

RackKMS™ Gateway Management Platform

Local or remote power monitoring and control



Modular by design, the RackKMS™ Gateway is a highly cost-effective power and environmental gateway that supports Intelligent Power Strips, CL-Amp™ Devices or In-Line IQ Adapter™ Devices.

The platform supports four environmental sensors and any two of the following power devices:

Intelligent Power Strips (monitor only), monitoring RMS Volts, RMS Amps, kVA, kW, kWh, Power Factor and Frequency.

Non-Invasive CL-Amp™ Devices to monitor Amps in legacy data centres where zero power downtime is paramount.

In-Line IQ Adapter™ Devices and **Dual Link Box** devices to bring intelligence to any 3rd party non-intelligent power strips and free standing equipment in legacy, retrofit applications. It monitors RMS Volts, RMS Amps, kVA, kW and kWh, Power Factor and Frequency.

This solution requires only a single IP address, as opposed to many solutions on the market, which utilise multiple IP addresses per cabinet. Two temperature sensors are provided as standard with two spare sensor ports available for temperature, humidity, voltage-free contact switches or analogue 0~10VDC inputs. These sensors can be easily retro-fitted into a deployment at any time.

To further enhance the RackKMS™ Gateway, a simple client Env-U3 software application is included. This provides both a live and historical view of current, temperature, and humidity data readings. The software provides simple trending information of the parameters monitored and basic management data can be easily exported into Excel or CSV formats. This enables users to generate their own customised reports.

The RackKMS™ Gateway is part of the portfolio of SmartZone™ Solutions that deliver comprehensive energy and physical infrastructure efficiency in data centres, facilities, and remote estate sites through intelligent products, systems, and services.

Features

- Zero RU height installation
- Requires one single IP address
- SNMP agent optimised for single rack management
- Allows up to four auto sense analogue 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 analogue 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.

SmartZone™ Rack Energy Kits

- Non-Invasive Rack Energy Kit
- In-Line Rack Energy Kit
- Rack-Mounted Energy Kit
- Intelligent Power Strips Kit

Unified Physical Infrastructure



Power Monitoring Devices

Intelligent Power Strips	CL-Amp™ Device
 <p data-bbox="248 651 794 757">Panduit Intelligent Power Strips provide a modular and flexible solution for real-time monitoring of remote equipment where zero downtime and reliance is paramount to effective operations.</p>	 <p data-bbox="826 651 1356 779">The CL-Amp™ Device is a unique innovative product, designed and manufactured by Panduit to provide urgently needed non-invasive current monitoring solution into retrofit, legacy, and new data centres.</p>
IQ Adapter™ Device	Dual Link Box Device
 <p data-bbox="248 1227 772 1449">A quick and simple solution to bring monitoring functionality to non-intelligent power strips. As a unique and retrofit solution, the IQ Adapter™ Device sits between the power supply and existing power strip to optimise power consumption; measuring real-time RMS Volts, RMS Amps, kVA, kW, kWh, PF, and Hz in legacy and new-build data centres.</p>	 <p data-bbox="826 1227 1366 1420">The Dual Link Box device is specifically designed for power devices requiring one or more direct power feeds. Ideal for large servers, disk storage arrays, blade server enclosures, and network switches. The devices can be free standing or installed in server cabinets for new-build and retrofit applications.</p>

Please refer to individual data sheets for full details and technical specifications of above products.

RacKMS™ Gateway Specifications

Power Supply	
Input power	100~240VAC
Input connector	1 x IEC C14 Inlet
Power consumption	(Max) 40W
Additional information	Isolated Supply
Power supply options	48V VDC Power Input
Internal PSU	Single
Operating Environment	
Operating Temperature	0°C to 45°, -15°C to 50°C
Storage Humidity	-10°C to 70°C, -40°C to 70°C (Optional Extended Range)
Operating Humidity	15% to 85% RH
Storage Humidity	5% to 90% RH
MTBF	>100,000 Hrs
Connectivity and Networking	
Network Type	Fast Ethernet (802.3u)
Network Connection	RJ45
Link Speeds	10/100 Mbps with auto negotiation
Network Indications	Connection LED (Green) Network Speed LED (Yellow)
Sensors	
Number of Inputs	4
Input Connector	8 way RJ45
Parameters Monitored	Temperature, Humidity, Open/Close contacts
Temperature Monitoring Range	0°C to 60°C
Temperature Monitoring Accuracy	±5% Standard Transducer @ 20°C
Temperature Hysteresis	Programmable 0.1°C to 9.9°C in 0.1 increments
Humidity Monitoring Range	30% to 90% relative humidity
Humidity Monitoring Accuracy	±5% RH @ 25°C
Humidity Hysteresis	Programmable 0.1% RH to 9.9% RH in 0.1 increments, RH Analog Resolution 12 Bit A/D
Analog Resolution	12 Bit A/D
Additional Information	Inputs are not isolated; auto detection of supported sensors
PDU Monitoring and Control	
Number of Inputs	2
PDU Input Connector	RJ45
Parameters Monitored	Volts, amps, total kVA, total kWh, total power factor and frequency
Voltage Monitoring Range	0V to 500V
Voltage Monitoring Accuracy	± 2%
Current Monitoring Range	0A to 65A
Current Monitoring Accuracy	± 2%
kWh Monitoring Range	0 kWh to 429496729 kWh
kWh Monitoring Accuracy	Dependant on PDU
kVA Monitoring Range	0 kWh to 429496729 kVA
kVA Monitoring Accuracy	N/A
Monitoring and Configuration	
The following monitoring and configuration methods are provided	Web management interface via HTTP or HTTPS (Secure), SNMP
LCD Status Monitor	
The optional backlit LCD status monitor can display the following	Summary page displaying configured PDUs and inputs 1 and 2. All 4 digital inputs. All 2 PDUs.
The following system information is also available	Firmware Version, IP address, subnet mask, gateway, MAC address
Additional Information	Backlit, powered from unit (no additional power source required)

RackKMS™ Gateway Specifications (continued)

Status Indicators

Unit front panel provides the following LED indicators	Power On (Blue) Status CPU (Green) Status Alarm (Red) Network Link (Green) Network Speed (Yellow)
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Env-U3 Monitoring Software

Env-U3 software is easy-to-deploy and included as part of the SmartZone™ Rack Energy solutions. The software provides 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.

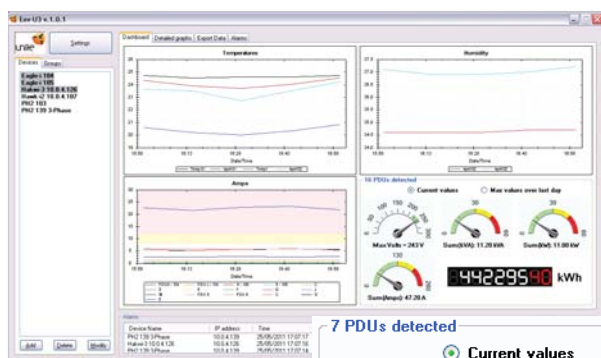
The Env-U3 software application is intended to collect all data and readings from the RackKMS™ Gateway. Using standard SNMP protocol, Env-U3 software will monitor up to a maximum of 60 power strips. Based on Microsoft .NET framework version 2.0, Env-U3 software is capable of logging any SNMP alarms which are generated by the gateway.

The RackKMS™ Gateway is polled at regular intervals and the read data collected and stored in the application's database at one minute intervals, for a maximum of 186 days.

The low clutter dashboard shows all temperature, humidity, and current sensors as trend lines for the current selected devices. Dial gauges display real-time data for energy uses for one or all gateway devices.

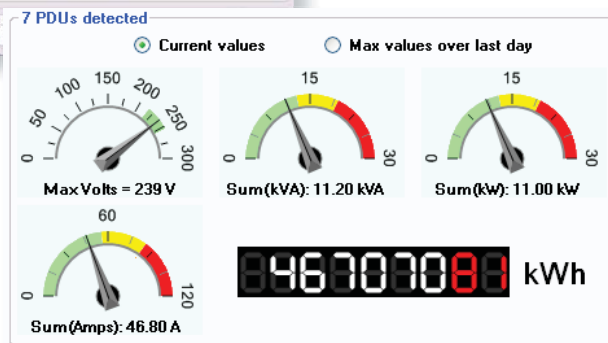
Features

- Simple client-based application
- Uses standard SNMP protocol to support the RackKMS™ Gateway
- Supports up to a maximum of 60 power devices
- Polls devices and creates and logs SNMP traps as alerts
- Live and historical view of data
- Simple trending information and management reports



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



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