SNMP Web Pro

User's Manual

Management Software for Solar Inverter

Table of Contents

1. Overview

1.1 Introduction

This SNMP web pro can allow web server to monitor and manage multiple Inverters in a networking environment including LAN and INTERNET. It can detect temperature and humidity of the environment by connecting to EMD (Environmental Monitoring Device). The same port is also applied to data transmission. Simply connect SMS modem to a RJ11 with DB9 cable for sending SMS.
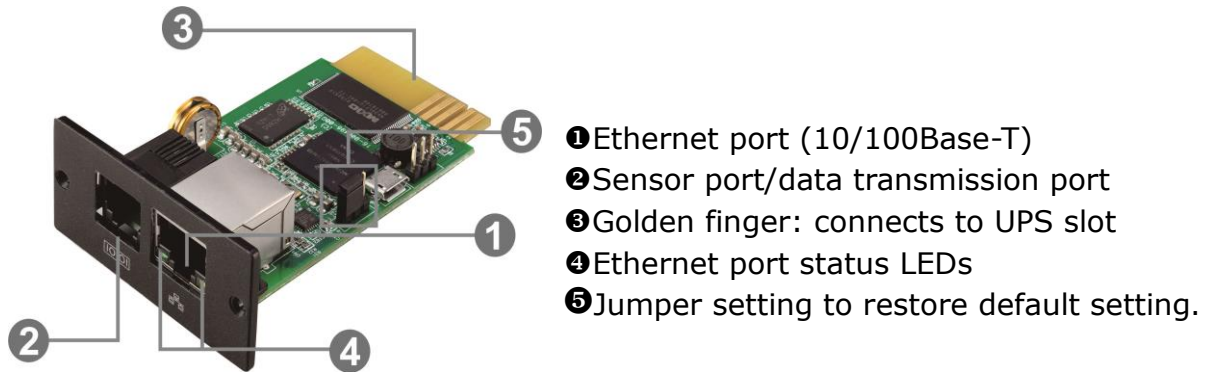
All Inverter warning and fault event records can be kept in SNMP web pro.

Integrated with SolarPower Pro software, it can monitor and remotely access to all distributed devices with SNMP web pro card in a LAN or INTERNET. For the detailed operations, please check user manual of SolarPower Pro.

1.2 Features

- ➢ Open monitor via Web Browser.
- ➢ Offer SNMP MIB to monitor Inverter status.
- ➢ Automatically detect and exchange 10M/100M Fast Ethernet.
- ➢ Supported protocol such as TCP/IP, UDP, SNMP, SMTP, SNTP, HTTP, HTTPS, SSL, SSH, TELNET, IPV4/IPV6, DHCP and so on.
- ➢ Able to store more than 200,000 threads of event log, including Inverter warnings, faults and EMD warnings, operation data logs from web users or SolarPower pro users. It will be stored safely without data loss even when power failure occurs.
- ➢ Support daily reports for event log and data log.
- ➢ Simultaneously upload UPS data to http servers.
- ➢ Support EMD monitoring and SMS service.
- ➢ Set with real-time clock to record log by date and keep running up to 7 days even without power connection.

1.3   Overlook

❶Ethernet port (10/100Base-T)
❷Sensor port/data transmission port
❸Golden finger: connects to UPS slot
❹Ethernet port status LEDs
❺Jumper setting to restore default setting.

LEDs status for Ethernet port:

100M LED	(Green)	On	Port is operating at 100Mbit/s
		Off	Current web bandwidth is 10Mbit/s
Link status LED	(Yellow)	Flash	Link Active
		Off	Card is not connected to the network

Pin assignment for Jumper:

Pin #	Status	Description
Pin 1 & Pin 2	Closed	Normal operation
Pin 2 & Pin 3	Closed	After re-connecting utility, the IP address of SNMP web card and password will restore to default setting. **Default**: dhcp. If there is no dhcp server, then use the static. **IP address**: 192.168.102.230. **Default password**: 12345678

NOTICE: After setting is restored to default, be sure to change the jumper setting to connect Pin 1 and Pin 2 for normal operation.

1.4   Installation and Connection

Installation
If using SNMP web card, please follow the steps below to install card first:
Step 1: Remove the cover of intelligent slot on the back panel of Inverter and retain the screws
Step 2: Slide the card into the open slot and secure it with the screws from step 1. (see Diagram 1-1)
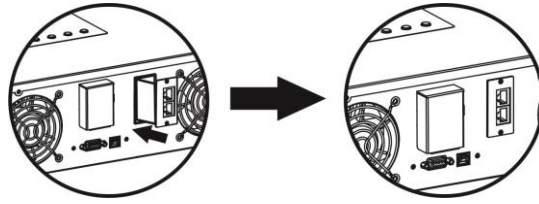
Diagram 1-1

Refer to Diagram 1-2 for connecting the SNMP web pro.

Step 3: Plug Ethernet cable to the Ethernet port (RJ-45) on the SNMP web manager.

Step 4: Use one more Ethernet cable. Connect one end to the sensor port on the SNMP web manager and the other end to the optional environmental monitoring device.
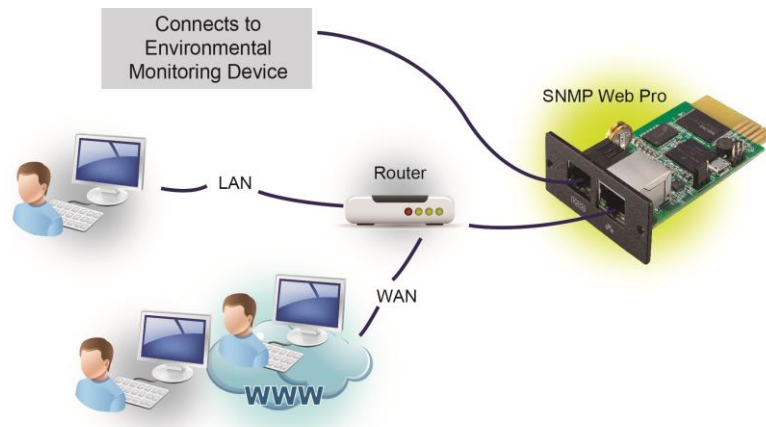

Diagram 1-2

1.5 Configuration

a) Please install SolarPower Pro monitoring software in your PC. After software is installed successfully, it will pop up a plug icon in the tray. SNMP manager will be automatically activated. Select "SNMP manager" by clicking right button of the mouse.

Diagram 1-3

b) Enter specific IP address to search all SNMP devices in LAN. The SNMP manager will automatically collect the IP address from sever by default via a DHCP server. It will apply default IP address as 192.168.102.230, default subnet mask as 255.255.255.0, and default gateway as

192.168.102.254 without a DHCP server. Users can modify IP address through web server of SNMP web pro card, SSH Client or SNMP web Manager.
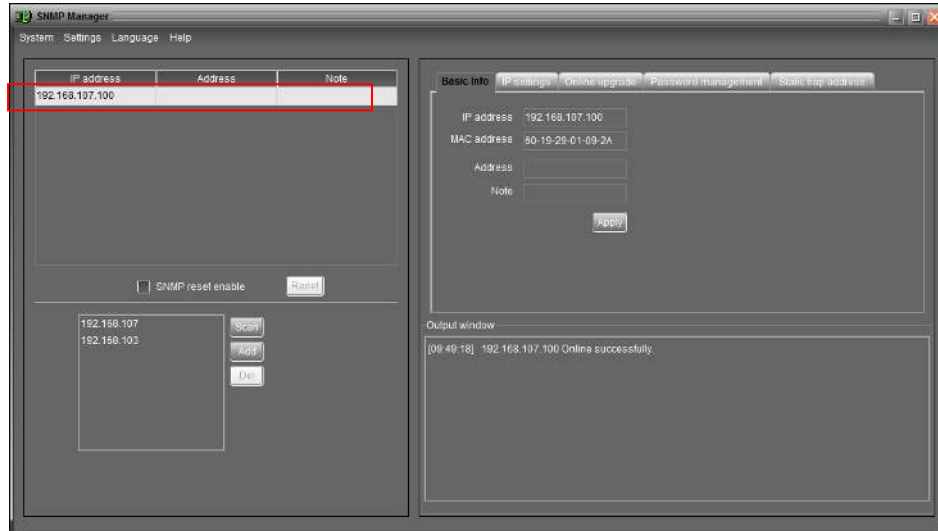

Diagram 1-4

c) User can modify IP setting, online upgrade, password management, and static trap address setting in SNMP Web Manager interface. It is necessary to enter password for any medications. The default password is 12345678.

1.6 Monitoring

There are two ways to monitor:

a) Double click the selected device from the device list (refer to Diagram 1-5) and web page as Diagram 1-5a will open. Or simply enter https address (https://192.168.107.100) in web browser to access to web server directly. Refer to Diagram 1-5b.
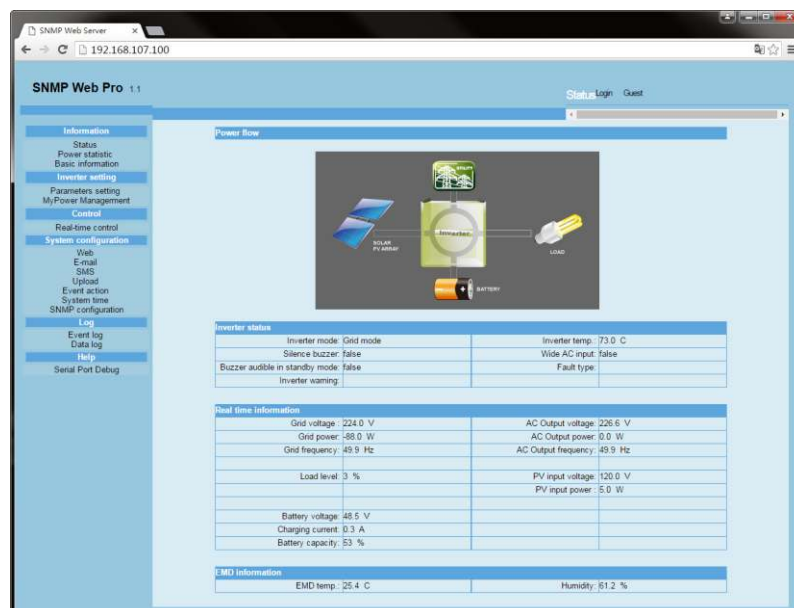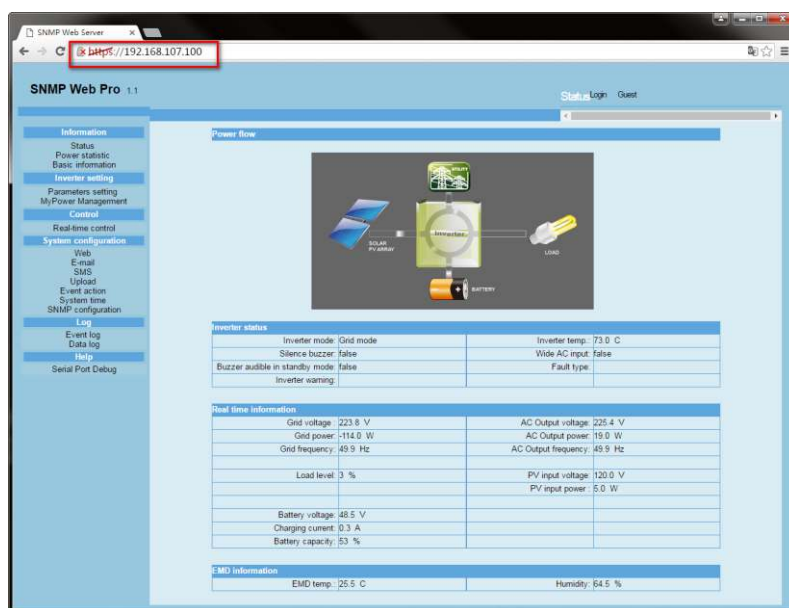
Diagram 1-5a

Diagram 1-5b

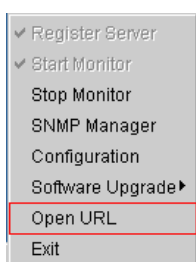b) As Diagram 1-6, select "Open URL" by clicking right button of the mouse.

Diagram 1-6

Then, it will activate SolarPower Pro software and list SNMP devices on the left side of screen. Refer to Diagram 1-7.
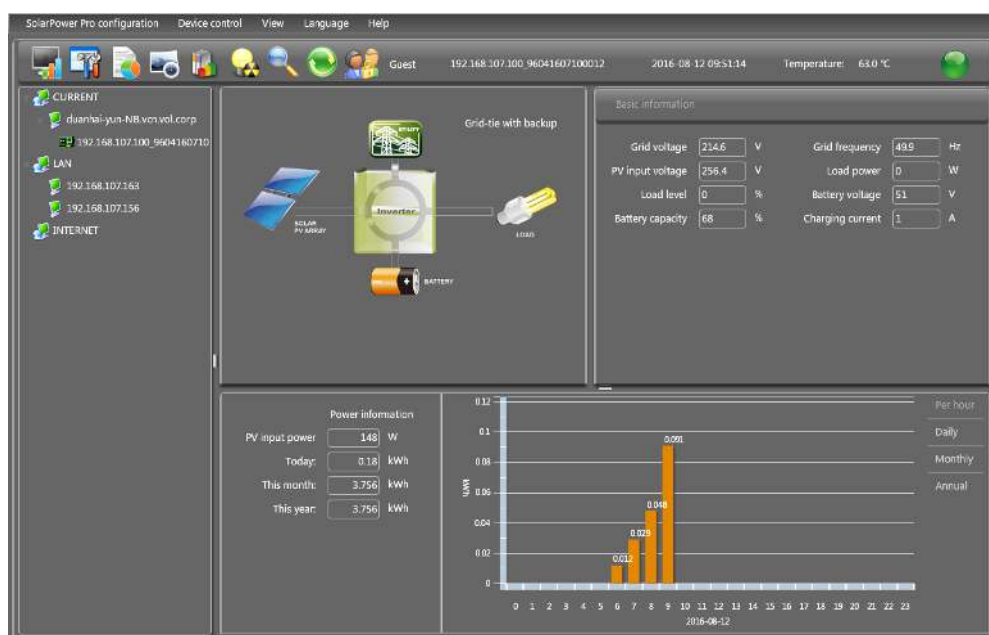
Diagram 1-7

2. SNMP web pro GUI

SNMP web pro GUI includes function menu, login section and main screen. Refer to Diagram 2-1:
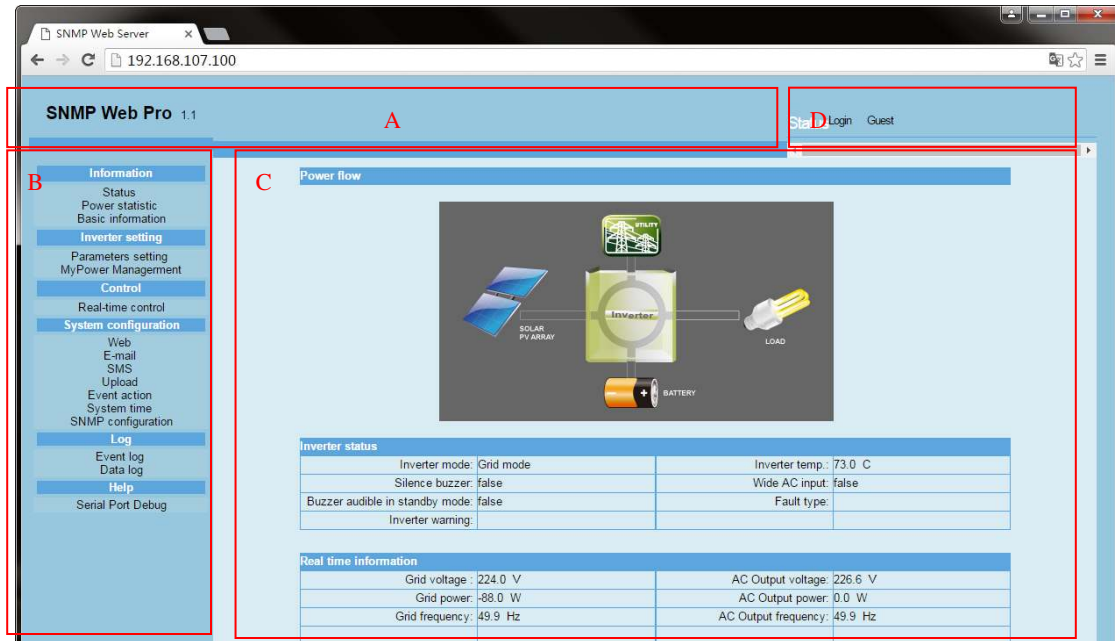

Chart 2-1

A .SNMP web pro GUI version

B .Function Menu

It offers complete tool-set for navigation and setting the GUI.

C .Main Screen

It will display information and/or control alternatives according to selected function menu.

D. Login section

It shows user type for current login user. The default password for administrator is "12345678".

3. Function Menu

3.1   Information

3.1.1.   Status

Select Information >> Status. Refer to Diagram 3-1. It shows real-time monitored Inverter data including current diagram, input, output, load and battery and environmental information in table format. The interface might vary based on different inverters.
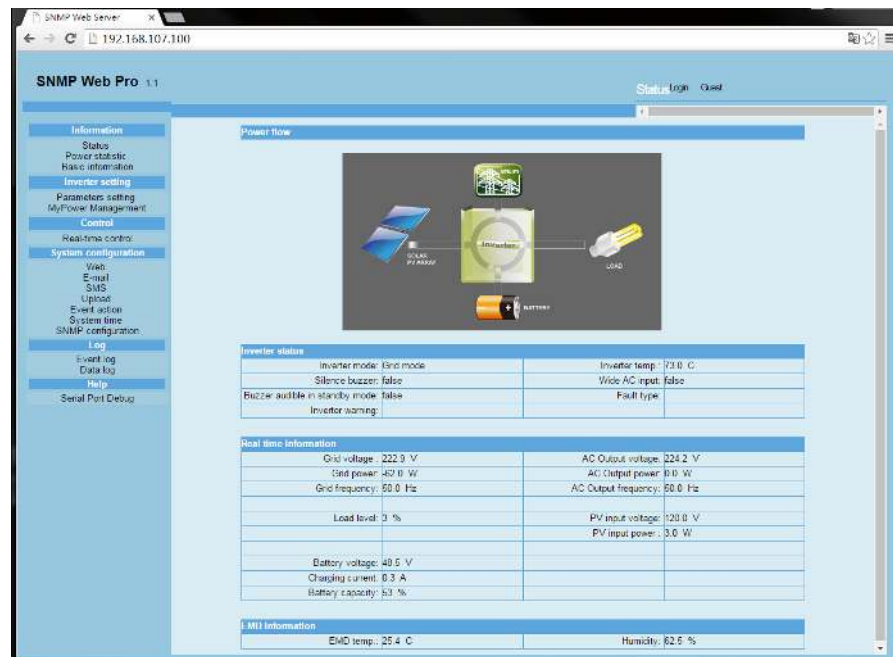

Diagram 3-1

3.1.2.   Power statistic

Select Information>>Power statistic. It shows the power generated by year, month and per hour a day. The interface might vary based on different inverter.

Chart 3-2

3.1.3.   Basic information

Select Information>>Basic information. It includes basic information of the inverter, battery information and rated information of the inverter. Refer to Diagram 3-2. The interface might vary based on different inverter.

Diagram 3-3

3.2 Inverter setting

3.2.1 Parameters setting

Select Inverter Setting >> Parameters setting. Refer to Diagram 3-4. Some inverter functions can be set and changed via software. The interface might vary based on different inverter.
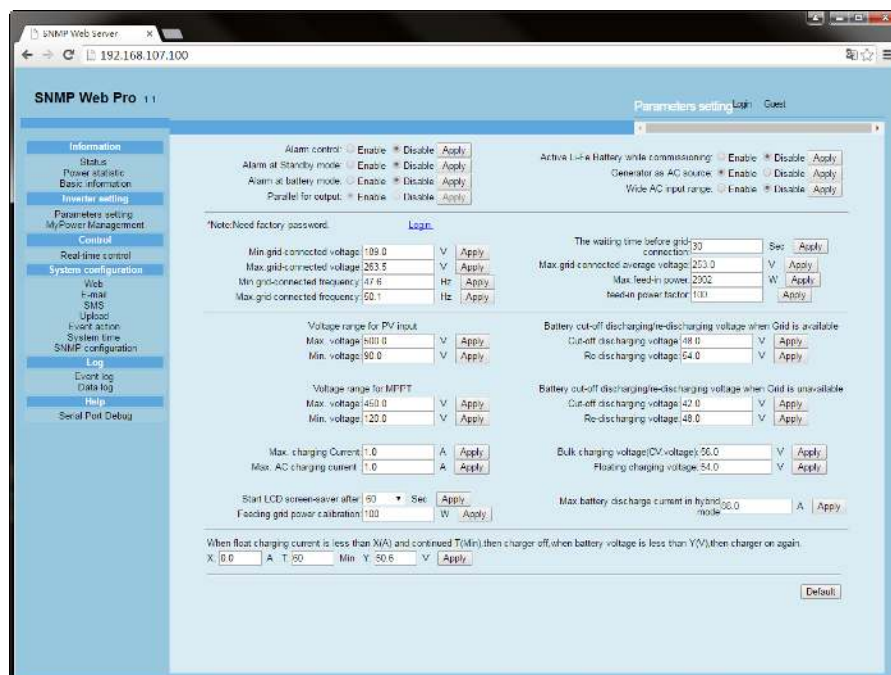

Diagram 3-4

Note: Different inverters may access to different parameter setting.

1. Select the functions by clicking "Enable" or "Disable" button. Change the numbers by clicking up-down arrows or modify the numbers directly in the number column.
2. Click "Apply" button to save the settings. Each function setting is saved by clicking "Apply" button in each section.
3. Click "Default" button to recover the default setting.

Note: If the function is not supported by the inverter, it can't access through the interface.

➢ Min. grid-connected voltage: The acceptable low voltage point for solar Inverter with grid connected.

➢ Max. grid-connected voltage: The acceptable high voltage point for solar Inverter with grid connected.

➢ Min. grid-connected frequency: The acceptable low frequency point for solar Inverter with grid connected.

➢ Max. grid-connected frequency: The acceptable high frequency point for solar Inverter with grid connected.

➢ The waiting time before grid-connection: The waiting time to establish grid connection after all requirements are met.

➢ Max. grid-connected average voltage: When the average voltage is higher than this setting, it will be identified as abnormal utility.

➢ Max. feed-in grid power: Maximum power to feed-in to the grid.

➢ Feed-in power factor: Setting range is -0.99~-0.80 and 0.80~1.00.

➢ Min. PV input voltage: The acceptable low voltage point for PV terminals when grid connection is established successfully.

➢ Max. PV input voltage: The acceptable high voltage point for PV terminals when grid connection is established successfully.

➢ Start LCD screen-saver after: The maximum duration time to activate LCD backlight.

➢ Min. MPP voltage: The acceptable low voltage point from solar module.

➢ Max. MPP voltage: The acceptable high voltage point from solar module.

➢ Max. charging current: The acceptable high charging current point.

➢ Max. AC charging current: The maximum acceptable charging current from AC. If this AC charging current is higher than max. charging current, max. charging current will be set up as real charging current.

➢ Bulk charging voltage (C.V. voltage) and Floating charging voltage as below:
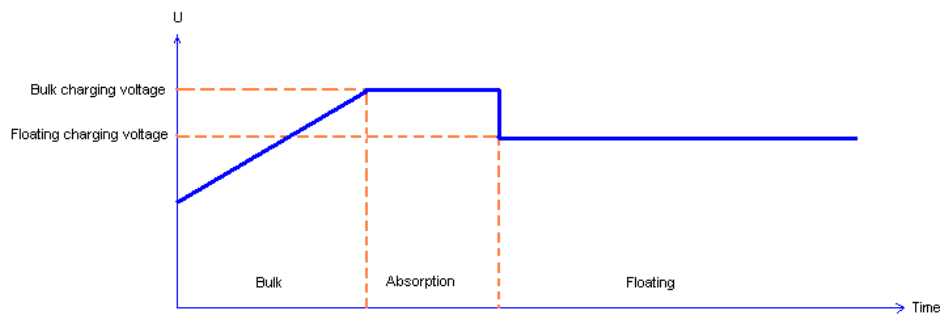
- ➤ Battery cut-off discharging voltage when Grid is available: It's to set up battery cut-off discharge voltage when grid is available.
- ➤ Battery re-discharging voltage when Grid is available: It's to set up battery re-charging voltage when grid is available.
- ➤ Battery cut-off discharging voltage when Grid is unavailable: It's to set up battery cut-off discharging voltage when grid is not available.
- ➤ Battery re-discharging voltage when Grid is unavailable: It's to set up battery re-discharging voltage when grid is not available.
- ➤ Feeding grid power calibration: Calibrate feeding power in watts. Setting range is from -300~+300.
- ➤ Max. battery discharge current in hybrid mode: It allows to set up maximum battery discharge current in grid-tie and grid-tie with backup mode operation.
- ➤ Mute Buzzer alarm: If it's activated, when fault or warning occurs, it will not sound and vice versa.
- ➤ Mute the buzzer in Standby mode: If it's activated, the buzzer will not sound when the device is in Standby mode and vice versa.
- ➤ Mute the buzzer in battery mode: If it's activated, the buzzer will not sound when the device is in the Battery mode and vice versa.
- ➤ Generator as AC source: If enabled, the unit is able to accept generator as AC power source.
- ➤ Activate Li-Fe battery while commissioning: If enable, Li-Fe battery will be activated while commissioning.
- ➤ Wide AC input range: If disabled, the acceptable AC input voltage range will be determined by setting voltage between min. grid-connected voltage and max. grid-connected voltage and setting frequency between min. grid-connected frequency and max. grid-connected frequency. If enabled, AC input voltage range will become 170V ~ 280V. The acceptable frequency range become 40Hz ~ 55Hz for 50 Hz system and 55Hz ~ 65Hz for 60 Hz system. When either AC input voltage or AC input frequency is beyond the grid-connected setting range, it's not allowed to feed-in back to grid. At this time, it's only available to provide power to loads or charge battery.
- ➤ When float charging current is less than X (A) and lasts T (Min), and then charger is off. When battery voltage is less than Y (V), and then charger is

on again.

➢ System time: It presents the time zone of device. Any modification may affect the calculation of power generation. Please conservatively make any change.

NOTE: All parameter setting should be made in standby mode.

3.2.2 MyPower Managerment

It is to set up inverter operation mode and personalized interface. Inverter Setting >> MyPower Management. Refer to Diagram 3-5.
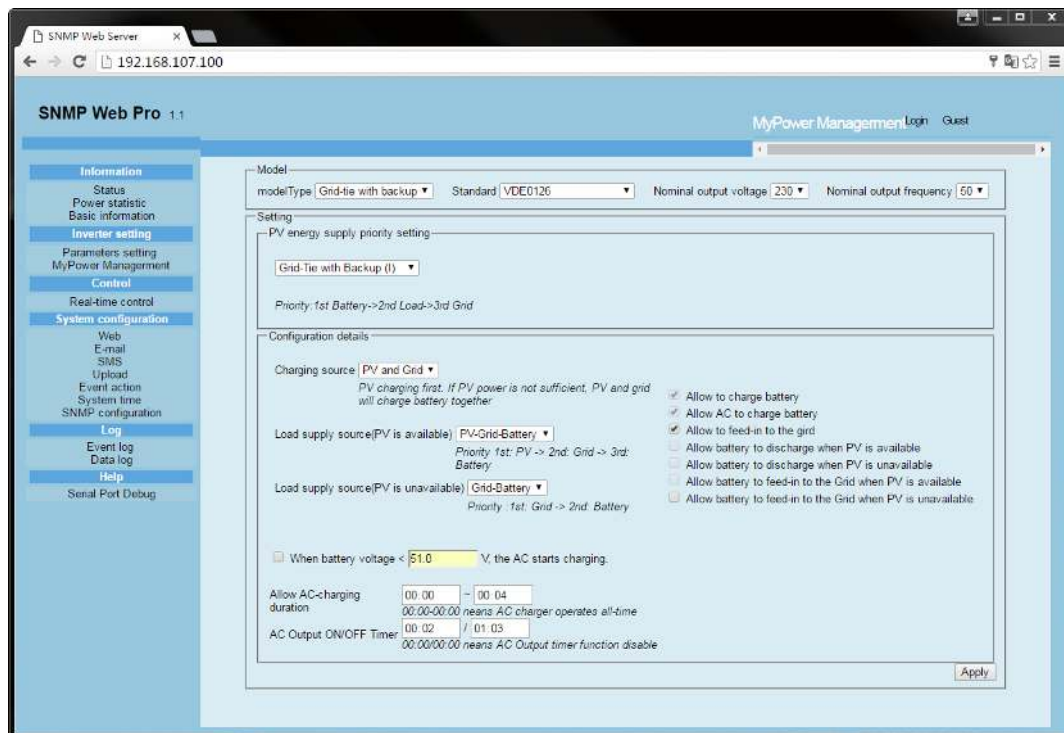

Diagram 3-5

3.2.2.1 Mode

There are three operation modes: Grid-tie with backup, Grid-Tie and Off-Grid.

➢ Grid-tie with backup: PV power can feed in to grid, provide power to the load and charge battery. There are four options available to select in this mode: Grid-tie with backup I, II, III, IV and V. In this mode, users can configure the priority of PV power supply, charging source and load supply source. However, when Grid-tie with backup IV option is selected in PV energy supply priority, the Inverter is only operated between two working logics based on defined peak time and off-peak time of electricity. Only during peak time and off-peak time of electricity, you are able to set up for optimized electricity usage.

➢ Grid-Tie: PV power only can feed in to grid.

➢ Off-Grid: PV power only provides power to the load and charge battery.

Standard: It will list local grid standard. It's requested to have factory password to make any modifications. Please check local dealer only when this standard change is requested.
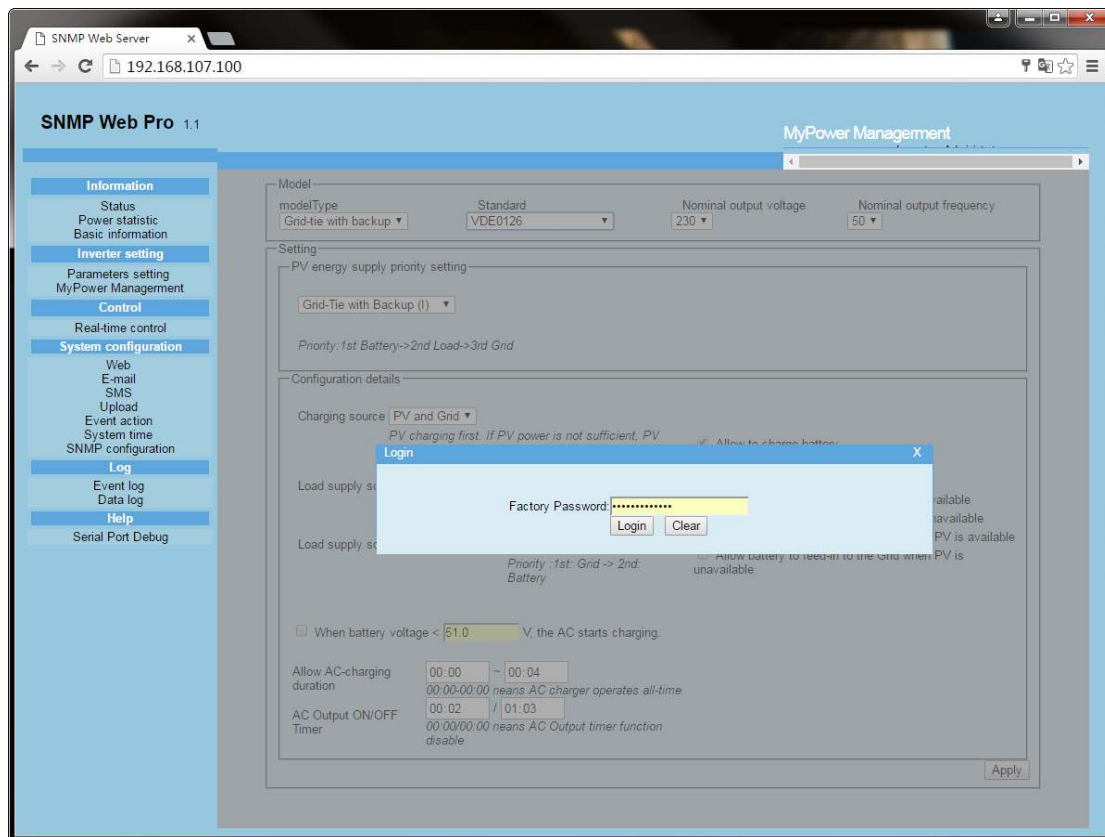

Diagram 3-6

CAUTION: Wrong setting could cause damage to the unit or not working.

Nominal Output Voltage: There are 5 options for high voltage system to select, 240V, 230V, 220V, 208V and 202V. For low voltage system, there are four options: 127, 120, 110 and 101.

Nominal Output Frequency: There are two options to select, 50HZ or 60HZ.

3.2.2.2 Setting

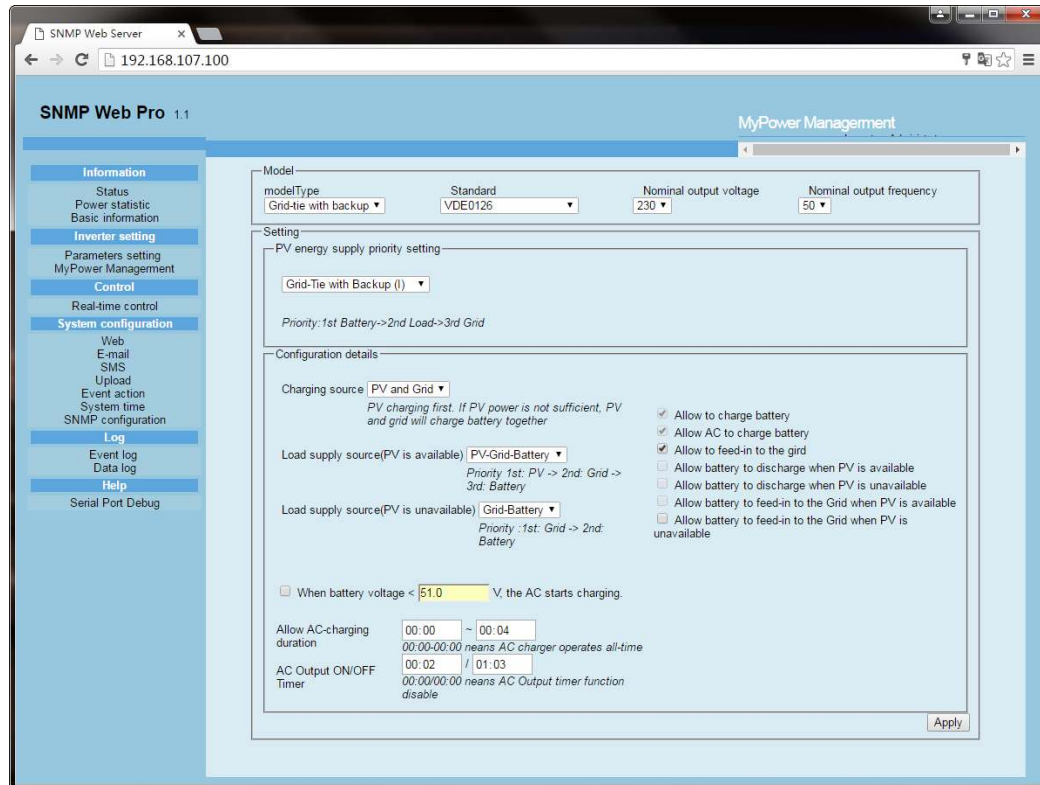Grid-tie with backup

➢ Grid-tie with backup (I):

Diagram 3-7

PV energy supply priority setting: 1st Battery, 2nd Load and 3rd Grid.

PV power will charge battery first, then provide power to the load. If there is any remaining power left, it will feed-in to the grid.

Battery charging source:

1. PV and Grid: It's allowed to charge battery from PV power first. If it's not sufficient, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter it's from PV power or grid.

Load supply source:

When PV power is available: 1st PV, 2nd Grid, 3rd Battery

If battery is not fully charged, PV power will charge battery first. And remaining PV power will provide power to the load. If there's not sufficient power, grid will provide power to the load. If grid is not available at the same time, battery power will back up the load.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery power will provide power backup.

2. 1st Battery, 2nd Grid: Battery power will provide power to the load first. If battery power is running out, grid will back up the load.

NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause battery damage.
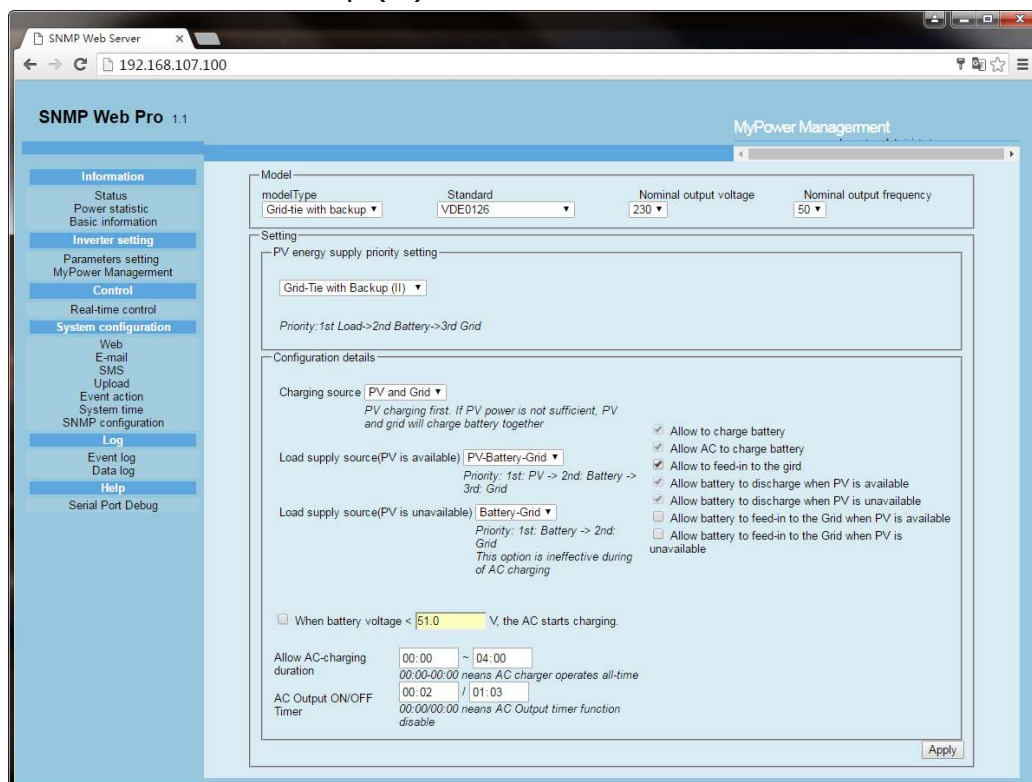
➢ Grid-tie with backup (II) :

Diagram 3-8

PV energy supply priority setting: 1st Load, 2nd Battery and 3rd Grid.

PV power will provide power to the load first. Then, it will charge battery. If there is any remaining power left, it will feed-in to the grid.

Battery charging source:

1. PV and Grid: It's allowed to charge battery from PV power first. If there's not sufficient power, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

Load supply source:

When PV power is available:

1. 1st PV, 2nd Battery, 3rd Grid

PV power will provide power to the load first. If there's not sufficient power, battery will provide power to the load. When battery power is running out or not available, grid will back up the load.

2. 1st PV, 2nd Grid, 3rd Battery

PV power will provide power to the load first. If there's not sufficient power, grid will provide power to the load. If grid is not available at the same time, battery power will back up the load.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery power will provide power backup.

2. 1st Battery, 2nd Grid: Battery power will provide power to the load first. If battery power is running out, grid will back up the load

NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause damage to battery.
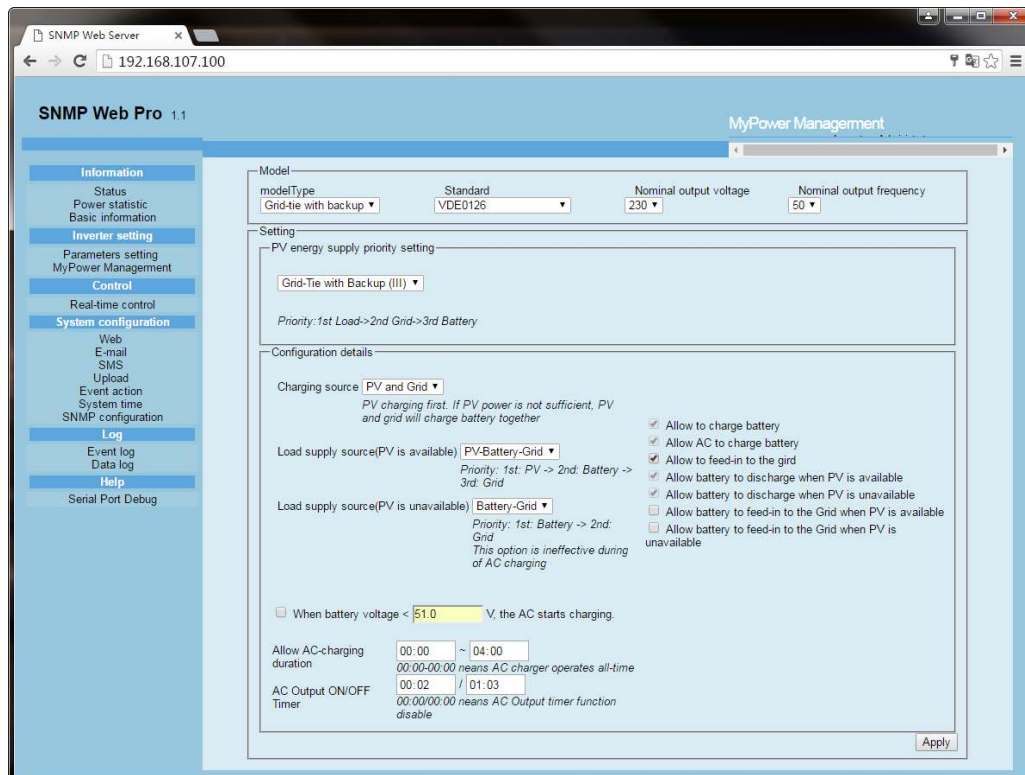
➢ Grid-tie with backup (III) :

Diagram 3-9

PV energy supply priority setting: 1st Load, 2nd Grid and 3rd Battery

PV power will provide power to the load first. If there is more PV power available, it will feed in the grid. If feed-in power reaches its max. feed-in power setting, the remaining power will charge battery.

NOTE: The max. feed-in grid power setting is available in parameter setting. Please refer to section 3-2-1.

Battery charging source:

1. PV and Grid: It's allowed to charge battery from PV power first. If there's not sufficient power, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

Load supply source:

When PV power is available:

1. 1st PV, 2nd Battery, 3rd Grid

PV power will provide power to the load first. If there's not sufficient power, battery will provide power to the load. When battery power is running out or not available, grid will back up the load.

2. 1st PV, 2nd Grid, 3rd Battery

PV power will provide power to the load first. If there's not sufficient power, grid will provide power to the load. If grid is not available at the same time, battery power will back up.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery power will provide power backup.

2. 1st Battery, 2nd Grid: Battery power will provide power to the load first. If battery power is running out, grid will back up the load.

   NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause damage to battery.

➢ Grid-tie with backup (IV): Users are only allowed to set up peak time and off-peak electricity demand.
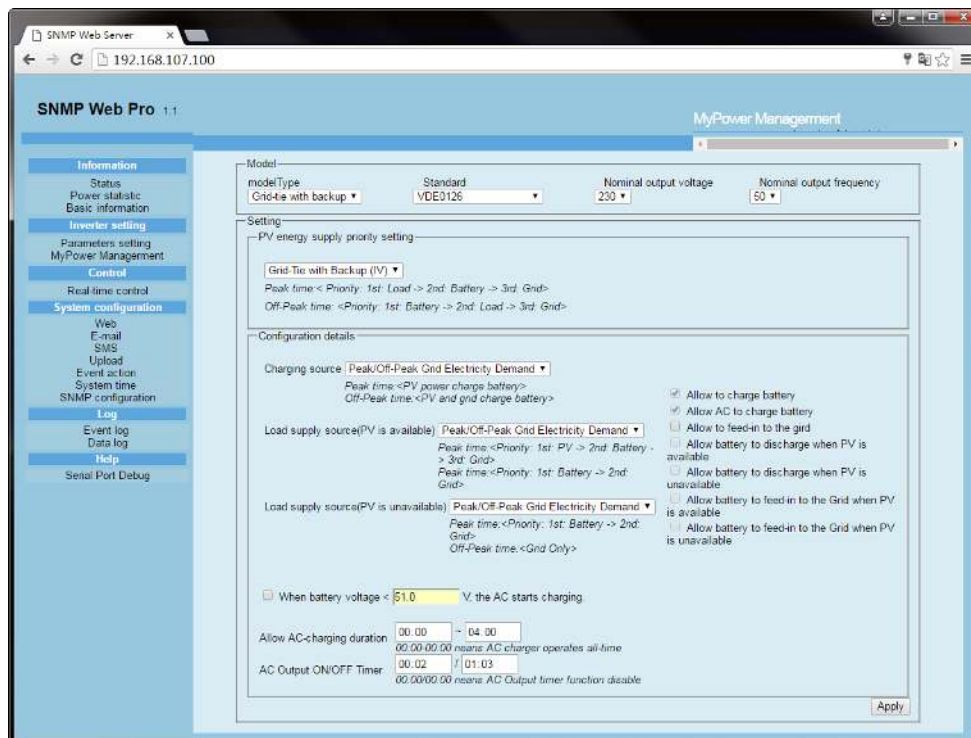
Diagram 3-10

Working logic at peak time:

PV energy supply priority: 1st Load, 2nd Battery and 3rd Grid

PV will provide power to the load first. If PV power is sufficient, it will charge battery next. If there is remaining PV power left, it will feed in the grid. Feed-in to the grid is disabled at default.

Battery charging source: PV only

Only after PV power fully supports the load, the remaining PV power is allowed to charge battery during peak time.

Load supply source: 1st PV, 2nd Battery, 3rd Grid

PV power will provide power to the load first. If PV power is not sufficient, battery power will back up the load. If battery power is not available, grid will provide the load. When PV power is not available, battery power will supply the load first. If battery power is running out, grid will back up the load.

Working logic at off-peak time:

PV energy supply priority: 1st Battery, 2nd Load and 3rd Grid

PV power will charge battery first. If PV power is sufficient, it will provide power to the loads. The remaining PV power will feed in the grid.

NOTE: The max. feed-in grid power setting is available in parameter setting. Please refer to section 3-2-1.

Battery charging source: PV and grid charge battery

PV power will charge battery first during off-peak time. If there's not sufficient power, grid will charge battery.

Load supply source: 1st PV, 2nd Grid, 3rd Battery

When battery is fully charged, remaining PV power will provide power to the load first. If PV power is not sufficient, grid will back up the load. If grid power is not available, battery will provide power to the load.

➢ Grid-tie with backup (V): In this mode, Inverter will automatically disconnect from grid to allow battery to support loads when battery can not discharge due to high grid voltage.
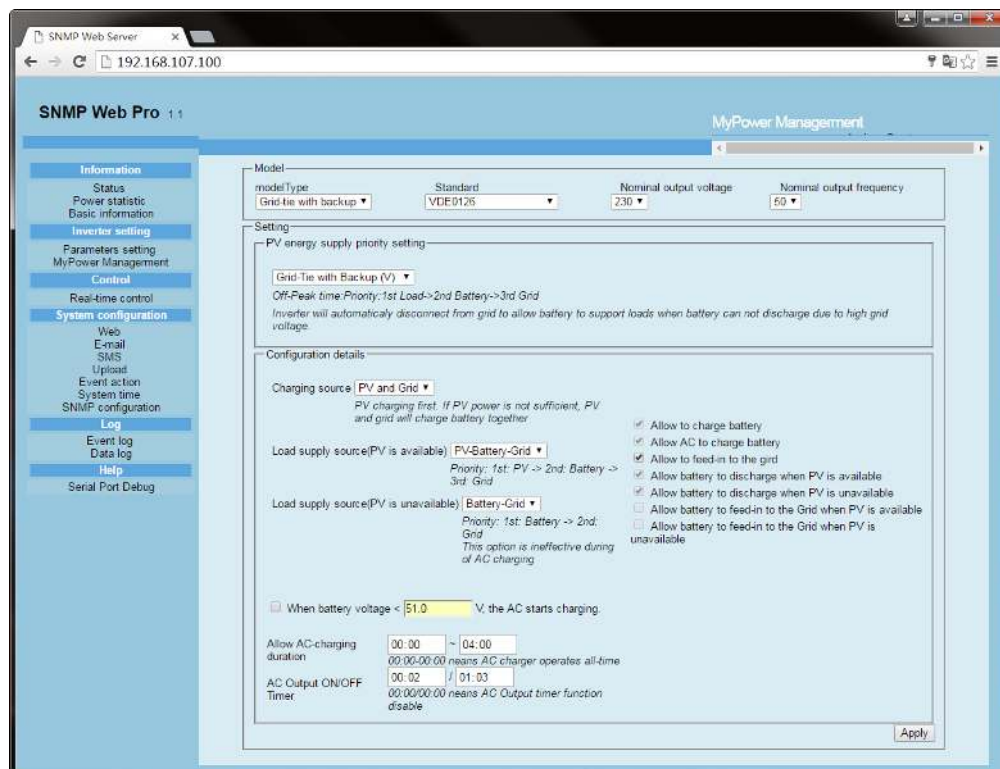
Diagram 3-11

PV energy supply priority setting: 1st Load, 2nd Battery and 3rd Grid.

PV power will provide power to the load first. Then, it will charge battery. If there is any remaining power left, it will feed in the grid.

Battery charging source:

1. PV and Grid: It's allowed to charge battery from PV power first. If there's not sufficient power, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

Load supply source:

When PV power is available:

1. 1st PV, 2nd Battery, 3rd Grid

PV power will provide power to the load first. If it's not sufficient, battery power
will provide power to the load. When battery power is running out or not
available, grid will back up the load.

2. 1st PV, 2nd Grid, 3rd Battery

PV will provide power to the load first. If there's not sufficient power, grid will
provide power to the load. If grid is not available at the same time, battery
power will back up.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not
available, battery will provide power backup.

2. 1st Battery, 2nd Grid: Battery will provide power to the load first. If battery
power is running out, grid will back up the load

NOTE: This option will become ineffective during AC charging time and the
priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it
will cause damage to battery.

Grid-Tie

In this operation mode, PV power only feed in to the grid. No priority setting is
available.

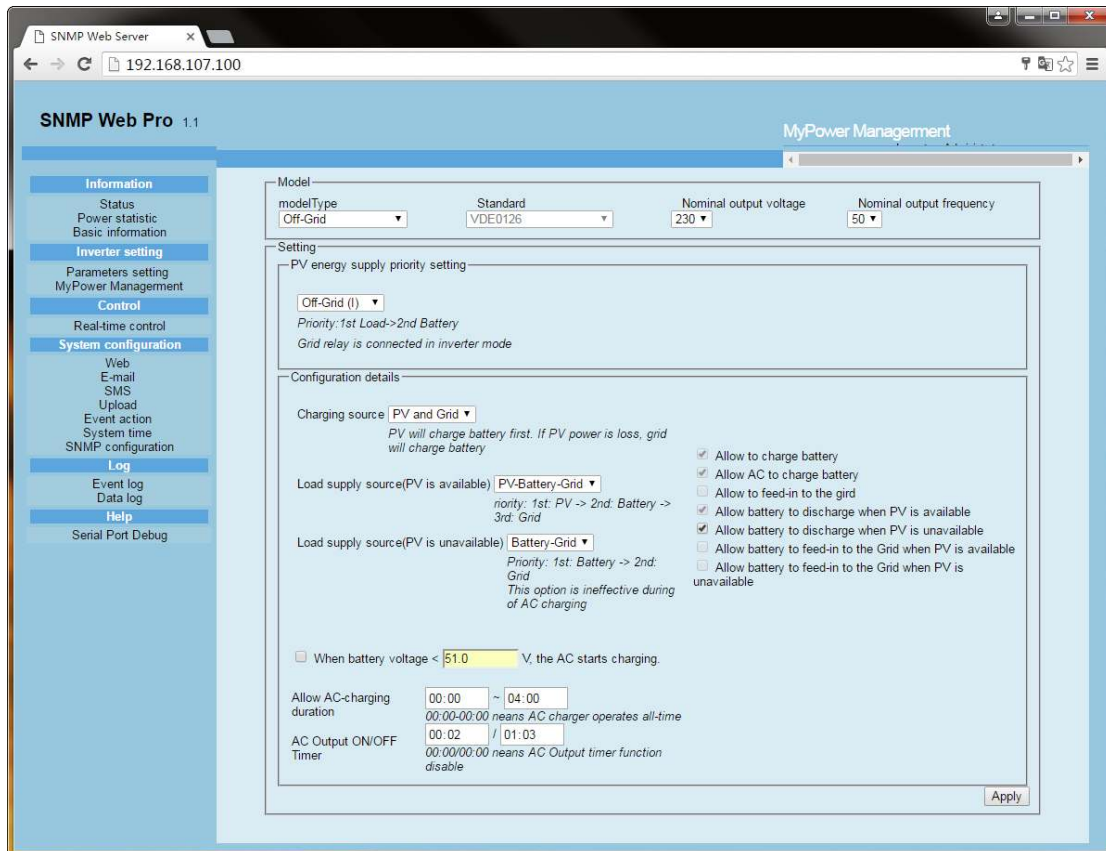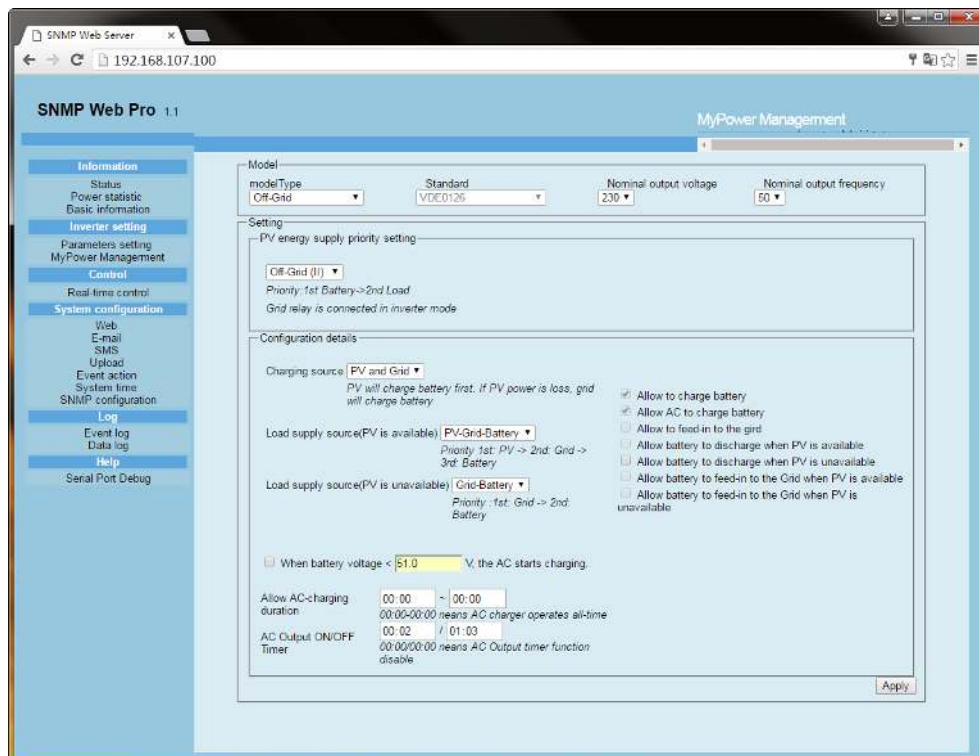**Diagram 3-12**

Off-Grid

➢ Off-Grid (I):

Diagram 3-13

PV energy supply priority setting: 1st Load, 2nd Battery

PV power will provide power to the load first and then charge battery. Feed-in to the grid is not allowed in this mode. At the same time, the grid relay is connected in Inverter mode. That means the transfer time from Inverter mode to battery mode will be less than 15ms. Besides, it will avoid overload fault because grid can supply load when connected load is over nominal power of the inverter.

Battery charging source:

1. PV or Grid: If there is remaining PV power after supporting the loads, it will charge battery first. Only until PV power is not available, grid will charge battery.

2. PV only: It is only allow PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

Load supply source:

When PV power is available:

1. 1st PV, 2nd Battery, 3rd Grid

PV will provide power to the load first. If there's not sufficient power, battery will provide power to the load. When battery power is running out or not available, grid will back up the load.

2. 1st PV, 2nd Grid, 3rd Battery

PV will provide power to the load first. If there's not sufficient power, grid will provide power to the load. If grid is not available at the same time, battery power will back up the load.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery will provide power backup.

2. 1st Battery, 2nd Grid: Battery power will provide power to the load first. If battery power is running out, grid will back up the load.

NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause battery damage.

➢ Off-Grid (II):

Diagram 3-14

PV energy supply priority setting: 1st Battery, 2nd Load

PV power will charge battery first. After battery is fully charged, if there is remaining PV power left, it will provide power to the load. Feed-in to the grid is not allowed in this mode. At the same time, the grid relay is connected in Inverter mode. That means the transfer time from Inverter mode to battery mode will be less than 15ms. Besides, it will avoid overload fault because grid can supply load when connected load is over nominal power of the inverter..

Battery charging source:

1. PV or Grid: If there is remaining PV power after supporting the loads, it will charge battery first. Only until PV power is not available, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

NOTE: It's allowed to set up AC charging duration.

Load supply source:

When PV power is available: 1st PV, 2nd Grid, 3rd Battery

PV power will provide power to the load first. If there's not sufficient power, grid will provide power to the load. If grid is not available at the same time, battery power will back up the load.

When PV power is not available:

1. 1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery will provide power backup.

2. 1st Battery, 2nd Grid: Battery will provide power to the load first. If battery power is running out, grid will back up the load.

NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause damage to battery.
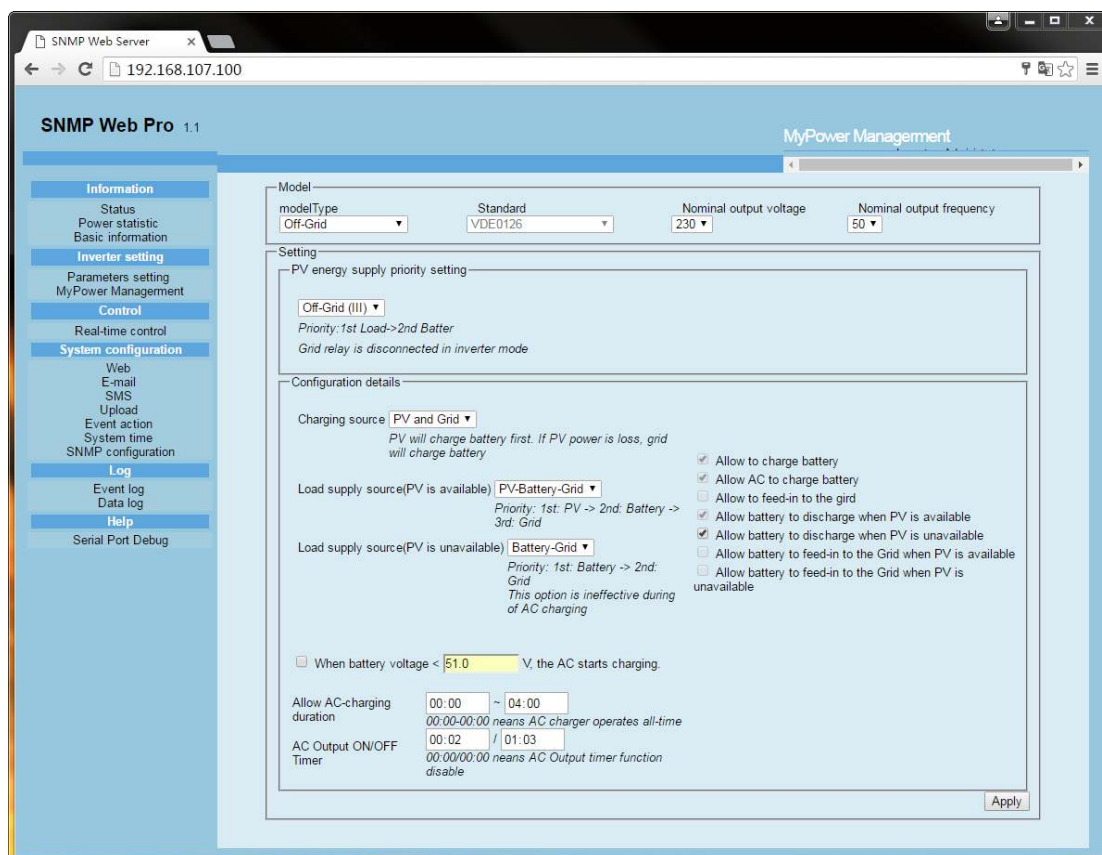
➢ Off-Grid (III)

Diagram 3-15

PV energy supply priority setting: 1st Battery, 2nd Load

PV power will charge battery first. After battery is fully charged, if there is remaining PV power left, it will provide power to the load. Feed-in to the grid is not allowed in this mode. The grid relay is NOT connected in Inverter mode. That means the transfer time from Inverter mode to battery mode will be about 15ms. If connected load is over nominal power of the inverter, this inverter will activate fault protection.

Battery charging source:

1. PV or Grid: If there is remaining PV power after supporting the loads, it will charge battery first. Only until PV power is not available, grid will charge battery.

2. PV only: It only allows PV power to charge battery.

3. None: It is not allowed to charge battery no matter if it's PV power or grid.

NOTE: It's allowed to set up AC charging duration.

Load supply source:

When PV power is available: 1st PV, 2nd Battery, 3rd Grid

PV power will provide power to the load first. If there's not sufficient power, battery will back up the load. Only after battery power is running out, Grid will back up the load.

When PV power is not available:

1.   1st Grid, 2nd Battery: Grid will provide power to the load first. If grid is not available, battery will provide power backup.

2.   1st Battery, 2nd Grid: Battery power will provide power to the load first. If battery power is running out, grid will back up the load.

NOTE: This option will become ineffective during AC charging time and the priority will automatically become 1st Grid and 2nd Battery order. Otherwise, it will cause damage to battery.

When selected, after battery voltage is lower than that in setting (xx.x V), AC will start to charge battery. When this condition is selected, it's allowed to enter setting voltage. Otherwise, it's impossible to enter any values.

Allow AC charging duration: It's a period of time to allow AC (grid) to charge battery. When the duration is set up as 0:00-00:00, it means no time limitation for AC to charge battery.

AC output ON/Off Timer: Set up on/off time for AC output of Inverter. If set as 00:00/00:00, the device will disable this function.

Allow to charge battery: This option is automatically determined by setting in "Charging source". It's not allowed to modify here. When "NONE" is selected in charging source section, this option becomes unchecked in grey text.

Allow AC to charge battery: This option is automatically determined by setting in "Charging source". It's not allowed to modify here. When "Grid and PV" or "Grid or PV" is selected in charging source section, this option is selected at default. In Grid-tie mode, this option is invalid.

Allow to feed-in to the Grid: This option is only valid in Grid-tie and Grid-tie with backup IV modes. Users can decide if this Inverter can feed in the grid.

Allow battery to discharge when PV is available: This option is automatically determined by setting in "Load supply source (PV is available)". When "Battery" is in higher priority than "Grid" in Load supply source (PV is available), this option is selected at default. Under Grid-tie, this option is invalid.

Allow battery to discharge when PV is unavailable: This option is automatically determined by setting in "Load supply source (PV is unavailable)". When "Battery" is in higher priority than "Grid" in Load supply source (PV is unavailable), this option is selected at default. In Grid-tie mode, this option is invalid.

Allow battery to feed-in to the Grid when PV is available: This option is only valid

in Grid-tie with backup II or Grid-tie with backup III modes.

Allow battery to feed-in to the Grid when PV is unavailable: This option is only valid in all options of Grid-tie with backup mode.

3.3   Control

3.3.1.   Real-time control

It's to control AC output and activate Li-Fe battery in real-time.
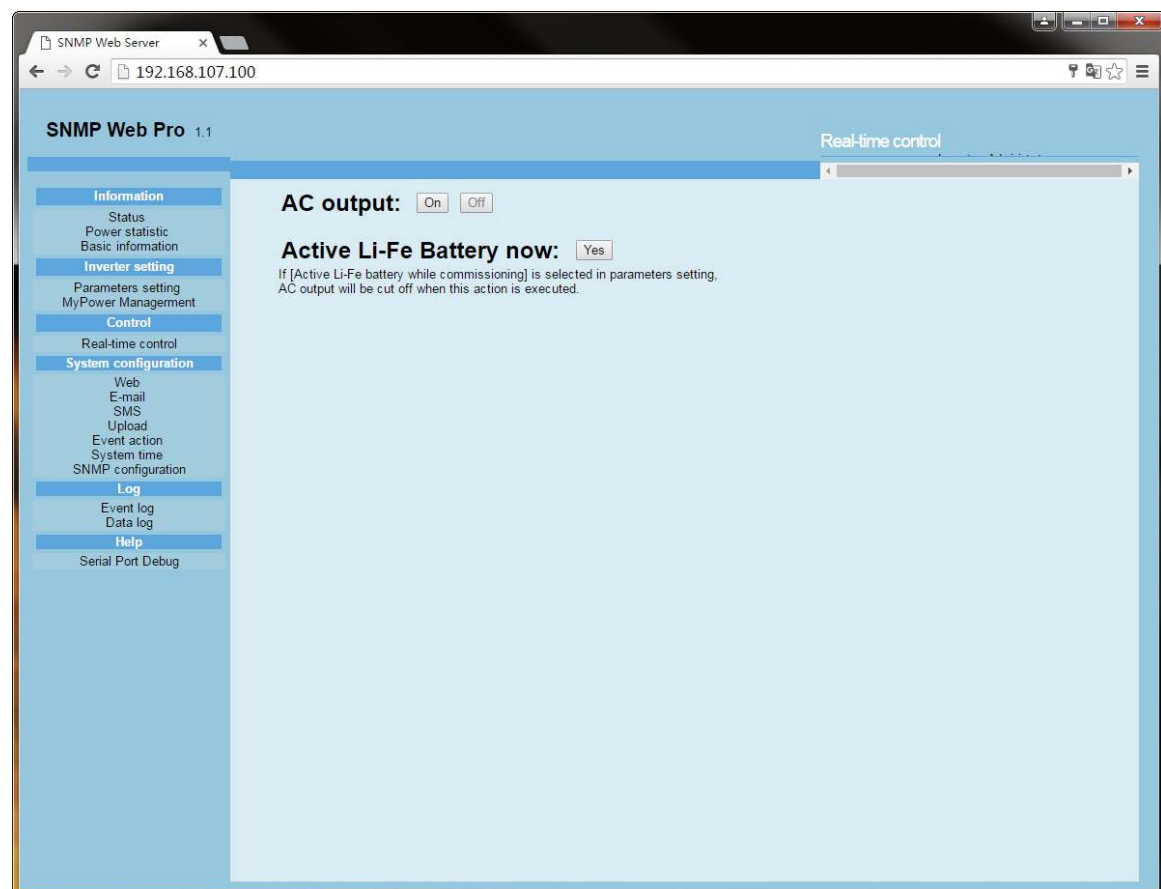Select Control >> Real-time control. Refer to Diagram 3-16.

Diagram 3-16

You can control the Inverter by executing following operation in real-time:
- AC output control: Turn on or turn off AC output immediately when clicking "Apply" button.
- Activate Li-Fe battery: To wake up Li-Fe battery when clicking "Activate" button.

3.4. System configuration

3.4.1. Web user

It's to configure the authority to access to SNMP web pro. Please enter access ID and password in each column. There is no limitation to access to control in default setting. It is also allowed for http (click checkbox to enable http. Otherwise, it will disable http) and https modification. The default setting is 80 for http and 443 for https. If any modification for adding web users, deleting web users or port re-configuration, it's necessary to click "Restart Web Server" button to restart web server to activate all modifications. Refer to Diagram 3-17.
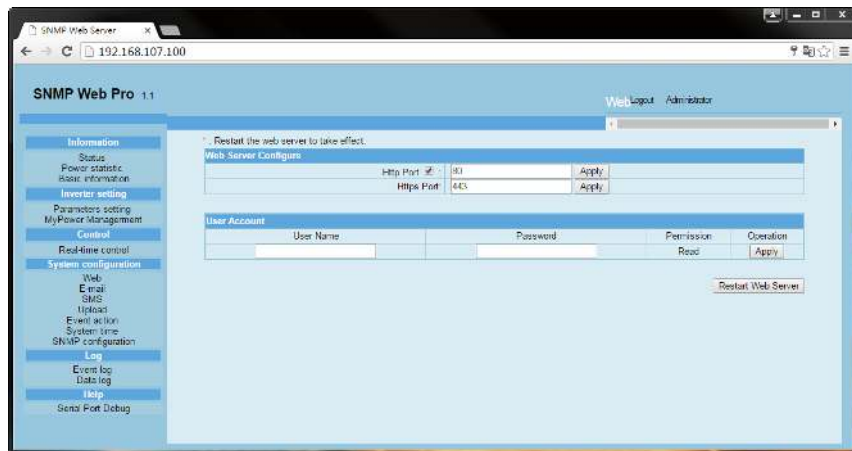
Diagram 3-17

3.4.2. E-mail

It's allowed to send alarm mail by SMTP server. To use this function, the e-mail service must be correctly configured. All values in this function page are empty at default. This action can't be executed without the SMTP information, e-mail account and password. Besides, the sender account should be allowed for SMTP/POP3 forwarding.

Select System Configuration >> E-mail. Refer to Diagram 3-18
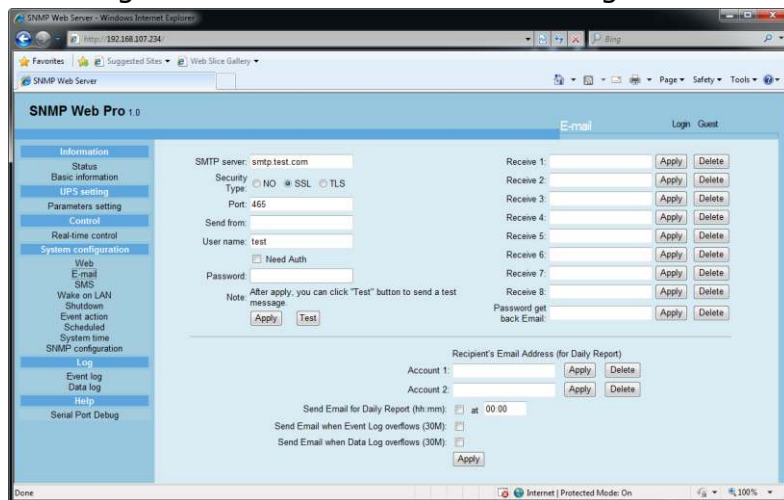
Diagram 3-18

1. Enter SMTP server, security type (supported encryption from SMTP server), SMTP port, sender's E-mail address, user name and password. Click checkbox of "Need Auth" for password verification.
2. Enter correct e-mail accounts in Receives' list. Then, click "Apply" to add into receivers' list. Click "Delete" button to delete e-mail account.
3. Click "Apply" to save the changes. The "Test" button can be used to send a test e-mail to all receivers to confirm correct operation. When the test e-mails are successfully sent to specific recipients, it will pop up a successful message on operating PC. Otherwise, it will pop up a failure dialog to indicate there is an error for parameter setting.
4. You may decide who will receive daily report e-mail at specific duration. Please enter recipient's Email Address and timer into columns. Then, click "Apply" button to set up this action. You also can configure who will receive alarm e-mail when event log exceeds 100 or data log exceeds 50 records. Please click checkbox of selections.

3.4.3. SMS

- Sending SMS By Server
  It is required to have service software available such as SolarPower Pro. In the event of an alarm condition occurring, a message about Inverter status will be sent to the specified users via mobile phone. Please refer to Diagram 3-19b.
- Sending SMS By Serial Port
  It is used EMD port as data transmission to send SMS without any service software. Please configure Baud rate of GSM Modem as 9600 and then connect data transmission port (❷) of SNMP web port card to GSM Modem with a RJ11 to DB9 cable. Please refer to Chart 3-19 a for detailed wiring.
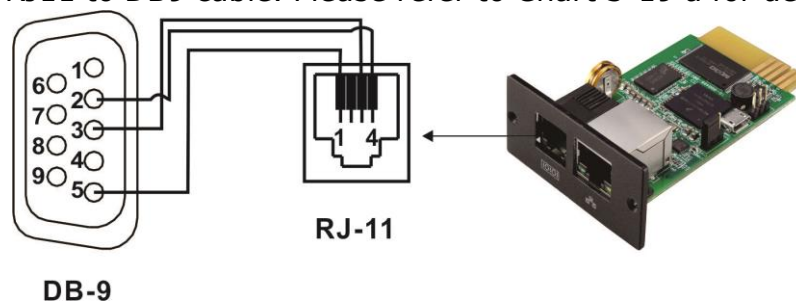
Diagram 3-19a
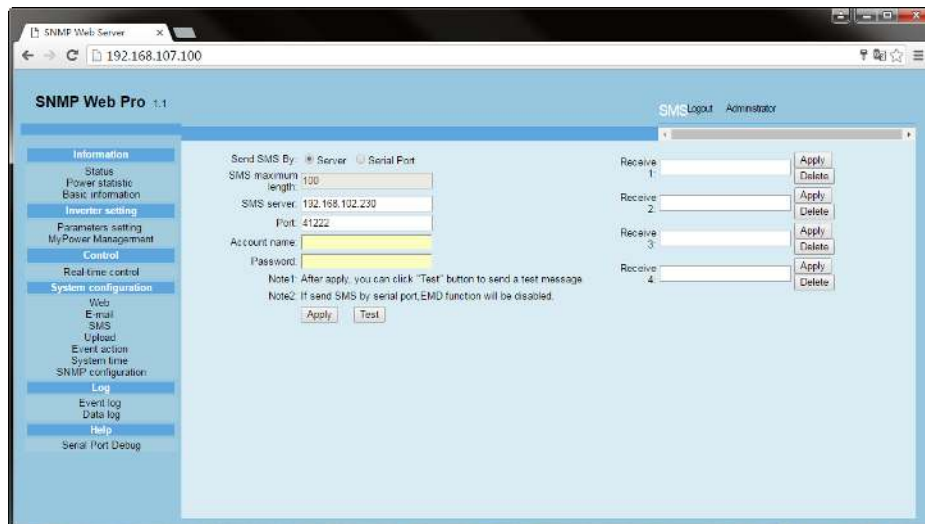
Diagram 3-19b

3.4.4. Upload

After selecting "Upload," the Inverter data can be uploaded to HTTP servers. 300sec stands for uploading interval in 300 seconds. The duration is adjustable. (Default 300 sec.)

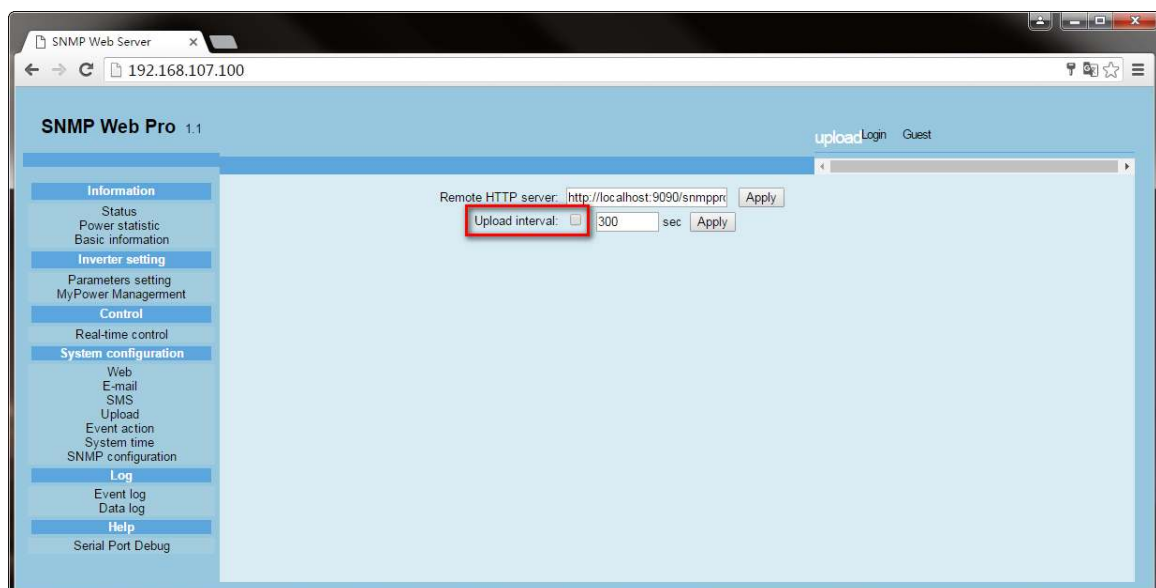Select System Configuration >> Upload. Refer to Diagram 3-20.

Diagram **3-20**

3.4.5. Event action

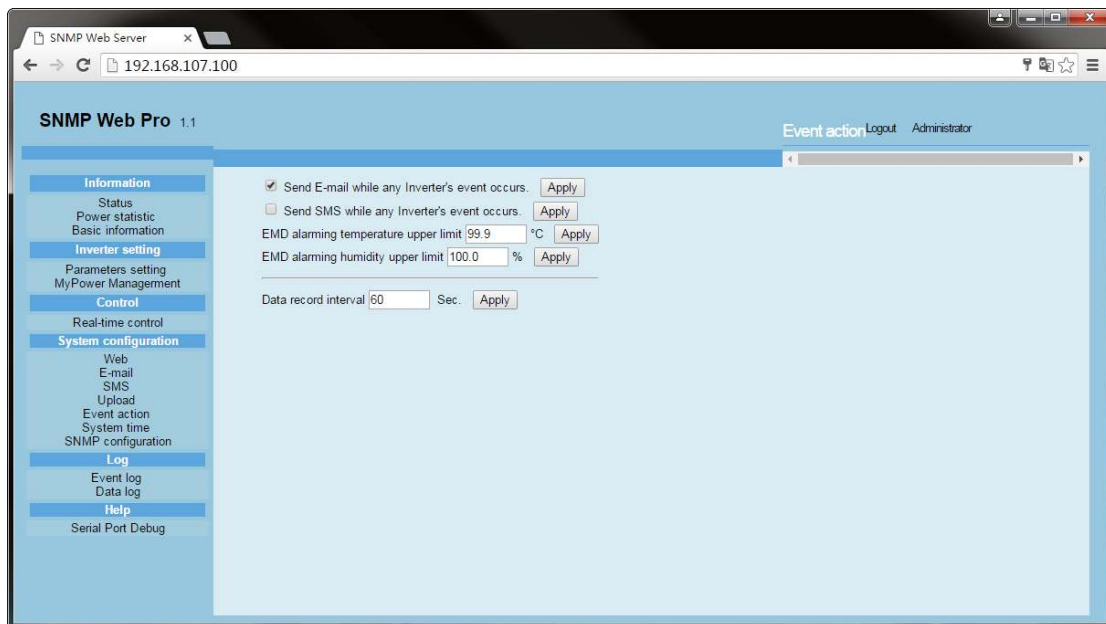Select System Configuration >> Event action. Refer to Diagram 3-21.

Diagram **3-21**

● Send E-mail while any Inverter event occurs: When clicking this checkbox, it will send alarm E-mail when any event occurs in the local Inverter.

● Send SMS while any Inverter event occurs: When clicking this checkbox, in the event of an alarm condition occurring, a message about Inverter status will be sent to the specified users via mobile phone.

● EMD alarming temperature maximum limit: Set up alarm for high temperature point. If detected temperature is beyond the setting value, it will send alarm message.

● EMD alarming humidity maximum limit: Set up alarm for high humidity point. If detected humidity is beyond setting value, it will send alarm message.

● Data record interval xx sec: Data log record the data per xx sec.

3.4.6. System time

Select System Configuration >> System time. Refer to Diagram 3-22.
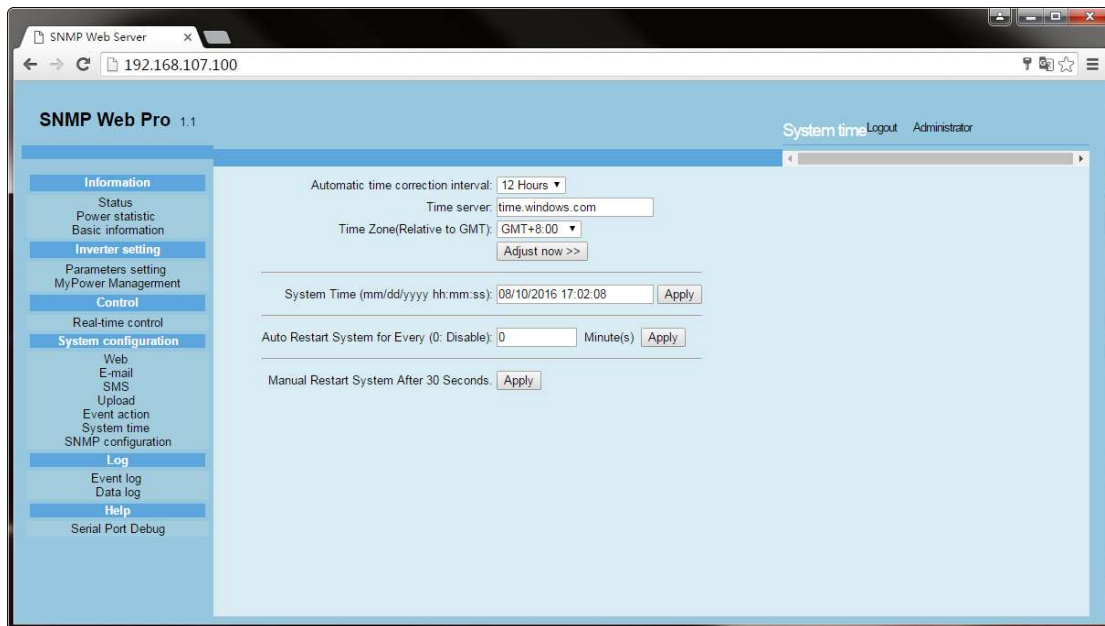
Diagram 3-22

- Automatic time correction interval
- Time server: The SNTP server IP address or domain name.
- Time Zone (Relative to GMT): It's measured to relative to GMT.
- System Time (mm/dd/yyyy hh:mm:ss): It is to set up SNMP web local host time
- Auto Restart System for Every (0: Disable): XX Minute(s)
- Manual Restart system after 30 Seconds: When click "Apply" button, SNMP will restart after 30 seconds.

3.4.7. SNMP configuration

Set SNMP web pro basic information such as IP address, password, trap IP address, SNMP UDP port, add/delete snmpv3 user account, enable/disable Telnet function and restore the factory settings.

Note: Some modifications are required to restart snmp server to activate them.

Select System Configuration >> SNMP configuration. Refer to Diagram 3-23a and 3-23b.
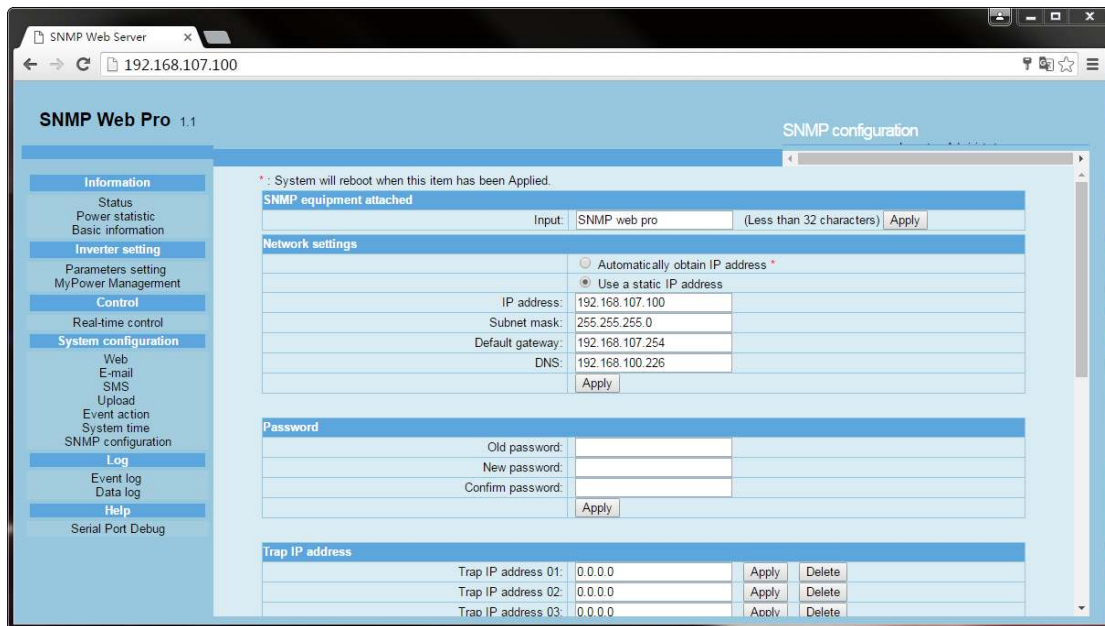
Diagram 3-22a
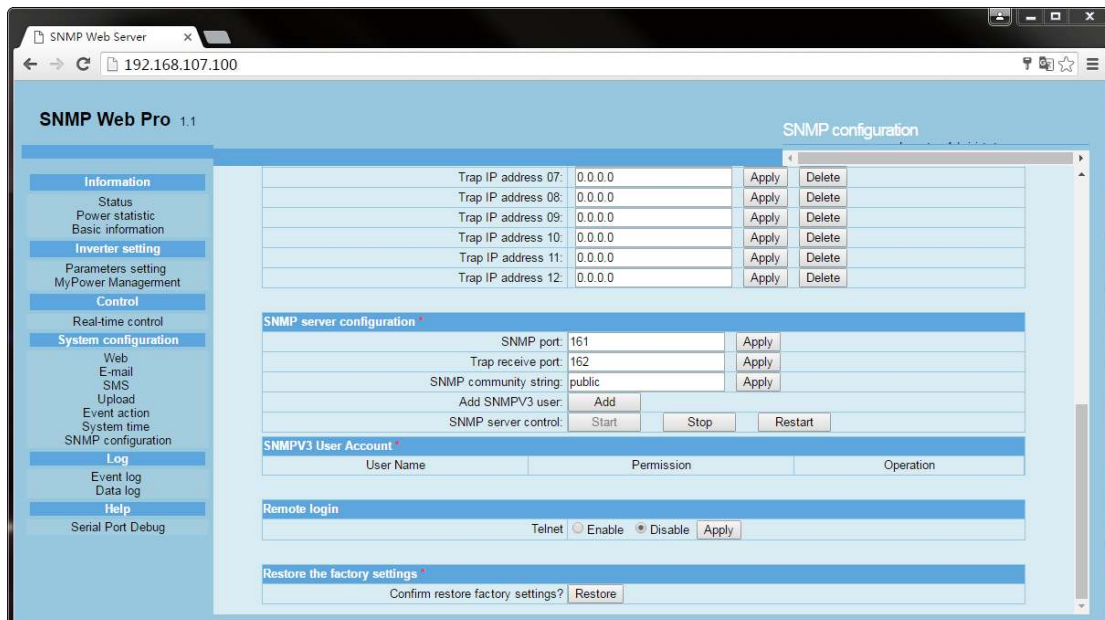
Diagram 3-23b

● IP address: There are two methods to obtain IP address
  1. Automatically obtain IP address (DHCP, default)
  2. Manually configure IP address
  The system will automatically obtain IP addresses at default. If there is no this kind of service provided in LAN, the default IP will display as "192.168.102.230", Net mask as "255.255.255.0" and default gateway as "192.168.102.254".
● Password: Modify the password. The length of password is 8~15 digits.
● Trap IP address: The SNMP device could provide 12 static trap addresses.
● SNMP server configuration: You may change SNMP port and trap port. You also can add SNMPV3 users by clicking "Add" button. It will pop up a screen

to set up user setting such as security level and permission level. Refer to the diagram below.
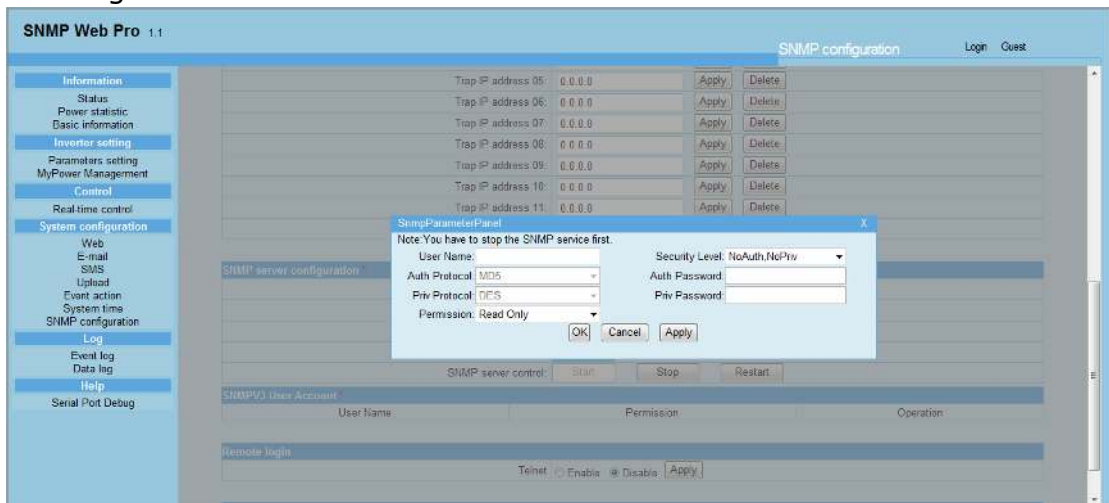
Diagram 3-24

- Remote login: Users can remotely register to SNMP card via Talnet client. The function is disable at default.
- Restore the factory settings
  Note：The system will automatically obtain IP addresses at default and its default Password is 12345678.

3.5. Log

3.5.1. Event log

In the Event Log page, it lists all history events and can be saved as .csv file. The event log includes Inverter warnings, fault info, EMD warnings, Inverter operation logs from web users or SolarPower pro users. All logs are recorded in flash memory of web card by month. It's safely recorded without data loss even after power failure occurs. It can save up to 200,000 threads. Refer to Diagram 3-25.

Select Log>>Event log.
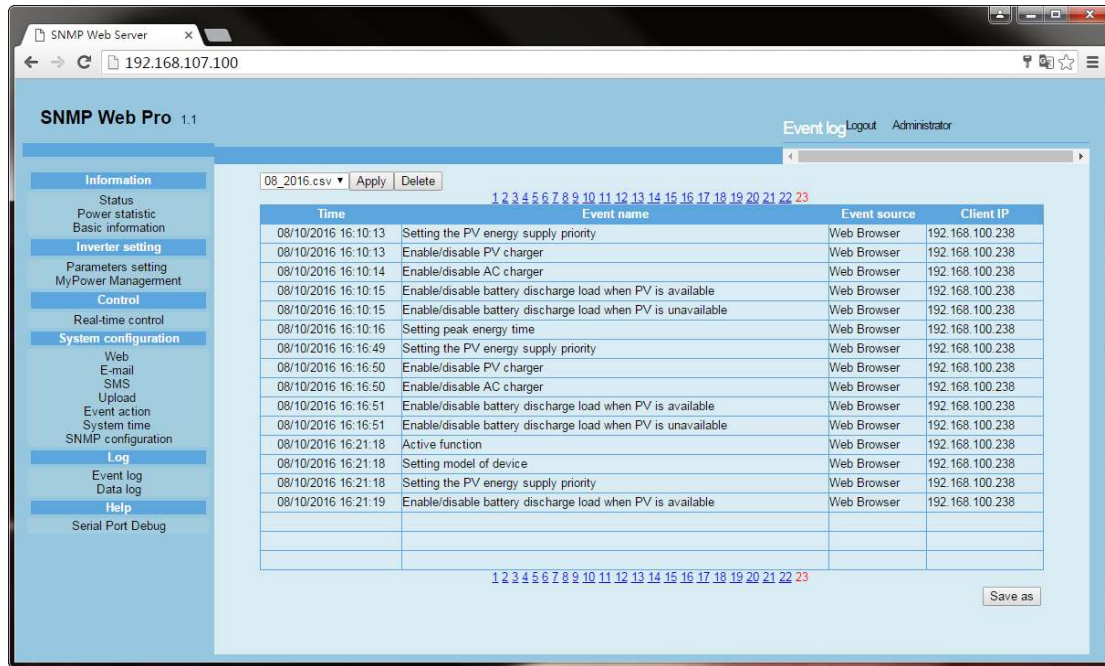
Diagram 3-25

3.5.2. Data Log

In the Data Log page, it will list all history logs and can be save as .csv file. All logs are recorded in flash memory of web card by day. It's safely recorded without data loss even after power failure occurs. It can save up to 200,000 threads. Refer to Diagram 3-26. The interface might vary based on different inverter.

Select Log >> Data log.

Diagram 3-26

3.6. Help

3.6.1. Serial Port Debug

It's to test communication condition between SNMP card and device.
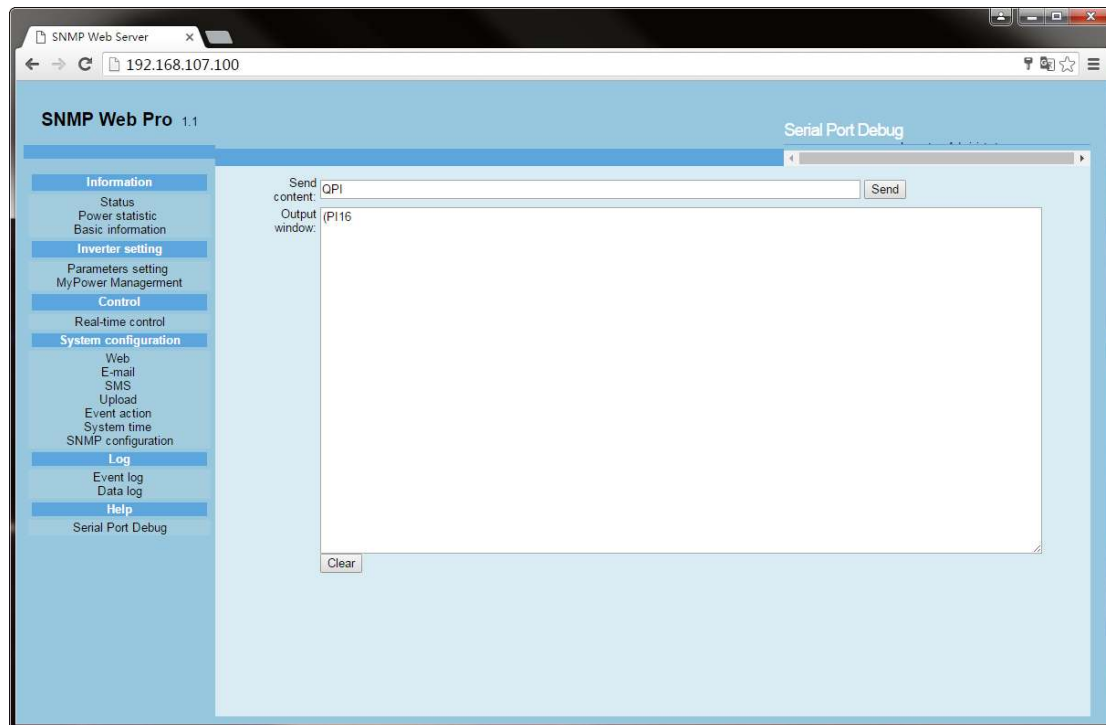
Select Help >> Serial Port Debug. Refer to Diagram 3-27.

Diagram 3-27