

**SMU01A
V100R001**

User Manual

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About This Document

Purpose

This document describes the network diagram, performance specifications, liquid crystal display (LCD) screen and web user interface (UI) operations, installation, and troubleshooting of the SMU01A.

Intended Audience

This document is intended for:

- Sales engineers
- Technical support engineers
- Maintenance engineers

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 DANGER	Alerts you to a high risk hazard that could, if not avoided, result in serious injury or death.
 WARNING	Alerts you to a medium or low risk hazard that could, if not avoided, result in moderate or minor injury.
 CAUTION	Alerts you to a potentially hazardous situation that could, if not avoided, result in equipment damage, data loss, performance deterioration, or unanticipated results.
 TIP	Provides a tip that may help you solve a problem or save time.
 NOTE	Provides additional information to emphasize or supplement important points in the main text.

Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

Issue 06 (2015-10-08)

Port COM adds the note.

Issue 05 (2013-04-28)

Optimizes the document.

Issue 04 (2013-04-12)

Modify LCD menu and menu hierarchy.

The corresponding software version is V100R002C01B103SP01.

Issue 03 (2012-12-05)

Port description is modified.

Issue 02 (2011-06-12)

This issue is the second official release.

The SMU01A revision changed to C02, the document revision changed to 02.

Issue 01 (2011-04-20)

This issue is the first official release.

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1 SMU01A Overview

1.1 Description

The SMU01A is an advanced site monitoring unit (SMU) and consists of a shell, an LCD panel, and multiple manufactured boards. It is applicable to the Embedded Telecom Power (ETP) V100R001C02.

The SMU01A has the following features:

- Performs comprehensive power management and intelligent battery management.
- Supports Hyper Text Transport Protocol (HTTPS), Simple Network Management Protocol (SNMP), and Control Area Network (CAN).
- Supports remote software upgrade.
- Queries electronic label information of system components over the web UI.
- Supports system management over the Network Ecosystem (NetEco).
- Provides eight dry contact outputs.
- Provides seven spare Boolean value inputs.
- Provides ports to connect to the smoke sensor, door status sensor, water sensor, battery temperature sensor, ambient temperature and humidity sensor, and battery installation sensor.
- Supports multiple languages, such as English, Chinese, Turkish, Spanish, and Portuguese.

1.2 Network Diagram

Figure 1-1 shows the SMU01A in in-band communication. Figure 1-2 shows the SMU01A in out-of-band communication.

Figure 1-1 SMU01A in in-band communication

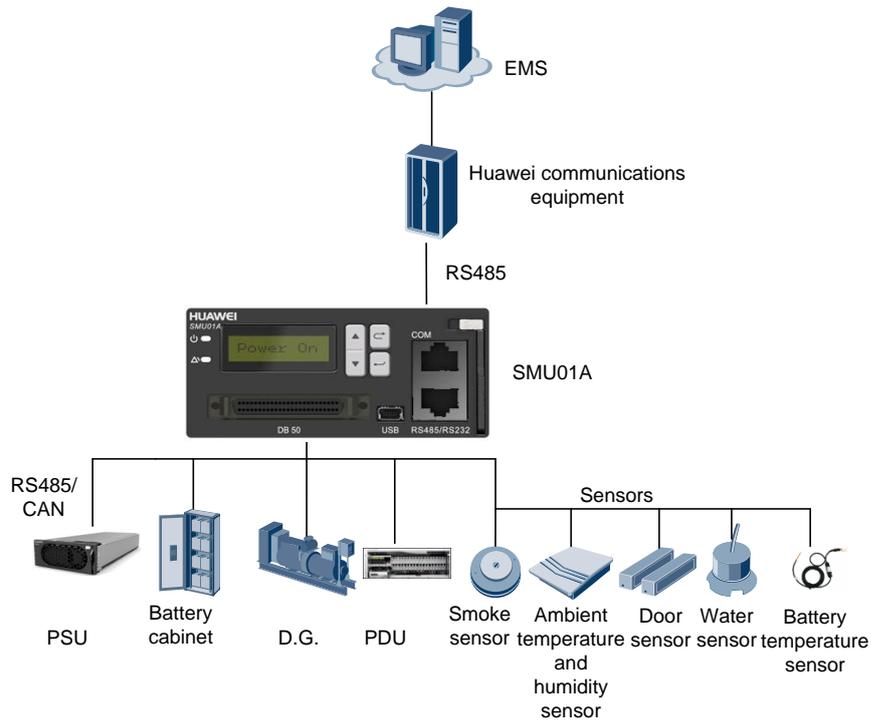
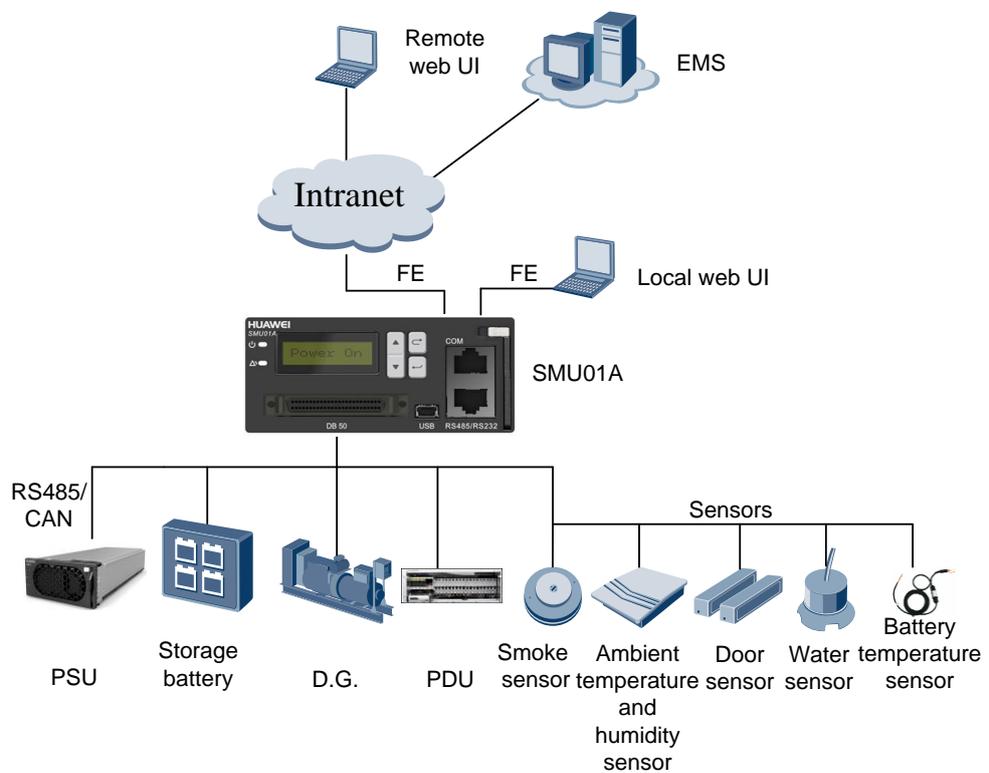


Figure 1-2 SMU01A in out-of-band communication



1.3 Performance Specifications

Table 1-1 describes performance specifications of the SMU01A, such as its dimensions, weight, and storage environment.

Table 1-1 Performance specifications

Item	Specifications
Dimensions (H x W x D)	44.5 mm x 95.5 mm x 208 mm (1.75 in. x 3.76 in. x 8.19 in.)
Weight	≤ 1.5 kg (3.31 lb)
Operating temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Operating humidity	5–95% RH
Storage temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Storage humidity	5–95% RH
Transportation temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Altitude	4000 m (13123.2 ft)



NOTE

The LCD screen must be able to function normally at temperatures ranging from −20 °C (−4 °F) to 70 °C (158 °F), and cannot be damaged at temperatures ranging from −40 °C (−40 °F) to −20 °C (−4 °F).

When the altitude is between 2000 m (6561.6 ft) and 4000 m (13123.2 ft), the temperature decreases by 1 °C (33.8 °F) for each additional 200 m (656.16 ft).

1.4 Functions

Table 1-2 describes the SMU01A functions.

Table 1-2 SMU01A functions

Category	Function
Battery management	Controls storage batteries in manual or automatic mode.
	Manages battery boost and floating charge.
	Manages battery tests.
	Manages battery current limiting.
	Manages battery temperature compensation.
	Provides battery overtemperature protection.
	Provides battery connection and disconnection.
	Monitoring and reporting battery capacity.

Category	Function
Detection	Monitors AC input voltages.
	Monitors load currents.
	Monitors DC busbar voltages.
	Monitors battery temperatures.
	Monitors ambient humidity.
	Monitors ambient temperatures.
	Monitors standby analog values.
Control	Resets the smoke sensor remotely. (The smoke sensor can be remotely reset after an alarm is cleared.)
	Provides eight dry contact outputs.
Alarm reporting	Reports alarms for SMU01A faults.
	Reports DC overvoltage alarms.
	Reports DC undervoltage alarms.
	Reports alarms for abnormal load currents.
	Reports alarms for DC ultra overvoltage.
	Reports alarms for DC ultra undervoltage.
	Reports alarms for mains failure.
	Reports alarms for very high ambient temperatures.
	Reports alarms for the water sensor.
	Reports alarms for the smoke sensor.
	Reports alarms for wire frames.
	Reports alarms for load fuse blown.
	Reports alarms for humidity sensor faults.
	Reports alarms for long-time AC failures.
	Reports alarms when communication failures of all rectifiers.
	Reports alarms for single-rectifier faults. (There is no reserved rectifier.)
	Reports alarms for multi-rectifier faults.
	Reports alarms for communication failures.
	Reports alarms for rectifier faults.
	Reports alarms for very high battery temperatures.
Reports alarms for very low battery temperatures.	

Category	Function
	Reports alarms for LVD2 disconnection.
	Reports alarms for overcurrent.
	Reports alarms for battery losing.
	PDE Failure
	PDE Branch Failure
	PDE Branch Protection

2 Panel and Ports

SMU01A Panel

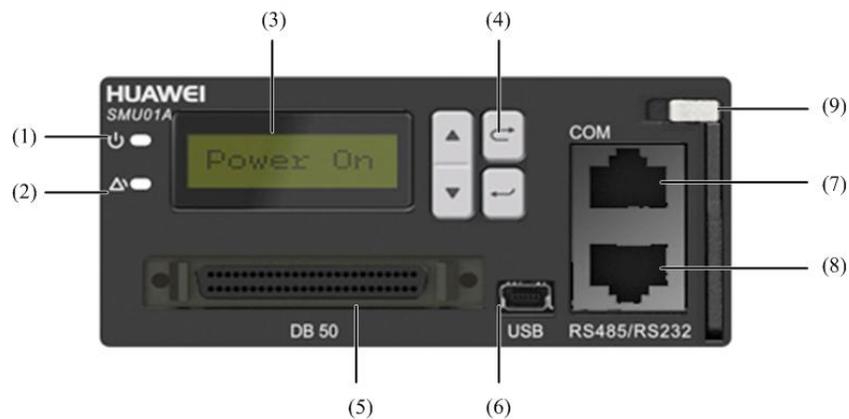


NOTE

All ports in this manual are protected by a security mechanism.

Figure 2-1 shows the SMU01A panel.

Figure 2-1 SMU01A panel



(1) Running status indicator

(2) Alarm indicator

(3) LCD

(4) Four buttons

(5) DB50 port

(6) USB port

(7) COM port

(8) RS485/RS232 port

(9) Locking latch

Indicators

Table 2-1 describes the SMU01A indicators.

Table 2-1 Indicator description

Name	Color	Meaning	Status	Description
Running status indicator	Green	Indicates the running status.	Off	The SMU01A is faulty or has no DC input.
			Blinking at 0.5 Hz	The SMU01A runs properly and communicates with the host properly.
			Blinking at 4 Hz	The SMU01A runs properly but does not communicate with the host properly.
Alarm indicator	Red	Indicates the alarm status.	Off	No critical or major alarm is generated.
			Steady on	A critical or major alarm is generated.

LCD

You can set parameters and view information on the LCD using the four buttons beside on the SMU01A panel.

Buttons

Table 2-2 describes the buttons.

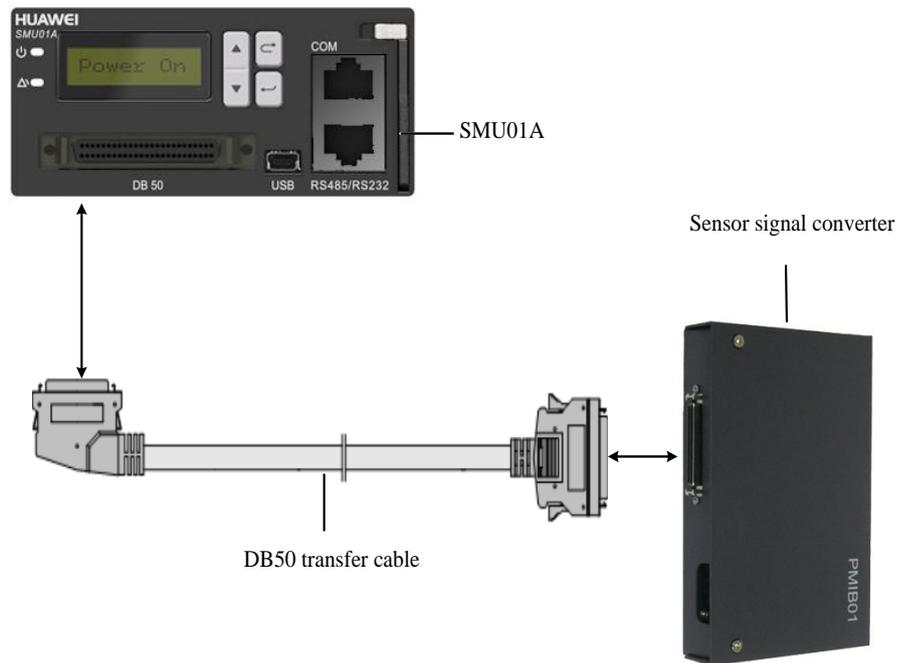
Table 2-2 Button description

Button	Description
▲ or ▼	Allows you to view and set menu items.
Cancel	Returns to the previous menu without saving the current menu settings.
Enter	Enters the main menu from the standby screen, enters a submenu from the main menu, or saves menu settings.
<p>NOTE:</p> <ul style="list-style-type: none"> • After a menu is displayed, the standby screen is displayed and the LCD screen becomes dark if you do not press any button within 5 minutes. • You need to log in again if you do not press any button with 8 minutes. 	

DB50 Port

The DB50 port is connected to the sensor signal converter by using the DB50 transfer cable. The DB50 port detects analog parameters and Boolean values, and provides controlled signal outputs. Figure 2-2 shows the connection between the DB50 port and the sensor signal converter.

Figure 2-2 Connection between the DB50 port and the sensor signal converter



NOTE

The DB50 transfer cable and sensor signal converter are extended components of the SMU01A.

USB Port

The universal serial bus (USB) port is not used in this version.

Communications Ports

The SMU01A communicates with the host over communications ports. Table 2-3 describes the communications ports on the SMU01A panel.

Table 2-3 Communications port description

Communications Ports	Communications Mode	Communications Parameter	Protocol Compliance
COM	Fast Ethernet	Auto-adaptation	TCP/IP, HTTPS and SNMP
	RS485/RS232	Baud rate: 9,600 bit/s or 19,200 bit/s	Huawei master/slave protocol or telecom protocol
RS485/RS232	RS485/RS232	Baud rate: 9,600 bit/s or 19,200 bit/s	Huawei master/slave protocol or telecom protocol

Communications Ports	Communications Mode	Communications Parameter	Protocol Compliance
<p>NOTE:</p> <ul style="list-style-type: none">• The COM port is a multiplexed as a network port and RS485/RS232 port. The SMU implements adaptive detection 30 min after startup. If no network cable is connected within 30 min, it communicates through RS485/RS232 by default. To use the network port for communication, perform network detection on the LCD to implement another adaption. LCD path: Main Menu > Control > Site Summary > Network Detect• After the port is selected, only either of the communication modes RS485 and RS232 can be used at a time.			

SD Card Port

A secure digital (SD) card is inserted into this port to store a large capacity of data. The SD card port is not used in this version.

3 LCD Description

The SMU01A provides an LCD for you to:

- View active alarms and historical alarms.
- View the running status of the system, such as the system voltage, load current, and battery testing records.
- Set system parameters, communications parameters, power supply unit (PSU) parameters and battery parameters.
- Control the system status, such as choosing boost charge or floating charge and resetting PSUs.
- Set parameters quickly, such as the battery string parameters, date, time, and communication addresses.

3.1 LCD Application

This section describes how to select a display language, view active alarms, and set parameters quickly on the LCD. For details about how to use the buttons on the SMU01A panel, see Table 2-2.

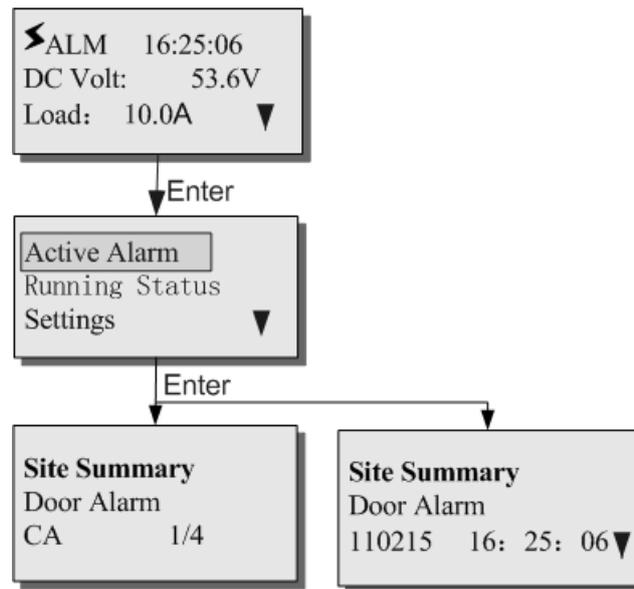
Selecting a Display Language

After the SMU01A is powered on, the screen for selecting a display language is displayed. You can select Chinese or English or other language by pressing ▲ or ▼ and enter the standby screen by pressing Enter.

Querying Active Alarms

This section describes how to query active alarms on the LCD, as shown in Figure 3-1. The parameter values in Figure 3-1 are for reference only.

Figure 3-1 Querying active alarms



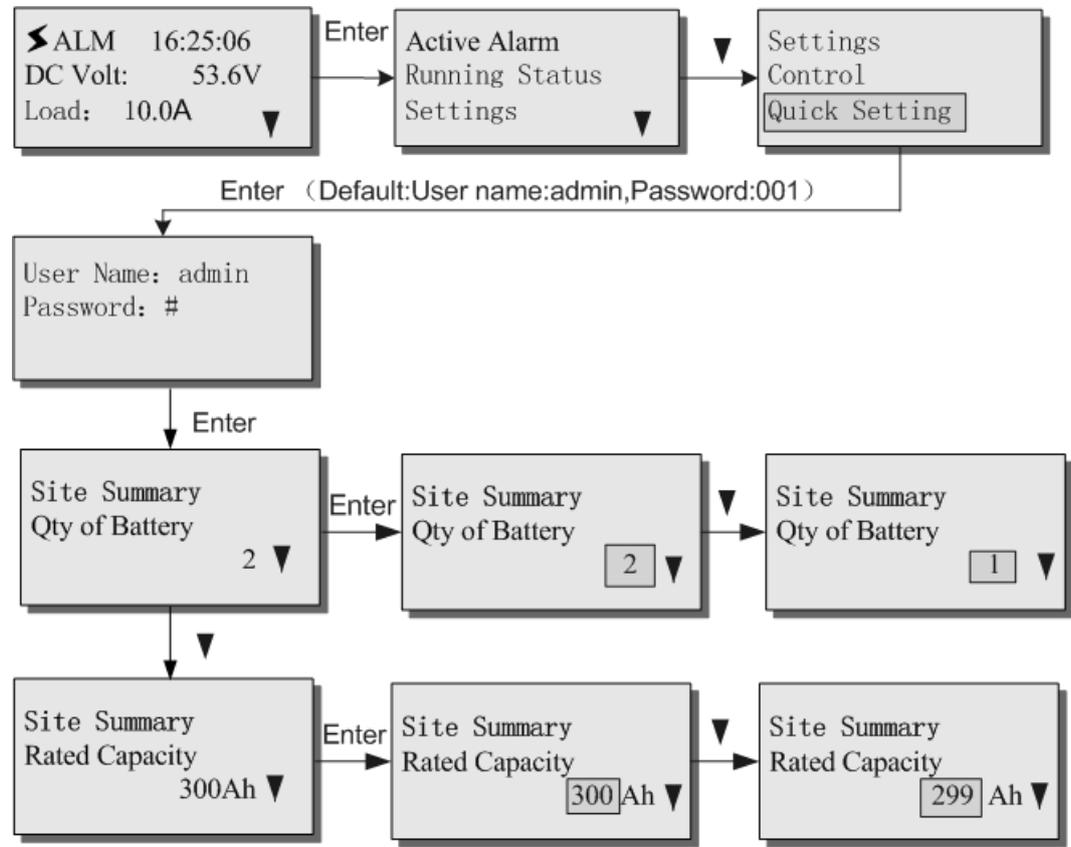
NOTE

110215 indicates February 15, 2011. The alarm severity and date are displayed alternatively.

Setting Parameters Quickly

This section describes how to quickly set the number of battery strings and rated battery capacity on the LCD, as shown in Figure 3-2. The parameter values in Figure 3-2 are for reference only.

Figure 3-2 Setting parameters quickly



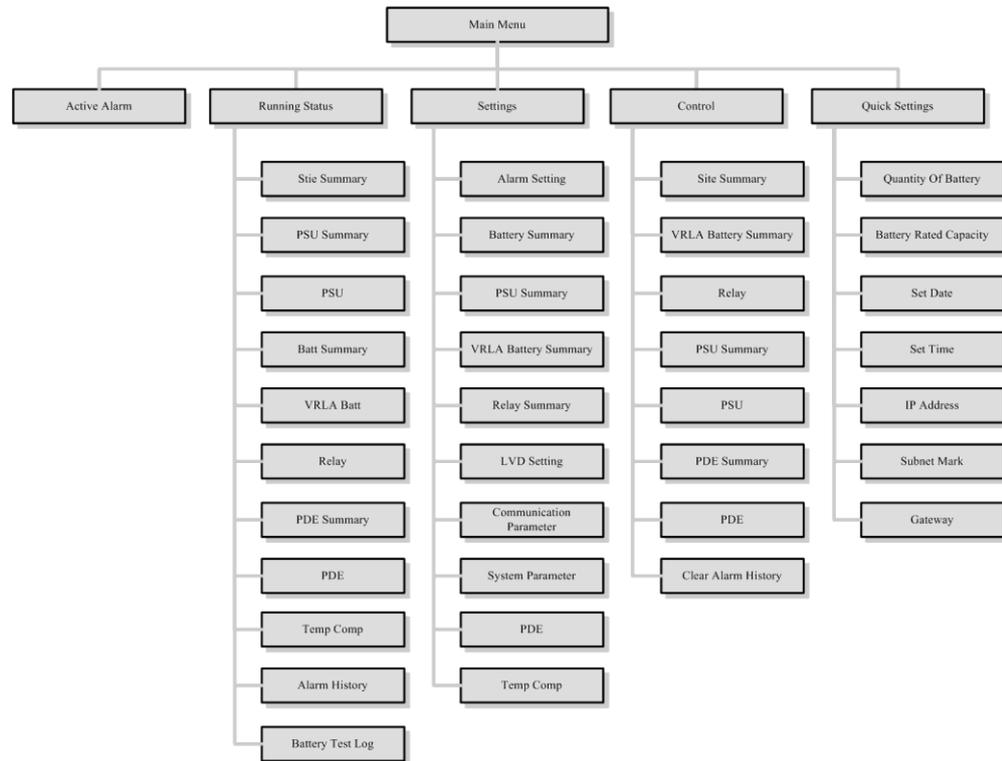
NOTE

To open the **Settings** page, **Quick Setting** page, and **Control** page, you need to enter a password. The preset user name is **admin** and the preset user password is **001**. You can add or delete users, and change the user name and password.

3.2 Menu Hierarchy

Figure 3-3 shows the LCD main menu. For details about the parameters, see Table 3-1.

Figure 3-3 Menu hierarchy



3.3 LCD Menu

Table 3-1 describes the menu hierarchy and parameters.

Table 3-1 LCD menu

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
Active alarm	-	-	-	-
Running status	Site Summary	Auto/Man Ctl Sta	-	-
		System Voltage	-	-
		Total Load	-	-
		Ambient Humi	-	-
		Ambient Temp 1	-	-
		Ambient Temp 2	-	-
	PSU Summary	Total Current	-	-
		Used Capacity	-	-
		AC Voltage	-	-

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value	
	PSU	PSU 1	DC Output Volt	-	
			Current Limit	-	
			Output Current	-	
			AC Input Volt	-	
			Rect Temp	-	
			Total Run Time	-	
			DC On/Off State	-	
			SW	-	
	Batt Summ		Total Current	-	-
			Pre Disch Time	-	-
			Batt Charge Sta	-	-
			Batt Temp 1	-	-
			Batt Temp 2	-	-
	VRLA Batt	VRLA Batt 1	Current	-	-
			Remained Cap	-	-
			Capacity Percent	-	-
	PDE Summary		PDE Number	-	-
			Comm PDE Num	-	-
			Total Power	-	-
			Total Current	-	-
			Comm Status	-	-
	PDE	PDE1	Total Run Time	-	-
			Branch Number	-	-
			Total Power	-	-
			Total Current	-	-
			Branch(1-4) Power	-	-
			Branch(1-4) Current	-	-
			Branch(1-4) Voltage	-	-

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
			Branch(1-4) Temperature	-
			Software Version	-
	Alarm History	-	-	-
	Batt Test Log	-	-	-
Settings	Alarm Setting	Site Summary	-	-
		PSU Summary	-	-
		PSU	-	-
		Batt Summ	-	-
		VRLA Batt	-	-
		Alarm Relay		
		PDE Summary	-	-
		PDE	-	-
	Site Summary	System Type	DC Ultra Over V	-
		DC Ultra Over V	-	58.0 V
		DC Over Volt		60.0 V
		DC Ultra Under V	-	46.0 V
		DC Under Volt		43.0 V
		Qty of Battery	-	1
		Shunt Current	-	300 A
		Shunt Voltage	-	75 mV
		AC Over Volt	-	280 V
		AC Under Volt	-	180 V
		System AC Type	-	Single Phase
		Dial-up Network		Disable
		Amb High Temp	-	40 ℃
		Amb Low Temp	-	0 ℃
		Amb High Humi	-	80%
Amb Low Humi	-	10%		

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value	
		Amb v-Hi Temp	-	50 °C	
		DI(1-8)Alarm	-	Close	
		DO(1-8) Alarm Act	-	Close	
		Alarm Voice	-	No	
	PSU Summary	High Volt Limit	-	59.5 V	
		Rect Redund Ena	-	Enable	
		High Volt Limit	-	80%	
	VRLA Batt Summ	Basic Para	Float Charge		53.5 V
			Boost Charge		56.4 V
			Current Limit		0.15C10
			Over Current		0.25C10
			Rated Capacity		200 Ah
			Install Date		2010-01-01
		FC BC	Auto BC Enabled		Enable
			To BC Current		0.05C10
			Curr BC Delay		30 Min
			To BC Capacity		80%
			Capa BC Delay		10 Min
			BC To FC Curr		0.01C10
			BC To FC Delay		180 Min
			Max BC Time		16 H
			Cyclic BC Ena		Enable
			Cyclic BC Intv		30 Days
Battery Test		Test End Volt		46.0 V	
		Test End Capa		70.0%	
		Test End Temp		5 °C	
	Test End Time		480 Min		

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
			Mains Fail Test	Enable
			Batt Test Type	No Test
			Short Test Ena	Enable
			Short Test Intv	30 Days
			ShortT Duration	5 Min
			Simple Test Time	30 Min
		Temp Comp	TC Factor	80 mV/dgeC
			Nominal Temp	25dgeC
		Charge Disch	0.05C10 DisTime	12.0 H
			0.1C10 Dis Time	10.0 H
			0.2C10 Dis Time	4.9 H
			0.3C10 Dis Time	3.0 H
			0.4C10 Dis Time	2.0 H
			0.5C10 Dis Time	1.4 H
			0.6C10 Dis Time	1.2 H
			0.7C10 Dis Time	1.1 H
			0.8C10 Dis Time	0.9 H
			0.9C10 Dis Time	0.7 H
			1.0C10 Dis Time	0.5 H
			Capacity Coeff	95%
		LVD Setting	LVD1 Enabled	Disable
			LVD2 Enabled	Enable
			LVD2Mode	By Voltage

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value	
			LVD2Voltage	43.2 V	
			LVD2Reconnect Voltage	51.5 V	
		Others	Battery Temperature Very High Action	Do Nothing	
			Battery High Temperature	45 °C	
			Battery Very High Temperature	53 °C	
			Battery Low Temperature Point	-5 °C	
			Battery Very Low Temperature	-10 °C	
			Load HiTemp Dis	Disable	
		LVD Setting	LVD1 Enabled	Disable	
			LVD2 Enabled	Enable	
			LVD2Mode	By Voltage	
			LVD2Voltage	43.2 V	
				LVD2Recon Volt	51.5 V
		Communication Parameter	Host CommAddr	-	0
	Host Baudrate		-	9600 bit/s	
	DHCP			Disable	
	Phone Number 1				
	Account 1				

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
		Password		
		Phone Number 1		
		Account 1		
		Password		
		Phone Number 1		
		Account 1		
		Password		
		IP Address	-	-
		Subnet Mask	-	-
		Gateway	-	-
		NetEco Main IP	-	-
		NetEco Backup IP	-	-
		NetEco Port	-	31220
	System Parameter	LUI Language	-	-
		Set Date	-	-
		Set Time	-	-
		Set Time Zone	-	GMT +08:00
		Set As Def Cfg	-	Yes
		Restore Def Cfg	-	Yes
		Restore Manu Def Cfg	-	Yes
		Logout	-	Yes
		Set Site Name	-	SMU_SITE
		Set Batt1 Type	-	-
		Set Batt2 Type	-	-
	LCD Contrast	-	5	
	PDE	PDE1	Branch1 Current Limitation	10 A
			Branch2 Current Limitation	20 A
			Branch3 Current	20 A

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
			Limitation	
			Branch4 Current Limitation	10 A
			Over Temperature Protection Point	110 ℃
			Input Voltage Protection Enable	Enable
			Input Over Voltage Protection	59 V
			Input Under Voltage Protection	42V
			Voltage Hysteresis	2 V
Control	Site Summary	Auto Man Ctrl	-	-
		Network Detect	-	Yes
		Reset Smoking	-	-
		DO1-DO8	-	-
	VRLA Batt Summ	BC/FC Ctrl	-	-
		Battery Test	-	-
		Reset Batt Capa	-	-
		Clear Batt Alarm	-	-
		LVD1 Control	-	-
		LVD2 Control	-	-
	PSU Summary	Current Limit	-	-
		DC Voltage Ctrl	-	-
		On/Off Control	-	-
		Reset	-	-
		Clear RectLost	-	-
		Clr Phase Fail		
	PSU	PSU1	Reset	-

Main Menu	Second-Level Menu	Third-Level Menu	Fourth-Level Menu	Default Value
			On Off Control	-
	PDE Summary	Clear PDE Lost	-	-
	PDE	PDE1	Branch(1-4) Control	-
			Reset	-
	Clr Alm Hist	-	-	-
Quick Setting	Qty of Battery	-	-	1
	Rated Capacity	-	-	200 Ah
	Set Date	-	-	-
	Set Time	-	-	-
	IP Address	-	-	-
	Subnet Mask	-	-	-
	Gateway	-	-	-



NOTE

The LCD Menu is dynamic changed due to the different configuration, the above table only for reference, the detailed information based on the SMU01A LCD Menu that you used.

4 Web UI Description

You can perform the following operations over the web UI:

- View the system status, including the PSU status, battery status, and active alarm information.
- Configure system parameters.
- Configure network parameters, including IP addresses, host communications addresses and baud rates under master/slave protocol.
- Control the system, such as choosing battery boost or floating charge and resetting PSUs.
- Add or delete users, and change user names and passwords.
- Upgrade software online.
- Query and export historical logs and alarms.
- Configure alarm parameters, alarm severity, and the relationship between alarms and dry contacts.
- Set the system date and time, site and storage batteries, and save, download, and upload configuration files.
- Query electronic label information.
- Site information configure, including Set date and Site name , deal with the configuration files and so on.

4.1 Requirements for Operating Environment

Operating system: Windows XP

Browser: Internet Explorer 6.0 or later

4.2 Preparations for Login

Set the IP address, gateway, and subnet mask of the SMU01A before logging into the web UI. You also need to set the network and Internet Explorer.

Setting the IP Address

Set the IP address, subnet mask, and gateway on the LCD based on those assigned by the customer.

Setting the LAN

CAUTION

- If the SMU01A is connected to a local area network (LAN) and a proxy server has been selected, you need to cancel proxy server setting.
- If the SMU01A is connected to the Internet but the computer is connected to the LAN, you cannot cancel proxy server setting; otherwise, you will fail to access the SMU01A.

To set the LAN, perform the following steps:

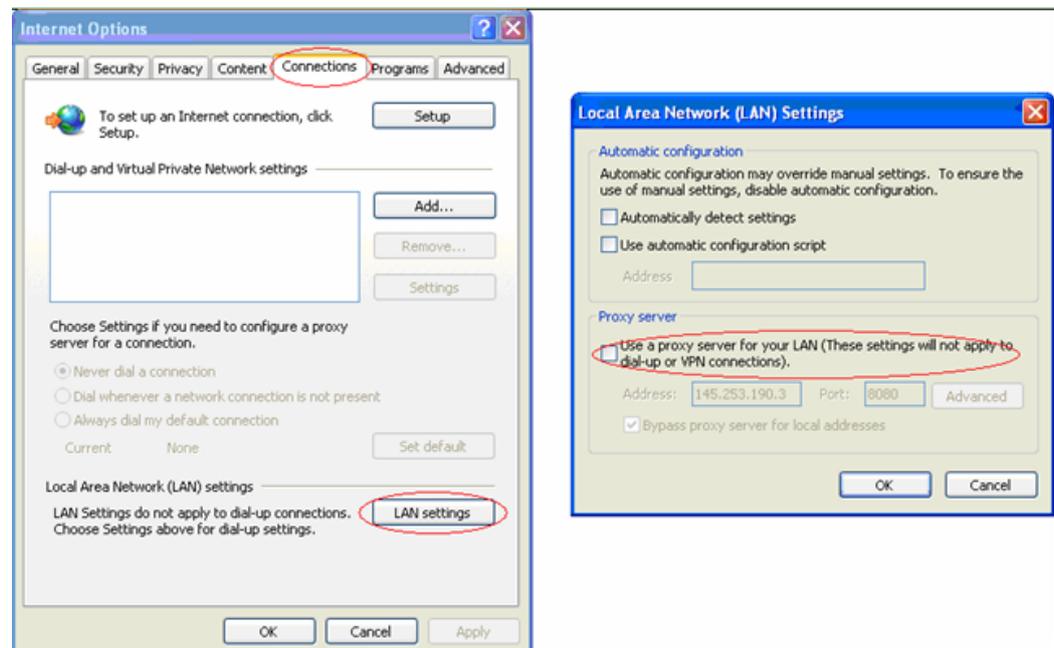
Step 1 Open Internet Explorer.

Step 2 Choose **Tools > Internet Options**.

Step 3 Click the **Connections** tab and then click **LAN settings**.

Step 4 Deselect the check box under **Proxy server**, as shown in Figure 4-1.

Figure 4-1 LAN settings



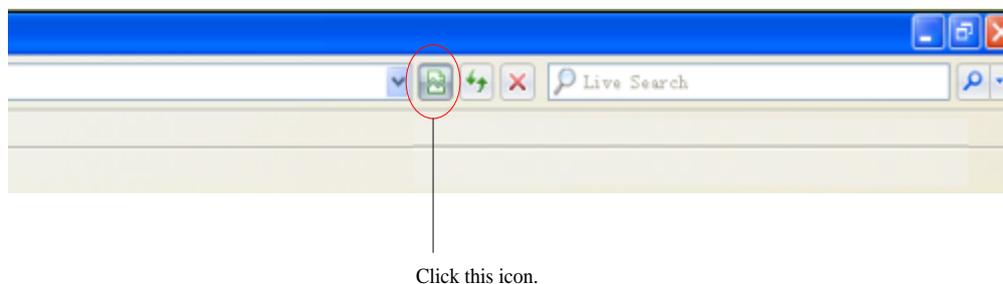
Step 5 Click **OK** to finish the LAN settings.

----End

Setting Internet Explorer

If Internet Explorer 8.0 is used, you need to click  to open the compatibility view and set Internet Explorer 8.0, as shown in Figure 4-2. This ensures normal use of the web UI.

Figure 4-2 Clicking the icon to open the compatibility view



4.3 Web UI Overview

The parameter values in the figures in this section are for reference only.

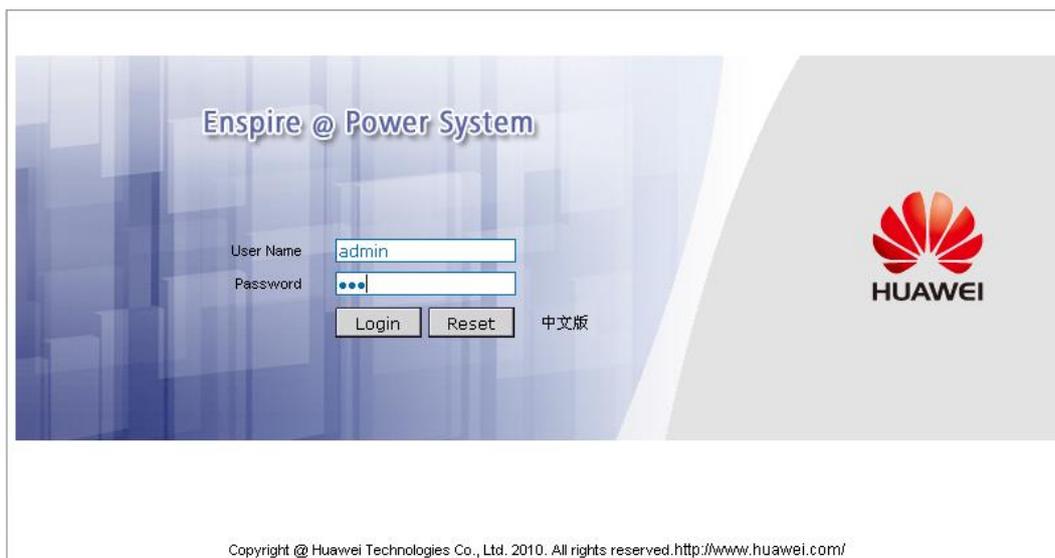
Login Page

 **NOTE**

To ensure the security of data transmission, the NetEco transmits data after encrypting it over SSL.

Enter the IP address of the SMU01A in the Internet Explorer address box and press **Enter**. A login page is displayed, as shown in Figure 4-3. Set **User Name** to **admin** and **Password** to **001**, and then press **Login**.

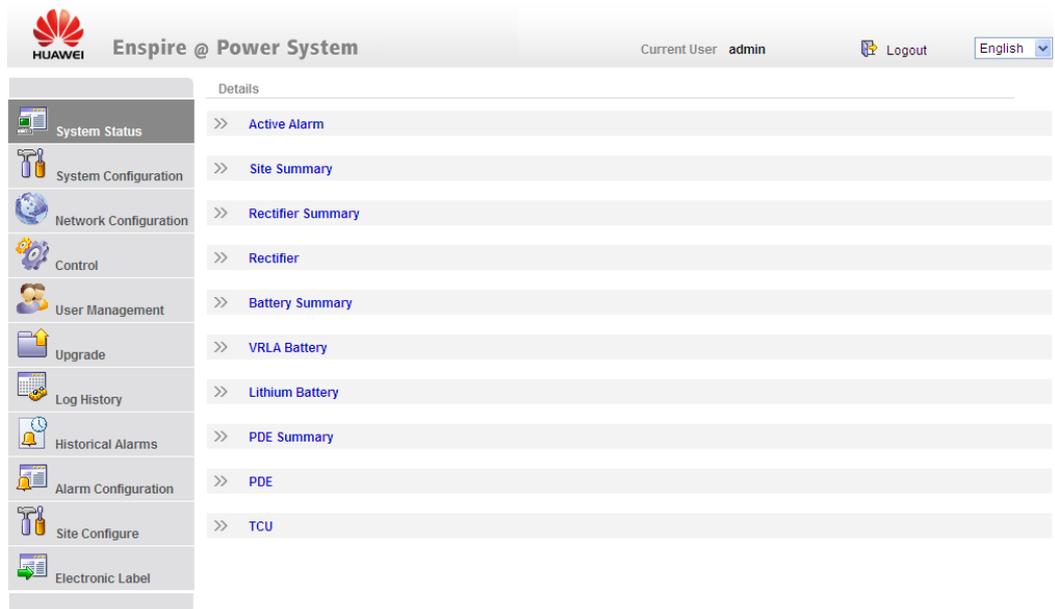
Figure 4-3 Login page



System Status Tab Page

To view the information about the site, active alarms, PSUs, batteries, and power distribution, click the **System Status** tab, as shown in Figure 4-4.

Figure 4-4 System Status tab page



System Configuration Tab Page

You can configure the site, PSUs, and batteries on the **System Configuration** tab page, as shown in Figure 4-5. Figure 4-6 shows the **Site Summary** page.

Figure 4-5 System Configuration tab page

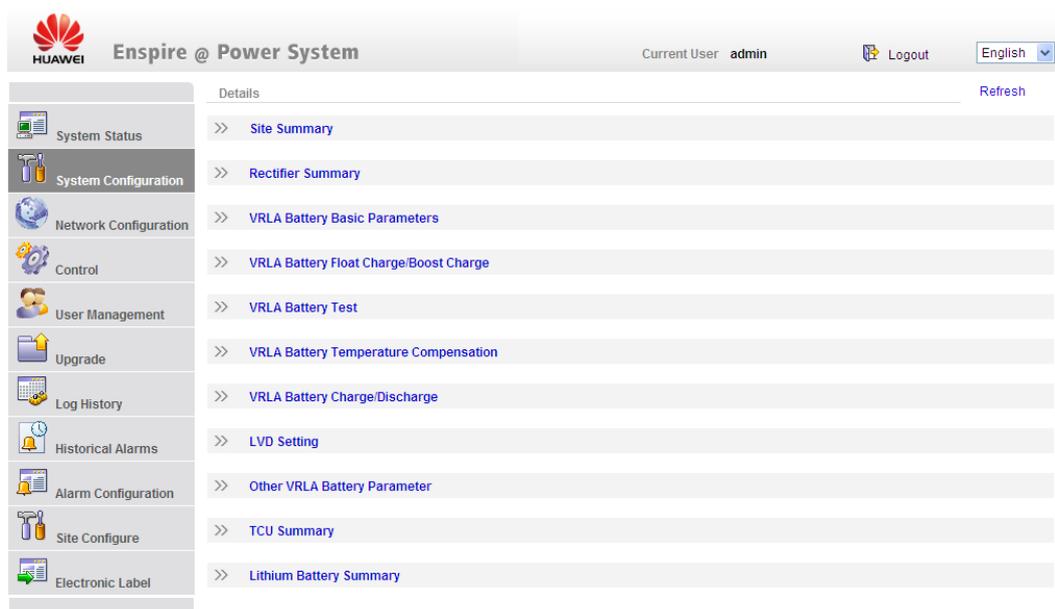
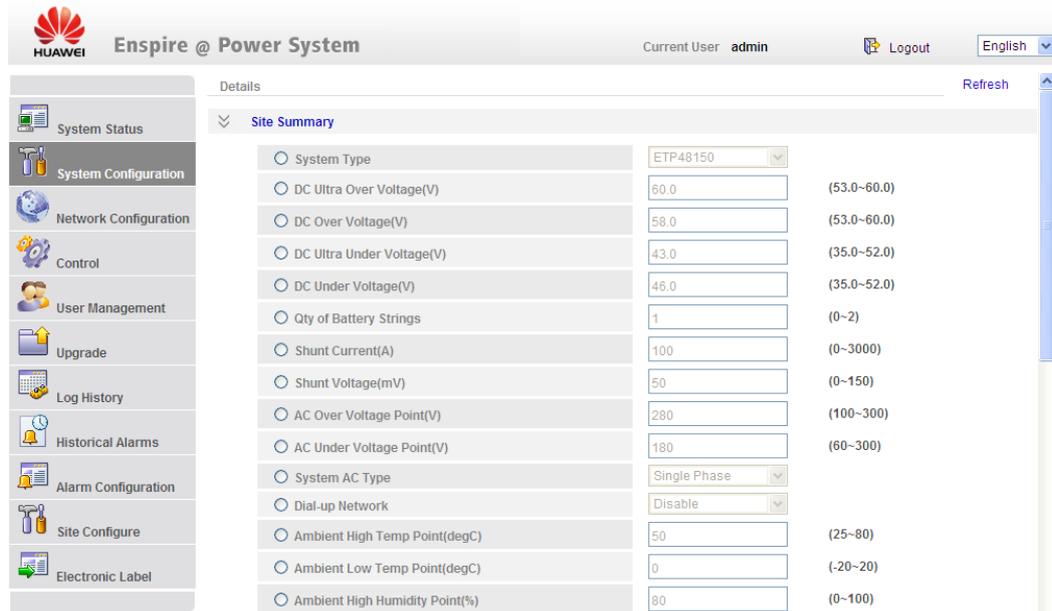


Figure 4-6 Site Summary page



Network Configuration Tab Page

On the **Network Configuration** tab page, you can set the IP address, subnet mask, and gateway under **System IP**, the host communications address and baud rate under **Master Slave Protocol**, the SNMP version under **SNMP**, the trap IP address under **SNMP Trap**, and the server IP addresses and port number under **NetEco**.

Figure 4-7 shows the **Network Configuration** tab page. Figure 4-8 shows the expanded **Network Configuration** tab page.

Figure 4-7 Network Configuration tab page

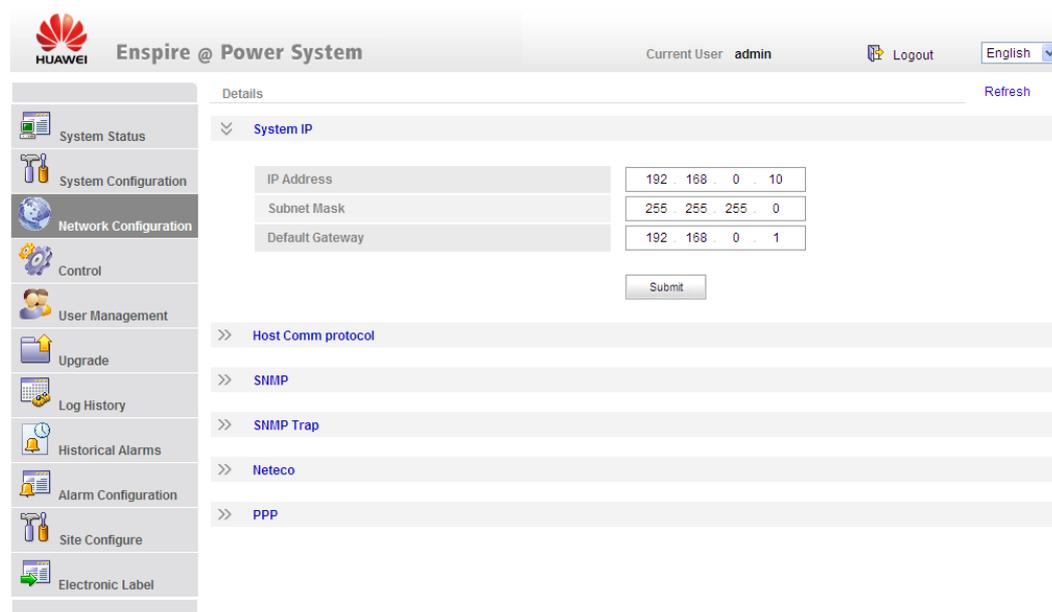


Figure 4-8 Expanded Network Configuration tab page

The screenshot displays the 'Network Configuration' tab in the Huawei Enspire @ Power System web interface. The interface is organized into a sidebar on the left and a main configuration area on the right. The sidebar includes navigation icons for System Status, System Configuration, Network Configuration (which is currently selected), Control, User Management, Upgrade, Log History, Historical Alarms, Alarm Configuration, Site Configure, and Electronic Label. The main area is titled 'Details' and features a 'Refresh' button. It contains several expandable configuration sections:

- System IP:** IP Address (192.168.0.10), Subnet Mask (255.255.255.0), Default Gateway (255.255.255.1). A 'Submit' button is located below these fields.
- Master Slave Protocol:** Host Comm Address (0), Host Comm Baudrate (9600). A 'Submit' button is located below these fields.
- SNMP:** SNMP Version (SNMPv1 & SNMPv2c), SNMP Port (161), Read Community (read), Write Community (write). A 'Submit' button is located below these fields.
- SNMP Trap:** Trap IP (127.0.0.1), Trap Port (162). A table lists the trap configuration:

No.	Trap IP	Trap Port
<input type="checkbox"/> 1	127.0.0.1	162

 A 'Submit' button is located below the table.
- Neteco:** Main Server IP Address (10.71.30.137), Backup Server IP Address (10.71.30.137), Port No. (31220). A 'Submit' button is located below these fields.

Control Tab Page

You can set control parameters for the site, PSUs, batteries, and power distribution unit on the **Control** tab page, as shown in Figure 4-9. Figure 4-10 shows the **Control** tab page.

Figure 4-9 Control tab page

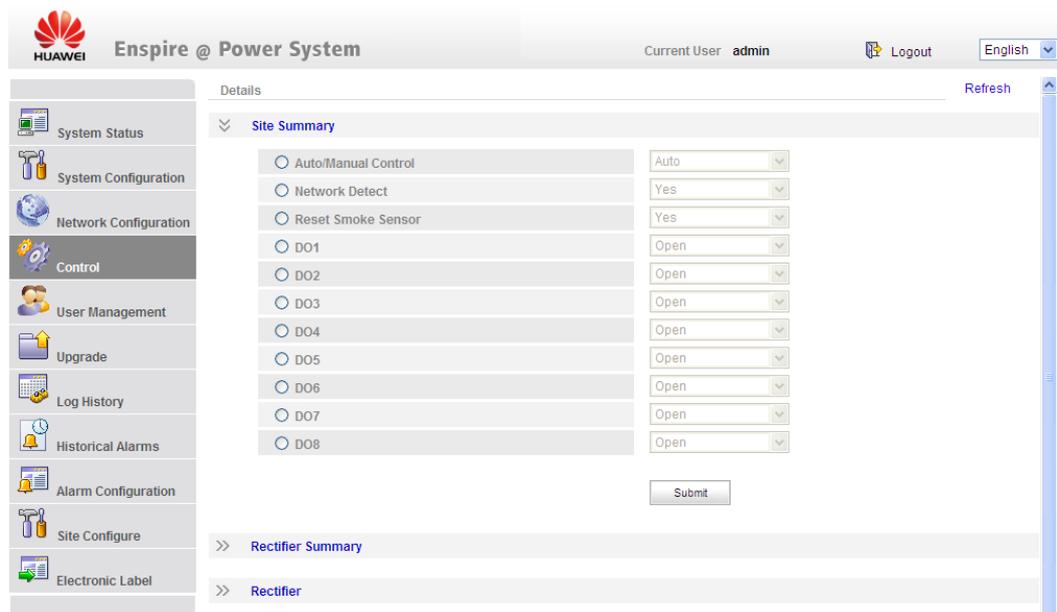
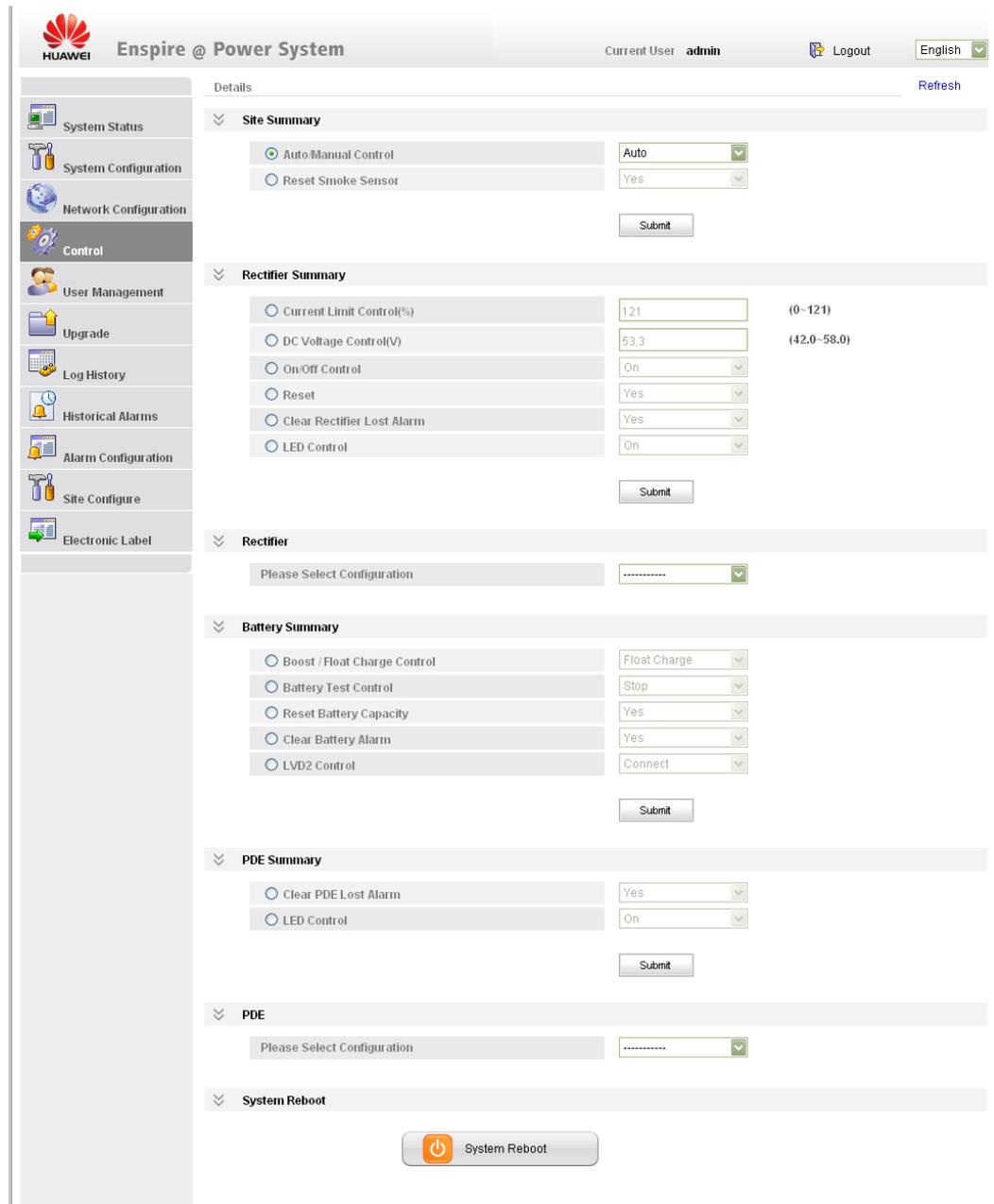


Figure 4-10 Expanded Control tab page



User Management Tab Page

You can create and delete users and modify user information on the **User Management** tab page, as shown in Figure 4-11. Users are classified into three types: admin, engineer, and operator. Different user types have different operation rights. Only admin users have user management rights.

Figure 4-11 User Management tab page



Upgrade Tab Page

You can upgrade the SMU01A, PSU, PDE software on the **Upgrade** tab page, as shown in Figure 4-12.

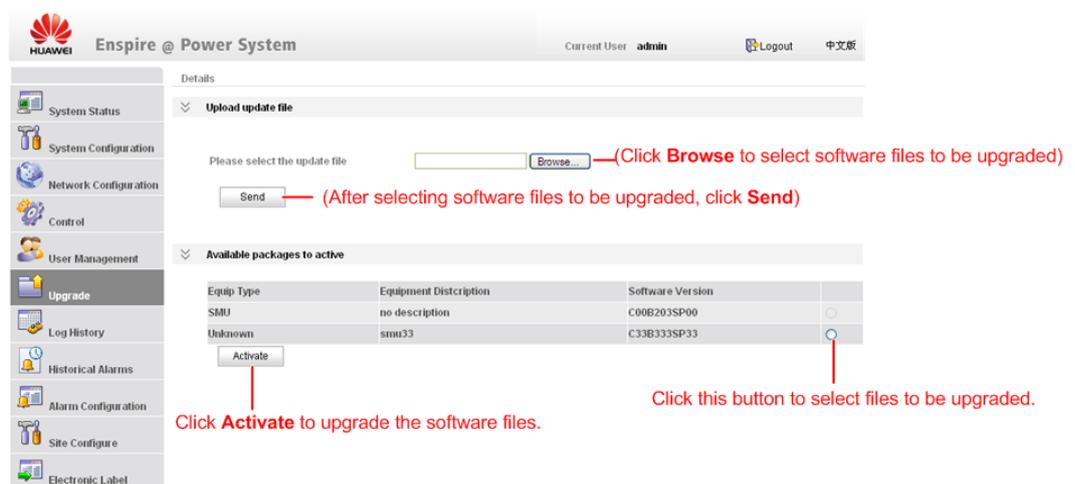
To upgrade SMU01A software, perform the following steps:

- Step 1** Click **Browse** to select the software and then click **Send**.
- Step 2** After the software information is displayed in **Available package active**, select the software and click **Activate**, as shown in Figure 4-12.

The software upgrade process is displayed over the upgrade process bar. A message is displayed when the upgrade is successful.

----End

Figure 4-12 Upgrade tab page



Log History Tab Page

To download the configuration file and log file, perform the following steps:

Step 1 Click the **Log History** tab.

Step 2 Then click **Download** under **One-click Download**.

"Are you sure to download the current configuration file and log file?" is displayed.

Step 3 Click **OK**.

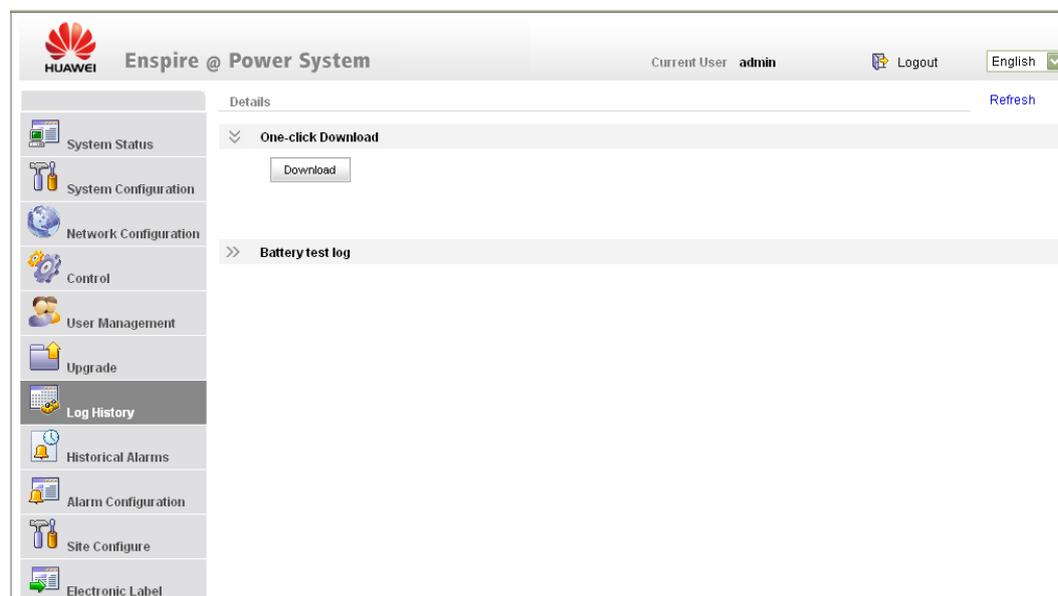
The configuration file and log file are downloaded in about 2 minutes.

----End

You can export battery testing records in HTML files by clicking **Export**.

Figure 4-13 shows the **Log History** tab page.

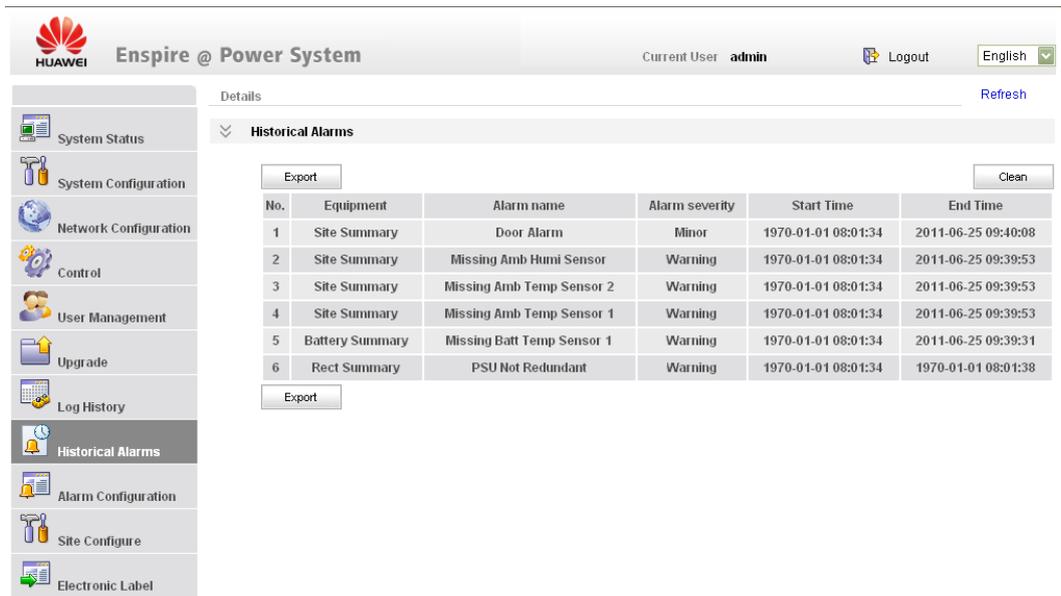
Figure 4-13 Log History tab page



Historical Alarms Tab Page

You can download historical alarms on the **History Alarms** tab page, as shown in Figure 4-14. To export historical alarms in HTML files, click **Export**. To clear historical alarms, click **Clean**.

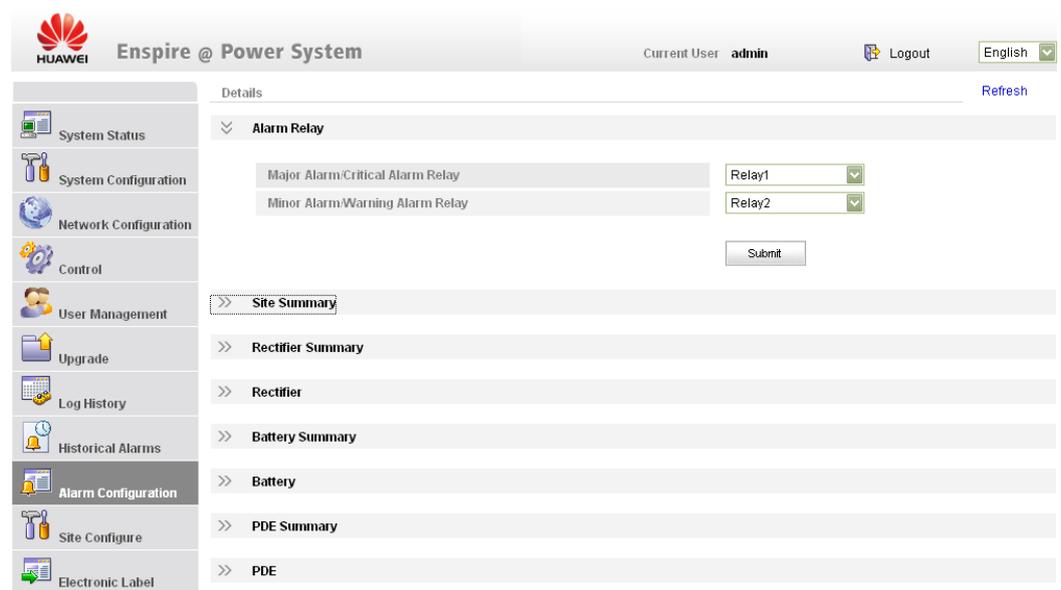
Figure 4-14 Historical Alarms tab page



Alarm Configuration Tab Page

You can set **Alarm Enable**, **Alarm Level** and **Relay** on the **Alarm Configuration** tab page, as shown in Figure 4-15.

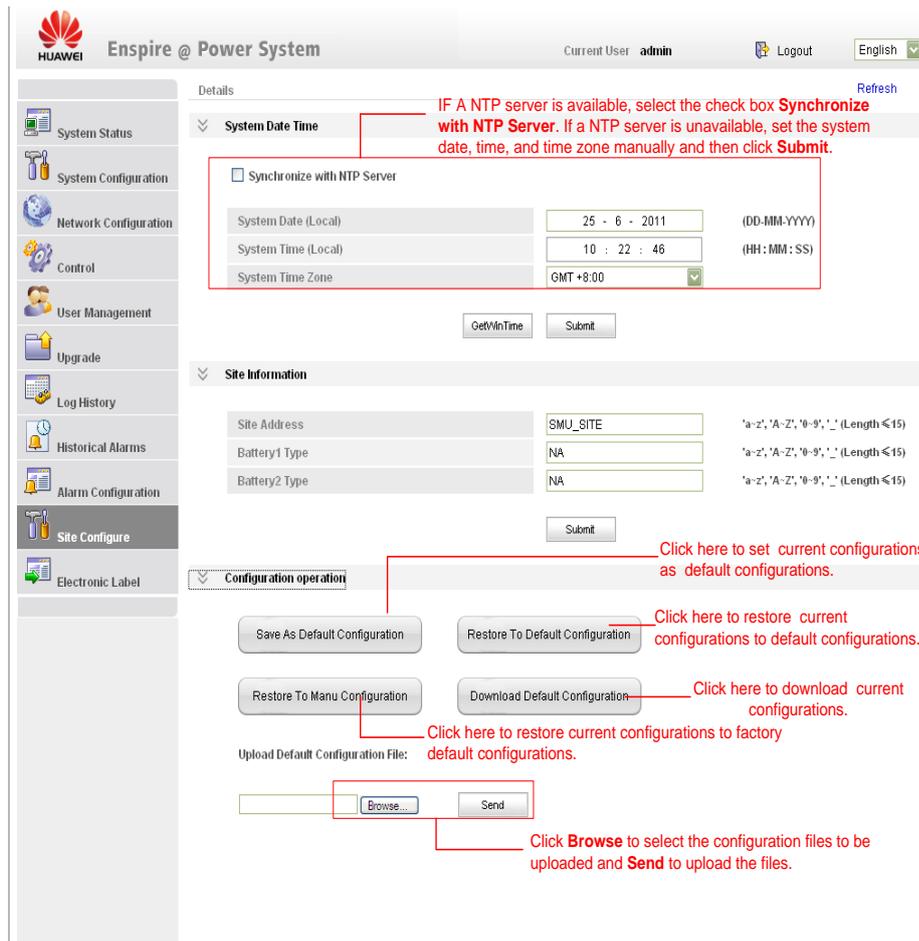
Figure 4-15 Alarm Configuration tab page



Site Configuration Tab Page

On the **Site Configure** tab page, you can set the system date and time, site and storage batteries, and save, download, and upload configuration files, as shown in Figure 4-16.

Figure 4-16 Site Configure tab page



Electronic Label Tab Page

You can query electronic label information about system components such as the SMU01A, power distribution rack, and PSUs on the **Electronic Label** tab page. Click **Export** to export the electronic label information in HTML files.

5 Operation Guide

The SMU01A provides an LCD screen and a web UI is also available when the SMU01A is connected to a personal computer (PC). For details about the LCD screen and web UI, see chapter 3 "LCD Description" and chapter 4 "Web UI Description." An EMS UI is available to customers when the SMU01A is connected to an EMS. For details about the EMS UI, see related EMS operation guides.

5.1 Setting Communications Parameters

Set SMU01A communications parameters based on actual requirements.

The SMU01A is connected to Huawei communications equipment over an RS485/RS232 port. You can set communications addresses of Huawei communications equipment on the LCD or over the web UI.

If the SMU01A is connected to an Ethernet over a COM port, you need to set the IP address, subnet mask, and gateway on the LCD based on those assigned by customers and then perform other operations.

On the LCD, you can choose **Settings > Quick Setting** to change the IP address, subnet mask, and gateway of the SMU01A.

Communicating with Huawei Communications Equipment

Set the communications addresses and baud rates of Huawei communications equipment on the LCD or over the web UI. The default communications address is **0** and the default baud rate is **9,600 bit/s**.

On the LCD, choose **Settings > Communication Parameter** to set the host communications address and host communications baud rate.

For details about how to set communications parameters over the web UI, see Figure 4-8.

Accessing the Web Page

To access the web page locally or remotely through a PC, enter the IP address of the SMU01A in the browser. For details, see 4.2 "Preparations for Login."

Communicating with the Huawei NetEco

To communicate with the NetEco, set the port number and IP address of the NetEco server on the LCD or over the web UI.

On the LCD, you can choose **Settings > Communication Parameter** to set the IP address and port number of the NetEco server.

Figure 5-1 shows how to set the IP address and port number of the NetEco server.

Figure 5-1 Setting the IP address of the NetEco server

The screenshot shows a web configuration page for NetEco. On the left is a navigation menu with options: Network Configuration, Control, User Management, Upgrade, Log History, and Historical Alarms. The main content area is titled 'SNMP' and contains a sub-section 'SNMP Trap' with a dropdown menu set to 'Neteco'. Below this are three input fields: 'Main Server IP Address' (10 . 71 . 30 . 137), 'Backup Server IP Address' (10 . 71 . 30 . 137), and 'Port No.' (31220). A 'Submit' button is located at the bottom right of the form.

Communicating with a Third-Party EMS over SNMP

Configure the network over the web UI when the SMU01A communicates with a third-party EMS.

After you select the appropriate SNMP version, set the trap address (a maximum of six addresses) and trap port on the **Network Configuration** tab page. The trap IP address is the server IP address. The IP port is the alarm interception port and its default value is **162**. For details, see Figure 5-2.

Figure 5-2 Network Configuration tab page

The screenshot shows the 'Network Configuration' tab page. The left navigation menu includes: System Configuration, Network Configuration, Control, User Management, Upgrade, Log History, Historical Alarms, Alarm Configuration, Site Configure, and Electronic Label. The main content area is titled 'SNMP' and contains two sections: 'SNMP' and 'SNMP Trap'. The 'SNMP' section has fields for 'SNMP Version' (SNMPv1 & SNMPv2c), 'SNMP Port' (161), 'Read Community' (read), and 'Write Community' (write). The 'SNMP Trap' section has fields for 'Trap IP' and 'Trap Port' (162). Below these fields is a table with one entry: No. 1, Trap IP 127.0.0.1, and Trap Port 162. A 'Submit' button is located at the bottom right of the form.

 **NOTE**

The SMU01A cannot communicate with Huawei communications equipment, Huawei NetEco, and third-party EMS (over SNMP) at the same time.

5.2 Selecting a Display Language

A display language can be selected on the LCD or over the web UI based on actual requirements.

Selecting a Display Language on the LCD

You can select a display language when the SMU01A is being powered on or on the LCD. On the LCD, you can choose **Settings > System Parameter > LUI Language** and select a language.

Selecting a Display Language on the Web UI

You can select a language before you log in to the web UI or switch to a required display language after you log in to the web UI. Figure 5-3 shows the drop-down list for selecting a language.

Figure 5-3 Selecting a display language



5.3 Querying Alarms

You can query active alarms and historical alarms over the LCD, web UI, or EMS UI.

Figure 3-1 shows how to query alarms on the LCD. Figure 5-3 shows how to query active alarms over the web UI. Figure 4-14 shows how to query historical alarms. For details about querying alarms over the EMS UI, see related EMS operation guides.

Figure 5-4 shows how to query active alarms over the web UI.

Figure 5-4 Querying active alarms

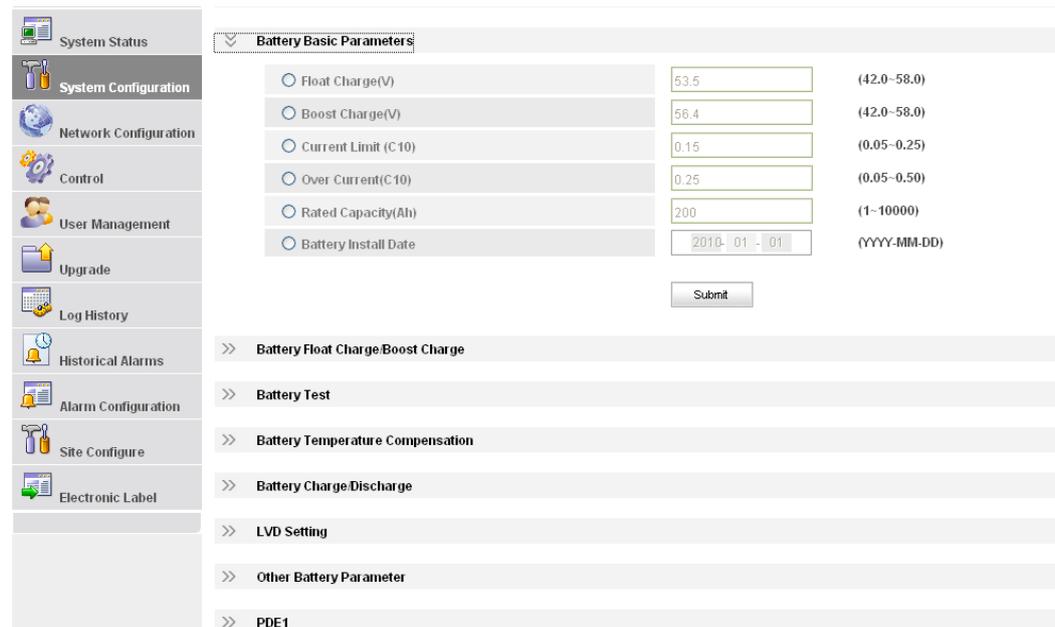


5.4 Setting Battery Parameters

You can set battery parameters on the LCD, web UI, or EMS UI.

- Figure 3-1 shows how to set battery parameters on the LCD.
- Figure 5-5 shows how to set battery parameters over the web UI.
- For details about how to set battery parameters over the EMS UI, see related EMS operation guides.

Figure 5-5 Setting battery parameters



5.5 Upgrading Software Remotely

The SMU01A software can be upgraded over the web UI or EMS UI.

- For details about how to upgrade the software remotely on the web UI, see "Upgrade Tab Page."

- For details about how to upgrade the software on the EMS UI, see related EMS operation guides.

5.6 Opening a .TXT File Exported from the Web UI

To open a .txt file exported from the web UI, perform the following steps:

Step 1 Open a .TXT file.

Step 2 Choose **File > Open**, select the .TXT file that you need to open, set **Encoding** to **Unicode**, and then click **Open**.

----End

6 Installation

6.1 Safety Precautions

Wear electrostatic discharge (ESD) gloves when installing or replacing the SMU01A.

6.2 Installing the SMU01A

Figure 6-1 Installing the SMU01A



To install the SMU01A, perform the following steps:

- Step 1** Hold the handle of the SMU01A, and insert the SMU01A into the correct position in the power system.
- Step 2** Push the SMU01A until its front panel is level with that of the subrack in the power system.
- Step 3** Push the locking latch on the front panel to the right.

----End

6.3 Replacing the SMU01A

To remove the SMU01A, push the locking latch to the left to release the handle and then pull the SMU01A.

7 Troubleshooting Methods

This section describes how to rectify common faults of the SMU01A.

Table 7-1 describes the methods for rectifying the common faults.

Table 7-1 Troubleshooting methods

Symptom	Cause	Solution
The alarm indicator is red	A critical or major alarm is generated.	Rectify faults based on the alarm information.
The running status indicator blinks at 4 Hz.	The SMU01A does not communicate with the host properly.	<ul style="list-style-type: none">• Connect communications cables properly.• Reseat the SMU01A.
The green indicator on the right side of the COM port is off.	Network communication is interrupted.	<ul style="list-style-type: none">• Connect Ethernet cables properly.• Set a correct IP address.

A Acronyms and Abbreviations

C

CAN Control Area Network

E

ETP embedded telecom power

EMS Element management system

F

FE Fast Ethernet

FOA first office application

H

HTTPS Hyper Text Transport Protocol Secure

L

LVD low voltage disconnection

LCD liquid crystal display

N

NetEco Network Ecosystem

P

PSU Power supply unit

PDE power distribution with electronic switch

S

SD	secure digital
SNMP	Simple Network Management Protocol
SMU	site monitoring unit

U

USB	universal serial bus
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