



RED PSU
Redundant Power Supply

P1 P2 INVLD OVLD CLEAR RESET

ADDER
www.adder.com

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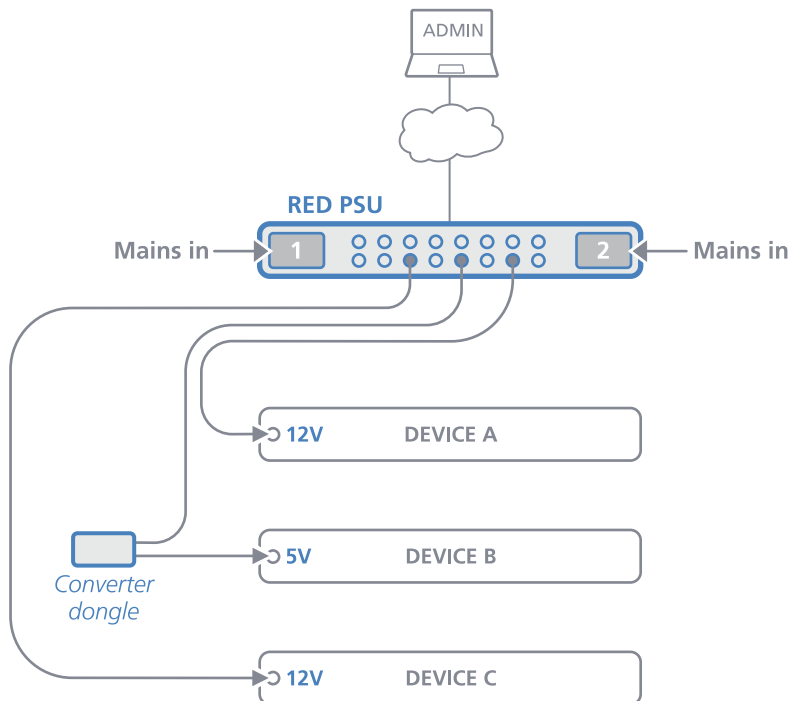
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WELCOME

Thank you for choosing the Adder RED-PSU system. In tune with your network, as KVM systems expand so too do their requirements for the reliable supply of power. While individual Adder power adaptors perform well, as devices proliferate they can become unwieldy and difficult to manage. RED-PSU provides the next step in terms of efficiency, reliability and power management.

The heart of the RED-PSU system is a modular chassis which occupies a 1U 19" rack slot. Arranged along its rear panel are eight or sixteen low voltage output ports. These ports are then linked via cables and/or *Converter dongles* to the devices that require power. Each output has a nominal power rating of 20W.



The overall power is generated within the main chassis by either one or two plug-in 460W power modules. Adding the optional second power module provides redundancy for mission critical installations. During normal operation, the overall load is shared between the twin power modules, with the full load transferring instantly to one if the mains supply to the other should fail.

Protection and control

Power integrity, safety and management are core elements of the RED-PSU system. The main chassis features a central microprocessor which manages all aspects of RED-PSU operation. At start up it checks the validity of the single (or dual) power module(s) and then enables them. It then energizes each of the power ports in a carefully coordinated sequence to reduce the instantaneous load on the power module(s). After start up, each power port is carefully monitored to ensure safety protection while also maintaining power consistency to the multiple devices:

- **Electronic short protection** - If an overload or short circuit occurs on any output, the power is limited to a safe value (by current pulsing) until the microprocessor recognizes the overload condition and trips the output – this happens approximately one second after the fault happens. Once this occurs, you will need to correct the source of the short circuit and then reinstate the output either via the front panel CLEAR button or the management application. The other power output ports will remain unaffected during this period.
- **5V overload protection** - Where an optional converter dongle is used to supply a 5V device, an extra layer of vigilance is brought into play. If the load on a dongle exceeds approximately 5.5A, then an internal circuit will trip to protect the power modules and the cabling. Once the cause is dealt with, a simple toggling of the power port will restore output.
- **Limited power source (LPS)** - Further automated protection circuits within the RED-PSU unit ensure that it fully complies with the IEC60950-1 regulation to operate as a *Limited Power Source*.

The modular 460W power modules are unique to Adder Technology; the central microprocessor circuit reads the unique Adder code from a register in each power module and will only enable them once the correct code is received.

Available anywhere, via the in-built Ethernet port, a browser-based management application allows authorized admin users to monitor and control the power module(s) and all of the individual power output ports.

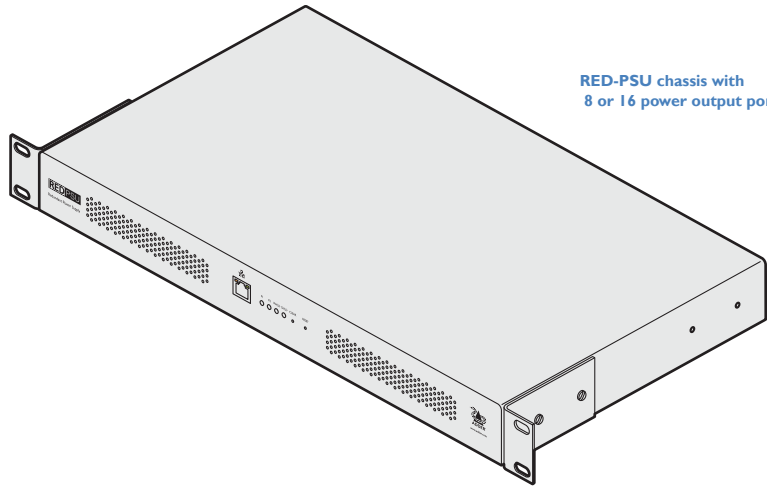
5VDC converter dongles

Each power output port operates at 12VDC. For devices that use 12VDC, a simple connection cable (VSC48) is all that's required to link them to each power port. However, numerous Adder devices operate at a lower voltage of 5VDC and these each require the use of a converter dongle (PSU-RPS-5V) to take the place of the simple connection cable.

SUPPLIED ITEMS

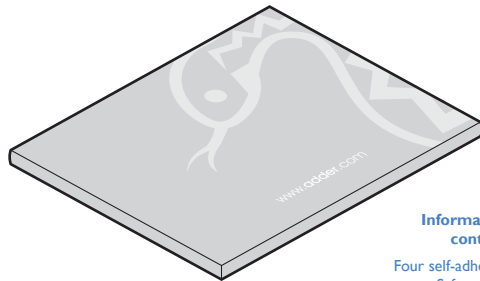
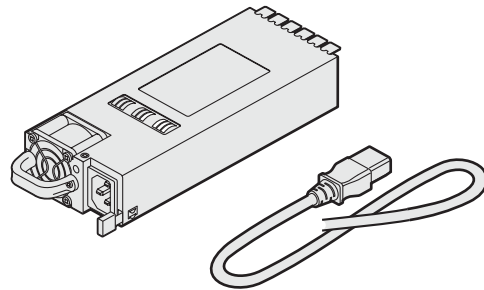
Package options:

Part numbers	Power modules	Output ports
PSU-RED1-8	1	8
PSU-RED1-16	1	16
PSU-RED2-8	2	8
PSU-RED2-16	2	16



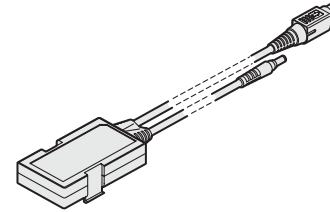
**RED-PSU chassis with
8 or 16 power output ports**

**One or two power module(s)
(pre-installed within the chassis)
and country-specific power cord(s)**

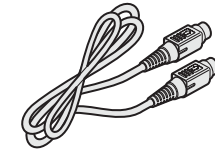


**Information wallet
containing:**
Four self-adhesive rubber feet
Safety document

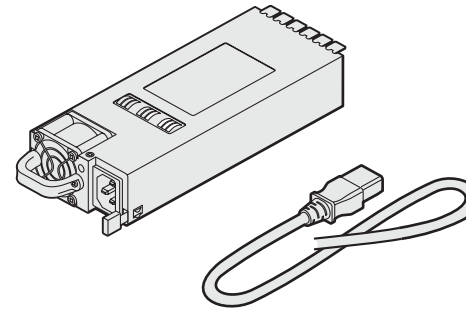
OPTIONAL EXTRAS



**5VDC converter dongle (2m)
(one required per 5VDC device)**
Part number: PSU-RPS-5V

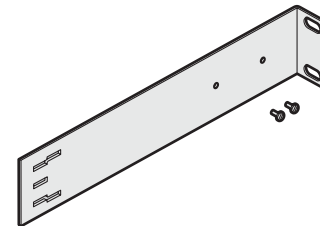


**12VDC link cable (2m)
(one required per 12VDC device)**
Part number: VSC48



Secondary power module
Part number: PSU-RED-460W

Country-specific power cords
CAB-IEC-EURO (Central Europe)
CAB-IEC-UK (United Kingdom)
CAB-IEC-USA (United States)
CAB-IEC-JAPAN (Japan)



**Rack bracket with dangle mount for use
with AdderLink Infinity devices
(plus two bolts)**
Part number: RMK4D-R2

LOCATION

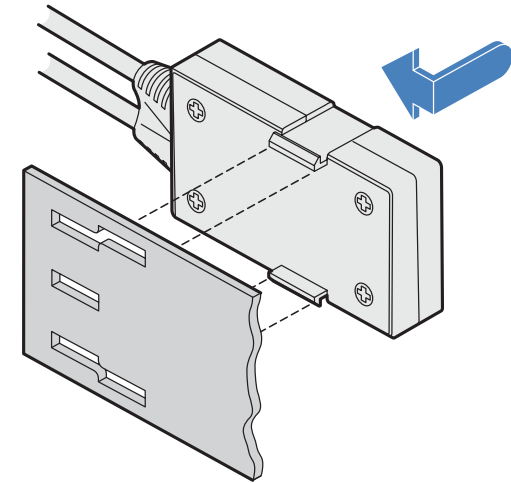
Please consider the following important points when planning the position of the RED-PSU unit:

- The RED-PSU main chassis occupies a single 1U (19”) rack slot and requires either one or two (when the redundancy option is used) mains inputs.
- For devices that require a 12VDC supply, a 2m link cable (VSC48) is required.
- For devices that require a 5VDC supply, small *Converter dongles* (PSU-RPS-5V) are required to be positioned close to the devices being powered. The converter dongle can be up to 2m away from the RED-PSU main chassis. See opposite for details.
- Consult the precautions listed within the [Safety information](#) section.

Mounting converter dongles

For each device that requires a 5VDC supply (12VDC devices require only a simple cable), a *Converter dongle* is required. Each converter dongle must be placed in close proximity to the device. To assist with mounting dongles in congested spaces, an optional elongated rack bracket is available for AdderLink Infinity units (see page 3) that allows each dongle to be positioned just behind the device that it is powering.

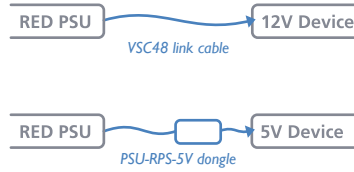
Insert the tabs of the dongle through the wider spaced holes of the rack bracket and then slide the dongle back to lock it in place.



Note: The indentations on the side of the converter dongle allow it to be fixed to other surfaces using a single plastic cable tie.

CONNECTIONS

The multiple output ports of the RED-PSU each provide power at 12VDC; when powering a 12VDC device, you merely need to use a basic cable (part number: VSC48). However, if you need to power a 5VDC device, you must use a converter dongle (part number: PSU-RPS-5V) as the link.

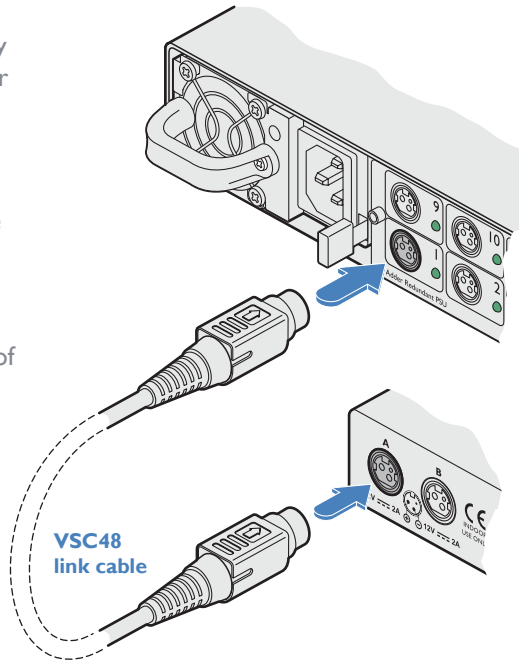


Connecting a 12V device

Devices that require a 12VDC supply can be connected directly to a power port using a simple link cable.

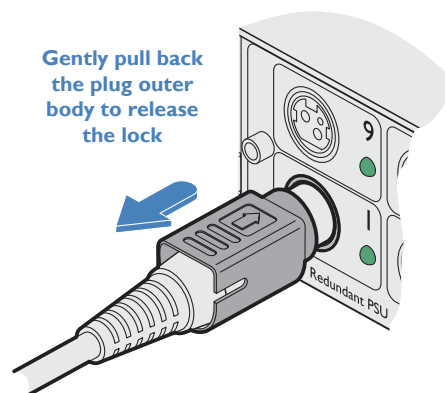
To connect a 12V device

- 1 Connect the locking 3-pin plug at one end of the VSC48 cable to the power input socket of the device - the lead is 2m (6.5 feet) in length
- 2 Connect the locking 3-pin plug at the other end of the cable to one of the power output sockets on the rear panel of the RED-PSU main chassis.



To disconnect a 3-pin locking plug

- 1 Use the management application to remove power from the required power outlet - the green indicator must be off.
- 2 Grasp the outer body of the 3-pin plug.
- 3 Gently pull back the body of the outer plug. As the body of the plug slides back, it will release from the socket and you can fully withdraw the whole plug.

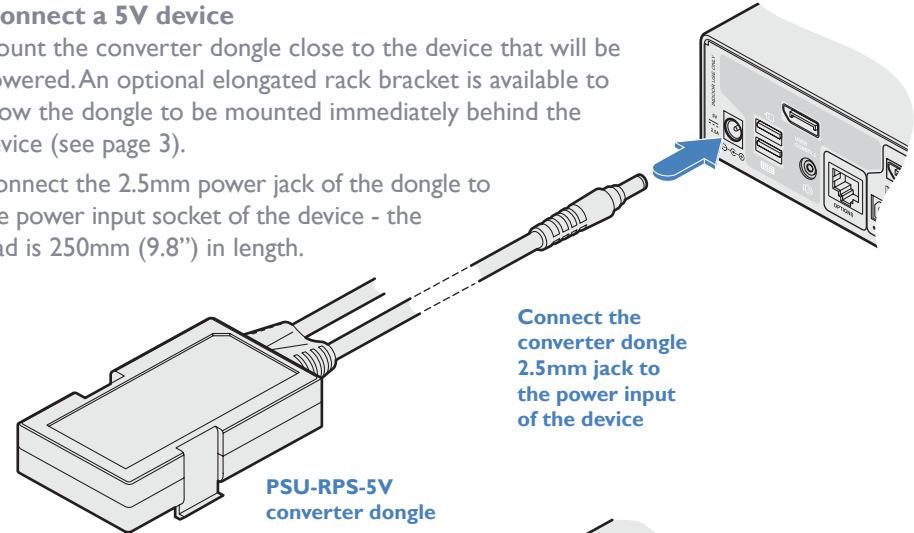


Connecting a 5V device

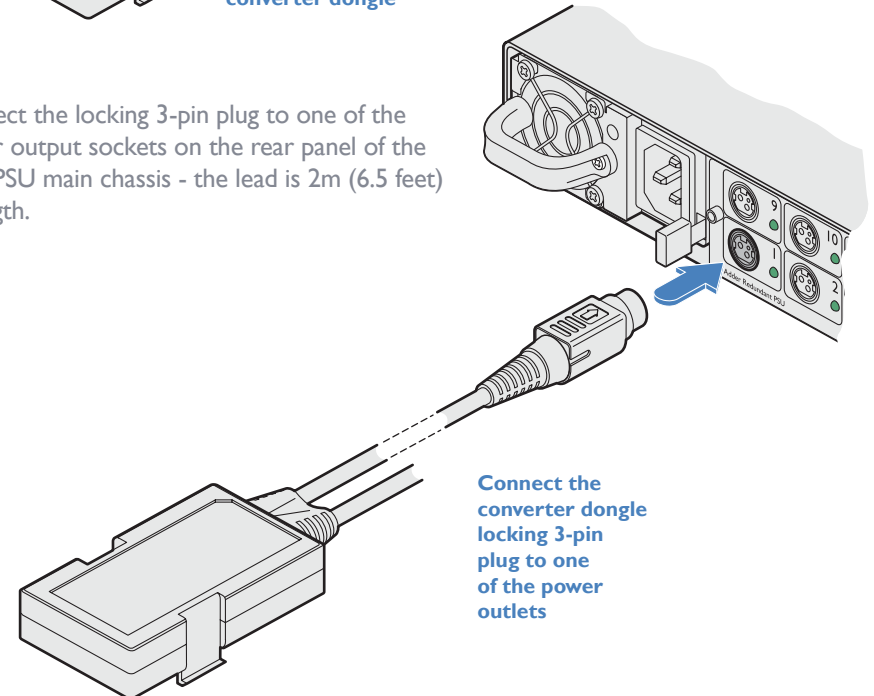
Devices that require a 5VDC supply require the use of a Converter dongle to form the link between the RED-PSU port and the device, while also transforming the voltage level. Each converter dongle has two leads: a 2.5mm power jack and a locking Kycon® 3-pin plug.

To connect a 5V device

- 1 Mount the converter dongle close to the device that will be powered. An optional elongated rack bracket is available to allow the dongle to be mounted immediately behind the device (see page 3).
- 2 Connect the 2.5mm power jack of the dongle to the power input socket of the device - the lead is 250mm (9.8") in length.



- 3 Connect the locking 3-pin plug to one of the power output sockets on the rear panel of the RED-PSU main chassis - the lead is 2m (6.5 feet) in length.



Fitting/removing a power module

The RED-PSU main chassis can accommodate two power modules, although operation is perfectly possible with just one module fitted. The addition of a second module provides redundancy for critical installations.

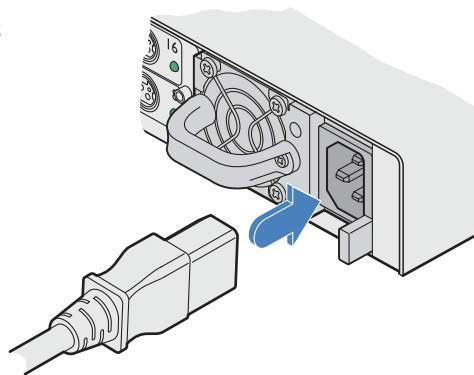
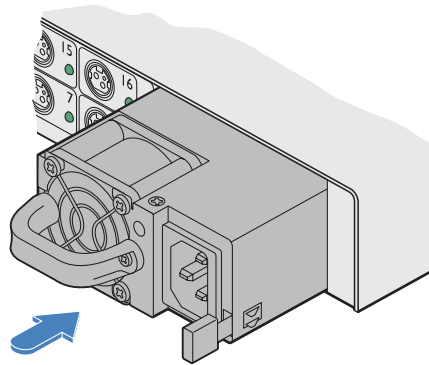
IMPORTANT: To ensure correct and reliable operation, only Adder power modules may be used with the RED-PSU. Upon startup, each inserted power module is interrogated by the RED-PSU and only those that present the correct identity code will be energized. If a non-authorized power module is inserted, the **INVLD** indicator will illuminate and the corresponding **P1** or **P2** indicator (as well as the indicator on the power module itself) will flash.

Note: Module bay 1 is on the left as you view the rear of the RED-PSU chassis, module bay 2 is on the right.

To fit a power module

Note: Power modules are hot-pluggable (i.e. while power is applied to the other module), be sure to observe safe working practices and anti-static precautions when fitting a module to a working RED-PSU chassis.

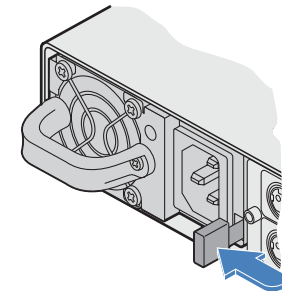
- 1 If a blanking plate is fitted, remove it to reveal the power module bay.
- 2 Observing suitable anti-static precautions, remove the new power module from its packing.
- 3 Carefully slide the power module into the vacant bay until the locking clip 'clicks' to hold the module in place.
- 4 Insert an IEC power cord into the socket on the module and apply power to the module.



To remove a power module

Note: Power modules are hot-pluggable (i.e. while power is applied to the other module), be sure to observe safe working practices and anti-static precautions when removing a module from a working RED-PSU chassis.

- 1 Isolate power from the module to be removed and disconnect the IEC power cord.
- 2 Push the locking lever to the left so that the module un-clips and use the handle to carefully pull the module out of the bay.
- 3 If no replacement module is to be used, fit a blanking plate to cover the vacant bay.



IMPORTANT: Please read and adhere to the electrical safety information given within the [Safety information](#) section of this guide. In particular, do not use an unearthed power socket or extension cable.


Note: Various items within the RED-PSU casing generate heat when in operation and will become warm to the touch. Ensure that air can circulate freely at the rear of the enclosure, particularly by the power module cooling fans. Do not operate the equipment in ambient temperatures exceeding 50 degrees Centigrade. Do not place the products in contact with equipment whose surface temperature exceeds 50 degrees Centigrade.

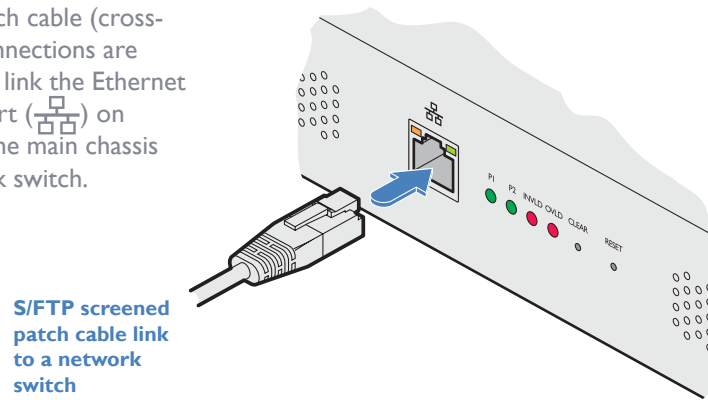
Network connection

The RED-PSU allows remote monitoring and control via a standard network connection.

Note: The patch cable used to link with the RED-PSU must be screened to the S/FTP level.

To connect to a network

1 Use a screened patch cable (cross-over or straight connections are both supported) to link the Ethernet 10/100 network port () on the front panel of the main chassis switch to a network switch.



ACCESSING THE MANAGEMENT APPLICATION

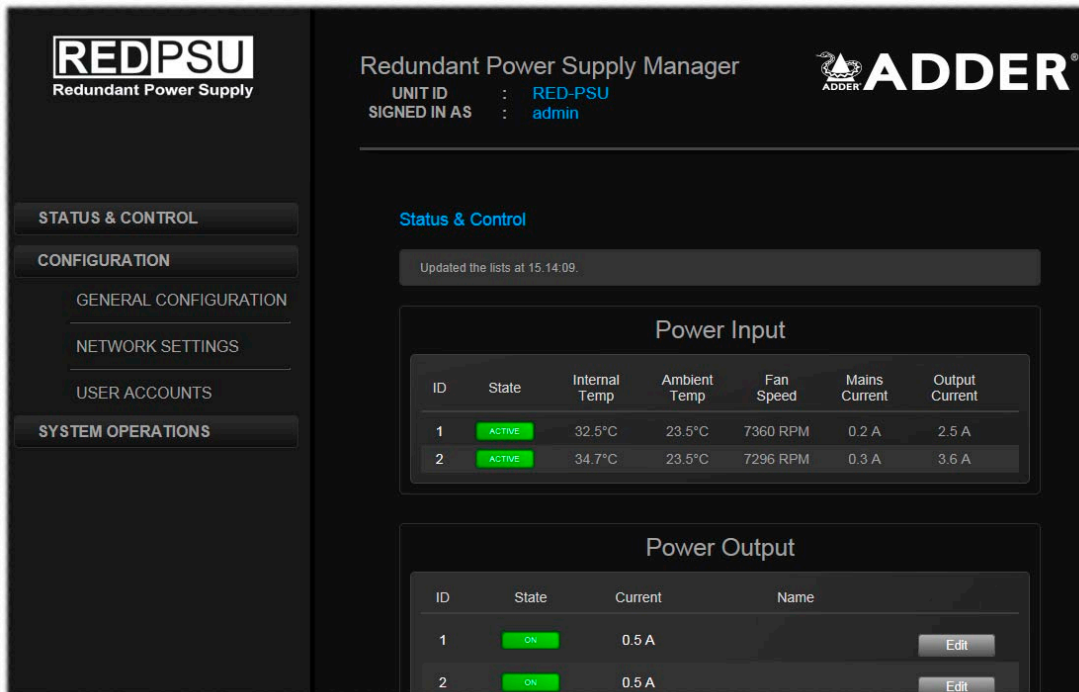
Each RED-PSU is configured via its network connections using an intuitive browser-based application, called *Redundant Power Supply Manager*. This secure, password protected application is accessible by any authorized admin user, located anywhere.

To access the management application

- 1 Use a computer that is directly or indirectly (i.e. via a network switch) connected to the RED-PSU unit. If you need to make a temporary connection, see right ➔
- 2 Run a web browser on your computer and enter the IP address of the RED-PSU. The default IP address setting is: **192.168.1.22**
- 3 If requested, enter your username and password to log on.

Note: The default username and password are 'admin' and 'password' respectively.

The opening page of the management application should be displayed:



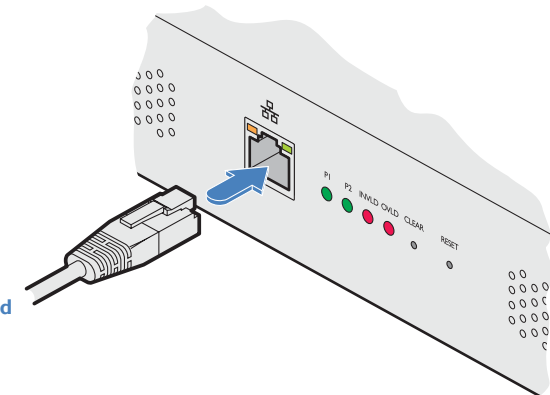
The various pages of the manager app are discussed within the remainder of this chapter.

To temporarily connect a computer to the network port

If you need to make a temporary connection for configuration purposes, use a standard patch cable (cross-over or straight connections are both supported) to link the Ethernet 10/100 network port (🔌) on the front panel of the main chassis to your computer.

Note: The patch cable used to link with the RED-PSU must be screened to the S/FTP level.

S/FTP screened patch cable link to your computer



THE STATUS & CONTROL PAGE

This opening page of the manager application provides a useful real time overview of the power input and output status. Using this page you can quickly ascertain the key metrics related to the power modules (e.g. temperatures, fan speeds, mains and output currents) as well as each output port. Additionally, you can monitor, name and control each output port individually.

To change the status of a single power output port

- 1 Locate the required power output port entry by its ID number or Name (if given).
- 2 Click the corresponding State button to change the output port from ON to OFF, or vice versa.

To change the status of all power output ports

- 1 Locate the ALL ON and ALL OFF buttons below the Power Output section. As appropriate, click either the ALL ON or ALL OFF button.
- 2 Click OK to confirm your choice in the subsequent popup.

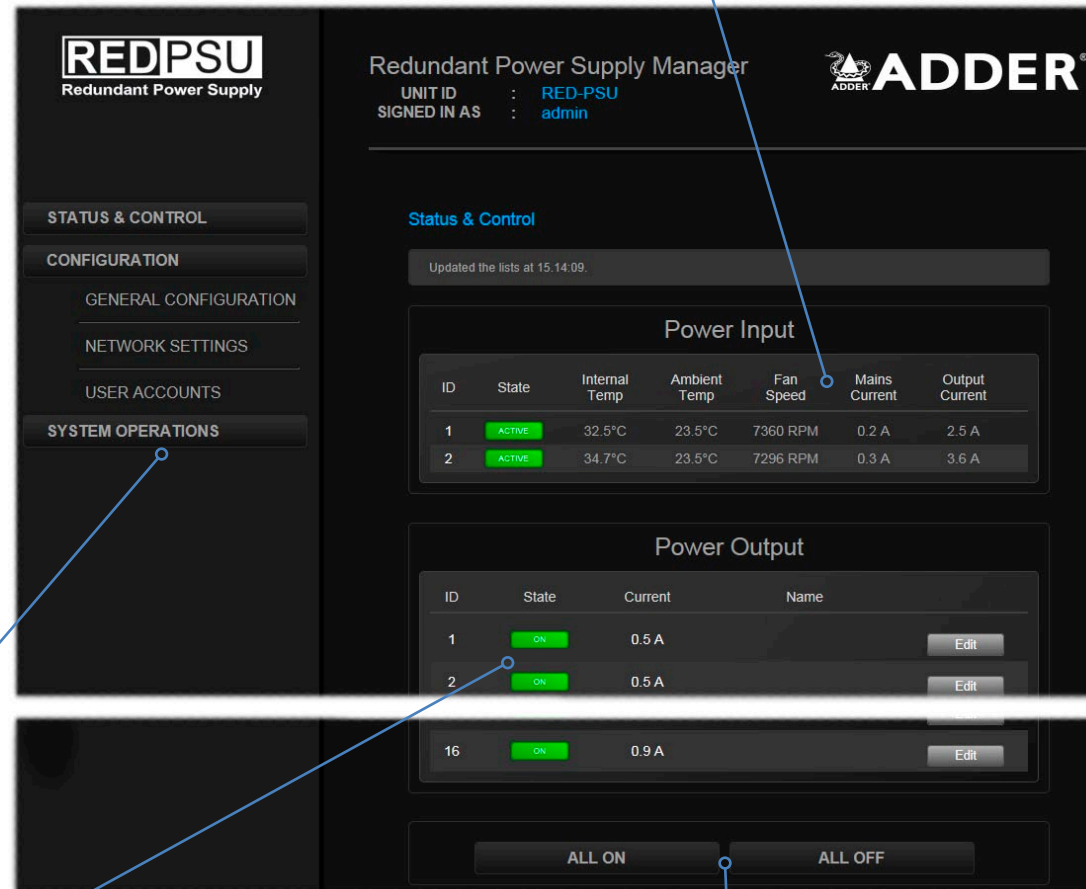
Note: When the ALL ON button is pressed, the individual ports will be energized in a staggered sequence determined by the Channel interval setting in the [General configuration](#) page.

To name a power output port

- 1 Locate the required power output port entry.
- 2 Click the corresponding Edit button. A cursor will appear within the Name field.
- 3 Enter the required name for the power output port and click the Update button.

Note: Name fields accept ASCII characters only. UTF-8 characters are not supported.

Key metrics for the single, or dual, power module(s), including the temperatures, cooling fan speeds, mains input and low voltage output currents.



ID	State	Internal Temp	Ambient Temp	Fan Speed	Mains Current	Output Current
1	ACTIVE	32.5°C	23.5°C	7360 RPM	0.2 A	2.5 A
2	ACTIVE	34.7°C	23.5°C	7296 RPM	0.3 A	3.6 A

ID	State	Current	Name
1	ON	0.5 A	Edit
2	ON	0.5 A	Edit
16	ON	0.9 A	Edit

Click the required menu item to reveal the available page choices.

Status details for all power output ports. To change the output status, click the ON / OFF button. To rename a port, click the Edit button.

Use these buttons to affect all power output ports collectively. When the ALL ON button is pressed, the individual ports will be energized in a staggered sequence determined by the Channel interval setting in the General configuration page.

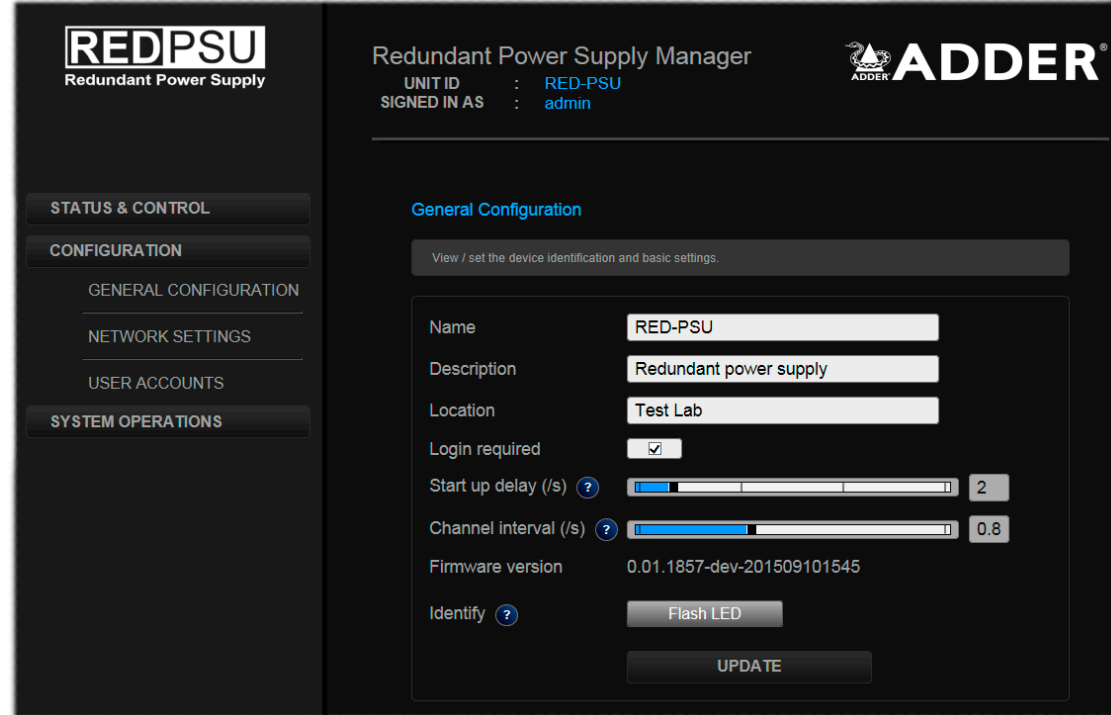
THE GENERAL CONFIGURATION PAGE

This page contains various important settings related to RED-PSU labelling, login, identity and startup.

IMPORTANT: When you make a change to any setting, don't forget to click the **Update** button to save the change.

Note: The Name, Description and Location fields accept ASCII characters only. UTF-8 characters are not supported.

- *Name* - the primary identity of this RED-PSU unit.
- *Description* - a further opportunity to add more information about the RED-PSU unit.
- *Location* - a useful feature if you have multiple RED-PSU units distributed around.
- *Login required* - when ticked, all users will be requested to enter a valid username and password prior to access being granted.
- *Start up delay* - this setting determines the time delay in seconds that should elapse, after mains power is first applied to the unit, before the power modules apply their full supply to the RED-PSU chassis. This feature is useful when multiple RED-PSU units are fed from the same mains power feed. By staggering the switch on points of the various units, the impact of multiple switched mode power supplies and their initial in-rush currents are greatly reduced. Values range from 0 to 10 seconds.
- *Channel interval* - this setting determines the time delay, in seconds, that should elapse between each power output port being energized. This performs an important task in preventing initial power overloads as each device reaches its quiescent state. Values range from 0.1 to 2 seconds.
- *Firmware version* - displays the current version of internal software used within the RED-PSU logic system.
- *Identity* - used to visually identify the RED-PSU unit when multiple units are installed together. Click the Flash LED button to flash the front panel LED indicators, as follows:
 - Click the button once to flash the LED indicators five times.
 - Click the button twice to flash the LED indicators indefinitely.
 - Click the button a third time to stop the flashing.



The screenshot displays the 'RED-PSU Redundant Power Supply' web interface. The left sidebar contains navigation tabs: STATUS & CONTROL, CONFIGURATION (selected), GENERAL CONFIGURATION, NETWORK SETTINGS, USER ACCOUNTS, and SYSTEM OPERATIONS. The main content area shows the 'Redundant Power Supply Manager' header with 'UNIT ID : RED-PSU' and 'SIGNED IN AS : admin'. Below this is the 'General Configuration' section, which includes a sub-header 'View / set the device identification and basic settings.' and a form with the following fields:

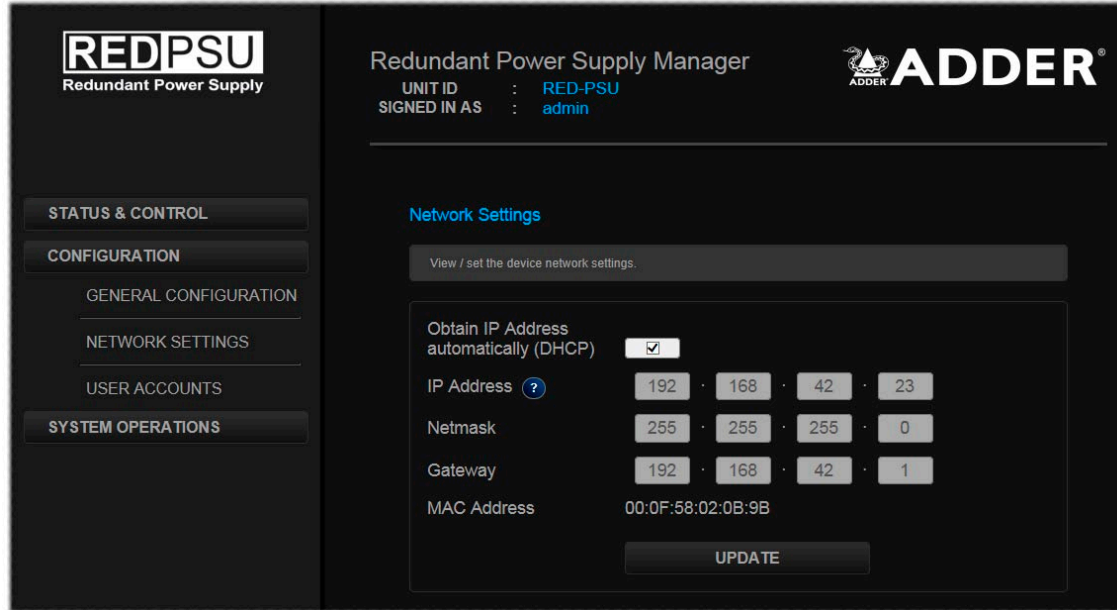
- Name: RED-PSU
- Description: Redundant power supply
- Location: Test Lab
- Login required:
- Start up delay (/s): 2
- Channel interval (/s): 0.8
- Firmware version: 0.01.1857-dev-201509101545
- Identify: Flash LED button
- UPDATE button

THE NETWORK SETTINGS PAGE

This determines the network settings used by the RED-PSU unit.

IMPORTANT: When you make a change to any setting, don't forget to click the Update button to save the change.

- *Obtain IP Address automatically* - when ticked, the RED-PSU will use DHCP (Dynamic Host Configuration Protocol) to automatically determine all network settings (and all other options in this page will be grayed out). When unticked, use the other options to configure the network settings manually.
- *IP Address* - set the IP address for the RED-PSU.
- *Netmask* - set a subnet mask to accompany the IP address.
- *Gateway* - optionally define a suitable address for a gateway device (only needed if external access to RED-PSU is required).
- *MAC Address* - displays the unique (and fixed) MAC address for the RED-PSU.



The screenshot shows the 'Network Settings' page of the RED-PSU interface. The page is titled 'Redundant Power Supply Manager' and includes the ADDER logo. The user is logged in as 'admin'. The left sidebar contains navigation options: STATUS & CONTROL, CONFIGURATION (selected), GENERAL CONFIGURATION, NETWORK SETTINGS, USER ACCOUNTS, and SYSTEM OPERATIONS. The main content area shows the following settings:

Setting	Value
Obtain IP Address automatically (DHCP)	<input checked="" type="checkbox"/>
IP Address	192 · 168 · 42 · 23
Netmask	255 · 255 · 255 · 0
Gateway	192 · 168 · 42 · 1
MAC Address	00:0F:58:02:0B:9B

An 'UPDATE' button is located at the bottom of the settings area.

THE USER ACCOUNTS PAGE

This page allows you to administer the details for users of the RED-PSU unit. By its nature RED-PSU is not an end user access product, so every authorized user is considered as an admin with the same rights. Extra users can be added and deleted, however, the main 'admin' entry cannot be deleted or renamed, only its password can be changed.

Note: The RED-PSU will only request Login details if the 'Login required' option within the [General configuration](#) page is ticked.

To add a new user

- 1 Enter a User Name and Password (and then Confirm password) in the labeled fields.

Note: The User Name and Password fields accept ASCII characters only. UTF-8 characters are not supported.

- 2 Click the Add button. If the two password entries match, the new user details will be added to the list of Users below.

To edit a user

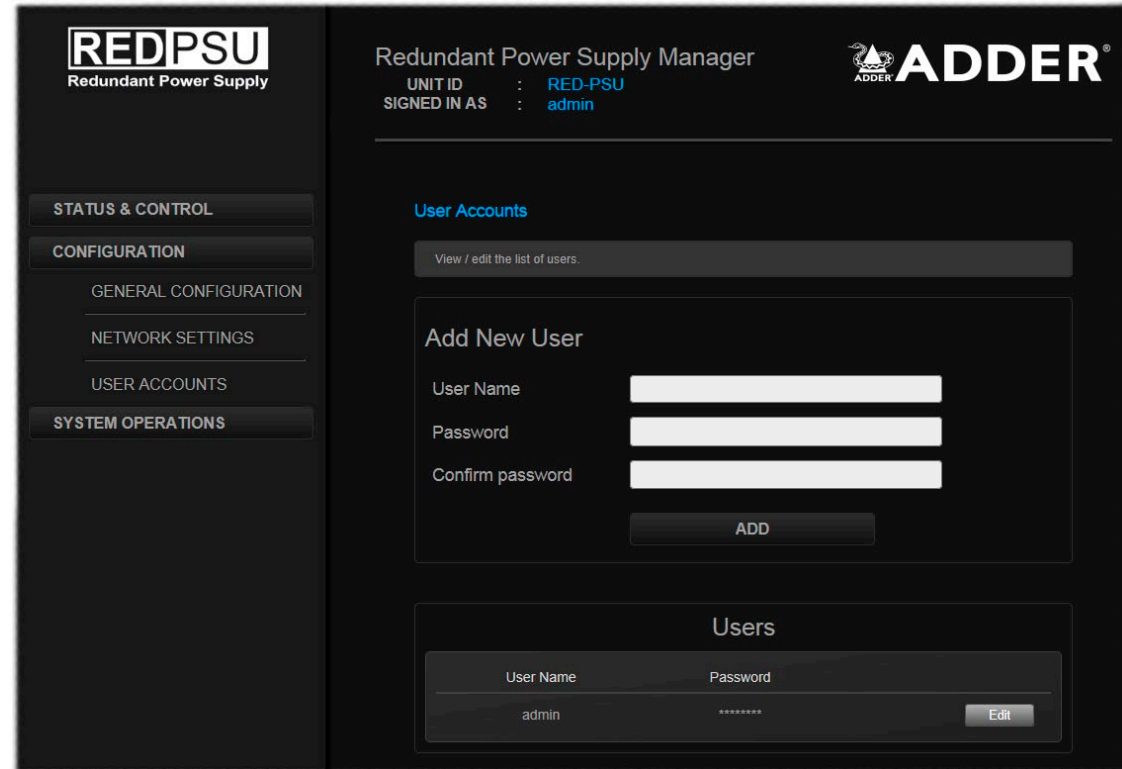
- 1 Locate the required entry within the Users list.
- 2 Click the Edit button, change the necessary details and then click the Update button.

Note: The main 'admin' entry name cannot be deleted or renamed, only its password can be changed.

To delete a user

- 1 Locate the required entry within the Users list.
- 2 Click the Delete button.

Note: The main 'admin' entry name cannot be deleted.



The screenshot shows the 'Redundant Power Supply Manager' interface. The top left features the 'REDPSU Redundant Power Supply' logo. The top right shows the 'ADDER' logo and user information: 'UNIT ID : RED-PSU' and 'SIGNED IN AS : admin'. A left-hand navigation menu includes 'STATUS & CONTROL', 'CONFIGURATION' (highlighted), 'GENERAL CONFIGURATION', 'NETWORK SETTINGS', 'USER ACCOUNTS', and 'SYSTEM OPERATIONS'. The main content area is titled 'User Accounts' and contains a link 'View / edit the list of users.' Below this is the 'Add New User' form with fields for 'User Name', 'Password', and 'Confirm password', and an 'ADD' button. At the bottom, a 'Users' table lists the 'admin' user with an 'Edit' button.

User Name	Password
admin	*****

THE SYSTEM OPERATIONS PAGE

This page contains various options for resetting and updating the RED-PSU. All options given here will interrupt normal operations and should be used with caution.

Device reset

This option will reset the operation of the RED-PSU unit, equivalent to a cold reboot (as if power to it had been removed and restored). All power outputs will be removed and then restored in a staggered manner defined by the start up delay and Channel interval settings within the General configuration page. No configuration details will be changed but you will need to reconnect your network link with the RED-PSU unit.

To reset the RED-PSU device

- 1 Click the Device Reset button.
- 2 Click OK to confirm your choice in the subsequent popup.

Factory reset

This option will perform a cold reboot but will also return all configuration details to the factory settings. *Note: The IP address will be returned to 192.168.1.22 (DHCP will be disabled) and all user entries apart from the main admin will be removed.* You will need to reconnect your network link with the RED-PSU unit.

To perform a factory reset

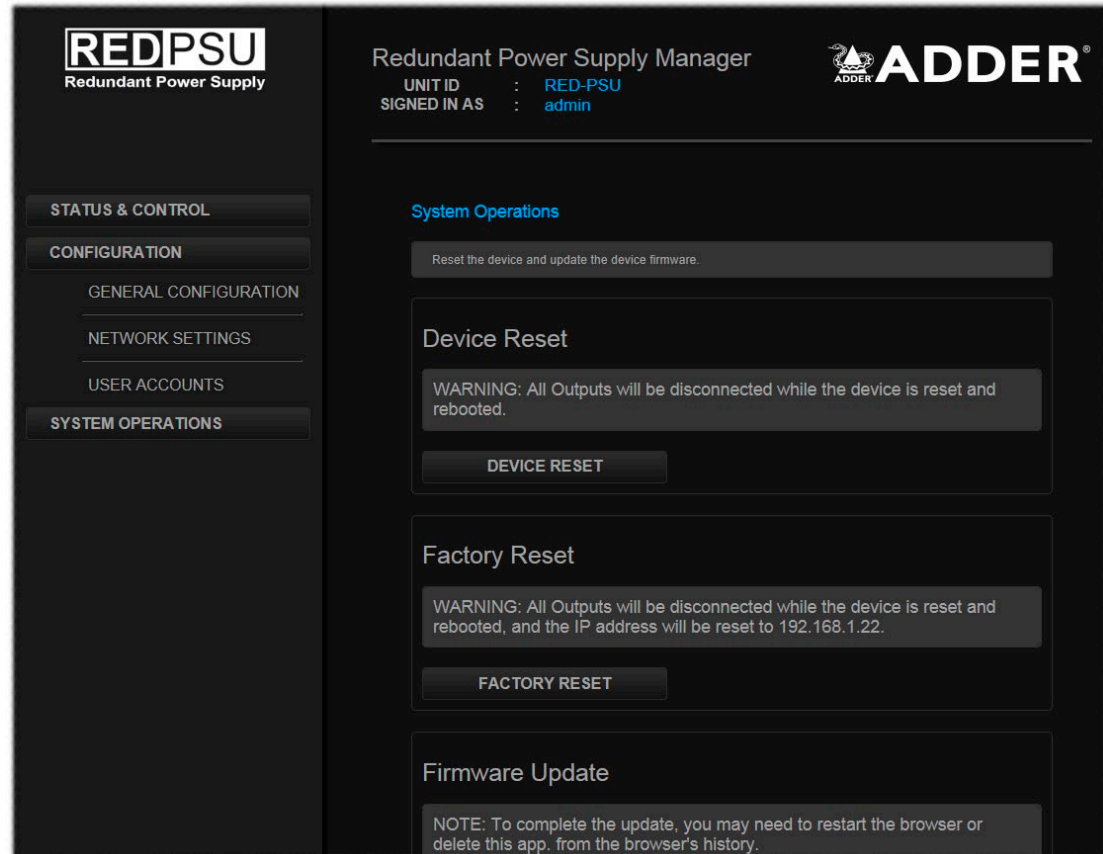
- 1 Click the Factory Reset button.
- 2 Click OK to confirm your choice in the subsequent popup.

Firmware update

This option will perform an update to the firmware contained within the logic circuitry of the RED-PSU unit. You will first need to download the latest firmware file for the device from the Adder website (www.adder.com) and ensure that it is unzipped and accessible from the computer you are using to access the RED-PSU unit.

To perform a firmware update

- 1 Click the Select Firmware File button. A file dialog will be displayed.
- 2 Use the file dialog to locate the new firmware file and click Open.
- 3 Click the Update Firmware button.



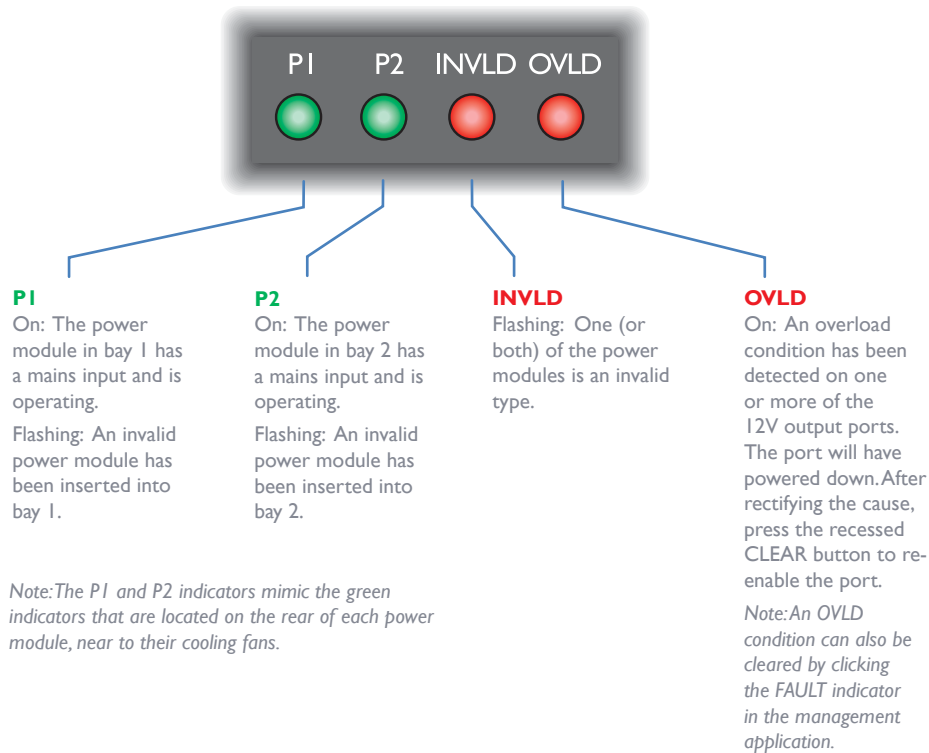
The RED-PSU system is designed to be transparent in operation.

INDICATORS

The RED-PSU main chassis contains various indicators to provide you with status information. There are four main indicators on the front panel as well as green and amber indicators on the network port connector.

Red status indicators

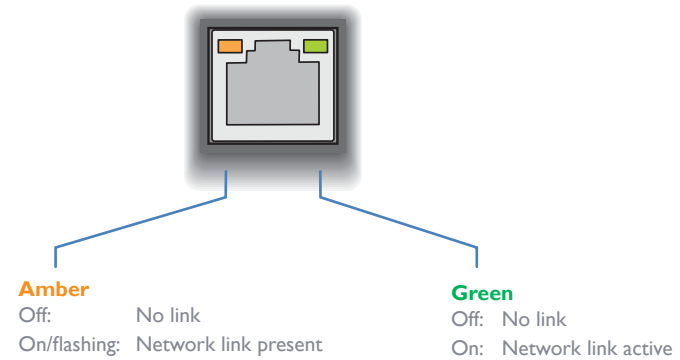
The red status indicators on the front panel provide various key power and operation feedback:



Note: The P1 and P2 indicators mimic the green indicators that are located on the rear of each power module, near to their cooling fans.

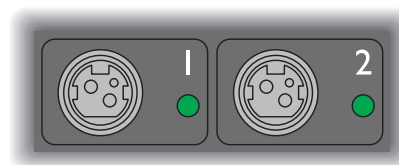
Green and amber network status indicators

The green and amber status indicators on the front panel network port connector provide further status information:



Green power output status indicators

On the rear panel, each power output port has a green status indicator:



On: Power (12VDC) is being supplied to the adjacent port.

RESTORING POWER OUTPUTS

As discussed in the [Welcome](#) section, the RED-PSU ports are carefully monitored to ensure safety protection while also maintaining power consistency to the multiple devices:

- *Electronic short protection* - If an overload or short circuit occurs on any output, the power is limited to a safe value (by current pulsing) until the microprocessor recognises the overload condition and trips the output – this happens approximately one second after the fault happens. The resulting trip is indicated on the RED-PSU front panel by the **OVLD** being on and also within the management application ('FAULT' is shown next to the affected port within the [Status & Control page](#)).
- *5V overload protection* - Applicable only to outputs that use optional Converter dongles. When the load exceeds approximately 5.5A*, a dongle will internally trip its power output. In most cases this will occur before the electronic short protection (mentioned above) reacts. In such cases, the power trip will not be reported back to the RED-PSU unit and its output will remain intact, although the listed current output for that port will fall to (or near) zero.

To restore a power output

- 1 Following an automatic power trip, your first task is to locate the cause of the problem. It may have been a temporary overload issue that has subsided or something more permanent. Perform thorough checks on the implicated device and all of the power cabling between it and the RED-PSU.
- 2 Depending on where the trip was made, you will see different results:
 - If the RED-PSU electronic short protection circuit responded, the front panel **OVLD** indicator will be lit and also the rear panel green indicator adjacent to the affected port will be **OFF**. Within the [Status & Control page](#) of the manager application, the port State will be shown as FAULT.
 - If the converter dongle overload circuit responded, it is likely that the corresponding RED-PSU output port will still be active.
- 3 Accordingly, your remedial actions will differ:
 - Where the fault is indicated on the front panel **OVLD** indicator (once you have diagnosed and corrected the cause), use a narrow implement (e.g. straightened paperclip) to press and release the recessed front panel CLEAR button. The power output to port will be reinstated. Alternatively, within the management application ([Status & Control page](#)), click the FAULT state shown against the affected port.
 - Where the fault was detected by a converter dongle, either use the [Status & Control page](#) of the management application to switch the port Off and then On; or at the RED-PSU rear panel remove and reconnect the converter dongle connection.
- 4 For a suitable period after resuming the power supply to the affected port, closely monitor the device, the RED-PSU and all related cabling for a reoccurrence of the same or similar problem.

RESETTING THE RED-PSU

If it becomes necessary to reset the entire RED-PSU unit, this can be achieved either using the management application (see [The Systems operation](#) page) or the recessed RESET button on the front panel. Using either method it is possible to enact a basic reset (equivalent to removing and restoring mains power) or a full factory reset.

Device reset from the front panel

This procedure will reset the operation of the RED-PSU unit, equivalent to a cold reboot. All power outputs will be removed and then restored in a staggered manner (as defined within the management application). No configuration details will be changed.

To reset the RED-PSU device

- 1 Use a narrow implement (e.g. straightened paperclip) to press and release the recessed front panel RESET button.

Factory reset from the front panel

This procedure will perform a cold reboot but will also return all configuration details to their factory settings. *Note: The IP address will be returned to 192.168.1.22 (DHCP will be disabled) and all user entries apart from the main admin will be removed.*

To perform a factory reset

- 1 Use a narrow implement (e.g. straightened paperclip) to press and hold the recessed front panel RESET button for 20 seconds.

* If you are using the management application to monitor supply currents, remember that due to the conversion from 12VDC to 5VDC, the values shown at the power output ports (within the app) differ from the currents flowing to the device. Roughly speaking, 5.5A at the 5V level will be reported at the management application as 2.3A at 12V.

This chapter contains a variety of information, including the following:

- Getting assistance - see right
- [Safety information](#)
- [Warranty](#)
- [Radio frequency energy statements](#)

GETTING ASSISTANCE

If you are still experiencing problems after checking the information contained within this guide, then we provide a number of other solutions:

- **Online solutions and updates** – www.adder.com/support
Check the Support section of the adder.com website for the latest solutions and firmware updates.
- **Technical support** – www.adder.com/contact-support-form
For technical support, use the contact form in the Support section of the adder.com website - your regional office will then get in contact with you.

SAFETY INFORMATION

- For use in dry, oil free indoor environments only.
- Warning - live parts contained within the power modules.
- Power modules contain no user serviceable parts - do not dismantle.
- Do not use an unearthed power socket or extension cable.
- Do not use a power module if its case becomes damaged, cracked or broken or if you suspect that it is not operating properly.
- Replace the power module(s) with a manufacturer approved type only - non-Adder power modules will not work with RED-PSU.
- If you use a power extension cord with the module, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure that the total ampere rating of all the devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.

WARRANTY

Adder Technology Ltd warrants that this product shall be free from defects in workmanship and materials for a period of two years from the date of original purchase. If the product should fail to operate correctly in normal use during the warranty period, Adder will replace or repair it free of charge. No liability can be accepted for damage due to misuse or circumstances outside Adder's control. Also Adder will not be responsible for any loss, damage or injury arising directly or indirectly from the use of this product. Adder's total liability under the terms of this warranty shall in all circumstances be limited to the replacement value of this product.

If any difficulty is experienced in the installation or use of this product that you are unable to resolve, please see the [Getting assistance](#) section.



RADIO FREQUENCY ENERGY

A Category 5e (or better) twisted pair network cable must be used to connect the units in order to maintain compliance with radio frequency energy emission regulations and ensure a suitably high level of immunity to electromagnetic disturbances.

European EMC directive 2004/108/EC

This equipment has been tested and found to comply with the limits for a class A computing device in accordance with the specifications in the European standard EN55022. These limits are designed to provide reasonable protection against harmful interference. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference to radio or television reception. However, there is no guarantee that harmful interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to correct the interference with one or more of the following measures: (a) Reorient or relocate the receiving antenna. (b) Increase the separation between the equipment and the receiver. (c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected. (d) Consult the supplier or an experienced radio/TV technician for help.

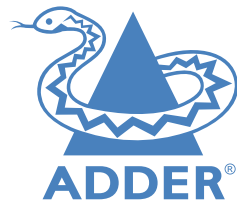
FCC Compliance Statement (United States)

This equipment generates, uses and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a class A computing device in accordance with the specifications in Subpart J of part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Canadian Department of Communications RFI statement

This equipment does not exceed the class A limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le règlement sur le brouillage radioélectriques publié par le ministère des Communications du Canada.



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