



SmartZone™
Rack Energy Kits
Energy and Environmental Monitoring
for Small Data Centers

PANDUIT®

SmartZone™ Rack Energy Kits Features:

- Simple and Easy to Install
- Single Part Number Ordering Capability
- Fully Scalable for Enhanced and Automated Reporting
- Real-time Monitoring and Alerting
- Single IP Address per Cabinet
- Non-Invasive Solution and Zero Downtime with CL-Amp™
- Best-in-Class Accuracy
- High Reliability and Resilience

Unified Physical Infrastructure



SmartZone™ Rack Energy Kits

Energy and Environmental Monitoring for Small Data Centers

Complete Energy and Environmental Management

Small data centers face spiraling power demands and increasing utility costs, with power often representing the largest component of overall operating expenditures. To help gain greater visibility into data center performance, Panduit offers SmartZone™ rack energy kits for new and legacy data centers with fewer than 30 racks that enable cost-effective, real-time monitoring, alerting, and management of data center power and environmental information.

Bundled with monitoring software, a gateway, and a choice of intelligent devices SmartZone™ rack energy kits are easy to install and deploy on a per rack basis.

SmartZone™ rack energy kits provide best-in-class monitoring accuracy at the outlet level. The complete “in a box” kit for small data centers requires fewer IP addresses, brings greater resilience, and higher reliability than other IP-based power distribution solutions. This is achieved through Panduit’s unique design philosophy where all of the non-essential intelligence and electronics necessary for supporting power strip functionality are removed and contained within the RackKMS™ gateway platform. This eliminates the need for an internal power supply to the actual strip itself.

Panduit rack energy kit solutions are part of the portfolio of SmartZone™ solutions that deliver comprehensive energy and physical infrastructure efficiency in data centers, facilities, and remote enterprise sites through intelligent products, systems, and services.



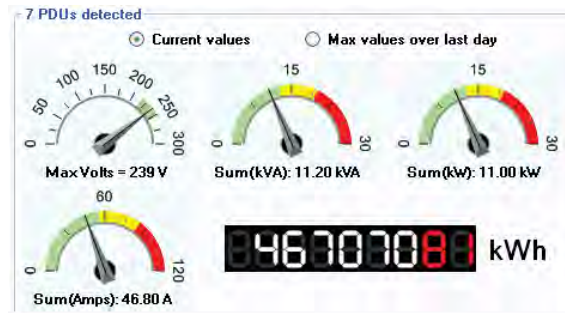
SmartZone™ rack energy kit solutions offer a flexible approach to rack monitoring, whether it is for non-invasive monitoring of legacy data centers, upgrading of ‘non-intelligent’ cabinets, or new build data centers.

The Foundation of Rack Energy Kit Monitoring

Standard In Every Kit Choice



Monitoring Dashboards – shows all temperature, humidity and power sensors as trend lines for devices



Monitoring Software – live and historical views of power, temperature and humidity data readings

Monitoring Software

Env-U3 Monitoring Software is included in each rack energy kit to provide both a live and historical view of power, temperature and humidity data readings, coupled with simple trending information of the parameters monitored, allowing basic management reports to be easily created and exported into Excel or CSV formats.

The Env-U3 application is intended to collect all data and readings from the RackKMS™ gateway. Using standard SNMP protocol, Env-U3 will monitor up to a maximum of 60 power strips (PDUs). Utilizing the Microsoft .NET framework version 2.0, Env-U3 is capable of logging any SNMP alarms generated by the RackKMS™ gateway. The gateway is polled at regular intervals and the read data is collected and stored in the applications database at one minute intervals for a maximum of 186 days.

Power and Environmental Monitoring Gateway

RackKMS™ is a highly cost effective power and environmental monitoring gateway that is included in each rack energy kit. It requires only a single IP address, as opposed to many of the solutions on the market, which utilize multiple IP addresses per cabinet. The RackKMS™ gateway combines with Env-U3 monitoring software to provide live and historical views of power, temperature and humidity data readings.

Other features of the RackKMS™ include:

- Installed at zero 'U' height, saving valuable rack space
- Allows up to four auto sense analog input channels per cabinet. Two standard temperature sensors and the other two ports can be any combination of temperature, humidity, voltage free contact switches or analog 0~10VDC inputs
- HTTP/HTTPS web interface for management and power strip control
- All alarm thresholds can be user defined and configured through an easy-to-use web interface or managed via SNMP for configuration and monitoring

Additional Kit Components

- Two temperature sensors are provided with each kit
- Four Ethernet Cables are included with each kit



SmartZone™ Non-Invasive Rack Energy Kit

Ideal for Legacy Data Centers

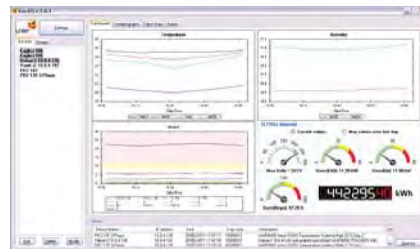
The SmartZone™ non-invasive rack energy kit utilizes CL-Amps™, which show power demand in a cost-effective and efficient “non-invasive” manner. These intelligent devices provide the ability to identify available capacity, make informed decisions, calculate “what-if” scenarios, perform risk analysis, and reduce costs for improved energy efficiency.

The CL-Amp™ is powered by the RackKMS™ gateway, which also provides the necessary communication link that allows the electrical current to be read and measured. The CL-Amp™ enables the “non-invasive” real-time monitoring of up to 60 Amps of current for any device or power strip. Created with a slotted cable opening in a high-quality and robust plastic housing, the device is placed directly over a non-armored power cable, with a selection of locking-ring collars to fit most 20A and 30A cable sizes.

Local and remote monitoring is achieved by connecting the CL-Amp™ to the included RackKMS™ gateway, and through an integral LED display on the CL-Amp™.

Benefits of SmartZone™ non-invasive rack energy kit:

- Non-invasive real-time monitoring
- Visibility of power demand to reduce costs and improve energy efficiency
- No need for power down and easy to install
- Non-intelligent power strip vendor neutral



Non-Invasive Rack Energy Kit with CL-Amps™

Part Number	Description
RMSC2T2PCLA01	Includes (2) CL-Amps™.

Non-Invasive Kit Include:
 Env-U3 Monitoring Software
 RackKMS™ Gateway
 Set of Ethernet Cables
 Temperature Sensors (2)
Non-Invasive CL-Amps™ (2)

SmartZone™ In-Line Rack Energy Kits

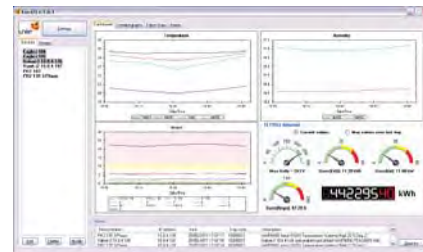
Ideal for Legacy Data Centers

The SmartZone™ in-line rack energy kits utilize IQ Adapters™ that offer a quick and simple solution to bring monitoring functionality to non-intelligent power strips. The IQ Adapters™ are installed between the power supply and existing power strip to measure and optimize power consumption in real-time.

The included RackMS™ gateway monitors the IQ-Adapters™ to provide a real-time and consolidated view of your energy status. This consolidation of granular information and monitoring accuracy enables flexible energy management and control. The SmartZone™ in-line rack energy kits are available with IQ Adapters™ in a wide range of load ratings for single or three phase applications. Quick and simple installation is achieved with a variety of mounting options.

Benefits of SmartZone™ in-line rack energy kits:

- Real-time view of energy consumption
- Remote monitoring and management
- Quick and easy to install
- Economical and cost-effective
- Power strip vendor neutral



In-Line Rack Energy Kits with IQ Adapters™

In-Line Kits Include:
 Env-U3 Monitoring Software
 RackMS™ Gateway
 Set of Ethernet Cables
 Temperature Sensors (2)
 IQ Adapters™ (2)

Part Number	Description
RMSQ2T2POB01	(2) IQ Adapters™ – 20A Single Phase. IEC 60309 Plugs and Sockets.
RMSQ2T2POB02	(2) IQ Adapters™ – 20A Three Phase Delta. IEC 60309 Plugs and Sockets.
RMSQ2T2POB03	(2) IQ Adapters™ – 30A Single Phase. IEC 60309 Plugs and Sockets.
RMSQ2T2POB04	(2) IQ Adapters™ – 30A Three Phase Delta. IEC 60309 Plugs and Sockets.
RMSQ2T2POB05	(2) IQ Adapters™ – 20A 120V Single Phase. NEMA L5-20P, L5-20R.
RMSQ2T2POB06	(2) IQ Adapters™ – 30A 120V Single Phase. NEMA L5-30P, L5-30R.
RMSQ2T2POB07	(2) IQ Adapters™ – 20A 208V Single Phase. NEMA L6-20P, L6-20R.
RMSQ2T2POB08	(2) IQ Adapters™ – 30A 208V Single Phase. NEMA L6-30P, L6-30R.
RMSQ2T2POB24	(2) IQ Adapters™ – 20A 120V Single Phase. NEMA 5-20P, 5-20R.

SmartZone™ Rack-Mounted Rack Energy Kits

Ideal for Legacy Data Centers

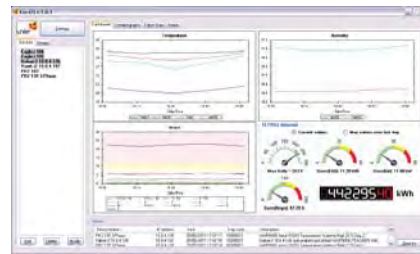


The SmartZone™ rack-mounted rack energy kits utilize a Dual Link Box specifically designed for devices requiring one or more direct power feeds. The Dual Link Box is ideal for large servers, disk storage arrays, blade server enclosures, and network switches.

These rack energy kits use the Dual Link Box to accurately measure critical power and energy information through polling and real-time SNMP, and the included RackKMS™ gateway to monitor and control, and to generate warnings, and critical alarms.

Benefits of SmartZone™ rack-mounted rack energy kits:

- Real-time view of energy consumption
- Remote monitoring and management
- Quick and easy to install
- Economical and cost-effective
- Power strip vendor neutral
- Front of rack data display through the Dual Link Box



Rack Mounted Kits Include:
 Env-U3 Monitoring Software
 RackKMS™ Gateway
 Set of Ethernet Cables
 Temperature Sensors (2)
 Dual Link Boxes (1)

Rack-Mounted Rack Energy Kits with Dual Link Box

Part Number	Description
RMSL2T1POB09	Dual Link Box – 20A Single Phase. IEC 60309 Plugs and Sockets.
RMSL2T1POB10	Dual Link Box – 20A Three Phase Delta. IEC 60309 Plugs and Sockets.
RMSL2T1POB11	Dual Link Box – 30A Single Phase. IEC 60309 Plugs and Sockets.
RMSL2T1POB12	Dual Link Box – 30A Three Phase Delta. IEC 60309 Plugs and Sockets.
RMSL2T1POB13	Dual Link Box – 20A 120V Single Phase. NEMA L5-20P, L5-20R.
RMSL2T1POB14	Dual Link Box – 30A 120V Single Phase. NEMA L5-30P, L5-30R.
RMSL2T1POB15	Dual Link Box – 20A 208V Single Phase. NEMA L6-20P, L6-20R.
RMSL2T1POB16	Dual Link Box – 30A 208V Single Phase. NEMA L6-30P, L6-30R.
RMSL2T1POB25	Dual Link Box – 20A 120V Single Phase. NEMA 5-20P, 5-20R.

SmartZone™ Intelligent Power Strips Rack Energy Kits

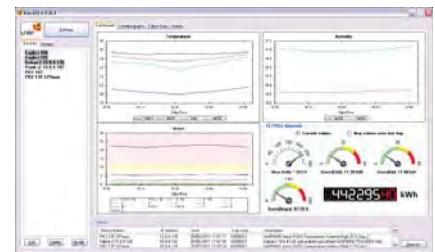
Ideal for New Data Centers

SmartZone™ intelligent power strips rack energy kits provide a total power monitoring and control solution. These kits are offered with intelligent power strips that are available in a variety of socket outlet types. Ideal for large servers, disk storage arrays, blade server enclosures and network switches.

The power strips have an accuracy of better than 1% at the outlet level and have been developed in line with Panduit's design philosophy, where all of the non-essential intelligence and electronics necessary for supporting power strip functionality are removed and contained within the included RackMS™ gateway. The intelligent power strips accurately measure critical power and energy information through polling and real-time SNMP.

Benefits of SmartZone™ intelligent power strips rack energy kits:

- Monitors RMS amps, RMS volts, kW, kVA, kWh, PF and Hz
- Supports a wide range of socket outlets
- Up to 24 outlets per strip, compatible with C13, C19 IEC plugs
- Sockets angled for optimum cable dressing
- Optional remote power cycling of up to a maximum of 24 individual outlets
- Sequential power-up protects against in-rush current



Intelligent Power Strips Kits Include:
 Env-U3 Monitoring Software
 RackMS™ Gateway
 Set of Ethernet Cables
 Temperature Sensors (2)
Intelligent Power Strips (2)

Intelligent Power Strips Rack Energy Kits

Part Number	Description
RMSP2T2POB17	(2) Intelligent Power Strips – 20A Single Phase Vertical PDU 14xC13, 2xC19 IEC 60309 Input Plug, Monitor Only.
RMSP2T2POB18	(2) Intelligent Power Strips – 30A Single Phase Vertical PDU 14xC13, 2xC19, 2x20A MCBs IEC 60309 Input Plug, Monitor Only.
RMSP2T2POB19	(2) Intelligent Power Strips – 20A Single Phase Vertical PDU 120V 14xC13, 2xC19 L5-20P Input Plug, Monitor Only.
RMSP2T2POB20	(2) Intelligent Power Strips – 30A Single Phase Vertical PDU 120v 20xC13, 4xC19, 2x20A MCBs L5-30P Input Plug, Monitor Only.
RMSP2T2POB21	(2) Intelligent Power Strips – 30A Single Phase Vertical PDU 208v 20xC13, 4xC19, 2x20A MCBs L6-30P Input Plug, Monitor Only.
RMSP2T2POB22	(2) Intelligent Power Strips – 30A Three Phase Vertical PDU 24xC13, 6xC19, 3x20A MCBs IEC 60309 Input Plug, Monitor Only.

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 InfrastructureSM 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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