User manual

PM0816-01

Contents

Introduction

Applicable Models

Unless specified otherwise, all information in this document is applicable to the following Racktivity 1U models:

- **PM0816-01**

Inventory

Inspection of the Package

Inspect the package (see inventory) and contents for shipping damage and make sure that all parts were received. Immediately report any damage from shipping to the shipping agent, and missing content, damaging or other problems to your reseller.

Please verify the contents of the package:
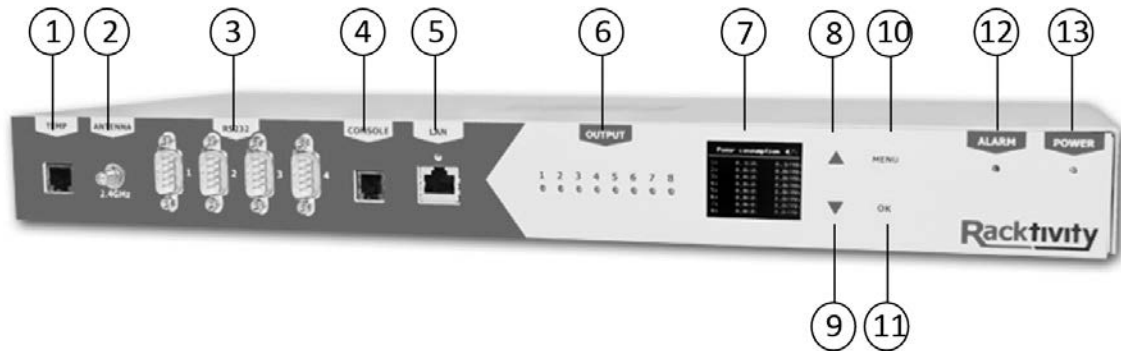
Standard Package

Item	Quantity (1pc)	Quantity (5pcs)
PM0816-01	1	5
Rack mounting brackets	2	10
Rack mounting bracket screws	4	20
Inlet power cable	1	5
Quick Start Guide	1	1

Overview

Front

1	**TEMP**	N/A
2	**ANTENNA**	N/A
3	**RS232**	4 x RS232 interface connector
4	**CONSOLE**	Console connector
5	**LAN**	Ethernet connector + LED
		Status LED is on = Ethernet connection established
		Status LED is flashing = Ethernet activity on the network
6	**OUTPUT**	Blue LED activity indicator for each of the 8 outlets
7	**OLED**	OLED display
8	**UP**	Move to the previous page or browse upwards in a selection list
9	**DOWN**	Move to the next page or browse downwards in a selection list
10	**MENU**	Button to access menu function
11	**OK**	Validation button
12	**ALARM**	Red alarm LED indicator
13	**POWER**	Blue power LED indicator

Rear
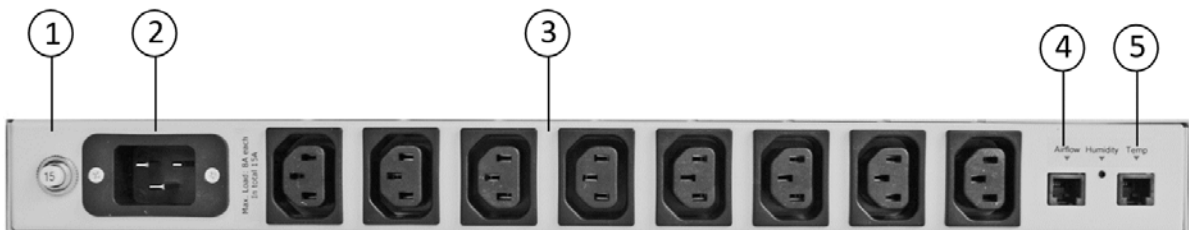
1	**FUSE**	15A circuit breaker
2	**INLET**	16A inlet: IEC C20
3	**OUTLET**	8x outlet plug
		Note: maximum load of 8A on each of the outlets & 15A in total
4	**AIRFLOW**	N/A
5	**TEMP**	N/A

Installation

Mounting the PDU

1. The PDU comes with brackets for mounting in a rack.
   - Choose the appropriate location for the brackets on the sides of the unit. The device can be mounted in the rack facing forward or facing backward.
   - Attach the rack mounting brackets to the unit using 2 retaining screws, provided for each of the brackets.
2. Attach the PDU to a vertical rail in your rack. Position the PDU, align the buttons with the rack mounting slots and fix the PDU with the required screws (not inserted in the package).
3. When mounting the device, ensure that nothing is leaning on or close to the PDU. Best is to leave open space for airflow and to assure accurate internal temperature measurements. The PDU itself is a low power device with a power consumption of only 4 Watts.

Connecting the PDU

1. The PDU has a detachable power cord. Attach the included power cord to the device by inserting the IEC C20 connector in to the IEC C20 inlet.
   Note: Optionally, a user-supplied power cord can be attached to the PDU by connecting it to the IEC inlet. Do not attempt to attach a user-supplied power cord unless it is certified to be compatible with the input power source that will be used by the PDU.
2. Connect the input plug to a compatible AC power outlet.
   Note: The AC power source should not share a circuit with a heavy electrical load.
3. Connect your equipment's input plugs to the outlet plugs of the PDU.
4. Only when the appropriate port status LED is lit does the PDU provide power to that port.
5. All blue port status LEDs will light up at first time use.

Note: When not first time use, it is possible that not all LEDs light up. The PDU will only activate those ports that were active when power was shut down. Non-lit ports are not active.

OLED Display

Activating the display

The OLED standby delay can be set at the Settings page on the Web Portal (the default value is 1 minute).
On the PDU, push any of the 4 buttons next to the OLED Display to activate the screen.

Using the display

The OLED is controlled using the **UP, DOWN, MENU** and **OK** buttons next to the screen.

Use the **UP** and **DOWN** buttons to navigate through the reporting screens or through a selection list in the menus. Press **OK** to select the highlighted item and **MENU** to go back.

When in a menu, the ">" symbol indicates that clicking this item will open a submenu. The "●" symbol indicates that this menu item leads directly to a setting.

Setting the brightness

1. Press the **MENU** button until the Main menu appears.
2. Select Brightness using the **UP** and **DOWN** buttons and press **OK**.
3. Use the **UP** and **DOWN** buttons to change the screen brightness.
4. Press **MENU** to save and exit.

Reporting Screens

Overview (1/7)

The Overview screen shows the total current in A (Ampère), the real power usage in Watts, the temperature in degrees Celsius and the humidity in RH (Relative Humidity). These values are updated in real time.

General (2/7)

This screen shows the current (in Ampère) for all 8 ports. A combined total is displayed on the right (Tot Current), followed by the input voltage (in Volts) and frequency (in Hz). All values are updated in real time. Ports shown in green are powered on, when shown in grey they are powered off.

Port State (3/7)

Here you can see the current (in Ampère) for all 8 ports, followed by the port name. The port name is typically the name of the connected device and can be set via the Web Portal. Ports shown in green are powered on, when shown in grey they are powered off.

Changing the port state

1. Press **OK**
2. Use the **UP** and **DOWN** buttons to select the desired port.
3. Press **OK** at the selected port, validate by pressing **MENU**
4. Press **MENU** again to exit port selection.

Power (4/7)

This screen shows the Real Power, Apparent Power and Power Factor (PF) values for each of the ports. Ports shown in green are powered on, when shown in grey they are powered off.

When the current of a particular port has reached the preset Warning threshold, the values will turn orange. When the Off threshold is exceeded the port will be powered off and the values will turn red.

Power Consumption (5/7)

This screen shows the power consumption expressed in kilowatt hour and kilovolt A hour for each of the 8 ports.

Ambient (6/7)

When external temperature probes are connected (up to 8) they will show up here. The internal temperature (°C), humidity (%RH) and an optional external airflow sensor (meters/second) are also displayed on this screen.

Current of Ports (7/7)

This screen shows a real time graph of the used current for each port (in Ampère). When the Warning and/or Off threshold have been set an orange (Warning) and/or red (Off) line will appear.

The thresholds can be set using the Web Portal.

TCP-IP Configuration

There are two methods for setting up the IP address: Dynamic IP Address assignment and Manual IP Address assignment. If you are uncertain which method to use, contact your network administrator for assistance before continuing the installation process.

Dynamic IP Address Assignment

Connect the PDU to a network. While the PDU is powered on, connect a standard Ethernet cable to the RJ45 Ethernet port, the activity LED will light up to indicate Ethernet connectivity.

1. Press **MENU** until the Main menu appears, select Ethernet or Network using **UP** and **DOWN** and press **OK**.
2. Within the Ethernet or Network menu, select **DHCP (off)** and press **OK** until DHCP (on) appears.
3. Press **MENU** to return to the Main menu and use **UP** and **DOWN** to select Current IP-Address. The current IP-address is shown in yellow at the bottom of the OLED.
4. On a computer in the same network, use a browser to open the assigned IP-address, for example http://192.168.14.250
5. When browsing to the Web Portal, a popup appears requesting a username and password. The default values are:

> **Login**: admin
> **Password**: 1234

Manual IP Address Assignment

Obtain the correct IP address, standard gateway, DNS Server IP and subnet mask from your network administrator.

1. Press the **MENU** button until the Main menu appears, select Ethernet or Network using the **UP** and **DOWN** buttons and press **OK**.
2. Within the Ethernet or Network menu, select **DHCP (on)** and press **OK** until DHCP (off) appears.
3. Select **SET IP-ADDRESS** and press **OK** to change the settings (when navigating the menus, the value for that setting is shown in yellow at the bottom of the OLED).
4. Use the **UP** and **DOWN** buttons to change the currently selected value and press **OK** to select the next value. When holding the **UP** and **DOWN** buttons changing the values speeds up. When ready press **MENU** to return to the Ethernet or Network menu.
5. Repeat the last 2 steps for the Subnet mask, Std Gateway and DNS Server settings.
6. On a computer in the same network, use a browser to open the chosen IP-address, for example http://192.168.14.250
7. When browsing to the Web Portal, a popup appears requesting a username and password. The default values are:

   Login: admin
   Password: 1234

Using the Web Portal

Opening the Web Portal

Use a browser to open the PDU IP address. You will be asked for login credentials, the default values are:

> **Login**: admin
> **Password**: 1234

Status tab

- The Status Screen shows the ON/OFF status of the 8 ports on the PDU
    - **Grey background**: port is powered OFF
    - **Green background**: port is powered ON
- The button underneath each port toggles the port status instantly (even when a delay has been set on the Protection tab). The load is activated at the zero crossing of the voltage to avoid interference on the voltage. Toggling a port state always triggers an SNMP Trap, regardless of other settings.
- For each port, the real time True RMS is displayed (in Ampère)
- The default port names (port1, port2,...) can be changed at the Settings tab.

Power tab

This tab shows all the power measurements in real time.

- **Port**: Port name and status
    - **Grey background**: Port is powered OFF
    - **Green background**: Port is powered ON
- **Current**: The real time current is displayed (in Ampère)
- **Maximum**: The maximum current measured (in Ampère). Hover your mouse over this value to see a timestamp that indicates when the maximum value was measured. This value can be reset at the Protection tab
- **Real Power**: The real power usage (in Watts)
- **Apparent Power**: The apparent power (in Volt Ampère)
- **Power Factor**: The power factor (in %)
- **Resettable kWh**: The total amount of kilowatt hours since the last reset
- **Resettable kVAh**: Total apparent power (in kilo Volt Ampère hours) since the last reset
- **Reset**: Resets the Resettable kWh and the Resettable kVAh (note: this reset will not clear the maximum column, this can be done at the Protection tab)
- **kWh**: The total kilowatt hours since the PDU has been in use. This value can NOT be reset.

The default port names (port1, port2,...) can be changed at the Settings tab.

Ambient tab

The Ambient tab shows the environmental parameters being measured.

Sensor
- **Airflow**: The airflow measured by an optional external sensor (in meters per second)
- **Intrusion1**: Shows the state of an optional external intrusion detector
- **Intrusion2**: Shows the state of an optional external intrusion detector

Relative Humidity
- **Value**: The current relative humidity (in %RH)
- **Min**: The lowest value since the last reset (in %RH)
- **Max**: The highest value since the last reset (in %RH)
- **Reset**: resets the Min and Max columns to the current value
- **Warning Min**: Sets the minimum value at which an SNMP trap is sent
- **Warning Max**: Sets the maximum value at which an SNMP trap is sent
- **SNMP**: if checked SNMP traps will be sent when the Warning Min and/or Warning Max values are crossed.

Temperature
- **Temperature**: Shows the state of both the internal temperature sensor (on the first row) and any connected optional temperature sensors
  - **Grey background**: No sensor connected
  - **Green background**: Connected and active sensor
- **Value**: The current temperature (in °C)
- **Minimum**: The lowest value since the last reset (in °C)
- **Maximum**: The highest value since the last reset (in °C)
- **Reset**: Resets the Minimum and Maximum columns to the current value
- **Warning Level**: Sets the maximum temperature that when crossed causes an SNMP trap to be sent
- **SNMP**: If checked SNMP traps are sent when the Warning Level is exceeded

After editing the settings on the Ambient tab, press the Save Data button. A pop-up will appear after the changes have been successfully saved.

Settings tab

General
- **PDU Name**: Name of the PDU
- **Rack Position**: Optional administrative parameter that indicates where the PDU is installed.

Port Name
- Sets the preferred port names, typically the internal identification used for the connected devices

The following settings are only available when the DHCP checkbox is unchecked:

Ethernet (Warning: when changing these values connection to the Web Portal might be lost)
- **IP-Address**: The IP-address used for TCP/IP configuration
- **Subnetmask**: The subnet mask used for TCP/IP configuration
- **Std Gateway**: The standard gateway used for TCP/IP configuration
- **DNS-server**: The DNS-server used for TCP/IP configuration
- **DHCP**: When checked the PDU will automatically be assigned an IP-address (if a DHCP server is present on the network)

SNMP
- **Community read**: Sets the community read string, default: "public". When using SNMP software on a pc to collect SNMP data (GET command) this string is used as verification
- **Community write**: Sets the community write string, default: "private". When using SNMP software on a pc to change SNMP data (SET command) this string is used as verification
- **Write protection**: When checked this setting will prevent changes being made through SNMP (SET command), even when using the correct Community write string. It can be used as an additional protection
- **Trap receiver port**: Sets the port for the SNMP Trap function, default: "162"
- **Trap receiver IP**: Sets the IP address where the SNMP Trap is sent, this is normally the IP of a monitoring computer on the same network

OLED
- **Min. before Off:** Sets the OLED standby delay when no buttons are pressed (in minutes)
- **Brightness [2-10]:** Sets the OLED's brightness

- **Login**: Sets a new login and password. The default values are:

  Login: admin
  Password: 1234

Logging
- Sets the logging values for the Logging tab
  - **Short term**: From 1 - 255 seconds
  - **Medium term**: From 1 - 255 minutes
  - **Long term**: From 2 - 255 medium term intervals (specified in the above setting)

After editing the settings on the Settings tab, press the Save Data button. A pop-up will appear after the changes have been successfully saved.

Time Settings (UTC)
The following settings are only available when NTP is unchecked

- **Time** (**HM**): Sets the time (in hours:minutes)
- **Date** (**DMY**): Sets the date (in days/months/years)
- **Local NTP-server**: NTP server IP when Use Default NTP Server is not checked
- **Use Default NTP server**: When checked the PDU will connect to pool.ntp.org for the time settings
- **NTP**: When checked the PDU will try to get time settings from an NTP server

Protection tab

Use this tab to set the thresholds and alarms that provide disaster prevention and other recovery functions for each port.

- **Port**: Port name and status
- **Grey background**: Port is powered OFF
- **Green background**: Port is powered ON

- **Current**: Real time current in milliampère
- **Maximum**: Maximum current in milliampère since the last reset
- **Reset**: Resets the Maximum value. Hover your mouse over this value to see a timestamp that indicates when the maximum value was measured.
- Warning Level: When this threshold (in milliampère) is exceeded an SNMP Trap is sent (if the SNMP checkbox for this port is checked)
- **Off Level**: when this threshold (in milliampère) is exceeded the port is automatically powered off and an SNMP trap is sent (if the SNMP checkbox for this port is checked)
- **Temp Off**: When this temperature threshold (in °C) is exceeded by the internal temperature sensor the port is automatically powered off and an SNMP trap is sent (if the SNMP checkbox for this port is checked)
- **SNMP**: When checked SNMP Traps are enabled for this port
- **Priority**
  - The PDU looks at the thresholds of each port before checking the SUM. So, if a port exceeds its Off Level threshold that port is powered off, followed by a check of the "SUM" Off Level threshold.
  - When the Off threshold in the "SUM" row is exceeded, the device looks at the individual port priority settings to determine which port to power down first, second,... even when it wasn't that port that caused the threshold to be exceeded. A lower number means a higher priority (1 is the highest priority, 8 the lowest).
  - If 2 ports have the same priority level, the PDU will determine which port had the highest current increase and will power off that port. If no current increase is found, the port that was powered on last is powered off.
- **Delay On**: sets the startup delay (in seconds) after the PDU has been powered off and back on (Toggling a port's state manually ignores this setting).

Voltage table
- **Value**: Current voltage measured
- **Warning Min**: When the measured voltage goes below this threshold an SNMP trap is sent (with SNMP checked)
- **Warning Max**: When the measured voltage exceeds this threshold an SNMP trap is sent (with SNMP checked)
- **SNMP**: When checked, SNMP traps are sent when the measured voltage is below the minimum or above the maximum threshold

After editing the settings on the Protection tab, press the Save Data button. A pop-up will appear after the changes have been successfully saved.

Serial tab

The settings for the PDU's 4 serial connectors can be changed on this tab.

- **Port**: The number of the serial connector as seen on the front of the PDU
- **Baudrate**: Possible baudrates for serial communication. The baudrate of the serial connector and a connected device must be the same
- **TelnetPort**: Sets the telnet port. The port must end in the same number as the corresponding serial connector (serial connector 3 cannot have a port ending with 4 (ie: 30004), it must end with a 3 (ie: 14203)
- **Reset Telnet**: Disconnects an active telnet session. This button does not alter any other settings.

After editing the settings on the Serial tab, press the Save Data button. A pop-up will appear after the changes have been successfully saved.

Schedule tab

Here you can specify a schedule which defines for each port if and when it should be turned off and/or on and if this should be repeated on a daily basis.

- **Port**: Port name and status
  - **Grey background**: Port is powered OFF
  - **Green background**: Port is powered ON
- **Time Off**: Time in hours:minutes when the port is to be turned off (with Off Enable checked)
- **Off Enable**: When checked the port will be turned off at the time specified in Time Off
- **Time On**: Time in hours:minutes when the port is to be turned on (with On Enable checked)
- **On Enable**: When checked the port will be turned on at the time specified in Time on
- **Repeat Daily**: When checked the specified schedule for that port will be repeated daily

The current time is displayed below the table.
After editing the settings on the Schedule tab, press the Save Data button. A pop-up will appear after the changes have been successfully saved.

Logging tab

The PDU's short- medium- long- and event logging are displayed on this tab. For each type the number of items needed can be specified. Changing the logging intervals can be done at the Settings tab.

SNMP Configuration

SNMP (Simple Network Management Protocol) is mostly used in network management systems to monitor network-attached devices for conditions that warrant administrative attention.

The PDU features both access to SNMP data and the ability to send SNMP Traps.

Configuring SNMP

- Make sure that the PDU has been properly configured for use on the network.
- Use a browser to open the PDU's IP address. You will be asked for login credentials, the default values are:

    Login: admin
    Password: 1234

- Go to the Settings tab
- Under the SNMP section you will find the following:
    o **Community read**: Sets the community read string, default: "public". When using SNMP software on a pc to collect SNMP data (GET command) this string is used as verification
    o **Community write**: Sets the community write string, default: "private". When using SNMP software on a pc to change SNMP data (SET command) this string is used as verification
    o **Write protection**: When checked this setting will prevent changes being made through SNMP (SET command), even when using the correct Community write string. It can be used as an additional protection
    o **Trap receiver port**: Sets the port for the SNMP Trap function, default: "162"
    o **Trap receiver IP**: Sets the IP address where the SNMP Trap is sent, this is normally the IP of a monitoring computer on the same network

SNMP Usage

Monitoring software with SNMP functionality enables you to stay on top of any developments concerning the PDU. All relevant data (measurements, settings, port states, thresholds,...) are accessible through SNMP GET requests.

Make sure to load the Racktivity MIB file (found here) to get the full benefits of SNMP monitoring. Software like iReasoning's MIB Browser can help get results quickly, while Zenoss monitoring software takes a more in depth approach.

Serial Configuration

The PDU has 4 serial RS232 connectors located at the front to connect upto 4 external devices, ie: switches, servers,...

These connectors are primarily for recovery purposes, so when you have been locked out of an external device you can still connect to it through Telnet using the PDU's ethernet connection.

Configuring the serial connectors

- Make sure that the PDU has been properly configured for use on the network. For more info see TCP-IP Configuration
- Use a browser to open the PDU's IP address. You will be asked for login credentials, the default values are:

    Login: admin
    Password: 1234

- Go to the Serial tab
  Here you can specify for each connector:
    - **Port**: The number of the serial connector as seen on the front of the PDU
    - **Baudrate**: Possible baudrates for serial communication. The baudrate of the serial connector and a connected device must be the same
    - **TelnetPort**: Sets the telnet port. The port must end in the same number as the corresponding serial connector (serial connector 3 cannot have a port ending with 4 (ie: 30004), it must end with a 3 (ie: 14203)
    - **Reset Telnet**: Disconnects an active telnet session. This button does not alter any other settings.

Using the Serial Connectors

- Make sure the PDU and your computer are connected to the same subnet on the same network.
- Connect a serial cable between one of the PDU's configured serial connectors and an external device's serial port. The used Baudrates on both devices should be the same
- Start a Telnet session at the PDU's IP and with the correct port.
- You will be asked for login credentials, the default values are:

    Login: admin
    Password: 1234

- You are now connected, please refer to the external device's documentation for more information on the serial connection options.

Use Case

Requirements

- A fully configured PDU with an active Ethernet connection
- A PC with Putty software (download it here) and an active Ethernet connection
- Device with a console port (ie: a Cisco switch)
- A female DB9 to console cable

How to

- Install Putty
- Connect the cable between the PDU's 1st RS232 port and the device's console port
- Make sure the PDU and PC are on the same subnet and are switched on
- Open Putty and enter the following:
  o Connection Type: Telnet
  o Host name: the PDU's IP address (ie: 192.168.14.250)
  o Port: the default port for RS232 connector 1 is 2001 (can be changed at the Web Portal's Serial page)
- Press "Open"
- You will be asked for login credentials, the default values are:

  Login: admin
  Password: 1234

- Many devices require that you press the Enter key a few times before anything can be seen.

You are now connected to the device's console port through ethernet. Up to 4 devices can be connected to the PDU's RS232 connectors.

SNMP MIB Files

Download the MIB files appropriate to your firmware from the Support section

Specifications

Devices Connectable	8
Supported Voltages	110/220V
RS232 ports	4
Networking	Ethernet
SNMP Monitoring, alerting and management	Yes
Remote control software	Yes
Integrated Remote Control Web server	Yes
Max current per port	8A
Max current per PDU	15A
Enable/Disable ports	Yes
Form factor	1U
Color graphical OLED Display	Yes
LED Indicators	Yes
Rack Mountable	Yes
Power consumption	4 watt
Steel Case	Yes
Control buttons on front	Yes
Automatic Fuse Hardware 15 Ampère	Yes
Microcontroller based Fuse on each port	Yes
Internal Temperature	Yes

PDU Family Warranty

Warranty and Limitation of Liability

Racktivity agrees to repair or replace Datacenter Management Units ("Products") that fail due to a defect within twenty four (24) months after the shipment date of each Product unit to Buyer ("Warranty Period"). For purposes of this Agreement the term "defect" shall mean the Product fails to operate or fails to conform to its applicable specifications. Any claim made pursuant to this Agreement shall be asserted or made in writing only by Buyer. Buyer shall comply with Racktivity's Standard Return Merchandise Authorization ("RMA") procedure for all warranty claims as set forth in Racktivity's operation manual. Buyer must return Products in original packaging and in good condition. This limited warranty does not include labor, transportation, or other expenses to repair or reinstall warranted Products on site or at Buyer's premises. The warranty only applies to the original Buyer.

Racktivity reserves the right to investigate any warranty claims to promptly resolve the problem or to determine whether such claims are proper. In the event that after repeated efforts Racktivity is unable to repair or replace a defective Product, then Buyer's exclusive remedy and Racktivity's entire liability in contract, tort, or otherwise shall be the payment by Racktivity of Buyer's actual damages after mitigation, but shall not exceed the purchase price actually paid by Buyer for the defective Product.

Racktivity shall have no responsibility or liability for any Product, or part thereof, that (a) has had the Serial Number, Model Number, or other identification markings altered, removed or rendered illegible; (b) has been damaged by or subject to improper installation or operation, misuse, accident, neglect and/or has been used in any way other than in strict compliance with Racktivity's operation and installation manual; (c) has become defective or inoperative due to its integration or assembly with any equipment or products not supplied by Racktivity; (d) has been repaired, modified or otherwise altered by anyone other than Racktivity and/or has been subject to the opening of any sealed boxes without Racktivity's prior written consent. If any warranty claim by Buyer falls within any of the foregoing exceptions, Buyer shall pay Racktivity its then current rates and charges for such services.

THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. RACKTIVITY SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, OR EXEMPLARY DAMAGES; EVEN OF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

For warranty issues, contact the Product Support Department. All repair and return shipments must be approved by Racktivity and must be accompanied by a RMA (Return Merchandise Authorization) number and dated proof of purchase.

Troubleshooting

Password Reset

Resetting the password can be done on the device itself:

- Press and hold the **UP** and **DOWN** buttons simultaneously for 4 seconds.
- The password will now be reset to the factory default settings:

   Login: admin
   Password: 1234

This reset only affects the login credentials, no other settings are changed.

Factory Reset

If you would like to reset the PDU to the factory default settings this can be done on the device itself:
WARNING! This will completely erase all settings **and will power down all ports**. Make sure no vital equipment is connected to the PDU when performing a Factory Reset.

- Press and hold the **MENU** and **OK** buttons simultaneously for 4 seconds.
- The device is now completely erased of user specified settings, the default login values are:

   Login: admin
   Password: 1234

Determine Your Firmware

Web Portal

Open the Web Portal on the PDU. The firmware version is displayed in the top right corner after you log in (next to "SW V" + your firmware version).

OLED Display

On the PDU open the Main menu, then select **Version Numbers** followed by **Software Version**.

The firmware version is displayed at the bottom of the OLED in yellow.

Determine Your IP Address

To determine the IP address currently used by the PDU:

1. Press **MENU** until the Main menu appears, select Network or Ethernet using **UP** and **DOWN** and press **OK**.
2. Use **UP** and **DOWN** to select **Current IP-Address**. The current IP-address is shown in yellow at the bottom of the OLED

Firmware Update

To obtain the necessary software to update your PDU's firmware, please contact Racktivity Support.

1. Make sure that your computer and the PDU are on the same network and fully functional
2. Unpack the update package
3. Open the software tool "Racktivity Ethernet Bootloader.exe"
4. Use the "File" button to select the .cry file that came with the update package
5. Fill in the appropriate IP address and login credentials of the designated PDU
6. Press "Update firmware" to start the update
7. The update has successfully completed when "Programming completed / Exit bootloader" is shown (the update takes a few minutes)

Latest version

The latest available firmware version for the PM0816-01 is **v1.01**.

Update Troubleshooting

After starting the update "FAILED (check Settings)" is shown.

Please make sure that:
- The PDU is powered on and connected to LAN with a correct IP address
- You entered the correct login credentials under "Settings" in the software tool
- You are on the same LAN as the PDU

To verify the above settings are correct, go to the Web Portal and log in.

The Status window continuously shows output similar to "**ERROR Out of Sequence PDU Seq: 5294 5299".

- This is a mere warning and does not compromise the update.

The update fails and the PDU becomes unresponsive.

- If needed: restore power and/or Ethernet to the PDU
- Repeat the steps above to start the update again

In case you need to know the IP address, and it cannot be retrieved using the regular methods then:

- Connect a console cable between the PDU and your pc.
- Use the following settings to read the output: Baudrate 38400, 8 databits, no parity, 1 stopbit.
- Reboot the PDU, the currently used IP address is shown in the console output.
- Repeat the steps above to start the update again.

Support

Feel free to contact us if you need any support or have any other questions or remarks:

Online   www.racktivity.com/support

E-mail   support@racktivity.com

Phone   003293242095 (GMT+1)