's available capacity at a glance. Space, power and environmental metrics provide essential information for ensuring business continuity and maximizing IT device operating lifetimes.



Real-time intelligence

By providing you with real-time information, IPM Infrastructure enables quick and effective responses to events, to reduce MTTR (Mean Time to Repair).

Real-time monitoring and graphical trending analysis

Real-time device monitoring provides instantaneous visibility of the state of your physical infrastructure and its constraints.

Alert notification

Email, and email to SMS gateway alerts, ensure you are informed of critical alerts in real time.

Trends and evolution

Key power and environmental data is conveniently stored, and converted into easy to use in-application trend indicators and graphs. This means you can better understand how your data center capacity is evolving over time.

Load balancing

By automatically tracking power draw from the UPS through the rack power distribution, IPM Infrastructure helps you to ensure the load is equally distributed across all phases at all times.

Diversity, interoperability, support

You can rely on IPM Infrastructure to support whatever devices you currently operate.

Multi-vendor device support

IPM Infrastructure supports Eaton power devices out of the box, but is based on the 42ITy™ open source project, enabling us to provide vendor-neutral data acquisition via the NUT open source engine (www.networkupstools.org). Multi-vendor device support is provided via the SNMP protocol.

Extreme support

If we don't support your SNMP power device out of the box, we'll build a new driver configuration within 72 business hours of receiving your complete device profile information.

Integration

Open RESTful API facilitates third-party application integration.

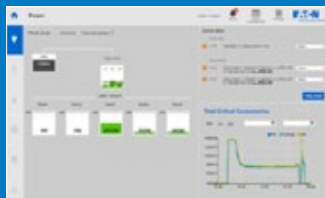
Application highlights



Data Center Dashboard:

Understand your data center. All the key KPIs you need for peace of mind.

- Total DC energy consumption
- Data Center Temperature
- Data Center Humidity
- Power availability KPI
- Trends on all KPIs
- Alert summary



Data Center Power Chain view:

Master your critical power consumption and extrapolate future usage trends.

- Simplified power chain
- UPS overview including phase detail
- Total power consumption per rack
- Total critical power consumption
- Historical power trend graph
- Alert summary



Rack level:

Where IT and Power meet. Understand the intersection of power and physical capacity at a glance.

- Available capacity – outlet and U space
- Installed devices
- Total rack power consumption
- Power consumption per rack PDU
- Feed balance
- Outlet identification per device
- Historical power trend graph
- Alert summary



Simplified asset management:

Manage the lifecycle of your IT devices.

- Installed devices
- Contact details per device
- Business priority per device
- Simple alert notification per device
- Warranty details per device with alert capability
- Import / Export to .csv

A semi-transparent UI overlay showing a table with multiple rows and columns. The table has a header row with labels and several data rows with numerical values. The interface includes a header with a logo and a sidebar with navigation options.

Technical Specifications

Intelligent Power Controller 3000

Processing and storage characteristics

| | |
|--------------------|------------------------------|
| CPU | 1GHz Dual Core ARM processor |
| Boot Flash storage | 128 MB |
| Mass storage | 4 GB SD Card |
| RAM | 1 GB |

Power connections

| | |
|--------|--|
| Input | 2 x IEC C14 redundant power connectors |
| Cables | 2 x 2m C13 – C14 power cables included |

Communication connectors

| | |
|----------------------|--|
| Ethernet ports | 2 x front facing RJ45 10/100/1000 Ethernet for redundant monitoring network connectivity 1 x rear facing RJ45 10/100/1000 Ethernet for rack PDU data aggregation |
| USB ports | 4 x USB ports, including 1 x powered 5V/2A |
| RJ45 Serial ports | 4 x RS232 T&H ports with EMP001 auto configuration capability 8 x RS232 serial ports for future monitoring probe aggregation or device monitoring 4 x RS232 / RS485 software selectable serial ports for select 3rd party Modbus T&H sensors |
| Service console port | 1 x DB9 serial service port |
| Dry contact | 10 x dry contact terminals for dry contact sensors |
| Relays | 5 x output relays, 12V |

Indicators / Display

| | |
|----------------|--|
| LED indicators | 2 x Power Feed Status LEDs, 1 x Network Status LED, 1 x Device Power Status LED, 1 x Service Status LED, 1 x Heart Beat LED |
| Display | 1 x Monochrome LCD |

Dimensions H x W x D / Weight

| | |
|--------------------|-------------------------|
| IPC3000 dimensions | 42 x 300 x 211 mm |
| IPC3000 weight | 2.2 kg / 4 lbs |
| Housing | Rack mount; 1U, ½ width |

Operating Conditions, standard and approvals

| | |
|-----------------------|---|
| Operating temperature | Maximum 50° C continuous, for indoor operation only |
| Operating humidity | Maximum 90% |
| Noise level | Fanless |
| Safety Approvals | CE ; cTUVus |

Integration

| | |
|---------------|--|
| Open REST API | HTTP/HTTPS RESTful API for integration with 3rd party applications |
|---------------|--|

Protocols

| | |
|-----------------------------|--|
| Supported network protocols | TCP/IP, HTTP, HTTPS, SNMPv1, SNMPv2c, DHCP, DNS, SSH |
|-----------------------------|--|







Graphical User Interface

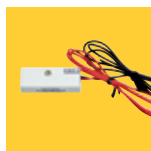
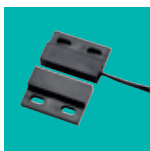
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|-----------------|--|
| Browser support | Desktop: Most recent versions of modern web browsers including MS Internet Explorer, Chrome, Firefox, and Safari Mobile: Most recent versions of modern mobile web browsers |
| Technology | Fully responsive, HTML 5 & AngularJS client application |

Customer Service and Support

| | |
|-------------------|---|
| Hardware warranty | 2 Year |
| Software | Free 1 Year IPM Infrastructure Software Subscription included |

Accessories

| Product Code | Description | Status | Image |
|--------------|---------------------------------|-----------|---|
| EMP001 | Temperature and Humidity Sensor | Available |  |
| DCS001 | Door contact sensor | Future |  |
| WLD012 | Water leak detector | Future |  |
| VIB001 | Vibration detector | Future |  |
| SMK001 | Smoke detector | Future |  |
| PIR001 | PIR motion detector | Future |  |



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- the OpenEvidence Project,
- Oracle and/or its affiliates
- the 42ITy project (www.42ITy.org)
- the NUT project (www.networkupstools.org).



This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org).

This product includes cryptographic software written by Eric Young (ey@cryptsoft.com).

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