USER MANUAL

iSTARS V2.0 SNMP WEB CARD

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1 Overview

iStars is new generation network monitoring product. Not only could monitor UPS stand-alone, iStars also could real-time network monitor and management of UPS. Integrated monitoring can be achieved by coordinating corresponding PC software. And it is quite convenient for User to take network management for UPS.

iStars provides very simple installation program. It only needs to install the iSearch software attached by this product in PC, after search or set the IP address of iStars by it; it can land the page of iStars by browser with obtained IP to take further set.

iStars can remotely monitor the working condition and environment condition of UPS by internet. Administrative personals can take remote monitoring of UPS by landing the internet to check real-time status of UPS and know the working voltage, current, frequency, temperature and humidity of UPS as well as know whether there is some fault for UPS.

iStars also can provide various operations for different operating systems. It can, according to detailed setting, set the power off and test of UPS at some certain time; set authority of login user, username, and IP, etc.

Its main functions are:

1. Set all functions by browser;
2. Monitor real-time status of UPS by browser;
3. Support protocols such as TCP/IP, FTP, NTP, HTTP, SMTP and SNMP.
4. Provide IP search and updating tools (iSearch);
5. Send the daily report by Email;
6. Send related information to administrative personals by Email of there is any fault for UPS;
7. Add GPRS message module by request of user (message module shall be purchased additionally).

2 Introduction

2.1 Description of Hardware

Figure 2.1 Side View (Built-in Card)
Size: 77 x 51.8 x 25.8 mm

Interface description of each part：

Interface	**Description**
RS485	RS485-RJ45_EXT interface(can be connected to temperature and humidity sensors)
RS232	RS232-RJ45_EXT interface (can be connected to 2G / 4G SMS cats), golden finger serial port (here connect the UPS card slot and UPS communication), debug serial port (debug program)
CAN	CAN CAN-RJ45_EXT interface (supports CAN interface devices)
Power	DC 12V, 1A
Network interface	interface RJ45_NET (for network communication)

LED indicator description:

	Indication Signal	**Description**
Green	Power indicator	When the system is up and running normally, the green light is flashing, indicating that the system is running.
Yellow	Communication indicator	Constant yellow light indicates normal communication with the UPS. Flashing at low frequency yellow light indicates communication loss with the UPS.

2.2 Disk Information

Attached information of disk
(1) iStars Operation Instruction
(2) iSearch IP search software
(3) iSmartMate Shutdown software
(4) iSmartView Centralized management software

3 UPS Web Management

3.1 Introduction

After finishing hardware connection and setting of iStars and network, according to the IP address of iStars obtained by iSearch, use the browser of any PC, input IP address of iStars, and then it can enter into the monitoring page of iStars to remotely monitor the UPS or set related information.

Make sure that the IP address is under the same network segment with the host IP.

(1) Start the browser.
(2) Input IP address of iStars (for example: 192.168.163.180).
(3) Input the username and password, click and confirm to enter into the monitoring page. An initial account with default username: admin and passwords: admin is set. User can add or delete corresponding user account and authority in setting pages.

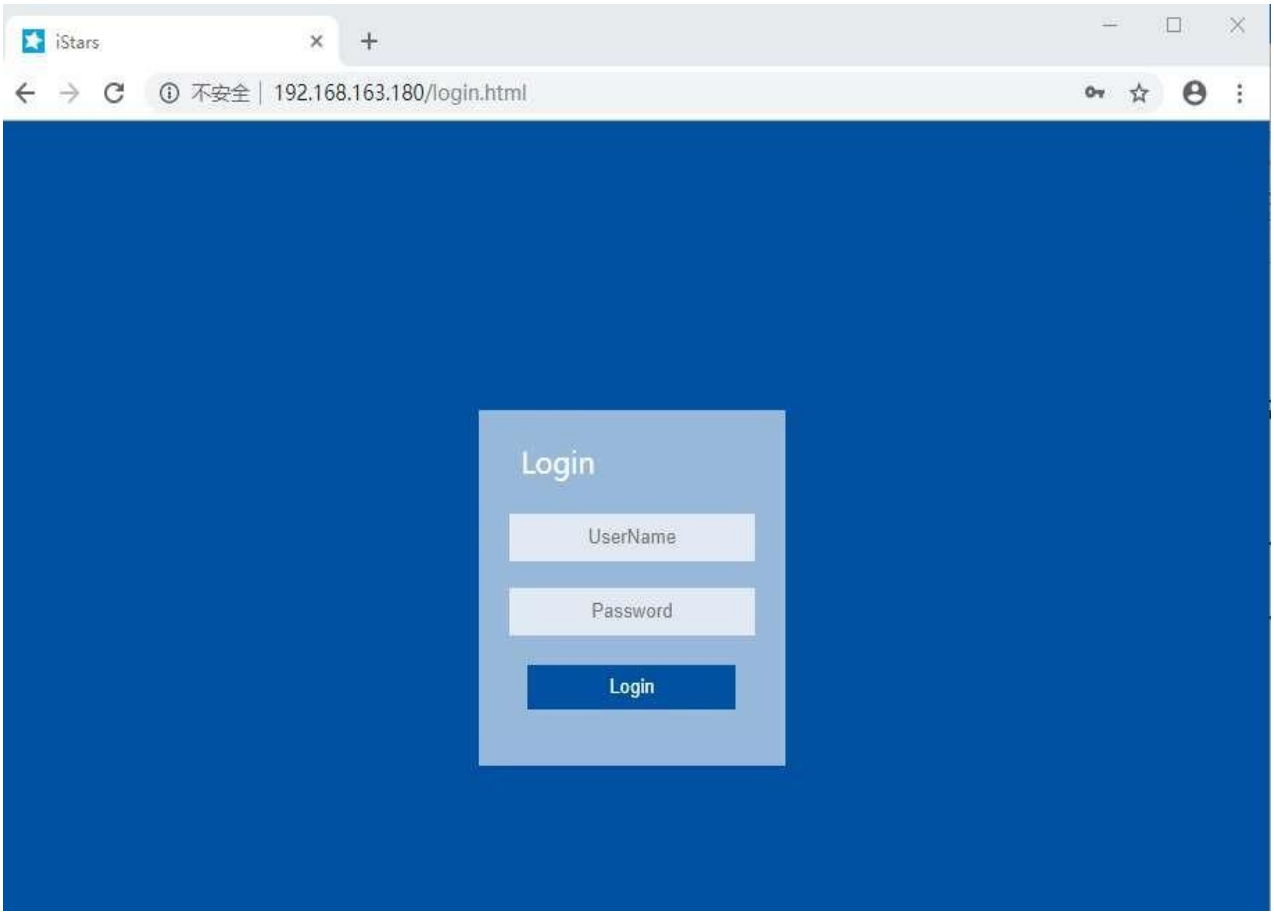

Figure 3.1 Webpage Login Interface of iStars

3.2 UPS Web Interface

After entering into iStars webpage, current login username and its authority, system functional menu and status will be displayed in home page. According to different protocols, the energy flow diagram displayed on this page is also slightly different.

There are six items for major functional options of system menu:

3.2.1 Overview

3.2.2 Device

3.2.3 Record

3.2.4 Settings

3.2.5 Help

3.2.6 Current state and alarm

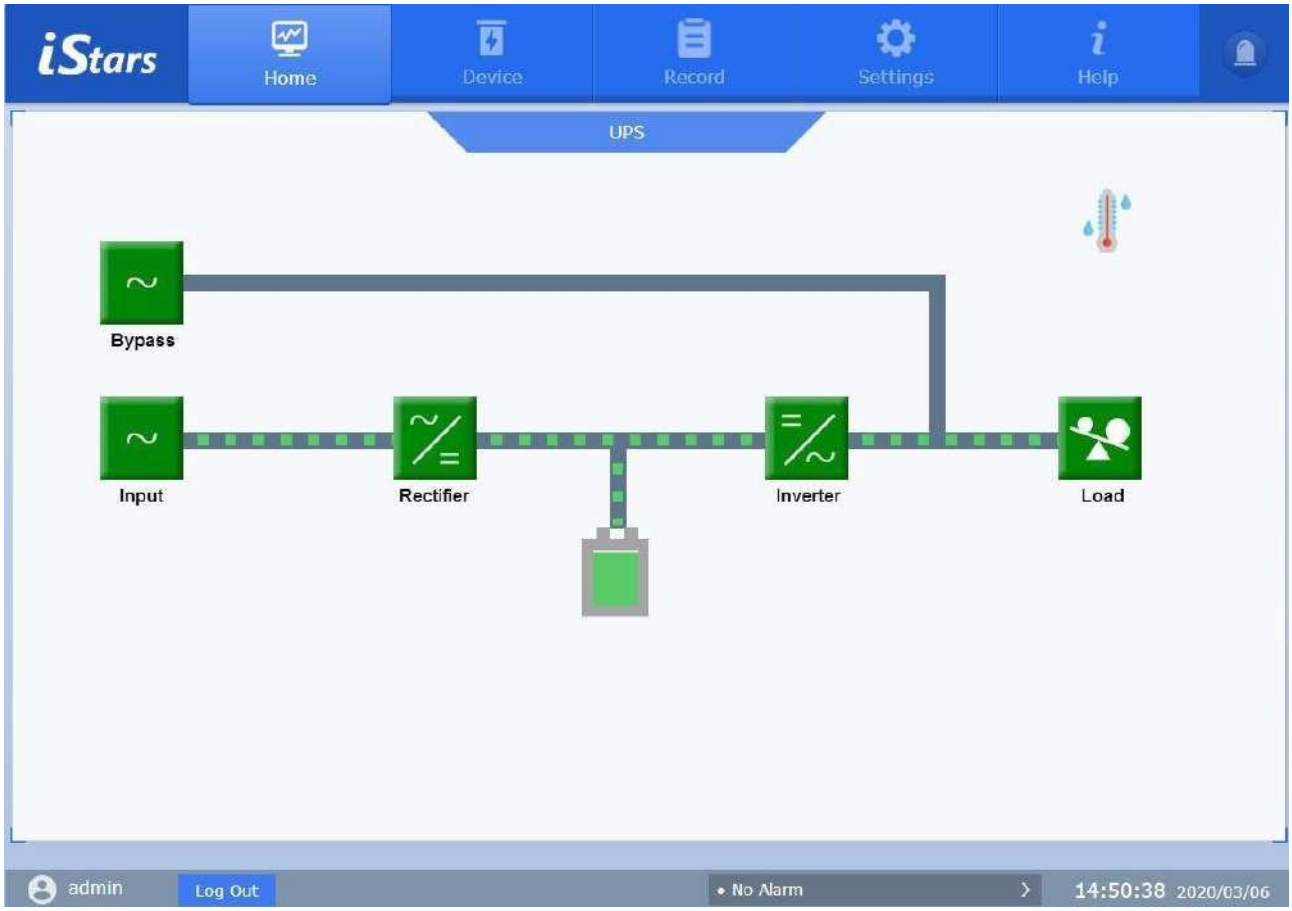

Figure 3.2 Homepage of Webpage of iStars

3.2.1 Overview

This function can check the current flow of the UPS being monitored, input information, bypass information, battery information, output information, environmental information, etc.
Users need to click the icon of a node on the webpage to view the information of a node. According to different protocols, the energy flow diagram displayed on this page is also slightly different.

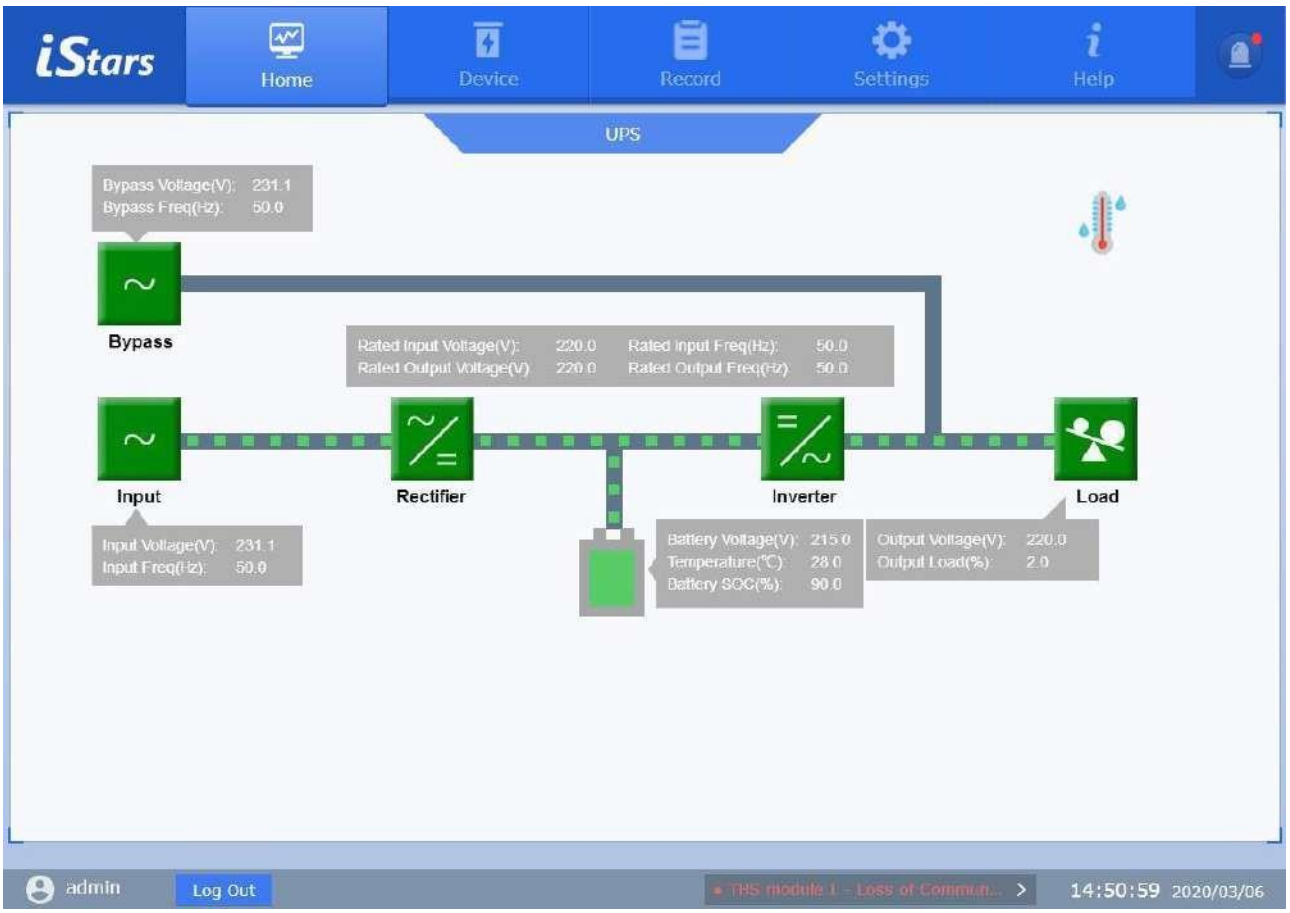

Figure 3.3 Information Displayed in the Overview

3.2.2 Device

There are seven sub-function options under this main function, which are parameter setting, remote control, scheduling setting,remote control, SMS alarm, and email alarm. Through the related operations on these pages, you can realize the functions of UPS control, related parameter settings, and Email / SMS sending.
This feature is not open to users with read-only permissions.

3.2.2.1 Parameter Settings

This page is used to set UPS related parameters, including parameter settings, port settings, and record settings. According to different protocols, the parameter setting page is slightly different.

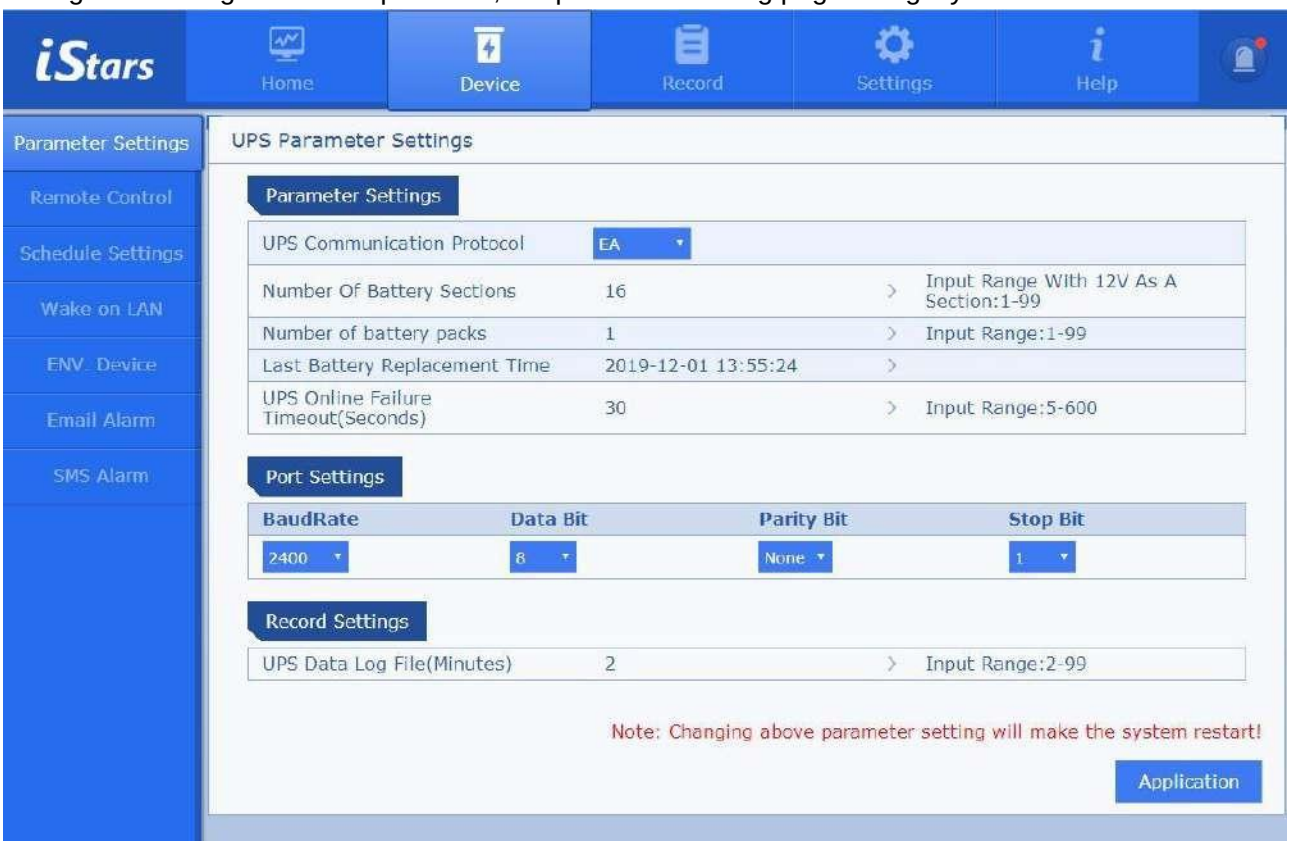

Figure 3.4 Parameter Settings Page

Parameter Settings

This column mainly sets the parameters of UPS in detail.

UPS communication protocol

Select according to the communication protocol actually used by the UPS, otherwise communication may be abnormal.

UPS communication address

Set the device address of the UPS.

Number of battery cells and battery packs

For the setting of the above columns, please refer to the UPS manual.

Last battery replacement time

Record the time of UPS battery replacement.

UPS online failure timeout

It indicates how long the communication between the SNMP card and the UPS is interrupted, and the connection failure alarm message is started.

Port settings

This column sets the port information between the UPS and the SNMP card. If the setting is incorrect, the UPS and the SNMP card cannot be connected normally.

Record settings

This column is used to set the interval for recording UPS operation records. The setting range is 2-99.

3.2.2.2 Remote Control

This page provides the function of remotely controlling the UPS. Click to select the control you want to execute, and click the Apply button to implement the operation. According to different protocols, the content displayed on this page is slightly different.

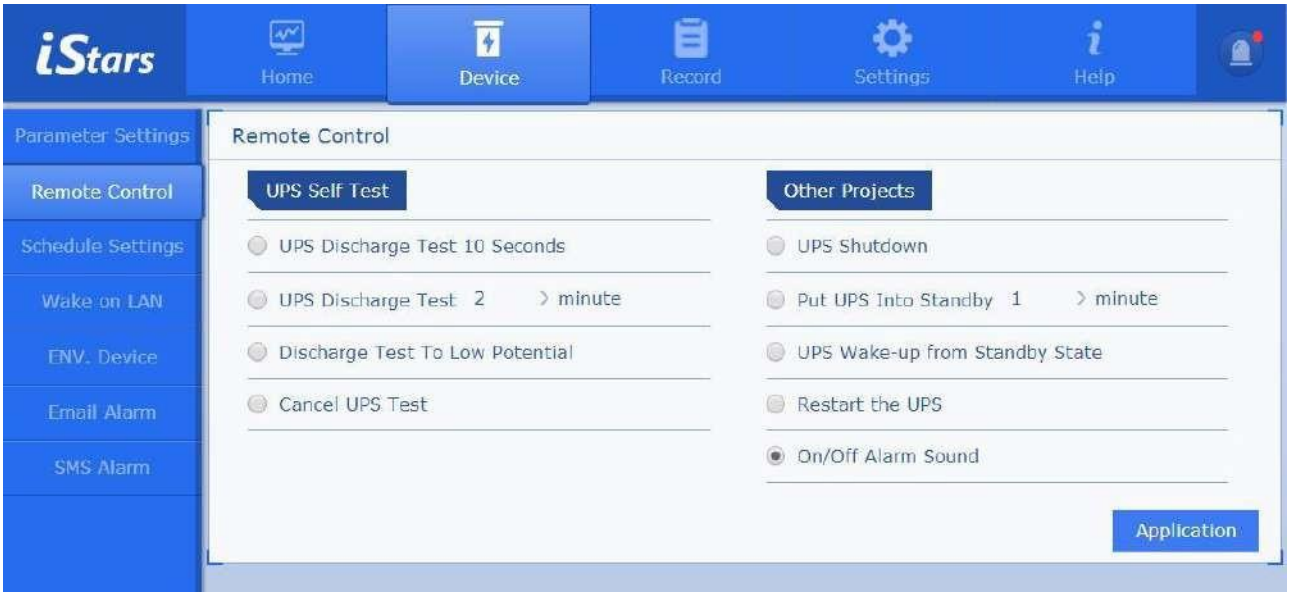

Figure 3.5 Remote Control Page

3.2.2.3 Schedule Settings

This page is mainly used to set UPS schedule related functions, including weekly scheduled power on / off settings, special day power on / off settings, UPS self-test, sending alarms before scheduled shutdowns, and delayed shutdown time settings when special events occur.

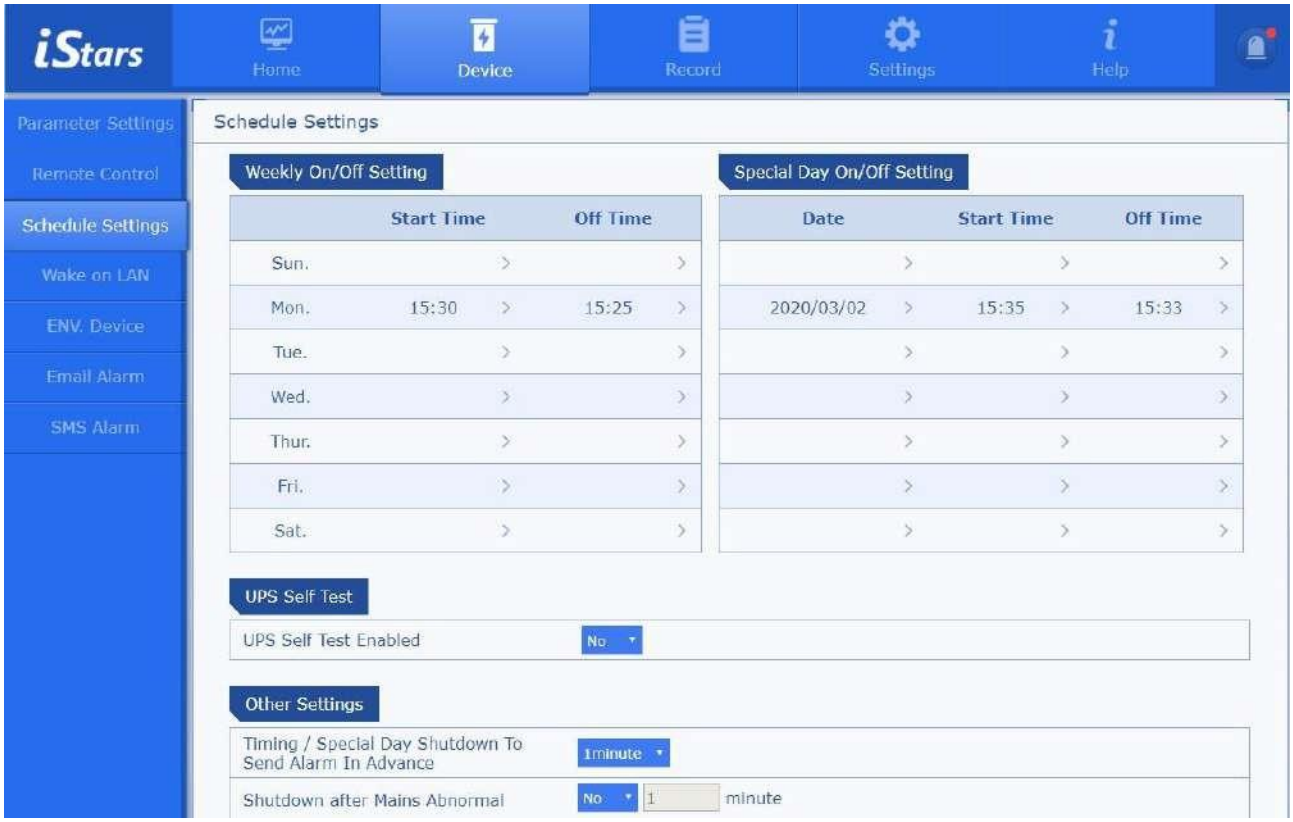

Figure 3.6 Schedule Settings Page

On / off settings

The special day on / off setting takes precedence over the weekly scheduled on / off setting, that is, when the weekly scheduled setting time is the same as the special day setting date, the special day on / off setting prevails.

Other settings

Including timer / special day shutdown to send alarm time setting in advance, delayed shutdown after abnormal mains power, low battery voltage delay shutdown, over temperature delay shutdown and overload delay shutdown time setting.

UPS self-test

Set the UPS to test at a certain time.

3.2.2.4 Wake On LAN

This page can set whether to wake up the computer that lives on the same network with iStars after the mains is restored. Note that the computer must support the Wake-on-LAN feature and it has been configured.

Figure3.7 UPS Wake on LAN Page

Remote port

Set the remote port number.

MAC address 1~8

Set the MAC address of the computer in the same LAN as iStars. And set whether to wake up the computer after the utility power is restored.

3.2.2.5 ENV. Device

This web page sets the port information, communication address, and upper and lower limits of temperature and humidity for the temperature and humidity module. The SMS module and the temperature and humidity module cannot be used at the same time.

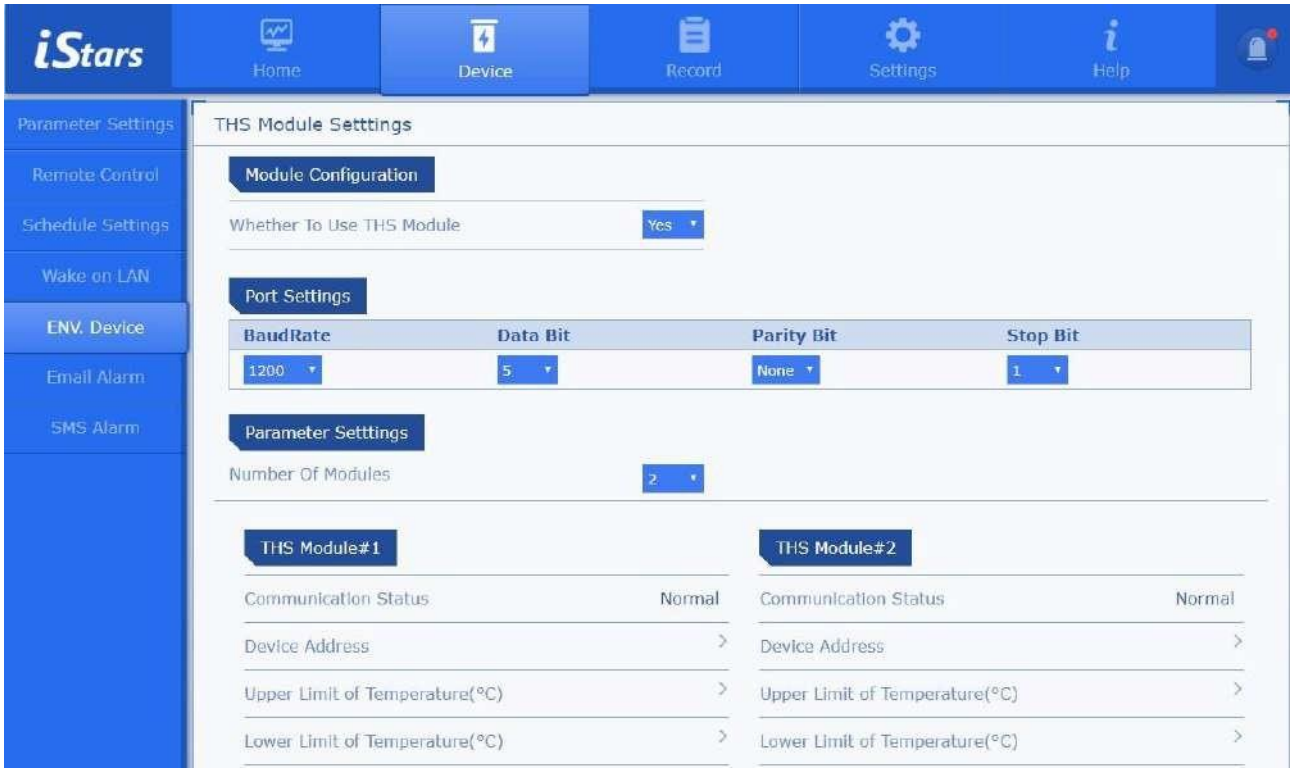

Figure 3.8 ENV. Device Page

Port settings

If the port information is set incorrectly, the temperature and humidity module and the SNMP card cannot communicate normally.

Parameter settings

Configure the number of modules

Set the current number of temperature and humidity modules. If the relevant module information is set, you can view the real-time data of the temperature and humidity module in [Overview].

Conversion coefficient

Actual temperature (humidity) = collected temperature (humidity) / conversion coefficient; this parameter is for compatibility with different temperature and humidity modules.

3.2.2.6 Email Alarm

This function realizes sending device events and daily reports to users by Email.
Function setting: When iStars detects UPS related data or events, whether to transfer these information to a certain user's Email box. The settings page includes Email settings, recipient email addresses (for receiving event log files), recipient email addresses (for receiving daily reports), and test settings. Figure 3.8 shows the email alert setting page.

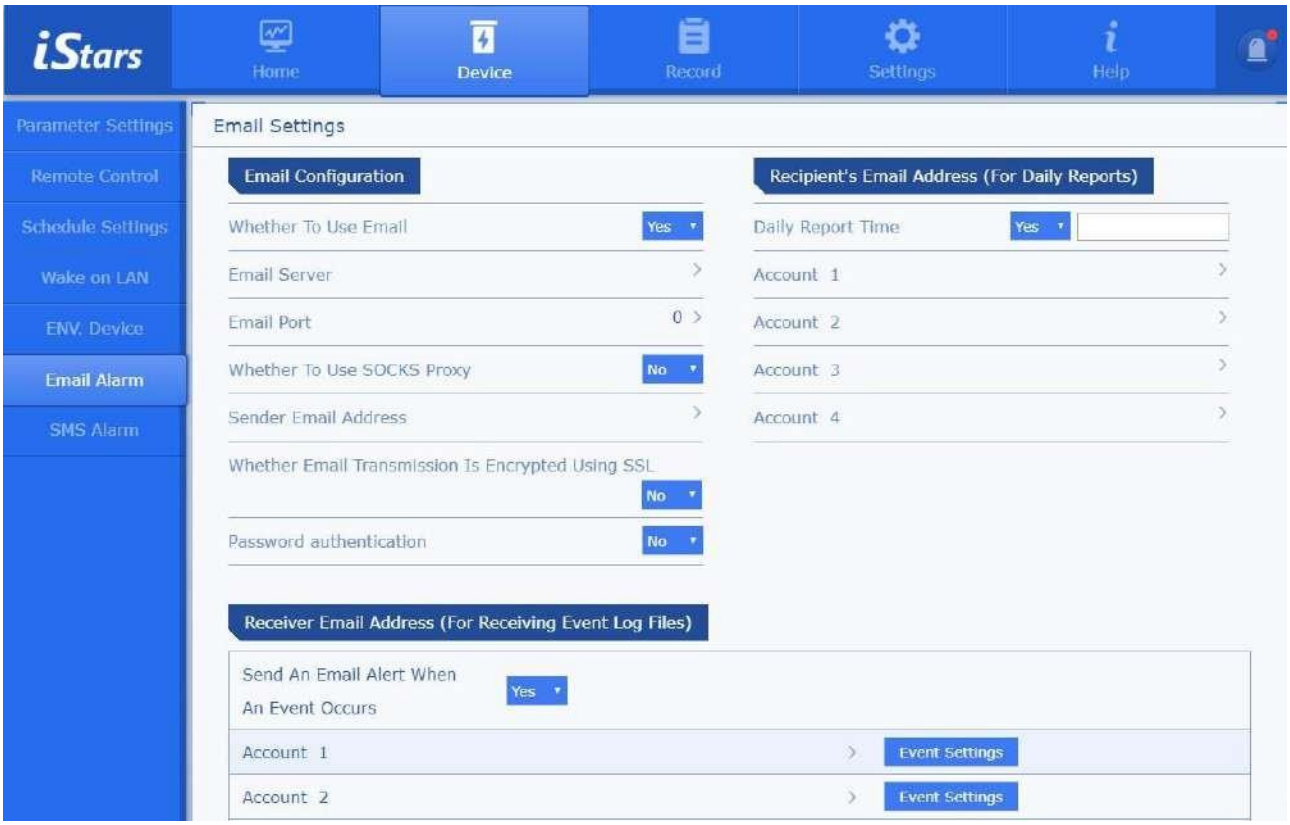

Figure 3.9 Email Alarm Page

Email configuration

Email server

Set the server address of the email receiver.

Email port

Email mail receiving port, usually 25.

SOCKS proxy

Set the SOCKS proxy server and port number of the user's network. Note that the SOCKS proxy is inconsistent with the HTTP proxy. The default port number for SOCKS proxy is 1080.

Sender Email Address

Set the address of the email sender.

Whether Email Transmission Is Encrypted

Set whether Email uses SSL encryption for transmission.

Email account

Set the sender's Email account, which is generally the same as the sender's Email address.

Email password

Set the email account password of the sender. Some Email servers may set the client authorization

code here.

Recipient's Email Address (for receiving daily reports)

Daily report delivery time

This setting is to set whether to send the daily report regularly.

Account 1~4

Set up an email account to receive daily reports, with a maximum of 4 supported.

Recipient's Email Address (for receiving event log files)

Send an email alert when an event occurs

Set whether to send events by email when an abnormal state of the UPS is detected.

Account 1~8

When the UPS is in an abnormal state, the email account of the email receiver supports a maximum of 8.

Receive event settings

This page selects some or all of the various events detected by iStars and sends them to the corresponding Email account.

Figure 3.10 Receive Event Settings Page

Test setup

Test mail recipient

After setting the recipient's email address, click Send Test Email to test whether the email sending function is normal. If the email function is normal, the email recipient will receive a test email.

3.2.2.7 SMS Alarm Settings

The SMS alarm function requires iStars external SMS module, which is sent as a short message by detecting the relevant data and events of the UPS. The setting interface includes SMS status, SMS configuration, port settings, mobile phone number for receiving event notifications, and test settings. The SMS module and the temperature and humidity module cannot be used at the same time.

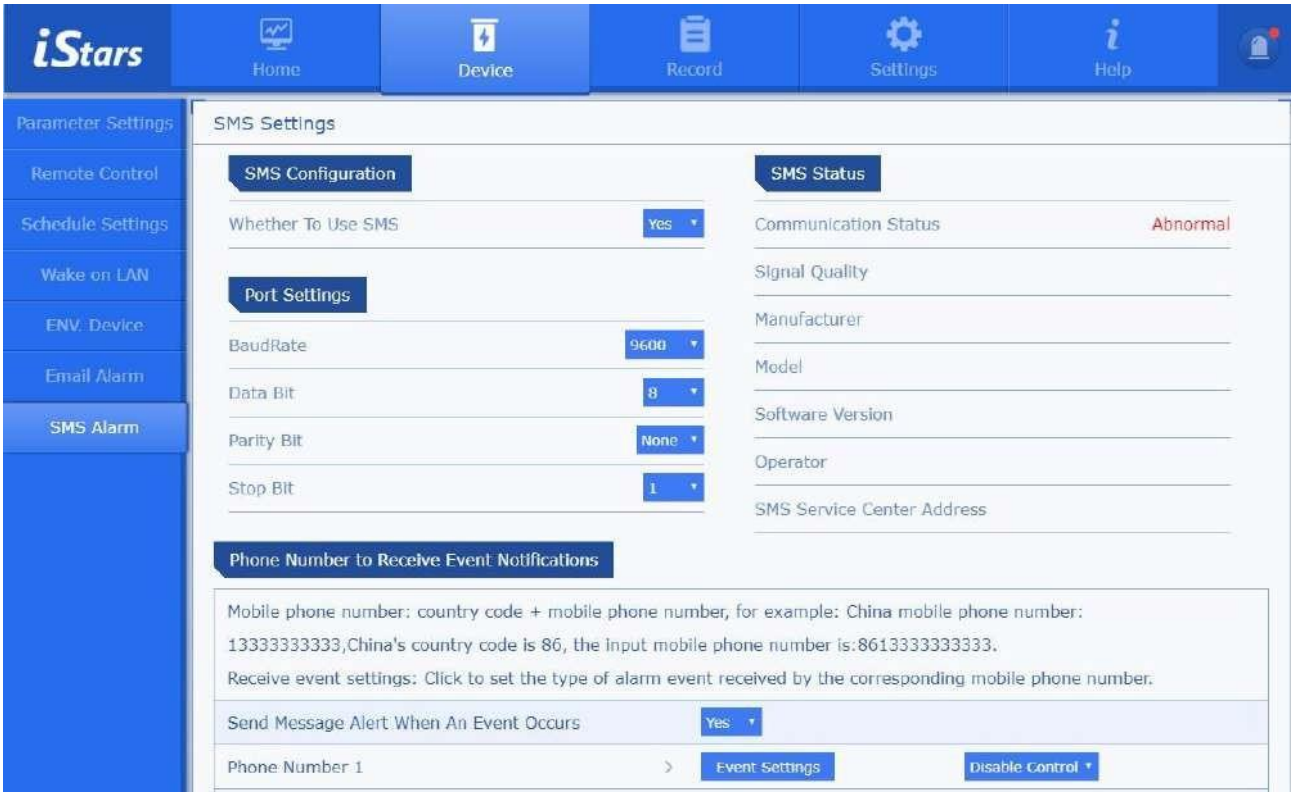

Figure 3.11 SMS Alarm Page

Port settings

Set the port information of the SNMP card and the SMS module. If it is set incorrectly, communication will fail.

SMS status

Display the communication status, signal quality and other related information of the short message module connected to iStars.

Receive event notification mobile phone number

Set the mobile phone number of the receiver. It supports up to eight. When an abnormality is detected in the UPS, whether to send related events through short messages.

Receive event settings

This page selects some or all of the various events detected by iStars and sends them to the corresponding mobile phone number.

Test setup

Test the SMS receiver ’s mobile phone number to check whether the web page function can be used normally and the receiver ’s mobile phone number to receive information normally. The receiver will receive a test message after clicking the test.

3.2.3 Record

The function options include four sub-functions of data recording, event recording, short message recording, and email. You can query the related historical records of the specified date by entering the year, month, and day. The related record information can also be saved to other storage devices through the save button on the page.

3.2.3.1 Data Record

This page records the UPS input, output, battery, bypass, environment, and battery test data. To view UPS data for a specific day, enter the year, month, and day you want to query in the input box. If there is no data for that day, no data is displayed. You can also view the curve of the data change here. According to different protocols, the data displayed on this page is also slightly different.

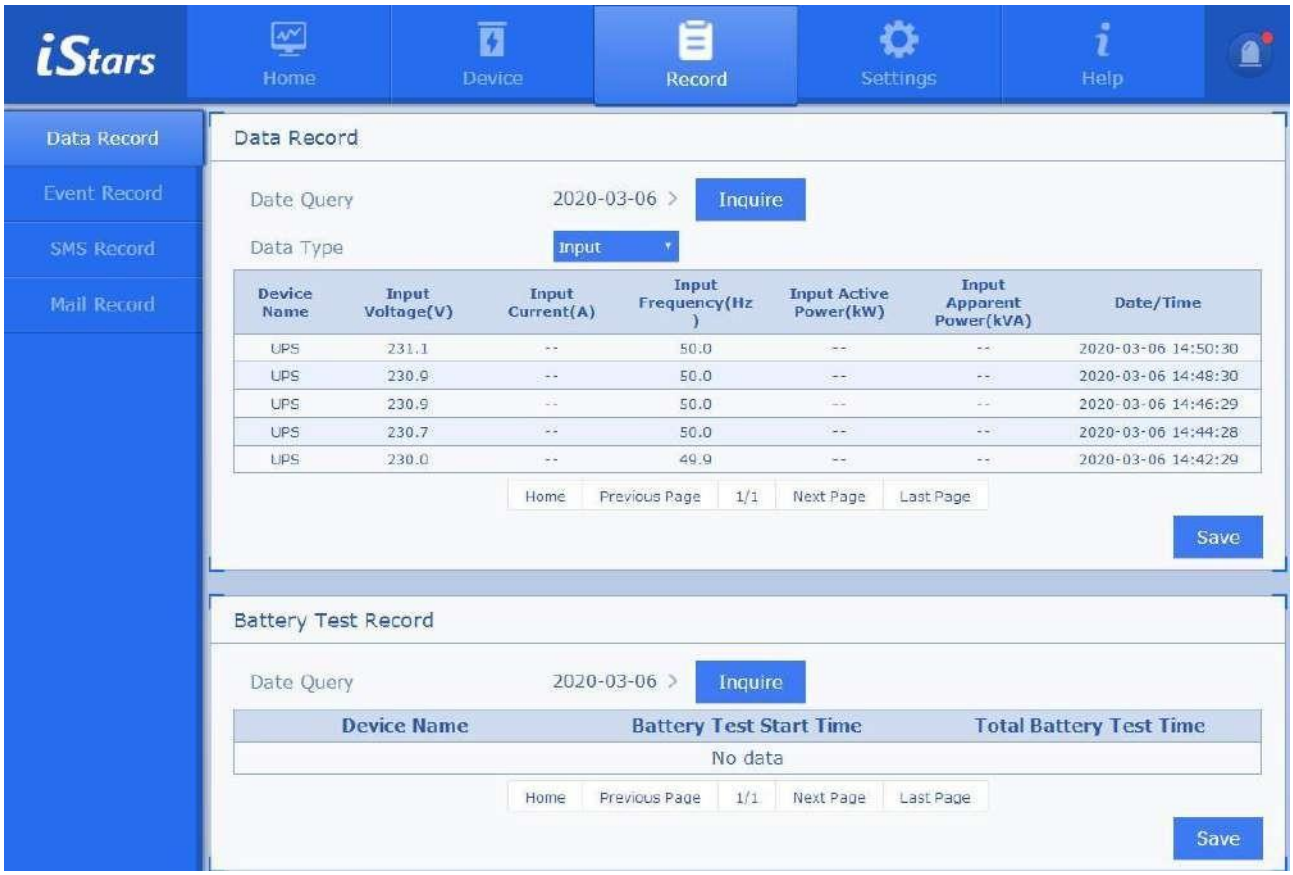

Figure 3.12 Data Record, Battery Test Record

You can select the data you want to view in the data list, and you can select up to 4 at a time.

Figure 3 .13 Data-Time Curve

3.2.3.2 Event Record

This page records the details such as the date / time and time description of the UPS event. To view the event records of a specific day, enter the day you want to query in the box.

Figure 3.14 Event Record Page

3.2.3.3 SMS Record

This page mainly records the details of the SMS test, the date / time of the SMS alert, and the time description. To view the event records of a specific day, enter the day you want to query in the box.

Figure 3.15 SMS Record Page

3.2.3.4 Email Record

This page mainly records the details of email test, email daily report, date / time and time description of email alert. To view the event records of a specific day, enter the day you want to query in the box.

Figure 3.16 Email Record Page

3.2.4 Settings

Function options include network settings, system settings, and network management settings. This feature is not open to users with read-only permissions.

3.2.4.1 Network Settings

This web page sets network connection information, DNS server IP address, dynamic domain name resolution, web page remote login and other functions.

Network Configuration

The IP acquisition method can be set manually or automatically by DHCP. Contact your network administrator for the appropriate settings.

If the DHCP network service is provided in the user's network, the automatic setting can be selected. At this time, the DHCP network service allocates the address, and the detailed information of the allocation can be displayed in the iSearch software.

If you cannot provide DHCP service, please choose manual settings, please assign an IP address, subnet mask, gateway address, and primary and secondary DNS servers on the same network segment as the user workstation. Figure 3.16 shows the network configuration function.

Figure 3.17 Network Configuration

Dynamic Domain Name Resolution

Before using the dynamic domain name resolution function, you need to apply for an account on the website of the dynamic domain name resolution provider in advance. After the application is successful, the public IP address of the SNMP card is mapped to the corresponding domain name through the dynamic domain name resolution provider. After the setting is successful, you can browse the webpage through the domain name.

Remote Login Page

In this table, you can set the user name, password, login permission, and login IP address for logging in to iStars.

The permission settings are no permission, read-only, and read / write. "No authority" means that a certain user name or IP is prohibited from using the system web page; "readable" means that the user

has only the right to view the information on the web page, and cannot use the setting and control function options in the web page.

The setting format of the manager's IP address is the same as that in the connection status table. After setting the manager IP, the designated user must log in to the iStars web page on the terminal corresponding to the IP address; without setting the manager IP address, you can log in to the iStars web page on any terminal. Figure 3.17 shows the functions of dynamic domain name resolution and web remote login.

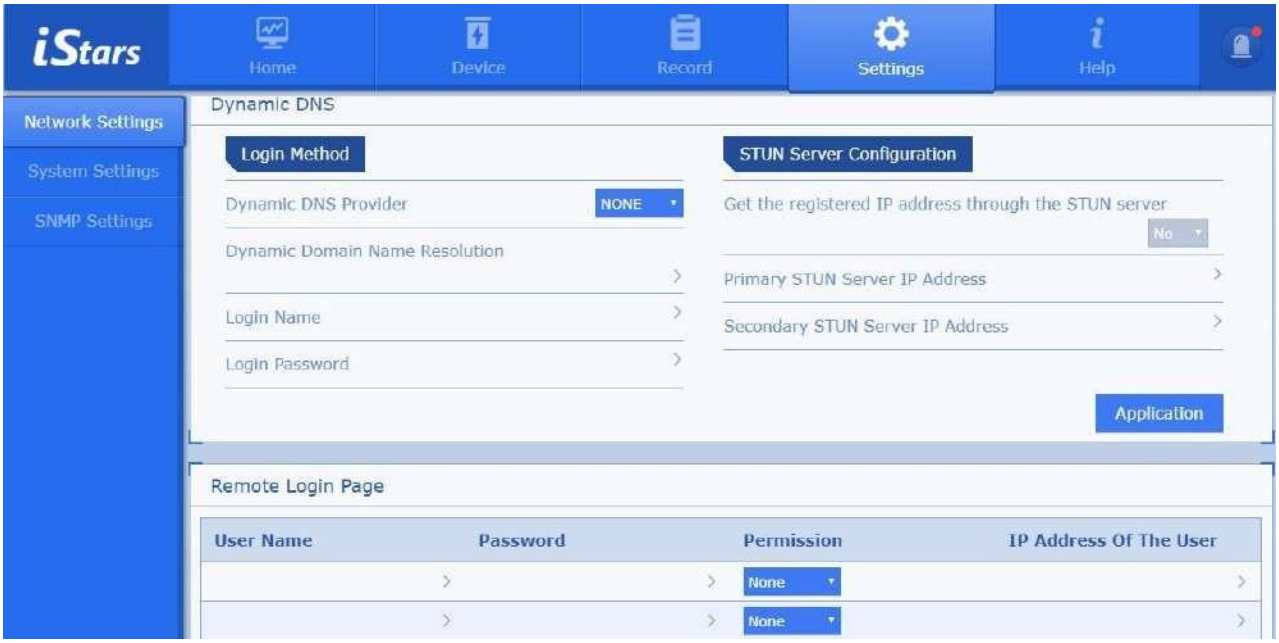

Figure 3.18 Dynamic DNS, Remote Login Page

3.2.4.2 System Settings

System settings include four functions: system configuration, language setting, update system time, and system restart.

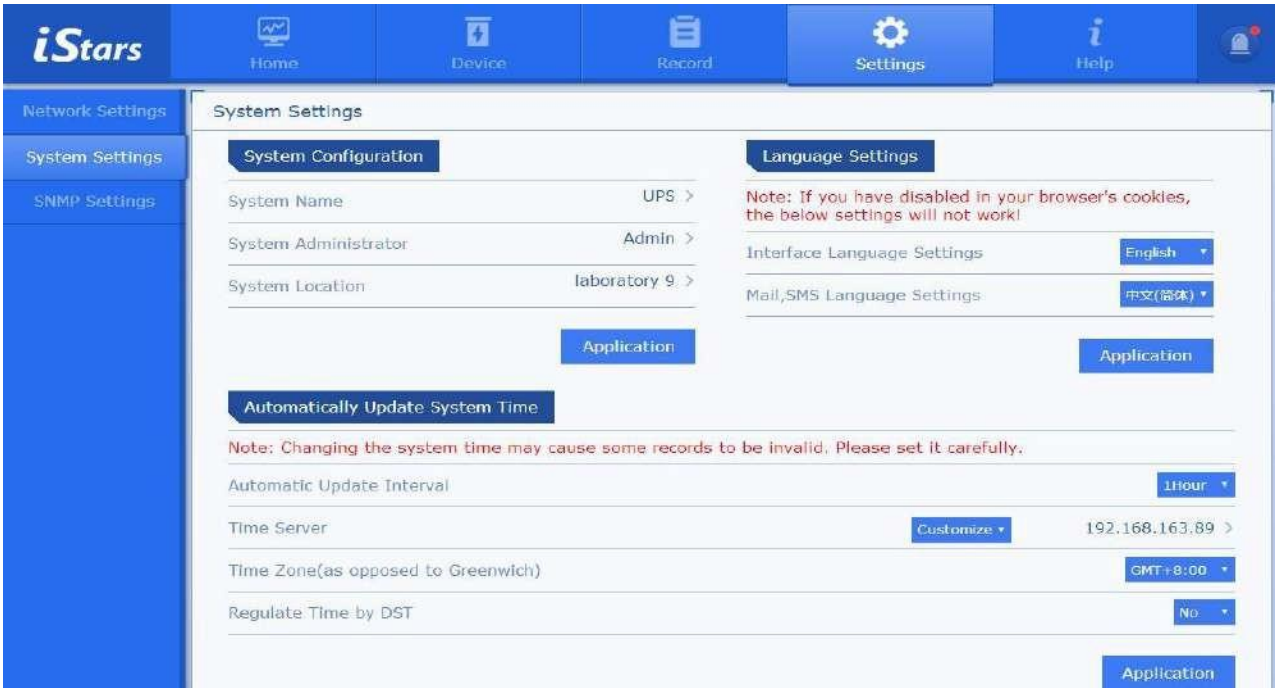

Figure 3.19 System Settings

System Configuration

System Name

Set the name of iStars. This item can be named by the user.

System Administrator

Set the iStars administrator name.

System Location

Set where iStars will be placed.

Automatically Update System Time

Automatic Update Interval

Set how often the system time is updated.

Time Server

Set the time server IP address on the network. You can use the existing network address or customize the time server IP address.

Time Zone (as opposed to Greenwich)

This item can be adjusted according to different time zones. GMT is Greenwich Mean Time.

Regulate Time by DST

If this option is set to YES, the time will be automatically changed to daylight saving time. Click the Adjust System Time Now button to complete the above four settings.

Manually Update System Time

This item is used when the user manually updates.

System restart

This item is used for users to restart the system at regular intervals.

3.2.4.3 SNMP Settings

SNMP network management settings are mainly used for trap notifications and SNMP protocol notifications. Figure 3.19 shows the network management settings.

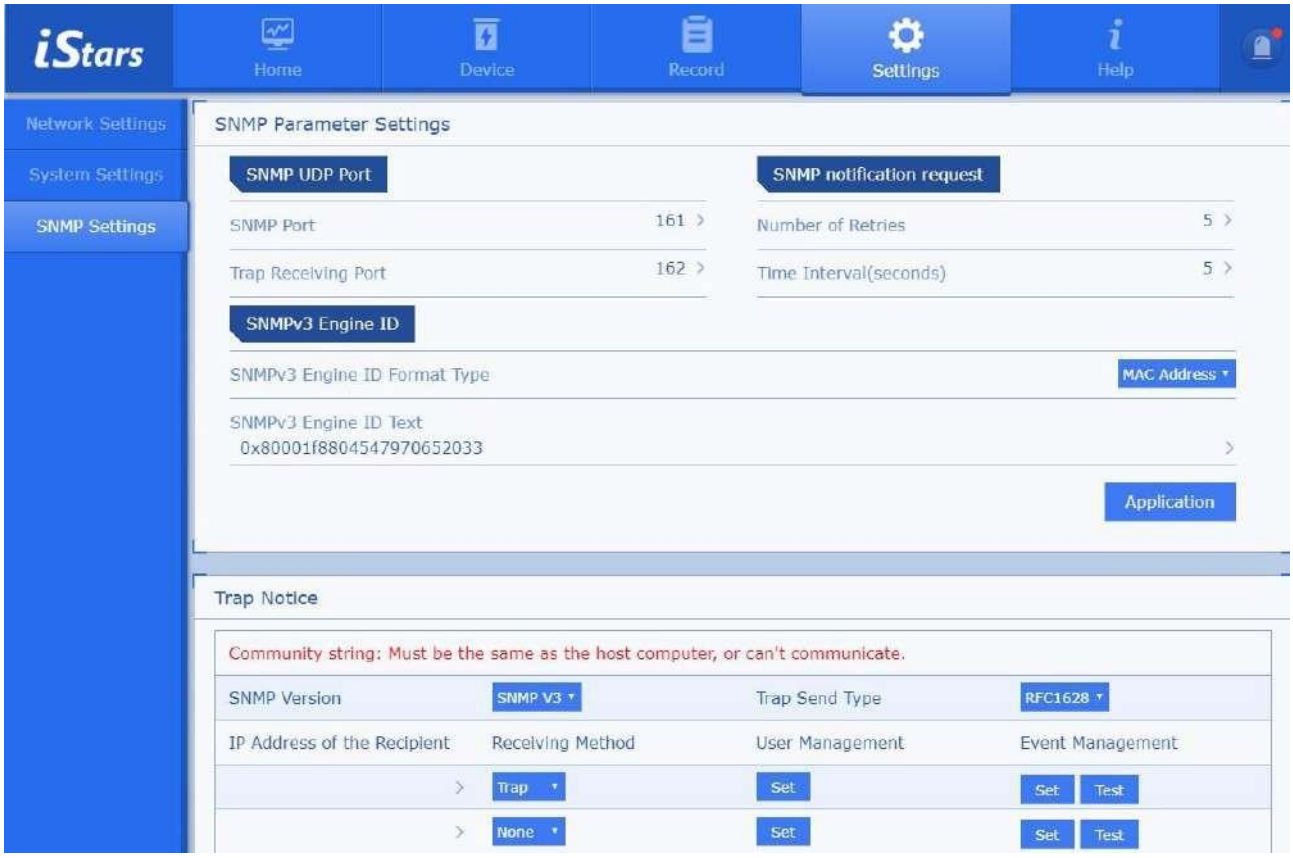

Figure 3.20 SNMP Settings Page

SNMP port, Trap receiving port

These two columns set the SNMP and Trap ports. The default SNMP port is 161, and the Trap port is 162 by default.

SNMP notification request

This column sets the number of repetitions and time interval for Trap Inform notifications.

SNMPv3 Engine ID

This column sets the SNMP V3 entity engine ID.

Trap notification

IP address of the Recipient

This field is used to set the IP address of the recipient receiving the Trap notification sent by the SNMP card. A total of 8 recipient IP addresses can be set.

Community string

This column sets the name of the community string. If it communicates with the host computer, the community string must be the same, otherwise it cannot communicate.

Trap sending type, receiving method

Trap sending types currently only support RFC1628, and the receiving methods are Trap and Inform.

Event management

The SNMP card can detect various events of the UPS. Users can check the events received by

each user separately here, and click the [Test] button here to test whether the function is normal.

User Management

Here you can manage the information that Trap notifies each user.

SNMP Management Settings

IP of Manager

The SNMP manager IP address is set here. A total of 8 addresses can be set. When set to'*. *. *. *', This SNMP card can be managed at any IP address.

Community string

Set the name of the community string here (the community string must be the same as the setting at the NMS to receive).

SNMP permissions

Please set the manager's authority here.

User name, user password, privacy password, authentication, privacy protection

Set user authentication information for SNMP manager here.

3.2.4.4 Northbound Settings

The northbound setting is mainly used to enable various protocol conversion functions and provide users with a northbound protocol interface.

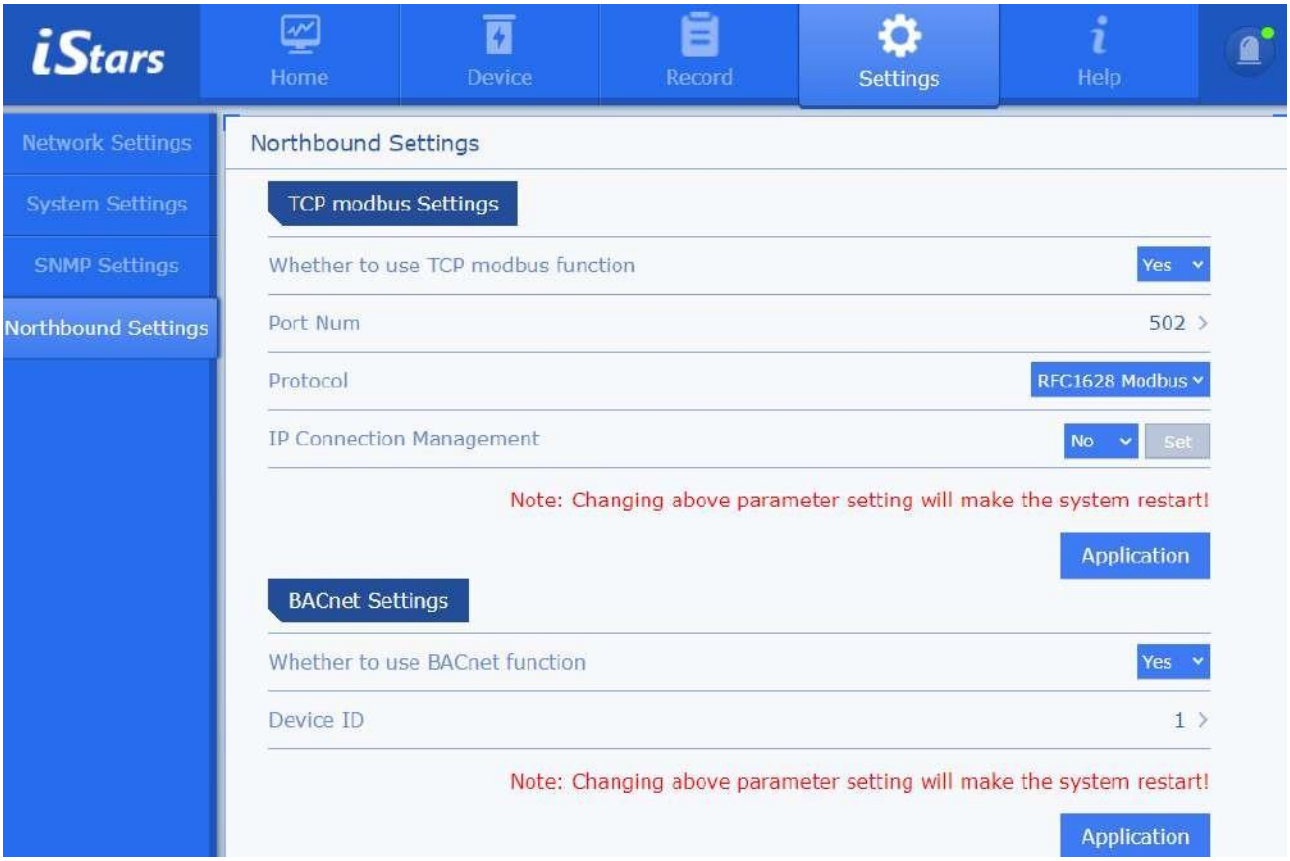

Figure 3.21 TCP modbus settings, BACnet settings

TCP modbus Settings

Port Num

TCP Modbus connection port. The default is 502.

IP connection management

Used to restrict IP connections. If the IP is filled in as "*.*.*.*" or empty, there is no restriction.

BACnet Settings

Device ID

Identify the number of the device.

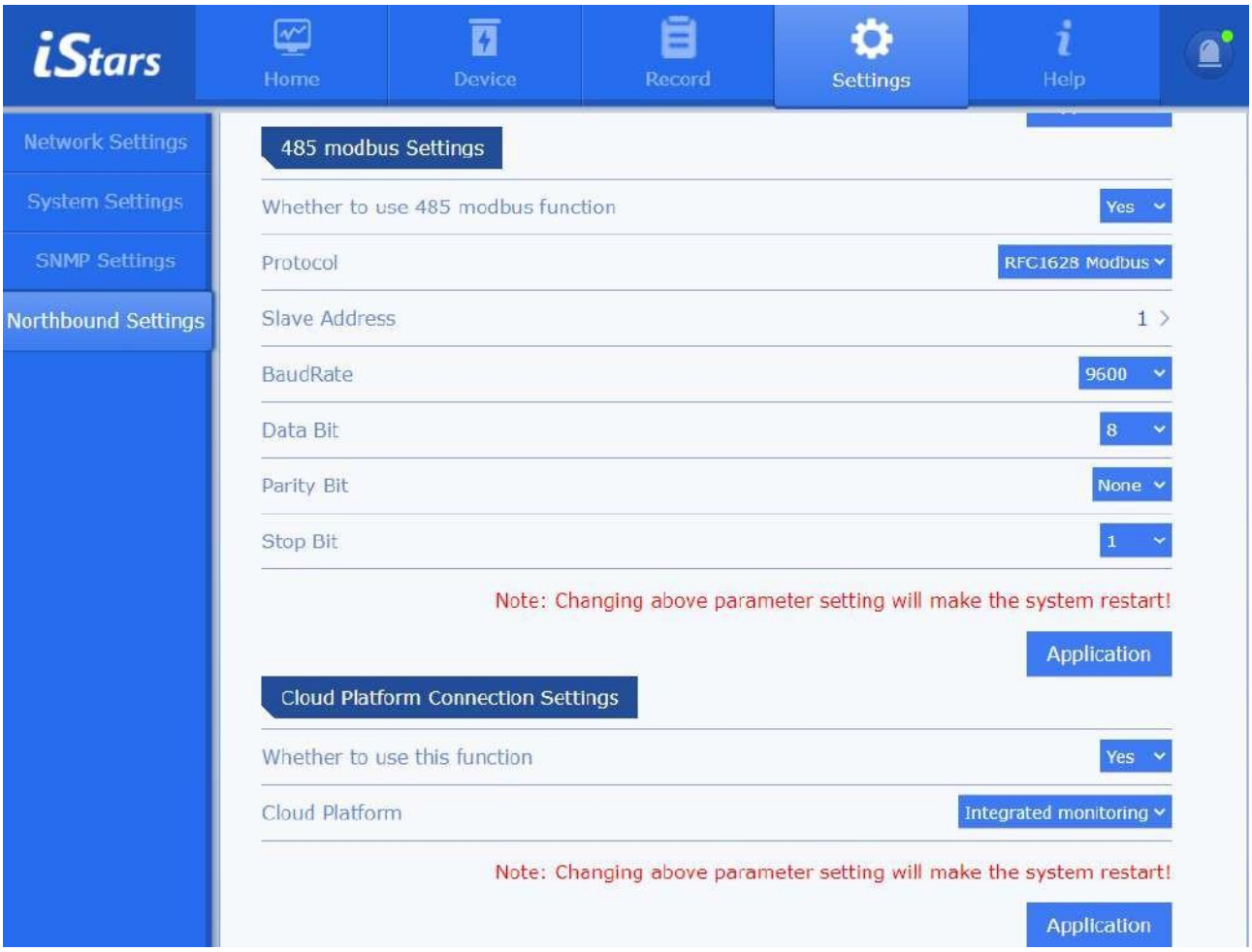

Figure 3.22 485 modbus settings, cloud platform connection settings

485 modbus Settings

Slave Address

Set the address of the modbus slave. The slave address of the same bus is unique.

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Cloud Platform Connection Settings

Before connecting, you need to check in advance whether the automatic time synchronization function is normal, whether the time zone is set correctly, and whether the network communicates normally. The communication serial number can be viewed in the navigation [Help]->[About].

3.2.5 Help

Feature options include update, debug, help, and about.

3.2.5.1 Update

This page updates the firmware, including local update and online update. Users need to upload files or update firmware online. Depending on the network and the size of the update package, it may take several seconds to several minutes. Please wait patiently. After uploading the file or updating the firmware online, please check whether the information in the device list is correct, and finally click "Start Upgrade". When the firmware update is completed, iStars will restart automatically (note that the power cannot be turned off during the restart process, otherwise the product may not work properly), the monitoring webpage will not respond during the restart process, and iSearch cannot find its address. After the restart is complete, check if the firmware version in the iSearch software, firmware update page, and about page has been updated.

Figure 3.23 Update Page

Local update

Before use, please check if the upgrade package is correct. Select the file package to be updated in the "Upgrade file" column and upload the upgrade package. After the upload is successful, please click "Start Upgrade", wait for the upgrade to complete, and the system will restart.

Update online

Before use, please check if the network is correct. Click "Check for version updates". After the update is complete, click "Start Upgrade", wait for the upgrade to complete, and the system will restart.

3.2.5.2 Debug

The user can choose the serial port type and encoding type, send debugging data, and observe whether the device / module can respond normally. If you need to export all the debugging data, please set the “Start Recording” column to “Yes”.

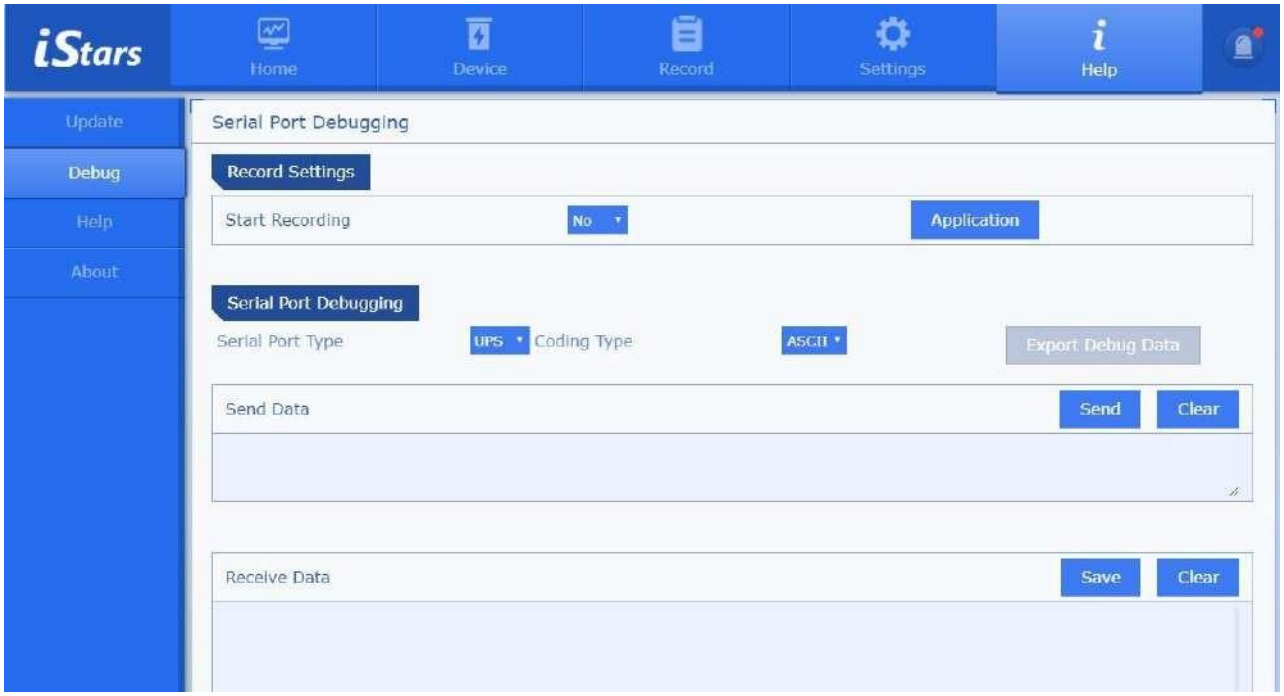

Figure 3.24 Debug Page

3.2.5.3 Help

This page mainly records the text description of each function of the iStars web page.

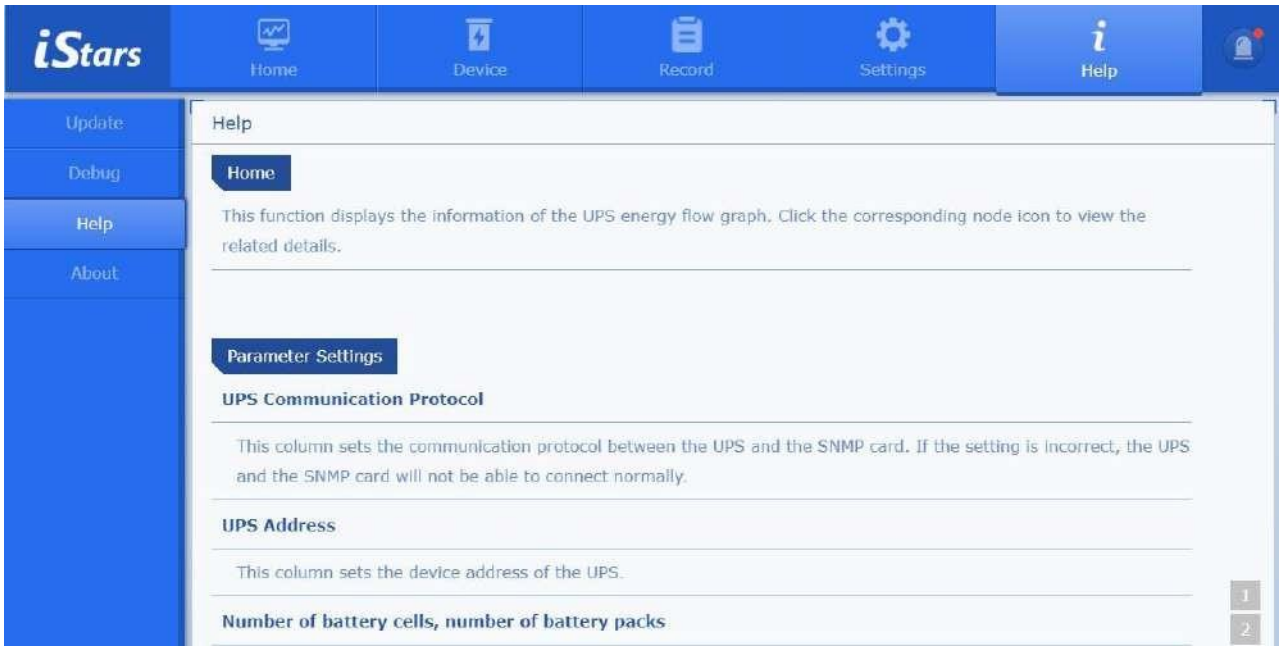

Figure 3.25 Help Page

3.2.5.4 About

This page mainly records iStars system information, network status, and functions for saving / recovering settings.

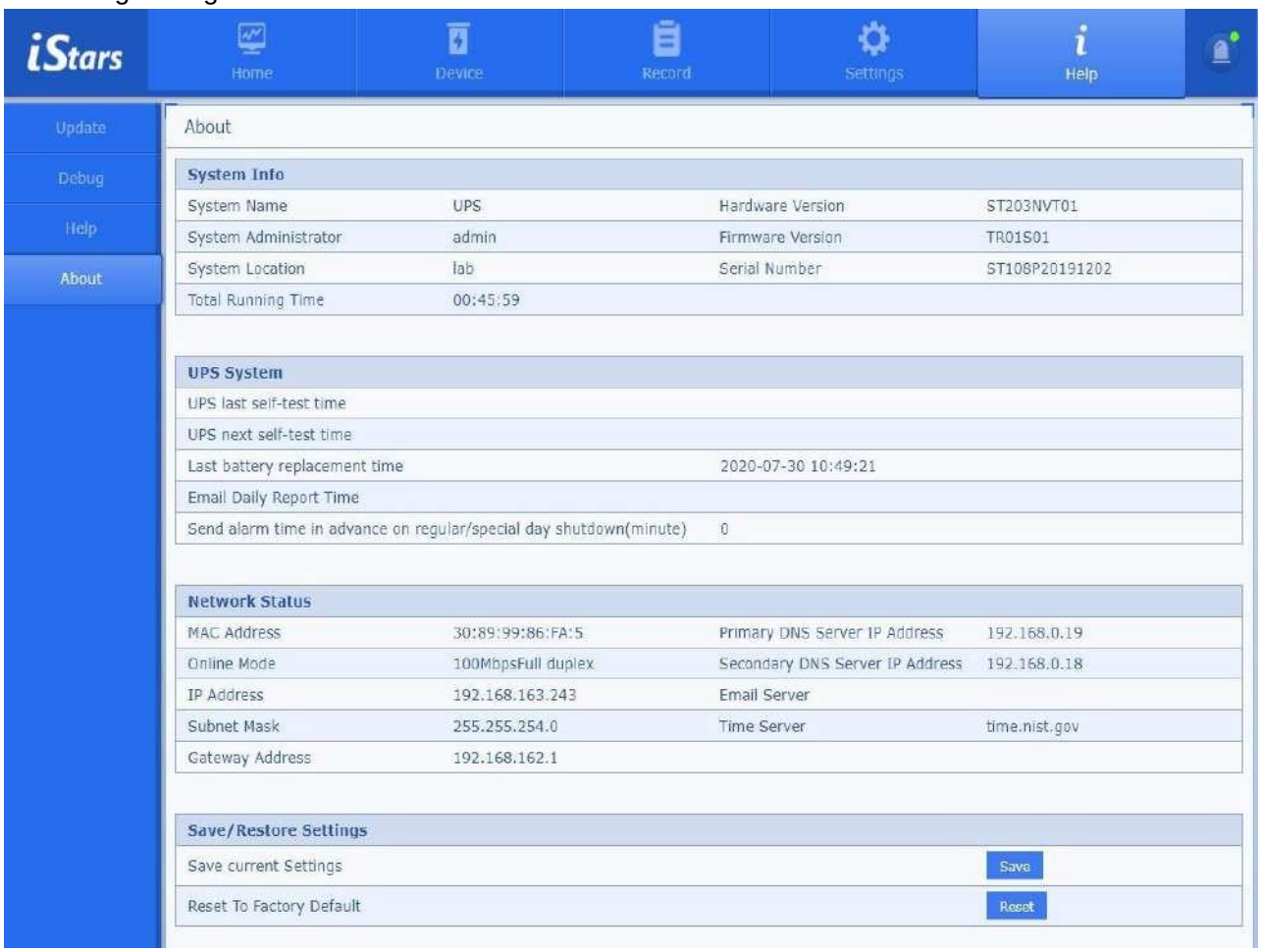

Figure 3.26 About Page

Save current settings

Save the data of the current web page settings. Export the "system_config.csv" configuration file. It is best not to modify this file at will.

Reset to factory settings

Restore the system to factory settings and clear the settings saved on the webpage.

3.2.6 Current State And Alarm

This page mainly displays the current state and alarms of the UPS.

Figure 3.27 Current State And Ala Page