

## PWR-RMT-RBT2-515R-LC

2 Port Internet Controllable Power Strip with Power Cycle



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## **Chapter 1: Introduction**

### **1.1. Introduction**

The PWR-RMT-RBT2-515R-LC is a remote internet controllable power strip designed to automatically reset a router when internet connectivity is lost. The unit can power cycle either one or both outlets, allowing ultimate configurability. It also features 2 outlets to allow you to remotely turn on/off up to 2 devices either through a web browser or via the instant messaging tool Google Talk.

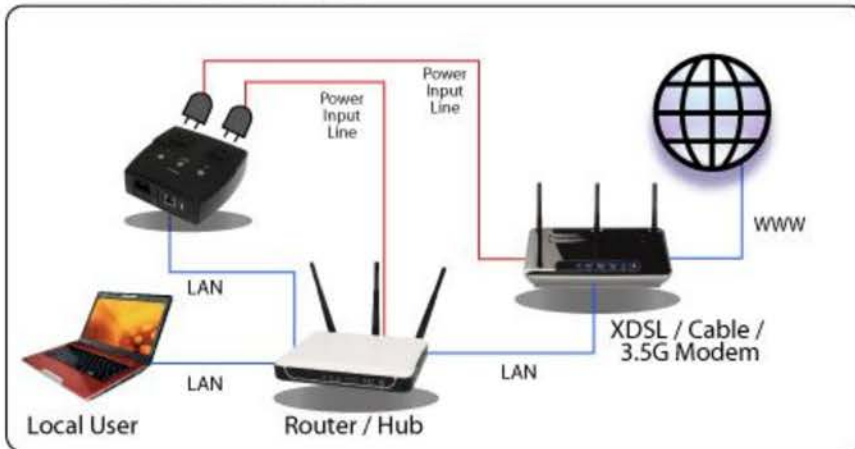
This device is useful when a router needs to be reset due to a connection being dropped. The internet controllable power strip features a powerful internet monitoring feature called UIS that detects when the internet stops working. If it detects the internet is offline, it will automatically reset the router and then afterwards test the network to see if everything is back online. This feature saves the trouble of:

1. Users having to manually power cycle a router when their internet connection is lost.
2. Resetting NAS drives or IP cameras when the device becomes unresponsive.
3. Traveling to a remote site just to reset a device that has lost its connection.
4. Manually turning on/off or resetting a device during a specific time.

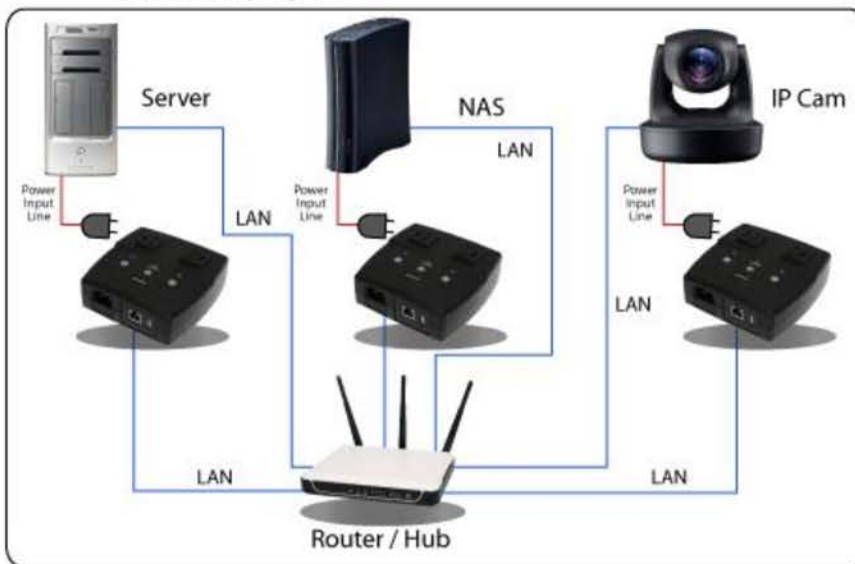
The PWR-RMT-RBT2-515R-LC also allows you to remotely turn on/off up to 2 devices using either a web browser or via the instant messaging tool Google Talk (now updated to Google Hangouts). This device is a perfect complement to routers and devices that need the ability to turn on/off remotely over the internet or need the ability to power cycle automatically when a connection is lost.

## 1.2 Application Diagrams and Working Examples

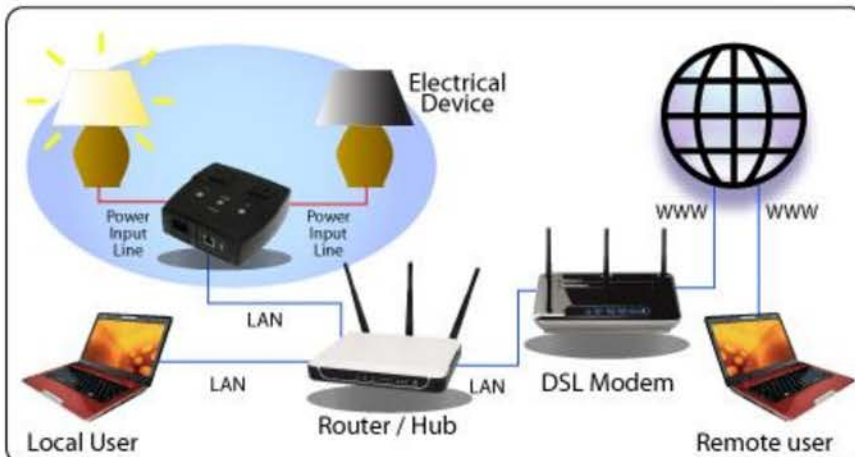
**Usage #1:** Setup to perform automatic reset of router and modem.  
No software setup required.

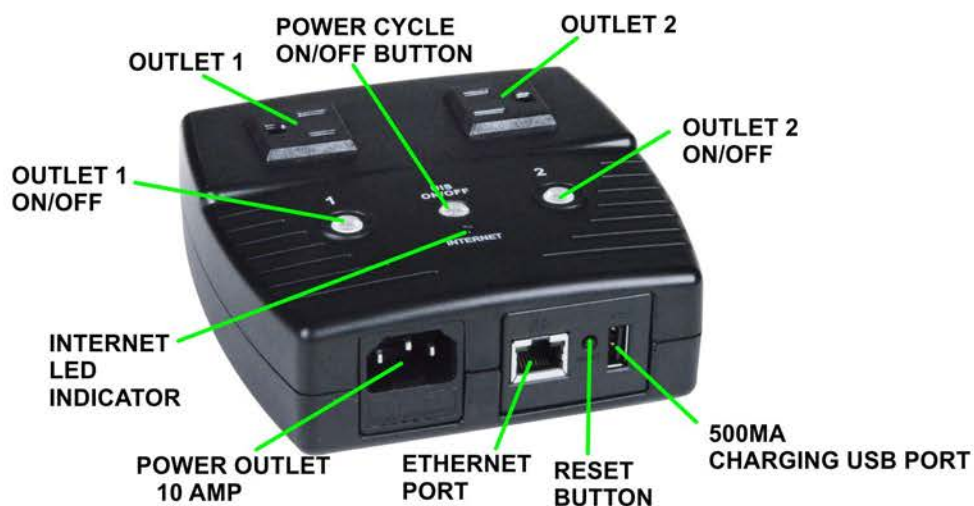


**Usage #2:** Setup as watch-dog to keep internet devices alive.  
Software setup required.



**Usage #3:** Setup to remotely control electrical devices. Software setup required.





### 1.3 Technical Specifications

Plug Type	2 x US sockets
Electrical Rating	10 amp, 100-250V AC (50 / 60Hz)
Available Outlets	2 x fixed
Internet Controllable Sockets	2 x fixed
Power On/Off Switch	Individual outlet power On/Off LED button
Power Indicator	Orange LED
✱ Reset to Factory Default	Long press all 3 LED buttons (approx. 20-30 seconds)
Internet Indicator	Green LED
Web Server CPU	32-bit RISC CPU
Supported Browsers	IE / Java
	HTTP
	TCP/IP
	UDP
	PPPoE
Supported Network Protocols	Dynamic DNS
	DNS Client
	SNTP
	BootP
	DHCP
	FTP
Network Access	10/100 Base-T RJ45
Operating Environment	0°C to 60°C at 10%-90% relative humidity (for indoor use only)
Reset Button	Press to restart the device without cycling power
See * above for resetting to factory defaults.	

## 1.4 LED Information

LED Indicators on Front		
LED	LED Status	Description
Button 1	Orange	Outlet 1 is ON (hold button 2 seconds to turn OFF)
Button 2	Orange	Outlet 1 is ON (hold button 2 seconds to turn OFF)
UIS Button	OFF	Automatic power cycle is OFF (hold button for 2 seconds to turn ON)
UIS Button	Static Blue	Automatic power cycle on (hold button for 2 seconds to turn OFF)
Internet	Static Green	Indicates device is connected to the internet

## Chapter 2: Setting up your Device

### 2.1 Connecting the PWR-RMT-RBT2-515R-LC to your network

Step 1: Connect the power cord to the PWR-RMT-RBT2-515R-LC and then to a wall outlet or power strip.



Step 2: Connect the LAN cable to the PWR-RMT-RBT2-515R-LC and then to a port on your router. The internet LED indicator will blink to show the internet is online. Note: In order to enable the power cycle function, The UIS button needs to be enabled. In order to enable the feature, press and hold the button for 2 seconds. Once enabled, the UIS LED indicator will turn a static blue.





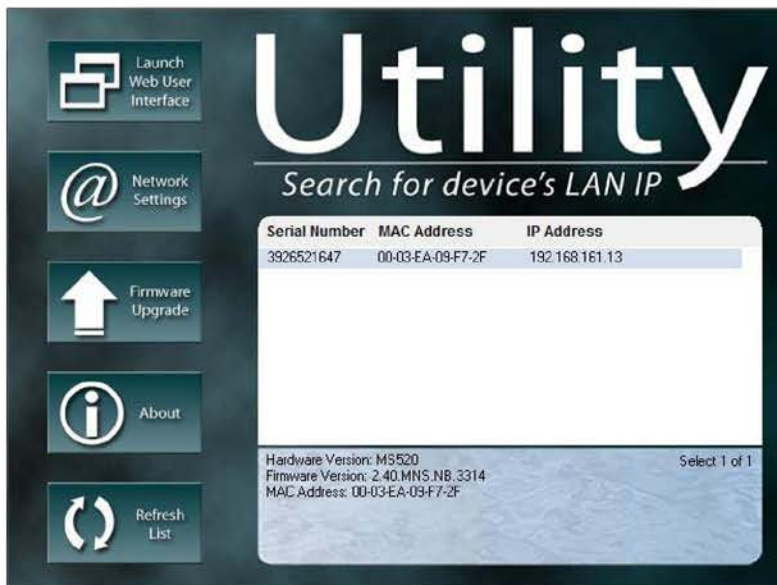
Step 3: Plug in up to 2 devices to the 2 outlets. For power cycling to work for your router, the router will need to be plugged into one of the available ports.



## Chapter 3: Software and Remote Setup

### 3.1 Accessing the UI

To launch the UI, download the Utility application from our [website](#). Install the Utility application and launch the program. From within the program, you can get the current IP for the device if DHCP is enabled. Click on the 'Launch Web User Interface' button to access the UI. To configure a static IP for the device (recommended), click on the 'Network Settings' button and then set a static IP.



### 3.2 Web User Interface

Launch the web user interface by clicking the button. The UI will ask for a login name and password. The default username and password is '**admin**'. Once logged in, a menu will show up on the left hand side, allowing you to configure various settings for the device.

### 3.3 Accessing the Device Remotely

There are two methods to remotely control the outlets:

1. Use Google Hangouts (Formerly Google Talk) or any other IM platform that supports the Google chat protocol.
2. Web user interface (DDNS & Port Forwarding required).

#### 3.3.1 Google Hangouts

The first thing you need to do is obtain a gmail account. You will need at least 2 accounts to talk to and control the PWR-RMT-RBT2-515R-LC. Once the accounts are setup, login in to your gmail account, and make sure the registered names are on the contact list on the left hand menu. If they are not on contact list, invite the gmail account that you want to talk to. **If both gmail accounts are not on each other's contact list, you will not be able to control the device.**

Note: Google has recently changed their security settings for 3<sup>rd</sup> party apps. In order for Google Hangouts to work, you will need to allow less secure apps

<https://www.google.com/settings/security/lesssecureapps>

#### 3.3.2 Google Hangouts Setup on UI

Log into the UI interface and click on the Google Talk button. Set the status to Online. Input the Login ID as the gmail account you want the device to use as the primary account to talk to and then enter the password to that account. Below, input the contact accounts that you will use to talk to the device (e.g. test2@gmail.com will talk to the primary account test1@gmail.com). Click the apply button to save the settings. Once the settings are saved, on the top right hand tab, next to the words Google Account, the device will attempt to sign in to the Google accounts. If successful, a text will display "Signed in / Online."

Status	Login ID	Password
Online	test1@gmail.com	*****

Show a Personal Message for Account

Add Contact Accounts (to access / control the above account)

test2@gmail.com
test3@gmail.com

Send test message

Download Google Hangouts (available on your PC/Mac, Smartphone, Tablet, etc.) and login with your secondary gmail account (e.g. test2@gmail.com or test3@gmail.com). Open your contact list (make sure you already added the primary account and it's showing up in the contact list) and double click on the primary gmail account (test1@gmail.com).

### 3.3.3 IM Commands in Google Hangouts

At this point, you're able to talk to the PWR-RMT-RBT2-515R-LC and start controlling the plugged in devices. Type **"HELLO"** (without quotes) for a list of available commands. The Google Talk account will respond with, **"Please type 'HELP' to list available commands."**

#### Outlet Commands:

SET [ON/OFF/RESET] [0/1/2] (where 0=Both outlets, 1/2=Outlets)

UIS [ON/OFF]

GET [IP/STATUS]

Example 1: SET ON 1 (will turn on outlet 1)

Example 2: UIS OFF (will turn off power cycle)

### 3.3.4 Accessing UI Remotely via DDNS

Login to your router and port forward port 80 or any other port to the IP assigned to the PWR-RMT-RBT2-515R-LC. Next, register for a free DDNS provider for your dynamic WAN IP. This will ensure that when your IP changes, the DDNS provider will keep track of the change and allow you to access your device remotely via an easy to remember name. Input the registered DDNS name in the "Network" menu in the UI. The following DDNS providers are supported:

Dyn.com

myddns.com

zive.org

dhs.org

Once DDNS is setup, you can login anywhere via the name you registered for the DDNS provider (e.g. test1.dyndns.org). Once logged in, you can control the outlets in the "Current Status" menu. Click on the Green buttons in On/Off Control to turn devices on or off.

Note: When you are connected to a local LAN network without connection to the internet, the status (IP Address, Response Time and Timeout values) for the "Target Site" webpages (listed below) will be blank. These will only have values displayed when connected to the internet.

Connection Status				
Target Site	IP Address	Response Time	Timeout	
www.google.com	74.125.239.144	20 ms	0 %	
www.yahoo.com	206.190.36.45	40 ms	0 %	
www.bing.com	205.168.238.16	1 ms	0 %	
www.asic.com	205.168.236.8	1 ms	0 %	
192.168.161.1			0 %	

Status and Control <a href="#">[help]</a>				
Item	Status	On/Off Control		
UIS Function	Enable			
Outlet1	On		<a href="#">Reset</a>	<a href="#">Reset All</a>
Outlet2	On		<a href="#">Reset</a>	



## Use HTTP Script to Control Outlet and Get Status

Use a program of your choice like Java, PHP or Curl to make a packet request via HTTP protocol. This request can also be done via modern web browser by typing in the target URL and entering credentials in the pop up dialog. **Example** URL: 192.168.3.1/control.cgi?outlet=1&command=3

### Control Outlet:

#### Packet Request:

```
"GET" <target> "HTTP/1.1" CRLF
"Host:" <host ip> CRLF
"Keep-Alive: 300" CRLF
"Connection: keep-alive" CRLF
"Authorization: Basic" <auth> CRLF CRLF
      ;auth:encoded account(admin:1234) with base-64
```

#### Request Description:

Target: "control.cgi?<action>"

Action: outlet=<0/1/2>

0 means outlet all,

1 means outlet 1,

2 means outlet 2

command=<0/1/2/3/4/5>

0 means power off,

1 means power on,

2 means power switch(i.e. from On → Off, or from Off → On)

3 means power reset,

4 means UIS on,

5 means UIS off (/4/5 MNS only)

**Example:** control.cgi?outlet=1&command=3(Outcome: outlet 1 reset)

#### Packet Response:

##### XML format:

```
"<?xml version='1.0'?>" "<request>"
"<outlet1_status>"{OUTLET1_STATUS}"</outlet1_status>"
"<outlet2_status>"{OUTLET2_STATUS}"</outlet2_status>"
"<uis_status>"{UIS_STATUS}"</uis_status>" "</request>"
```

#### XML Description:

OUTLET1\_STATUS / OUTLET2\_STATUS / UIS\_STATUS: 0 means off, 1 means on

## Get Status:

### Request:

Target: "outlet\_status.xml"

**XML format:** "<?xml version='1.0'?>" "<request>"  
"<site\_ip>"{SITE1}"","{SITE2}"","{SITE3}"","{SITE4}"","{SITE5}"</site\_ip>"  
"<connect\_status>"{C1\_S}"","{C2\_S}"","{C3\_S}"","{C4\_T}"","{C5\_S}"</connect\_status>"  
"<outlet\_status>"{O1\_S}"","{O2\_S}"</outlet\_status>"  
"<site\_lost>"{S1\_L}"","{S2\_L}"","{S3\_L}"","{S4\_L}"","{S5\_L}"</site\_lost>"  
"<UIS\_fun>"{U\_S}"</UIS\_fun>" "<g\_target1>"{G\_T1}"</g\_target1>"  
"<g\_target2>"{G\_T2}"</g\_target2>" "</request>"

### XML Description:

SITE<n>: (n:number) string: Site  
<n> IP Address.

C<n>\_S: (n:number) digit(unit: millisecond): Site <n>  
response timing.

O<n>\_S: (n:number) digit: 0 means off,  
1 means on.

S<n>\_L: (n:number) digit: Percent  
of ping lost.

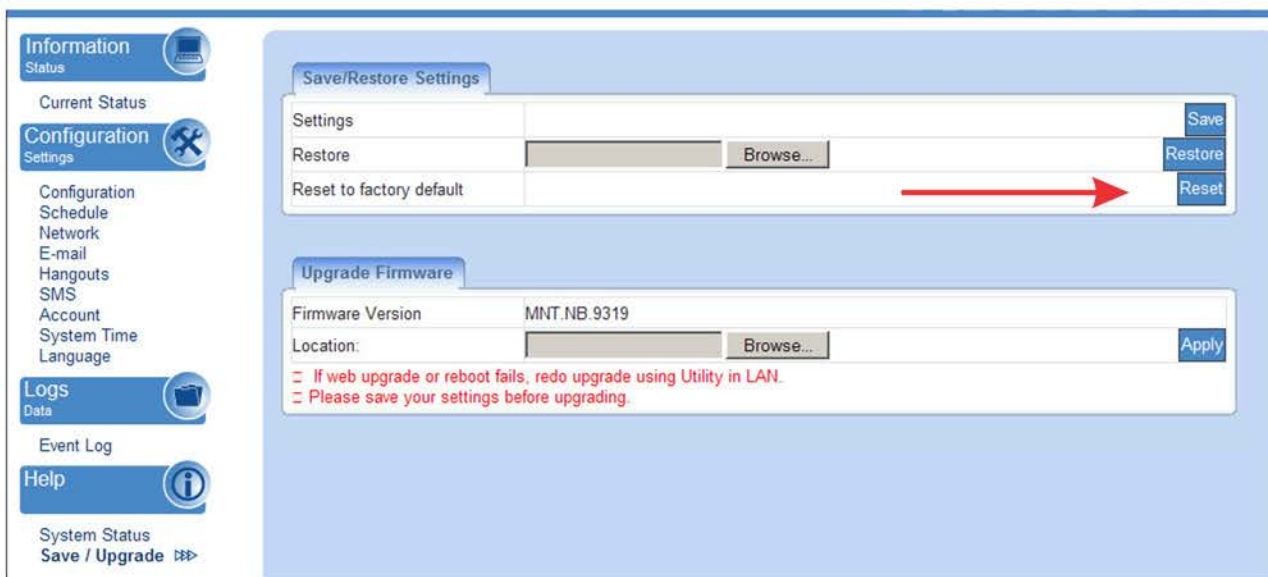
UIS\_fun: digit: 0 means off, 1 means  
on.

G\_T<n>: (n:number) digit: 0 means None, 3 means All, 1 means Outlet1, 2  
means Outlet2

## Chapter 4: Frequently Asked Questions

1. How do I reset the device to factory default settings?

Answer: In the UI, under "Help", click on "Save/Upgrade". Click on "Reset" to the right of "Reset to factory default".



2. What do I do if I forget my password?

Answer: If at any time you lose your password, you will need to reflash the firmware again. This will reset the password back to factory default settings.

3. Should I use a static local IP vs a DHCP assigned IP for the device?

Answer: We recommend using a static IP. The reason why is DHCP will recycle itself after a couple of hours or days (depending on your router), which may cause the device to lose network activity for a brief period of time. For mission critical systems, we recommend setting the device to a static local IP.

4. I can't talk to the device when using the IM feature.

Answer: Make sure your gmail accounts are in the contact list. One way to make sure is to log into your gmail account and check to see if the gmail account is listed on the left hand side.

5. I cannot ping the device.

Answer: When pinging the IP address of the device, if the results indicate "Timeout 100%", it might be necessary to disable the firewall.

## Chapter 4: Frequently Asked Questions (Continued)

### 6. Why do my outlets keep resetting?

Answer: Your outlets will reset automatically if the UIS Reset on the "Current Status" page is set to On (Green) and the repeatability will be determined by the Timeout Settings on the Configuration page (page 13). If you do not want your outlets to reset automatically, set the UIS Reset to Off (Red).

Note: Make sure the IP address for each Target Site is accurate.

**Information**  
Status

**Current Status** >>>

**Configuration**  
Settings

- Configuration
- Schedule
- Network
- E-mail
- Hangouts
- SMS
- Account
- System Time
- Language

**Logs**  
Data

**Event Log**

**Help**

System Status  
Save / Upgrade

---

**Connection Status**

Assign	Site Label	Target Site	IP Address	Response Time	Timeout
Both	Google	www.google.com			
	Yahoo	www.yahoo.com			
	Bing	www.bing.com			
	Ask.com	www.ask.com			
None	Router	192.168.1.1	192.168.1.1	Timeout	100 %

---

**Status and Control**

Item	On/Off Control
UIS Reset	

Assigned outlet will auto reset when target site timeout. Only outlets that are On will reset.

Assigned outlet will not reset when connection loss is detected.

---

**Status and Control**

Outlet Name	Status		Control	
Outlet 1	On			
Outlet 2	On			

Outlet On    Outlet Off    Outlet is On, UIS Reset function is Off



Information

Status

Current Status

Configuration

Settings

Configuration

Schedule

Network

E-mail

Hangouts

SMS

Account

System Time

Language

Logs

Data

Event Log

Help

System Status

Save / Upgrade

Website / IP Address [\[help\]](#)

Assign	Site Label	Website / IP Address	Response Time	Protocol
Both	Google	www.google.com		<input checked="" type="radio"/> UDP <input type="radio"/> TCP
Both	Yahoo	www.yahoo.com		<input checked="" type="radio"/> UDP <input type="radio"/> TCP
Both	Bing	www.bing.com		<input checked="" type="radio"/> UDP <input type="radio"/> TCP
Both	Ask.com	www.ask.com		<input checked="" type="radio"/> UDP <input type="radio"/> TCP
None	Router	192.168.1.1	Timeout	<input checked="" type="radio"/> UDP <input type="radio"/> TCP
None				<input checked="" type="radio"/> UDP <input type="radio"/> TCP
None				<input checked="" type="radio"/> UDP <input type="radio"/> TCP

Heartbeat [\[help\]](#)

Assign
None
When assigned ping function will be disabled.

Timeout within
10 second(s)
1 - 3600 seconds.

Outlet Setup [\[help\]](#)

Outlet 1 Name
Outlet 1
Normal

Outlet 2 Name
Outlet 2
Normal

Power-on delay for Outlet1
3 second(s)
1 - 600 seconds.

Power-on delay for Outlet2
13 second(s)
1 - 600 seconds.

Timeout Settings [\[help\]](#)

Timeout for Each Website / IP Address
5 second(s)
1 - 60 seconds.

Number of Continuous Timeout
4 times
1 - 10 timeouts.

Set Ping Frequency
10 second(s)
10 - 3600 seconds.

Ping Delay After UIS Reset
5 minute(s)
1 - 30 minutes.

Number of UIS Resets
Limited 1 times
1 - 30 times.

Force UIS Reset after initial power-on
Enable

Apply
Reset

### Timeout for Each Website / IP Address:

Determine how long the device should wait for a ping response. A longer timeout allows for delays or response lags from target site.

### Number of Continuous Timeout:

Number of continuous timeout before the UIS reset is triggered.

### Set Ping Frequency:

Determine the ping interval after each successful response or timeout from target sites.

### Ping Delay After UIS Reset:

Set how long the device waits after an UIS Reset event before performing network checks.

### Number of UIS Reset:

Set the number of UIS reset attempts when internet connection is lost.

### Force UIS Reset after initial power-on:

Force the outlets to reset if all target site are unreachable after power-on.  
Use case example: 3G-router boot failure after a black-out.

Resets only outlets that were On (before power off).

1st reset:  $t_0 + 3\text{minutes}$  ( $t_0 = \text{At system ready}$ )

2nd reset:  $t_1 + 5\text{minutes}$

3rd reset:  $t_2 + 7\text{minutes}$

4th onwards:  $t_3 + 10\text{minutes}$  ...

Note: UIS function must be enabled for this to work.