

Intelligent PDU User Guide

PDU31xxx PDU41xxx PDU71xxx PDU81xxx

PDU Remote Management	t	Annonetheney logs force for the force of the second
Summary		Host *
Current Condition		
PDU is normal Environment sensor is no	umal	
PDU Status		
Dev Load	0.00 A	i i i
Outlet	1 2 3 4	
Name PDUB1001		
Location Server Room		
Contact Administrator		
Roling 12A Uptime 6day, 10hr, 55mir	ABSec.	
Time 2017/07/27 10:30		
Envir Status		
Temperature	30.4°C	
Humidity Envir Data	42%RH	
Name EnvSensor		
Location Server Room Recent Device Events Time 2017/07/20 16 00 220 1		nind, (10031001 (DN 155364705052) in Classi #1 No. devize is antigond to 1007
Location Server Room Recent Device Events Time 2017/07/20 16:08:29	havey chain new guessi ad	
Location Server Room Recent Device Events Time 2017/07/20 16:08:29	havey chain new guessi ad	
Location Server Room Recent Device Events Imv 2017/07/20 16:08:29	havey chain new guessi ad	

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Web Interface

Introduction

CyberPower's Intelligent Power Distribution Unit (PDU) Web Interface gives users all the features they need to configure, manage, and monitor the Intelligent PDU Series via a Web browser. With this easy-to-navigate interface, users can perform real-time monitoring of each outlet, control individual outlet, set power alerts, and complete many other tasks in an intuitive manner.

How to Log in

C	yber Power	PDU Remote Management
-		0

Remote Management - LOGIN		
Name	cyber	
Password		
	Automatic Login	
	LOGIN	

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- 1. Open a Web browser.
- 2. Enter the IP address of the CyberPower PDU in the Browser Address Bar, and then press ENTER.

Note: To look up the IP address, please refer to the LCD screen of the PDU.

3. Enter the information for the User **Name** and **Password** fields. There are two types of user accounts.

Account Type	Default User	Default	Authorization
	Name	Password	
Administrator	cyber	cyber	View, access, and control all settings.
Viewer	device	cyber	View all settings.

4. Click LOGIN to open the Summary Tab.

General Settings

These are the basic settings for the PDU.

1. Date and Time Settings

The date and time can be set manually or synchronized with a Network Time Protocol (NTP) server. All time-related configurations are based on this setting. See System Tab > General > Time.

System Tab > General > Time			
PDU Remote Managemer			
General	Time Current Settings		
Time Identification Daylight Saving Time Security	Time Status Next NTP Update System Time Configuration	2017/07/25 Tuesday & 16:15:28 Update from manual input.	
Network Service Notification Reset/Reboot About	Time Zone Date Format Using NTP Server Primary NTP Server Secondary NTP Server	GMT+08:00 ▼ yyyy/mm/dd ▼ 0.0.0.0 0.0.0.0	
	Update Interval Manual Setup Date Time Apply Reset	8759 [1-8760 Hour(s)]	

Item Definition	
Current Settings	
Time The current date and time.	
Status	Show whether the date and time setting is updated by manual setup or by the NTP (Network Time Protocol) server.
Next NTP Update	Synchronize with Update Interval.

ltem	Definition	
System Time Configuration		
Time Zone	The options for time zone selection.	
Date Format	The options for date format selection.	
Using NTP Server	 *Primary NTP Server: Users enter the IP address/domain name of the NTP server and choose local time zone based on their location. *Secondary NTP Server: Users enter the IP address/domain name of the NTP server and choose local time zone based on their location. *Update Interval: The frequency for updating the date and time from the NTP server. Select the Update right now option to update immediately. 	
Manual Setup	*Date: Enter the date in the designated format. *Time: Enter the time in the designated format.	

2. Daylight Saving Time

Users adjust the daylight saving time according to their location. See System Tab > General > Daylight Saving Time.

	System Tab > General > Daylight Saving Time
PDU Remote Managemen	Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help
General Time Identification Daylight Saving Time Security Network Service Notification Reset/Reboot About	Daylight Saving Time DST Configuration Disable Traditional US DST time (Second Sunday in March to First Sunday in November) Manual DST Date Time Start 02:00 V, the Second V Sunday V of March V End 02:00 V, the First V Sunday V of November V Apply Reset

Item	Definition	
DST Configuration		
Disable	Disable the DST function.	
Traditional US DST	Start from the second Sunday in March to the first Sunday in	
Time	November.	
Manual DST Date	Select the start/and time using the drandown manu	
Time	Select the start/end time using the dropdown menu.	

3. Device Identification

Users assign the device's name, location, and the person to contact about issues. See System Tab

> General > Identification.

System Tab > General > Identification			
PDU Remote Managemer	Administrator login from 192.168.25.28 & [Logout] PDU Remote Summary PDU Envir Log System Help		
General Time Identification Daylight Saving Time Security Network Service Notification Reset/Reboot About	Identification Image: Host Image: Host <th></th>		

ltem	Definition		
	Select the role of the PDU (HOST or GUEST#) if PDUs are daisy		
HOST/GUEST#	chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU.		
Name	The name entered by the user to identify the PDU.		
Location	The PDU location entered by the user.		
Contact	The person to be contacted about issues. Entered by the user.		

4. Device Reset/Reboot

Users can reboot the PDU or reset all the settings to defaults. See System Tab > Reset/Reboot.

System Tab > Reset/Reboot			
PDU Remote Managemen	Administrator login from 192.168.25.28 🛃 [Logout] Summary PDU Envir Log System Help		
General Security Network Service Notification <u>Reset/Reboot</u> About	Reset/Reboot Reboot Power Distribution Unit Reset Power Distribution Unit Reset Power Distribution Unit (TCP/IP Settings Reserved) Apply Reset		
	Apply Reset		

ltem	Definition	
Reboot Power Distribution Unit	Restart the PDU without power cycling any outlet.	
Reset Power Distribution Unit	Reset the PDU to its factory default setting and restart it.	
Reset Fower Distribution Onit	This action will power cycle any outlet.	
Reset Power Distribution Unit	Reset the PDU to its factory default setting while	
(TCP/IP Settings Reserved)	reserving the TCP/IP settings, and restart the PDU. This	
(ICF/IF Settings Reserved)	action will power cycle any outlet.	

5. Environmental Monitoring

PDU with CyberPower ENVIROSENSOR can provide remote monitoring of temperature and humidity in a server closet and/or datacenter. You can set temperature and humidity threshold for event action warning. See Envir Tab > Status & Envir Tab > Configuration. Note that Envir Tab only appears when an ENVIROSENSOR is connected to the PDU.

Envir Tab > Status			
PDU Remote Managemei		Administrator login from 192.168.27.126 🔐 [Logout] Summary PDU Envir Log System Help	
	Status		
Status	Information		
Configuration	Name	EnvSensor	
	Location	Server Room	
	Temperature		
	Current Value	23.1 °C	
	Maximum	24.1 °C (at 02/15/2017 11:10:55)	
	Minimum	20.5 °C (at 02/16/2017 07:45:25)	
		Reset	
	Humidity		
	Current Value	51 %RH	
	Maximum	56 %RH (at 02/16/2017 09:32:10)	
	Minimum	42 %RH (at 02/15/2017 13:12:40)	
		Reset	
	Contact		
	Contact#1	Normal	
	Contact#2	Normal	
	Contact#3	Normal	
	Contact#4	Normal	

ltem	Definition		
Information	Display the name and location of the ENVIROSENSOR.		
Temperature			
Current Value	The real-time reading of temperature.		
Maximum	The highest temperature recorded and the time of occurrence.		
Minimum	The lowest temperature recorded and the time of occurrence. Click Reset to reset the highest and lowest value to zero.		
Humidity			
Current Value	The real-time reading of humidity.		

ltem	Definition		
Maximum	The highest humidity recorded and the time of occurrence.		
Minimum	The lowest humidity recorded and the time of occurrence.		
	Click Reset to reset the highest and lowest value to zero.		
Contact Display the current status of each input dry contact relay.			

Envir Tab > Configuration

PDU Remote Managemen				
	Configuration			
Status	Information			
Configuration	Name	EnvSensor		
	Location	Server Room		
	Temperature			
	High Threshold	32 °C [1-70]		
	Low Threshold	15 °C [1-70]		
	Hysteresis	2°C [1-10]		
	Rate of Change	10 °C per 5 minutes [1-70]		
	Unit	°C V		
	Humidity			
	High Threshold	80%RH [10-90]		
	Low Threshold	20 %RH [10-90]		
	Hysteresis	5 %RH [1-20]		
	Rate of Change	20 %RH per 5 minutes [1-80]		
	Contact			
	#1 Name & State	Contact#1 , Normally Open V		
	#2 Name & State	Contact#2 , Normally Open •		
	#3 Name & State	Contact#3 , Normally Open V		
	#4 Name & State	Contact#4 , Normally Open v		
	Apply Reset			

ltem	Definition		
Information			
Name	The name entered by user to identify the ENVIROSENSOR.		
Location	The location of the ENVIROSENSOR, entered by the user.		
Temperature			
High Threshold	d Set the highest temperature value for a high temperature warning.		
Low Threshold	Set the lowest temperature value for a low temperature warning.		

ltem	Definition		
Hysteresis	The point where the environmental state changes from abnormal to normal and users receive a clearing event notification. The function of Hysteresis is to avoid receiving multiple event notifications. *For high threshold, the point is the threshold minus the Hysteresis value; for low threshold, the point is the threshold plus the Hysteresis value. For example: The high threshold is 32°C, and hysteresis is 2°C. The temperature rises to 33°C, you will get a warning. Then it goes down to 31°C and up to 33°C repeatedly. No clearing events and warnings will occur while the temperature readings are within the Hysteresis. You will not get a clearing event until it drops to 30°C.		
Rate of Change	Define the abnormal change of temperature per 5 minutes. For example: The current temperature is 23°C, and rate of change is 10°C. If it goes up to 33°C or down to 13°C within 5 minutes, you will get a warning.		
Unit	Select the unit of temperature.		
Humidity			
High Threshold	Set the highest humidity value for a high humidity warning.		
Low Threshold	Set the lowest humidity value for a low humidity warning.		
Hysteresis	Same as <i>Hysteresis</i> under temperature.		
Rate of Change	Same as <i>Hysteresis</i> under temperature.		
Contact Enter the name of each input dry contact relay and use the dro menu to define the normal status of each one.			

Advanced Power Management

Remote Monitoring

Users can see real-time readings of PDU vitals such as device load, power consumption, and outlet status for an overview of current PDU status. See Summary Tab, PDU Tab > Status, and PDU Tab > Status > Outlet.

Summary Tab			
PDU Remote Management	Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help		
Summary Current Condition	Host v		
PDU is normal Environment sensor is normal			
PDU Status Dev Load	0.00 A		
Outlet	1 2 3 4 5 6 7 8 Outlet3		
System Data	ON		
Name PDU81001			
Location Server Room			
Contact Administrator			
Rating 12A			
Uptime 4day. 5hr. 17min. 10sec.			
Time 2017/07/24 20:51:34			
Envir Status			
Temperature	29.5°C		
Humidity	43%RH		
Envir Data			
Name EnvSensor			
Location Server Room			
Recent Device Events			
Time Events			
2017/07/20 16:08:29 Daisy chain new guest added; PDU81001 (SN: 123456789022) is Guest #1.			

ltem	Definition		
HOST/GUEST#	Select the role of PDU (HOST or GUEST#) if PDUs are daisy chained. Up		
	to 3 GUEST PDUs can connect to 1 HOST PDU.		
Current Condition	Operating condition of the PDU and ENVIROSENSOR.		
PDU Status			
Dev Load	Total load current of all connected devices, measured in Amps.		
Outlet	The on/off status of each outlet. The green light icon indicates that the		
	outlet is on and providing power. This light will go off when the outlet turns		

ltem	Definition		
	off.		
	Outlet Tooltip Function: move the cursor to an individual outlet, Outlet		
	name and its ON/OFF status will be shown.		
System Data			
Name	The name of the PDU. For configuration, see System Tab > General >		
Name	Identification.		
Location	The location of the PDU. For configuration, see System Tab > General >		
Location	Identification.		
Contact	The person accountable for the maintenance of the PDU. For		
Contact	configuration, see System Tab > General > Identification .		
Rating	UL current rating of the PDU, measured in Amps.		
	The amount of time the system has been working for since it was last		
Uptime	restarted.		
Time	System time of the PDU. For configuration, see System Tab > General >		
Time	<u>Time</u> .		
Envir Status			
Tomporatura	Display temperature reading when the ENVIROSENSOR is connected to		
Temperature	the PDU.		
Humidity	Display humidity reading when the ENVIROSENSOR is connected to the		
Humidity	PDU.		
Envir Data			
Name	The name of the ENVIROSENSOR. For configuration, see Envir Tab >		
Name	Configuration.		
Location	The location of the ENVIROSENSOR. For configuration, see Envir Tab >		
Location	Configuration.		
Recent Device	A list of the five most recent device events. All events are related to		
Events	configuration changes.		

PDU Tab > Status > Device

PDU Remote Managemei	1	Administrator login from Summary	192.168.25.28 😭 [Logout] Envir Log System Help
Status	Device Status Load		Host •
Device	Device Load	0.00 A/ 0 W/ 0	AV 0
Manager	Power Factor Peak Load	 0.00 A	(at 2017/06/26 16:30:43)
Outlet Action Daisy Chain	Energy	0.00 A	(from 2017/06/26 16:30:43)
Wake on Lan	Utility		
EnergyWise PowerPanel [®] List	Voltage	107.8 V	
	Frequency	60.0 Hz	

ltem	Definition
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy chained.
HOST/GUEST#	Up to 3 GUEST PDUs can connect to 1 HOST PDU.
Load	
	Load current of the connected device(s), measured in Amps.
Device Load	Load power of the connected device(s), measured in Kilowatts and
	Kilovolt-Amps.
Bank Load*	Load current of the bank, measured in Amps.
Power Factor	Power factor of the connected device(s).
	Maximum load current recorded and the time of occurrence.
Peak Load	Users can reset the value to zero at Power Restore in PDU Tab >
	Manager > Device.
	Total energy consumed by the connected device(s) from the reset
Eporav	date, measured in kWh.
Energy	Users can reset the value to zero at Power Restore in PDU Tab >
	Manager > Device.
Utility	
Voltage	Voltage of the utility power.
Frequency	Frequency of the utility power.

*Only available in select models.

PDU Tab > Status > Outlet*

PDU Remote Manageme	Administrator lo	PDU	_	Logoutj Log System Help				
Status	Outl Load	let Status i				Host v		
Device	#	Name		Status	Load (A)	Load (W)	Peak Load(W)	Energy(kWh)
Outlet	1	Outlet1		ON	0.90	0	10 (at 2017/06/27 04:07:56)	0.0 (from 2017/06/26 16:30:4
Manager	2	Outlet2		ON	1.68	30	60 (at 2017/06/27 03:23:15)	16.5 (from 2017/06/26 16:30:
Outlet Action	3	Outlet3		ON	2.84	0	0 (at 2017/06/26 16:30:43)	0.0 (from 2017/06/26 16:30:4
Daisy Chain Wake on Lan	4	Outlet4		ON	3.17	0	0 (at 2017/06/26 16:30:43)	0.0 (from 2017/06/26 16:30:4
EnergyWise	5	Outlet5		ON	0.83	0	10 (at 2017/06/26 22:48:32)	0.0 (from 2017/06/26 16:30:4
PowerPanel [®] List	6	Outlet6		ON	1.96	30	70 (at 2017/06/27 01:31:11)	18.0 (from 2017/06/26 16:30:
	7	Outlet7		ON	2.94	0	0 (at 2017/06/26 16:30:43)	0.0 (from 2017/06/26 16:30:4
	8	Outlet8		ON	3.22	0	0 (at 2017/06/26 16:30:43)	0.0 (from 2017/06/26 16:30:4

*The above Outlet Status Page is available for Switched Metered by Outlet Series only.

ltem	Definition
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy chained.
HOST/GUEST#	Up to 3 GUEST PDUs can connect to 1 HOST PDU.
Status	The on/off status of each outlet.
Load (A)	Load current of each outlet, measured in Amps.
Load (kW)	Load power of each outlet, measured in Kilowatts.
	The maximum load current recorded and the time of occurrence. Users
Peak Load (kW)	can reset the value to zero at Power Restore in PDU Tab > Manager >
	Outlet.
Enormy $(k)\lambda/b$	Total energy consumed by connected equipment of each outlet since the
Energy (kWh)	last reset. The reset can be set in PDU Tab > Manager > Outlet.

Visible Power Consumption

With comprehensive energy measurement data, users can gain more visibility to the total power usage of a PDU, as well as estimate the energy cost and CO2 emissions. The energy-trend report also helps users analyze their power utilization and to review the history of power conditions. See Log Tab > Status Records, Log Tab > Graphing, Log Tab > Energy Records, and Log Tab > Maintenance.

DU Remoto anageme	6	tor login from 192.168.25.28 🔮 [Logo ry PDU Envir Log	System Help					
	Status Records		Host 🔻					
Event Logs	Time	Device max (A)	Device (A)	Voltage (V)	Temp. (°C)	Hum. (%RH)	Outlet 1 max (W)	Outlet (W)
Status Records Energy Records	2017/07/25 13:34:28	0.00	0.00	107.8	30.0	38	0	0
Graphing	2017/07/25 12:34:29	0.00	0.00	107.8	30.0	40	0	0
Syslog	2017/07/25 11:34:29	0.00	0.00	107.8	29.8	38	0	0
Maintenance	2017/07/25 10:34:29	0.00	0.00	107.8	29.9	39	0	0
	2017/07/25 09:34:29	0.00	0.00	107.8	29.6	41	0	0
	2017/07/25 08:34:29	0.00	0.00	107.8	30.7	40	0	0
	2017/07/25 07:34:29	0.00	0.00	107.8	30.8	45	0	0
	2017/07/25 06:34:29	0.00	0.00	107.8	30.6	45	0	0
	2017/07/21 00:34:37	0.00	0.00	107.8	29.8	44	0	0
	2017/07/20 23:34:37	0.00	0.00	107.8	29.5	45	0	0
	2017/07/20 22:34:37	0.00	0.00	107.8	29.0	46	0	0
	<							

Log Tab > Status Records

Item	Definition
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy chained.
HOST/GUEST#	Up to 3 GUEST PDUs can connect to 1 HOST PDU.
	The maximum load current of the connected device(s) or bank during
Device Max (A)	a specific time interval, measured in Amps. This interval can be set in
	Log Tab > Maintenance.
Device (A)	Load current of the connected device(s) or bank, measured in Amps.
Voltage (V)	Voltage of the utility power.
Temp. (°C)	Temperature reading when the ENVIROSENSOR is connected to the
	PDU.
Hum. (%RH)	Humidity reading when the ENVIROSENSOR is connected to the
	PDU.
	The maximum load power of a specific outlet during a specific time
Outlet # Max (kW)*	interval, measured in Kilowatts. This interval can be set in Log Tab >
	Maintenance.
Outlet # (kW)*	Load power of a specific outlet, measured in Kilowatts.

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*For Switched Metered by Outlet Series only.

Log	Tab	>	Grap	hing

PDU Remote Management	Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
	Data Log Graphing III Host V
Status Records Energy Records	Dest 1 day ▼
Graphing	From 2017/07/24 14:04 to 2017/07/25 14:04
	Graph Data Device Current Device Current Max Voltage Temperature Humidity Outlet_1 Power Outlet_2 Power Graph Node Display All Nodes in Detail Draw Reset Launch Graph in New Window

ltem	Definition
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy
HOST/GUEST#	chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU.
	The time period is used to create a retroactive graph of the status
Graph Period	records. A large time period will require more time to render the
	graph.
	The data used to create a graph of the status records. Up to five
Graph Data	data points can be selected. A large number of data selected will
	require more time to render the graph.
	Select the Display All Nodes in Detail option to display the
	selected data points along the graph. When the cursor is moved to
Graph Node	an individual data point, information about that point will be shown.
	If this option is not selected, the graph will show only the line
	(without the points), so less time is needed to render.
Draw	A graph of the status records will be created.
Reset	Reset the Graph Period to default (1 day).
Launch Graph in New	A detailed view of the graph opens in a new browser window
Window	A detailed view of the graph opens in a new browser window.

Log Tab > Energy Records

PDU Remote Managemer		in from 192.168.25.28 📸 (Logout) DU Envir Log System Help						
Í	Energy Records	Host 🔻						
Event Logs Status Records	Time	Interval Energy(kWh)	Interval Cost(units)	Interval CO2(kg)	Energy (KWh)	Cost (units)	CO2 (kg)	Outlet 1 (kWh)
Energy Records	2017/07/25 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
Graphing	2017/07/24 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
Syslog	2017/07/23 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
Maintenance	2017/07/22 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/07/21 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/07/20 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/07/19 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/07/18 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/07/01 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0
	2017/06/30 00:00:00	0.0	0.00	0.000	0.0	0.00	0.000	0.0

ltem	Definition
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy
HOST/GUEST#	chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU.
	Energy consumed by connected device(s) during a specific time
Interval Energy (kWh)	interval, measured in kWh. This interval can be set in Log Tab >
	Maintenance.
	Cost of the energy consumed by the connected device(s) during a
Interval Cost (units)	specific time interval, equal to Electricity Rate multiplied by Interval
	<i>Energy</i> . The interval and electricity rate can be set in Log Tab >
	Maintenance.
	Equivalent CO2 emission of the connected device(s) during a
Interval CO2 (kg)	specific time interval, equal to CO2 Emissions multiplied by Interval
	<i>Energy</i> . The interval and CO2 emissions can be set in Log Tab >
	Maintenance.
Energy (kWh)	Accumulated Interval Energy since the last reset. The reset can be
	set in Log Tab > Maintenance.
Cast (unita)	Accumulated Interval Cost since the last reset. The reset can be set
Cost (units)	in <u>Log Tab > Maintenance</u> .
CO2 (kg)	Accumulated Interval CO2 since the last reset. The reset can be set
CO2 (kg)	in <u>Log Tab > Maintenance</u> .
	Accumulated Interval Energy of a specific outlet since the last reset.
Outlet # (kWh)*	The reset can be set in Log Tab > Maintenance.

*For Switched Metered by Outlet Series only.

		Log Tab > Maintenance
PDU Remote Managemer	1	Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help
	Maintenance	
Event Logs	Event Logs	
Status Records	Clear All Logs	No
Energy Records Graphing		Yes, right now.
Syslog	The Number of Events	111 / 1024
Maintenance	Save Event Logs	Save
	Status Records	
	Recording Interval	1 hour v
	Clear All Records	No No
		Yes, right now.
	Remaining Time	56day 11hour / 85day 8hour
	Save Status Records	Host v Save
	Energy Records	
	Recording Interval	one day 🔻
	Clear All Records	No
		Yes, right now.
	Electricity Rate	3.00 units / KWh [0.00-600]
	CO2 Emissions	0.60 kg / kWh [0.00-600]
	Save Energy Records	Host v Save
	Apply Reset	

Item	Definition
Event Logs	
Clear All Logs	Clear the existing event logs.
The Number of Events	The number of the existing event logs and the maximum number of the event logs that can be recorded. Once the maximum number is reached, new events overwrite oldest events in memory.
Save Event Logs	Save the existing event logs as a text file.
Status Records	
Recording Interval	The frequency to record the status data. A smaller interval will provide more recordings, but the recordings are overwritten in a shorter period of time. A larger interval will provide fewer recordings, but the recordings are overwritten in a longer period of time.
Clear All Records	Clear the existing status records.

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ltem	Definition		
	The time that records have been kept. A smaller recording interval		
Pomoining Timo	leads to less remaining time while a larger recording interval leads		
Remaining Time	to more remaining time. Once the maximum number is reached,		
	new status records overwrite oldest status records in memory.		
Save Status Records	Save the status records as a text file.		
Energy Records			
Recording Interval	The frequency to record the energy data.		
Clear All Records	Clear the existing energy records.		
Electricity Dete	The cost (units) of energy per unit of energy consumed (kWh).		
Electricity Rate	Unit is a monetary value.		
CO2 Emissions	The equivalent CO2 emission (kg) per unit of energy consumed		
CO2 Emissions	(kWh).		
Save Energy Records	Save the existing energy records as a text file.		

Event Logging

Users can view all the events, including log in/out records and configuration changes. The timestamp is recorded in a 24-hour format. See Log Tab > Syslog and Log Tab > Event Logs. For event logs, Users can clear the existing event logs in Log Tab > Maintenance

		Log Tab > Sy	/slog	
PDU Remote Managemei		Administrator login from Summary PDU	192.168.25.28 🛃 [Logout] Envir Log System Help	
Event Logs Status Records Energy Records Graphing Syslog Maintenance	Syslog Facility Code Apply Reset	Enabled	¥	
	IP Address Add Server	Port	Send test	

Item Definition		
Syslog	Check this box to enable Syslog function.	
Facility Code	Classify syslog message	

Click Add Server to enter Syslog Server Page.

Syslog Server Page				
PDU Remote Managemei		Administrator login from 192.168.25.28 🔒 [Logout] Summary PDU Envir Log System Help		
Event Logs Status Records Energy Records Graphing Syslog Maintenance	Syslog Server Server IP Server Port Apply Reset	192.168.26.76 514		

ltem	Definition		
Server IP	The IP address of Syslog server.		
Server Port	The port number that Syslog server uses to communicate.		

Logs Tab > Event Logs

PDU Remote Managemer	1	Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
	Event Logs	
Event Logs	Time	Events
Status Records	2017/07/25 16:12:48	Admin user login from 192.168.25.28.
Energy Records	2017/07/25 14:49:49	Admin user logout from 192.168.25.28.
Graphing	2017/07/25 14:37:51	Admin user login from 192.168.25.28.
Syslog	2017/07/25 14:31:57	Admin user logout from 192.168.25.28.
Maintenance	2017/07/25 14:21:53	Admin user login from 192.168.25.28.
	2017/07/25 14:14:13	Admin user logout from 192.168.25.28.
	2017/07/25 13:53:25	Admin user login from 192.168.25.28.
	2017/07/25 13:53:14	Login authorization failure via HTTP from 192.168.25.28.
	2017/07/25 13:30:36	Admin user logout from 192.168.25.28.
	2017/07/25 13:20:33	Admin user login from 192.168.25.28.
	2017/07/25 11:12:15	Admin user logout from 192.168.25.28.
	2017/07/25 10:59:48	Admin user login from 192.168.25.28.
	2017/07/24 22:03:10	Admin user logout from 192.168.25.28.
	2017/07/24 21:44:02	Admin user login from 192.168.25.28.
	2017/07/24 21:29:47	Admin user logout from 192.168.25.28.

Power Protection

The configurable load threshold can be set to prevent an overload condition. Coldstart and system configurations are also offered for different user needs. See PDU Tab > Device Manager.

PDU Tab > Manager > Device			
PDU Remote Managemei		ator login from 192.168.25.28 🔀 [Logout] ary PDU Envir Log System Help	
	Device Manager	Host 🔻	
Status	Load Configuration		
Manager	Overload Threshold	12 A	
Device	Near Overload Threshold		
Outlet			
Outlet Action	Low Load Threshold	0 A	
Daisy Chain Wake on Lan	Outlet Restriction	None v	
EnergyWise	Power Restore		
PowerPanel [®] List	Peak Load	Reset (last reset at 2017/06/26 16:30:43)	
	Energy	Reset (from 2017/06/26 16:30:43)	
	ColdStart Configuration		
	ColdStart State	Previous State	
		All On	
	ColdStart Delay	 Instant 	
		Wait Sec(s)	
		O Never	
	System Configuration		
	Idle Time	10 Minutes V	
	Apply Reset		

Item	Definition
HOST/GUEST#	Select the role of PDU (HOST or GUEST#) if PDUs are daisy chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU.
Load Configuration	
Overload Threshold	Set the value for the total current on the PDU that will signal an overload warning. Must be higher than <i>Near Overload Threshold</i> and equal to or lower than the PDU <i>Rating</i> in the <u>Summary Tab</u> .
Near Overload Threshold	Set the value for the total current on the PDU that will signal a near overload warning. Must be between <i>Overload Threshold</i> and <i>Low Load Threshold</i> .

Item	Definition		
Low Load Threshold	Set the value for the total current on the PDU that will signal a low load warning. Must be lower than <i>Near Overload Threshold</i> .		
Outlet Restriction**	 When load current exceeds the corresponding threshold, no outlets will be allowed to turn on. *None: Users can turn on an outlet even if the device is in Near Overload or Overload state. *On Near Overload: Users cannot turn on an outlet when the device is in Near Overload or Overload or Overload state. *On Overload: Users cannot turn on an outlet when the device is in Near Overload or Overload state. 		
Power Restore			
Peak Load Reset the peak load to zero.			
Energy	Reset the energy to zero.		
ColdStart Configuration			
ColdStart State	 *Previous State: Outlets will return to the same state (on or off) they were in prior to the PDU turning off. The <i>ColdStart Delay</i> setting will apply when the PDU resumes power. *All On: All outlets will turn on when power is restored to the PDU. 		
ColdStart Delay	 *Instant: Outlets will be turned on immediately when power is restored to the PDU. *Wait: Outlets will be turned on according to this setting when power is restored to the PDU. *Never: Outlets will not be turned on when power is restored to the PDU. 		
System Configuration			
Idle Time	The PDU LCD screen will turn off automatically after it remains idle for the selected period of time.		

**For some models, the Outlet Restriction only shows in the Bank Manager Page.

Event Action Notification

Users decide the event actions for which they receive notifications. When a certain event happens, an automatic notification will be sent to users so that they can make timely decisions to prevent potential problems. See System Tab > Notification.

)U Remote anagemei		Administrator login from 192 168.25.28 🔮 [L Summary PDU Envir Lo					Сув	erPov
General	Event Action							
Security	Device Events		System Events					
letwork Service	PDU Status	Outlet Control	Security					
Notification	Power Status	Outlet Status	System Information					
Event Action	Configuration	Daisy chain	PowerPanel					
SMTP Server E-mail Recipients	Communication	Environment Sensor						
Trap Receivers	Event			Log	E-mail	Trap	Syslog	SMS
SMS Service	Device current draw has cr	rossed the low load threshold		٠	٠			
SMS Recipients	The low load condition on a	a PDU has been cleared		•				
Reset/Reboot About	Device current draw has cr	oss the near overload threshold						
About	The near overload conditio	n on a PDU has been cleared						
	Device current draw has cr	ossed the overload condition						
		No e A transfer de la Collar de Sector de La Collar de La Collar de Collar de Collar de Collar de Collar de Col						

System Tab > Notification > Event Action

Click the Event field to enter the Event Action Page.



The Event Action Page enables users to modify the notification method.

ltem	Definition		
Logs Event	Record the device event in the Event Logs.		
Send E-mail	Send an email to a specific user.		
	An available SMTP server is necessary.		
Post Trap	Send a SNMP trap to a specific IP address.		
Syslog	Record the device event in Syslog server.		
Send SMS	Send a short message to a specific mobile phone number.		
	An available Short Message Service (SMS) provider is needed.		

Event Action Recipient Settings

1. E-mail Notification

Set the proper SMTP server settings so that users can receive an email when a specific event occurs. See System Tab > Notification > SMTP Server.

PDU Remote Managemer	1	Administrator login from 192.168.25.28 💦 [Logout] Summary PDU Envir Log System Help
	SMTP Server	
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	Service Provider SMTP server address Sender E-mail address Sender name Authentication Account Password Secure connection Service port Apply Reset	General ▼ 0.0.0 □ ■ Required ■ ■ ● None ■ TLS ■ SSL 25 [default: 25]

System Tab > Notification > SMTP Server

ltem	Definition
Service Provider	The service provider of e-mail account. There are two options:
	Other and Gmail.
Other	Select other as service provider. Complete all field settings and
Other	click Apply to save.
	Select Gmail as the service provider. Click Authorize for an
Gmail	authorization to send a mail notification. Then complete the sender
	name and click Apply to save the settings.
SMTP server address	The IP or host Name of SMTP server used to notify users by
SIVITE Server address	e-mail.
Sender E-mail Address	The From field shown in the e-mail message.
Sender Name	The name of the sender.
Authentication	Select this option if the SMTP server requires Authentication.

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ltem	Definition		
Account	Account used for Authentication.		
Password	Password used for Authentication.		
Secure connection	Enable/Disable TLS or SSL to encrypt the SMTP connection.		
Service Port	The port number that the PDU uses to communicate with SMTP		
	server.		

Users can set up to five e-mail recipients in designated email address format. See System > Notification >E-mail Recipients.

System > Notification > E-mail Recipients



Item	Definition		
	Click the e-mail address of the recipient to enter the Configure E-mail		
E-mail	Recipient Page. Users can modify the e-mail address, change its		
	status, check test result, and delete an existing recipient.		
TECT	Click this button to check if the SMTP setting and the email recipients		
TEST	are set correctly.		
New Recipient	Click this button to enter the Add New E-mail Recipient Page. Users		
	can add a new recipient.		

Configure E-mail Recipient Page

PDU Remote Managemen	
	Configure E-mail Recipient
General	Activate Senabled
Security	E-mail ted mosby@cyberpower.com
Network Service	
Notification	Apply Reset Delete
Event Action	
SMTP Server	
E-mail Recipients	
Trap Receivers	
SMS Service	
SMS Recipients	
Reset/Reboot	
About	

Add New E-mail Recipient Page

PDU Remote Managemei	
	Add New E-mail Recipient
General	Activate 🖉 Enabled
Security	E-mail
Network Service	L mai
Notification	Apply Reset
Event Action	Apply
SMTP Server	
E-mail Recipients	
Trap Receivers	
SMS Service	
SMS Recipients	
Reset/Reboot	
About	

2. SNMP Trap Notification

Set up to 10 SNMP trap receivers to be notified when an event occurs. See System > Notification > Trap Receivers.

PDU Remote Managemei	1	Administrator login from 192.168.2		tem Help		Cyber Power
	Trap Receivers					
General	Name	Status	Туре	IP Address	Community/ User Name	Send test
Security Network Service	Trap Name	Enabled	SNMPv1	0.0.0.0	public	TEST
Notification	New Receiver					
Event Action						
SMTP Server						
E-mail Recipients						
Trap Receivers						
SMS Service						
SMS Recipients						
Reset/Reboot						
About						

System > Notification > Trap Receivers

ltem	Definition		
Name	Click on the trap name to enter the Configure Trap Receiver Page.		
name	Users can modify or delete an existing receiver.		
TEST	Click this button to check if the trap can be sent.		
New Deseiver	Click this button to enter the Add New Trap Receiver Page. Users can		
New Receiver	add a new recipient.		

Configure Trap Receiver Page

PDU Remote Managemei	-	Administrator login from 1 Summary PDU	2.168.25.28 움 [Logout] Envir Log System	Нејр
	Configure Tra	p Receiver		
General	Active	Enabled		
Security Network Service	Name	Trap Name]	
Notification	IP Address	0.0.0.0		
Event Action	_			
SMTP Server	SNMPv1		_	
E-mail Recipients	Community	public		
Trap Receivers	_			
SMS Service	SNMPv3			
SMS Recipients	User Name	cyber snmpv3 user1 ▼		
Reset/Reboot About	Apply Res	et Delete		

Add New Trap Receiver Page

PDU Remote Managemei	-	Administrator login from 192.168.25.28 🛣 [Logout] Summary PDU Envir Log System Help
	Add New Trap	Receiver
General Security Network Service	Active Name	✓ Enabled Trap Name
Notification Event Action	IP Address	0.0.0.0
SMTP Server	SNMPv1	
E-mail Recipients Trap Receivers	Community	public
SMS Service	SNMPv3	cyber snmpv3 user1 ▼
SMS Recipients Reset/Reboot About	Apply Rese	

ltem	Definition	
Name	The name of trap receiver.	
IP Address	The IP address of the trap receiver.	
SNMPv1	If choosing the SNMPv1 option as the trap type for a trap receiver, select the corresponding community. See <u>System Tab > Network</u> <u>Service > SNMPv1 Service</u> .	
SNMPv3	If choosing the SNMPv3 option as the trap type for a trap receiver, select the corresponding user name. See <u>System Tab > Network</u> <u>Service > SNMPv3 Service</u> .	

3. SMS Notification

Short Message Service (SMS) is used by mobile communication systems to send a short message to a specific mobile phone number. Standardized communication protocols allow the exchange of short text messages between mobile devices.

The system provides four methods for users to choose how they want to send a message. See System > Notification > SMS Service.

PDU Remote Managemen	1	Administrator login from 192.168.25.28 🔐 [Logout]
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	SMS Service Service Provider: User Name Password HTTP API ID Apply Reset	Clickatell tedmosby himym 2014331

System > Notification > SMS Service

Clickatell method:

Clickatell is one of the supported SMS service providers. Go to the Clickatell website to sign up and get an API ID.

ltem	Definition	
User name	The account username created on Clickatell website.	
User password	The user password created on Clickatell website.	
HTTP API ID	The API ID acquired on Clickatell website.	

System > Notification > SMS Service		
PDU Remote Managemei		
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	SMS Service Service Provider: URL: http://api.clickatell.com/http/sendmsg? user=tedmosby&password=himym&api_id=2014331&to= E_PHONE_NUMBER&text=E_PHONE_MESSAGE Apply	

Using HTTP GET:

Use the example where Clickatell is the SMS provider.

The basic form of URL using the HTTP GET method is:

http://api.clickatell.com/http/sendmsg?user=tedmosby&password=himym&api_id=2014331&to

=E_PHONE_NUMBER&text=E_PHONE_MESSAGE

Query String in the URL	Definition
user=tedmosby	Replace "tedmosby" with the user name created at the Clickatell website.
password=himym	Replace "himym" with the password created at the Clickatell website.
api_id=2014331	Replace "2014331" with the API ID acquired at the Clickatell website.
to=E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone number entered in <u>System Tab > Notification > SMS</u> <u>Recipients</u> .
text=E _MESSAGE	Do not replace this information. It refers to the event action sent by the SMS service provider. For configurations, see <u>System Tab</u> <u>> Notification > Event Action</u> .



System > Notification > SMS Service

Using HTTP POST:

Use the example where Clickatell is the SMS provider.

The basic form of URL is: http://api.clickatell.com/http/sendmsg

The basic form of body is:

user=tedmosby&password=himym&api_id=2014331&to=E_PHONE_NUMBER&text=E_ MESSAGE

Query String in Body	Definition				
user=tedmosby	Replace "tedmosby" with the user name created at the Clickatell				
usei–leumosby	website.				
password=himym	Replace "himym" with the password created at the Clickatell website.				
api_id=2014331	Replace "2014331" with the API ID acquired at the Clickatell website.				
to=E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone number				
	entered in System Tab > Notification > SMS Recipients.				
	Do not replace this information. It refers to the event action sent by				
text=E_ MESSAGE	SMS service provider. For configurations, see System Tab >				
	Notification > Event Action.				
System > Notification > SMS Service					
--	---	---	--	--	--
PDU Remote Managemen		Administrator login from 192.168.25.28 😪 [Logout] Summary PDU Envir Log System Help			
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	SMS Service Service Provider: Address: Subject: Content: Apply Reset	Using E-mail ted_mosby@cyberpower.com PDU Event E_ MESSAGE and E_PHONE_NUMBER			

Using Mail:

Users set the SMTP server in <u>System Tab > Notification > SMTP Server</u> first, and then enter the following information.

ltem	Definition
Address	Enter the e-mail of the recipient.
Subject	The Subject field shown in the e-mail message, entered by user.
Content	
	Do not replace this information. It refers to the event action sent by
E_ MESSAGE	SMS service provider. For configurations, see <u>System Tab ></u>
	Notification > Event Action.
E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone
	number entered in <u>System Tab > Notification > SMS Recipients</u> .

Users can set up to 10 mobile phone numbers as SMS recipients who will receive a short message notification when a specific event occurs. See System Tab > Notification > SMS Recipients.

System Tab >	Notification >	SMS	Recipients
--------------	----------------	-----	------------

PDU Remote Managemen		Administrator login from 192 168 25		Cyber Power
	SMS Recipie	nts		
General	Status	Recipient Name	Mobile Number	Send test
Security	Enabled	Ted	0910000111	TEST
Network Service	New Recipier	t		
Notification				
Event Action				
SMTP Server				
E-mail Recipients				
Trap Receivers				
SMS Service				
SMS Recipients				
Reset/Reboot				
About				

ltem	Definition
Recipient Name	Click the name of the recipient to open the Configure SMS Receiver
	Page. Users can modify or delete an existing receiver.
TEST	Click this button to check whether the test message is correctly sent.
Now Posiziont	Click this button to open the Add New SMS Receiver Page. Users can
New Recipient	add a new recipient.

Configure	SMS	Receiver	Page

PDU Remote Managemen	
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	Active Image: Enabled Active Image: Enabled Active Image: Ted Mobile Number 0910000111 Apply Reset Delete

Add New SMS Receiver Page

PDU Remote Managemei	
General Security Network Service Notification Event Action SMTP Server E-mail Recipients Trap Receivers SMS Service SMS Recipients Reset/Reboot About	Add New SMS Recipient Active Image: Enabled Recipient Name Image: Enabled Mobile Number Image: Enabled Apply Reset

Outlet Management

The following provides the outlet configurations to meet different application scenarios.

Remote Outlet On/Off/Reboot

Users can turn on, turn off, or reboot individual outlet. See PDU Tab > Outlet Action > Control. (For Switched Metered by Outlet Series and Switched Series only.)

PDU Remote Managemei				Administrator I Summary	168.25.28 🔮		
Í	Cont	rol				Host	•
Status Manager	Cont	rol Action		Turn On	¥		
Outlet Action	Dela	у		Yes			
Control	Outle	et Selection	ı	All			
Schedule		Status	#	Name			
Daisy Chain		ON	1	Outlet1			
Wake on Lan		ON	2	Outlet2			
EnergyWise		ON	3	Outlet3			
PowerPanel [®] List		ON	4	Outlet4			
		ON	5	Outlet5			
		ON	6	Outlet6			
		ON	7	Outlet7			
		ON	8	Outlet8			
	Ne	xt » F	leset				

PDU Tab > Outlet Action > Control

ltem	Definition	
	Select the role of PDU (HOST or GUEST#) if PDUs are daisy	
HOST/GUEST#	chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU.	
Control Action		
Turn On	Selected outlets will be immediately turned on.	
	Selected outlets will be turned on according to each outlet's Power	
Turn On + Delay	<i>On Delay</i> in <u>PDU Tab > Manager > Outlet</u> .	
Turn Off	Selected outlets will be immediately turned off.	

Item	Definition
	Selected outlets will be turned off according to each outlet's Power
	Off Delay in PDU Tab > Manager > Outlet.
Turn Off + Delay	This action could signal a computer to shut down, if PowerPanel®
	Business Edition Client software is installed on it.
	Selected outlets will be immediately turned off and then be turned
Reboot	on again according to each outlet's <i>Reboot Duration</i> in PDU Tab >
	Manager > Outlet.
	Selected outlets will be turned off according to each outlet's Power
	Off Delay. They will be synchronized with the longest Power Off
Reboot + Delay	Delay and the longest Reboot Duration of the selected outlets.
	Then they will be turned on according to each outlet's Power On
	<i>Delay</i> in <u>PDU Tab > Manager > Outlet</u> .
Cancel Pending	Any pending commands of the selected outlet(s) will be cancelled.
Command	Any outlet in a pending command state will be notated with an
	asterisk (*).
Outlet Selection	Outlets selected for action.

Scheduled Outlet On/Off/Reboot

Outlet(s) can be set to automatically turn on, turn off, or reboot at scheduled times. See PDU Tab > Outlet Action > Schedule. (For Switched Metered by Outlet Series and Switched Series only.)

PDU Remote Managemer		Administrato Summary	r login from 192.168.25.28 7 PDU Envir	≩ [Logout] Log System Help		
Status	Schedule Scheduled Actio	n		Host	v	
Manager	Status	Name	Action	Action Time	Frequency	Outlet
Outlet Action						
Control	Add New Action	Schedule				
Schedule	Frequency	Once				
Daisy Chain	rioquonoy	Daily				
Wake on Lan		Weekly				
EnergyWise		Veekiy				
PowerPanel [®] List	Next »					

PDU Tab > Outlet Action > Schedule

Select the role of PDU (HOST or GUEST#) first if PDUs are daisy chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU. Select the **Once**, **Daily** or **Weekly** option, and then click the **Next** button to enter the **Add New Action Schedule Page**.

ltem	Definition
Frequency	
Once	Scheduled action takes place once at the configured date and
	time.
Daily	Scheduled action takes place daily at the configured time.
Weekly	Scheduled action takes place once a week for the configured day
	and time.

Add New Action Sch	nedule Page
--------------------	-------------

PDU Remote Managemen	
	Add New Action Schedule - Once
Status Manager Outlet Action Control Schedule Daisy Chain Wake on Lan EnergyWise PowerPanel® List	Enable Name Schedule Name Control Action Turn On Delay Yes Action Time 7 v / 26 v at 11 v: 17 v Outlet Selection All * Name 1 Outlet1 2 3 Outlet3 4 5 Outlet5 6 7 Outlet7 8

Up to 10 scheduled settings are allowed.

ltem	Definition
Enable	Check this box to activate the scheduled action function.
Name	The name entered by the user to identify the specific scheduled event.
	The action will be performed when the scheduled event takes place.
Control Action	For reboot action, selected outlets will be immediately turned off and then
Control Action	be turned on again according to outlet's <i>Reboot Duration</i> in PDU Tab >
	Manager > Outlet. The duration is within 5 to 60 seconds.
Dolov	Click this box to activate outlet delay function. For configurations, see
Delay	PDU Tab > Manager > Outlet
Action Time	The time at which the scheduled event takes place.
Outlet Selection	Outlets selected for the scheduled event.

Sequencing Power On/Off

Enable users to turn on, turn off, or reboot the outlets in sequence. When powering on the connected devices, the sequential power-on method is recommended to avoid high inrush current. See PDU Tab > Manager > Outlet. (For Switched Metered by Outlet Series and Switched Series only.)

PDU Remote Managemen	t	Summar	or login from 192.168. Y PDU Er	_	System Help			
Status	Outlet M	0			Host 🔻			
Manager	#	Outlet Name	On Delay	Off Delay	Reboot Duration	Overload Threshold	Near Overload Threshold	Low Load Threshol
Device Outlet	1	Outlet1	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
	2	Outlet2	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
Daisy Chain	3	Outlet3	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
Wake on Lan	4	Outlet4	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
EnergyWise	5	Outlet5	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
PowerPanel [®] List	6	Outlet6	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
	7	Outlet7	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)
	8	Outlet8	3 sec.	3 sec.	5 sec.	1440 (W)	1080 (W)	0 (W)

PDU Tab > Manager > Outlet

Select the role of PDU (HOST or GUEST#) first if PDUs are daisy chained. Up to 3 GUEST PDUs can connect to 1 HOST PDU. Click the box to select one outlet or multiple outlets for power sequencing and then click Next to open the Outlet Configuration Page for configuration.

Outlet Configuration Pa	ge
--------------------------------	----

PDU Remote Managemen	
Status Manager Device Outlet Action Daisy Chain Wake on Lan EnergyWise PowerPanel® List	Configuration Imit Name Name Imit Name Action Configuration Instant Power On Delay Instant Imit Delay Sec(s) [1-7200] Imit Delay Instant Imit Delay Imit Delay Imit Delay Imit Delay Imit Delay Imit Delay Imit Delay<
	Load Configuration
	Overload Threshold W
	Near Overload Threshold W
	Low Load Threshold W
	Power Restore
	Peak Load 🔲 Reset
	Energy Reset
	Apply Reset

ltem	Definition				
Name	The name entered by the user to identify the selected outlet or multiple				
Name	outlet configuration.				
Action Configuration					
	*Instant: Turn on/off the outlet immediately.				
Power On/Off	*Delay: Delay time before turning on/off the outlet. Valid values				
Delay	are within the range of 1 to 7,200 seconds.				
	*Never: Never turn on/off the outlet.				
Reboot Duration	The length of time the outlet will remain off during a Reboot action. Valid				
	values are within the range of 5 to 60 seconds.				
Load Configuration					
Overload	Set the value for individual outlet that will signal an overload warning in				
Threshold	Watts. Must be higher than Near Overload Threshold.				
Near Overload	Set the value for individual outlet that will signal a near overload				
Threshold	warning in Watts. Must be between Overload Threshold and Low Load				
THESHOLD	Threshold.				

ltem	Definition
Low Overload	Set the value for individual outlet that will signal a low overload warning
Threshold	in Watts. Must be lower than Near Overload Threshold.
Power Restore	
Peak Load	Restore the peak load of each outlet to zero.
Energy	Restore the energy of each outlet to zero.

AutoPing

The AutoPing feature allows the PDU to detect if a target device becomes unresponsive to IP pings and automatically reboot the device. If the device gets back to normal operation after reboot, network connection could be restored at the same time.

To utilize the function, See PDU Tab > Outlet Action > AutoPing. (For Switched Metered by Outlet Series and Switched Series only.)

PDU Remote M	anagement				03.50 <mark> [Logout</mark>] System Help				Cył	per Power
	AutoPing									
Status Manager	Status	Name	Active	Priority IP Address	Target IP Address	Period (sec)	Retries	Action	Restart Delay (min)	Outlet
Outlet Action	New									
Control										
Schedule										
AutoPing										
Wake on Lan										
EnergyWise										
PowerPanel [®] List										

AutoPing configuration is shown as below. For example, the AutoPing function is enabled on Outlet 1 with 192.168.203.64 as "Target IP address". The PDU sends IP pings to the target device every 30 seconds. Outlet1 reboots once only if ping tests fail 3 times in a row, which takes 90 seconds for the PDU to detect the failure and trigger the action. After Outlet1 reboots, no pings are sent to the target device until 1 minute of "Restart Delay" is reached.

PDU Remote Ma	nonoment	trator login from 192.168.203.50 🛖 [Logout] ary PDU Log System Help	Cyber Pow
	Add New AutoPing Action		
Status	Name	AutoPing Name	
Manager	Active	Enabled v	
Outlet Action	Priority IP Address	No	
Control		Ves	
Schedule	Target IP Address	192.168.203.64	
AutoPing	Period	30 sec(s) [30-999]	
Wake on Lan EnergyWise	Retries	3 [2-200]	
	Action	Reboot ▼ 1 times [1-50]	
PowerPanel [®] List	Restart Delay	1 min(s) [0-10]	
	Outlet Selection	All Bank 1 Bank 2	
	Bank 1	Bank 2	
	# Name	# Name	
	1 Outlet1	9 Outlet9	
	2 Outlet2	10 Outlet10	
	3 Outlet3	11 Outlet11	
	4 Outlet4	12 Outlet12	
	5 Outlet5	13 Outlet13	
	6 Outlet6	14 Outlet14	
	7 Outlet7	15 Outlet15	
	8 Outlet8	16 Outlet16	
	0		

Intelligent PDU User Guide

Up to 10 AutoPing settings are allowed.

ltem	Definition
Active	Enable/Disable the AutoPing function.
	When "Yes" is selected, sets the IP address of the priority to utilize the function. Pings will only be sent to the target device when receiving a
Priority IP Address	successful ping response from the priority. For example, the target device is connected to a router, which is set to be the priority. The PDU sends IP pings to the target device only if the router is responsive to IP
	pings. In this way, the PDU can verify network connection by sending IP pings to the priority first and determine if target IP ping test is performed accordingly.
Target IP Address	The IP address of the target device.
Period	The time interval between successive pings to the target device, in second.
Retries	The number of failed ping tests that must be consecutively detected before the action is triggered.
Action	The action on specific outlet if the PDU continuously receives no response from the target device. When "Reboot" is selected, sets the maximum number of times to be triggered.
Restart Delay	Length of time after an action is triggered before beginning to restart ping tests. This allows a proper time for the device to get back to normal operation. During this time interval, no pings are sent to the target device.

After confirming the AutoPing configuration and pressing "Apply" button, find your preferred configuration and AutoPing status on AutoPing Webpage.

PDU Remote M	Administrator login from 192.168.203.50 🔒 [Logout] Mote Management Summary PDU Log System Help					Cyber Power				
	AutoPing									
Status	Status	Name	Active	Priority IP Address	Target IP Address	Period (sec)	Retries	Action	Restart Delay (min)	Outlet
Manager Outlet Action	Success	AutoPing Name	Enabled	-	192.168.203.64	30	3	Reboot (1)	1	[1]
Control	New									
Schedule										
AutoPing										
Wake on Lan										
EnergyWise										
PowerPanel [®] List										

Besides, set the IP address of the priority when "Yes" is selected. For example, the target device is connected to a router, which is set to be the priority. The PDU sends IP pings to the target device only if the router is responsive to IP pings. In this way, the PDU can verify network connection by sending IP pings to the priority first and determine if target IP ping test is performed accordingly.

	Add New AutoPing Action	
Status	Name	AutoPing Name
Manager	Active	Enabled V
Outlet Action	Priority IP Address	0 No
Control		Yes 192.168.1.1
Schedule	Target IP Address	192.168.203.64
AutoPing	Period	30 sec(s) [30-999]
Wake on Lan EnergyWise	Retries	3 [2-200]
PowerPanel [®] List	Action	Reboot v 1 times [1-50]
	Restart Delay	1 min(s) [0-10]

Wake on LAN (WoL)

When turning on an outlet, a Wake on LAN packet can be sent to the connected computer to awaken it. It is necessary for the computer to support this function and is configured as "Enabled" in its BIOS settings. See PDU Tab > Wake on LAN > Features and PDU Tab > Wake on LAN > Lists. (For Switched Metered by Outlet Series and Switched Series only.)

PDU Remote Managemen	
Status Manager Outlet Action Daisy Chain	WoL Features PowerPanel Client Load/Sync with PowerPanel Client List Wake Conditions
Wake on Lan Features Lists EnergyWise PowerPanel [®] List	Outlet Turned On Apply Reset

PDU Tab > Wake on LAN > Features

ltem	Definition	
PowerPanel Client	Load/Sync with PowerPanel Client List. To achieve synchronization, make sure the PDU has established communication with PowerPanel® Business Edition Client software. See <u>System Tab > Security ></u> <u>Authentication</u> .	
Wake Conditions	Enable or disable the Wake on LAN function.	

PDU Tab > Wake on LAN > Lists

PDU Remote Managemer	1	Administrator login from 192.16	8 25 28 😭 [Logout] invir Log System Help		
Status	WoL Lists WoL Client List				
Manager Outlet Action Daisy Chain Wake on Lan	Status	IP Address	MAC Address	Outlet	Send test
Features Lists EnergyWise	WoL Manual List Status New	IP Address	MAC Address	Outlet	Send test
PowerPanel [®] List					

ltem	Definition
WoL Client List	If the PowerPanel Client option in PDU Tab > Wake on LAN > Features is selected, the PowerPanel® List will be automatically added to the WoL Client list.
WoL Manual List	Click New to enter the Add Wake on LAN Receiver Page. Users can manually add WoL receivers.

PDU Remote Managemer	
	Add Wake on Lan Receiver
Status Manager Outlet Action	Active Image: Enabled IP Address 0.0.0.0
Daisy Chain Wake on Lan	Outlet
Features	# Name
Lists	I Outlet1
EnergyWise	2 Outlet2
PowerPanel [®] List	3 Outlet3
	4 Outlet4
	5 Outlet5
	6 Outlet6
	7 Outlet7
	8 Outlet8
	Apply Reset

ltem	Definition		
Active	Enable/Disable the Wake on LAN function.		
IP Address	The IP address of the computer. This IP must be within the same subnet as the PDU. Up to 50 IP addresses are supported.		
Outlet	Select the outlet that provides power to the computer.		

Graceful Computer Shutdown

After the connected computer is installed with PowerPanel Business Edition Client or Center and establishes communication with the PDU, its IP address will be automatically displayed in the PowerPanel® List shown below. This computer can perform a safe shutdown before the outlet powering the computer turns off, thus avoiding data loss. To achieve communication between the computer and PDU, see System > General > Security.

Up to 50 computers having PPBE Client or Center installed can be listed. A Client or Center computer will be removed when it has been disconnected from the PDU for an hour. See PDU Tab > PowerPanel® List. (For Switched Metered by Outlet Series and Switched Series only.)



PDU Tab > PowerPanel® List

Click the IP address of a client to access configuration settings.

Cisco EnergyWise

Users can manage and control all Cisco EnergyWise entities and configure settings. See PDU Tab > EnergyWise > Configuration and PDU Tab > EnergyWise > Children List.

PDU Tab >	EnergyWise >	Configuration
-----------	--------------	---------------

PDU Remote Managemei	,	Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help
	EnergyWise Configu	ration
Status Manager Outlet Action Daisy Chain Wake on Lan EnergyWise Configuration Children List	Version EnergyWise Service port Domain Name Off-State Cache Secure Mode	1.2.0 Enable
Children List PowerPanel [®] List	Apply Reset	

ltem	Definition		
Version	The version of EnergyWise supported.		
EnergyWise	Enable/Disable EnergyWise support.		
	The port number is used to communicate with EnergyWise.		
Service Port	This number must be the same as that of a Cisco switch that the PDU		
	connects to.		
	The EnergyWise domain name.		
Domain Name	This must be the same as that of a Cisco switch that the PDU connects		
	to.		
Off-State Cache	Enable/Disable endpoint to cache EnergyWise list in the Cisco switch		
	after the PDU has rebooted.		
Secure Mode	Enable EnergyWise use of a shared secret.		
Shared Secret	The secret for the EnergyWise domain.		

PDU Remote Administrator login from 192.168.25.28 & [Logout] Nanagement Summary PDU Envir Log System Help					
Status	EnergyWise Parent	Children List			
Manager Outlet Action	#	Name	Role	Keywords	importance
Daisy Chain	1	PDU_Base	base,role	endpoint,child,base	1
Wake on Lan	Children				
EnergyWise	#	Name	Role	Keywords	importance
Configuration	1	Outlet1	outlet,role	endpoint,child,outlet	1
Children List	2	Outlet2	outlet,role	endpoint, child, outlet	1
PowerPanel [®] List	3	Outlet3	outlet,role	endpoint,child,outlet	1
	4	Outlet4	outlet,role	endpoint,child,outlet	1
	5	Outlet5	outlet,role	endpoint,child,outlet	1
	6	Outlet6	outlet,role	endpoint,child,outlet	1
	7	Outlet7	outlet,role	endpoint,child,outlet	1
	8	Outlet8	outlet,role	endpoint,child,outlet	1
	9	Bank1	bank,role	endpoint,child,bank	1

PDU Tab > EnergyWise > Children List

Click the Name field in parent and/or children list to enter the EnergyWise Parent Configuration Page and EnergyWise Child Configuration Page.

PDU Remote Managemen	1	Administrator login from 192.168.25.28 🛃 [Logout] Summary PDU Envir Log System Help
Status Manager Outlet Action Daisy Chain Wake on Lan EnergyWise Configuration Children List PowerPanel [®] List	EnergyWise Parent Name Role Keywords importance Apply Reset	Configuration PDU_Base base,role endpoint,child,base 1

EnergyWise Parent Configuration Page

EnergyWise Child Configuration Page

PDU Remote Managemei	1	Administrator login from 192.168.25.28 🔮 [Logout] Summary PDU Envir Log System Help
	EnergyWise Child Co	onfiguration
Status	Name	Outlet1
Manager	Role	outlet,role
Outlet Action	Keywords	endpoint.child.outlet
Daisy Chain	importance	1
Wake on Lan	Importance	Ι
EnergyWise		
Configuration	Apply Reset	
Children List		
PowerPanel [®] List		

ltem	Definition	
Name	The name entered by the user to identify an EnergyWise entity.	
	The maximum length is 31 characters.	
Role	This parameter is a string entered by the user to describe the function of	

ltem	Definition		
	the entity. Maximum length is 31 characters.		
Keywords	This parameter is a string entered by the user to describe the entity.		
	Maximum length is 31 characters.		
Importance	This parameter, entered by the user, shows the value of an entity's		
	importance and must be between 1 and 100.		

Security

The following provides account configurations to protect against unauthorized entry.

Login Authentication

There are five options for login authentication. Only one user can log in to the web interface at a time.

PDU Remote Managemen	
General Security Authentication Local Configuration RADIUS Configuration LDAP Configuration Session Control	Authentication Login Authentication Local RADIUS , Local RADIUS Only LDAP , Local LDAP Only
Network Service Notification Reset/Reboot About	Software Authentication Secret Phrase powerpanel.encryption.key Apply Reset

System Tab > Security > Authentication

ltem	Definition
Login Authentication	
Local	Log in with user name and password configured in Local
LUCAI	Account. See System Tab > Security > Local Configuration.
	Log in with user name and password to authenticate with
	RADIUS server first. If the RADIUS server fails to respond, then
RADIUS, Local	the user name and password configured in Local Configuration
	can be used. See System Tab > Security > RADIUS
	Configuration.

ltem	Definition		
	Log in with user name and password to authenticate with		
RADIUS Only	RADIUS server only. See System Tab > Security > RADIUS		
	Configuration.		
	Log in with user name and password to authenticate with LDAP		
	server first. If the LDAP server fails to respond, then the user		
LDAP, Local	name and password configured in Local Configuration can be		
	used. See System Tab > Security > LDAP configuration.		
	Log in with user name and password to authenticate with LDAP		
LDAP Only	server only. See System Tab > Security > LDAP		
	configuration.		
Software Authentication			
	The authentication phrase is used to communicate with		
Secret Phrase	PowerPanel® Business Edition software. This phrase should		
Secret Fillase	be the same Secret Phrase as the field on PowerPanel®		
	Business Edition software interface.		

1. Using Local Configuration for Authentication

System Tab > Security > Local Configuration PDU Remote Administrator login from 192.168.25.28 (Logout) Summary PDU Envir Log System Help					
General	Local Con	figuration	User Name	Password	Manageable Outlets
Security	Enabled	Administrator	cyber	*****	All
Authentication	Enabled	Viewer	device	cyber	None
Local Configuration RADIUS Configuration LDAP Configuration Session Control Network Service Notification Reset/Reboot About	New				

There are two types of account: administrator and viewer. Click User Name or Password field to enter Administrator Page or Viewer Page. Users can also click NEW to enter Add Outlet User Page to create an outlet account.

Administrator Page			
PDU Remote Management		Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help	
	Administrator		
General	User Name	cyber	
Security	Current Password		
Authentication	New Password		
Local Configuration	Confirm Password		
RADIUS Configuration			
LDAP Configuration	Admin Manager IP		
Session Control	Enabled	0.0.0.0	
Network Service	Enabled	0.0.0.0	
Notification	Apply Reset		
Reset/Reboot			
About			

Viewer Page

PDU Remote Managemei	- 	Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help
	Viewer	
General	Allow Access	Enabled
Security	User Name	device
Authentication	New Password	device
Local Configuration		
RADIUS Configuration	Confirm Password	
LDAP Configuration	Viewer Manager IP	
Session Control	Enabled	0.0.0.0
Network Service	Enabled	0.0.0.0
Notification		
Reset/Reboot	Apply Reset	
About		

ltem	Definition		
Administrator	The administrator can access all functions, including Enable/Disable the Viewer account. For login configuration, users can only create one administrator account.		
User Name	Enter the new user name.		
Current Password	Enter the current password for authentication.		
New Password	Enter the new password.		
Confirm Password	Enter the new password again to confirm it.		
Admin Manager IP (optional)	Set the Admin IP which is allowed to access. If you want access from a IP address, you can set one of them as 0.0.0.0 or 255.255.255.255. Note: You can also set a range of IP addresses to access, for example 192.168.16.1/24.		
Viewer	The viewer can view the settings but cannot control or change any settings.		
Allow Access	Check this box to enable view account.		
Viewer Manager IP(optional)	Set the Viewer IP which is allowed to access. If you want access from any IP address, you can set one of them as 0.0.0.0 or 255.255.255.255. Note : You can also set a range of IP addresses to access, for example, 192.168.16.1/24.		

PDU Remote			Administrator login from 192.168.25.28 움 [Logout]
Managemei	It		Summary PDU Envir Log System Hel
	Add O	utlet User	
General Security Authentication Local Configuration	Active User Na Passwo		Enable
RADIUS Configuration	Outlet S	election	All
Session Control	#	Name	
Network Service	1	Outlet1	
Notification	2	Outlet2	
Reset/Reboot	3	Outlet3	
About	4	Outlet4	
	5	Outlet5	
	6	Outlet6	
	7	Outlet7	
	8	Outlet8	
	Apply	Reset	

Add Outlet User Page*

*The above Add Outlet User Page is available for Switched Metered by Outlet Series and Switched Series only.

Users can create an outlet account that is allowed to control assigned outlet(s).

ltem	Definition	
Active	Enable or disable the user account.	
User Name	Set a name for the user account.	
Password	Set the user password.	
Outlets Selection	Outlets that the user can control.	

2. Using RADIUS Configuration for Authentication



Click Add Server to enter Radius Server Configuration Page to create a server.

PDU Remote Managemei		Administrator login from 192.168.25.28 🔀 [Logout] Summary PDU Envir Log System Help
	RADIUS Server (Configuration
General	Server IP	0.0.0.0
Security	Shared Secret	
Authentication	Server Port	1812 [default:1812]
Local Configuration		
RADIUS Configuration		
LDAP Configuration	Test Setting	
Session Control	User Name	
Network Service Notification	Password	
Reset/Reboot	Skip Test	
About		
About	Apply Reset	

ltem	Definition		
Server IP	The IP address of RADIUS server.		
Shared Secret	The shared secret of RADIUS server.		
Server Port	The UDP port used by the RADIUS server.		
Test Setting	Use user name and password to authenticate with RADIUS server, and save information of RADIUS server if authentication succeeds.		
Skip Test	Save information of the RADIUS server without test.		

Radius Server Configuration Page

3. Using LDAP Configuration for Authentication

System Tab > Security > LDAP configuration			
PDU Remote Management		Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System	Help
General Security Authentication Local Configuration CADIUS Configuration LDAP Configuration LDAP Configuration Session Control Network Service Notification Reset/Reboot About	LDAP Configura LDAP Server Add Server	ntion Type	LDAP SSL

Click Add Server to enter LDAP Server Configuration Page to create a server.

	LDAP Server	Configuration	n Page
PDU Remote Managemen		Administrator login from 19 Summary PDU	
	LDAP Server Configu	uration	
General			
Security	LDAP Server	0.0.0.0	
Authentication	LDAP SSL	Enable	
Local Configuration	Port	389	[default:389]
RADIUS Configuration	Base DN	209	
LDAP Configuration	Base DN Login Attribute		
Session Control	Generic LDAP Server		
Network Service	 Active Directory 		
Notification	AD Domain		
Reset/Reboot			
About			
	Test Setting		
	User Name		
	Password		
	Skip Test		
	Apply Reset		

ltem	Definition		
LDAP Server	The IP address of LDAP server.		
LDAP SSL	To communicate with LDAP server by LDAPS.		
Port	The TCP port used by the LDAP(S) server.		
Base DN	The base DN of LDAP server.		
Login Attribute	The login attribute of LDAP user entry. (ex: cn or uid)		
Generic LDAP	The type of LDAP server.		
Server			
Active Directory	Select LDAP server type as Windows AD		
AD Domain	The AD Domain of the Active Directory server.		
Test Setting	Use user name and password to authenticate with LDAP server, and		
Test Setting	save information of LDAP server if authentication succeeds.		
Skip Test	Save information of the RADIUS server without test.		

Timeout Setting

Configure the idle login sessions. See System > Security > Session Control.

PDU Remote Managemei		ministrator login from 192.168.25.28 😭 [Logout] ummary PDU Envir Log System Help
General	Session Control	
Security Authentication	Timeout	10 ▼ minute(s)
Local Configuration RADIUS Configuration	Apply Reset	
LDAP Configuration Session Control		
Network Service Notification		
Reset/Reboot About		

System > Security > Session Control

Item	Definition
Login Session	
Timeout	The time in minutes that the system waits before automatically logging off.

Network Service

The following provides the network configurations.

TCP/IPv4 Setting

Display the current TCP/IPv4 settings and allow users to select the option to obtain TCP/IP settings by DHCP. See System > Network Service > TCP/IPv4.

PDU Remote Managemen		ogin from 192.168.25.28 余 [Logout] PDU Envir Log System Help
	TCP/IPv4	
General	Current Configuration	
Security	IP Address	192.168.26.21
Network Service	Subnet Mask	255.255.255.0
TCP/IPv4	Gateway	192.168.26.254
TCP/IPv6 SNMPv1 Service	DNS Server	0.0.0.0
SNMPv3 Service	DHCP	
Web Service	Enable DHCP	
Console Service	Obtain DNS Address from DHCP	
FTP Service	Manual	
Notification	IP Address	192.168.26.21
Reset/Reboot About	Subnet Mask	255.255.255.0
About	Gateway	192.168.26.254
	DNS Server	0.0.0.0
	Apply Reset	

System > Network Service > TCP/IPv4

ltem	Definition
Current	Display the current TCP/IP settings: IP Address, Subnet Mask, Gateway,
Configuration	and DNS server.
	*Enable DHCP: Select this option to get IP address, Subnet Mask, and
	Gateway from DHCP.
DHCP	*Obtain DNS Address from DHCP: Select this option to get DNS by
	DHCP if DHCP is enabled.
Manual	Unselect Enable DHCP first.
	Enter the TCP/IP settings manually and click Apply.

TCP/IPv6 Setting

Display the current TCP/IPv6 settings and allow users to assign the IPv6 address either by router control or manually. See System > Network Service > TCP/IPv6.

PDU Remote Managemen	1	Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
	TCP/IPv6	
General	IPv6 Interfaces	
Security	Туре	IPv6 Address
Network Service		
TCP/IPv4	IPv6 Gateway	
TCP/IPv6	N/A	
SNMPv1 Service	N/A	
SNMPv3 Service	IPv6 Configuration	
Web Service	_	
Console Service	Access	Enabled
FTP Service Notification	Address Mode	Router Control
Reset/Reboot		Manual
About		
A BOAL	Manual IPv6 Address	
	System IP Address	
	Apply Reset	

System > Network Service > TCP/IPv6

ltem	Definition		
IPv6 Interface	Displays the current IPv6 address.		
IPv6 Gateway	Displays the current IPv6 gateway.		
IPv6 Configuration			
Allow Access	Enable/Disable IPv6 service.		
Address Mode: Router Control	The IPv6 address is assigned through the method (Stateless Address Auto configuration, Stateless DHCPv6, or Stateful DHCPv6) determined by the router's configuration.		
Address Mode: Manual	The IPv6 address is assigned manually.		
Manual IPv6 Address	Enter the IPv6 address manually and click Apply when the Address Mode: Manual option is selected.		

SNMPv1 Service Setting

Allow users to perform SNMPv1 configurations. See System Tab > Network Service > SNMPv1 Service.

DU Remote Ianagemei		Summary PDU	68.25.28 😭 [Logout] Envir Log System Help
ĺ	SNMPv1		
General	SNMPv1 Service	•	
Security	Allow Access		
Network Service			
TCP/IPv4 TCP/IPv6	Apply Res	et	
SNMPv1 Service			
SNMPv3 Service	SNMPv1 Access		
Web Service	Community	IP Address	Access Type
Console Service	public	0.0.0.0	Read Only
FTP Service	private	0.0.0.0	Read/Write
Notification	public2	0.0.0.0	Forbidden
Reset/Reboot	public3	0.0.0.0	Forbidden
About			

System Tab > Network Service > SNMPv1 Service

ltem	Definition		
SNMPv1 Service			
Allow Access	Enable or disable the SNMPv1 service.		

Click the SNMP Trap Community field to enter the SNMPv1 Page. Users can configure the SNMPv1 settings.

SNMPv1 Page				
PDU Remote Management		Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help		
General Security Network Service TCP/IPv4 TCP/IPv6 SNMPv1 Service SNMPv3 Service Web Service Console Service FTP Service Notification Reset/Reboot About	SNMPv1 Community IP Address Access Type Apply Reset	public 0.0.0.0 Read Only V		

ltem	Definition		
Community	The name used to access the SNMP community from a Network		
	Management System (NMS). Its maximum length is 15 characters.		
IP Address (IPv6 Support)	The IP address or IP address mask can be accessed by the NMS. A specific		
	IP address allows access only by the NMS with the specified IP Address.		
	The "255" is regarded as the subnet mask and the rules are as follows:		
	*192.168.20.255: Access only by an NMS on the 192.168.20.0 segment.		
	*192.255.255.255: Access only by an NMS on the 192.0.0.0 segment.		
	*0.0.0.0 (the default setting) or 255.255.255.255: Access by any NMS on		
	any segments.		
Access Type	The allowable action for the NMS through the community and IP address.		
	*Read Only: GET at any time but cannot SET.		
	*Write/Read: GET at any time. SET at any time unless someone logs		
	in to the Web interface.		
	*Forbidden: No GET or SET.		
SNMPv3 Service Setting

Users can perform SNMPv3 configurations. Authentication type or privacy type are provided to strengthen security. See System Tab > Network Service > SNMPv3 Service.

System Tab > Network Service > SNMPv3 Service

PDU Remote Managemer		Administr Summ	ator login from 192.168.2 ary PDU Envi		Help	
	SNMPv3					
General	SNMPv3 Service					
Security Network Service	Allow Access					
TCP/IPv4 TCP/IPv6	Apply Reset					
SNMPv1 Service	SNMPv3 Access Con	trol				
SNMPv3 Service Web Service	User Name	Status	IP Address	Authentic Protocol	ation Privacy Protocol	
Console Service	cyber snmpv3 user1	Disabled	0.0.0.0	None	None	
FTP Service	cyber snmpv3 user2	Disabled	0.0.0.0	None	None	
Notification	cyber snmpv3 user3	Disabled	0.0.0.0	None	None	
Reset/Reboot About	cyber snmpv3 user4	Disabled	0.0.0.0	None	None	

Item	Definition
SNMPv3 Service	
Allow Access	Enable or disable the SNMPv3 service.

Click the User Name field to enter the SNMPv3 Page. Users can configure SNMPv3 settings.

	SNI	MPv3 Page
PDU Remote Management		Administrator login from 192.168.25.28 😪 [Logout] Summary PDU Envir Log System Help
General Security Network Service TCP/IPv4 TCP/IPv6 SNMPv1 Service SNMPv3 Service Web Service Console Service FTP Service Notification Reset/Reboot	SNMPv3 Access User Name Authentication Password Privacy Password IP Address Authentication Key Privacy Key Privacy Key Reset	Enabled cyber snmpv3 user4 0.0.0.0 None V None V
About		

Item	Definition	
Access	Enable or disable the SNMPv3 service.	
User Name	The name that identifies the SNMPv3 user. It must be 1 to 31 characters long.	
Authentication	The password used to generate the key for authentication. It must be	
Password	16 to 31 characters long.	
Privacy Password	The password used to generate the key for encryption. It must be 16 to 31 characters long.	
IP Address (IPv6 Support)	 The IP address or IP address mask that can be accessed by the NMS. A specific IP address allows access only by the NMS with the specified IP Address. The "255" is regarded as the subnet mask and the rules are as follows: *192.168.20.255: Access only by an NMS on the 192.168.20.0 segment. *192.255.255.255: Access only by an NMS on the 192.0.0 segment. *0.0.0 (the default setting) or 255.255.255: Access by any NMS on any segments. 	
Authentication Key	The hash type for authentication.	
Privacy Key	The privacy type for encrypting and decrypting data.	

Web Service

Select the Enable HTTP/HTTPS option to access the HTTP/HTTPS Service and configure HTTP/HTTPS port settings. See System Tab > Network Service > Web Service.

PDU Remote Managemen		Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
	Web Service	
General	Access	
Security Network Service TCP/IPv4 TCP/IPv6	Allow Access	 Enabled HTTP Enabled HTTPS Disabled
SNMPv1 Service	Http Settings	
SNMPv3 Service Web Service	Http Port	80 [80 or 5000-65535]
Console Service	Https Settings	
Notification	Https Port	443 [443 or 5000-65535]
Reset/Reboot	Certificate Status	Valid Certificate
About	Apply Reset	<u>Upload Certificate</u>

System Tab > Network Service > Web Service

ltem	Definition		
Access			
	Enable or disable HTTP/HTTPS service.		
	HTTPS supports the following encryption algorithms:		
	• AES (256/128 bits)		
	Camellia (256/128 bits)		
Allow Access	• 3DES (168 bits)		
	• DES (168 bits)		
	• RC4 SHA (128)		
	• RC4 MD5 (128)		
Http Settings			

ltem	Definition		
	The TCP/IP port of the Hypertext Transfer Protocol (HTTP); 80 is the		
	default value.		
HTTP Port	Users can also change the port setting to any unused port from 5000 to		
	65535 to enhance security.		
Https Settings			
	The TCP/IP port of the Hypertext Transfer Protocol Secure (HTTPS); 443		
Uttoo Dort	is the default value.		
Https Port	Users can also change the port setting to any unused port from 5000 to		
	65535 to enhance security.		
	*Valid Certificate: Display the detailed certificate information.		
Certificate	*Upload Certificate: Upload a certificate and replace the		
Status	current one. The certificate must be uploaded in standard PEM		
	(Privacy Enhanced Mail) format.		

Click the <u>Valid Certificate</u> link, and the Installed Certificate Page will appear.

Installed Certificate Page

PDU Remote Managemer		Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
General Security Network Service TCP/IPv4 TCP/IPv6 SNMPv1 Service SNMPv3 Service Web Service Console Service FTP Service	Installed Certificato Issue to Common Name(CN) Organization(O) Organization Unit(OU) Locality(L) Country Serial Number Issue by	Power Distribution Unit CyberPower Systems, Inc. PDU Unknown Unknown 11:1C:76:14
Notification Reset/Reboot About	Common Name(CN) Organization(O) Organization Unit(OU) Validity	Power Distribution Unit CyberPower Systems, Inc. PDU
	Issued from Expires on Fingerprints SHA MD5	2013/05/28 2023/05/26 44 C0 C5 CF 64 41 A0 A5 98 DF 0A B9 B1 BA 2F 3E FD 2B 84 CF DD 84 A4 A3 38 3C BE 3E D9 09 FF 73 6D 53 3E 5C
	« Back	

Click the <u>Upload Certificate</u> link, and the Change Certificate Page will appear.

Change Certificate Page

PDU Remote Manageme	
General	Upload and Replace
Security Network Service	Upload Certificate Select File
TCP/IPv4	Submit
TCP/IPv6 SNMPv1 Service	« Back
SNMPv3 Service	
Web Service	
Console Service	
FTP Service	
Notification	
Reset/Reboot	
About	

Console Service

Select the Enable options to allow access using Telnet/SSH service and configure Telnet/SSH port settings. See System Tab > Network Service > Console Service.

PDU Remote Managemer		Administrator login from 192.168.25.28 😭 [Logout] Summary PDU Envir Log System Help
	Console	
General	Access	
Security	Allow Access	Enable Telnet
Network Service		Enable SSH
TCP/IPv4		
TCP/IPv6 SNMPv1 Service		Disabled
SNMPv3 Service	Telnet Settings	
Web Service	Telnet Port	23 [23 or 5000-65535]
Console Service		
FTP Service	SSH Settings	
Notification	SSH Port	22 [22 or 5000-65535]
Reset/Reboot	Hostkey Status	Valid
About		Upload Hostkey
	Hostkey Fingerprint:	D6 58 DD D3 A6 DF 01 29 50 02 B7 0C 76 03 91 29
	Apply Reset	

System Tab > Network Service > Console Service

ltem	Definition
Access	
Allow Access	Enable access using Telnet or SSH version 2, which transmits user
Allow Access	names, passwords, and data in an encrypted format.
Telnet Settings	
	The TCP/IP port that Telnet uses to communicate; 23 is the default
	value.
	Users can change the port setting to any unused port from 5000 to
Telnet Port	65535 to enhance security.
	Note: Telnet Client requires users to enter a space and the port number
	after the PDU IP address on the command line to access the control
	console.

ltem	Definition
SSH Settings	
	The TCP/IP port that SSH uses to communicate; 22 is the default value.
SSH Port	Users can change port setting to any unused port from 5000 to 65535 to
	enhance security.
	Display the status of hostkey fingerprint to show whether it is valid or
Hostkey Status	invalid.
	Click Upload Hostkey to upload or change hostkey.
Hostkey	The hostkey fingerprint uploaded by users will be displayed in this field.
Fingerprint	

FTP Service

Allow users to enable/disable the FTP server service and configure the TCP/IP port of the FTP server. The FTP server is used for upgrading Firmware. See System Tab > Network Service > FTP Service.

S	System Tab > Network Service > FTP Service				
PDU Remote Management		Administrator login from 192.168.25.28 🔐 [Logout] Summary PDU Envir Log System Help			
General Security Network Service TCP/IPv4 TCP/IPv6 SNMPv1 Service SNMPv3 Service Web Service Console Service FTP Service Notification Reset/Reboot About	FTP Allow Access Service port Apply Reset	Enabled 21 [21 or 5000-65535]			

ltem	Definition
Allow Access	Enable FTP server access.
	The TCP/IP port of the FTP server; 21 is the default value. Users can
Access Port	change port setting to any unused port from 5000 to 65535 to enhance
	security.

PDU Information

Display the system information of the PDU. See System > About.

DU Remote	,	Administrator login from 192.168.25.28 🔒 [Logout]	
lanagement	t	Summary PDU Envir Log System Help	
	About		
General	Information		
Security	Model	PDU81001	
Network Service	Serial Number	123456789011	
Notification	Hardware Version	1.0	
Reset/Reboot About	Firmware Version	1.0.5	
About	Firmware Update Date	2017/07/20	
	MAC Address	00-0C-15-40-50-72	
	Save/Restore Configuration	on	
	Save Configuration	Save	
	Restore Configuration	Select File	
		Submit	

Item	Definition	
Information		
Model Name	Model name of the PDU.	
Serial Number	Serial Number of the PDU.	
Hardware Version	The hardware version of the PDU.	
Firmware Version	The current firmware version installed on the PDU.	
Firmware Updated Date	The date the firmware was last updated.	
	MAC address of the PDU.	
MAC Address	Note: The MAC address is shown on the label on the back of	
	the PDU and via the LCD screen on the PDU.	
Save/Restore Settings		
	Click Save to save the PDU configuration file to local	
Save Configuration	computer. The text file name will have a default format of	
	YYYY_MM_DD_HHMM.txt.	

	To restore a configuration that has been saved earlier.
Restore Configuration	Click Select File to import an existing configuration file and
	then click Submit.

Command Line Interface

Introduction

How to log on

Users can log on to the command line interface through either console network access (Telnet or SSH) or local access (Serial port).

1. Network access to the command line interface

When user logs in with the admin username and admin password through Telnet or SSH, there are two types of interfaces available. One is the command line interface (CLI) and the second is a menu interface. The default is CLI. If the user wants to change to the menu interface, type in the [menumode] command. To switch back to CLI, it is necessary to logout and login to the PDU.

2. Local access to the command line interface

To log on via serial connection, the PC/server must be connected directly to the Universal port of the PDU using the included RJ45/DB9 Serial Port Connection Cable, and perform the following steps.

- Step 1: Open Hyper Terminal software (eg. PuTTY, HyperTerminal, or Tera Term) on your PC and select a name and icon for the connection.
- Step 2: Setup the COM port settings using the following values
 - *Bits per second: 9600
 - *Data bits: 8
 - *Parity: None
 - *Stop bits: 1
 - *Flow control: None
- Step 3: Press Enter to enter the Authentication menu.
- Step 4: Enter the user name and password of the PDU at the Authentication menu.

Note: Serial connection can only access Command Line Mode and cannot support Menu Mode.

How to use telnet access command line interface

- Step 1: Need to make sure the computer has access to the PDU installed network. At a command prompt, type telnet and the IP address for the PDU (for example, telnet 139.225.6.133, when the PDU uses the default Telnet port of 23), and press Enter.
- Step 2: Enter the user name and password (by default, user name: cyber, password: cyber)

How to use SSH access command line interface

SSH is highly recommended for using to access the command line interface. SSH encrypts user names, passwords, and transmitted data. To use SSH you must first configure SSH and install an SSH

client program (eg. PuTTY, HyperTerminal, or Tera Term) on your computer.

Note: If using PuTTY to configure SSH access, please configure Line discipline of Terminal to "Force off", as shown in Figure 5.

Reputry Configuration	X
Category: 	Options controlling the terminal emulation Set various terminal options I Auto wrap mode initially on DEC Origin Mode initially on
Bell Features Window Appearance Behaviour Translation Colours	DEC origin Model initially of 1 Implicit CR in every LF Implicit LF in every CR Use background colour to erase screen Enable blinking text Answerback to ^E: PuTTY
Connection → Connection → Data → Proxy → Telnet → Rlogin ⊕ SSH	Line discipline options Local echo: Auto Force on Force on Local line editing: Auto Force on Force on Force off
Serial	Remote-controlled printing Printer to send ANSI printer output to: None (printing disabled)
About	Open Cancel

Figure 5. The PuTTY Configuration window.

How to use the Command Line Interface

While using the command line interface, you can also do the following:

- 1. To close the connection to the command line interface → Type "exit" and press Enter
- 2. To switch mode as Menu Mode → Type "menumode" and press Enter
- 3. To view a list of available commands or arguments → Type "?" (Eg. date ?).
- 4. To view the command that was typed most recently in the session → Press the UP/DOWN arrow key. (The session can remember up to ten previous commands.)
- 5. A command can support multiple options → To define the date as March 21, 2015 (Eg. date yyyy 2015 mm 3 dd 21)

Command Response Codes

When the command or arguments is not recognized or is incorrect, the console interface will display [^] underneath the wrong command or argument. The following error message will be displayed:

Command not found	PDU doesn't know this command.	
Command not found	Console interface display the list of available commands.	
Parameter Error	The parameter type or format is not allowed.	
	Console interface display the list of available value or format.	

Command Lists

devsta

Description: Show device status of load and utility.

Option	Argument	Description
show		Show information of system device load and
31101		utility status.
guest	1 2 3	Set daisy chain index.

Example 1:

To display device status

CyberPower > devsta show

devcfg

Description: Show and set device load threshold, reset power parameters in device level, set cold start status and delay.

Option	Argument	Description
show		Show information of device configuration.
guest	1 2 3	Set daisy chain index.
overload	<overload threshold="" value=""></overload>	Set device overload threshold value.
nearover	<near overload="" threshold="" value=""></near>	Set device near overload threshold value.
lowload	<low load="" threshold="" value=""></low>	Set device low load threshold value.
pwrrest	peakload energy	Reset the peak load or energy of device.
coldstasta	previous allon	Set the cold start state of device.
coldstadly	-1 0 1 2 300	Set the cold start delay of device.
idletime	1 2 3 5 10 never	Set idle time of device.

Example 1:

To display load configuration of the device CyberPower > devcfg show

Example 2:

To set overload threshold at 7500W

CyberPower > devcfg overload 7500

Example 3:

To set near overload threshold at 5000W CyberPower > devcfg nearover 5000 Example 4:

To set cold start delay at 0

CyberPower > devcfg coldstadly 0

Example 5:

To set idle time of the device at 10 minutes CyberPower > **devcfg idletime 10**

bankcfg

Description: Show and set bank load configuration.

Option	Argument	Description
show		Show information of bank load threshold.
guest	1 2 3	Set daisy chain index.
index	b1 b2 all	Select bank index.
overload	<overload threshold="" value=""></overload>	Set bank overload threshold value.
nearover	<near overload="" threshold="" value=""></near>	Set bank near overload threshold value.
lowload	<low load="" threshold="" value=""></low>	Set bank low load threshold value.
restriction	none onnear onover	Set outlet restriction of bank

Example 1:

To display bank load configuration

CyberPower > bankcfg show

Example 2:

To set overload threshold of bank 1 at 15A

CyberPower > bankcfg index b1 overload 15

Example 3:

To set near overload threshold of bank 2 at 10A CyberPower > bankcfg index b2 nearover 10

oltsta

Description: Show information of outlet status.

Option	Argument	Description
show		Show information of outlet status.
guest	1 2 3	Set daisy chain index.
index	1 2 outlet number	Select outlet index.

Example 1:

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To display all outlet status

CyberPower > **oltsta show**

Example 2:

To display status of outlet #5

CyberPower > **oltsta index 5 show**

oltctrl

Description: Control the action of outlet.

Option	Argument	Description
Index	1 2 outlet number b1 b2 all	Select outlet index.
guest	1 2 3	Set daisy chain index.
act	on off reboot delayon delayoff delayreboot cancel	Control the action of outlet.

Example 1:

To turn on outlet #1 immediately

CyberPower > oltctrl index 1 act on

Example 2:

To turn on outlet #2 with turn on delay

CyberPower > oltctrl index 2 act delayon

oltcfg

Description: Show and set configuration of outlet action.

Option	Argument	Description
show		Show information of outlet delay time.
guest	1 2 3	Set daisy chain index.
index	1 2 outlet number all	Select outlet index.
name	<outlet name=""></outlet>	Modify outlet name.
td_on	-1 0 1 2 7200	Set outlet on delay time.
td_off	-1 0 1 2 7200	Set outlet off delay time.
td_reboot	<reboot duration="" time=""></reboot>	Set outlet reboot duration time.
set	<1 2 outlet number all>	Modify outlet configuration
	<outlet name=""></outlet>	
	<0 1 2 7200>	
	<0 1 2 7200>	
	<5 6 60>	

Example 1:

To display all outlet configuration

CyberPower > oltcfg index all show

Example 2:

To name outlet #1 as test_1

CyberPower > oltcfg index 1 name test_1

Example 3:

To set turn on delay of outlet #2 as 3 seconds CyberPower > **oltcfg index 2 td_on 3**

Example 4:

To set turn off delay of outlet #3 as 3 seconds CyberPower > **oltcfg index 3 td_off 3**

Example 5:

To set reboot duration of outlet #4 as 5 seconds CyberPower > **oltcfg index 4 td_reboot 5**

Example 6:

To name outlet #1 as test_1, set turn on delay as 3 seconds, set turn off delay as 4 seconds and set reboot duration as 5 seconds with a single command CyberPower > oltcfg set 1 test_1 3 4 5

oltloadcfg

Description: Show and set outlet load threshold, reset power parameters in outlet level.

Option	Argument	Description
show		Show information of outlet load threshold.
guest	1 2 3	Set daisy chain index.
index	1 2 outlet number all	Select outlet index.
name	<outlet name=""></outlet>	Modify outlet name.
overload	<overload threshold="" value=""></overload>	Set outlet overload threshold value.
nearover	<near overload="" threshold="" value=""></near>	Set outlet near overload threshold value.
lowload	<low load="" threshold="" value=""></low>	Set outlet low load threshold value.
pwrrest	peakload energy	Reset the peak load or energy of outlet.

Example 1:

To display outlet load configuration CyberPower > **oltloadcfg show**

Example 2:

To set overload threshold of outlet #1 at 1800W

```
CyberPower > oltloadcfg index 1 overload 1800
```

Example 3:

To set near overload threshold of outlet #2 at 1000W CyberPower > **oltloadcfg index 2 nearover 1000**

Example 4:

To set low load threshold of outlet #10 at 100W CyberPower > **oltloadcfg index 10 lowload 100**

schedule

Description: Show and configure the outlet schedule of device.

Option	Argument	Description
show		Show information of schedule.
guest	1 2 3	Set daisy chain index.
index	1 2 schedule number 10	Select schedule index.
		Add outlet schedule with a schedule name
		and follow the settings step by step.
		The parameters of status
		enable disable
		The parameters of action
		on off reboot delayon delayoff
		delayreboot
		The parameters of outlet
	once daily weekly	1 2 outlet number
odd		The parameters of frequency
add		once daily weekly
		The Parameters of hour
		1 2 3 24
		The Parameters of minutes
		1 2 3 59
		The Parameters of day of week
		Mon Tue Wed Thu Fri Sat Sun
		The parameters of month
		1 2 12
		The Parameters of day

		1 2 3 31
status	enable disable	Modify schedule status
name	<schedule name=""></schedule>	Modify shedule name.
act	on off reboot delayon	Control the action of outlet.
aci	delayoff delayreboot	
time	<hh:mm></hh:mm>	Set schedule time.
date	<mm dd=""></mm>	Set schedule date.
week	Mon Tue Wed Thu Fri Sat	Set schedule week.
WEEK	Sun	
oltnum	1 2 outlet number b1 b2 all	Set the outlet number of schedule.
delete		Delete the schedule.

To display schedules of the device CyberPower > schedule show

date

Description: Show and configure timezone, date format, date, time.

Option	Argument	Description
show		Display system date information
timezone	<time offset="" zone=""></time>	Choose the time zone in GMT (Greenwich Mean Time).
format	mm/dd/yyyy yyyy/mm/dd dd.mm.yyyy mmm-dd-yy dd-mmm-yy yyyy-mm-dd	Set system date format
уууу	<number of="" year=""></number>	Set year of system date by AD.
mm	<number month="" of=""></number>	Set month of system date.
dd	<number date="" of=""></number>	Set day of month.
time	<hh:mm:ss></hh:mm:ss>	Set system time.

Example 1:

To define timezone offset as +08:00

CyberPower > date timezone +0800

Example 2:

To define the date as March 21, 2015

CyberPower > date yyyy 2015 mm 3 dd 21

Example 3:

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To define the time as 13:45:12 CyberPower > date time 13:45:12

ntp

Description: Show and configure NTP server IP, NTP update interval time.

Option	Argument	Description
show		Display all NTP information
access	enable disable	If enable was set, System will set date and time from NTP server.
priip	<primary ip="" ntp="" server=""></primary>	Set the IP address/domain name of primary NTP servers
secip	<secondary ip="" ntp="" server=""></secondary>	Set the IP address/domain name of secondary NTP servers
update	now 1-8760	 now – Choose Update right now to update immediately. 1-8760 – Set the frequency to update the date and time from NTP server.

Example 1:

To enable NTP server define date and time CyberPower > **ntp access enable**

Example 2:

To setup primary NTP server IP as "192.168.26.22"

CyberPower > ntp priip 192.168.26.22

Example 3:

To update time by NTP immediately CyberPower > ntp update now

sys

Description: Show and configure identification of the device.

Option	Argument	Description
show		Display all system information
name	<system name=""></system>	Set name of the equipment.
location	<system location=""></system>	Set the location of power equipment.
contact	<system contact=""></system>	Set the person to contact about this equipment.

		Reboot – Reboot the device
		notcpip-Reset the System to default setting but
reset	reboot notcpip all	reserving TCP/IP settings, and restart it.
		all – Set all to reset the System to default setting and
		restart it.

To view all information of system CyberPower > sys show Name: PDU81001 Location: Server Room Contact: Admainistrator Model: PDU81001 Hardware Version: 1.1 Firmware Version: 1.0.3 Firmware Update Date: 03/08/2015 Serial Number: TALGY2001975 MAC Address: 00-0C-15-00-B9-42

Example 2:

To reset the device to default parameter. CyberPower > **sys reset all**

dst

Description: Show and configure type of Daylight Saving Time.

Option	Argument	Description
show		Display all DST information
		disable – Disable DST.
		us-Tradition US DST
		manual – Manual DST date time rules.
		After finish this command, input start and end time step by
		step.
mode	disable us manual	The parameters of Week of month:
		first second third forth last
		The Parameters of day of week :
		Mon Tue Wed Thu Fri Sat Sun
		The parameters of month :
		Jan Feb Mar Apr May Jun Jul Aug Sep Oct

	Nov Dec

Manual set Daylight Saving Time
CyberPower > dst mode manual
Start time (0~23): 2
Start week of month: second
Start day of week: Sun
Start month: Mar
End time (0~23): 2
End week of month: first
End day of week: Sun
End month: Nov

Example 2:

To view DST setting CyberPower > dst show DST: Manual DST Date Time Start: 02:00, the second Sunday of Mar End: 02:00, the first Sunday of Nov

login

Description: Show and configure authentication for login.

Option	Argument	Description
show		Display all login information
		local – User to login Remote Management Card with
		user name and password that configured in Local
		Account.
		radiuslocal – User to login Remote Management Card
	local radiuslocal	with user name and password for authenticate with
type	radiusonly Idaplocal	RADIUS server first. If the RADIUS server fails to
	Idaponly	respond, the user name and password that configured
		in Local Account will be used.
		radiusonly-User to login Remote Management Card
		with user name and password for authenticate with
		RADIUS server only.

		Idaplocal – User to login Remote Management Card
		with user name and password for authenticate with
		LDAP server first. If the LDAP server fails to respond,
		the user name and password that configured in Local
		Account will be used.
		Idaponly-User to login Remote Management Card
		with user name and password for authenticate with
		LDAP server only.
agaratabraga	<authentication phrase=""></authentication>	The Authentication Phrase used to communicate with
secretphrase		PowerPanel Business Edition Client
		The period (in minutes) that the system waits before
timeout	1~10	auto logging off. The range of argument is from 1 to 10
		(in minutes).

To change authentication type to Radius, Local Account CyberPower > **login type radiuslocal**

admin

Description: Show and configure administrator account and manager IP.

Option	Argument	Description
show		Display all admin information
primip	<primary ip="" manager=""></primary>	Set primary manager IP of admin
coominao	onable I disable	Enable or disable secondary manager IP
secmipac	enable disable	of admin
secmip	<secondary ip="" manager=""></secondary>	Set secondary manager IP of admin
name	<administrator account=""></administrator>	Set user name of admin
passwd	<administrator password=""></administrator>	Set user password of admin
		enable – Secondary administrator
secacctac	enable disable	account active.
Secalulat		disable – Secondary administrator
		account inactive.
secname	<secondary account<="" administrator="" td=""><td>Modify secondary administrator account</td></secondary>	Modify secondary administrator account
Sechame	name>	name
socnasswd	<secondary account<="" administrator="" td=""><td>Modify secondary administrator account</td></secondary>	Modify secondary administrator account
secpasswd	password>	password

Example 1:

To change the primary administrator account information with a single command (need current password)

```
CyberPower > admin name pri_name passwd pri_pass
Input admin password : cyber
pass
```

device

Description: Show and configure viewer account and manager IP.

Option	Argument	Description	
show		Display all viewer account information	
access	enable disable	Enable or disable viewer account	
primip	<primary ip="" manager=""></primary>	Set primary manager IP of viewer account	
secmipac	enable disable	Enable or disable secondary manager IP of viewer	
		account	
secmip	<secondary ip="" manager=""></secondary>	Set secondary manager IP of viewer account	
name	<user name=""></user>	Set user name of viewer account	
passwd	<user password=""></user>	Set user password of viewer account	

Example 1:

To define primary viewer manager IP as 192.168.26.0/24 CyberPower > **device primip 192.168.26.0/24**

oltuser

Description: Show and configure the outlet user.

Option	Argument	Description
show		Show information of outlet user.
index	1 2 outlet user number	Select user index.
add		Add outlet user then input user name/
auu		password/ outlet number appear later on.
status	enable disable	Enable of disable the status of outlet user.
name	<outlet name="" user=""></outlet>	Set the name of outlet user.
passwd	<outlet password="" user=""></outlet>	Set the password of outlet user.
guest	<1 2 3 >	Set daisy chain index.
oltnum	1 2 outlet number b1 b2 all	Seth the outlet number of outlet user.
delete		Delete the outlet user.

Example 1:

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To display configuration of outlet users

CyberPower > **oltuser show**

	Status	User Name	Manageable Outlets
1	Ena	outletuser1	1,2,3,4
2	Disa	outletuser2	g#1-5,6,7,8
3	Ena	outletuser3	1,3,5,7;g#1-2,4,6,8

Example 2:

To disable the outlet user #1

```
CyberPower > oltuser index 1 status disable
```

Example 3:

To set host outlet 1,3,5, guest #1 outlet 2,4,6, and guest #2 outlet 7,8,9 to the outlet user #1 CyberPower > oltuser index 1 oltnum 1,3,5;g#1-2,4,6;g#2-7,8,9

Example 4:

To delete the outlet user #1

CyberPower > oltuser index 1 delete

radius

Description: Show and configure information of RADIUS server.

Option	Argument	Description
show		Display all Radius server information
pri	show	Display primary/secondary Radius server
sec	SHOW	information.
add		Add radius server then input radius server
auu		IP/Secret/Port appear later on.
odd	<server ip=""> <server secret=""></server></server>	Add radius server information including
add	<server port=""></server>	server IP/Secret/Port at one time.
priip	<radius ip="" server=""></radius>	Set the IP address of primary/secondary
secip		RADIUS server.
priport	andius conver ports	Set the UDP port which is used by the
secport	<radius port="" server=""></radius>	primary/secondary Radius server.
prisecret	<radius secret="" server=""></radius>	Set the shared secret of primary/secondary
secsecret		Radius server.
pritype	<radius authentication<="" server="" td=""><td>Set the authentication type of</td></radius>	Set the authentication type of
sectype	type>	primary/secondary Radius server.
pridel		Delete primary/secondary Radius server

secdel	

To view primary radius server information

```
CyberPower > radius pri show
```

Server IP: 192.168.26.33

Server Secret: testsecret

Server Port: 1826

Example 2:

To view secondary radius server information

CyberPower > radius sec show Server IP: 192.168.30.58 Server Secret: testsecret2 Server Port: 1508

Enter the following command to add Radius server information configuration with a single command: radius add <Server IP> <Share Secret> <Server Port><Authentication Type>

For example:

CyberPower > radius add 192.168.203.55 testsecret 150 pap

Note: This single command could not be executed successfully if there are two Radius servers to be set already.

Idap

Description: Show and configure information of LDAP server.

Option	Argument	Description	
show		Display all LDAP server information	
odd		Add LDAP server then input information for	
add		requirements appear later on.	
pritype	anonidan Lad	Set the type of LDAD eenver	
sectype	openIdap ad	Set the type of LDAP server.	
priip	<ldap ip="" server=""></ldap>	Set the IP address of primary/secondary LDAP	
secip	<ldaf if="" server=""></ldaf>	server.	
prissl	anabla I disabla	Enable or disable using LDAPS	
secssl	enable disable	Enable or disable using LDAPS.	
priport	d DAR conver ports	Set the TCP port which is used by the	
secport	<ldap port="" server=""></ldap>	primary/secondary LDAP server.	

pridn		Set the Base DN of primary/secondary LDAP
secdn	< LDAP server base DN>	server.
priaddomain	< LDAP server AD domain>	Set the AD Domain of the primary/secondary
secaddomain	< EDAP Server AD domains	Active Directory server.
priattr	< LDAP server login attribute>	Set the Login Attribute of primary/secondary
secattr	< EDAP server login attribute>	LDAP user entry.
pridel		Delete primery/ecoendary DAB conver
secdel		Delete primary/secondary LDAP server.

To add LDAP Server CyberPower > ldap add Input LDAP Server Type [openldap | ad]: ad Input IP address: 192.168.26.33 Use SSL [enable | disable]: disable Input LDAP port: 389 Input base DN: dc=cyber,dc=com Input login attribute: cn Input AD Domain: cyber.com

Example 2:

To view information about LDAP Server CyberPower > ldap show Primary LDAP Server Type: Windows AD LDAP Server: 192.168.26.33 LDAP SSL: Disable Port: 389 Base DN: dc=cyber,dc=com Login Attribute: cn AD Domain: cyber.com

tcpip

Description: Show and configure IPv4 IP, netmask, gateway, DNS.

Option	Argument	Description	
show		Display all IPv4 information	
dhcp	enable disable	Enable or disable DHCP	
dns	manual auto	Auto-Obtain DNS Address from DHCP when DHCP	

		enable
		Manual-Obtain DNS Address by manual when DHCP
		enable.
ір	<system ip=""></system>	Set IP Address of system
netmask	<system netmask=""></system>	Set netmask of system
gateway	<system gateway=""></system>	Set gateway of system
dnsip	<system dns=""></system>	Set DNS of system

To disable DHCP and define IP address to 192.168.26.33 CyberPower > tcpip dhcp disable ip 192.168.26.33

tcpip6

Description: Show and configure status of IPv6 router control, IPv6 manual IP.

Option	Argument	Description	
show		Display all IPv6 information	
access	enable disable	Enable or disable IPv6 service.	
		The IPv6 address is assigned through the method (Stateless	
routerctrl	enable disable	Address Autoconfiguration, Stateless DHCPv6 or Stateful	
		DHCPv6) which is decided by router setting.	
manual	enable disable	Enable or disable IPv6 manual ip.	
ір	<manual ip="" ipv6=""></manual>	Set manual IPv6 ip.	

Example 1:

To define IPv6 manual IP address then show the information of IPv6

```
CyberPower > tcpip6 ip 2001:cdba:0:0:0:3257:9652 show
Access: Enable
Router Control: Enable
Manual: Enable
Manual IPv6 Address: [2001:cdba::3257:9652]
```

snmpv1

Description: Show and configure status of SNMPv1.

Option	Argument	Description
show		Display SNMPv1 status.
index	1 2 3 4	Select SNMPv1 community index.
set	<1 2 3 4> <community> <ip< td=""><td>Modify SNMPv1 community information.</td></ip<></community>	Modify SNMPv1 community information.

	Address> <readonly readwrite="" th="" ="" <=""><th></th></readonly>	
	forbidden>	
access	enable disable	Enable or disable SNMPv1.
community	<community></community>	Modify SNMPv1 community name.
ір	<ip address=""></ip>	Modify SNMPv1 community IP address.
type	readonly readwrite forbidden	Modify SNMPv1 community type.

To view the second SNMPv1 community information

```
CyberPower > snmpv1 index 2 show
Community: private
IP Address: 192.169.203.20
Type: Read/Write
```

Example 2:

To change the community name of first SNMPv1 community to Public1

CyberPower > snmpv1 index 1 community Public1

Example 3:

```
To change the IP address of third SNMPv1 community to 192.168.203.88
CyberPower > snmpv1 index 3 ip 192.168.203.88
```

Example 4:

To change the community type of forth SNMPv1 community to read/write CyberPower > snmpv1 index 4 type readwrite

Enter the following command to perform all parameters configuration with a single command:

```
snmpv1 set <1 | 2 | 3 | 4> <Community> <IP Address> <readonly | readwrite | forbidden>
```

For example:

```
CyberPower > snmpv1 set 3 CyberPower 192.168.203.91 readonly
```

snmpv3

Description: Show and configure status of SNMPv3.

Option	Argument	Description
Show		Display SNMPv3 status.
Index	1 2 3 4	Select SNMPv3 user index.
	<1 2 3 4> <community> <ip< td=""><td></td></ip<></community>	
Set	Address> <readonly readwrite="" td="" ="" <=""><td>Modify SNMPv3 user information.</td></readonly>	Modify SNMPv3 user information.
	forbidden>	

Access	enable disable	Enable or disable SNMPv3.
Name	<user name=""></user>	Modify SNMPv3 user name.
Status	<enable disable="" =""></enable>	Enable or disable SNMPv3 user.
lp	<ip address=""></ip>	Modify IP address of SNMPv3 user.
Auth	mdE sha popo	Modify authentication protocol of SNMPv3
	md5 sha none	user.
Authkey	<auth key=""></auth>	Modify authentication password of SNMPv3
Aunkey	<autil key=""></autil>	user.
Priv	aes des none	Modify privacy protocol of SNMPv3 user.
Privkey	<priv key=""></priv>	Modify privacy password of SNMPv3 user.

To view the first SNMPv3 user information

CyberPower > snmpv3 index 1 show User Name: CyberPower Status: Enable IP Address: 192.169.30.58 Auth Protocol: MD5 Priv Protocol: aes

Example 2:

To change the user name of second SNMPv3 user to CyberPower CyberPower > snmpv3 index 2 name CyberPower

Example 3:

To enable the-third SNMPv3 user

CyberPower > snmpv3 index 3 status enable

Example 4:

To change the IP address of forth SNMPv3 user to 192.168.203.66

CyberPower > snmpv3 index 4 ip 192.168.203.66

Example 5:

To change the authentication protocol of second SNMPv3 user to md5 and set its authentication password as test_authkey_123456

CyberPower > snmpv3 index 2 auth md5 authkey test_authkey_123456

Example 6:

To change the authentication password of first SNMPv3 user to test_authkey_123456

CyberPower > snmpv3 index 1 authkey test_authkey_123456

Example 7:

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To change the authentication protocol of third SNMPv3 user to none

CyberPower > snmpv3 index 3 auth none

Example 8:

To change the privacy protocol of second SNMPv3 user to aes and set its privacy password as test_privkey_123456

CyberPower > snmpv3 index 2 priv aes privkey test_privkey_123456

Example 9:

To change the privacy password of first SNMPv3 user to test_privkey_123456

CyberPower > snmpv3 index 1 privkey test_privkey_123456

Example 10:

To change the privacy protocol of third SNMPv3 user to none

CyberPower > snmpv3 index 3 priv none

Enter the following command to perform all parameters configuration with a single command:

```
snmpv3 set <1 | 2 | 3 | 4> <User Name> <IP Address> <md5 | sha | none> <Auth Key>
<aes | des | none> <Priv Key>
```

For example:.

```
CyberPower > snmpv3 set 1 CyberPower 192.168.203.90 sha test_authkey_123456 des test_privkey_123456
```

trap

Description: Show and configure information of SNMP trap receiver.

Option	Argument	Description
show		Display trap receiver information.
add		Add trap receiver.
index	1 2 10	Select trap receiver index.
name	<trap name="" receiver=""></trap>	Modify trap name of trap receiver.
ір	<trap ip="" receiver=""></trap>	Modify IP address of trap receiver.
ver	v1 v3	Modify SNMP version of trap receiver.
status	enable disable	Enable or disable trap receiver.
community	Trop Bossiver Community	Modify SNMPv1 community name of trap
community	<trap community="" receiver=""></trap>	receiver.
user	1 2 3 4	Select SNMPv3 user of trap receiver.
test		Trap receiver send test
delete		Delete trap receiver.

To view sixth trap receiver information

CyberPower > trap index 6 show

Trap Name: CyberPower Status: Enable IP Address: 192.168.203.68 Type: SNMPv1 Community: test_community

Example 2:

To change the trap name of second trap receiver to test

CyberPower > trap index 2 name test

Example 3:

To change the IP address of third trap receiver to 192.168.30.85

CyberPower > trap index 3 ip 192.168.30.85

Example 4:

To change the SNMP version of forth trap receiver to SNMPv3

CyberPower > trap index 4 ver v3

Example 5:

To change the fifth trap receiver

CyberPower > trap index 5 status enable.

Example 6:

To change the community name of second trap receiver to CyberPower with the condition that the SNMP version of trap receiver must be SNMPv1.

CyberPower > trap index 2 community CyberPower

Example 7:

To change the SNMPv3 user of tenth trap receiver to SNMPv3 user2 with the condition that the SNMP version of trap receiver must be SNMPv3

CyberPower > trap index 10 user 2

Example 8:

To delete the fifth trap receiver

CyberPower > trap index 5 delete

Enter the following command to add trap receiver configuration with a single command:

For SNMPv1: trap add <Trap Name> <Trap Receiver IP> v1 <Community>

For example:

CyberPower > trap add CyberPower 192.168.203.16 v1 test

For SNMPv3: trap add <Trap Name> <Trap Receiver IP> v3 <1 | 2 | 3 | 4>

For example:

CyberPower > trap add cyberpower 192.168.203.12 v3 3

web

Description: Show and configure web access type, http port and https port.

Option	Argument	Description
show		Display all web information
		http-Enable the access to http service.
access	http https disable	https-Enable the access to https service.
		disable – Disable web service
httpport	abtto ports	The TCP/IP port of the Hypertext Transfer Protocol
httpport <http port=""></http>		(HTTP) (80 by default)
http://www.ant	uhiting north	The TCP/IP port of the Hypertext Transfer Protocol
httpsport	<https port=""></https>	Secure (HTTPS) (443 by default)

Example 1:

To change the HTTP server port to 5000

CyberPower > web httpport 5000

console

Description: Show and configure console network access type, telnet port and SSH port.

Option	Argument	Description
show		Display all console information.
		telnet – Enable the access to Telnet.
access	telnet ssh disable	ssh -Enable the access to SSH.
		disable – Disable console service.
tolpot		enable – Enable Telnet.
telnet	enable disable	disable – Disable Telnet.
	enable disable reset_hostkey	enable – Enable SSH.
aab		disable – Disable SSH.
ssh		reset_hostkey-Reset SSH Hostkey to
		default.
talpatpart		The TCP/IP port (23 by default) that Telnet
telnetport	<telnet port=""></telnet>	uses to communicate.

sshport	assh ports	The TCP/IP port (22 by default) that SSH	
SSIPOR	<ssh port=""></ssh>	uses to communicate.	I

To enable Telnet as console type CyberPower > console telnet enable

Example 2:

To disable SSH as console type CyberPower > console ssh disable

Note: The telnet and the ssh modes are options for switching between each other. For example, the telnet will be automatically disabled once ssh is enabled as console type and vice versa.

Example 3:

To reset SSH Hostkey to default CyberPower > console ssh reset_hostkey

Note: The system will reboot after the SSH Hostkey is reset to default.

ftp

Description: Show and configure FTP access type and TCP/IP port of FTP.

Option	Argument	Description
show		Display all FTP information
access	enable disable	Enable or disable FTP server
port	<ftp port=""></ftp>	The TCP/IP port of the FTP server (21 by default).

Example 1:

To enable FTP service

CyberPower > ftp access enable

eventlog

Description: View and clear the eventlog of the device.

Option	Argument	Description
abow		Displays the list of events and a brief description of each
show		event along with the date and time stamp.
clear		Clear the existing event logs.

Example 1:

CyberPower > eventlog show

12/11/2015 03:32:08 Admin login from 192.168.26.33.

.....

Then use the following keys to navigate the event log.

Кеу	Description
SPACE	View the next page of event log.
Q	Close the event log and return to command line interface.

Example 2:

To clear all event logs.

CyberPower > eventlog clear

```
Do you want to clear all eventlog [yes / no]: yes
```

syslog

Description: Show and configure information of SYSLOG server.

Option	Argument	Description
show		Display all syslog information.
s1		
s2	show	Display syslog server information for 1 to 4
s3	SIOW	servers.
s4		
add		Add syslog server then input syslog server
auu		IP /Port appear later on.
add	<server ip=""> <server port=""></server></server>	Add syslog server information including
auu		server IP/Port at one time.
access	enable disable	Enable or disable syslog.
	kernel user mail system	
	auth1 syslog link news uucp	
facility	clock1 auth2 ftp ntp logaudit	Set Syslog facility.
lacinty	logalert clock2 local0 local1	Set Syslog facility.
	local2 local3 local4 local5	
	local6 local7	
s1test		
s2test		Send test message to Syslog server for 1 to
s3test		4 servers.
s4test		
lp1	<syslog ip="" server=""></syslog>	Set the IP address of Syslog server for 1 to 4
lp2		servers.

lp3		
lp4		
port1		
port2	<syslog port="" server=""></syslog>	Set the UDP port which is used by the
port3	<313LOG server port>	Syslog server 1 to 4 servers.
port4		
s1del		
s2del		Delete Syslog server for 1 to 4 servers.
s3del		
s4del		

To view syslog information of server 1 CyberPower > **syslog s1 show**

IP: 192.168.26.33

Port: 514

Example 2:

To view syslog information of server 2

CyberPower > syslog s2 show IP: 192.168.203.89

Port: 268

Example 3:

To view syslog information of server 3 CyberPower > **syslog s3 show** IP: 192.168.30.15 Port: 101

Example 4:

To view syslog information of server 4 CyberPower > **syslog s4 show** IP: 192.168.26.93 Port: 358

Enter the following command to perform all parameters configuration with a single command:

syslog add <Server IP address> <Server Port>

For example:

CyberPower > syslog add 192.168.203.65 180

Note: This single command could not be executed successfully if there are four Syslog servers to be

set already.

ассу

Description: Show accessory information.

Option	Argument	Description
show		Show information of accessory.

Example 1:

To display general information of accessory

Су	CyberPower > accy show			
	Model	Serial number	HW version	FW version
1	SENV001	TBLMV2000001	1.0	1.0.4
2	SENV001	TBLMV2000002	1.0	1.0.4

envsta

Description: Show environment sensor status.

Option	Argument	Description
show		Show status of environment sensor.
index	1 2 3 8	Select environment sensor index.

Example 1:

To display general status of environment sensor

CyberPower > envsta show

	Name	Location	Temp	Humid
1	Name1	Location1	77.21 F	54.00 %RH
2	Name2	Location2	76.33 F	53.00 %RH

envcfg

Description: Show and set environment sensor configuration.

Option	Argument	Description
show		Show configuration of environment sensor.
index	1 2 3 8	Select environment sensor index.
name	< environment sensor name>	Modify environment sensor name.
location	< environment sensor location>	Set environment sensor location.
temphthres	<high threshold="" value=""></high>	Set high temperature threshold.

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templthres	<low threshold="" value=""></low>	Set low temperature threshold.
temphyster	<hysteresis value=""></hysteresis>	Set temperature hysteresis.
tempchange	<rate change="" of="" value=""></rate>	Set temperature rate of change.
humhthres	<high threshold="" value=""></high>	Set high humidity threshold.
humlthres	<low threshold="" value=""></low>	Set low humidity threshold.
humhyster	<hysteresis value=""></hysteresis>	Set humidity hysteresis.
humchange	<rate change="" of="" value=""></rate>	Set humidity rate of change.
maxminreset	stomp bumids	Reset maximum and minimum record of
maximilleset	<temp humid="" =""></temp>	temperature or humidity.
unit	<celcius fahrenheit="" =""></celcius>	Set temperature unit

Example 1:

To display general configuration of environment sensor

```
CyberPower > envcfg show
```

Na	me l	Location	Tempera [.] [HTH LTH		• •			•
1 Na 2 Na		Location1 Location2	[158 33 [158 33	•		-	· ·	• •

*HTH = High Threshold *LTH = Low Threshold

*HYS = Hysteresis *CAG = Change Rate(per 5min)

Example 2:

To set accessory#1's name as envirname1

CyberPower > envcfg index 1 name envirname1

Example 3:

To set high temperature threshold of the accessory#1 at 70

CyberPower > envcfg index 1 temphthres 70

Example 4:

To reset maximum and minimum record of accessory#1 temperature CyberPower > envcfg index 1 maxminreset temp

Example 5

To set temperature unit as celcius CyberPower > envcfg unit celcius

contactsta

Description: Show contact status.

Option	Argument	Description
show		Show status of contact.
index	1 2 3 8	Select contact index.

Example 1:

To display general status of contact

CyberPower > contactsta show

	name	name	name	name	status
	contact1	contact2	contact3	contact4	[#1 #2 #3 #4]
		.	-		-
1	contact1-1	contact1-2	contact1-3	contact1-4	[x x x x]
2	contact2-1	contact2-2	contact2-3	contact2-4	[x x x x]

*O = Normal *X = Abnormal

contactcfg

Description: Show and set contact configuration.

Option	Argument	Description
show		Show configuration of contact.
index	1 2 3 8	Select contact index.
contact1name	<contact name=""></contact>	Modify contact 1 name.
contact1state	<open closed="" =""></open>	Set contact 1 state
contact2name	<contact name=""></contact>	Modify contact 2 name.
contact2 state	<open closed="" =""></open>	Set contact 2 state
contact3name	<contact name=""></contact>	Modify contact 3 name.
contact3 state	<open closed="" =""></open>	Set contact 3 state
contact4name	<contact name=""></contact>	Modify contact 4 name.
contact4 state	<open closed="" =""></open>	Set contact 4 state

Example 1:

To display general configuration of contact

CyberPower > contactcfg show

Example 2:

To set envirsensor#1's contact 2 name as contact1-2

CyberPower > contactcfg index 1 contact2name contact1-2

menumode

Description: Switch mode as Menu Mode.

exit

Description: Close the connection to the command line interface.

clear

Description: Clear the console screen

Save and Restore Configuration Settings

Option 1: via Web interface

You can easily save and restore the device configuration to your local PC on System > About.

PDU Remote Managemen		inistrator login from 192.168.25.28 😭 [Lo mmary PDU Envir Log	
General	About Information		
Security Network Service Notification	Model Serial Number	PDU81001 123456789011	
Reset/Reboot About	Hardware Version Firmware Version Firmware Update Date	1.0 1.0.5 2017/07/20	
	MAC Address	00-0C-15-40-50-72	
	Save/Restore Configuration		
	Save Configuration Restore Configuration	Save Select File	
		Submit	

To save the configuration file, click "Save" to save the configuration to your local PC. The text file will have a default format of YYYY_MM_DD_HHMM.txt. To restore configuration, click "Browse" to the location of the saved configuration file and click "Submit" to restore a configuration that has been saved earlier.

Option 2: via File Transfer Protocol (FTP)

Note: Only firmware version 1.2.6 and above supports the functionality to download configuration file via FTP.

Use the following steps to save configuration via FTP.

- 1. Open a command prompt window and navigate to "C:\".
- 2. Login to the PDU with FTP command, type
 - C:\>ftp
 - ftp> open 192.168.22.126 21 (for example: 192.168.22.126 is the current IP of the PDU and 21 is the default ftp port for the PDU)
 - Connected to 192.168.22.126.

- 220 CyberPower FTP Server Ready.
- User (192.168.22.126:(none)):cyber
- 331 User name okay, need password.
- Password:
- 230 User logged in, proceed.
- ftp>
- 3. Download the configuration file, type
 - ftp> get <filename>
- 4. Download is complete, type
 - ftp> quit
- **Note:** <filename> is the configuration file with format of .TXT. Maximum length of filename is 32 characters, excluding the file extension(.TXT).

For example: -ftp> get YYYY_MM_DD_HHMM.txt YYYY_MM_DD_HHMM.txt is the configuration file to be saved.

Use the following steps to restore configuration via FTP.

- 1. Open a command prompt window and navigate to "C:\".
- Login to the PDU with FTP command, type
 - C:\>ftp

- ftp> open 192.168.22.126 21 (for example: 192.168.22.126 is the current IP of the PDU and 21 is the default ftp port for the PDU)

- Connected to 192.168.22.126.
- 220 CyberPower FTP Server Ready.
- User (192.168.22.126:(none)):cyber
- 331 User name okay, need password.
- Password:
- 230 User logged in, proceed.
- ftp>
- 3. Upload the configuration file, type
 - ftp> put <filename>
- 4. Upload is complete, type
- ftp> quit
- 5. The system will reboot after you type "quit".

Option 3: Use Secure Copy (SCP) command

Use the following steps to restore configuration via SCP.

Note: Only firmware version 1.1.2 and above supports the functionality to restore configuration via SCP.

For Windows Users:

- 1. Download any PuTTY Secure Copy client (PSCP) utility.
- 2. Save the configuration file and the PSCP Utility in the same folder.
- 3. Open the Command Line Interface and change the path to where the configuration file and the PSCP Utility are saved.
- 4. Enter the following command to restore configuration:

```
pscp -scp <filename> <user>@<IP address of PDU>:
```

Note:

- (1) The SSH setting on the PDU must be Enabled.
- (2) <filename> is the filename of the configuration file with a default format of YYYY_MM_DD_HHMM.txt.
- (3) <user> is the username of the SSH account on the PDU.
- (4) Ensure to add ":" after the IP address.

```
For example:
```

```
pscp -scp YYYY_MM_DD_HHMM.txt cyber@192.168.1.100:
```

Note: YYYY_MM_DD_HHMM.txt is the configuration file to be restored.

- 5. After executing the command, a message may appear asking if you trust the host. To continue type "y" for yes within 10 seconds.
- On the next screen enter the PDU password. Please wait until the progress indicator displays 100%. The system will automatically log out and reboot after the transfer is complete.

For Linux, MacOS and Unix Users:

- 1. Install the related distribution of an SSH or SCP client, for example OpenSSH client.
- 2. Open the Terminal and change the path to where the configuration files are saved.
- 3. Enter the following Command to restore configuration:

scp <filename> <user>@< IP address of PDU>:

Note:

(1) The SSH setting on the PDU must be Enabled.

(2) <filename> is the filename of the configuration file with a default format of Intelligent PDU User Guide

YYYY_MM_DD_HHMM.txt.

- (3) <user> is the username of the SSH account on the PDU.
- (4) Ensure to add ":" after the IP address.

For example:

scp YYYY_MM_DD_HHMM.txt cyber@192.168.1.100:

Note: YYYY_MM_DD_HHMM.txt is the configuration file to be restored.

- 4. After executing the command, a message may appear asking if you trust the host. To continue type "y" for yes within 10 seconds.
- 5. On the next screen enter the PDU password. Please wait until the progress indicator displays 100%. The system will automatically log out and reboot after the transfer is complete.

PDU Network Daisy Chain

The daisy-chain function allows up to four PDUs to be connected together to be monitored and controlled from one IP address.



When PDUs are connected, two roles are defined: Host and Guest. Up to three Guest PDUs can be connected to one Host PDU. The Guest PDUs will be recognized by serial number and their order within the daisy-chain.

Note: To perform the daisy-chain function, the firmware version of the connected PDUs needs to be the same (v1.08 or above).

How to connect the PDUs together?

Use one Ethernet cable and connect one end of it to the daisy-chain (Out) port on the Host PDU and the other end to the daisy-chain (In/ENV) port on the Guest 1 PDU to connect the PDUs (as shown below).



What remote management protocols are supported in PDU daisy-chains?

Currently users can monitor and control daisy-chained PDUs through Web interface (HTTP/HTTPS) or SNMP protocols.

What functions on the Web pages does daisy-chain support?

Please find in below table:

Summary				
	Device Status			
	Outlet Status			
PDU	Device Manager			
FDU	Outlet Manager			
	Outlet Control			
	Outlet Schedule			
	Status Records			
Log	Energy Records			
	Graphing			
System	Identification			

How to switch between Host and Guest PDUs on the Web interface?

Functionality supported by daisy-chained PDUs will have the Host/ Guest # drop down menu displayed on the Web interface (as shown below).

PDU Remote Ma	anagement	Administrator login from 192.188.28.188 🔂 [Logout] Summary PDU Envir Log System Help	Cyber Power
Status Device Outlet Manager Outlet Action Daisy Chain Wake on Lan	Device Status Load Device Load Power Factor Peak Load Energy Utility	0.00 A/ 0 W/ 0 VA 0.00 A (at 2017/06/26 16:30:43) 0.0 KWh (from 2017/06/26 18:30:43)	
EnergyWise PowerPanel [®] List	Voltage Frequency	105.1 V 60.0 Hz	

Can I upgrade the firmware version of the Guest PDUs through the Host PDU?

Yes, you can upgrade the firmware using the Power Device Network Utility 2,

FTP (network connection required), or USB port. Once the Host completes the PDU firmware upgrade, it will trigger its Guest PDUs to upgrade the firmware automatically. It takes about 5 minutes for the Guest PDUs to upgrade, regardless of the number of PDUs in the series.

What will happen if an Ethernet cable is disconnected in the PDU daisy-chain?

For example, if four PDUs are connected and the cable connecting Guest 1 and 2 is disconnected, then Guest 2 and 3 will no longer be detected by the Host PDU.

An event showing that Guest 2 and 3 are removed will be recorded in the Host PDU. Meanwhile,

Guest 2 and 3 will create a new daisy-chain where Guest 2 becomes a Host and Guest 3 becomes Guest 1 to the new Host.



In the above example, if the disconnected Ethernet cable is re-connected, will the role of the PDUs stay the same?

Yes, when the disconnected cable between Guest 1 and 2 is re-connected, Guest 2 and 3 will revert to their previous roles.

What happens if one PDU in the daisy-chain is powered off?

For example, if four PDUs are connected and Guest 1 is powered off, an event showing that Guest 1, 2 and 3 are removed will be recorded in the Host PDU. Guest 2 and 3 will not create another daisy-chain.

Does the Host PDU record the logs of the Guest PDUs and itself? Yes, the Host PDU records the logs from all Guest PDUs daisy-chained to it.

Will the Logs of the Guest PDUs recorded in the Host PDU be cleared if the Guest PDUs are removed from the Host PDU?

No, the Logs of the Guest PDUs will remain even after the Guest PDUs are removed.

Does the Host PDU record the Status Records of the Guest PDUs and itself?

Yes, the Host PDU records the Status Records for all the PDUs in the daisy-chain.

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Will the Status Records of the Guest PDUs logged in the Host PDU be cleared if the Guest PDUs are disconnected from the Host PDU?

Yes, once the Guest PDUs are removed, the Status Records logged in the Host PDU will be cleared. As long as the Host PDU does not connect to other PDUs, the Status Records of the disconnected PDU can be displayed when it is re-connected to the Host PDU. If the Host PDU connects to different PDUs, the Status Records of the removed PDU will be entirely cleared.

Are the Guest PDUs able to connect to the network when they are daisy-chained?

Yes, even when the PDUs are daisy-chained, the Guest PDUs are able to connect to the network directly. Note that a Guest PDU will require having its own Ethernet cable connected to the network.

What will happen if a 5th PDU is added to a daisy-chain?

The maximum number of PDUs that can be connected in one daisy-chain is 4. The daisy-chain functionality will not work until the fifth PDU is removed.

What is the maximum recommended length of the Ethernet cable to daisy-chain the PDUs? 50 ft (15 m)

Troubleshooting

Problem	Possible Cause	Solution
The PDUs are	-The firmware version	Check the firmware
connected but the daisy	does not support daisy	version of each PDU and
chain function is not	chain.	upgrade to v1.08 or
working.	-The PDUs have	above.
	different firmware	
	version.	
I cannot set the	Only the Host PDU	N/A
EnergyWise	supports this function.	
configuration for Guest		
PDUs.		
I cannot set the WoL for	Only the Host PDU	N/A
Guest PDUs.	supports this function.	

Firmware Upgrade

By upgrading the Firmware, you can obtain new features and updates/improvements to existing functionality. To ensure the firmware is kept up to date, please regularly visit our website to see if there is any updated firmware version available. There are three methods for upgrading the PDU firmware. Please follow the instructions below for the method that is appropriate for your application. There are two files to update in order to upgrade the firmware version:

- * cpsmpdumadata_XXX.bin
- * cpsmpdumafw_XXX.bin

Note that the XXX is not part of the file name but is where the version number in the filename is given. Prior to performing a firmware update, please:

- Download the latest firmware from <u>www.cyberpower.com</u>
- Extract the downloaded firmware file to your local "C:\" drive

Note:

- 1. The FTP service needs to be enabled before attempting to execute a firmware upgrade. Please refer to 5.7 FTP Service to make sure that FTP is enabled.
- 2. Please do not turn the PDU off when processing the Firmware upgrade. PDU outlets will remain powered on while the firmware update takes place. Only the PDU LCD screen will reboot.
- 3. The PDU LCD screen will reboot during the firmware update process. This DOES NOT cause the PDU outlets to reboot.

Option 1: Single Device Upgrade via FTP

Use the following steps to upgrade the firmware.

- 1. Open a command prompt window and navigate to "C:\".
- 2. Login to the PDU with FTP command, type
 - C:\>ftp
 - ftp> open 192.168.22.126 21 (for example: 192.168.22.126 is the current IP of the PDU and 21 is the default ftp port for the PDU)
 - Connected to 192.168.22.126.
 - 220 CyberPower FTP Server Ready.
 - User (192.168.22.126:(none)):cyber
 - 331 User name okay, need password.
 - Password:
 - 230 User logged in, proceed.
 - ftp>

- 3. Upload the cpsmpdumadata_XXX.bin, type
 - ftp > bin
 - ftp > put cpsmpdumadata_XXX.bin
- 4. Upgrade complete, type
 - ftp > quit
- 5. The system will reboot after you type "quit". This reboot will take approx. 30 seconds.
- 6. Login to the PDU via FTP again, type
 - C:\>ftp
 - ftp> open 192.168.22.126 21 (for example: 192.168.22.126 is the current IP of the PDU and 21 is the default ftp port for the PDU)
 - Connected to 192.168.22.126.
 - 220 CyberPower FTP Server Ready.
 - User (192.168.22.126:(none)):cyber
 - 331 User name okay, need password.
 - Password:
 - 230 User logged in, proceed.
 - ftp>
- 7. Upload cpsmpdumafw_XXX.bin, type
 - ftp > bin
 - ftp > put cpsmpdumafw_XXX.bin
- 8. Upgrade complete, type
 - ftp > quit
- 9. The system will reboot after you type "quit".

Option 2: Single or Multiple Device Upgrade (recommended)

Use the following steps to upgrade the firmware.

- 1. Install the Power Device Network Utility 2 available for download at www.cyberpower.com
- 2. After installation completes, run the Power Device Network Utility 2.
- 3. Wait for scanning to finish (shown in Figure 1).

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	Copyright © 2022 Cyber Power Systems, Inc. All rights reserved.	

Figure 1.

4. Check the checkbox to select devices listed in the **Operation View** (Shown in Figure 2).

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Figure 2

5. Make sure Account and Password are valid on selected devices (Shown in Figure 3).

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Figure 3.

6. Select Upload Firmware.

7. Click **Browse** to locate and select the firmware and data file to be updated and then click **OK** (Shown in Figure 4).



Figure 4.

8. The upgrade progress bar will show in the lower right **Upload Firmware** window (Shown in Figure 5).

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Figure 5.

9. The result of firmware upgrade will show in Result column (Shown in Figure 6).

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Figure 6.

Note: If you don't want to wait for the firmware upgrade, you can stop the process by clicking Cancel in the lower right Upload Firmware window. However, this is not recommended because the Cancel action may cause the device to malfunction.

Option 3: Use a USB Flash Drive

Use the following steps to upgrade the firmware.

- 1. Download the latest firmware from <u>www.cyberpower.com</u>
- Extract the file to the root directory of a USB flash drive with FAT32 formatting. Please note that the two files below should be available in order to complete the firmware upgrade process: *cpsmpdumadata_xxx.bin
 *cpsmpdumafw xxx.bin
- 3. Plug the USB drive into the PDU USB port and press **Enter** on the PDU LCD screen to enter **Main Menu**. The USB option will be displayed.



- 4. Select USB and press Enter button to enter Firmware Upgrade menu.
- 5. Select Main and Yes to start the upgrade process.



6. The PDU will reboot after the process is completed.

Note: You can check to see if the firmware upgrade is successful by checking the "Firmware version" on the [System->About] webpage. You can also check Firmware Version on LCD screen. Press Enter on the LCD screen to enter Main Menu. Select About and press Enter to see the PDU information. Select Firmware Version to check the PDU Firmware Version.

Option 4: Use Secure Copy (SCP) command

Use the following steps to update the firmware via SCP.

Note: Only firmware version 1.10 and above supports the functionality to update firmware via SCP.

For Windows Users:

- 1. Download any PuTTY Secure Copy client (PSCP) utility.
- 2. Save the firmware files and the PSCP Utility in the same folder.
- Open the Command Line Interface and change the path to where the firmware files and the PSCP Utility are saved.
- 4. Enter the following command to perform the firmware update:

```
pscp -scp <filename> <user>@<IP address of PDU>:
```

Note:

- (5) The SSH setting on the PDU must be Enabled.
- (6) <filename> is the filename of the firmware file. There are two firmware files to upload: cpsmpdumadata_XXX.bin and cpsmpdumafw_XXX.bin. In order to upgrade the firmware version both files need to be uploaded. Only one firmware file can be uploaded at a time, it is recommended to upload the data file cpsmpdumadata_XXX.bin first followed by the firmware file cpsmpdumafw_XXX.bin.
- (7) <user> is the username of the SSH account on the PDU.
- (8) Ensure to add ":" after the IP address.

For example:

pscp -scp cpsmpdumafw_XXX.bin cyber@192.168.1.100:

Note: cpsmpdumafw_XXX.bin is the firmware file of the version being updated.

- 5. After executing the command, a message may appear asking if you trust the host. To continue type "y" for yes within 10 seconds.
- 6. On the next screen enter the PDU password. Please wait until the progress indicator displays 100%. The system will automatically log out and reboot after the transfer is complete.
- 7. Repeat steps 4 through step 6 to upload the firmware file cpsmpdumafw_XXX.bin to complete the firmware update process.
- 8. If the firmware file transfer is unsuccessful you will see an error message. Attempt to retype the command and execute it again.

For Linux, MacOS and Unix Users:

- 1. Install the related distribution of an SSH or SCP client, for example Openssh client.
- 2. Open the Terminal and change the path to where the firmware files are saved.
- 3. Enter the following Command to perform firmware update:
 - scp <filename> <user>@< IP address of PDU>:

Note:

- (1) The SSH setting on the PDU must be Enabled.
- (2) <filename> is the filename of the firmware file. There are two firmware files to upload: cpsmpdumadata_XXX.bin and cpsmpdumafw_XXX.bin. In order to upgrade the firmware version both files need to be uploaded. Only one firmware file can be uploaded at a time, it is recommended to upload the data file cpsmpdumadata_XXX.bin first followed by the firmware file cpsmpdumafw_XXX.bin.
- (3) <user> is the username of the SSH account on the PDU.
- (4) Ensure to add ":" after the IP address.

For example:

```
scp cpsmpdumafw_XXX.bin cyber@192.168.1.100:
```

Note: cpsmpdumafw_XXX.bin is the firmware file of the version being updated.

- 4. After executing the command, a message may appear asking if you trust the host. To continue type "y" for yes within 10 seconds.
- 5. On the next screen enter the PDU password. Please wait until the progress indicator displays 100%. The system will automatically log out and reboot after the transfer is complete.
- 6. Repeat steps 3 through step 5 to upload the firmware file cpsmpdumafw_XXX.bin to complete the firmware update process.
- 7. If the firmware file transfer is unsuccessful you will see an error message. Attempt to retype the command and execute it again.

Contact Information

Feel free to contact our Tech Support department with installation, troubleshooting, or general product questions.

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