USHA Series
UPS SNMP HTTP AGENT

User's Manual

Version 1.02
Jan., 2020

Electronic Emission Notice

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

CE Notice

This device complies with the EMC directive of the European Community and meets or exceeds the following technical standard:

- EN 55032: 2015+AC: 2016, Class B
- EN 55024: 2010+A1:2015
- EN 61000-3-2: 2014
- EN 61000-3-3: 2013
- AS/NZS CISPR 32: 2015

Safety Information

- All the service of this equipment must be perform by qualified service personnel. Remove rings, watches and other jewelry before servicing the unit

Chapter 1. Introduction

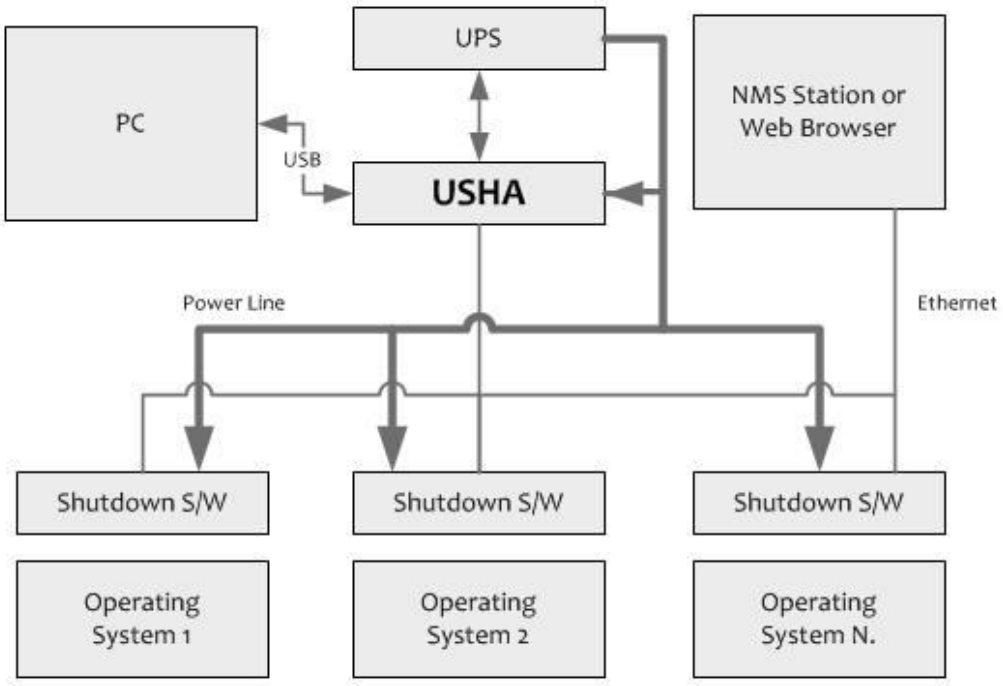
USHA – acronym for UPS SNMP and HTTP Agent. It can get hold of the status from issue commands to the UPS. User can use SNMP managers or Web browsers to manage the UPS through an Ethernet. USHA also provides shutdown programs for different operating systems. It issues a shutdown command in the event such as mains failure, UPS battery low condition, UPS overload, UPS over temperature and scheduled shutdown. All shutdown events are configurable by user. The shutdown software will proceed to the automatic orderly shutdown to prevent the abnormal shut-off of the clients or servers.

1.1. Features

- Real-time UPS health monitoring
- Comprehensive UPS management and flexible configuration via Web Browser, NMS, and SNMP
- Graceful shutdown to protect up to 250 servers/workstations from data loss due to power outage
- Automatic events notification via E-mail, and SNMP Trap
- Regularly records UPS parameters for statistical analysis and event diagnostics
- Environmental Monitoring Device supported
- Standard UPS MIB and USHA-proprietary MIB supported
- Auto-sense to works in the 10/100Mbps fast Ethernet network environment
- WOL function supported
- Radius supported
- Assigned IP automatically via DHCP or BOOTP
- Scheduling shutdown/startup/reboot of UPS via remote control
- Configuration utility simplifies the firmware upgrade process
- IPv4 and IPv6 dual-stake
- SSH and SSL supported

1.2. USHA System Application

The following diagram shows how the USHA SNMP Web Card which can be used in a network application. It supports various kinds of protocol such as SNMP, HTTP…etc. Through the SNMP NMS and Web Browser, user can obtain the UPS status, issue commands of UPS and set up USHA configuration via the network.
USHA also provides shutdown software tool for sending the event notifications to the connected clients. The shutdown software can be installed on various operating systems. It can communicate with the USHA automatically via a proprietary protocol. USHA will issue the shutdown command to shutdown software in the event of AC failure, battery low and scheduled shutdown. Shutdown software will proceed to the shutdown process in order to prevent the abnormal shutoff of host or server.



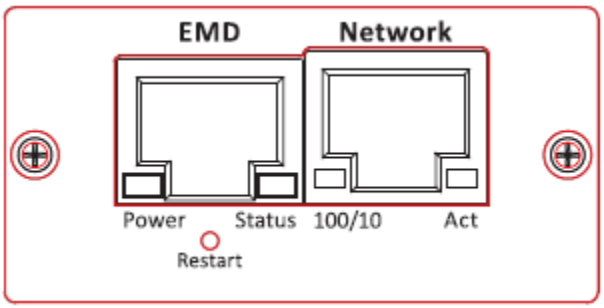
1.3. Package Contents

Please carefully check the USHA SNMP Card and the included accessories. If there is any missing or damaged, please contact your dealer. Should you return the related items and repacked using the original packing materials come with the unit.

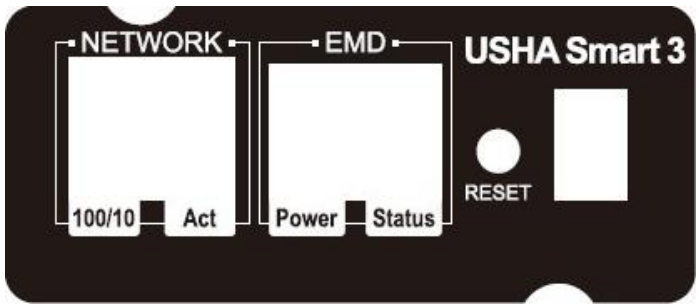
No.	Item	Quantity
1	USHA SNMP Card	1 Piece
2	Mounting bracket	1 Piece
3	Utility CD (Includes Quick Installation Guide/User Manual/MIB File Shutdown Software/Discover Tool)	1 Piece

1.4. Interface of USHA SNMP Card

The interface of USHA SNMP Card includes a Network port, EMD port, and a Restart button as shown below.



Mini GOLD 2



SMART 3

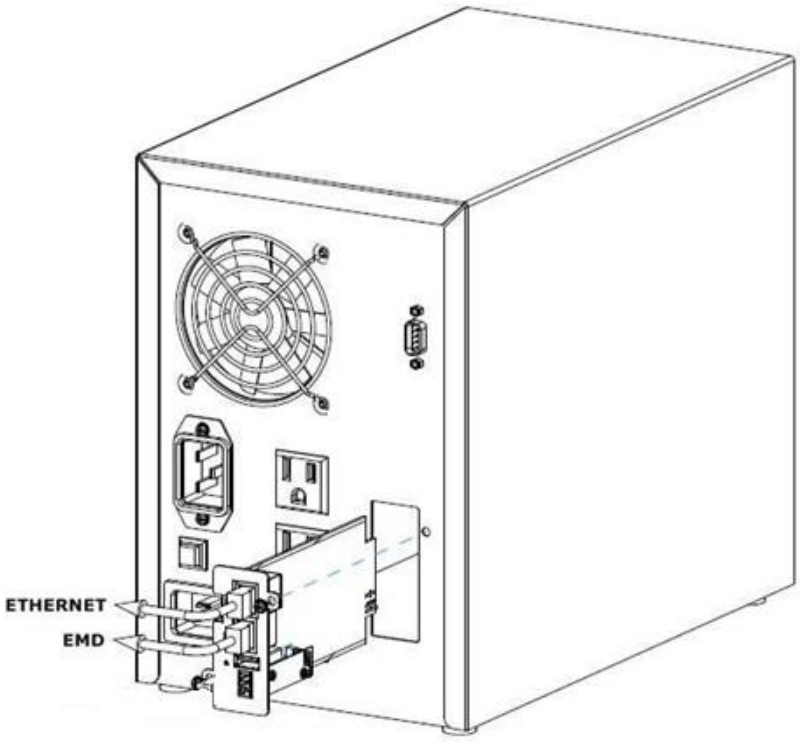
No.	Item	Description
1	Network port	Connects to network. LED indication: LAN 10/100 link, Activity.
2	EMD port	Connects to an environmental sensor (EMD). LED indication: System power, System status.
3	Restart/Reset button	Software restart USHA only. This will not affect the operation of UPS. Restart： 1. Press and hold the restart button for 1~3 seconds：Warm boot. 2. Press and hold the restart button for 3~6 seconds：Reset Administrator Name and Password. 3. Press and hold this restart button for more than 6 seconds：Reset to factory default.
4	Dip Switch (SMART 3)	Able to change the operation mode by the specific FW version; Otherwise, it is always working on the Normal operation mode.

Chapter 2. Installation

2.1. Install the USHA on UPS

Please follow the procedures below to install the USHA Card on UPS **(see Figure2-1)**

Step1. Insert the USHA Card into the UPS slot.
Step2. Lock the screws of the USHA card bracket.
Step3. Procure a workstation (Microsoft Windows 7 or above installed).
Step4. Insert the Ethernet cable into LAN port of USHA card.

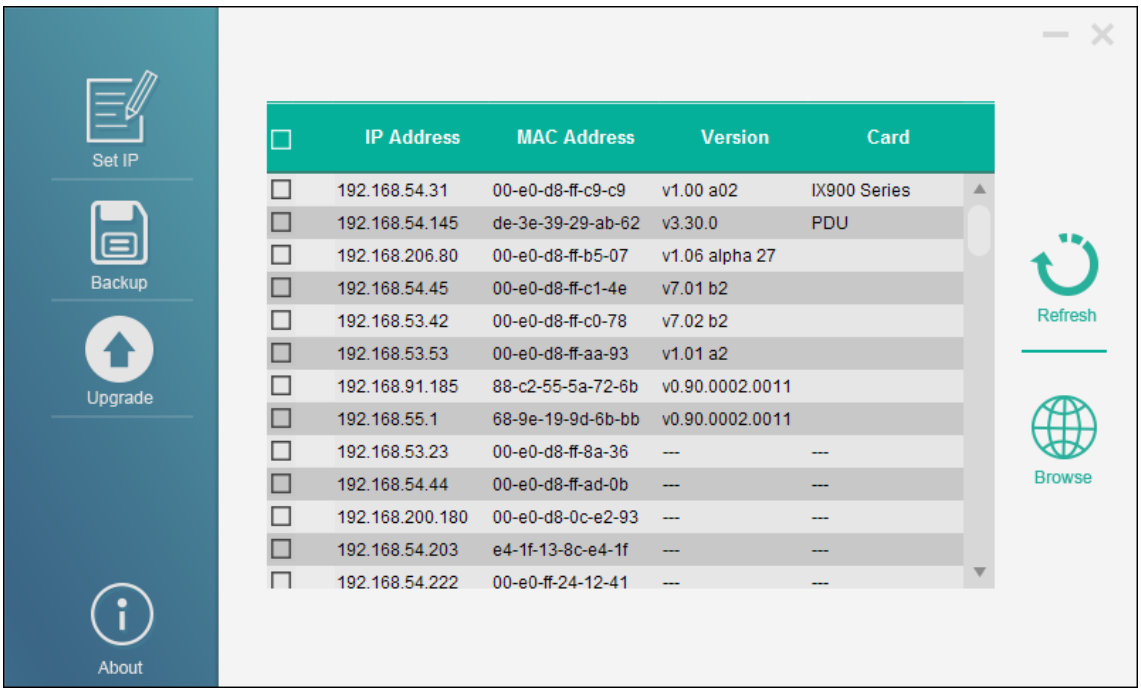


(Figure 2-1: Install the USHA Card on UPS)

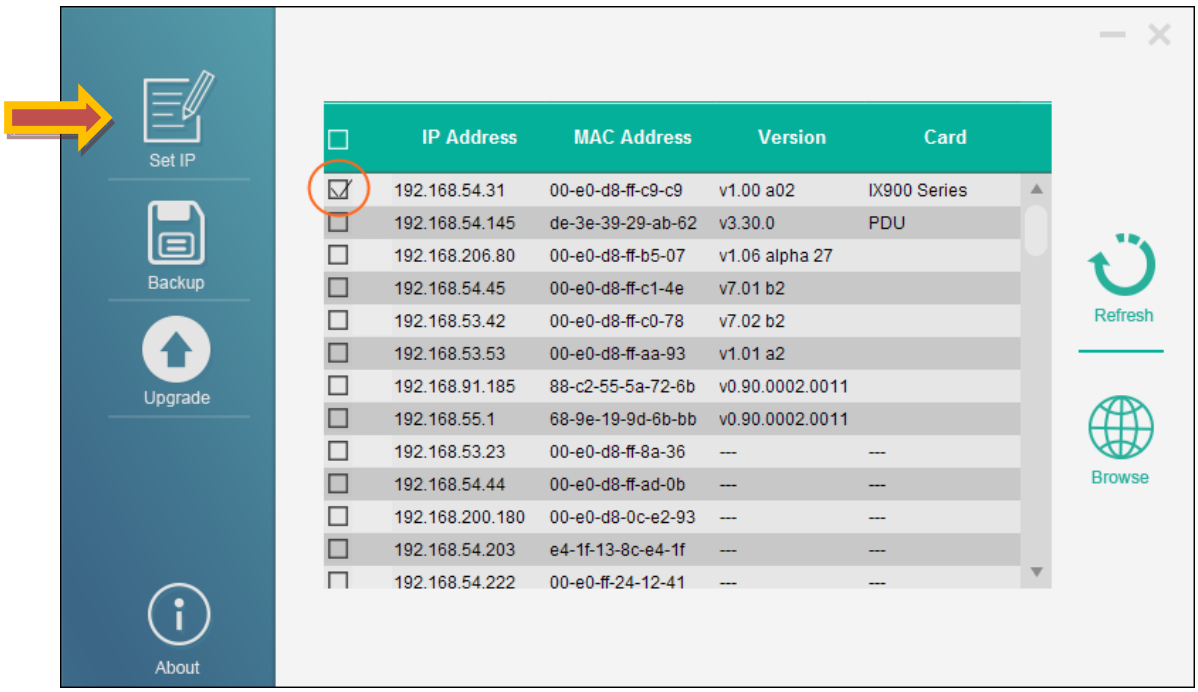
2.2. To find your USHA card by using Upgrade Tool

Step1. Install the Upgrade Tool on your PC
Please find the “USHA FITility v1.xx.exe” in CD contents and install the Upgrade Tool on your PC.

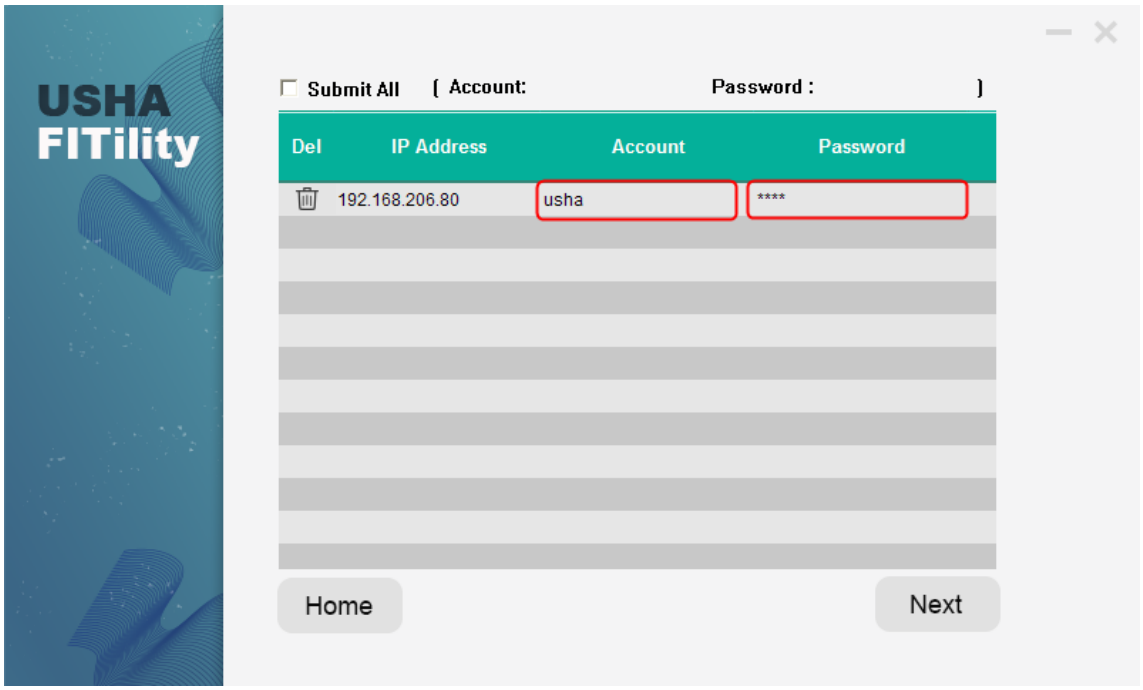
Step2. Execute USHA FITility, USHA FITility will auto discover and list up the devices on your LAN.



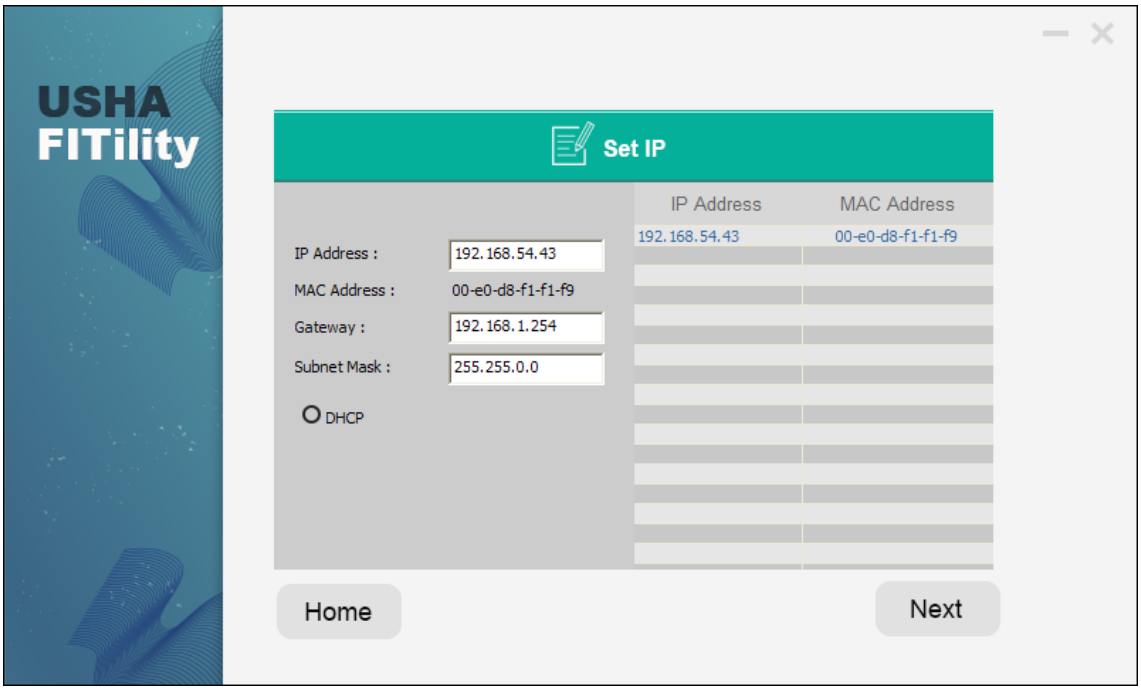
Step3. If necessary, please select the device, then click “Set IP” to change the IP to the same network segment as your LAN.



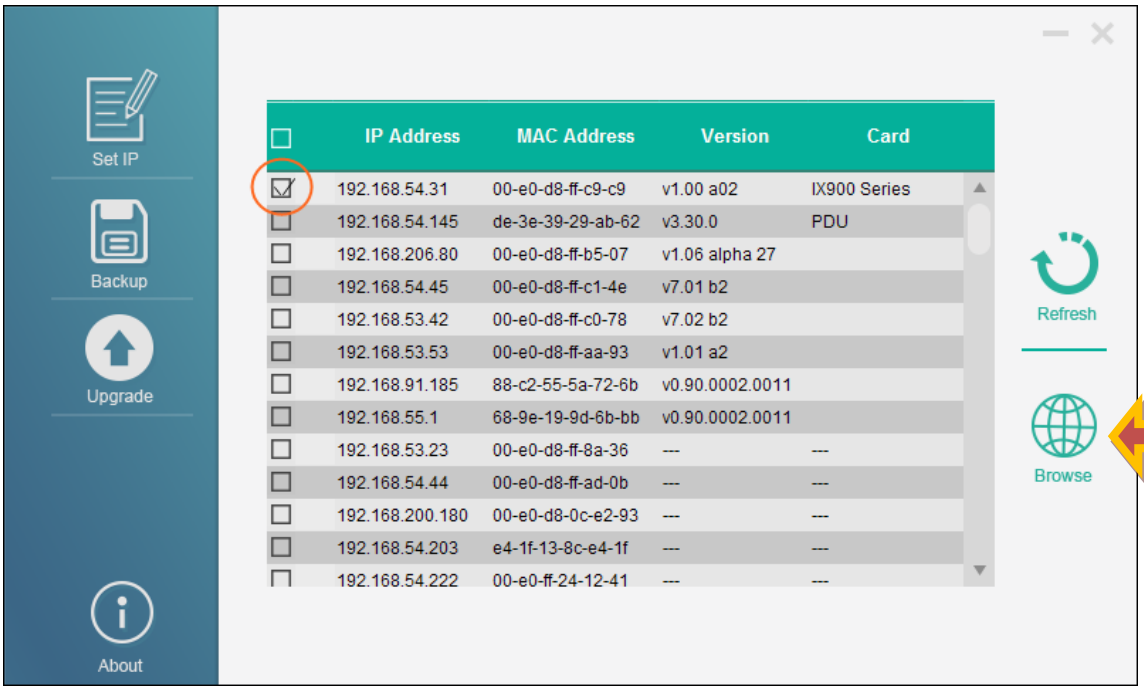
Step4. Input Account and Password (Default: usha/admin).



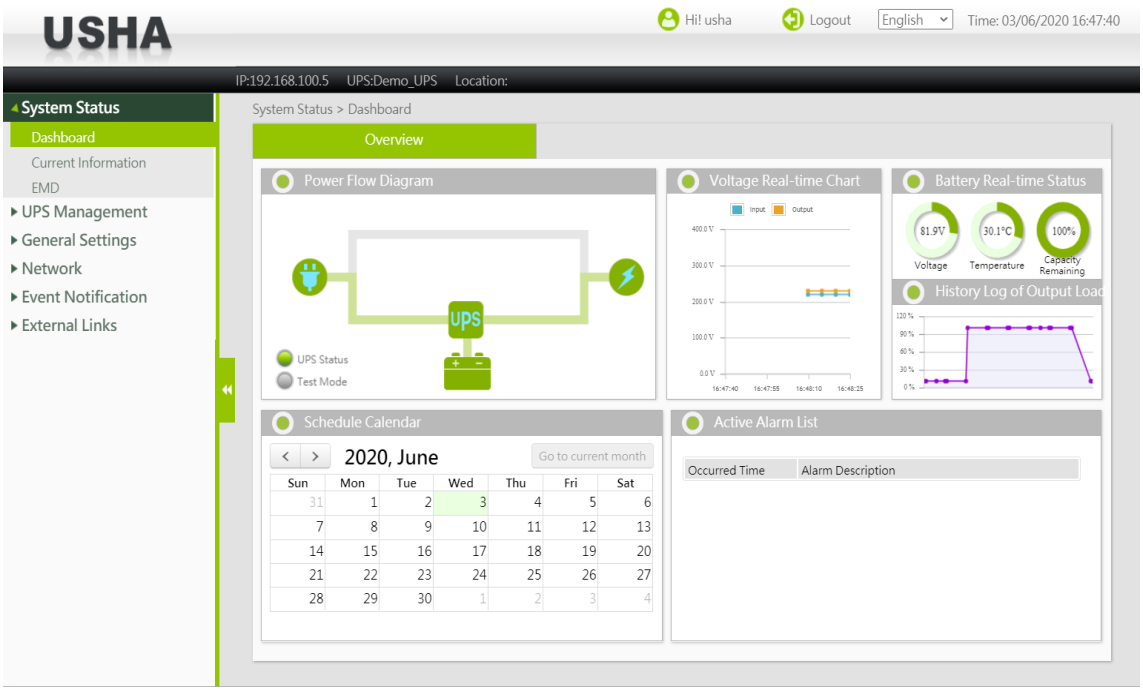
Step5. Input new settings and click “Next” to finish the IP setting.



Step6. Select your device and click “Browse” to open webpage.



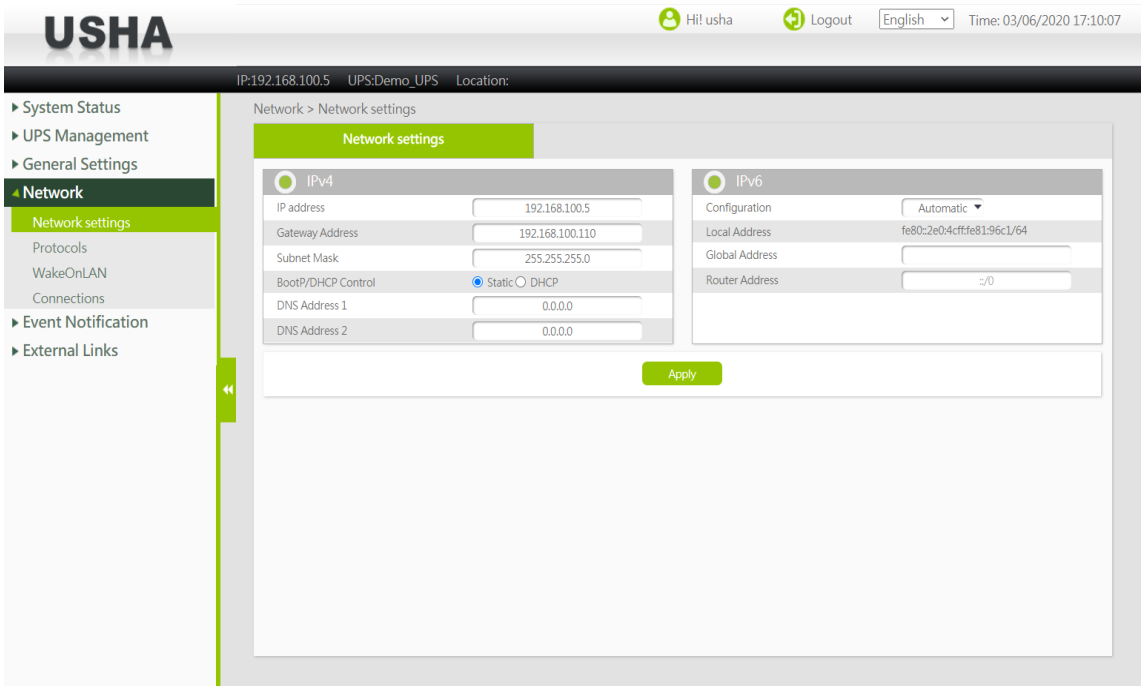
Step7. The browser displays the USHA Dashboard page.



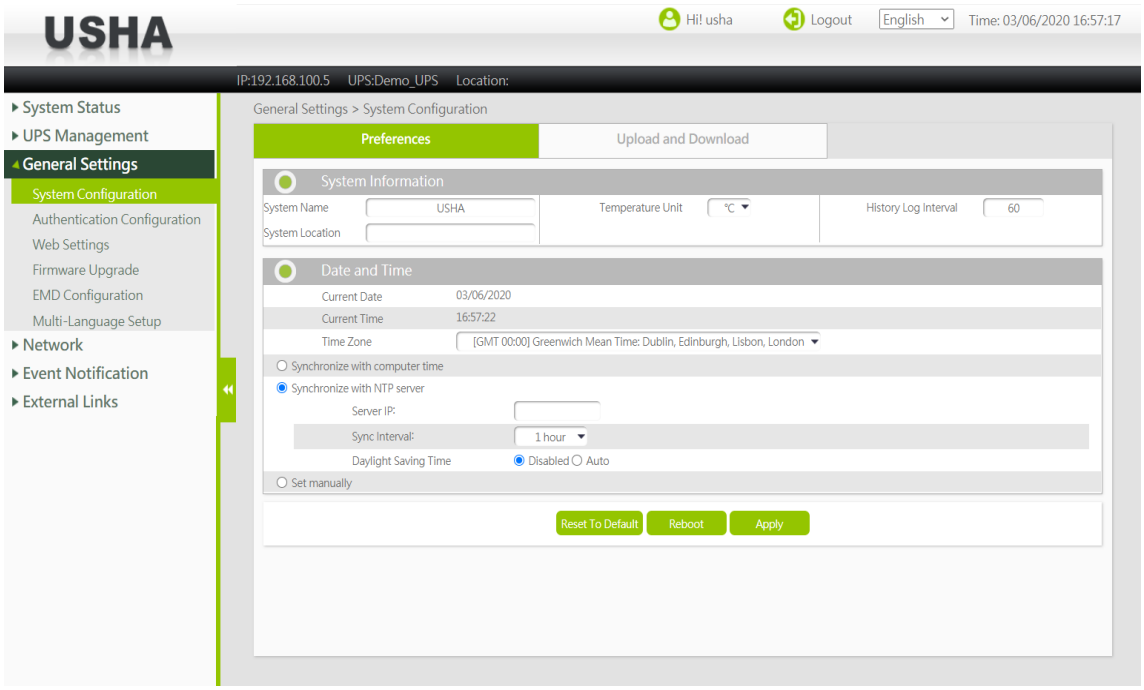
Chapter 3. Configuring with Web Browser

3.1. USHA Initial Configuration

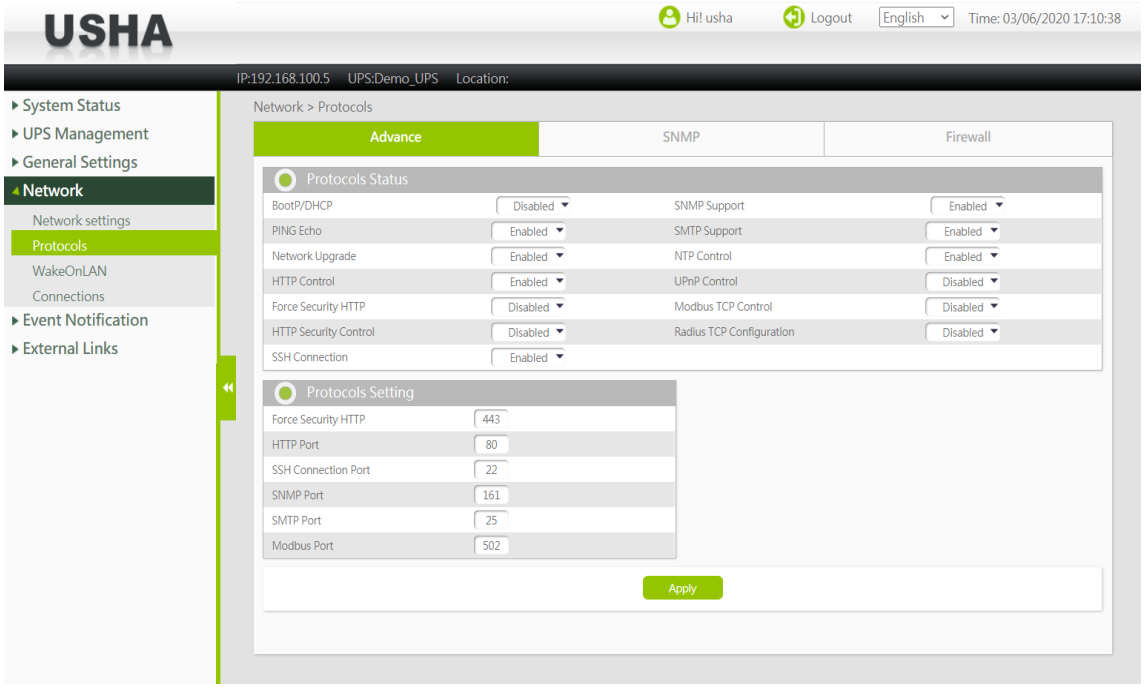
1. Select “Network settings” from “Network” of the main menu to setup the network configuration parameters.



2. Login to become Administrator (default Username: usha ; Password: admin)
3. Enter the USHA IP address.
4. Enter the USHA Gateway Address in the network.
5. Enter the USHA Subnet Mask of the network.
6. Click “Apply” to save the settings.
7. Enter “Date and Time” from General Settings> System Configuration and enter the appropriate date and time information in the specified format.



8. Click “Apply” to save the date and time settings.
9. Select Network > Protocols to enable or disable the network protocols.



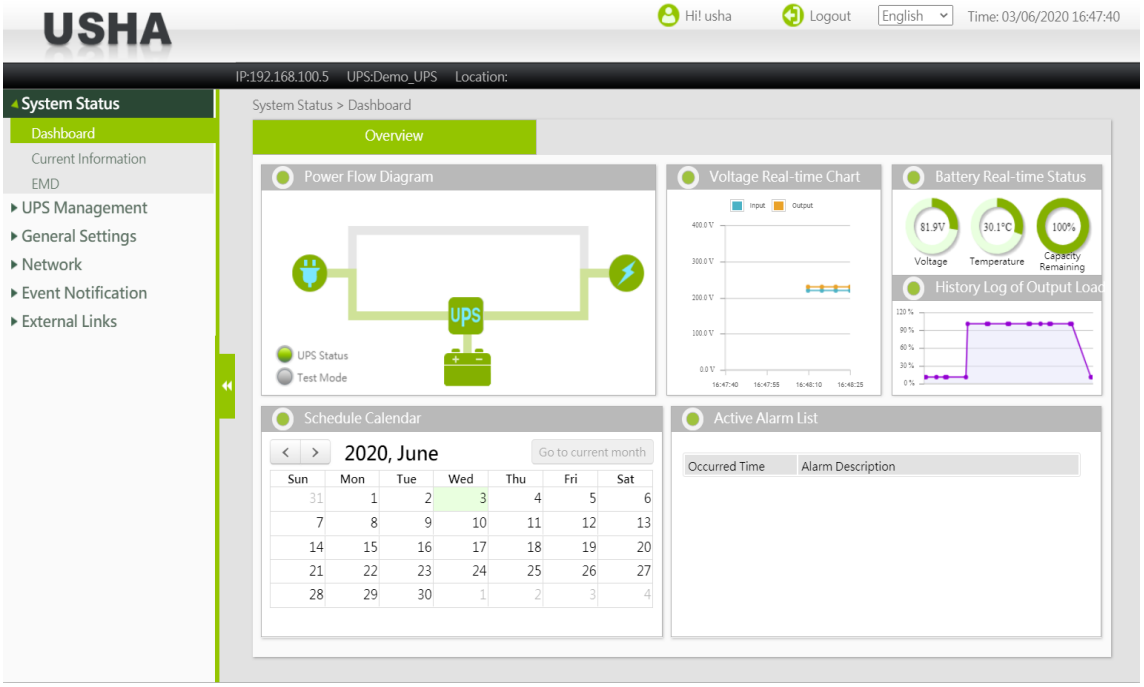
10. Click “Apply” to save the changes.

3.2. System Status Position

In System Status, you can check the real time operating status of the UPS, Schedule, Alarm and other product information.

3.2.1. Dashboard

In Dashboard, You can check the operating status, schedule, and others of the UPS. This page will refresh automatically.



Power Flow Diagram

This area displays the UPS input/output power supply status using a diagram. The most important is the "Operating Status" light at the lower left. If the "Operating Status" light turns yellow or red, please check the "Active Event List".

Voltage Real-time Chart
This chart displays the input/output voltages of the UPS in real-time in graph format.

Battery Real-time Status
Voltage: Displays the voltage of the built-in battery of the UPS.
Temperature: Displays the temperature of the UPS
Capacity Remaining: Displays the rough charged level of the built-in battery of the UPS.

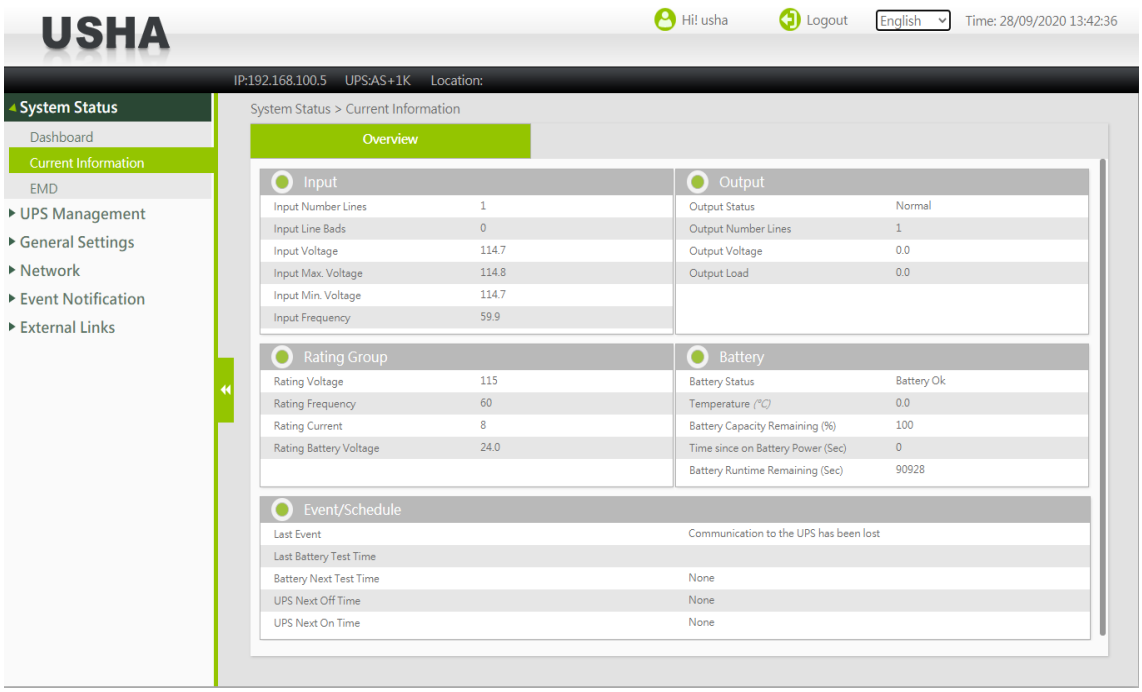
History Log of Output Load
This chart displays the power consumption of the devices connected to the UPS as percentages.

Schedule Calendar
UPS schedules can be checked for each month.

Active Alarm List
This table displays the currently active alarms.

3.2.2. Current Information

You can check the statuses of the UPS and battery, the latest alarm and schedule.



3.2.2.1. Input

Input Voltage
This shows the current input voltage in Volts.

Input Max. Voltage
This shows the max. utility line voltage in Volts.

Input Min. Voltage
This shows the min. utility line voltage in Volts.

Input Frequency
This shows the current input frequency in Hertz.

3.2.2.2. Rating Group

This shows the UPS rating information.

Rating Voltage
This shows the nominal voltage in Volts.

Rating Frequency
This shows the nominal frequency in Hertz.

Rating Current
This shows the nominal current in Amps.

Rating Battery Voltage
This shows the nominal battery voltage in Volts.

3.2.2.3. Output

Output Status
This field shows the status of the output source. Status included "Other", "None", "Normal", "Bypass", "Battery", "Booster" and "Reducer".

Output Voltage
This shows the current UPS output voltage in Volts.

Output Frequency
This shows the current UPS output current in Hz.

Output Load
This shows the current load on the UPS in terms of percentage.

Output Current
This shows the current output Current in Amps.

Output Active Power
This shows the current output Power in Watts.

Output VA
This shows the current output Apparent Power in VA.

3.2.2.4. Battery

Battery Status
The status of the UPS batteries. Battery Status Included: "Battery OK", "Low battery" and "Battery failure".

Temperature
The current internal UPS temperature expressed in °C.

Battery Capacity Remaining
The remaining battery capacity expressed in percent of full capacity.

Time since on Battery Power
The elapsed time in seconds since the UPS has switched to battery power.

Battery Runtime Remaining
The rough remaining battery backup time expressed in seconds.

Battery Voltage
The current battery voltage expressed in Volts.

Current Battery Voltage Per Cell
The current battery voltage of each cell expressed in Volts.

Autonomy Time
The rough autonomy time expressed in hh:mm:ss format.

Battery Live (Year)
The current battery life expressed in Years.

Self-test Result
This shows the test result of the last battery self-test.

3.2.2.5. Event/Schedule

Error Code
Displays the last error code number.

Last Event
Displays the last recorded event.

Last Battery Test Time
Displays the latest date and time a battery test was executed in dd/mm/yyyy hh:mm format.

Battery Next Test Time
Displays the date and time scheduled for the next battery test in dd/mm/yyyy hh:mm format.

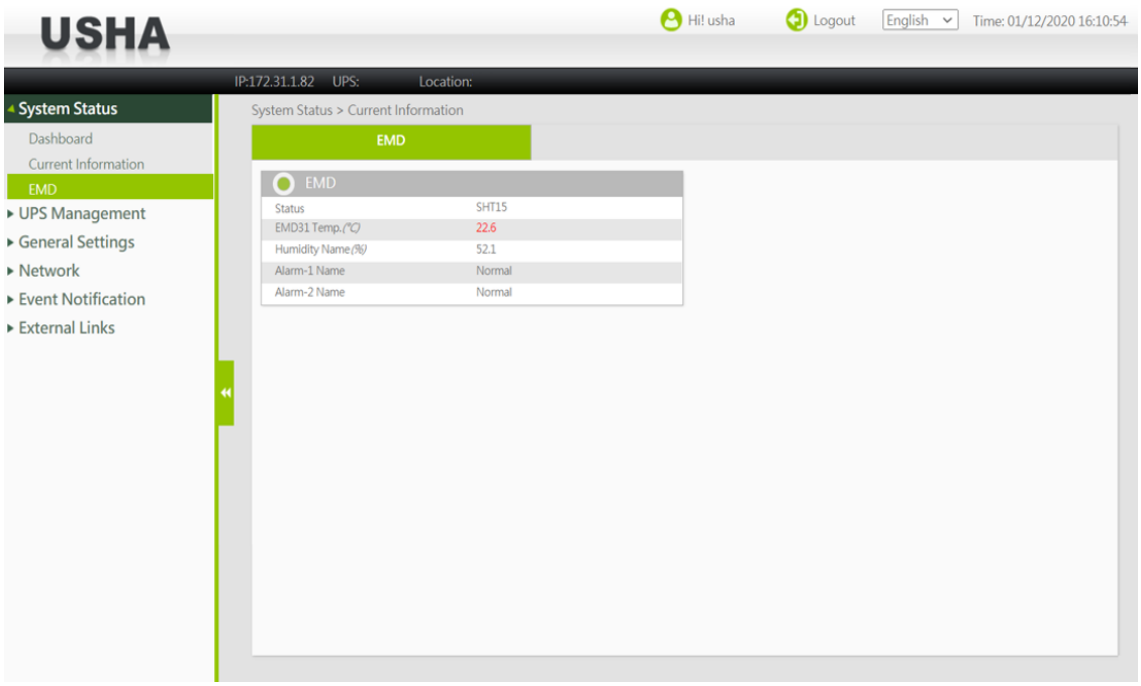
UPS Next Off Time
The date and time that UPS will be turn off according to Weekly or Special Day Schedule.

UPS Next On Time
The date and time that UPS will be turn on according to Weekly or Special Day Schedule.

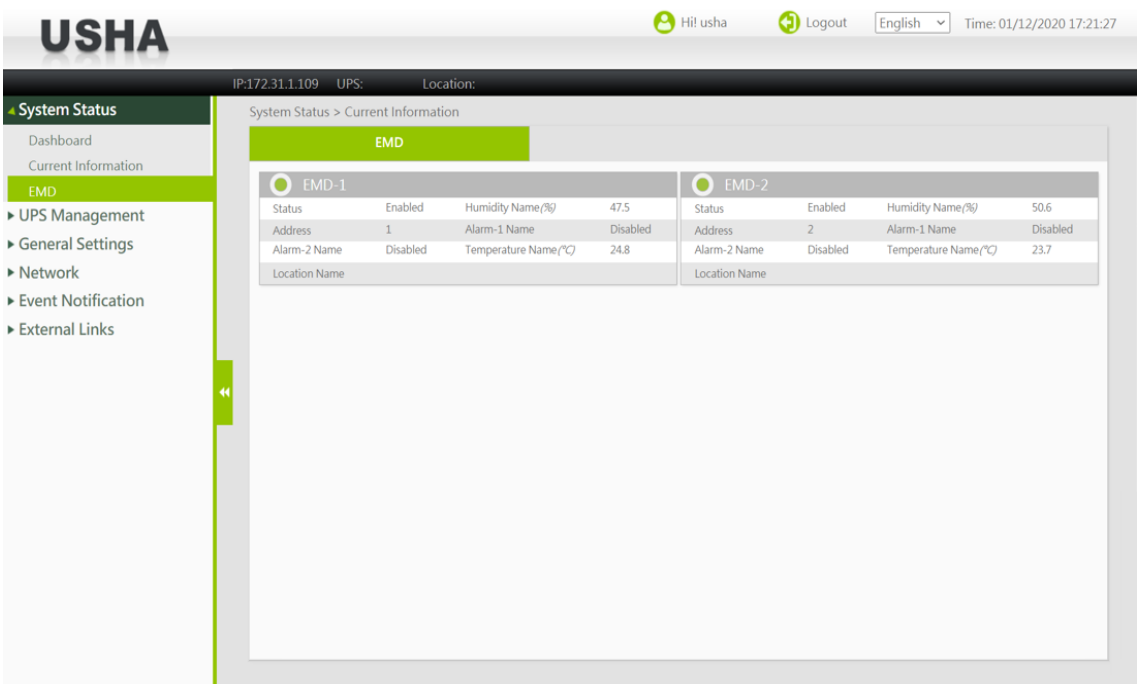
3.2.3. EMD

Environmental Monitoring Device

miniGOLD 2



SMART 3



3.2.3.1. EMD

miniGOLD 2

Status
This shows the EMD status is Enabled or Disabled.

EMDn Temp(°C)
This shows the current temperature measurement of the EMD expressed in °C.

Humidity Name(%)
This shows the current humidity measurement of the EMD expressed in percentage.

Alarm -1 / 2 Name
This shows the current status (alarm or normal) detected from the sensor which attached to the EMD.

SMART 3

Status
This shows the EMD status is Enabled or Disabled.

Humidity Name(%)
This shows the humidity sensor name and current humidity measurement of the EMD-n.

Address
This shows the EMD RS485 Address.

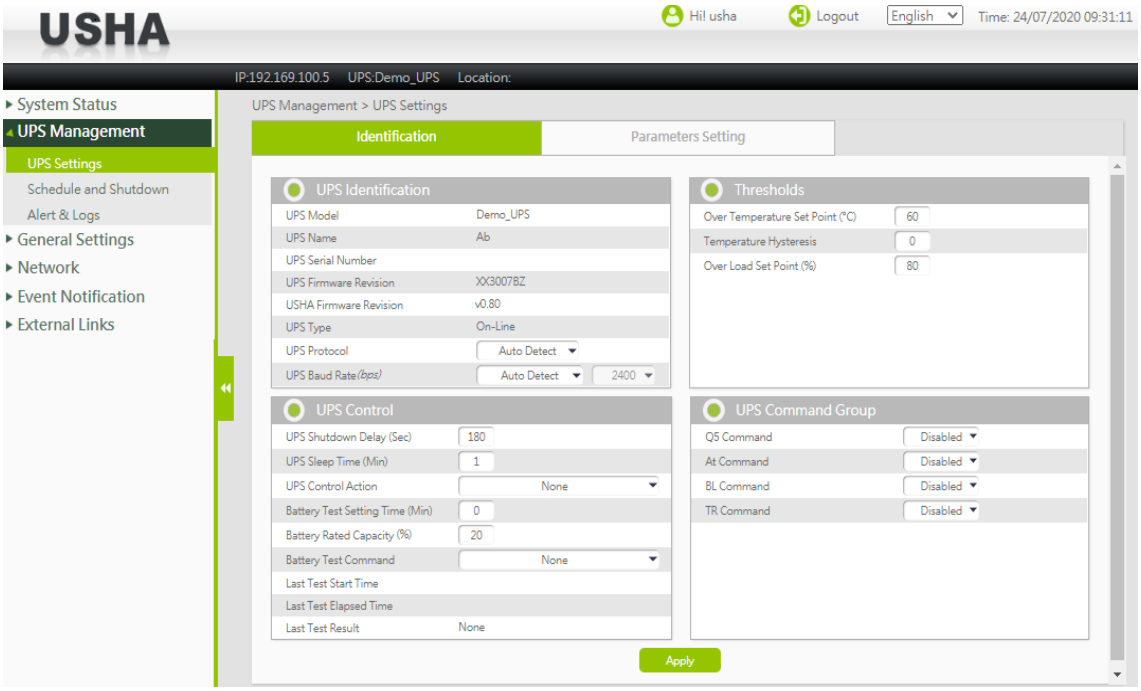
Alarm-n Name
This shows the current status (alarm or normal) detected from the sensor which attached to the EMD.

Temperature Name(°C)
This shows the temperature sensor name and current temperature measurement of the EMD-n.

Location Name
This shows the location of EMD-n.

3.3. UPS Management

3.3.1. UPS Settings



3.3.1.1. UPS Identification

This page lets you get all the UPS information.

UPS Model
The UPS model name (e.g. 'Intelligent 8000E 900VA').

UPS Name
This is the name of the UPS configured by Administrator.

UPS Serial Number
The serial number of the UPS.

UPS Firmware Revision
The firmware revision of the UPS.

USHA Firmware Revision
The firmware revision of USHA.

UPS Type
Type of UPS. This can be either On-line, Off-line, Line-Interactive, 3 Phase or Other.

UPS Protocol
This lets user to choice the UPS protocol by Auto detect or Manual setting.
*Only for some models

UPS Baud Rate
This lets user to choice the UPS Baud Rate by Auto detect or Manual setting.
*Only for some models

3.3.1.2. UPS Control

This page let you perform control such as stopping/starting the UPS and running a battery test.

UPS Shutdown Delay (Sec)
The delay in seconds the UPS remains on after being told to sleep. The UPS shutdown delay time will be count-down synchronize to the shutdown delay time set in the Shutdown Program in all connected clients. To avoid improper shutdown of the clients, the UPS shutdown delay time set in USHA should always be greater than the shutdown delay time set in the Shutdown Program.

UPS Sleep Time (min)
The time in minutes for the UPS to go to sleep when instructed. When in Sleep mode, the UPS will not provide output power regardless of the input line state. Once the specified time has elapsed, output power will be restored.

UPS Control Action
Turn Off UPS with Delay Setting "Turn off UPS with Delay" causes the UPS to turn off after a delay of UPS Shutdown Delay time. The output power can be restored by the Turn on UPS/Cancel UPS Shutdown option.

UPS Sleep
Setting "UPS Sleep" causes the UPS to go to sleep for the time specified by UPS Sleep Time after the delay time as configured in UPS Shutdown Delay. When in sleep mode, the UPS will not provide output power. Once the specified time has elapsed, UPS will provide output power.

Turn On UPS/Cancel UPS Shutdown
Setting "Turn On UPS/Cancel UPS Shutdown" causes the UPS to cancel any on-going shutdown process. If the UPS has already shutdown, then it cancels the sleep command and brings back the output power.

Switch to Bypass
Setting "Switch to Bypass" causes the UPS to transfer to the bypass mode immediately. The output voltage will directly power from utility.

Switch to Inverter
Setting "Switch to Inverter" causes the UPS to transfer to the line mode immediately.

Turn On/Off Beep
Setting "Turn On/Off Beep" allows the buzzer turn on or off.

Turn Off UPS (AC Fail)
Setting "Turn Off UPS (AC Fail)" causes the UPS turn off when the AC fail occur.

Battery Test Setting Time (min)
This shows the total time for the battery test when Timed Test has been selected in the Battery Test Command menu.

Battery Rated Capacity (%)
This shows the rated capacity for the battery test when Test Until Battery Rated Capacity has been selected in the Battery Test Command menu.

Battery Test Command
None - No action
Quick Battery Test -Perform battery test for a short time
Test Until Battery Low - Perform battery test until battery low.
Timed Test - Perform the battery test for the period set in the Battery Test Setting Time menu.
Test Until Battery Rated Capacity - Perform the battery test for the rated capacity set in the Battery Rated Capacity menu.
Cancel Test - Cancel the battery test.
Clear Test Information - Clear the last battery test information recorded by USHA.

Last Test Start Time
This shows the start time of the last battery test.

Last Test Elapsed Time
This shows the elapsed time of the last battery test.

Last Test Result
This shows the test result of the last battery test.

3.3.1.3. UPS Command Group

These commands shown below allow user to set the supported command for the UPS.

Q5 Command
This command is only available in the Basic communication protocol. Enable/Disable the Q5 command. If the Q5 command is enable, the following status will be shown. If the UPS does not support Q5 command, the related information will show N/A on the display.
Examples of Q5 command status:
[System Status] → [Current Information] page
"Output": Output Frequency, Output Current, Output Active Power, Output VA
"Battery": Battery Voltage, Current Battery Voltage Per Cell
"Event/Schedule": Error Code
[UPS Management] → [Alert & Logs] → [History Log] page
“History Log ": Output Frequency, Output Current, Output Active Power, Output VA

At Command
This command is only available in the Basic communication protocol. Enable/Disable the At command. If the At command is enable, the following status will be shown. If the UPS does not support At command, the related information will show N/A on the display.
Examples of At command status:
[System Status] → [Current Information] page
"Battery": Autonomy Time

BL Command
This command is only available in the Basic communication protocol. Enable/Disable the BL command. If the BL command is enable, the following status will be shown. If the UPS does not support BL command, the related information will show N/A on the display.
Examples of BL command status:
[System Status] → [Current Information] page
"Battery": Battery Live

TR Command
This command is only available in the Basic communication protocol. Enable/Disable the TR command. If the TR command is enable, the following status will be shown. If the UPS does not support TR command, the related information will show N/A on the display.
Examples of TR command status:
[System Status] → [Current Information] page
"Battery": Self-test Result

Programmable Outlet Command
Enable/Disable the Programmable Outlet command. If the Programmable Outlet command is enabled, the following status will be shown. If UPS does not support Programmable Outlet command, the related information will not be displayed.
Examples of Programmable Outlet command status:
[UPS Management] → [UPS Settings] → [Programmable Outlet] page
"Programmable Outlet": Programmable Outlet, Program Outlet 1, Program Outlet 2

3.3.1.4. Thresholds

This lets you set the temperature and load threshold point for the UPS.

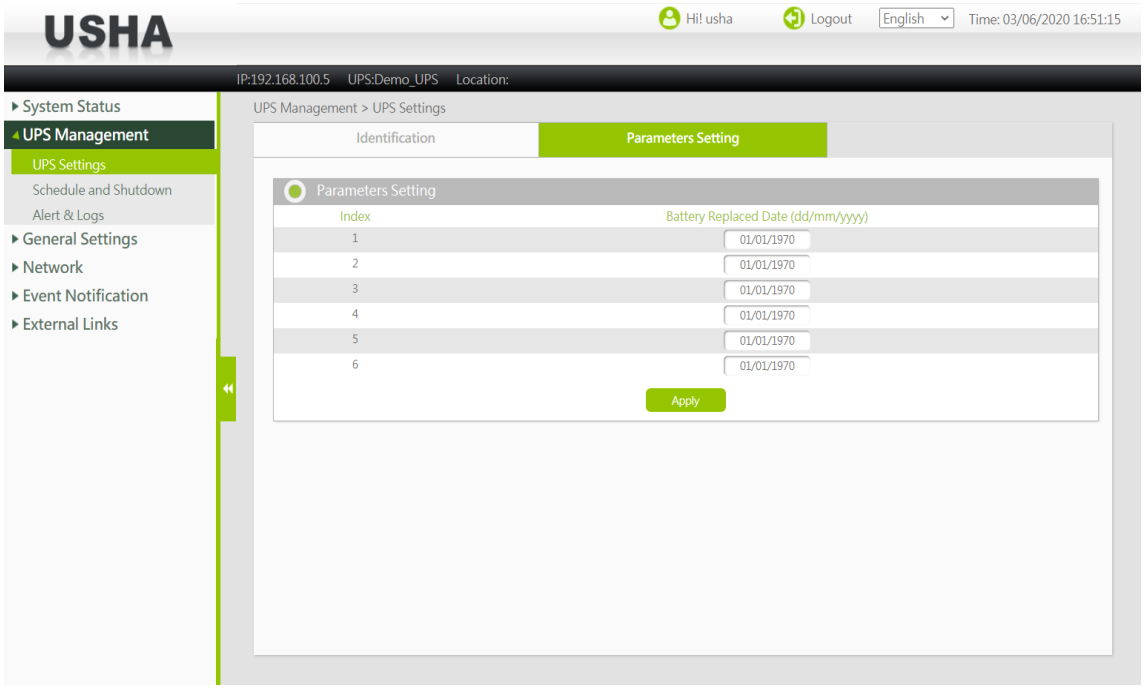
Over Temperature Set Point
Set the upper limit of UPS temperature. When UPS temperature exceed this limit , USHA will take action that is specified in the UPS Shutdown menu. (10~100)

Temperature Hysteresis
The temperature value may drift when it approaches the upper or lower limit as set by the user. Without hysteresis, when the temperature fluctuates around the set limit, it may trigger the generation of multiple alarm notifications. The hysteresis setting defines the number of degrees the measured value must change before the alarm clears. For example, if the temperature upper limit is set to 60 degrees and the hysteresis is set at 2 degrees, then the alarm will trigger at 60 degrees, but will not clear until the temperature drops below 58 degrees. The default hysteresis setting is 0 degrees Celsius.(0~20)

Over Load Set Point
Set the upper limit of UPS output load. When UPS output load exceed this limit, USHA will take action that is specified in the UPS Shutdown menu. (0~150)

3.3.1.5. Parameters Setting

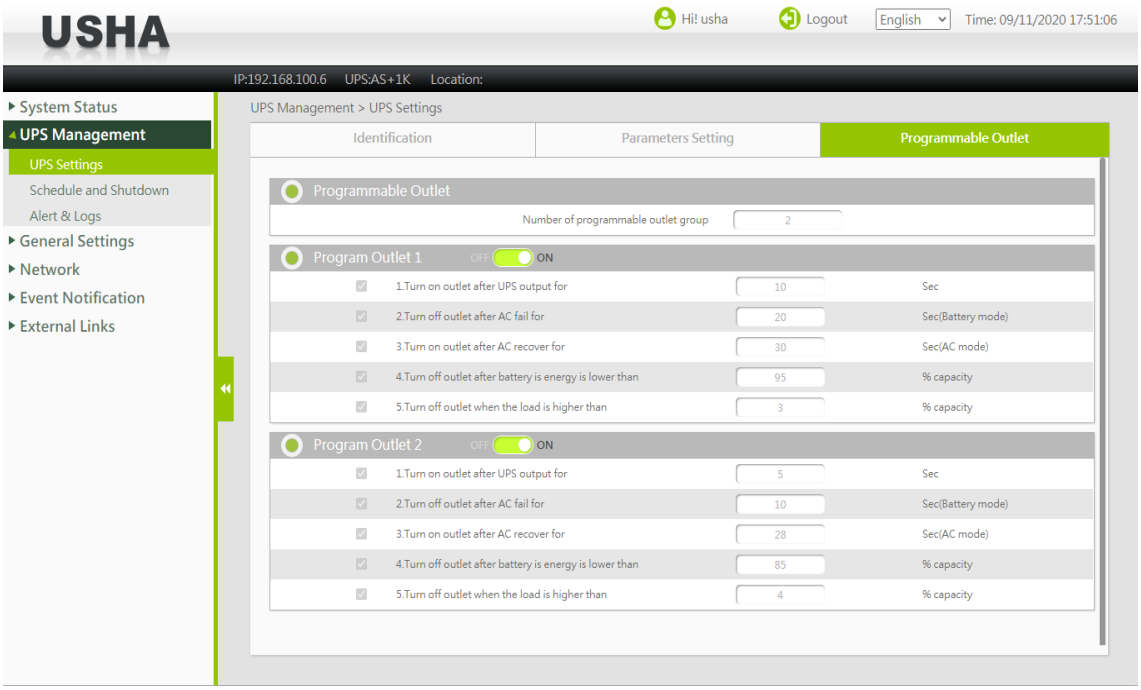
This page lets you set the battery replace date.



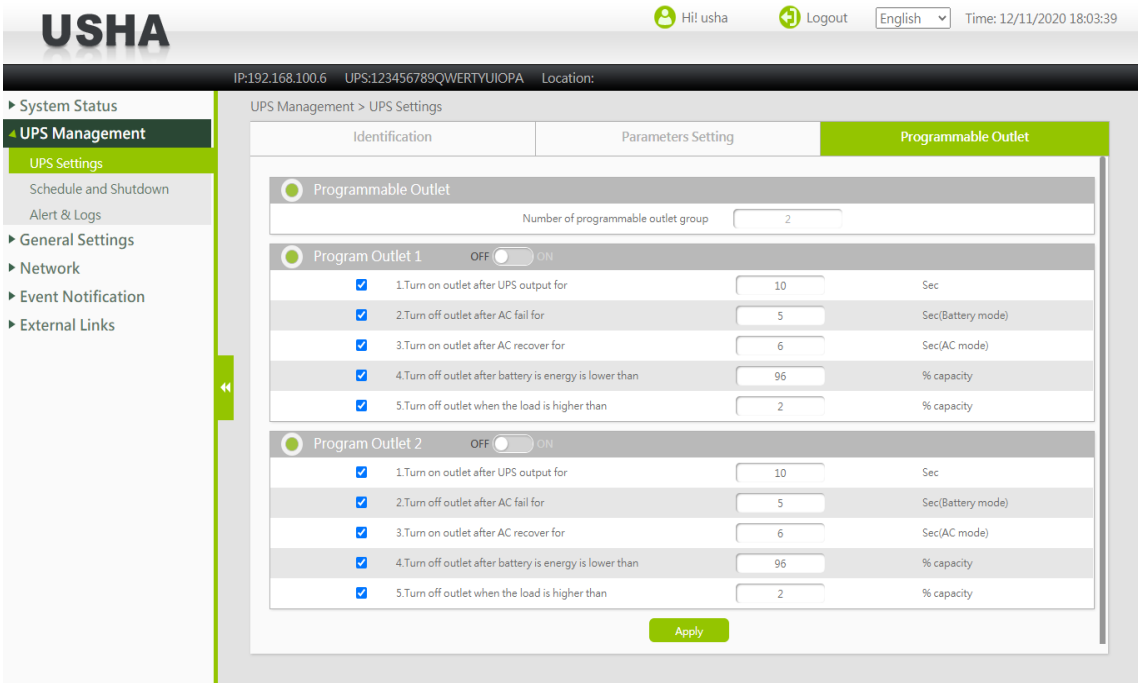
3.3.1.6. Programmable Outlet

This page lets you set the Programmable Outlet.

Line Mode



Standy Mode



Number of programmable outlet group

This field shows the number of programable output socket groups, which defaults to 2 groups.

Programmable Outlet1

This field directly controls the opening and closing of outlet 1, which is set in line mode and does not require the click of an Apply button. Other related settings need to be set in standby mode, and when complete, click the Apply button to write the settings.

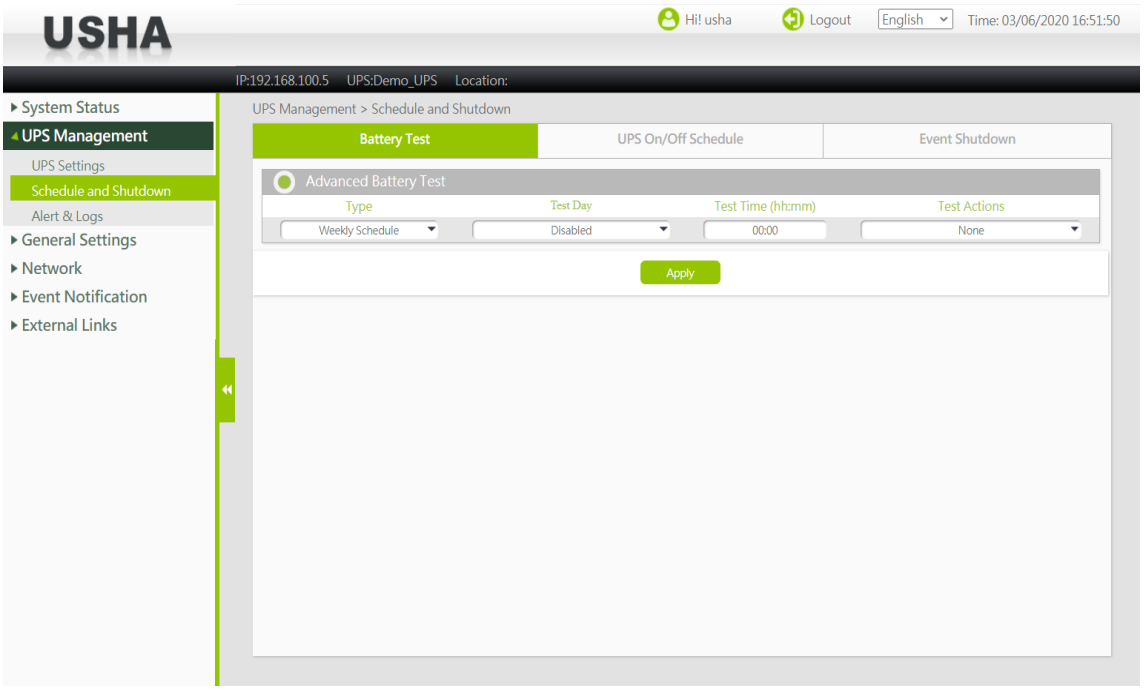
Programmable Outlet2

This field directly controls the opening and closing of outlet 2, which is set in line mode and does not require the click of an Apply button. Other related settings need to be set in standby mode, and when complete, click the Apply button to write the settings.

3.3.2. Schedule and Shutdown

3.3.2.1. Battery Test

This page let you set a schedule for Battery Auto Test.



Type
This column provides you the type of schedule for the battery test. Available options are: Weekly Schedule, Two Weeks Schedule, Monthly Schedule, and Quarterly Schedule.

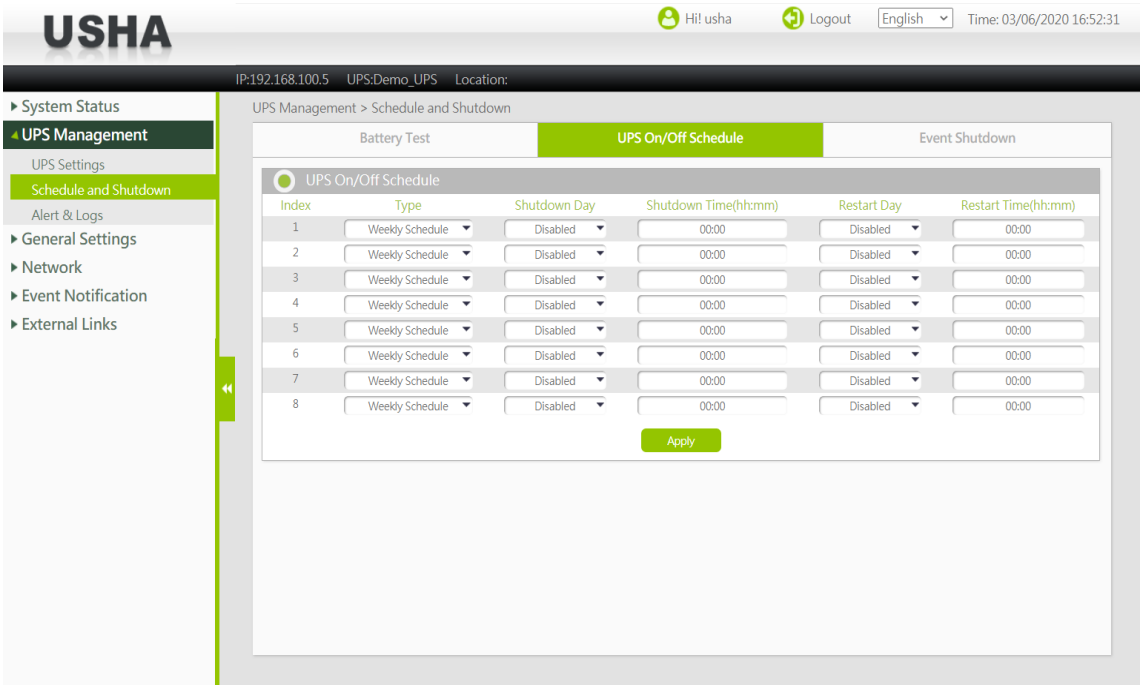
Test Day
The execution day of the battery test of UPS.

Test Time
The execution time of the battery test of UPS which is specified in 24-hour form.

Test Actions
Specifies whether the battery test shall be perform or not on the date and time set in advance. Available options are:
None - No action
Quick Battery Test - Performs battery test for a short time
Test Until Battery Low - Test until battery low
Timed Test - Test for the time specify in the Test Time column
Test Until Battery Rated Capacity - Test for the rated capacity specify in the Rated Capacity column

3.3.2.2. UPS On/Off Schedule

This page lets you modify the parameters of the shutdown / restart events associated with the days of the week or specific day. Please make sure the Weekly Schedule or Special Day option is enabled in the Event Shutdown menu.



Index
This column provides a reference number for the shutdown/restart event pair being configured.

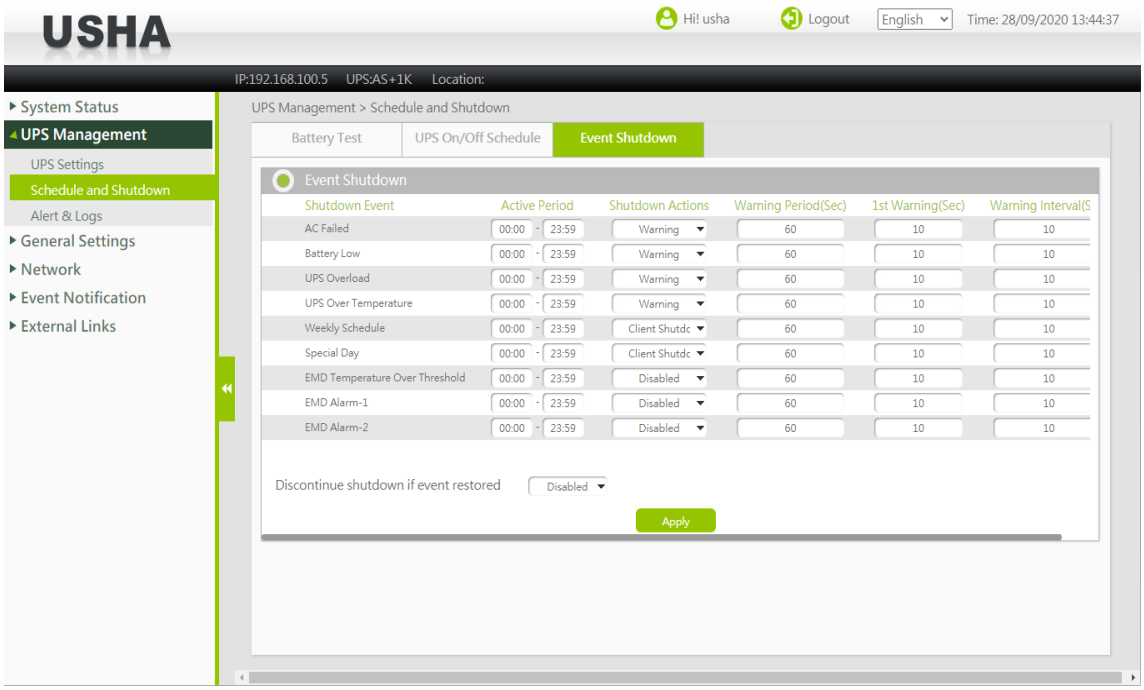
Type
This column provides you to choose these columns specify the day of the week when the UPS needs to be Shutdown or Restarted. They are usually configured in pairs.

Shutdown Day or Restart Day
These columns specify the day of the week when the UPS needs to be Shutdown or Restarted. They are usually configured in pairs.

Shutdown Time or Restart Time
The time in 24-hour format when the UPS should turn off (shutdown) output or turn on (restart) its output power.

3.3.2.3. Event Shutdown

This page lets you set related shutdown operation of the UPS can be performed.



Shutdown Event
This column defines set of events to cause UPS Shutdown.

Active Period
This column specifies the active period for the event shutdown action.

Shutdown Actions
Enabling this column specifies that the row entries are valid and the UPS should take proper action if that event occurs / happens. Available actions are:
Disabled - action is disabled.
Warning - warning message will be broadcast to the connected clients.
Client Shutdown - warning message will be broadcast and shutdown command will be sent to the connected clients.
Client Shutdown & UPS Turn Off - warning message will be broadcast, shutdown command will be sent to the connected clients and UPS will be turned off.

Warning Period
This column specifies time delay in seconds. After the occurrence of any enabled event, warning messages will be send persistent within this period. Shutdown request will send to clients after this period expired.

1st Warning
This column specifies the 1st warning time delay in seconds. After the occurrence of any Enabled Event, 1st warning call will be given after this delay.

Warning Interval
This column specifies the repeated warnings time delay in seconds. After the 1st warning call, successive warning calls will be given after this delay time. This will continue until the completion of the total delay time (mentioned in 3rd column). Minim

Discontinue shutdown if event restored
Enable/Disable the discontinue shutdown if event restored. If enabled, it will stop shutdown action when the event restored.

Different Events

A/C Fail
Shutdown will occur when the AC input fails.

Battery Low
Shutdown will occur for the battery low condition.

UPS Overload
Shutdown occurs if the output of the UPS is overload. Please check the configuration in UPS Shutdown menu for UPS Overload.

UPS Over Temperature
Shutdown occurs if the internal temperature of the UPS is over the pre-set value. Please check the configuration in UPS Shutdown menu for UPS Over Temperature.

Weekly Schedule
This Shutdown occurs as per the timings given in the Weekly Schedule shutdown table.

Special Day
This Shutdown occurs as per the Day & Time mentioned in the Special Day shutdown table.

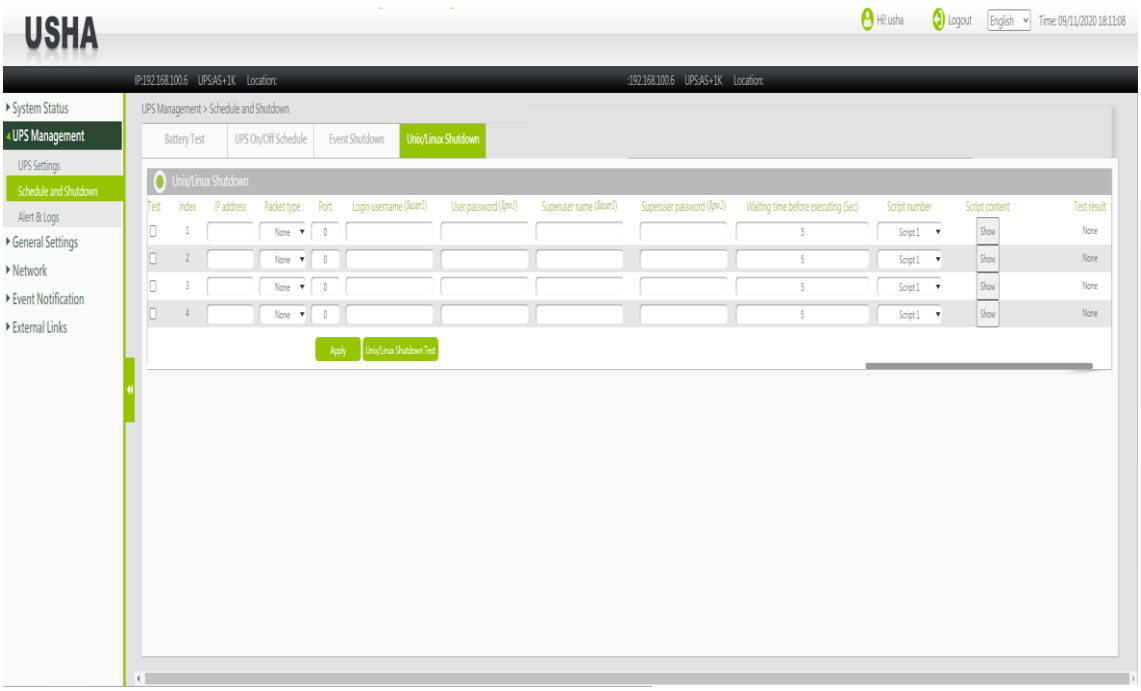
EMD Temperature over Threshold
Shutdown occurs when EMD temperature sensor detects over high temperature.

EMD Alarm-1
Shutdown occurs when alarm-1 sensor detects an active alarm.

EMD Alarm-2
Shutdown occurs when alarm-2 sensor detects an active alarm.

3.3.2.4. Unix/Linux Shutdown

This page provides the Unix/Linux operating system script shutdown settings.



Test
If this option is selected, USHA will send Unix/Linux instructions to the ticked computer after pressing the Unix/Linux Shutdown Test button.

Index
The index is the number of the entry in the table.

IP address
Enter the address of the computer you want to use.

Packet type
Managers can specify each type of envelope. This category is None, Telnet, SSH.
None：indicates that there are no connections.
Telnet：Connect as Telnet.
SSH：Connect as SSH.

Port
In addition to the Telnet port (23) and SSH port (22), users can set different communication port numbers.

Port Login username ($user1)
Set the port login user name.

User password ($pw1)
Set the user password.

Superuser name ($user2)
Set the Superuser name.

Superuser password ($pw2)
Set the Superuser password.

Waiting time before executing (Sec)
Wait time before executing the script.

Script number
Select the script number.

Script content
Show stored script content by script number.

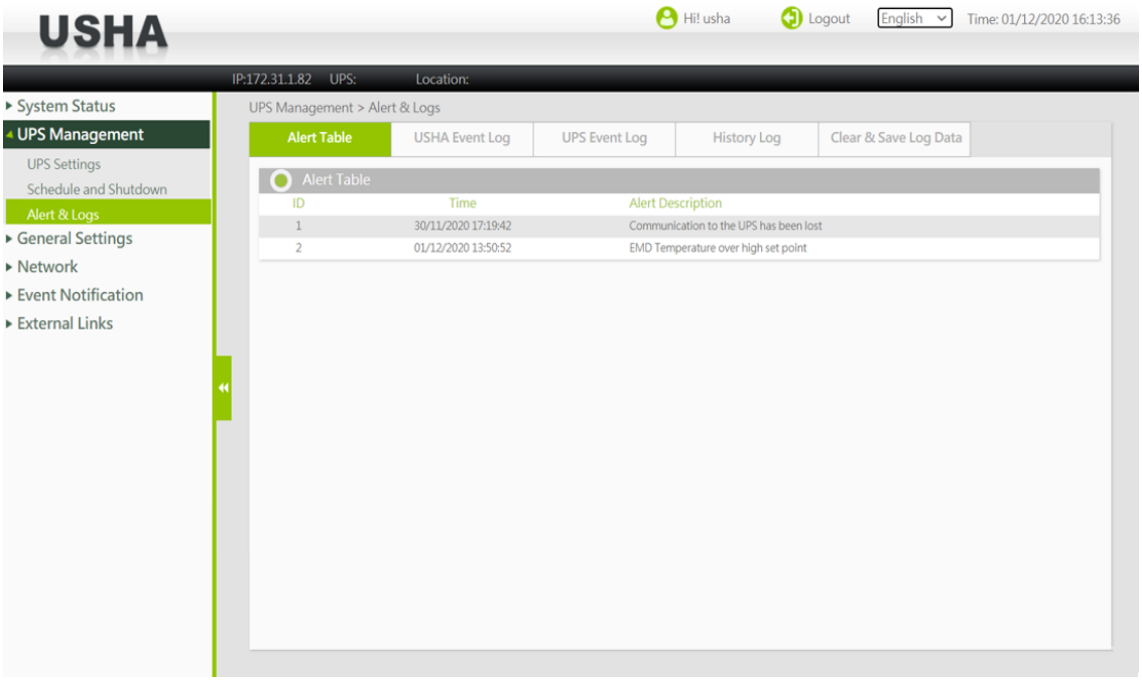
Test result
This field displays the test results.

3.3.3. Alert & Logs

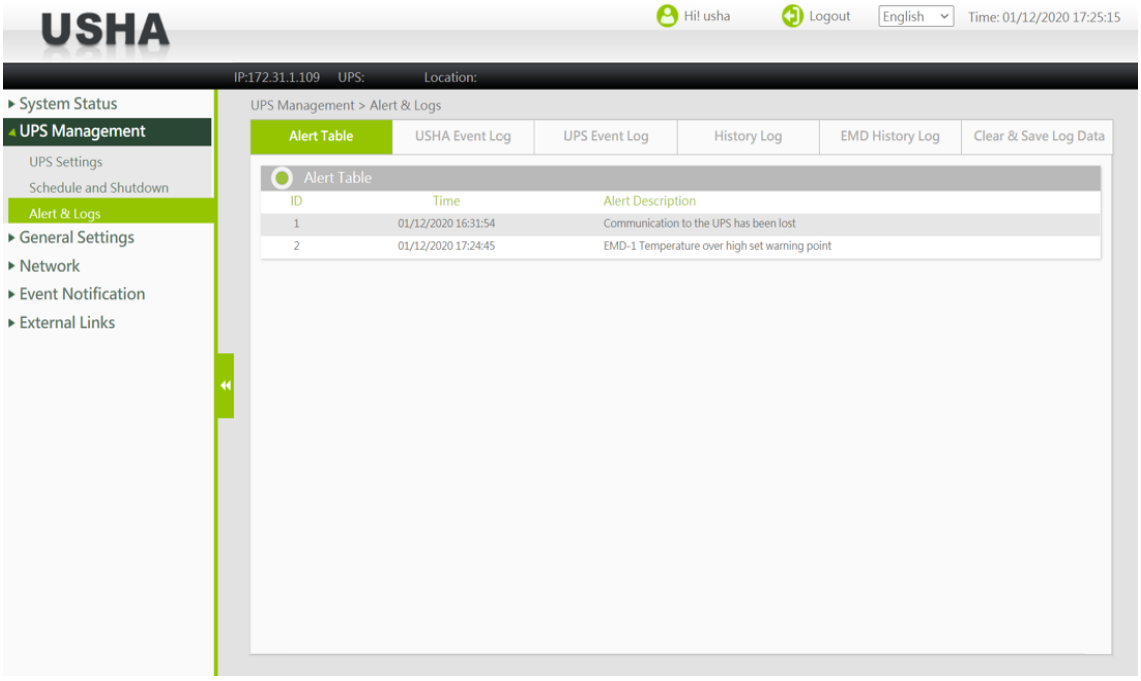
3.3.3.1. Alert Table

This table displays the currently active alerts. This menu will refresh automatically.

miniGOLD 2



SMART 3



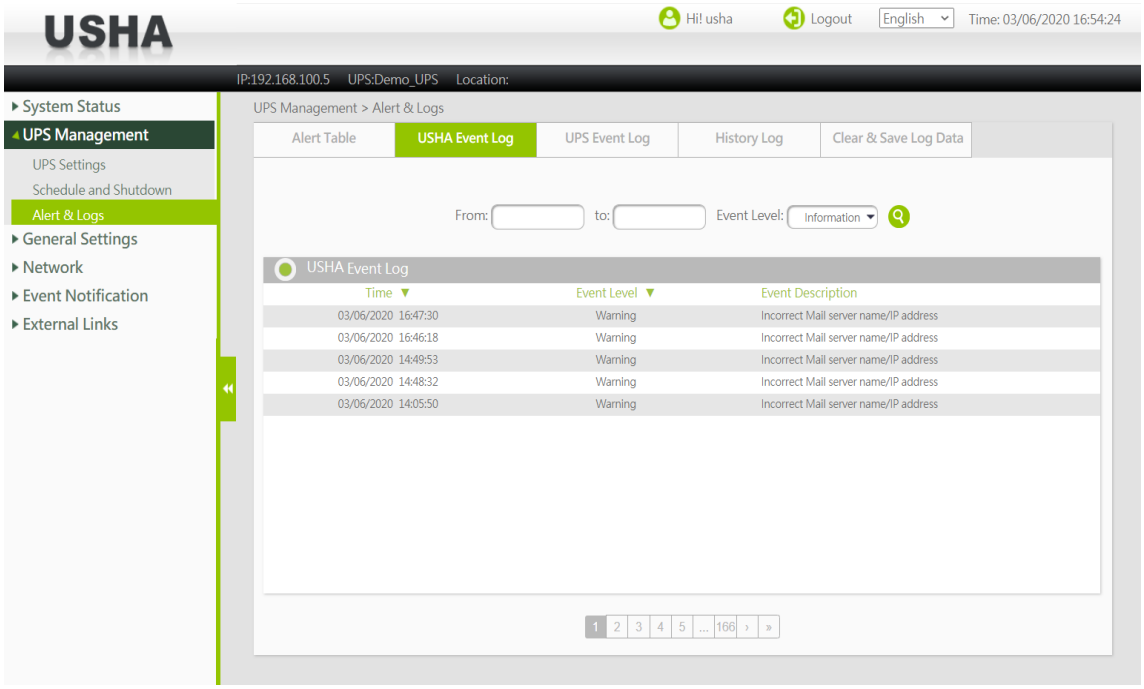
ID
Sequential number, it indicates the sequence of activation of alarms. This number will be reset after USHA reboot.

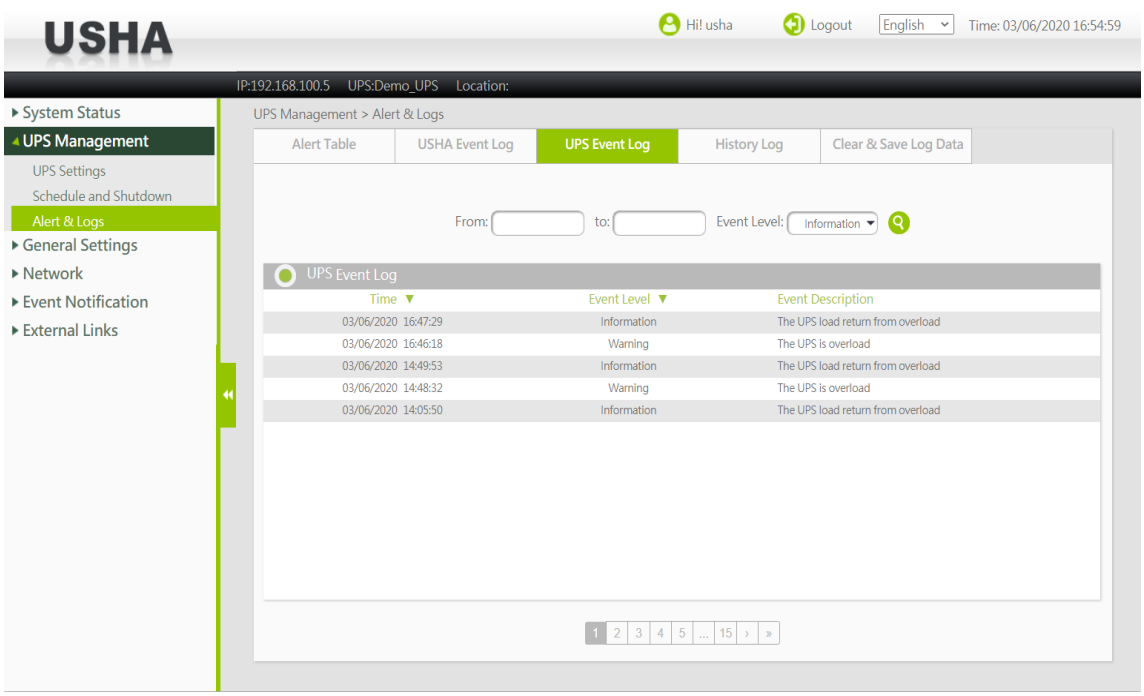
Time
UPS alert activation time on USHA.
(Note: The date / time depends on the clock within USHA.)

Alert Description
Complete UPS alert description.

3.3.3.2. USHA Event Log / UPS Events Log

You can check events that occurred in USHA/UPS. This table lists all the events that have occurred since the table was cleared. The existing values are overwritten when the maximum number of entries (rows) has been reached. You can clear the log data in "Clear & Save Log Data" page. The maximum number of event logs is 1024.





From / To

You can display logs by specifying a period.
Click over the From (To) field, and when the calendar appears, click the target date.
You can also enter the date (dd/mm/yyyy) in text.

Event Level

Logs can be displayed after being narrowed down by event level.
Information - Displays all the logs (Information/Warning/Critical).
Warning - Displays the logs which level are Warning or higher (Warning/Critical).
Critical - Displays only the logs which level are Critical.

"Refresh" button

After you are done specifying the period in the From and To fields, click the "Refresh" button on the right. The events that meet the conditions will be displayed.

Time (dd/mm/yyyy hh:mm:ss)

Sorting by the date and time (in dd/mm/yyyy format) by the event.

Event Level

Sorting by event level.

Event Description

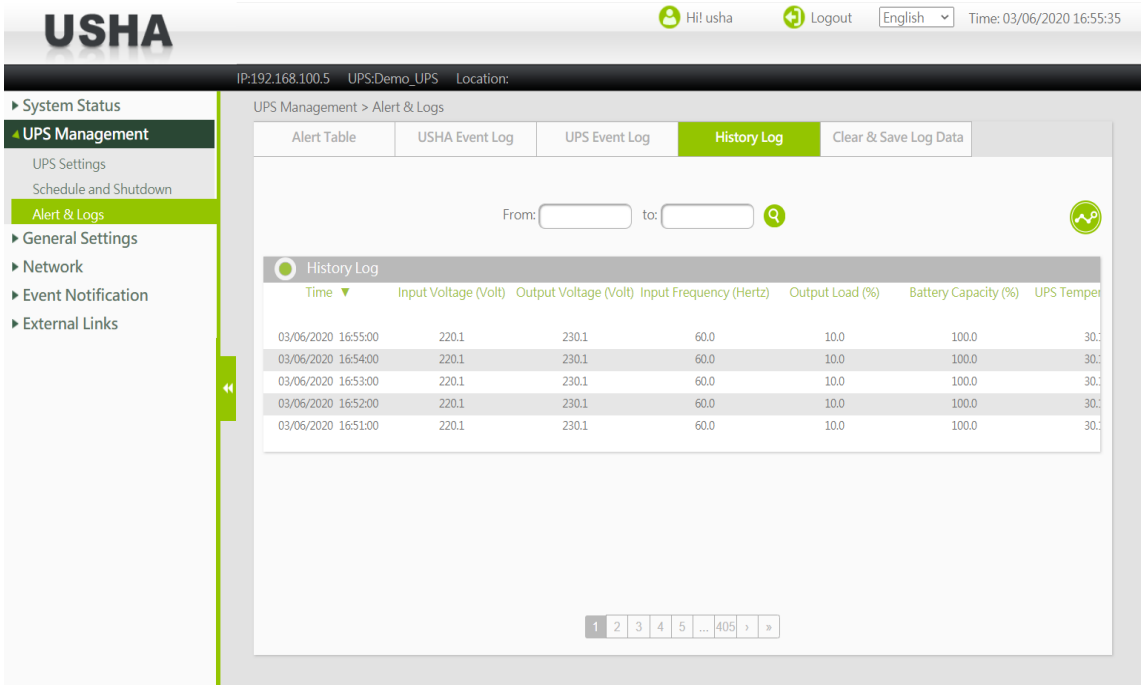
The description of the event which occurred at the recorded time.

3.3.3.3. History Log

This page gives a snap-shot of all the fundamental UPS parameters.
The recording interval can be changed by the Administrator by modifying the variable "Log Interval" in "System Configuration" page.
The existing values are overwritten when the maximum number of entries (rows) has been reached. You can clear the log data in "Clear & Save Log Data" menu. The maximum number of logs is 2048.

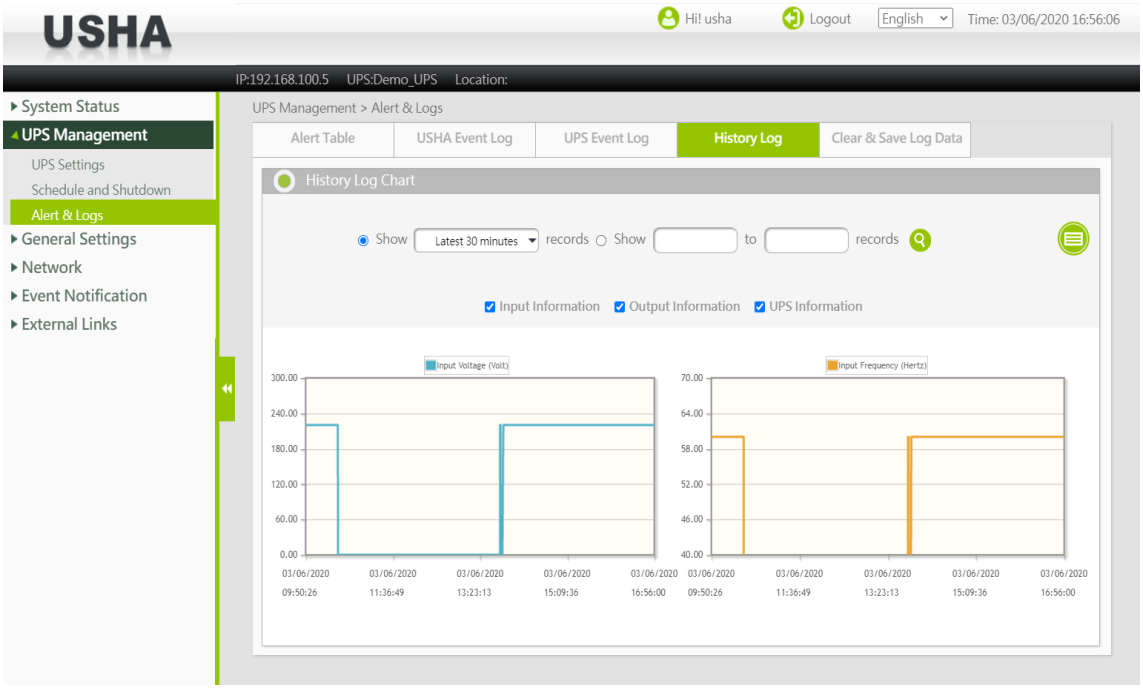
List button

This button is used to display data logs in list form.
To switch the data display in graphic form, click "Graphic button".



Graphic button

This button is used to display data logs in graphic form.
To switch the data display in graphic form, click "List button".



From / To

You can display logs by specifying a period.
Click over the From (To) field, and when the calendar appears, click the target date.
You can also enter the date (dd/mm/yyyy) in text.

After you are done specifying the period in the From and To fields, click the "Refresh" button on the right.

Time

This gives the date and time in a 24-hour format when the values were recorded.

Input Voltage

This shows the input voltage in Volts at the time of recording.

Output Voltage

This shows the output voltage in Volts at the time of recording.

Input Frequency

This shows the input frequency in Hertz at the time of recording.

Output Load

This show the load on the UPS in terms of percentage at the time of recording.

Battery Capacity

The remaining battery capacity expressed in percent of full capacity.

UPS Temperature

This shows the temperature of the UPS battery in ^{o}C at the time of recording.

Output Frequency

This shows the output frequency in Hertz at the time of recording.

Output Current

This shows the output current in Amps at the time of recording.

Output Power

This shows the output power in Watts at the time of recording.

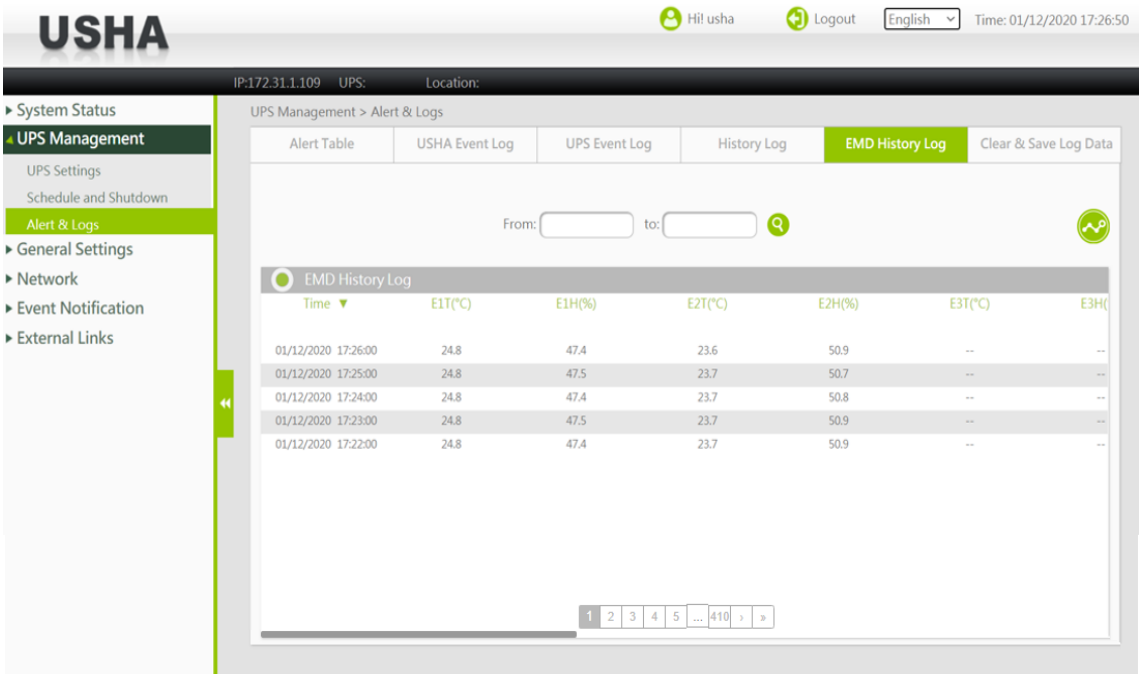
Output VA
This shows the output apparent power in VA at the time of recording.

EMD Temperature
This shows the current temperature measurement of the EMD.

EMD Humidity
This shows the current humidity measurement of the EMD.

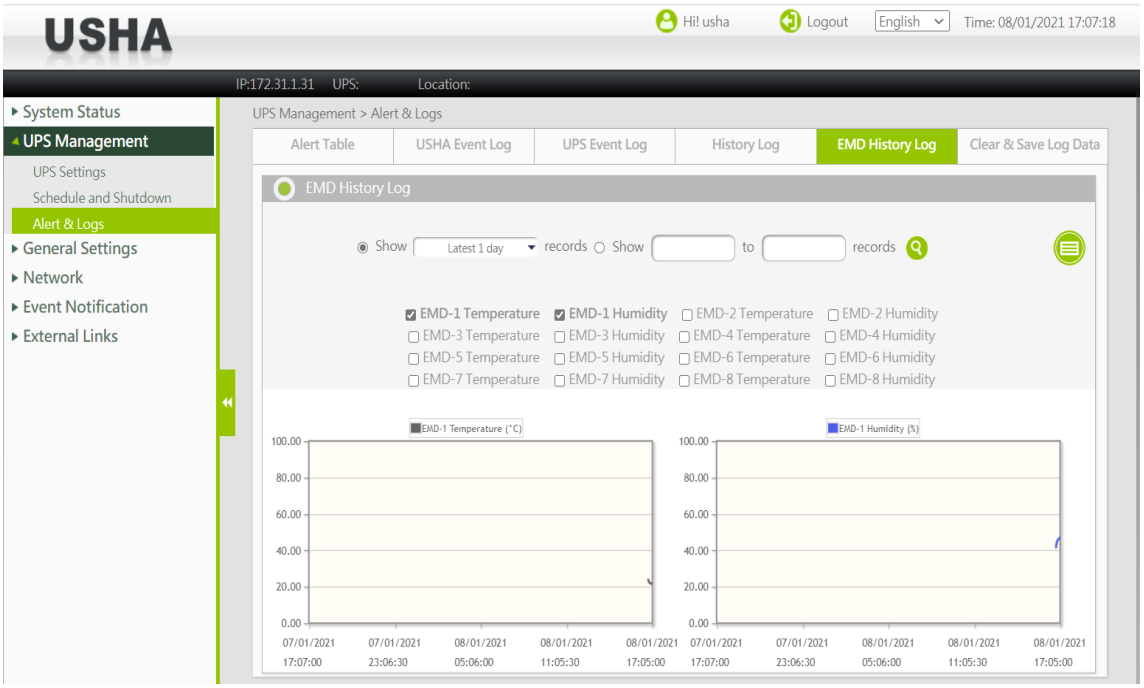
3.3.3.4. EMD History Log

List button
This button is used to display data logs in list form.
To switch the data display in graphic form, click "Graphic button".



Graphic button

This button is used to display data logs in graphic form.
To switch the data display in graphic form, click "List button".



From / To

You can display logs by specifying a period.
Click over the From (To) field, and when the calendar appears, click the target date.
You can also enter the date (dd/mm/yyyy) in text. After you are done specifying the period in the From and To fields, click the "Search" button on the right.

Time

This gives the date and time in a 24-hour format when the values were recorded.

E(n)T(°C)

This shows the current temperature measurement of the EMD-n.

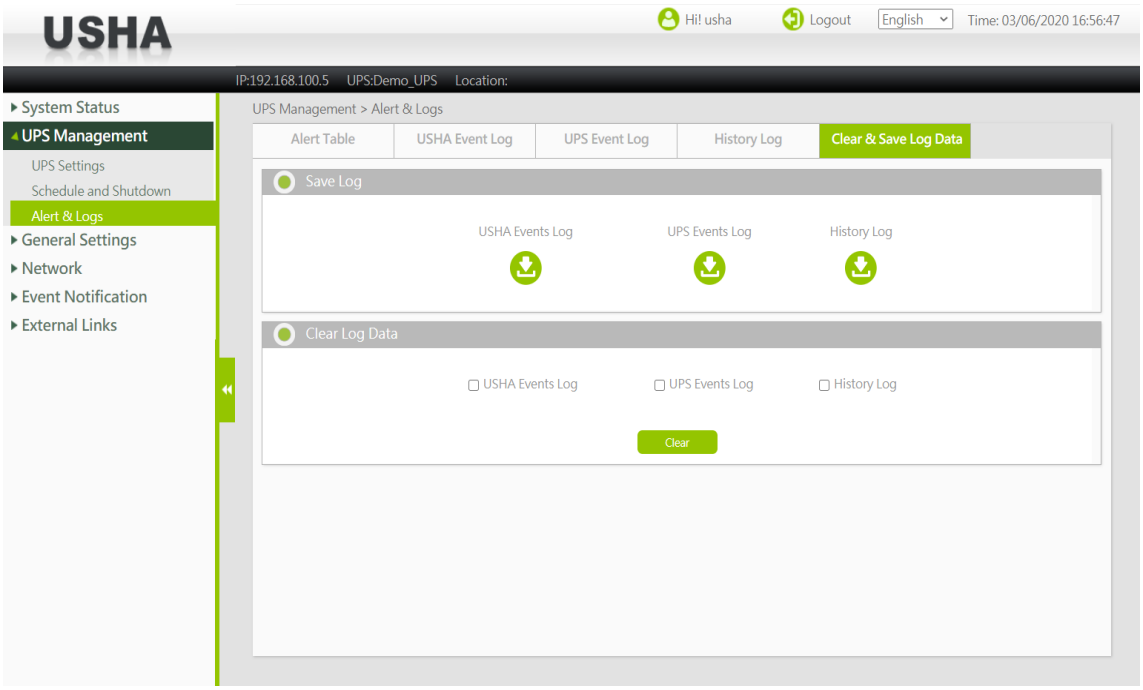
E(n)H(%)

This shows the current humidity measurement of the EMD-n.

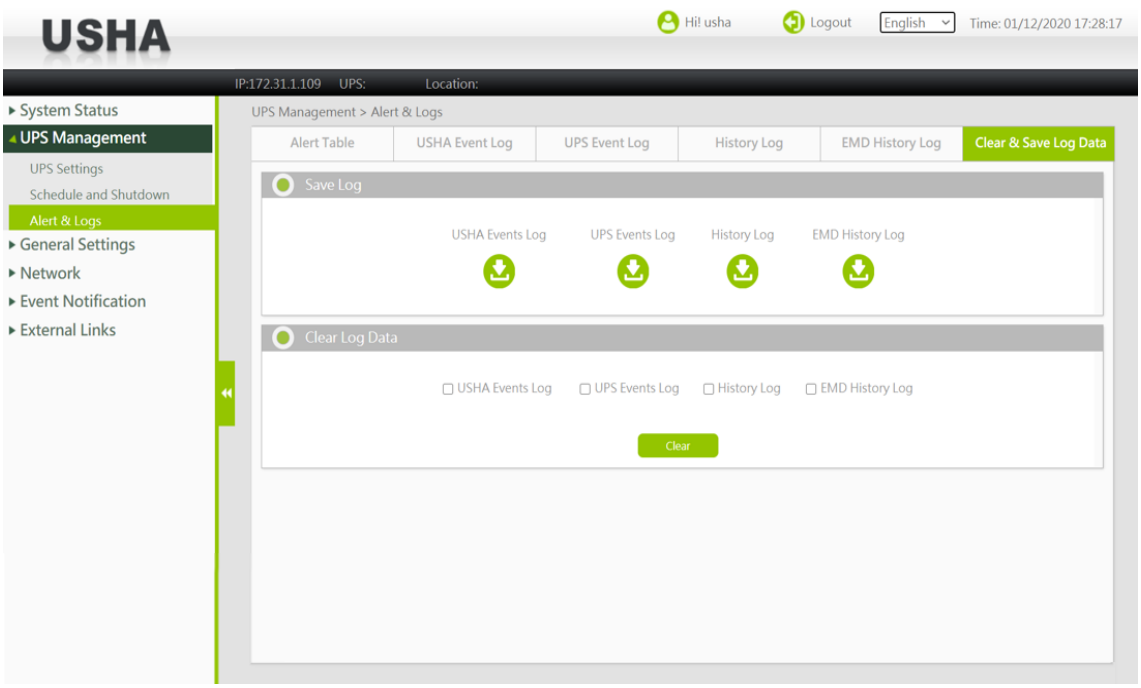
3.3.3.5. Clear & Save Log Data

This page lets you save or clear the log files.

miniGOLD 2



SMART 3



Save Log

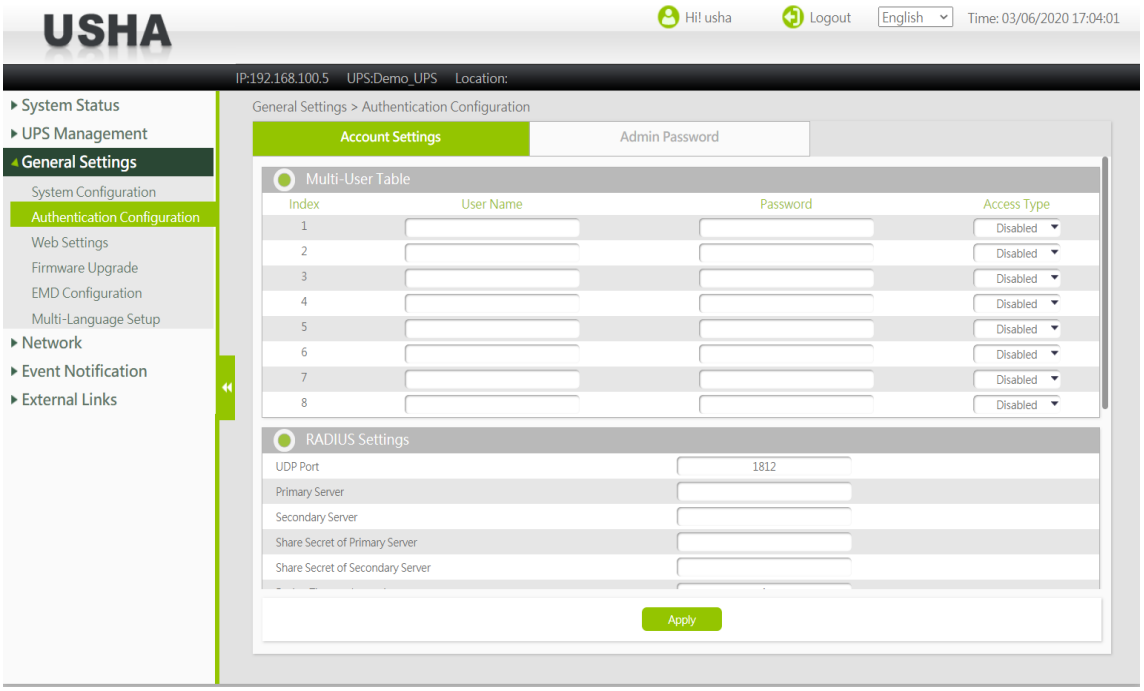
Click the download button displayed before the desired item. You can save the various USHA log data to a file with the extension .csv that can be opened and read in MS Excel.

Clear Log Data

Administrator can clear the specific log data by putting a check mark beside it and click the Clear button.

3.4. General Settings

3.4.1. Authentication Configuration



3.4.1.1. Multi-User Table

You can apply access control to the USHA for each login user.

Index
The index number of the entry in the table.

User Name
The user name with the access type set by Administrator.

Password
The password of the user with the access type set by Administrator.

Access Type
Available options are: Disabled, Read Only, and Read / Write.

3.4.1.2. RADIUS Settings

This page lets you set RADIUS authentication.

UDP Port
Enter the UDP Port No. Default value: 1812

Primary Server
Enter the IP address of the RADIUS server.

Secondary Server
Enter the IP address of the RADIUS server.

Share Secret of Primary Server
Enter the share secret string of the primary server.

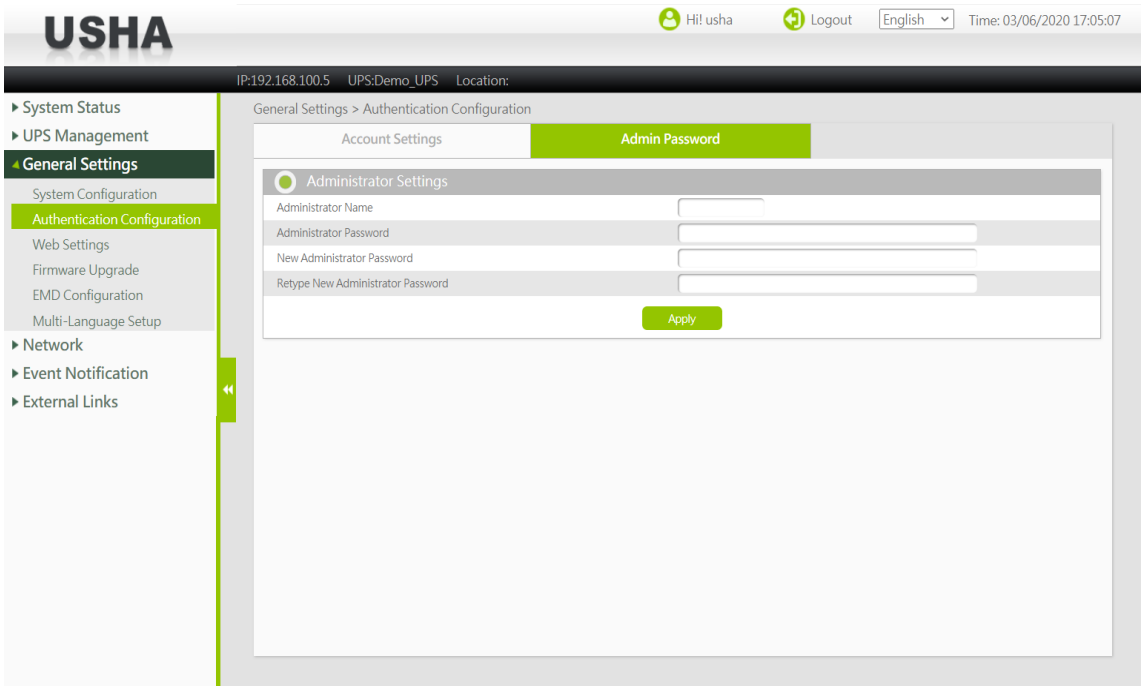
Share Secret of Secondary Server
Enter the share secret string of the secondary server.

Packet Timeout Interval
Set the packet timeout time. Default value: 1 second

Packet Retry Times
Set the number of retries. Default value is 3 times

3.4.1.3. Administrator Settings

This page lets you change the administrator name and administrator password.



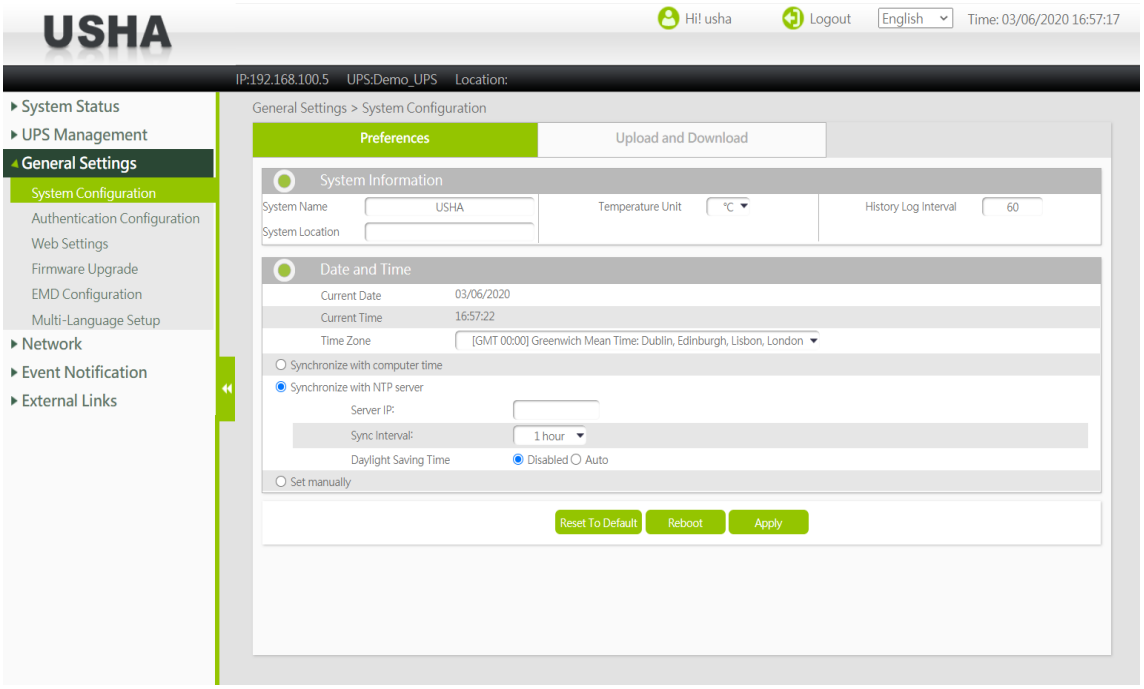
Administrator Name
Displays the current "administrator name".

Administrator Password
Enter the current "administrator password".

New Administrator Password
Enter a new "administrator password".

Retype New Administrator Password
Retype a new "administrator password".

3.4.2. System Configuration



3.4.2.1. System Information

System Name
This shows the current humidity measurement of the EMD.

System Location
This column lets you to set the location of USHA.

Temperature Unit
User can choose temperature to show the unit as Fahrenheit or Celsius in this settlement, the default value is Celsius.

History Log Interval
This value is the time in seconds to poll Input voltage, Output Voltage, Output Load, Battery Capacity, Input Frequency and UPS Temperature and save in the history log. Minimum value is 1 seconds.

3.4.2.2. Date and Time

This page provides the appropriate options below to enable the USHA date/time to be changed.

Current Date/Time
Display the current Date and Time of the USHA. This can be changed to synchronize with a computer, an enquiry from a time server (NTP) or manually.

Time Zone
Select the time zone of the area where the USHA is installed.

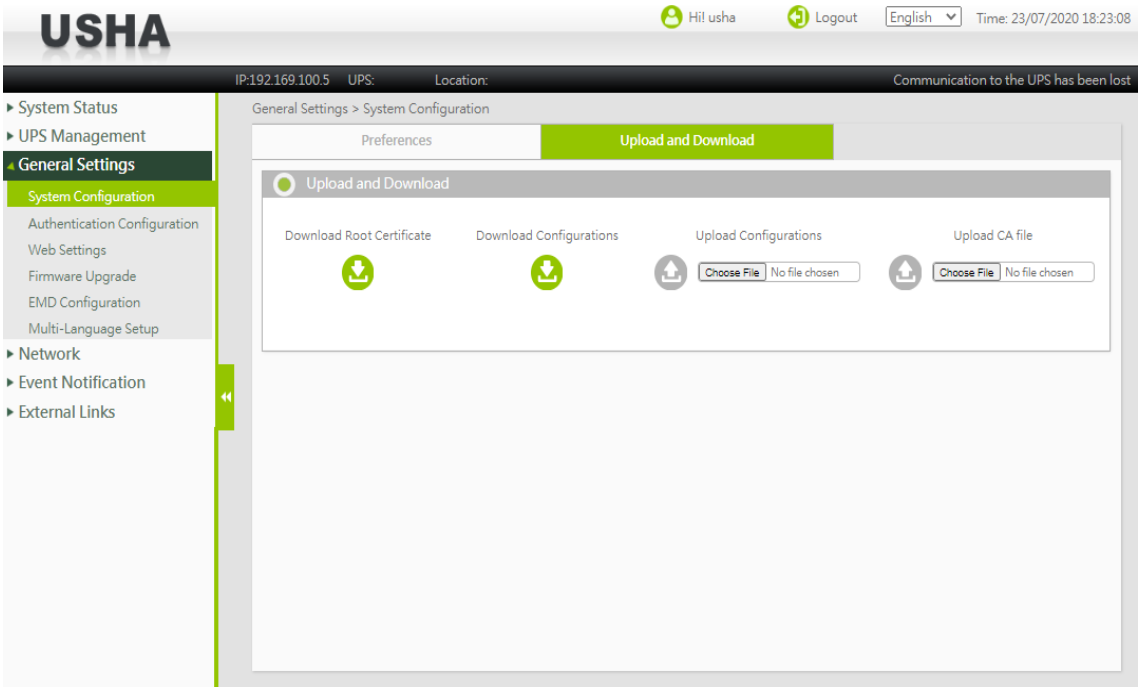
Synchronize with computer time
Select this option and click 'Set Value' to synchronize with the time from the computer clock.

Synchronize with NTP server
You must configure the NTP server IP and select the correct time zone to activate this option. To set the interval in the range 1 hour, 1 day, 1 week, or 1 month from the initial synchronization. After being configured to synchronize with NTP, the USHA will synchronize its time with the server periodically. If Daylight Saving Time was enabled, the time will be one hour earlier than NTP server time.

Set Manually
User can set the date and time with the following format: dd-mm-yyyy and hh:mm:ss.

3.4.2.3. Upload and Download

This page allows user to download or upload the setting file and CA Certificate for the USHA.



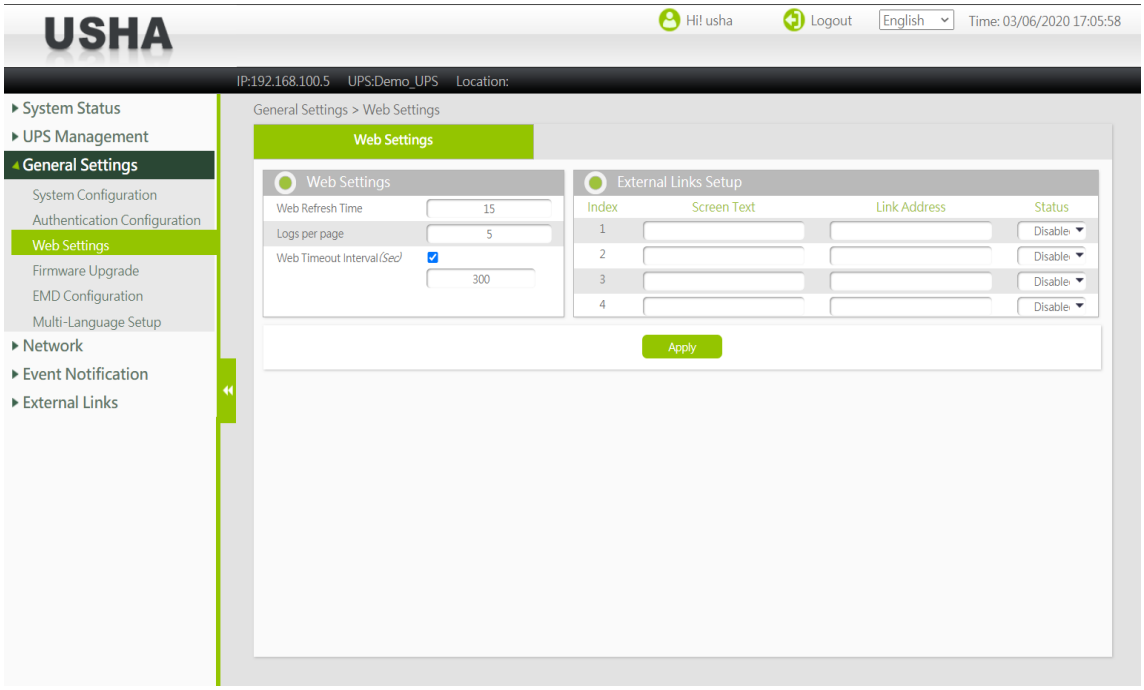
Upload Configurations
Upload configurations file to USHA.

Upload CA file
Upload CA file to USHA.

Download Configurations
Download configurations file from USHA.

Download Root Certificate
Download Root certificate from USHA

3.4.3. Web Settings



3.4.3.1. Web Settings

This page lets you configure the settings related to the Web monitor refresh interval and timeout when you log in.

Web Refresh Time
Set the Web monitor refresh interval.

Logs per page
Set the number of log lines displayed in one page.

Web Timeout Interval (Sec)
This field specifies the time interval in seconds, to logout the user if the user has no action on the web page.

3.4.3.2. External Links Setup

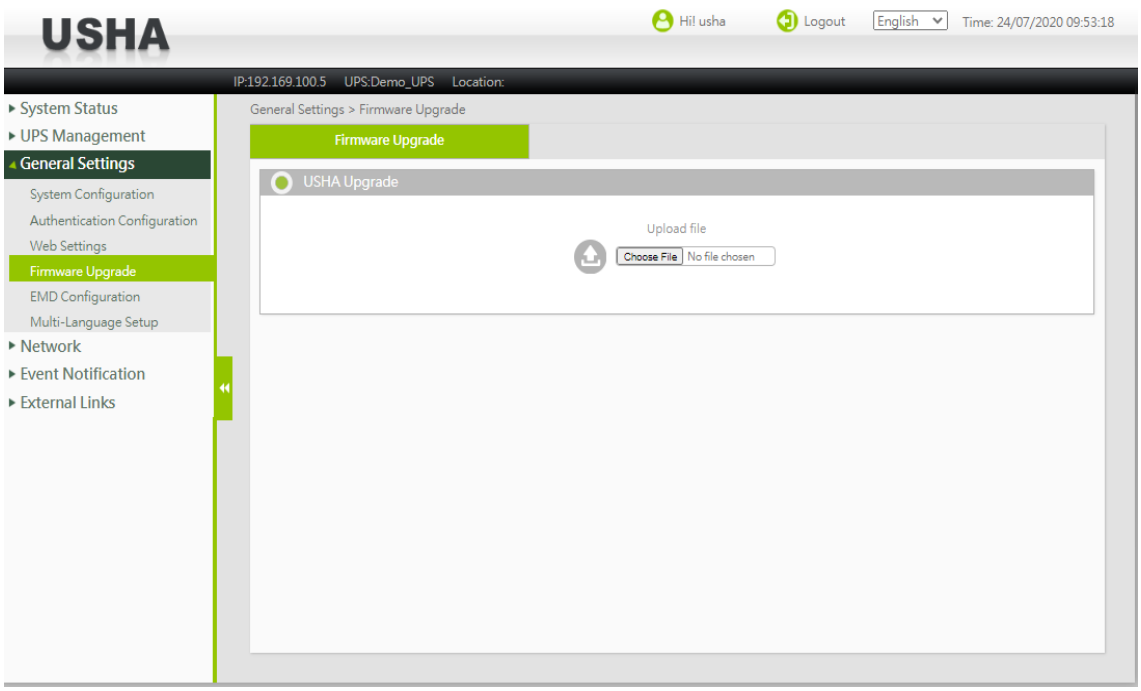
This page describes the setting of External Links. Up to four links can be setup by this page, each link can configure to an external web page that user can easily connect to related web pages. Such as another UPS with USHA Card, or Technical Support homepage.

Screen Text
This is the description of link name which will display on the menu tree for user's reference.

Link Address
This field defines the real name of web page to be connected, in URL format.

Status
This field controls the visibility of this link on menu tree. Setting "Disable" will make this link invisible from menu tree.

3.4.4. Firmware Upgrade



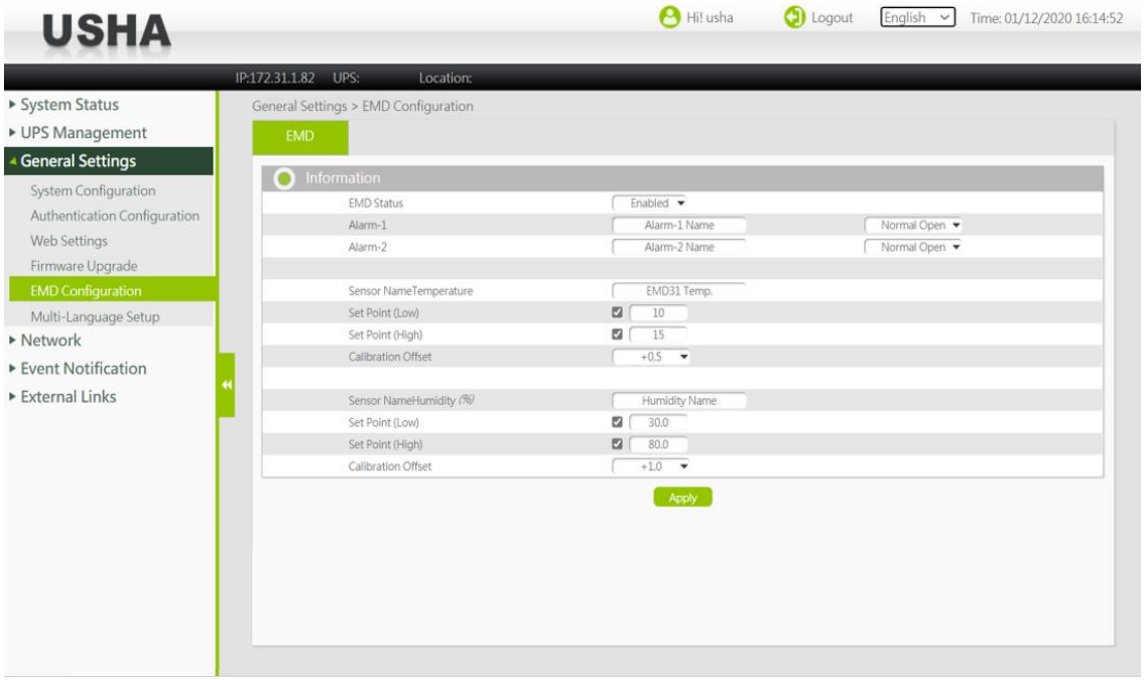
3.4.4.1. Firmware Upgrade

This page lets you update the firmware of USHA. Select the firmware with the "Choose File " button and click the "Upload " button.

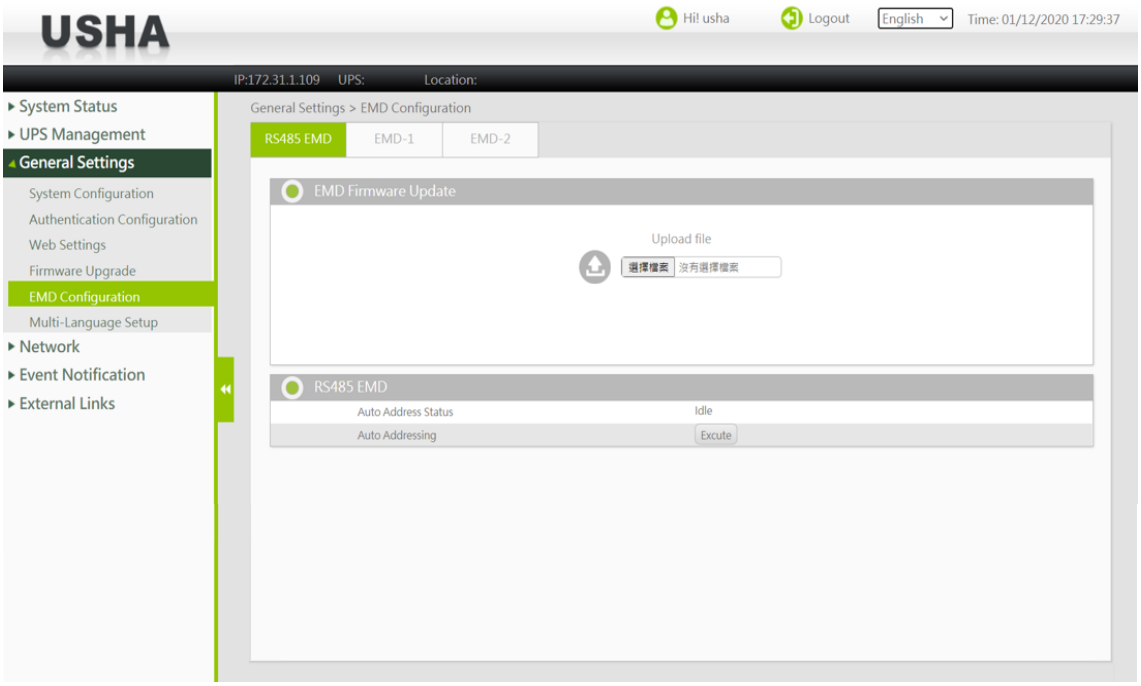
Upload Status
This field shows the status of the upload process.

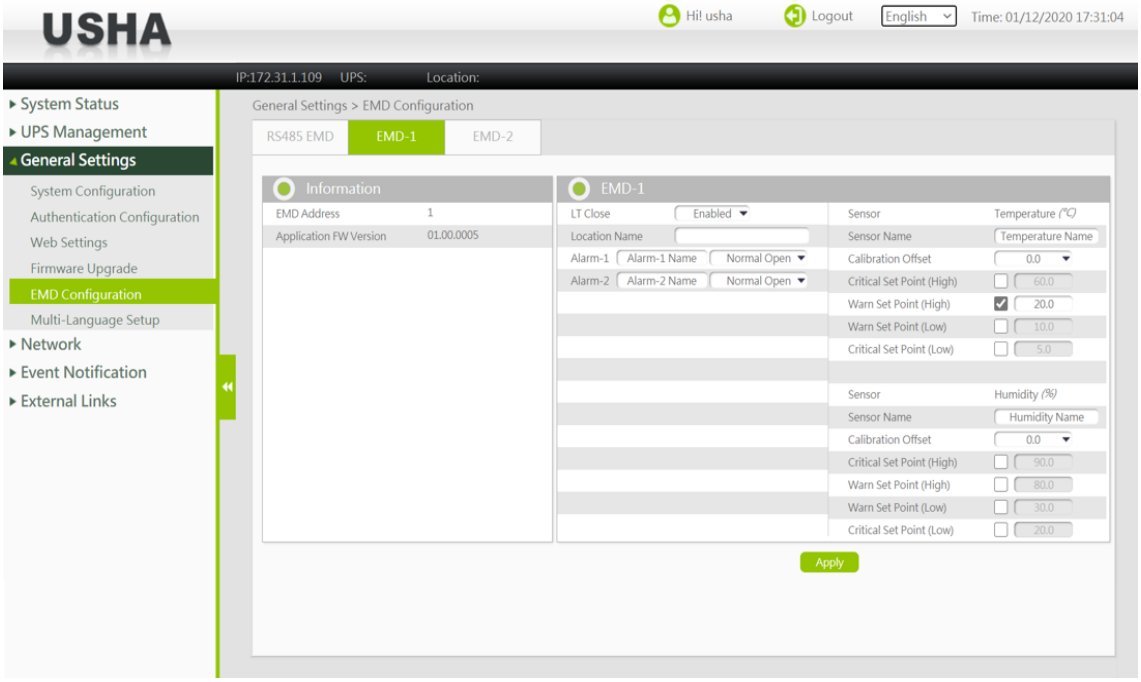
3.4.5. EMD Configuration

miniGOLD 2



SMART 3





3.4.5.1. EMD

This page allows user to configure all necessary parameters of an EMD.

EMD Status

The EMD can be configured as 'Disabled' or 'Auto'. The setup should be configured as 'Disabled' if an EMD is not attached to the port. The EMD type will be auto detected by the USHA if configured as 'Auto' and if the EMD is plugged into the port.

Alarm Type

If an alarm sensor (water leak, security, etc) is connected to the USHA, the user can configure the alarm as 'Disabled', 'Normal Open', or 'Normal Close'. A 'Disabled' setting will mean the alarm is inactive.
'Normal Open' and 'Normal Close' are used for a two-wire detector that will emulate an open/close state. When the wires are closed to 'loopback' (the signal for the sensor), the sensor will detect the state as closed. The sensor will NOT activate the alarm for 'Normal Close' in this case, although the alarm will be activated if configured as 'Normal Open'.

Sensor/Alarm device Name
Configure the name of a sensor (or alarm device) with up to 31 characters.

Set Point
The threshold of a sensor (Temperature or Humidity) will trigger an alarm, whenever the measurement is over (high) or under (low) the set point. If the checkbox is not filled, the threshold is disabled and the alarm will not be triggered. The valid range for the Temperature threshold setting is 5 to 65, and 5 to 95 for Humidity.

Calibration Offset
If the measurement value of a sensor doesn't, for whatever reason, comply with the actual environment, the 'Calibration Offset' setting can be configured to adjust the final value of the sensor. For example, if a sensor reports 43% humidity for a 45% humidity environment, the user can configure the humidity offset as 2% so the sensor can then adjust its final value to 45%.

3.4.5.2. RS485 EMD

EMD Firmware Update

Upload file
This field is a button and file type input. User can select an EMD firmware image file and upload it to USHA card. When an upgrade is in progress, the upload button is disabled and the progress elements appear below the button. A confirmation message displays when upload button is clicked. After the firmware upgrade is successful, the EMDs will be restart.

RS485 EMD

Auto Address Status
To display auto address status

Auto Addressing
To execute auto addressing function.

3.4.5.3. EMD-n

Information

EMD Address
This field is read-only, defines the slave address used for Modbus, and address 0 is reserved for broadcast operation. Available values are 1 to 255. The default value is 1.

Application FW Version
EMDn firmware version

EMD-n

LT Close
This field defines whether the line termination of the EMD is closed or open. Available values are Disabled and Enabled. The default value is Disabled and the line termination is open.

Location Name
This field let user to type-in the name of location.

Alarm-1/Alarm-2
This field defines the ease-to-remember name of Alarm-n and whether it is enabled or disabled. Available values of name are alphabetic characters and numerals. The maximum size is 31 characters and default value is “Alarm-n Name”, n is 1 or 2.

Sensor
This field is read-only and defines the sensor type. Available values are Temperature (°C) and Temperature (°F). The default value is Temperature (°C).

Sensor Name
This field let user to type-in the name of temperature sensor. The default value is Temperature Name.

Calibration Offset
This field is used to improve the accuracy of temperature. Available values are +3.0, +2.5, +2.0, +1.5, +1.0, +0.5, 0.0, -0.5, -1.0, -1.5, -2.0, -2.5 and -3.0. The default value is 0.0.

Critical Set Point (High)
This field defines the threshold for high critical temperature. Available values are 0 to 65 °C. The default value is 60 °C. If checkbox is checked and the temperature exceeds the threshold, an alert is raised.

Warn Set Point (High)
This field defines the threshold for high warning temperature. Available values are 0 to 65 °C. The default value is 50 °C. If checkbox is checked and the temperature exceeds the threshold, an alert is raised.

Warn Set Point (Low)
This field defines the threshold for low warning temperature. Available values are 0 to 65 °C. The default value is 10 °C. If checkbox is checked and the temperature exceeds the threshold, an alert is raised.

Critical Set Point (Low)
This field defines the threshold for low critical temperature. Available values are 0 to 65 °C. The default value is 5 °C. If checkbox is checked and the temperature exceeds the threshold, an alert is raised.

Sensor
This field is read-only and defines the sensor type. The default value is Humidity (%).

Sensor Name
This field let user to type-in the name of humidity sensor. The default value is Humidity Name.

Calibration Offset
This field is used to improve the accuracy of humidity. Available values are +6.0, +5.0, +4.0, +3.0, +2.0, +1.0, 0.0, -1.0, -2.0, -3.0, -4.0, -5.0 and -6.0. The default value is 0.0.

Critical Set Point (High)
This field defines the threshold for high critical humidity. Available values are 0 to 100 %. The default value is90 %. If checkbox is checked and the humidity exceeds the threshold, an alert is raised.

Warn Set Point (High)
This field defines the threshold for high warning humidity. Available values are 0 to 100 %. The default value is 80 %. If checkbox is checked and the humidity exceeds the threshold, an alert is raised.

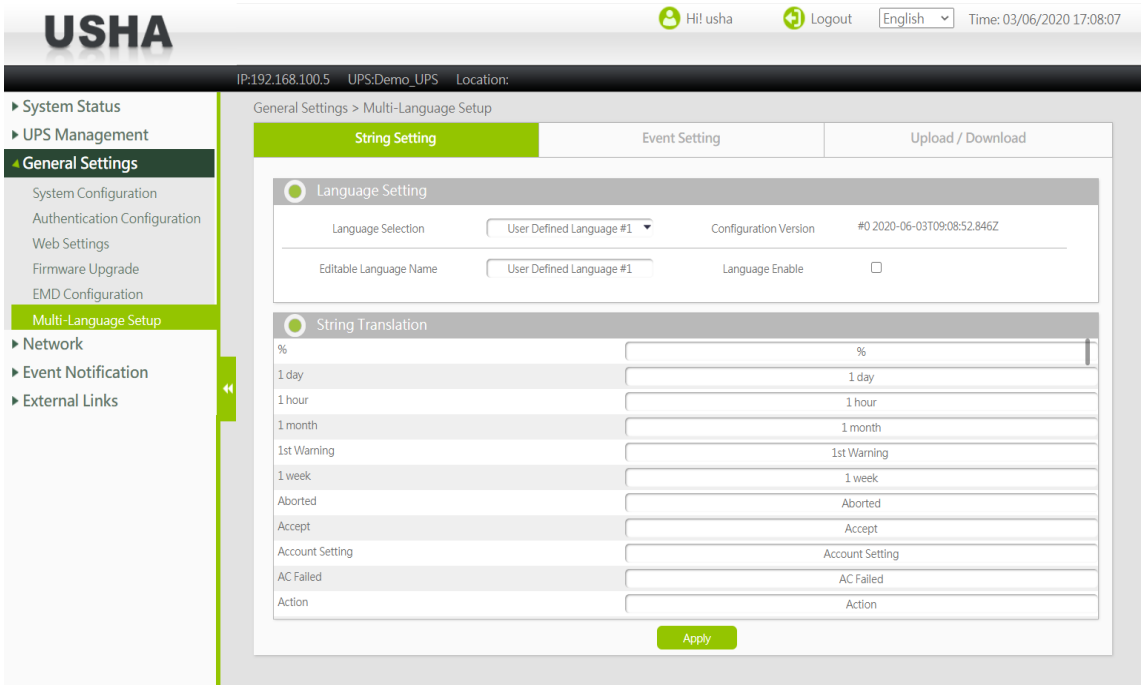
Warn Set Point (Low)
This field defines the threshold for low warning humidity. Available values are 0 to 100 %. The default value is 30 %. If checkbox is checked and the humidity exceeds the threshold, an alert is raised.

Critical Set Point (Low)
This field defines the threshold for low critical humidity. Available values are 0 to 100 %. The default value is 20 %. If checkbox is checked and the humidity exceeds the threshold, an alert is raised.

3.4.6. Multi-Language Setup

3.4.6.1. Language Setting

USHA card also supports two customized languages user can edit them on customization language page, as below.



Language Selection
This field selects the custom language you want to edit.

Editable Language Name
This field defines the language name that will be displayed in language combo box.

Configuration Version
This field shows the language configuration version.

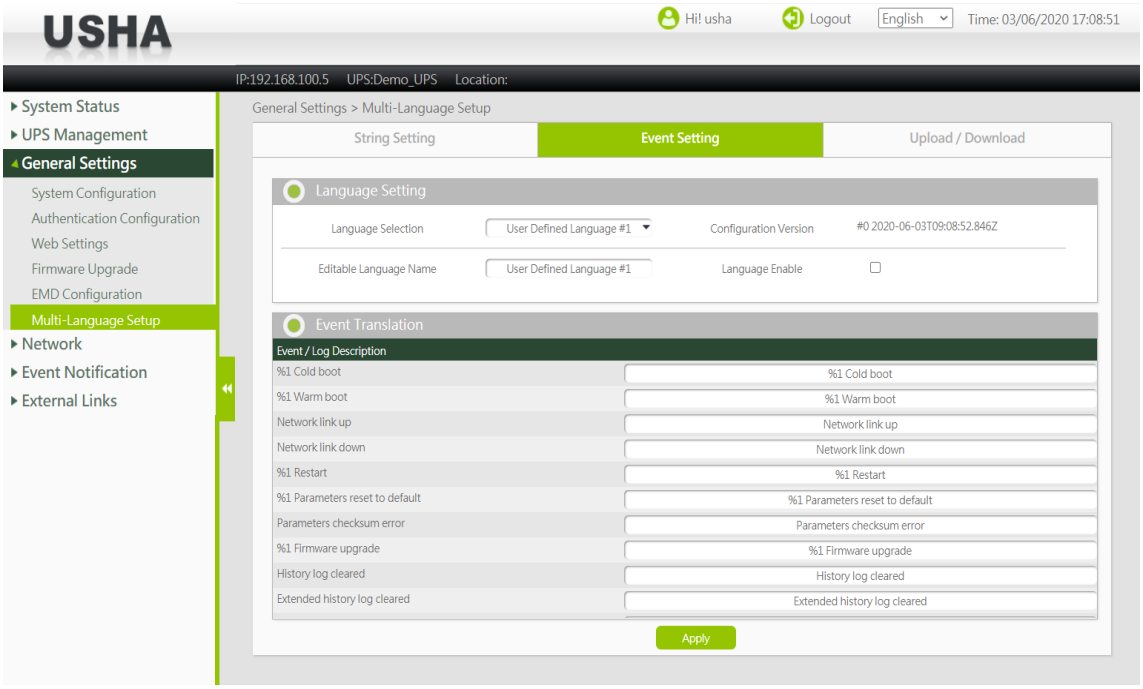
Language Enable
This field determines whether a custom language is displayed in the language combo box. If checked, the value of the Editable Language Name is displayed in the combo box.

3.4.6.2. String Translation

This table lists all the strings used on all pages, and users can edit them to any language, such as Japanese or other languages.

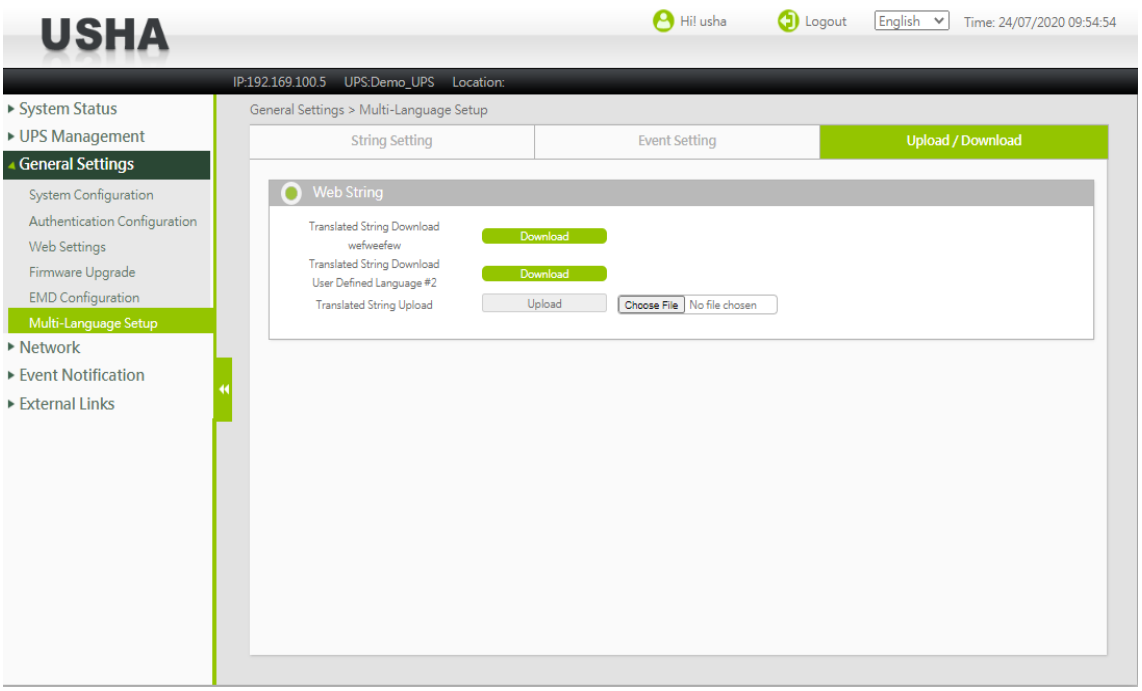
3.4.6.3. Event Translation

This table lists all the strings used in all events, and users can edit them to any language, such as Japanese or other languages.



3.4.6.4. Web String

On this page, users can download all translated language strings to a file and upload them to other USHA cards. Users can also upload the files to the USHA card.

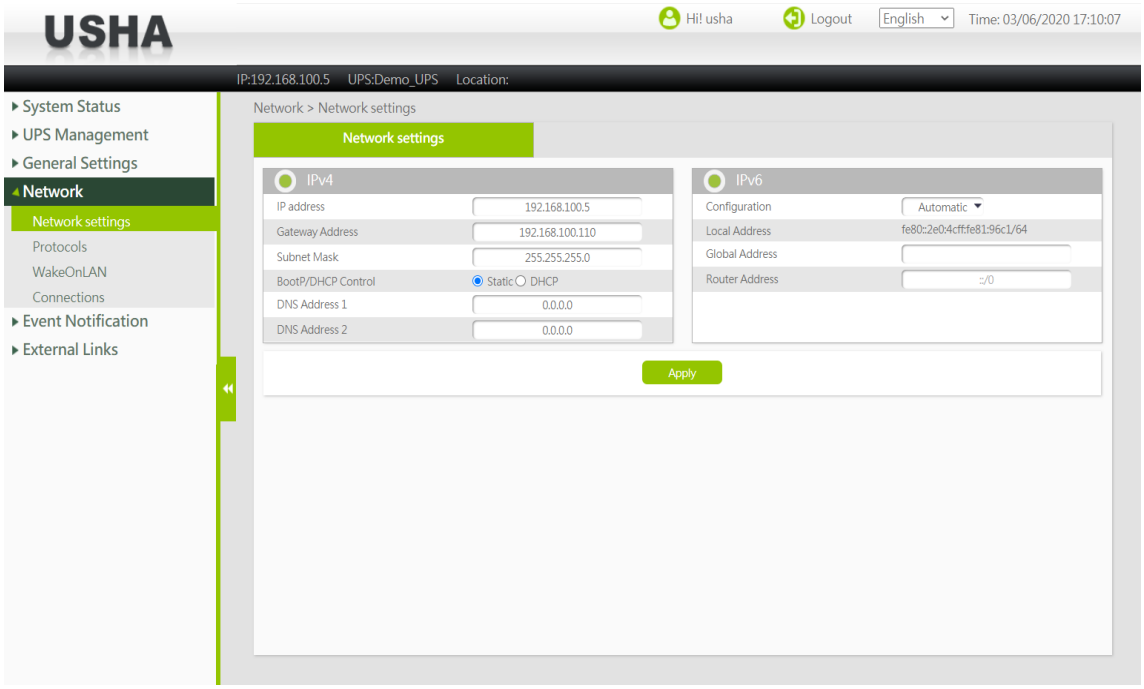


Translated String Download
This field is a button that the user can use to download all translated strings into a file.

Translated String Upload
This field is a button and file type input, and the user can select the translated file and upload it to the USHA card.

3.5. Network

3.5.1. Network settings



3.5.1.1. IPv4

This page lets you configure settings related to IPv4.

IP Address
The IP address of USHA in dotted format (eg. 192.9.60.229).

Gateway Address
The IP address of the gateway in dotted format (eg. 192.9.60.10).

Subnet Mask
The subnet mask of USHA (eg. 255.255.255.0).

BootP / DHCP Control
This is the parameter enabling or disabling the Boot Protocol (BootP) / Dynamic Host Configuration Protocol (DHCP) process. These protocols are used to obtain a dynamic IP address from a BootP / DHCP server.

DNS Address 1
Set the primary DNS.

DNS Address 2
Set the secondary DNS.

3.5.1.2. IPv6

This page lets you configure settings related to IPv6.

Configuration
To enable or disable IPv6 address auto-configuration of system. If enabled, system will first look for "Router Advertisement" message to do stateless auto-configuration. If there's no "Router Advertisement" message on the same link or the same subnet, then system will do the stateful auto-configuration via DHCPv6.

Local Address
The IPv6 link-local address of system (eg. FE80::2E0:D8FF:FEFF:8A59). The prefix of link-local address is always "FE80::/64". 64 is the prefix length. The link-local address is always configured by stateless auto-configuration process, and is always used in the same link or subnet.

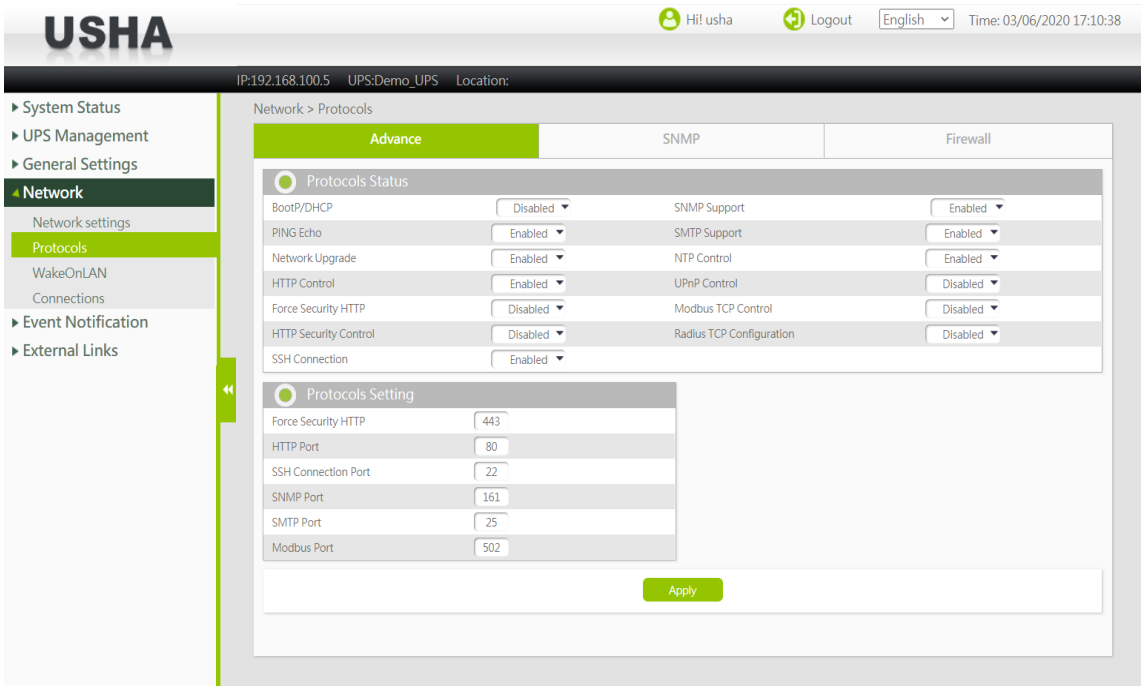
Global Address
The IPv6 global address of system (eg. 2001:B181:2::2E0:D8FF:FEFF:8A59).

Router Address
The IPv6 address of system default router.

3.5.2. Protocols

3.5.2.1. Protocols Status

This page lets the Administrator enable or disable the communication protocols available in the USHA.



BootP / DHCP
This is the parameter enabling or disabling the Boot Protocol (BootP) / Dynamic Host Configuration Protocol (DHCP) process. These protocols are used to obtain a dynamic IP address from a BootP / DHCP server.

PING Echo
Enable/Disable the USHA to respond to Ping requests.

Network Upgrade
This is the parameter enabling or disabling the Trivial File Transfer Protocol (TFTP) upgrade control. You can use the provided upgrade utility on Windows via TFTP to upgrade the USHA firmware.

HTTP Control
Enable/Disable the HTTP connection with the USHA. The user may configure HTTP protocol to use a port number other than standard HTTP port (80).

Force Security HTTP
This allow administrator to Enable or Disable force login by HTTPs.

HTTP Security Control
If this setting was enabled, user has to enter user name and password when he/she access to USHA via HTTP.

SSH Connection
Enable/Disable the SSH connection with the USHA.

SNMP Support
Enable/Disable the SNMP connection with the USHA.

SMTP Support
Enable/Disable the SMTP connection with the USHA.

NTP Control
Enable/Disable the synchronization with the NTP server feature.

UPnP Support
Enable/Disable the Universal Plug and Play (UPnP) feature.

Modbus TCP Control
Enable/Disable the Modbus over TCP feature.

Radius TCP Configuration
Enable/Disable the Radius over TCP Configuration.

3.5.2.2. Protocol Setting

This page lets the Administrator configure the communication protocol with a different port number.

Force Security HTTP
The user may configure HTTPs protocol to use a port number other than standard HTTPs port (443).

HTTP Port
The user may configure HTTP protocol to use a port number other than standard HTTP port (80).

SSH Connection Port
The user may configure SSH protocol to use a port number other than standard SSH port (22).

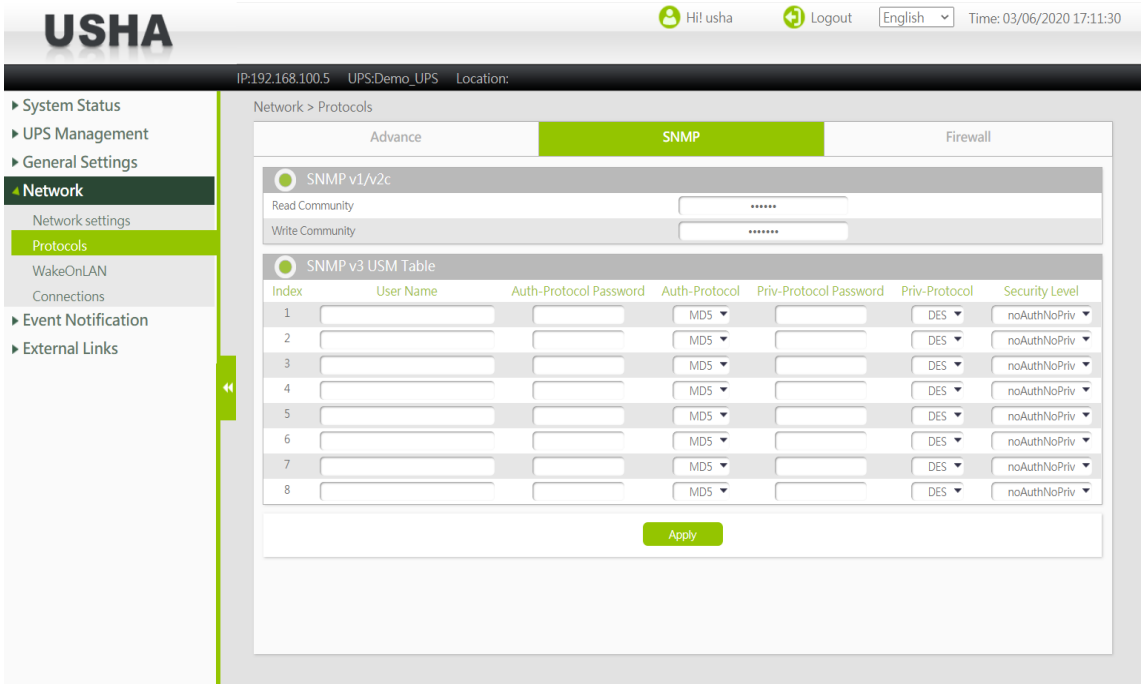
SNMP Port
The user may configure the SNMP protocol to use a port number other than the standard SNMP port (161).

SMTP Port
The user may configure the SMTP protocol to use a port number other than the standard SMTP port (25).

Modbus Port
This field allows the administrator to set the specific port for the user that allows accessing the USHA via Modbus protocol.

3.5.2.3. SNMP v1/v2c

This page lets the Administrator to set the read/write community.



Read Community
Set a read-only community. Default value: public.

Write Community
Set a read/write-permitted community. Default value: private

3.5.2.4. SNMP v3 USM Table

This page contains the related setting for configuring SNMPv3 protocol.

Index
This field shows the index numbers of the table entries.

User Name
This field allows the administrator to set the specific user name for the user that allows to access the USHA via SNMPv3.

Auth-Protocol Password
This field allows the administrator to set the authentication password of the associated user.

Auth-Protocol
This field allows the administrator to set the authentication protocol, HMAC-MD5 or HMAC-SHA.

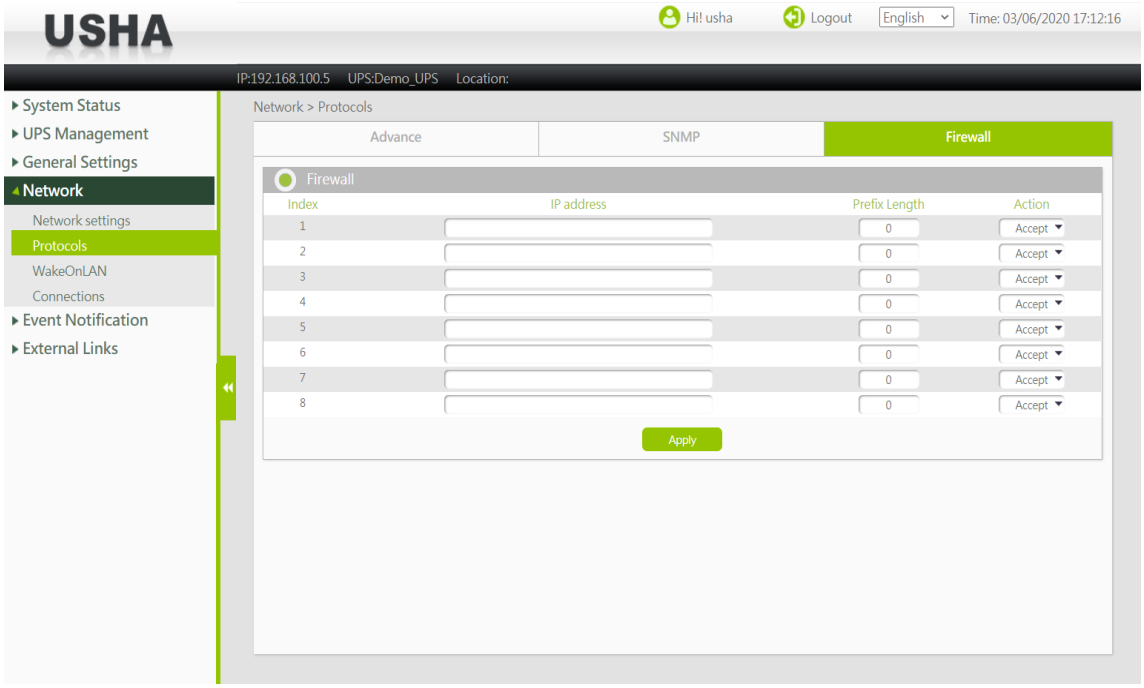
Priv-Protocol Password
This field allows the administrator to set the privacy password of the associated user.

Priv-Protocol
This field allows the administrator to set the privacy protocol, DES or AES.

Security Level
This field allows the administrator to set the access type for the user.
The available options are:
noAuthNoPriv - with no authentication and no privacy passwords
authNoPriv - with authentication password but no privacy password
authPriv - with no authentication password but with privacy password

3.5.2.5. Firewall

This page allows the administrator to set Accessible IP list



Index

This field shows the index numbers of the table entries.

IP Address

This field allows the administrator to set the IPv4/IPv6 address and only accept "dotted decimal notation" format (i.e., 192.168.60.229) or "hexadecimal" format (i.e., 2001:1234:100:f101:2e0:d8ff:feff:b522).

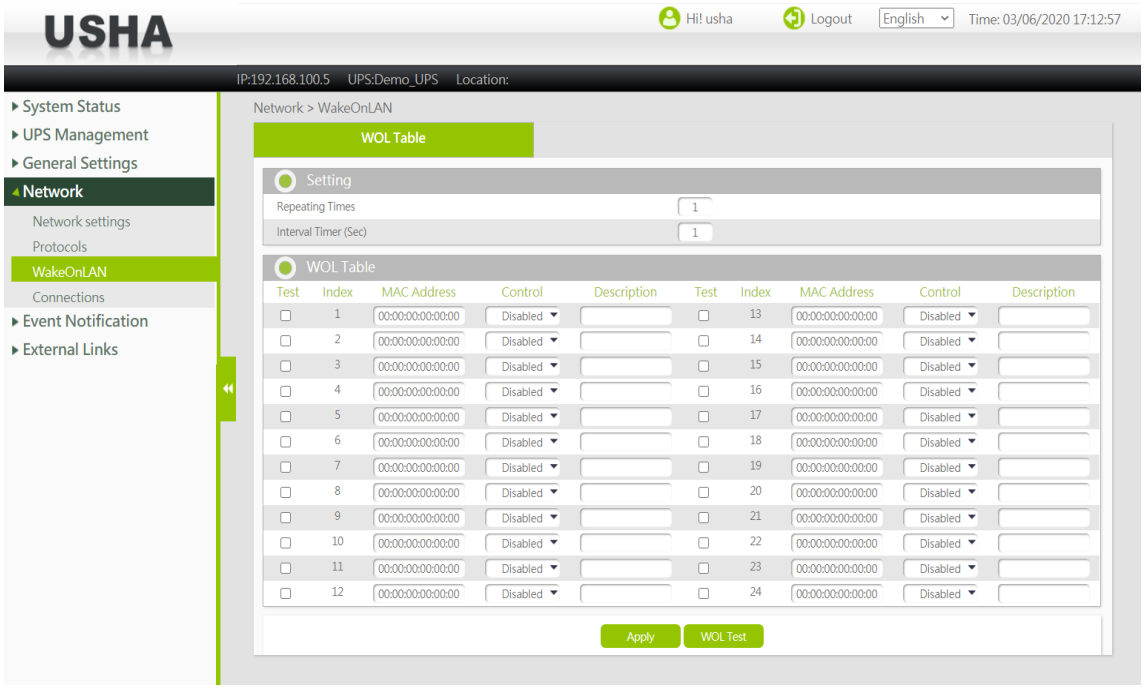
Prefix Length

This field allows the administrator to set the Prefix Length and only accept an integer between 0-32 (IPv4) or 0-128 (IPv6).

Action

Accept, this IP or IP segment could be accessed USHA.
Reject, this IP or IP segment could not be accessed USHA.

3.5.3. WakeOnLAN



3.5.3.1. Setting

"WOL" function could start up client PC from network by MAC address.

Repeating Times
The repeat times of sending WOL packet to client. The range of repeating time is 1~99.

Interval Timer (Sec)
The time interval is during two actions of sending WOL packet to client. The value is time in seconds. The range of time interval is 1~999.

3.5.3.2. WOL Table

From this page, you can set 24 MAC Address of clients. When the clients shutdown cause of UPS shutdown events, after shutdown events returned to normal, WOL packet will send to client to start up PC.

Test
If this option is selected, the WOL packet will send to client to start up PC after press "Wake On LAN test" button.

Index
The index is the number of the entry in the table.

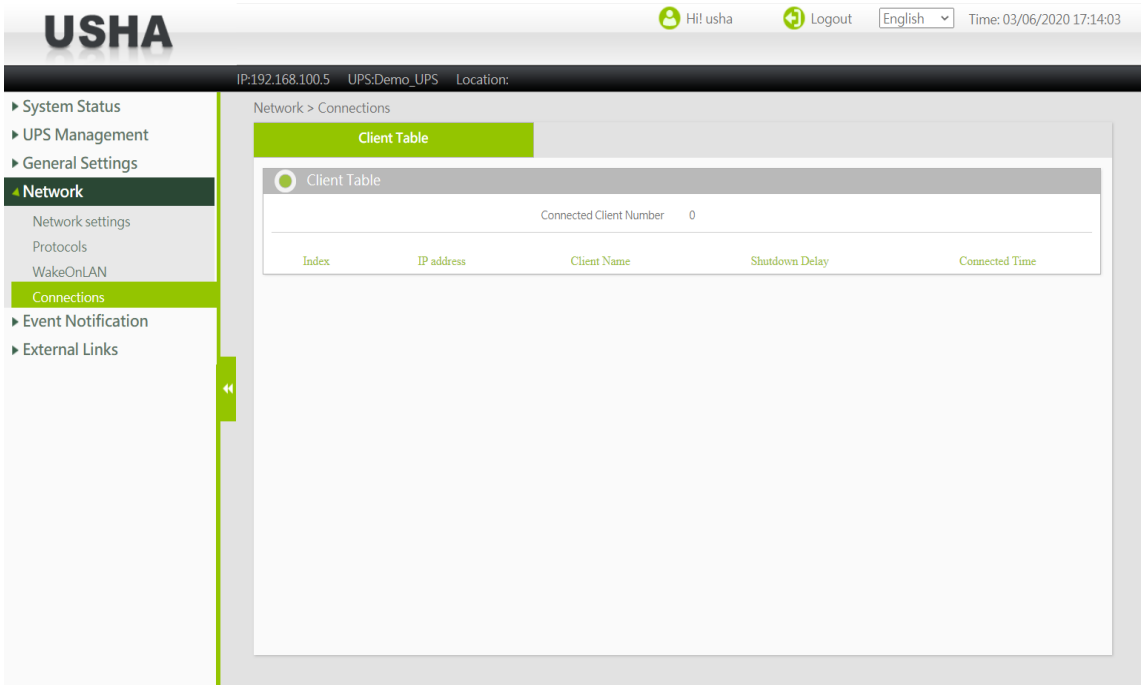
MAC Address
Enter the MAC address of the device you want to start using a WOL packet.

Control
Enabled or Disabled WOL function.

Description
User sets description. The maximum length of the string is 31 characters.

WOL test
This button is used to send the WOL test packet to the target device

3.5.4. Connections



3.5.4.1. Client Table

This table lists the clients that have the Shutdown Program running and have registered with USHA. This page will refresh automatically. Whenever the UPS is about to go down, these clients will be notified so that they can perform a graceful shutdown of the system.

Connected Client Number
Total of client system that has the Shutdown Program running and has registered with USHA.

Index
Serialized index number of the client registered.

IP Address
IP address of the client running the Shutdown Program and registered with USHA.

Client Name
Computer names of the client running the Shutdown Program and registered with USHA.

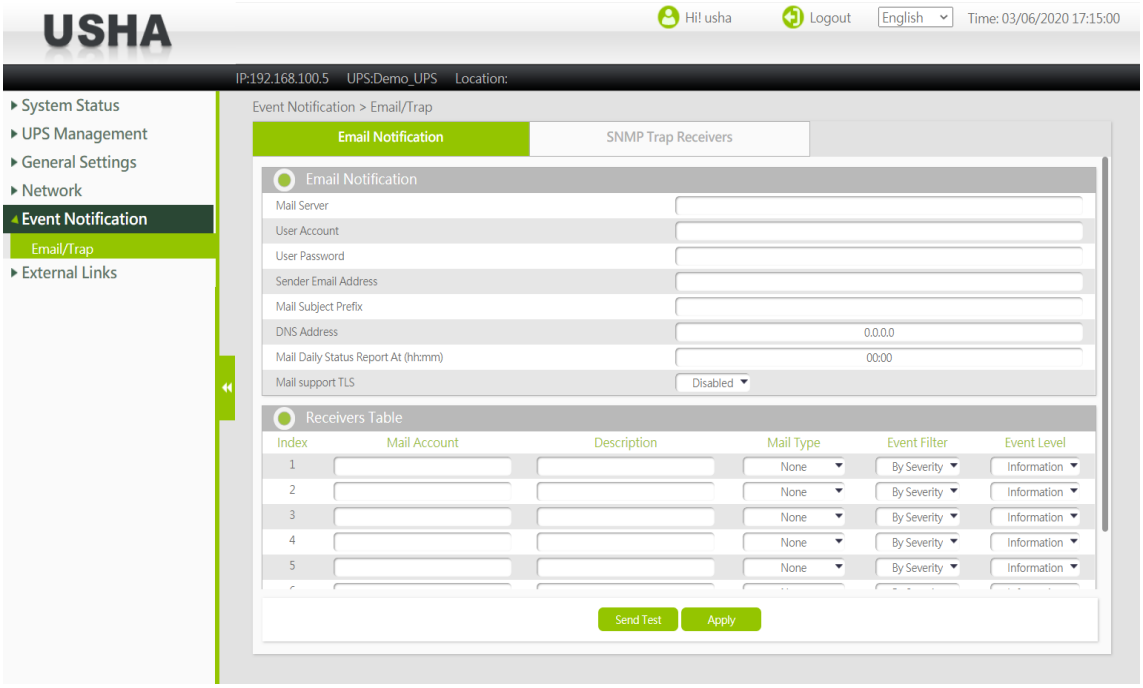
Shutdown Delay
This is the delay time for "Shutdown Program" in client computer to start system shutdown.

Connected Time
The time that the client running the Shutdown Program has registered with USHA.

3.5.5. Event Notification
Email/Trap

3.5.5.1. Email Notification

This page description of UPS email notification setting



Mail Server
As Administrator, you may enter the IP Address or Hostname of a SMTP mail server that will be used to send email messages from the SNMP/WEB Adapter. If entering a Hostname, you are also required to enter the DNS Address. If entering an IP Address, the DNS Address field will automatically be populated with the IP Address you entered.

User Account
As Administrator, you may enter the User Account of the mail server that will be used by the SNMP/WEB Adaptor to login mail server to forward mails.

User Password
As Administrator, you may enter the User Password of User Account.

Sender Email Address
This field specify the content of the 'From' field of the Email. If this field left blank, the sender's address will be account@ip_address.

Mail Subject Prefix
The string prefix in the mail subject to identify the device which send out the mail.

DNS Address
As Administrator, you are required to enter the IP address of your network DNS server if you entered a Hostname for the Mail Server. Otherwise, this field will contain 0.0.0.0.

Mail Daily Status Report At (hh:mm)
If you intend to have the SNMP/WEB Adapter send a Daily Status report to select email address (Mail Accounts), you need to enter the time of day in 24-hour format at which time you want the email sent.

Mail support TLS
Enabled/Disabled email support TLS.

3.5.5.2. Receivers Table

A maximum of 8 receivers can be registered.

Index
The index number of the entry in the table.

Mail Account
As Administrator, you may enter the email address of the individual you wish to have the SNMP/WEB Adapter send mail to.

Description
As Administrator, you may enter a description for reference purposes for each of the Mail Account you configure.

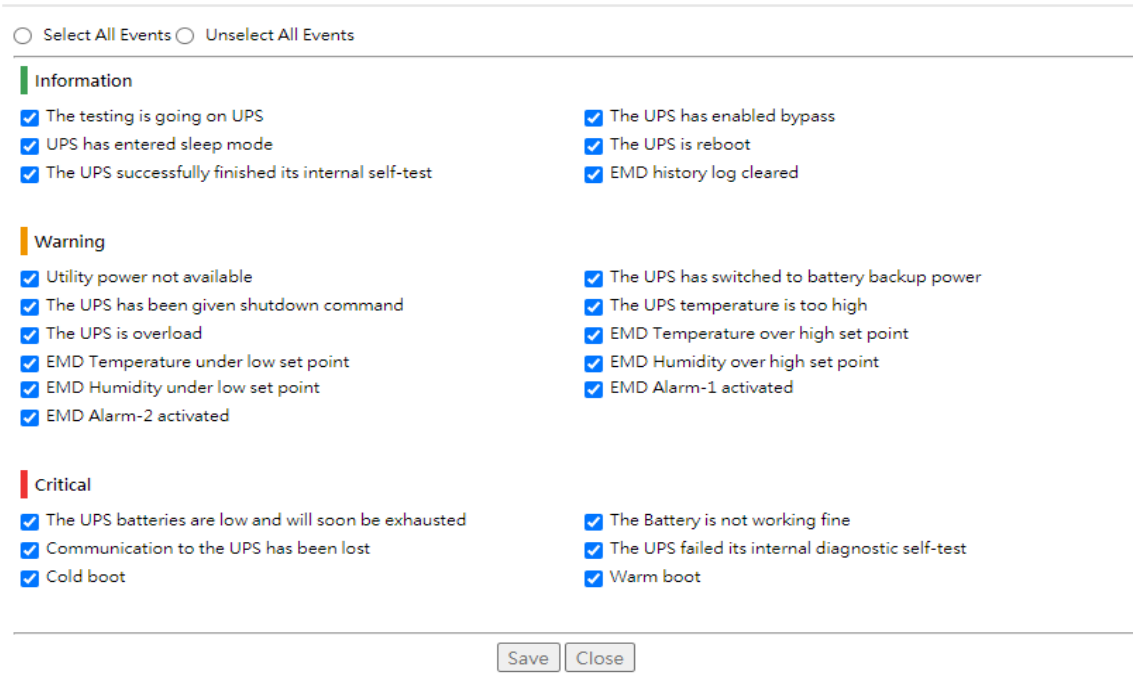
Mail Type
As Administrator, you are allowed to select what type of email is sent to a specific Mail Account. The choices are None, Events, Daily Status, or Event/Status.
The default of None allows you to disable the sending of email to a specific recipient.
Selecting Events specifies that the recipient should only receive short event-related messages.
Selecting Daily Status specifies that the recipient should only receive the Daily Status message that contains three file attachments containing information logged by the SNMP/WEB Adapter. One attachment contains the History Log contents (Logged UPS data) and the other two contains the Event Log contents, UPS Event & Agent Event (in .csv format suitable for viewing in Microsoft Excel).
Selecting Events/Status specifies that the recipient should receive an email message containing the event-related notification and the two file attachments (as described above), each time an event notification is sent.

Event Filter
This allow administrator to select the way to filter the email by Severity or by Event.

Event Level
This allow administrator to select the event level if the Event Filter is by Severity.

Event Level
As Administrator, you are allowed to select the severity level of notification you wish to send to each Mail Account configured to be sent Mail Type: Events or Events/Status. This filter is based on the SNMP-based traps (events) and allows selection of Informational, Warning or Severe. Refer to the MIB documentation included with the adapter for more information.

If the Event Filter is by Event, administrator can click "Event Select" button and select which trap should be sent by each receiver.

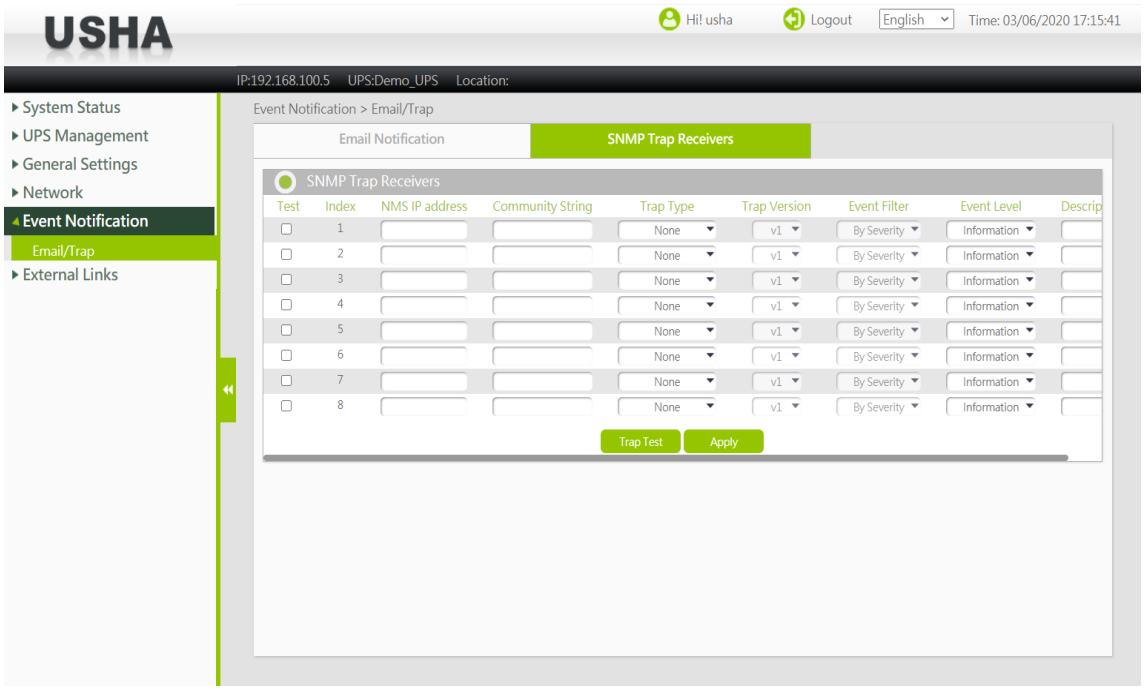


Send Test

This button is used to send the test mail to the target mail address.

3.5.5.3. SNMP Trap Receivers

This page lists the parameters for SNMP trap receivers (For SNMP Network Management). A maximum of 8 receivers can be registered.



Test

If this option is selected, the test trap will send to the IP Address after press "Trap Test" button.

Index

The index number of the entry in the table.

NMS IP Address

The IP Address in dotted format of the NMS station to which the trap should be sent.

Community String

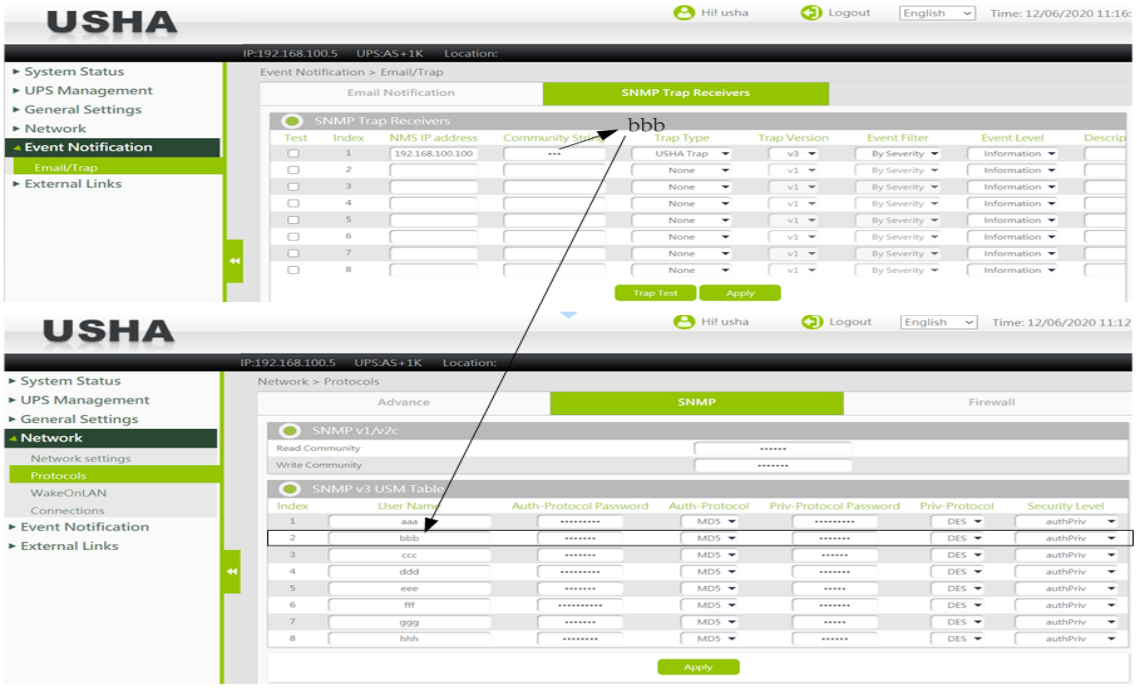
The community string of the trap PDU to be sent. The maximum length of the string is 19 characters.

Trap Type

Types of the traps to be received. Set the type of the trap.
none : Traps are not be received.
RFC-1628 Trap : Traps are received base on RFC-1628.
USHA Trap: Traps are received base on USHA MIB.

Trap Version

This allow administrator to select the SNMP trap version. If v3 Trap Version is selected, the administrator has to set authorized information from SNMP v3 USM Table. When the information is set on the SNMP v3 USM Table, the User Name of table needs to be same as where Community String of the SNMP Trap Receivers sets.
For SNMP v3 USM Table short cut, please refer the following information.
[Network] → [Protocols] → [SNMP] → [SNMP v3 USM Table]



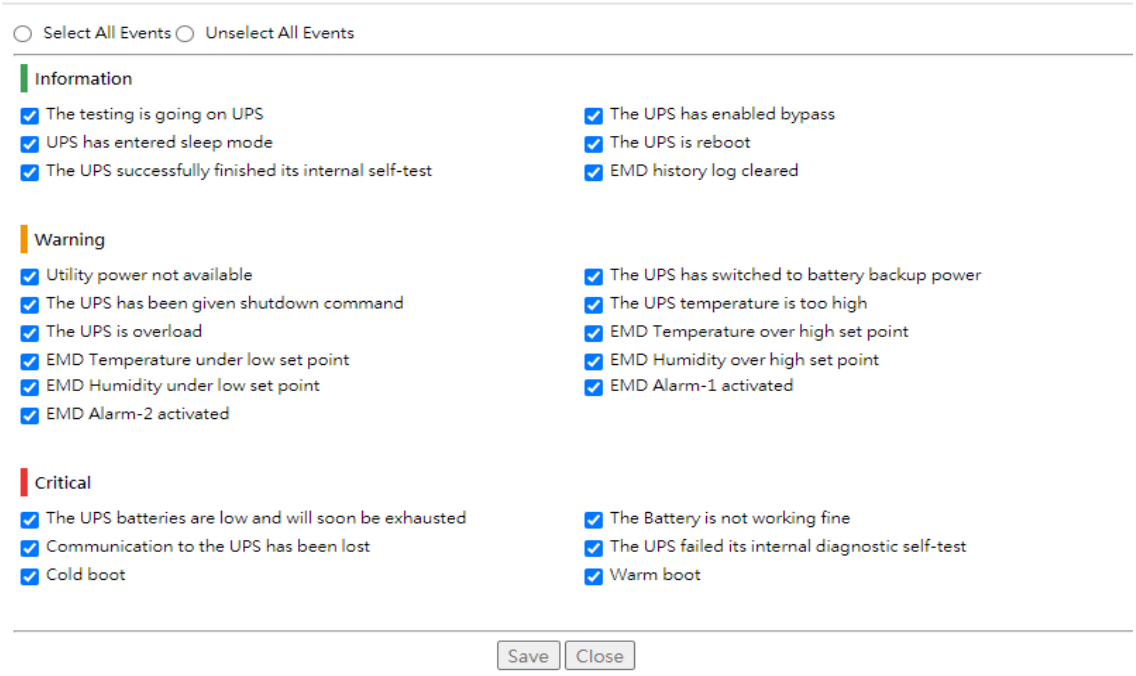
Event Filter

This allow administrator to select the way to filter the trap by Severity or by Event.

Event Level

This allow administrator to select the event level if the Event Filter is by Severity.
Set the level of the trap to be received.
Information: All traps are received
Warning: Trap that need to be noticed and are in dangerous is received.
Severe : The significant traps such as the UPS failure and low-battery which cause the immediate halt the output of the UPS are received.

If the Event Filter is by Event, administrator can select which trap should be sent by each receiver.



Description

Customer description string.

Trap Test

This button is used to send the test trap to the target IP address.

Chapter 4. Configuring the USHA via SSH

There are different ways to connect the USHA card by different models showed as below.

4.1. Configuring via SSH

1. SSH to the USHA from your workstation. When the below messages display on the screen, please enter the user name and password (the default username is ***usha*** and the password is ***admin***). Then the USHA configuration utility main menu will show on the screen.

```
Login as : usha
usha@192.168.53.23's password: *****
```

2. Select “1” to enter the SNMP/WEB Card Settings page.

```
============================================================
                    USHA Configuration Utility
                       [ New USHA v1.00]
============================================================
  1. SNMP/WEB Card Settings
  2. Reset Account/Password to Default
  3. Reset Configuration to Default
  4. Restart SNMP/WEB Card
  0. Exit

Please Enter Your Choice => 1
```

4.1.1. Setting the IP Address, Gateway Address, Network Mask and Date/Time

From the configuration menu, press “*1*” to select this function and set the IP address, Gateway address and other group parameters. The definitions of these parameters are listed as below.

1. Select “1” to enter the **IP, Time and System Group** page.

```
============================================================
                    USHA Configuration Utility
                       UPS Model :   0va
============================================================
  1. IP, Time and System Group
  2. Network Control Group
  3. Account Control Group
  4. Email Group
  5. SNMP Group
  0. Back to Main Menu

Please Enter Your Choice => 1
```

2. Select “1” to enter the **IPv4 Group** page or “2” to enter the **IPv6 Group** page depends on network condition.

```
============================================================
                    USHA Configuration Utility
                    [IP, Time and System Group]
============================================================
    SNMP/WEB Card Version :                 New USHA v0.90 b1
    Ethernet Address :                      00:E0:D8:FF:B4:41
  1. IPv4 Group
  2. IPv6 Group
  3. Date and Time Group
  4. System Contact :                       0
  5. System Name    :                       USHA
  6. System Location :
  0. Return to previous menu

Please Enter Your Choice => 1
```

3. Enter the related IPv4 or IPv6 setting as shown below.

```
============================================================
                    IP, Time and System Group
                        [IPv4 Group]
============================================================
  1. IP Address    :                      10.1.6.118
  2. Gateway Address :                    10.1.1.254
  3. Network Subnet    :                  255.255.0.0
  0. Return to previous menu

Please Enter Your Choice => 0
```

or

```
============================================================
                    IP, Time and System Group
                        [IPv6 Group]
============================================================
  1. IP v6 Address :          2001:1234:100:f101:2e0:d8ff:feff:b406/64
  0. Return to previous menu

Please Enter Your Choice => 0
```

4. Select “3” to enter the **Date and Time Group** pages

```
============================================================
                    IP, Time and System Group
                        [Date and Time Group]
============================================================
  1. System Date (dd/mm/yyyy) :                 22/12/2012
  2. System Time (hh:mm:ss) :                   15:03:15
  3. NTP Server    :
  4. NTP Time Zone     :                        62
  5. Daylight Saving Time Control : Disabled
  0. Return to previous menu

Please Enter Your Choice => 0
```

After completing these settings, press “0” to return to the configuration menu.

4.1.2. Network Control Group Setting

Go to the configuration menu, press “2” to enabled/disabled the network protocols.

```
============================================================
                    USHA Configuration Utility
                       UPS Model :   0va
============================================================
  1. IP, Time and System Group
  2. Network Control Group
  3. Account Control Group
  4. Email Group
  5. SNMP Group
  0. Back to Main Menu

Please Enter Your Choice => 2
```

1. Select “6~9” to enter the related network control pages.

```
============================================================
                    USHA Configuration Utility
                  [USHA Network Control Group]
============================================================
  1. BOOTP/DHCP Control :                    Disabled
  2. Upgrade Control :                       Enabled
  3. Ping Echo Control :                     Enabled
  4. UPnP Control    :                       Enabled
  5. Http Security :                         Disabled
  6. Http Control Group
  7. SNMP Control Group
  8. SMTP Control Group
  9. SSH Control Group

  0. Return to previous menu

Please Enter Your Choice => 6
```

2. Enter the related HTTP setting as shown below.

```
============================================================
                    Network Control Group
                    [HTTP Control Group]
============================================================
  1. HTTP Control :                          Enabled
  2. HTTP Port :                             80
  0. Return to previous menu

Please Enter Your Choice => 0
```

3. Enter the related SNMP setting as shown below.

```
============================================================
                    Network Control Group
                  [SNMP Control Group]
============================================================
  1. SNMP Control :                                Enabled
  2. SNMP Port :                                   161
  0. Return to previous menu

Please Enter Your Choice => 0
```

4. Enter the related SMTP setting as shown below.

```
============================================================
                    Network Control Group
                  [SMTP Control Group]
============================================================
  1. SMTP Control :                                Enabled
  2. SMTP Port :                                   25
  0. Return to previous menu

Please Enter Your Choice => 0
```

5. Enter the related SSH setting as shown below.

```
============================================================
                    Network Control Group
                  [SSH Control Group]
============================================================
  1. SSH Control :                                 Enabled
  2. SSH Port :                                    22
  0. Return to previous menu

Please Enter Your Choice => 0
```

After completing these settings, press “0” to return to the configuration menu.

4.1.3. Account Control Group Setting

Go to the configuration menu, and choose “3” to modify the related account control identification information.

```
============================================================
                    USHA Configuration Utility
                        UPS Model :    0va
============================================================
  1. IP, Time and System Group
  2. Network Control Group
  3. Account Control Group
  4. Email Group
  5. SNMP Group
  0. Back to Main Menu

Please Enter Your Choice => 3
```

1. Select “1~3” to enter the related account control pages.

```
============================================================
                    USHA Configuration Utility
                    [Account Control Group]
============================================================
  1. RADIUS Group
  2. Access Control Table
  3. Super User Group
  0. Return to previous menu

Please Enter Your Choice => 1
```

2. Enter the related RADIUS setting as shown below.

```
============================================================
                    Account Control Group
                        [RADIUS Group]
============================================================
  1. RADIUS Port :                                    1812
  2. RADIUS Server Settings
  3. Packet Timeout :                                    1
  4. Packet Retry :                                      3
  0. Return to previous menu

Please Enter Your Choice => 0
```

3. Enter the related access control setting as shown below.

```
============================================================
                    Account Control Group
                  [Access Control Table]
============================================================
      User Name          User Password              User Level
------------------------------------------------------------------------------------------------------------------------
[1]                      *                          Disabled
[2]                      *                          Disabled
[3]                      *                          Disabled
[4]                      *                          Disabled
[5]                      *                          Disabled
[6]                      *                          Disabled
[7]                      *                          Disabled
[8]                      *                          Disabled

Command :
   1. Display one entry
   2. Modify one entry
   0. Return to previous menu

Please Enter Your Choice => 0
```

4. Enter the related super user setting as shown below.

```
============================================================
                Super User Name & Password Group
                   [Super User Group]
============================================================
   1. User Name :                                    usha
   2. User Password :                                *
   0. Return to previous menu

Please Enter Your Choice => 0
```

After completing these settings, press “0” to return to the configuration men

4.1.4. Email Group Setting

Go to the configuration menu, and press “4” to modify the Email configuration.

```
==============================================================
                 USHA Configuration Utility
                   UPS Model :    0va
==============================================================
  1. IP, Time and System Group
  2. Network Control Group
  3. Account Control Group
  4. Email Group
  5. SNMP Group
  0. Back to Main Menu

Please Enter Your Choice => 4
```

1. Enter the related E-mail setting as shown below.

```
==============================================================
                 USHA Configuration Utility
                       [Email Group]
==============================================================
  1. Mail Server :
  2. User Account    :
  3. User Password :                                         *
  4. Sender Email Address :
  5. Mail Subject Prefix :
  6. Mail Daily Status Report At(hh:mm) :
  7. Mail Receiver Table
  0. Return to previous menu

Please Enter Your Choice => 7
```

2. Enter the related mail receiver setting as shown below.

```
==============================================================
                        Email Group
                    [Mail Receiver Table]
==============================================================
        Mail Account          Description     Mail Type    Event Level
  ------------------------------------------------------------------------
[1]                                           None         Information
[2]                                           None         Information
[3]                                           None         Information
[4]                                           None         Information
[5]                                           None         Information
[6]                                           None         Information
[7]                                           None         Information
[8]                                           None         Information

Command :
  1. Display one entry
  2. Modify one entry
  0. Return to previous menu

Please Enter Your Choice => 0
```

After completing these settings, press “0” to return to the configuration menu.

4.1.5. SNMP Group Setting

Go to the main configuration menu, and press “5” for the SNMP Group.

```
============================================================
                    USHA Configuration Utility
                       UPS Model :   0va
============================================================
 1. IP, Time and System Group
 2. Network Control Group
 3. Account Control Group
 4. Email Group
 5. SNMP Group
 0. Back to Main Menu

Please Enter Your Choice => 5
```

If you want to use a PC and perform the SNMP manager ‘trap’ function in order to manage UPS through USHA, the IP address of the PC must be added to the USHA list.

Note: The Set Trap Receivers configuration is used only for SNMP Network Manager.

```
============================================================
                    USHA Configuration Utility
                       [SNMP Group]
============================================================
 1. Trap Receiver Table
 2. SNMPv3 USM Table
 0. Return to previous menu

Please Enter Your Choice => 1
```

1. Enter the related Trap receiver setting as shown below.

```
============================================================
                        SNMP Group
                    [Trap Receiver Table]
============================================================
 IP Address      Community/Name      Trap Type     Severity     Description
------------------------------------------------------------------------------------------------------------------------
      [1]                              None        Information
      [2]                              None        Information
      [3]                              None        Information
      [4]                              None        Information
      [5]                              None        Information
      [6]                              None        Information
      [7]                              None        Information
      [8]                              None        Information

 Command :
1. Display one entry
2. Modify one entry
0. Return to previous menu

     Please Enter Your Choice => 0
```

2. Enter the related SNMPv3 USM setting as shown below. If you want to use a workstation with SNMP Manager or set up more restrictive access, you can add the IP address of the clients on the access control table for the access permissions.

```
==============================================================
                          SNMP Group
                      [SNMPv3 USM Table]
==============================================================
User Name    Auth Password    Auth.    Priv Password    Privacy    Security
---------------------------------------------------------------------------
[1]                           MD5                       DES        noAuthNoPriv
[2]                           MD5                       DES        noAuthNoPriv
[3]                           MD5                       DES        noAuthNoPriv
[4]                           MD5                       DES        noAuthNoPriv
[5]                           MD5                       DES        noAuthNoPriv
[6]                           MD5                       DES        noAuthNoPriv
[7]                           MD5                       DES        noAuthNoPriv
[8]                           MD5                       DES        noAuthNoPriv

Command :
  1. Display one entry
  2. Modify one entry
  0. Return to previous menu

Please Enter Your Choice => 0
```

After completing these settings, press “0” to return to the configuration menu.

4.1.6. Back to Main Menu

Press “0” to return to the main menu.

4.1.7. End of USHA Console Configuration

After completing the configuration, press “0” to end the console connection. Reboot USHA is not necessary, unless you press “4” to end the console connection and force USHA reboot again.

```
==============================================================
                   USHA Configuration Utility
                       [New USHA v1.00]
==============================================================
  1. SNMP/WEB Card Settings
  2. Reset Account/Password to Default
  3. Reset Configuration to Default
  4. Restart SNMP/WEB Card
  0. Exit

Please Enter Your Choice => 0
```

As so far, USHA initialisation is completed.

- **Note: If you want USHA to load the factory configuration default, you may press “3” to Reset Configuration to Default.**

Chapter 5. Managing USHA/UPS via SNMP

5.1. Setting SNMP parameters in USHA

If you intend to manage your USHA/UPS via SNMP NMS (Network Management station), you may want to customize some of the SNMP settings (such as System Name, System Contact and System Location and so on).

Before using USHA in SNMP environment, the IP address and gateway must be properly configured. Please refer to Chapter 2 for the details.

5.2. SNMP Access Control Setting

Because of the USHA supports SNMP network protocol, you can use SNMP NMS to manage UPS through the network. The IP address of the workstation must be set up in the USHA write access table to prevent unauthorized users from configuring USHA via HTTP or SNMP protocols.

- **Note: If you do not enter the IP address of the workstation to the Access Control Table (via SSH) or the SNMP/HTTP Access Control (via Web Browser) in USHA, the SNMP NMS can only view the UPS status; it will not be able to perform any configuration on USHA/UPS. (See Pg. 39 SNMP Control Table and SNMPv3 USM Table for details.)**

5.3. SNMP Trap Receivers Setting

See Pg. 42 SNMP Trap Receivers for details.

5.4. Set up SNMP Manager Software

1. Add the MIB file of USHA from the USHA CD-ROM to the MIB database of the SNMP manager.
2. Search the USHA equipment in the network
3. To access the USHA SNMP agent, use ‘public’ for the GET community string and the Read/Write password (default is **private**) for the SET community string.

   GET Community string: public
   SET Community string: **private**

   For more information, see the MIB file on the USHA CD-ROM.

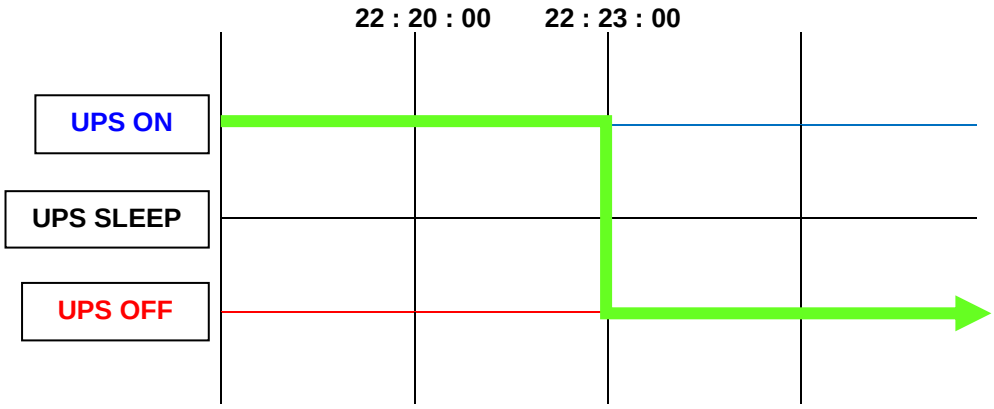
Chapter 6. UPS Power Management

One of the most significant features of the USHA is dealing with almost all the power crisis confront to a UPS and protect your valuable information reside in your server from being damage due to the abrupt shutdown of the server. In addition, USHA can help corporate to cut down the expensive energy bill by shutdown all the computer workstations in the office automatically during holiday or after office-hour by using the Weekly Shutdown schedule or Special Day schedule. These schedules can also assist MIS staff to prevent unauthorised access to the server after office-hour time.

6.1. Turn off UPS Manually

When there is a need to turn off the UPS manually, please go to the UPS Control in the UPS Management menu. Login the web user interface as an administrator identity. Select the radial button beside Turn off UPS and click the Send button.

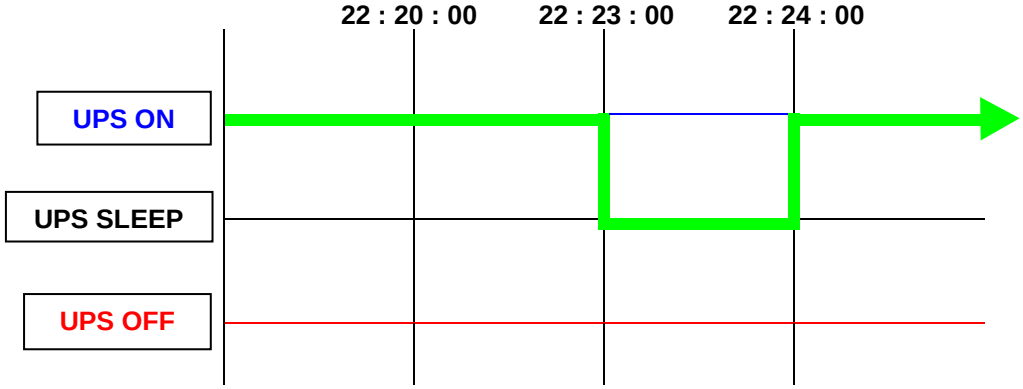
UPS Shutdown Delay (Sec):	180	(default value)
Turn off the UPS manually at	22:20:00	



6.2. Set UPS into Sleep Mode Manually

When there is a need to set up the UPS into sleep mode manually, please go to the UPS Control in the UPS Management menu. Login the web user interface as an administrator identity. Select the radial button beside UPS Sleep and click the Send button.

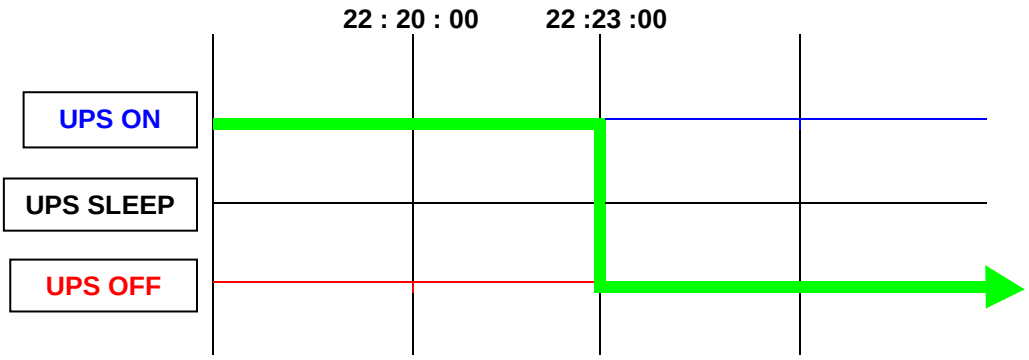
UPS Shutdown Delay (Sec):	180	(default value)
UPS Sleep Time (Min):	1	(default value)
Set UPS to sleep manually at	22:20:00	



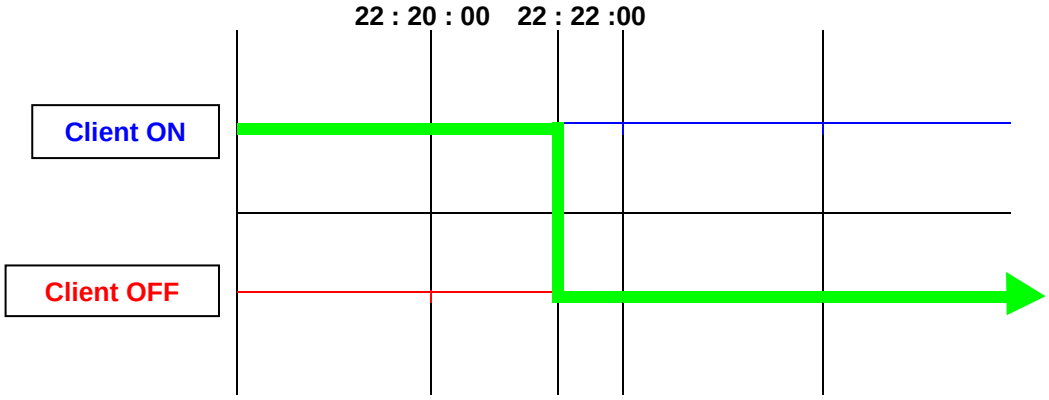
6.3. UPS Shutdown during Power Crisis

USHA responds to seven different kinds of UPS shutdown events and it will take appropriate action to protect your information in your server. Go to the UPS Shutdown in the UPS Management menu. Login the web user interface as an administrator identity. Configure the UPS Shutdown table to meet your need. Click the Set Value button when finished.

Status:	UPS Turn Off (default value)	
Delay (Min):	1	(default value)
1st Warning (Sec):	10	(default value)
Warning Interval (sec):	10	(default value)
UPS Shutdown Delay (Sec):	180	(default value)
AC failed at	22:20:00	



Client's local shutdown delay (Sec):120 (default value)



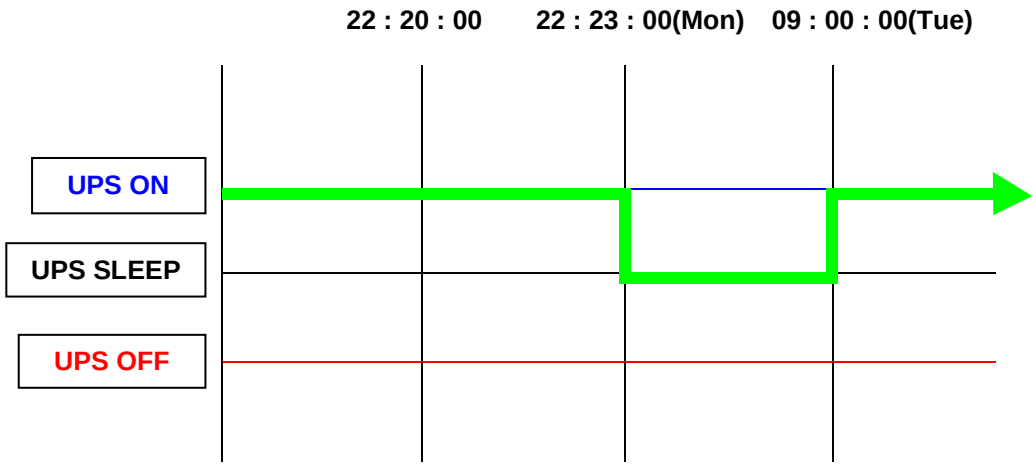
6.4. Managing the UPS Shutdown Schedule

USHA supports two kinds of shutdown schedules – (1) Weekly Schedule; (2) Special Day Schedule.

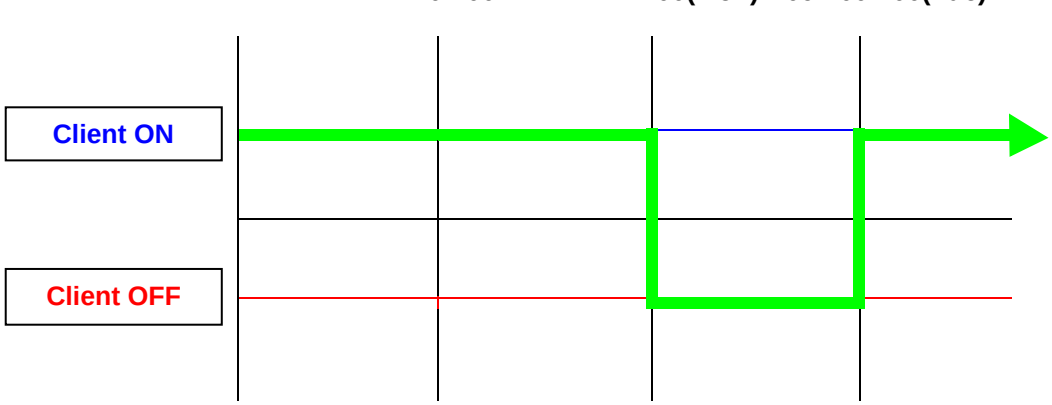
Note: Before managing the UPS Shutdown Schedule, please make sure that the Date and Time configured in USHA is correct.

Scenario

Status:	Special Day Schedule	
Delay (Min):	1	(default value)
1st Warning (Sec):	10	(default value)
Warning Interval (sec):	10	(default value)
UPS Shutdown Delay (Sec):	180	(default value)
Shutdown day & time:	Monday 22:20:00	
Restart day & time:	Tuesday 09:00:00	



Client's local shutdown delay (Sec): 120 (default value)



Chapter 7. Appendix A Technical Information

7.1. LED Definition

The function of the USHA miniGOLD 2 & SMART 3 are indicated by the Status/EMD and Network LEDs, as listed in the following tables.

miniGLOD 2

No.	Port	Green LED	Yellow LED	Function
1	Network	ON	Flashing	Ethernet 100 Traffic
2		OFF	Flashing	Ethernet 10 Traffic
3		ON	OFF	100 Base-TX Ready
4		OFF	ON	10 Base-T Ready
5		OFF	OFF	Ethernet Disconnection
6	Status/ EMD	ON	OFF	Power On(Normal Status)
7		ON	Flashing	RS232 Port Activity (UPS site)
8		OFF	OFF	Hardware Error

SMART 3

No.	Port	Green LED	Amber LED	Function
1	Network	ON	Flashing	Ethernet 100 Traffic
2		OFF	Flashing	Ethernet 10 Traffic
3		OFF	OFF	Ethernet Disconnection
4		ON	ON	100 Ready
5		OFF	OFF	10 Ready
6	EMD	ON	Flashing	RS-232 Port Activity
7		ON	OFF	Power On(Normal Status)
8		Two LED cross Flashing	Two LED cross Flashing	Auto Diagnostic Mode (MFG mode)
9		ON	ON	Auto Diagnostic Mode (MFG mode)
10		OFF	ON	Hardware Error

7.2. Technical Specification

miniGOLD 2

Function	Description
Power Input	DC +3.5V ~ 15V
Power Consumption	Maximum 3.0 Watts
SMT Switch	SMT switch on the board for restart USHA
Dimension(L x W x H mm)	80 x 42 x 18 mm
Operating Temperature	0 ~ 60° C
Operating Humidity	10 ~ 80 % (Non-condensing)
EMC Regulation	CE, FCC Class B

Smart 3

Function	Description
Power Input	DC +5.5V ~ +40V
Power Consumption	3 W Max. (without EMD)
Operating Temperature	0°C ~ +60°C
Operating Humidity	10 ~ 80 %
EMC Regulation	CE, FCC Class B