Solar Hot Water Remote Monitoring System

Operation manual

ℹ️ Please read the instruction carefully before operation!

Contents

Waiver !

The manufacturer is unable to monitor the configuration of the module (Elthernet module or wifi module) which connection and operation are consistent with the required application conditions and method. Incorrect configuration, connection and operation will lead the failure of online connection and data read. Whether the remote monitoring page can be opened or the data reading speed is closely related to the local network security settings and local network speed. We are exonerated from all liability for any loss, damage, injury howsoever caused. The manufacturer reserves the right to change products, technical data, and installation instructions without prior notice. Once it is obvious that the product cannot be used safely (for example, damage), please immediately switching off the operation, and ensuring that the device is not used accidentally.

Note:

Our server Http://www.isolarcontro.com is the test version, it is currently free for using. It is welcomed you can provide valuable advice. We will continue to improve it and further to provide better services.

1. System introduction

Solar hot water remote monitoring system is a system platform which is designed for the management between distributors and end users, below abb. Monitoring system, the system scheme is like below.
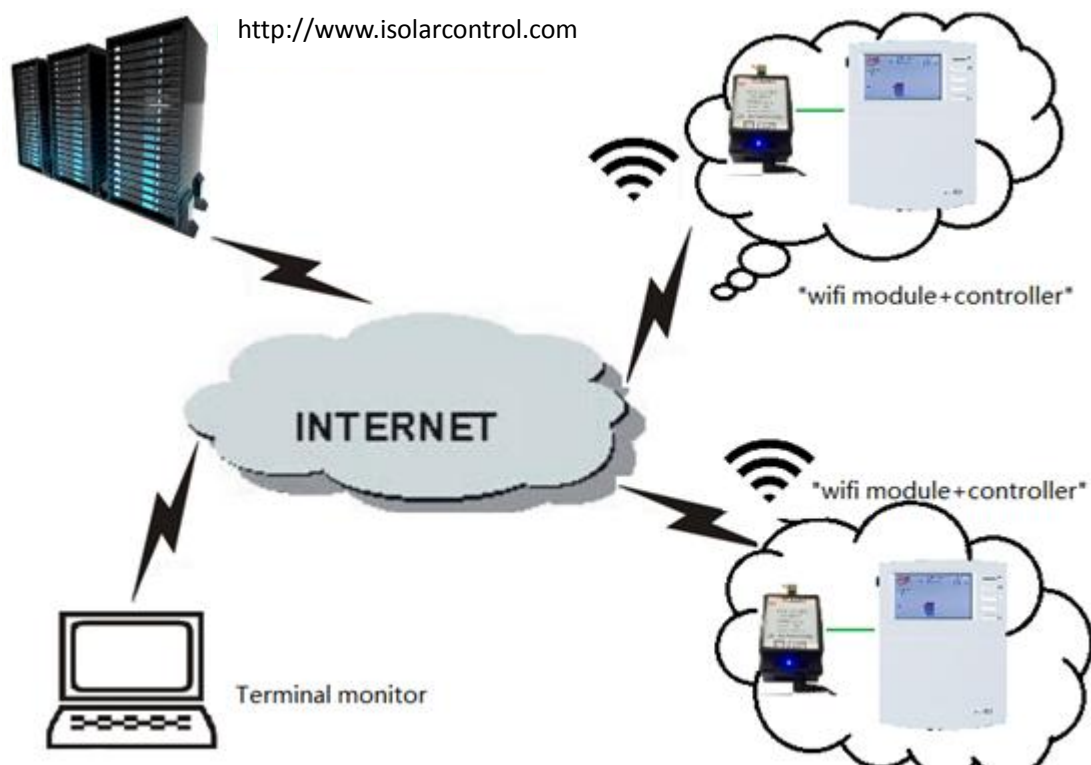
Communication mode: RS485

Protocol: user-defined protocol

Principle:

Through the connected WIFI module controller sends the data directly to the local intranet, then data is sent through local internet to the center server, and server can send the orders to the controller, distributors with different authorization can operate and maintain the user management system and solar water system remotely within his own range. Just with a computer which is connected to the internet, you can load in the server anywhere and operate the controller; it is very convenient for customer to know and manage their solar hot water system.
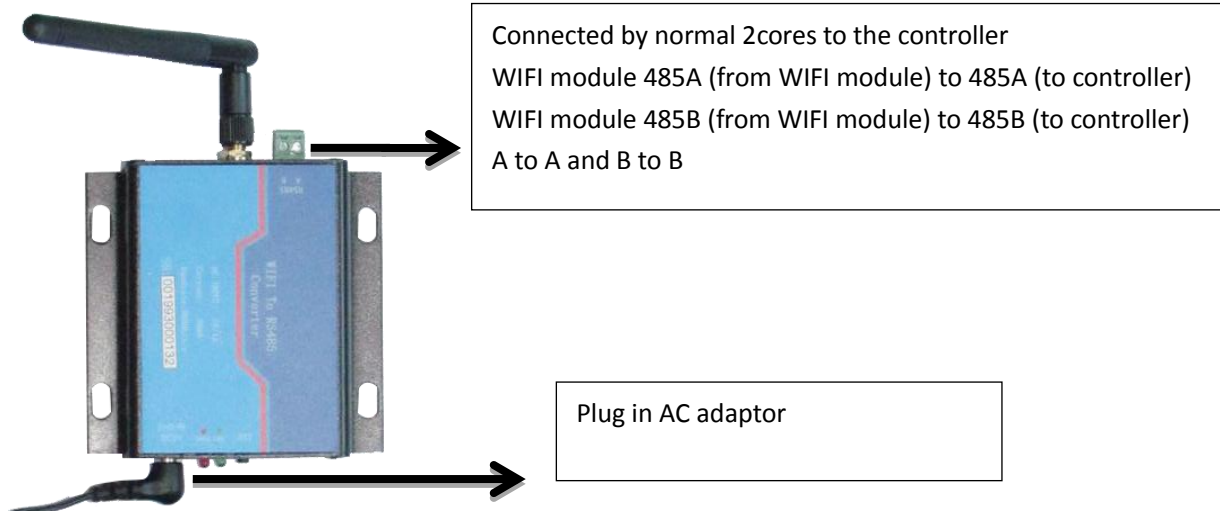
Conditions for using this monitoring system:

Buying the controller with the remote communication port and the special wifi module from our company,

Ensure the solar hot water system is installed and ready for using,

Commissioning and configuring the wifi module, and reading below operation instruction and familiar with this product. And then enjoy the convenient and efficiency benefit from the combination of SCM and internet.

1.1 Wifi Module Configuration Instruction

(Optional, exclude in standard delivery list, if need buy it separately)

Connected by normal 2cores to the controller

WIFI module 485A (from WIFI module) to 485A (to controller)

WIFI module 485B (from WIFI module) to 485B (to controller)

A to A and B to B

Plug in AC adaptor

Delivery list

Wifi Module	1pc
2-Cores Wire 5m	1pc
AC Adaptor	1pc
Input:100-230VAC 50-60Hz;	
Output:5V (1A)	

Check laptop wireless network,
Check "Gowin" ON wifi network list,
Click connect

Open software

WifiCtrl
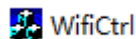
Search device,
Double clicking IP,
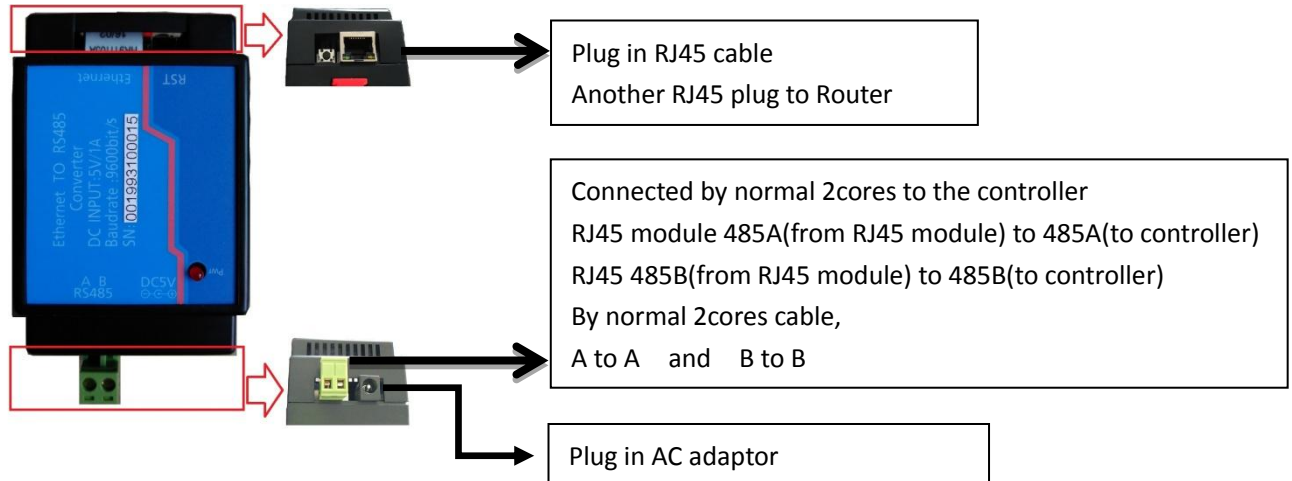Enter value:SSID and Password,

Press "start" configuration

The indicator lamp on the wifi module stop fast flash in 10 seconds

Configuration success!

Item	Blue Lamp
Recover factory	Press black button and hold for 10s until fast flash replace with slow flash
Wait for connect	WIFI power on,after10-20s,blue lamp slowly flash
Wait for connect (One key configuration mode)	Press button and hold for 6s until blue lamp fast flash, release button,then click start
Configuration success	WIFI module blue lame stop flash and light on steady.

"RJ45 module" Configuration Instruction

(Optional, exclude in standard delivery list, if need buy it separately)
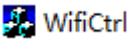
Plug in RJ45 cable
Another RJ45 plug to Router

Connected by normal 2cores to the controller
RJ45 module 485A(from RJ45 module) to 485A(to controller)
RJ45 485B(from RJ45 module) to 485B(to controller)
By normal 2cores cable,
A to A   and   B to B

Plug in AC adaptor

Delivery list

Rj45 Module	1pc
2-Cores Wire 5m	1pc
Rj45 Cable 1m	1pc
AC Adaptor Input:100-230VAC 50-60Hz; Output:5V (1A)	1pc

Item	Blue Lamp
Wait for connect	WIFI power on, blue lamp slowly flash and wait for connection.
Configuration success	Make sure, you have connect the wifi module to router well, You need wait for 1-2mins for automatically connect to server, WIFI module blue lame stop flash and light on steady, Connection success.

Product instruction

| FEATURE ITEM NO.:	**RJ45 Module** (Optional exclude in package)	**Wifi Module** (Optional exclude in package)
RJ45/WIFI module	RJ45/WIFI module (Ethernet to RS485 converter),It is use for internet access for solar controller, designed by shuangri company ,the Modules only available for shuangri products.	
Function	Ethernet to RS485 converter	
DC input	5V/1A	
Baudrate	9600bit/s	
Delivery list	**Rj45 Module 1pc**	Wifi Module 1pc
	2-Cores Wire 5m 1pc	2-Cores Wire 5m 1pc
	AC Adaptor 1pc **Input:100-230VAC 50-60Hz;** **Output:5V (1A)**	AC Adaptor 1pc Input:100-230VAC 50-60Hz; Output:5V (1A)
	Rj45 Cable 1m 1pc	******
Configuration soft	**without any software driver, Just plug RJ45 cable automatically configuration.**	In AP mode configuration WifiCtrl
Preparation before configuration	**Without PC, just need router and plug RJ45 cable**	A working laptop, And a local WIFI net work connection.
Applicable models	SR288,SR1568,SR658	SR288,SR1568,SR658
SNnumber	SN number very important, It is physical address of controller; also is identification of controller We Urge customers to register for all the numbers, Establish identify files.	
Connection **"485" A and B**	Wire 485A(from WIFI module) to 485A(to controller) Wire 485B(from WIFI module) to 485B(to controller) By normal 2cores cable, A to A and B to B Please don't make mistake connection.	

2. Introduction of the sign in interface

Please enter below IP address or domain name to access the interface of solar hot water monitoring system, see below picture.
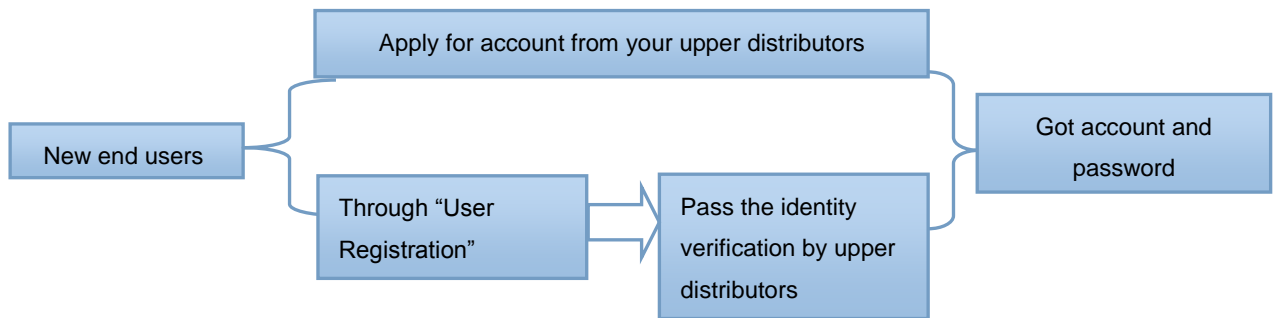
http://www.isolarcontrol.com

If you have an account and password already, please enter them and click "sign in".

If you don't have an account and password:
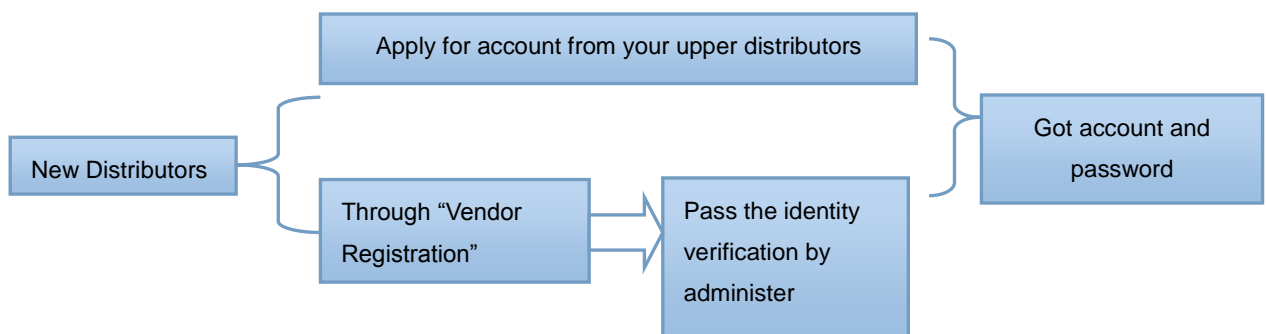
2.1 Distributor register interface（Vendor Registration）

Click "Vendor Registration", below dialog box appears.

2.1.1 Enter distributor information

➢ Vendor Account: An account for vendor "sign in" on first page (must be filled)

➢ Vendor: Your company name (must be filled)

➢ Contact: A person who in charge of remote management system

➢ Email: Your email address (must be filled)

➢ Tel: Your company telephone

➢ Address: Your company addresses

➢ Country: country of your company

2.1.2 Format requirement

◆ Vendor Account: consist of only 26 lower-case letters and 10 Arabic numerals, case insensitive, space key invalid.

◆ Vendor/Contact/Tel/Address/Country: consist of only 26 lower-case letters and 10 Arabic numerals, case insensitive, space key invalid, special characters invalid.

◆ Vendor Account: exclusive Nr. It can be same to any recorded No. in data base. (i.e others account), if the nr is repeated, then remind " data existed" will be show, and ask for to reenter the vendor account.

◆ Vendor: exclusive, It can't be same to any recorded in data base. (i.e others account), if it is repeated, then remind " data existed" will be shown and ask for to reenter the vendor.

Note:

Vendor Registration: is button for the upper dealers registration, after enter the information, data is send to administration management control (verify Vendor), the verify vendor control is designed to verify the vendor.

If the entered account is verified, administrator will send a email to inform your account and password, after that, you can sign in the system.

2. 2 User register interface（User Registration）

If you have already purchased a controller or a solar station which has internet function, and they are already connected with the special wifi module, and wifi module is configured successfully, then you can continuous below operation, click "user registration" button and appear below window.

2.2.1 Enter user information

Controller configuration:

- Model Number: The number of your solar controller (must be filled)

- Vendor Account: You can get it from your vendor   (must be filled)

- Serial Number: The serial number on your wifi module (must be filled)

Apply user account

- ➢ User Account: A account number for user "sign in" on first page (must be filled)

- ➢ Password: input password.

- ➢ Confirm password: confirm the password.

- ➢ User: The true name of user for contact

- ➢ Tel: Your contact telephone number

➢ Address: User address

➢ Country:

2.2.2 Format requirement

◆ Model Number: select the configured controller model from the drop-down menu.

◆ Vendor Account: enter your account No.

◆ Serial Number: enter the serial number of wifi module, please not the case size, and complete same of serial number of wifi module.
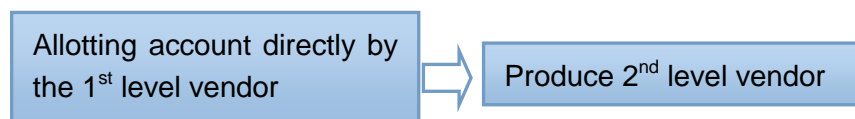
Note of user account:

● User Account: consist of only 26 lower-case letters and 10 Arabic numerals, case insensitive, space key invalid.

● User/Tel/Address/Country: consist of only 26 lower-case letters and 10 Arabic numerals, case insensitive, space key invalid, special characters invalid.

● User Account: exclusive, It cann't be same to any recorded in data base. (i.e others account), if it is repeated, then remind " data existed" will be shown and ask for to reenter the vendor.

3. 1st level vendor management interface

Setup the 1st level vendor

	Apply for account from the upper vendor	
New vendor		Got account and password
	Pass "Vendor Registration" → Pass the verify by administrator	

Setup 2nd level vendor:
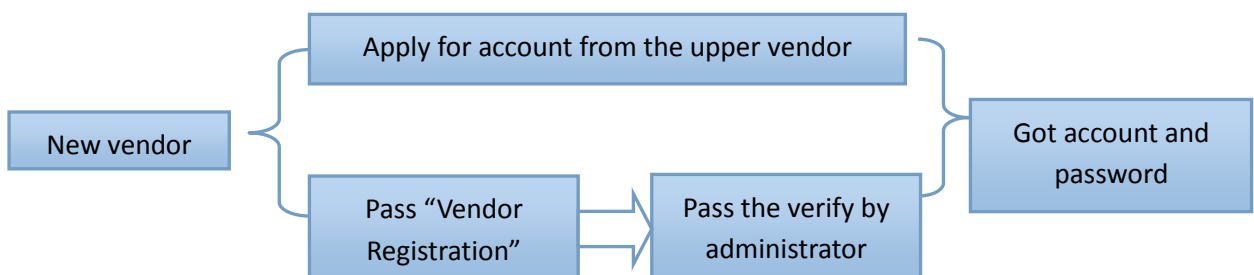
Allotting account directly by the 1st level vendor	→	Produce 2nd level vendor

Function of 1st level vendor:

User Verify:

- Verify the registration information of users

Vendor Manage:

- All vendors information query in detailed or fuzzy queries

- Add 2nd level vendor

- Delete 2nd level vendor

- Modify the information of 2nd level vendor

- Reset the password of 2nd level vendor

Fault Alarm:

- Query the error and warning message

Monitor:

- Maintain the information of user and 2nd level vendor

- Real time monitoring and remote data maintenance to every controller

- Reversed tree–shaped diagram to show the relationship between 1st level vendor, 2nd level vendor and users

Information management of the 2nd level vendor:

- Query in detailed or fuzzy query

- Add user

- Delete user

- Clear the temporary register

- Modify the user information

User's controller monitoring listed under the 2nd level vendor:

- Check the system operation diagram and the set parameters

- Check the operation status of system

- Temperature table and diagram

- System parameters management

- Warning management

3.1 Interface description
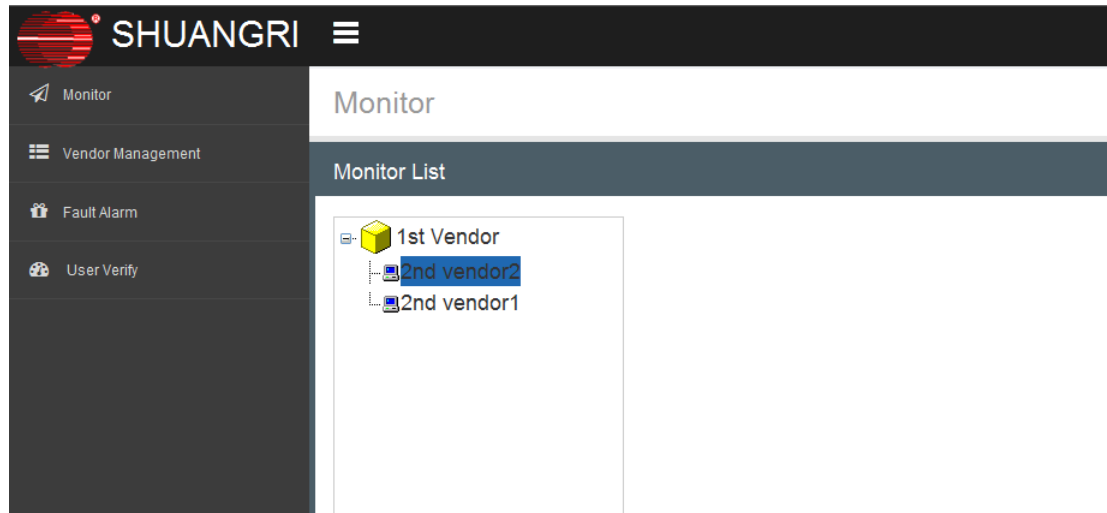
|	
Monitor	Users controller monitoring listed under the 2nd level vendors
Vendor Management	Can check/ add/ delete/modify/password reset for all 2nd level vendor
Fault Alarm	To check all the fault alarm of all the devices.
Vendor Verify	To verify all new registered vendor

3.2 User identity verification /User Verify

User Registration function is a button for user registering its self automatically, after register, data will be forward to the upper distributors management control " User Verify", administrator can verify the user or delete a user through this "User Verify"
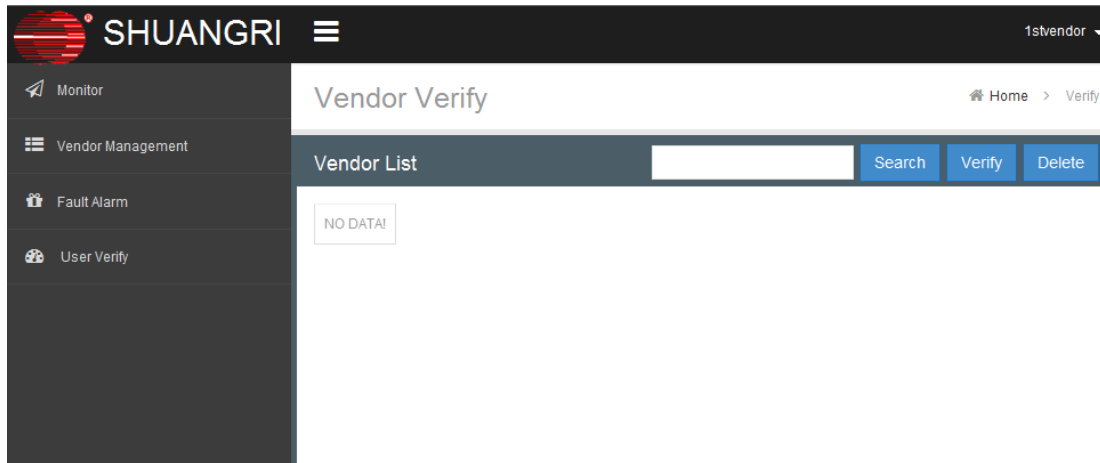
3.2 1 Pass the pending account/Verify

Without select a vendor to start verify, below dialog box appears
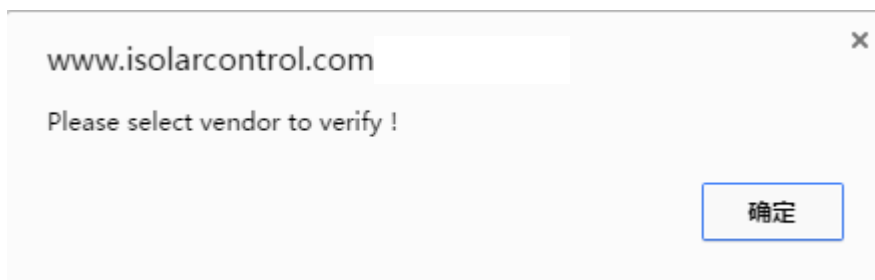
Checked and click verify, the first ask appears.

Select "confirm", another ask appears

Select "confirm", appears verify success prompt.

www.isolarcontrol.com:

Verify success !

确定
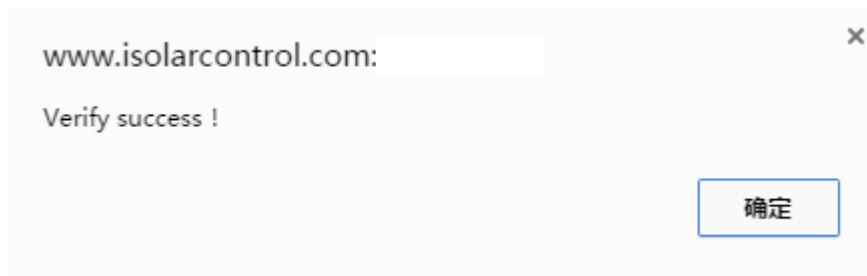
3.2.2 Delete a pending account / Delete

Same operation like above description.

3.3.3 Query a pending account / Search

For more pending account, you can use "search" button to find out the priority account

3.3 The 2nd level distributor account management / Vendor Manage

3.3.1 Account list /Vendor List

		Search	Add	Delete

Vendor Account	Vendor	Contact	Email	Tel	Address	Country	Role	Owner Vendor	Reg. Date	Action
										Modify Reset PWD

3.3 2 Field format

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Vendor Account / Vendor / Contact / Email / Tel / Address / Country

The description of these 7 items see paragraph 2.1 "Vendor Registration"。

Role, Owner Vendor and Reg. Date

Role: is the relationship between current vendor and shuangri

- 1st level vendor corresponding Role = "Supplier"

- 1st level vendor is from Vendor Registration, or from vendor setup by the super users

- 2nd level vendor corresponding Role="sub-tier"

- 2nd level vendor is from the list added by the 1st level vendor

Owner Vendor: is the upper dealer of current vendor

- 1st level vendor is from Vendor Registration, or from vendor setup by the super users
  Owner Vendor="shuangri";

- 2nd level vendor: Owner Vendor = " corresponding 1st level vendor"

Reg. Date:

- System will record date automatically.

3.3.3 Function button

Information management and maintenance of 2nd level vendor is through these functions "Search / Add / Delete / Modify / Reset PWD"

3.3.3.1 Vendor account checking / Search   Search

Support any field query and fuzzy query for the 1st level vendor.

i.e if you want to find a 1st level vendor, all relevant records will be displayed.:

	ID	Vendor Account	Vendor	Contact	Email	Tel	Address	Country	Role	Owner Vendor	Reg.Date	Action	
☐	1	1stvendor4	1st vendor4	peter		123456789		china	supplier	shuangri	2016-3-28 13:31:12	Modify	Reset Pwd
☐	2	1stvendor2	1st Vendor2	liu		136			sub-tier	shuangri	2016-5-6 12:36:02	Modify	Reset Pwd
☐	3	1stvendor	1st Vendor	123		123456		123456	supplier	shuangri	2016-3-23 15:52:25	Modify	Reset Pwd

Vendor List — 1st Vendor — Search Add Delete

3.3.3.2 Add account for a 2nd level vendor / Add 　Add

Click "Add" button, below window appears, detailed see Paragraph 2.1 "Vendor Registration"。

*Vendor Account: (A account for vendor sign in)	
*Vendor: (Your company name)	
Contact: (A person who in charge of Remote Management)	
* Email: (Your email address)	
Tel: (Your company tel)	
Address: (Your company address)	
Country:	

Save　Close

Please fill the information and click "save" to save the data and exit this window.

3.3.3.3 Delete account of a 2nd level vendor / Delete 　Delete

Principle of deletion:

- Non bear account can't be deleted (Non bear account: it is a account that there is a user and more users listed under it)

- Only delete account one by one, can't delete in batch.

- Only empty account can be deleted.

If without checking a delete item, then below dialog box appears.
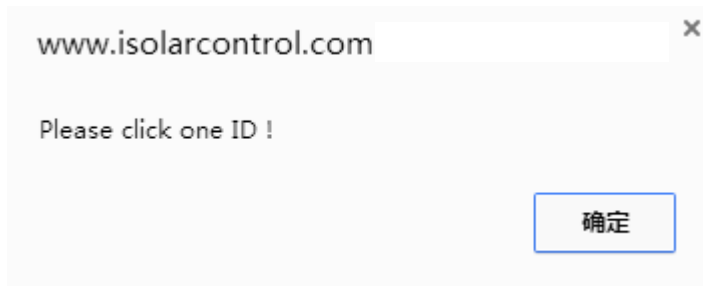
If prompt none bear account, below dialog box appears.
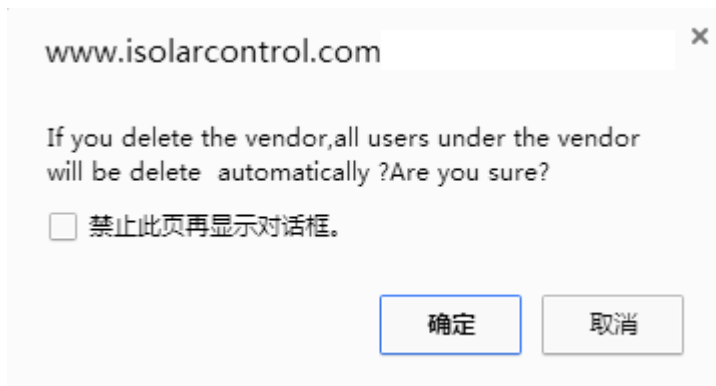
If you want delete a account, below dialog box appears.
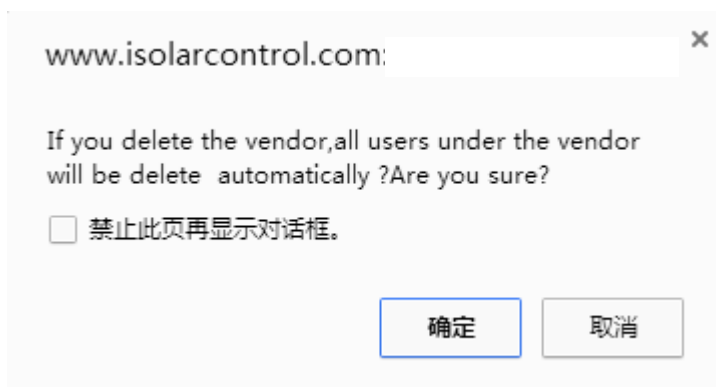
If delete is confirmed, below dialog box appears.

3.3.3.4 Modify the account of 2nd level vendor /Modify [Modify]

Here, below window appears, detailed see paragraph 2.1 "Vendor Registration"。

*Vendor Account: (A account for vendor sign in)	3ndvendor
*Vendor: (Your company name)	3nd Vendor
Contact: (A person who in charge of Remote Management)	peter
* Email: (Your email address)	
Tel: (Your company tel)	
Address: (Your company address)	
Country:		

[Save] [Close]

3.3.3.5 Reset the password for a 2nd level vendor / Reset [Reset]

Through this function, you can reset the password for the 2nd level vendor.

3.4 Fault warning / Fault Alarm

Through the "Fault Alarm" function， you can check the input and output of error message, it helps engineers to find out error quickly and improve the working efficiency greatly.

Fault name:

Displays the fault reasons, and accurately positions the fault position.

Serial No.:

It shows the serial Nr. of the connected wifi module and through it to be easy to find out the controller this Number to

Fault occurring time:

Displays the time fault occurred, time accurate to second.

Status:

It prompts whether error is removed.

3.5 Remote monitoring/Monitor

Vendors with different authorization access the monitoring system with own account, and they can do real time monitoring and data maintenance for all controllers which registered under its account.

3.5.1 Button introduction of user information management function

							Search	Add device	Delete	Clear

	ID	User Account	Model Number	Serial Number	On line	Fault	Action
							Monitor Modify

3.5.1.1 User query / Search [Search]

Support any field query and fuzzy query

3.5.1.2 User add / Add [Add Device]

Click "Add" button, below window appears, detailed explanation see paragraph 2.2"User Registration".

*Model Number: (The number of your solar controller)	SR1568 ▼
*Serial Number: (The serial number on your wifi module)	
*User Account: A account number for user "sign in" on first page	
User: The true name of user for contact	
Tel: (Your contact telephone number)	
Adress: (User address)	
Country:	

Save   Close

3.5.1.3 User deletes / Delete   Delete

Through the menu to delete a user account

3.5.1.4 Clearing the register / Clear   Clear

If the system diagram can be displayed properly, please click "Clear" button to display it normally.

3.5.1.5 User modification / Modify   Modify

The window here showed should be consistent in "User registration", requirement is same.

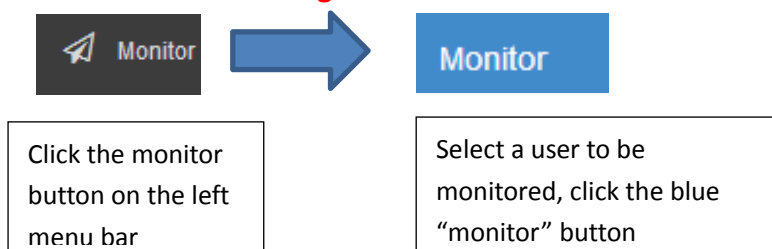| *Model Number: (The number of your solar controller)	SR1568 ▼
*Serial Number: (The serial number on your wifi module)	001993000125
*User Account: A account number for user "sign in" on first page	husnummer1
User: The true name of user for contact	
Tel: (Your contact telephone number)	
Adress: (User address)	
Country:	

Save   Close

Complete the information; please click "save" button to save it.

3.5.1.6 System Status

Lamp Indicate	Status	meaning
	on	Wifi module configuration success and wait for communication with server.
	off	Wifi module configuration failure; Or wifi module power off.
	Green on	User is monitoring the system.

You can quickly lock the fault controller through the lamp indicate.

4. Remote monitoring interface introduction

 Monitor

Monitor

Click the monitor button on the left menu bar

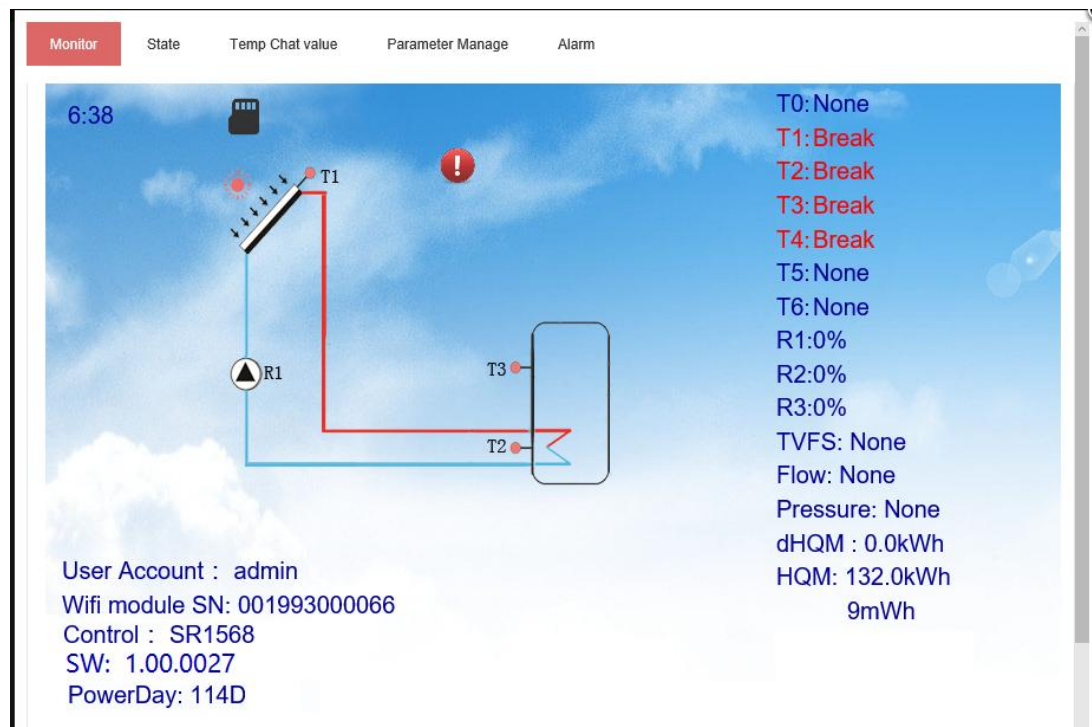Select a user to be monitored, click the blue "monitor" button

Below data can be monitored:

● Check the system diagram and its parameter value

- Check the system running status

- Temperature table and diagram

- System parameters management

- Fault management

Monitoring interface / Monitor

- Clock display

- User account display

- Controller model display

- Software version display of controller

- Accumulated running time of controller display

- Whether SD card is inserted display

- System operation diagram display

- Control parameters listed

Note: about the relevant parameter setup, please refer the manual of every controller.