RACKPOWER



USER MANUAL

Smart PDU

1U horizontal, 8 × C13 individually switched outlets

Model iPSi081-A2C04 | **Version** 2.0 | **Issued** October 2026

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About this manual

This manual explains how to install, connect and operate the RackPower Smart PDU, and how to configure it through its built-in web interface, SNMP and command line.

> **SCREENSHOTS**
> The management interface is shared across the RackPower Smart PDU range, so some screenshots show 24 outlets and three input phases (L1, L2, L3). On the 8-outlet single-phase model, only outlets 1 to 8 and the L1 input are used. Unused groups show as offline.

Throughout this manual, menu names in the web interface are shown in **bold navy**, for example **Net Configuration › Network Settings**.

BEFORE YOU START

Safety information

Read these instructions before installing or using the PDU, and keep this manual for future reference. Failure to follow these instructions may result in electric shock, fire, or damage to equipment.

WARNING: QUALIFIED INSTALLATION

The PDU must be installed by a suitably qualified person in accordance with the wiring rules and regulations that apply at the installation site.

WARNING: EARTHING

This equipment must be connected to an earthed supply. Bond the earth stud on the rear panel to the rack earth before connecting power, and never use an adaptor or cord that removes the earth connection.

WARNING: MAXIMUM LOAD

Do not exceed a total load of **16 A (3680 W)** across all outlets. Each C13 outlet is rated at a maximum of 10 A. Do not connect the PDU to another PDU, power board or extension lead.

WARNING: ISOLATION

Switching an outlet off from the web interface, SNMP or command line does not isolate it. Before working on the PDU or on connected equipment, switch off the front circuit breaker and unplug the inlet cord from the supply.

CAUTION: REMOTE SWITCHING

Remote switching, scheduling and threshold actions can turn off connected equipment without warning. Confirm which device is connected to each outlet before switching it, and label outlets in the web interface.

Operating environment

- For indoor use only, in a clean, dry, ventilated equipment rack or cabinet.
- Keep away from water, moisture, direct heat sources and corrosive or dusty environments.
- Do not block airflow around the PDU or connected equipment.

Cords and maintenance

- Use only an undamaged IEC C19 inlet cord rated for at least 16 A.
- Inspect cords and plugs regularly and replace any that are damaged.
- There are no user-serviceable parts inside. Do not open the PDU; refer servicing to RackPower.

SECTION 01

Getting to know your PDU

1.1 Product overview

The RackPower Smart PDU is an intelligent power distribution unit for server rooms, communications cabinets and data centres. A built-in management module measures power at the input and at every outlet, and lets you switch each outlet on, off or restart it remotely from a web browser, SNMP manager or command line.

Key features

- Eight individually switched IEC C13 outlets
- Per-outlet current, power, power factor and energy metering
- Input voltage, current, power, frequency and energy metering
- Colour LCD with front-panel buttons for local status
- Web (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet/SSH and Modbus access
- Email alerts and SNMP traps when thresholds are exceeded
- Outlet scheduling, outlet groups and per-user outlet permissions
- Daisy-chain ports and temperature/humidity sensor port

Specifications

Item	Specification
Model	iPSi081-A2C04
Form factor	1U, 19-inch rack mount (horizontal)
Input	Single-phase, single input, 230 V AC, 50 Hz
Input connector	IEC C20 inlet (use a 16 A C19 cord)
Maximum load	16 A / 3680 W total
Overcurrent protection	16 A circuit breaker with ON/OFF switch (front panel)
Outlets	8 × IEC C13, individually switched, 10 A maximum per outlet
Metering	Input: voltage, current, power, power factor, energy, frequency Each outlet: current, power, power factor, energy
Local display	Colour LCD, PWR/RUN and outlet LEDs, RST/DOWN/MENU/UP buttons
Network	RJ45 Ethernet, 10/100 Mbps
Other ports	RJ45 IN/OUT (daisy chain), RJ45 T&H (temperature and humidity sensor), USB
Protocols	HTTP, HTTPS, SNMP v1/v2c/v3, Telnet, SSH, SMTP, NTP, Modbus
Default network settings	IP 192.168.1.100, user name `admin`, password `admin`

1.2 Front panel

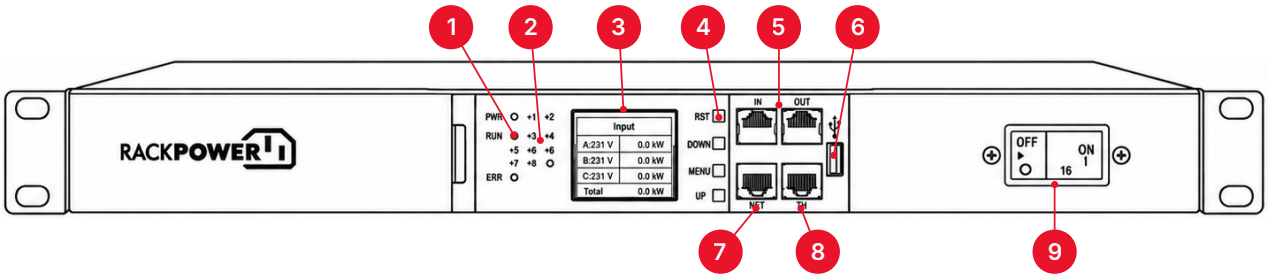


Figure 1 Front panel layout

No.	Item	Description
1	**PWR / RUN / ERR indicators**	PWR lights when the PDU has power. RUN shows the management module is operating. ERR indicates a fault or alarm.
2	**Outlet status LEDs**	Show the status of each outlet. LEDs 1 to 8 match outlets 1 to 8.
3	**LCD display**	Shows input voltage and power.
4	**RST, DOWN, MENU, UP**	RST restores factory settings when held for 5 seconds (see section 2.6). DOWN, MENU and UP navigate the display.
5	**IN / OUT ports**	RJ45 ports for daisy-chaining multiple PDUs.
6	**USB port**	USB connection.
7	**NET port**	10/100 Mbps Ethernet for the web interface, SNMP and command-line access.
8	**T&H port**	Connection for the RackPower temperature and humidity sensor.
9	**Circuit breaker**	16 A input circuit breaker and main ON/OFF switch. Trips if the input current exceeds its rating.

1.3 Rear panel

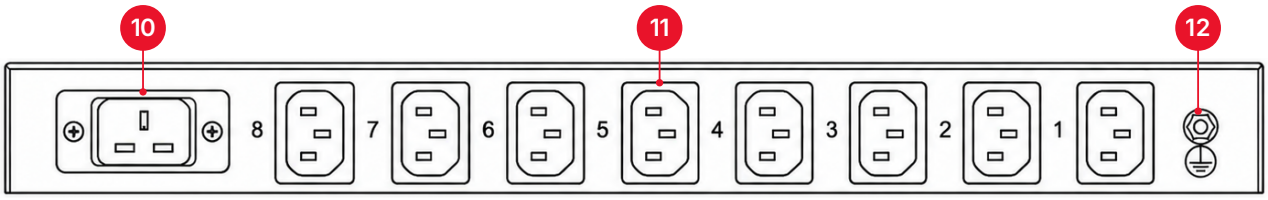


Figure 2 Rear panel layout (viewed from the rear)

No.	Item	Description
10	**C20 power inlet**	Connect a 16 A IEC C19 power cord here.
11	**Outlets 1 to 8**	IEC C13 outlets, numbered 1 to 8 from right to left when viewed from the rear. These numbers match the outlet numbers in the web interface.
12	**Earth stud**	Bond to the rack or cabinet earth before connecting power.

SECTION 02

Installation and general use

What you need

- One free 1U space in a 19-inch rack, with four cage nuts and screws to suit
- An IEC C19 power cord rated for at least 16 A, and a 16 A supply outlet
- An earth bonding lead from the earth stud to the rack earth
- An RJ45 network cable for remote management (optional)
- A RackPower temperature and humidity sensor (optional)

Check the PDU for any damage before installation. Do not install a damaged unit.

2.1 Mounting the PDU

1. Choose a 1U position where the front panel is accessible and the rear outlets are within reach of the equipment power cords.
2. Fit cage nuts to the rack rails at the chosen position.
3. Support the PDU and secure both mounting ears to the rack rails with four screws.
4. Make sure there is room behind the PDU for the inlet cord and equipment cords without sharp bends.

2.2 Earthing, power and connected equipment

1. Check that the front circuit breaker is in the **OFF** position.
2. Connect the earth stud on the rear panel to the rack earth with an earth bonding lead.
3. Plug the C19 cord into the C20 inlet, then into a 16 A supply outlet.
4. Switch the circuit breaker **ON**. The PWR indicator lights and the display starts. Allow about a minute for the management module to finish starting up.
5. Plug each device into an outlet using a C14 cord. Record which device is on which outlet so you can name the outlets in the web interface (section 4.2).

> **LOAD PLANNING**
> Add up the rated current of all connected devices before connecting them. The total must not exceed 16 A, and no single outlet may exceed 10 A. Leave headroom for start-up currents.

2.3 Network, daisy chain and sensor connections

Network

Connect the **NET** port to your network switch with an RJ45 network cable. The PDU's default IP address is **192.168.1.100**.

Daisy chain

To link several PDUs, connect the **OUT** port of the first PDU to the **IN** port of the next PDU with an RJ45 cable, and repeat for each PDU in the chain. Give each PDU a unique hardware address between 1 and 254 under **PDU Control › Basic Settings** (section 4.1).

Temperature and humidity sensor

Plug the sensor into the **T&H** port. Readings appear under **Information › Sensors Status**. For the most useful readings, position the sensor at the air intake of the equipment you want to monitor.

2.4 Using the front panel

The LCD shows the input voltage, output voltage and current, and frequency. Use **UP** and **DOWN** to move between display pages and **MENU** to open or close the menu.

> **INPUT A AND B**
> The display firmware is shared with dual-input models, so it may show "Input A", "Input B" and "Main source". This model has a single input, which is always shown as A. Readings for B can be ignored.

2.5 Quick start: first login

1. Connect your computer to the same network as the PDU, or directly to the NET port. If needed, set your computer to a fixed address on the same subnet, for example 192.168.1.10 with subnet mask 255.255.255.0.
2. Open a web browser and go to `http://192.168.1.100`.
3. Log in with user name `admin` and password `admin`.
4. Change the admin password straight away under **Net Configuration › Web and User Settings**.
5. Set the IP address, gateway and DNS to suit your network under **Net Configuration › Network Settings**.
6. Set the time zone and NTP server under **Net Configuration › System Time Settings**.

> **SECURITY**
> Always change the default password before connecting the PDU to a production network. Anyone who can reach the PDU with the default credentials can switch off your equipment.

Finding the PDU with the Finder utility

If you don't know the PDU's IP address, use the RackPower Finder utility. Connect your computer to the same network and click **Search**. Select the PDU in the list to view or change its IP address, mask, gateway and DNS, then click **Save**. Click **Link** to open the PDU's web interface in your browser.

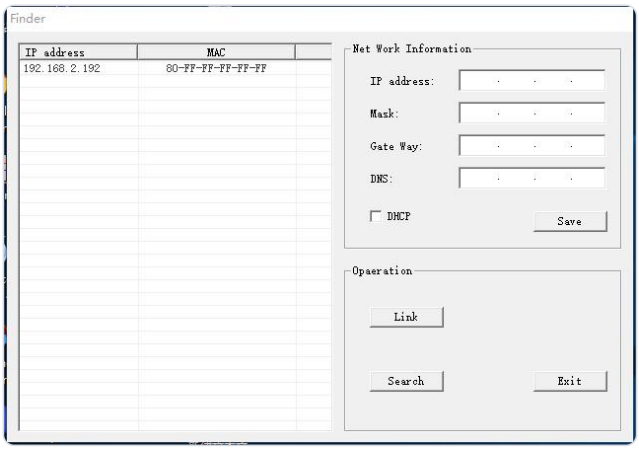


Figure 3 Finder utility

2.6 Restoring factory settings

With the PDU powered on, press and hold the **RST** button for 5 seconds. The PDU restarts automatically. After about 45 seconds, log in again at `192.168.1.100` with the default user name and password.

> **CAUTION**
> A factory reset restores the user accounts, passwords, IP address and all device settings to their defaults. Record your settings before resetting.

SECTION 03

Web interface and monitoring

3.1 Logging in

Enter the PDU's IP address in a current web browser: `http://192.168.1.100`, or `https://192.168.1.100` if HTTPS is enabled. If you have changed the web port, add it to the address, for example `http://192.168.1.100:8080`. Log in with your user name and password.



Figure 4 Login page

The **User Information** panel at the top of the menu shows the logged-in user, login time and the time remaining before automatic logout. Click **Refresh** to reset the timer or **Quit** to log out. You can change the colour theme (sunny, black, live, blue or green) from the title bar.

3.2 Menu overview

Menu	Purpose
Information	System information and live status of inputs, outlets and sensors
PDU Control	PDU name, input and outlet thresholds, outlet switching, scheduling, groups and energy
Net Configuration	Network, SNMP, email, web access and users, Telnet/SSH, time and firewall
Log Information	Event logs, run data records and energy records, with export
Other	Restart, factory reset, firmware upgrade and MIB file download

3.3 System information

Information › System Information shows the hardware and software versions, PDU name, contact and location, network settings, and a summary of input voltage and current.

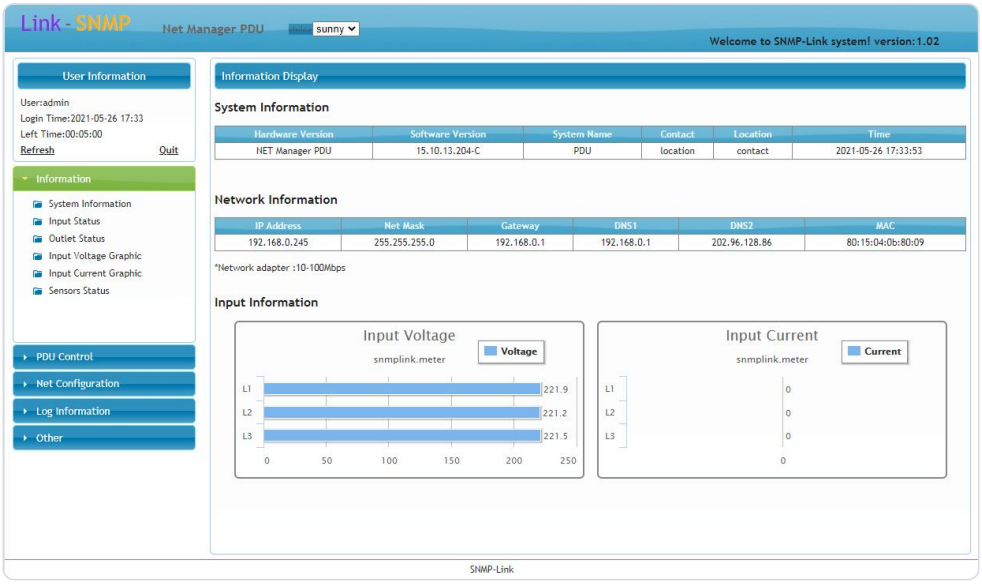


Figure 5 System information

3.4 Input status

Information › Input Status shows the voltage, current, power factor, power, frequency and energy of each input, together with the minimum and maximum alarm thresholds. Click **Setting** under an input to change its thresholds.

Outlets are arranged in groups of eight, and each group is supplied from one input line (L1, L2 or L3). The 8-outlet model uses group L1 only, so L2 and L3 show as offline.

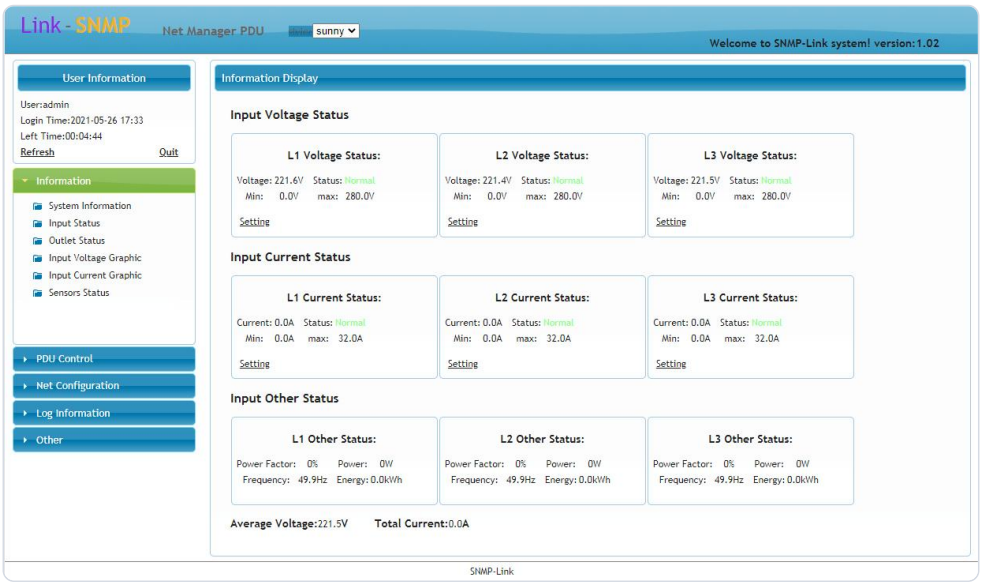


Figure 6 Input status

3.5 Outlet status

Information › Outlet Status lists every outlet with its name, switch state, current, power factor, power and energy.

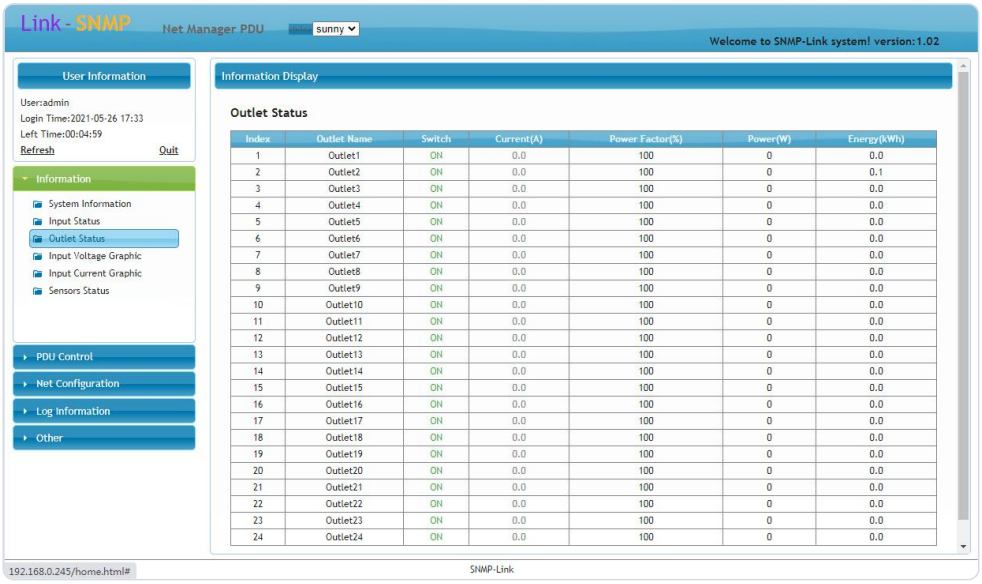


Figure 7 Outlet status

3.6 Graphs and sensors

Input Voltage Graphic and **Input Current Graphic** show live trend charts and gauges. **Sensors Status** shows temperature and humidity readings from the T&H sensor, along with the state of any dry contact inputs (DI1 to DI3) where fitted.



Figure 8 Input voltage graph

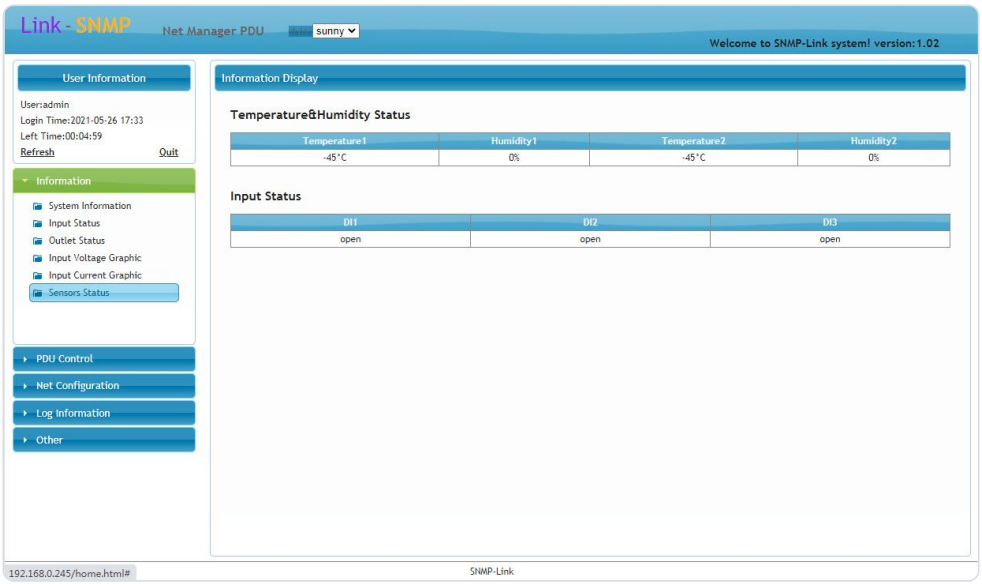


Figure 9 Sensor status

SECTION 04

PDU control settings

4.1 Basic settings

Under **PDU Control › Basic Settings** you can set the PDU name, contact and location. These details are also reported over SNMP.

The **PDU Hardware Address** is the device address used for Modbus and for daisy-chained PDUs. It can be set from 1 to 254 and must be unique within a chain.

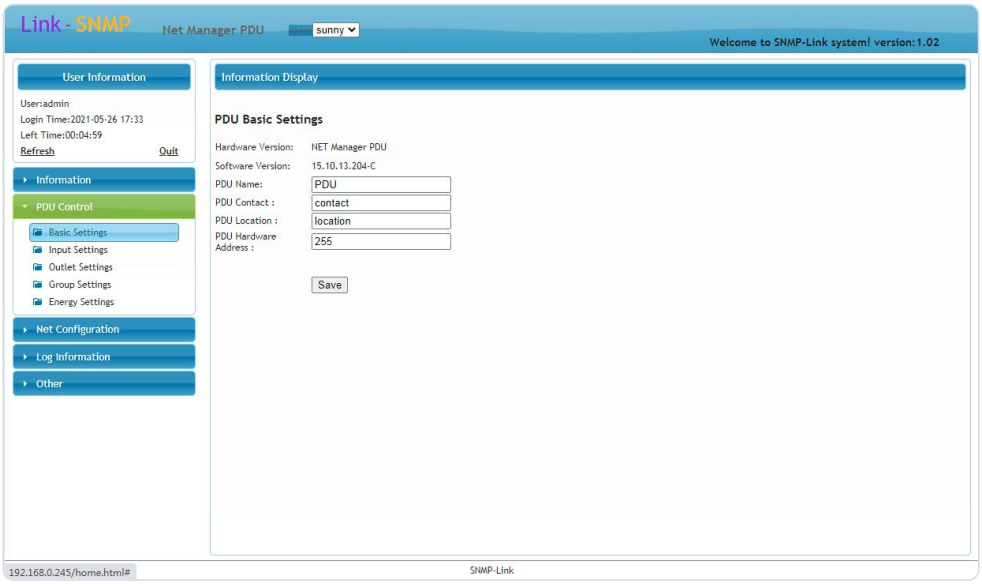


Figure 10 Basic settings

4.2 Outlet settings

PDU Control › Outlet Settings lists each outlet with its current thresholds. Use **ON** and **OFF** to switch individual outlets, or **ALL ON** and **ALL OFF** to switch every outlet. Click **Options** to configure an outlet.

Power options

Set the outlet name, the minimum and maximum current thresholds, and the **Alarm Action** taken when a threshold is exceeded. For example, the outlet can be switched off to protect connected equipment. Click **Save** to apply.

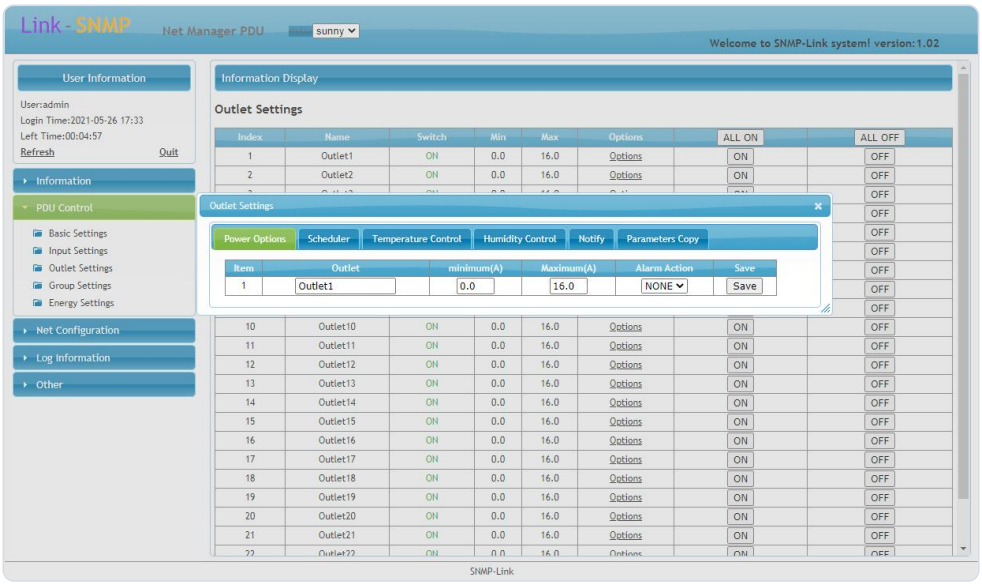


Figure 11 Outlet power options

Scheduler

Schedule an outlet to switch on or off automatically on a yearly, monthly, weekly or daily basis. Choose the schedule type, date and time, select the action, and click **Add**.

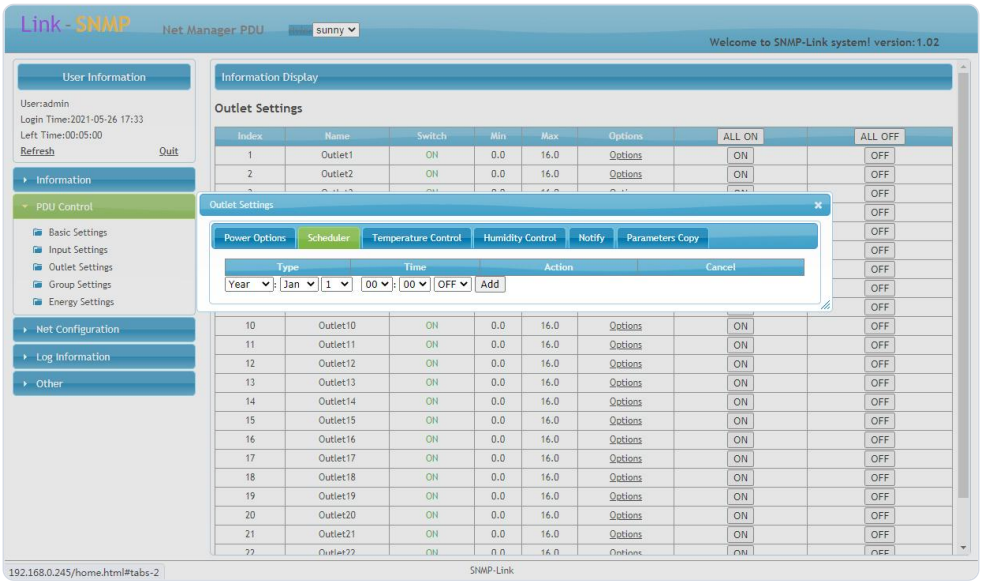


Figure 12 Outlet scheduler

The Options window also includes **Temperature Control**, **Humidity Control**, **Notify** and **Parameters Copy** tabs.

4.3 Outlet groups

PDU Control › Group Settings lets you combine several outlets into a named group, for example all outlets feeding one server. A group can be switched as a single unit and can have its own current thresholds and notifications. Click **Add Group**, enter a name, tick the outlets to include, and click **Add Group** to save.

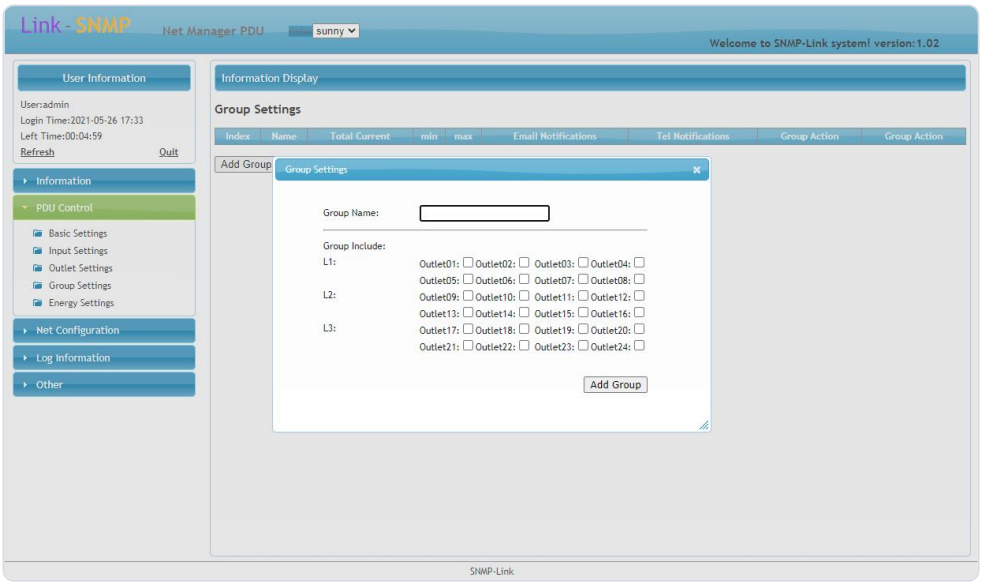


Figure 13 Group settings

SECTION 05

Network configuration

5.1 Network settings

Under **Net Configuration › Network Settings**, choose a manual IP address or DHCP and set the IP address, subnet mask, gateway and DNS servers.

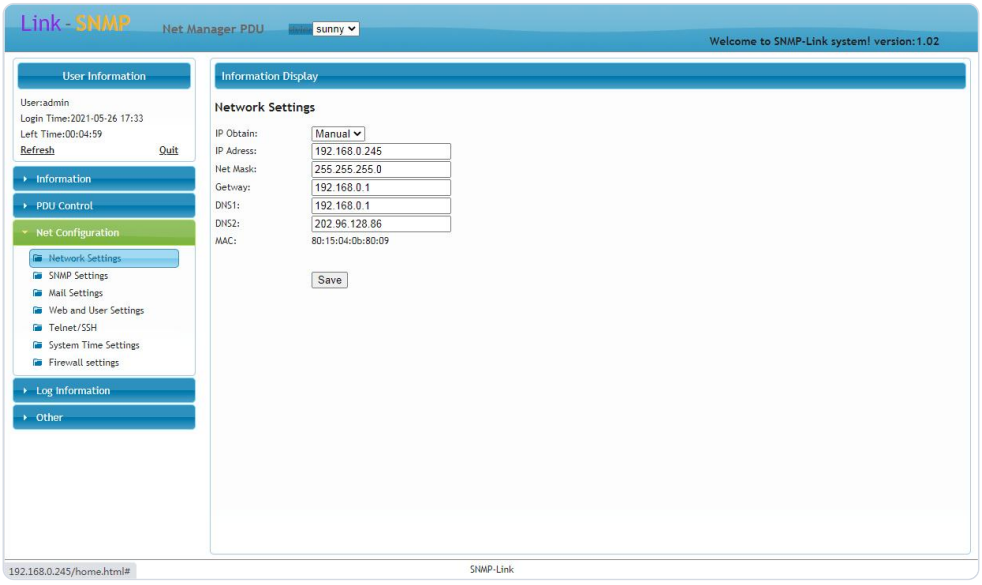


Figure 14 Network settings

> **DNS**
> Email alerts and network time synchronisation both need a correct DNS address. Without it, the PDU can't resolve the names of mail and time servers.

5.2 Email alerts

Set up email alarms under **Net Configuration › Mail Settings**. Use the settings provided by your email service.

Field	Description	Example (Gmail)
SMTP Account	Sender email address, up to 64 characters	alerts@yourdomain.co.nz
SMTP Password	Sender password, up to 64 characters. Many services require an app password rather than your normal password.	App password
SMTP Server	Outgoing mail server address	smtp.gmail.com
SMTP Port	Usually 25 for unencrypted LOGIN or 465 for SSL	465
Authentication	LOGIN for standard login or SSL for encrypted connections	SSL

Test to	Address for a test message. Click **Test** to send.	you@yourdomain.co.nz

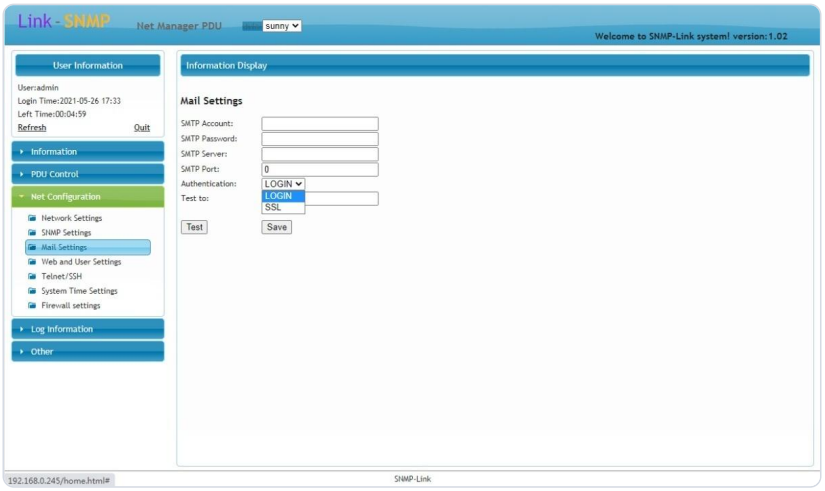


Figure 15 Mail settings

5.3 Web access and users

Under **Net Configuration › Web and User Settings** you can set the web ports and manage user accounts.

Setting	Description	Default
HTTP Port	Port for unencrypted web access	80
HTTPS	Enable to require encrypted access using https://	Disabled
HTTPS Port	Port for encrypted web access	443

Users can have **View And Edit** (administrator) or **View** permission. Viewers can see status but can't change settings. You can also choose which outlets each user may control. Click **Add User** to create an account, or **Delete** to remove one. The first account is always an administrator and can't be deleted.

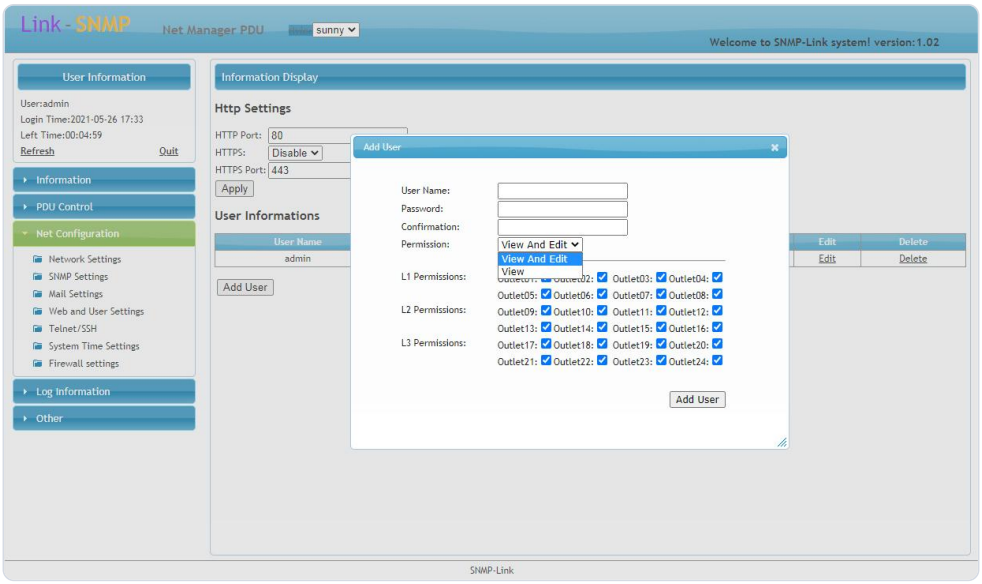


Figure 16 Adding a user with outlet permissions

5.4 System time

Set the clock under **Net Configuration › System Time Settings**, either automatically from a time server (NTP) or manually. With NTP enabled, the PDU synchronises once a day at midnight; click **Synchronization** to sync immediately.

Setting	Recommended for New Zealand
NTP Server	`nz.pool.ntp.org`
NTP Port	123
Zone	GMT+12:00 (check the clock after daylight saving changes)

The **Others** section sets the date format, the web page timeout (minutes) and the **Outlet ON/OFF delay** (milliseconds), which staggers outlets when they switch on together to limit inrush current.

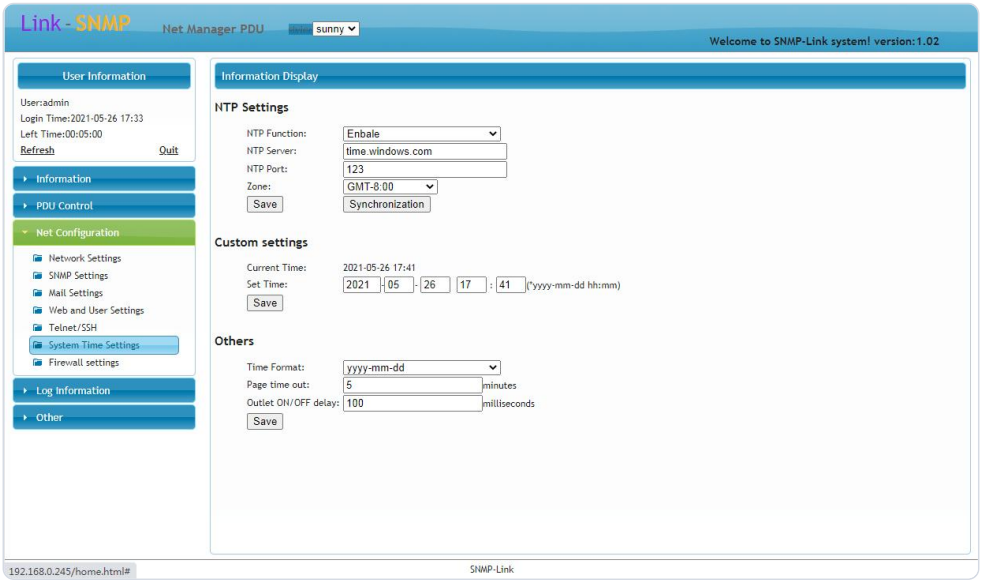


Figure 17 System time settings

5.5 Firewall

Under **Net Configuration › Firewall Settings**, enable the firewall and then choose the protections you need:

- **Packet filter** limits the number of connections from a single address, helping protect against network storms.
- **Disable PING** stops the PDU responding to ping requests.
- **Access rules** allow access only from the address ranges you add, for example 192.168.1.3 to 192.168.1.6.

> **CAUTION**
> Before enabling access rules, make sure your own computer's address is inside an allowed range. If you lock yourself out, the only way to recover access is a factory reset (section 2.6).

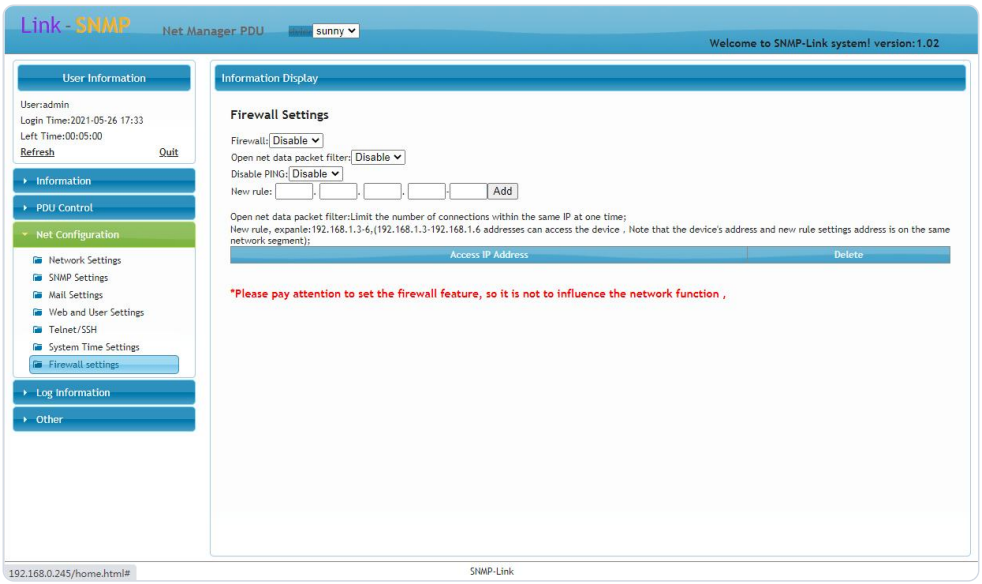


Figure 18 Firewall settings

5.6 SNMP

Configure SNMP under **Net Configuration › SNMP Settings**. The PDU supports SNMP v1, v2c and v3; the v3 options can be left blank if you only use v1 and v2c. SNMP traps are sent as v2c. Download the MIB file from the **Other** menu; the full list of OIDs is in Appendix A.

SECTION 06

Logs, command line and maintenance

6.1 Logs

The **Log Information** menu contains **Event Logs** (switching and alarm events), **Run Data Records** and **Energy Records**. Use **Exports** to download a log, or **Clear Logs** to delete it.

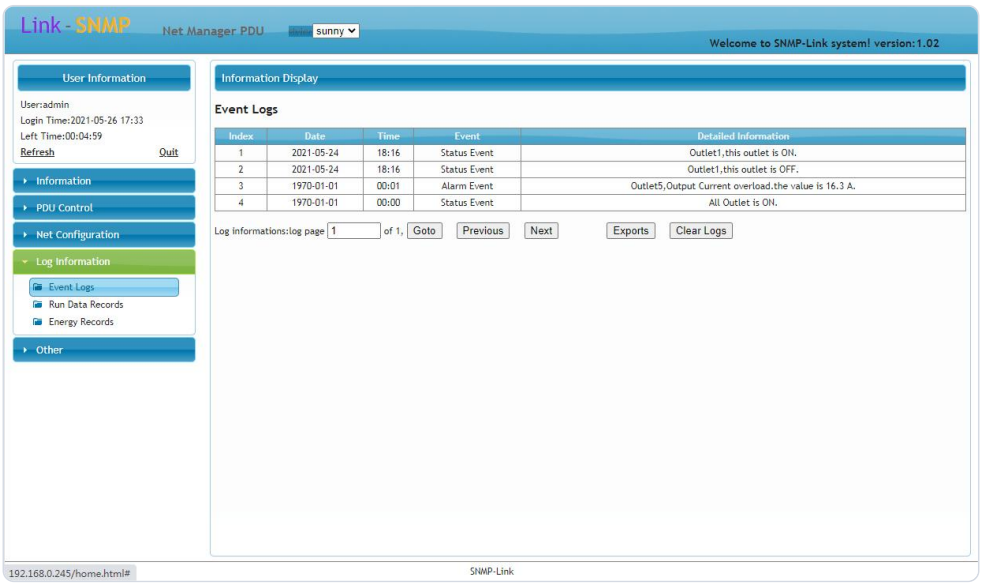


Figure 19 Event logs

> **DATA RECORDING**
>
> Run data is recorded every 10 minutes and held in memory. To extend the life of the internal flash, it's written to permanent storage twice a day, at 00:00 and 12:00. Data recorded since the last save may be lost if power is interrupted.

6.2 Command line (Telnet/SSH)

Enable command-line access and set its account under **Net Configuration › Telnet/SSH**, then connect with a terminal program such as PuTTY. The following commands are available:

Command	Purpose
`STATUS ALL`	Show total current, voltage, power factor, frequency and energy
`STATUS OUTLET1`	Show the status of a single outlet (OUTLET1 to OUTLET8)
`SWITCH`	Switch outlets on or off; follow the on-screen prompts
`REBOOT`	Restart outlets; follow the on-screen prompts

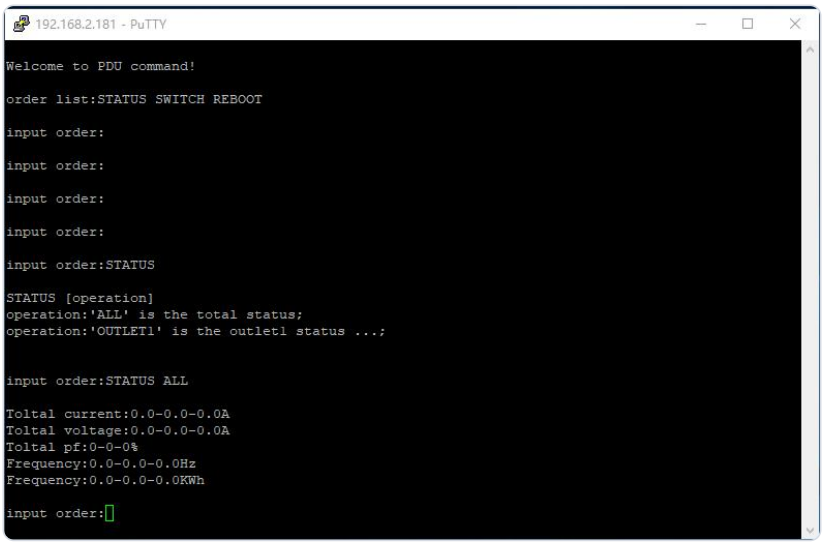


Figure 20 Command-line session

6.3 Restart, reset and firmware upgrade

The **Other** menu lets you restart the management software, restore factory settings, upgrade the firmware and download the MIB file.

> **FIRMWARE UPGRADES**
>
> Use only firmware supplied by RackPower, and do not remove power during an upgrade. After uploading the file, wait at least 45 seconds before logging in to confirm the upgrade was successful.

APPENDIX A

SNMP OID reference

All OIDs are under the RackPower enterprise prefix `.1.3.6.1.4.1.45514`. Many values are returned as whole numbers scaled by 10 or 100: for example, a voltage reading of 2305 means 230.5 V.

Device information

OID	Description	Access / scaling
`.1.1.1`	Hardware version	Read only
`.1.1.2`	Software version	Read only
`.1.1.3`	Device name	Read/write
`.1.1.4`	Device type	Read only

Input measurements

L1	L2	L3	Description	Scaling
`.1.2.1`	`.1.2.7`	`.1.2.13`	Input voltage	V × 10
`.1.2.2`	`.1.2.8`	`.1.2.14`	Input current	A × 10
`.1.2.3`	`.1.2.9`	`.1.2.15`	Input power factor	Read only, × 100
`.1.2.4`	`.1.2.10`	`.1.2.16`	Input power	W
`.1.2.5`	`.1.2.11`	`.1.2.17`	Input energy	kWh × 10
`.1.2.6`	`.1.2.12`	`.1.2.18`	Input frequency	Read only, Hz × 100

Input thresholds (read/write)

L1	L2	L3	Description	Scaling
`.1.3.1`	`.1.3.5`	`.1.3.9`	Minimum input voltage	V × 10
`.1.3.2`	`.1.3.6`	`.1.3.10`	Maximum input voltage	V × 10
`.1.3.3`	`.1.3.7`	`.1.3.11`	Minimum input current	A × 10
`.1.3.4`	`.1.3.8`	`.1.3.12`	Maximum input current	A × 10

Outlets (n = outlet number, 1 to 8 on this model)

OID	Description	Access / scaling
`.1.4.n`	Outlet name	Read/write
`.1.5.n`	Outlet current	A × 10
`.1.6.n`	Outlet power factor	Read only, × 100
`.1.7.n`	Outlet power	Read only, × 100
`.1.8.n`	Outlet minimum current	Read/write, A × 10
`.1.9.n`	Outlet maximum current	Read/write, A × 10
`.1.10.n`	Outlet switch state	Read/write, 1 = on, 0 = off

Sensors and traps

OID	Description	Access / scaling
`.1.11.1`	Temperature 1	Read only
`.1.11.2`	Humidity 1	Read only
`.1.11.3`	Temperature 2	Read only
`.1.11.4`	Humidity 2	Read only
`.1.11.5` to `.1.11.7`	Dry contact inputs 1 to 3	Read only
`.3.12.1`	Trap OID sent	

RACKPOWER

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