



Omniksol –WIFIKIT User Manual

Omnik New Energy Co., Ltd.

Overview of WIFIKIT Function

Omniksol-WIFIKIT is developed by Omnik as an external communication monitoring device, which integrates WiFi device for users and provides a wireless monitor function.

By connecting with inverters through RS485 interface, the Kit can receive information from inverters and realize cascade of inverters. One side It provides wireless function, another side, it may also use cable to transfer inverter data to the web server.

Users can monitor the runtime status of the device by checking the 4 LEDs on the panel which indicates Power, RS485, Link and Status respectively.

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1 RS485 Card Install SOP

1.1 Disassembly



Picture 1.1.1

Unscrew the four screws on the interface panel with the screwdriver as shown in Picture 1.1.1 and keep the screws aside.



Picture 1.1.2



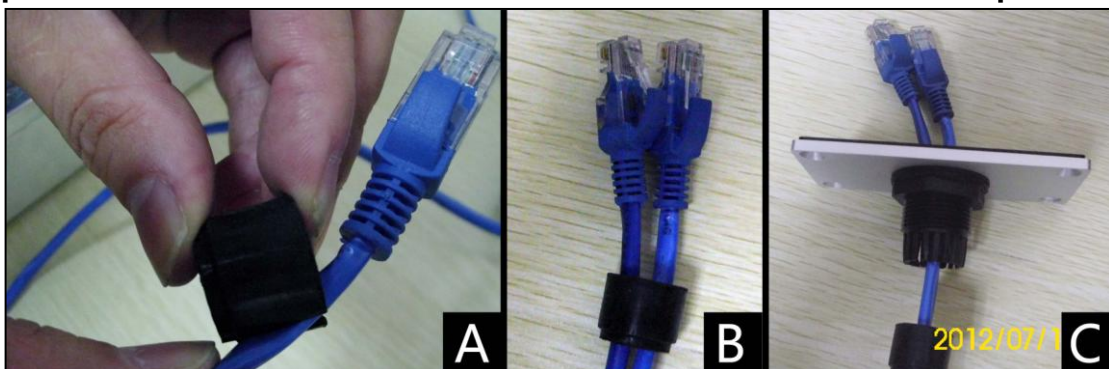
Picture 1.1.3

Unscrew the two-holed water-proofing connector from the interface panel as shown in Picture 1.1.2, 1.1.3.

1.2 Installation

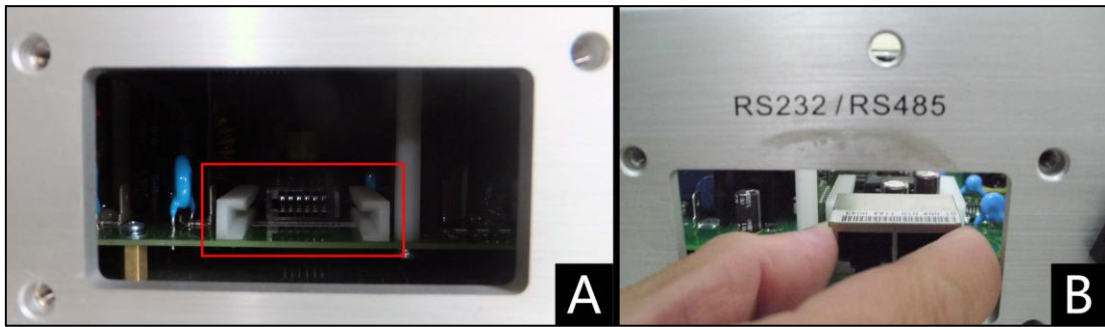
Pick out the net cable and the water-proofing connector from the package and follow the Picture :

- A. Put the net cable in from the gap**
- B. Pput the net cable one after another into the kneck of the interface panel**



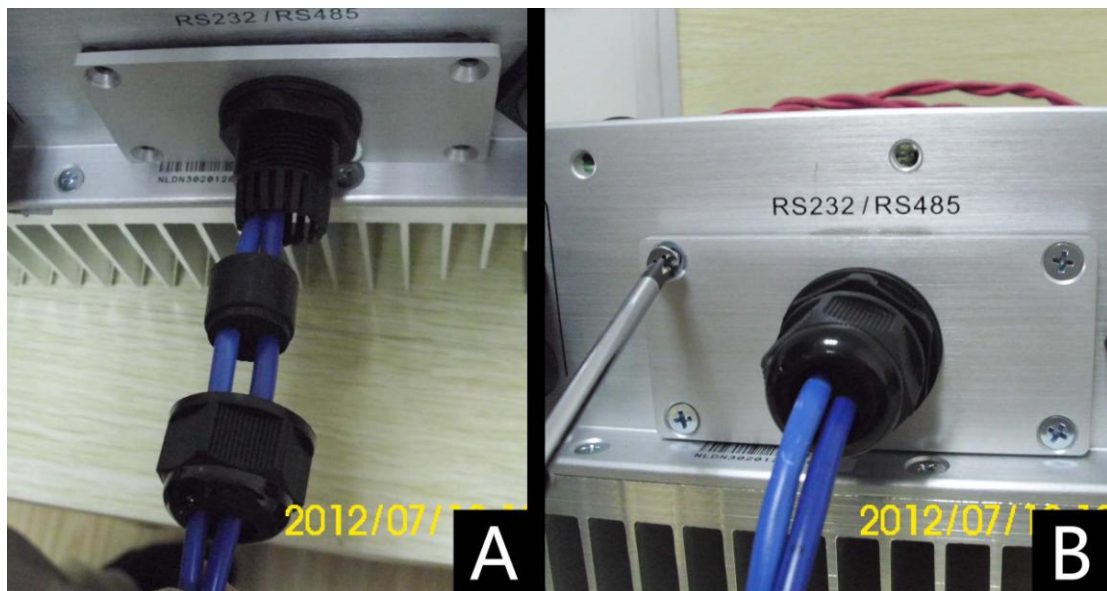
Picture 1.2.1

C. Insert the RS485 card lightly from the position as follow picture



Picture 1.2.2

D. Finish the installation, as Picture 1.2.3 :



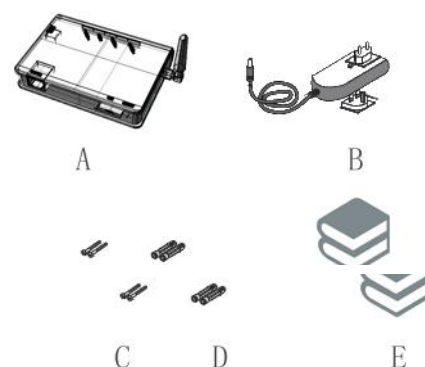
Picture 1.2.3

2 mniksol –WIFIKIT User Manual

2.1 Unpack

After unpacking the box, please check the parts according to the below list. Contact the manufacturer immediately, should you find any damage, missing or wrong model of the device or any parts.

Serial	Name	Quantity	Model
A	PV data collector	1	WIFIKIT
B	Power supply adapter	1	FY0502000
C	screw	2	--
D	expanded rubber tube	2	--
E	manual	1	--

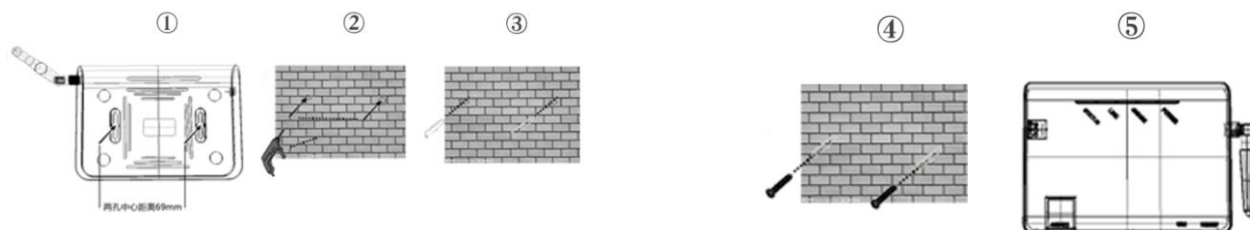


Picture 2.1.1

2.2 The installation of data collector

2.2.1 Wall-mounted installation

1. Mark two horizontal round holes which distance is 69mm in the selected position
2. Drill two $\phi 6\text{mm}$ holes in the marked position, the depth of the hole is not less than 30mm
3. Punch the expanded rubber tubes into the holes lightly with a rubber hammer
4. Wring two screws into the expanded rubber tubes, the screws head exposed wall about 6cm
5. Hang the PV data collector WIFIKIT on the screws, hold the metal part of the antenna and rotate the antenna to a wanted position



Picture 2.2.1

2.2.2 Horizontal data collector installation

Lay the data collector on a flat surface

Note1: The protection level of PV data collector WIFIKIT is IP21. It cannot be installed outdoors or in the

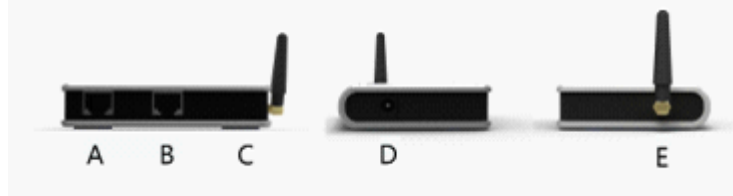
conditions of damp, dusty or with corrosive steam. Direct sunlight is also avoided, as well as shock and pressure defense. In addition, as metal components have effect on the wireless signals, the antenna of PV data collector (in all direction) should be away from metal components at least 10cm.

Note2: When screw or adjusting the antenna position, please note only the metal part can be screwed, plastic part cannot be screwed, or the antenna will be damaged. in addition, the unusual installation status will affect the usage of data collector, more details please refer to the abnormal condition and dispose during debugging.

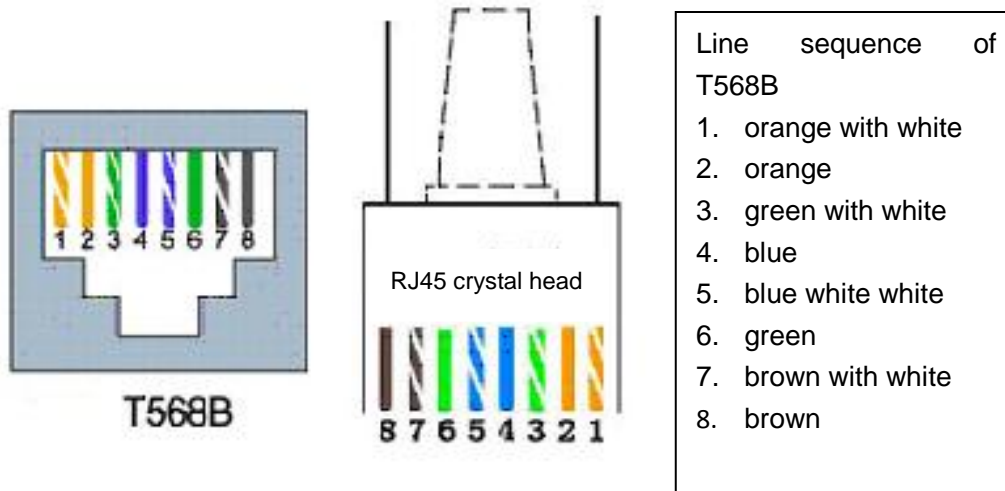
2.3 Connection between data collector and inverter

2.3.1 The instructions of data collector interface and connection line interface

Serial	Instructions
A	RS485/422 interface
B	Ethernet
C	Reset
D	Power supply adapter interface
E	Antenna interface



Picture 2.3.1



Picture 2.3.2

Pin NO.	RS485	RS422
1	NC	NC
2	NC	NC
3	NC	RX+
4	A	TX+
5	B	TX-
6	NC	RX-
7	GND	GND
8	GND	GND

2.3.2 Steps of connection

Both ends of the connecting wire are RJ45 network cable connector , all the line sequence are T568B.

A. Single inverter connection

1. cut of the power supply of the inverter
2. Insert the network cable into anyone RJ45 port on anyone inverter
3. Let the other network cable connects the network interface of PV data collector WIFIKIT
4. Connect the power supply adapter to data collector, then insert into the socket

B. Multiple inverter connection

1. Cut of the power supply of the inverter

2. Insert the network cable into anyone RJ45 port on anyone inverter
3. Insert the other network cable into anyone RJ45 port on second inverter
4. Make the needed monitoring inverters in series in the same way
5. Connect the PV data collector WIFIKIT to a inverter with the bus, (constitute serial LAN)
6. Connect the power supply adapter to data collector, then insert into the socket

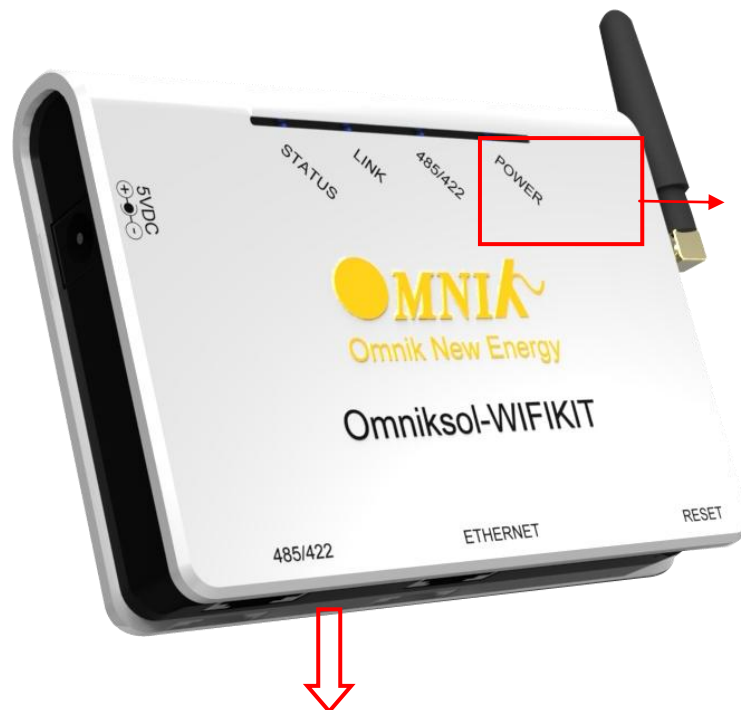


Picture 2.3.3

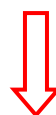
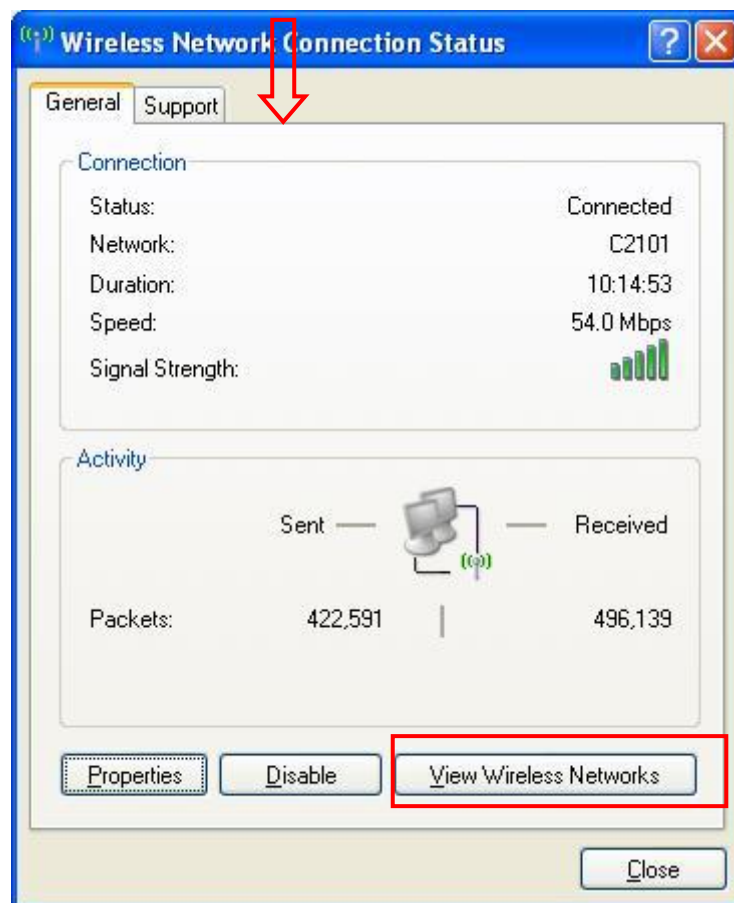
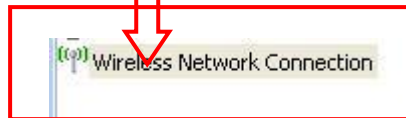
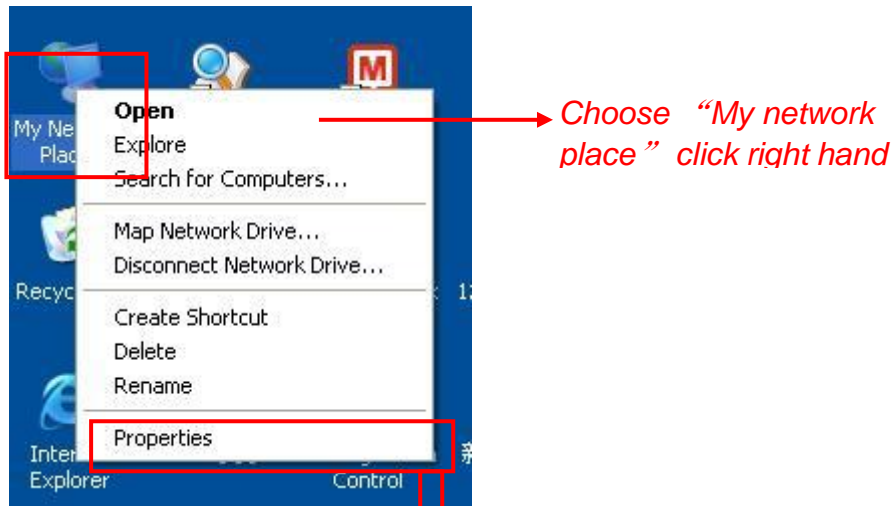
Note: Must cut off the power supply before connection. Please make sure that all the connections are completed, and then power the inverters and PV data collectors. Otherwise may cause personal injury or equipment damage.

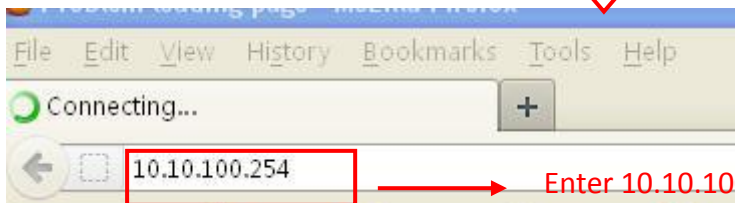
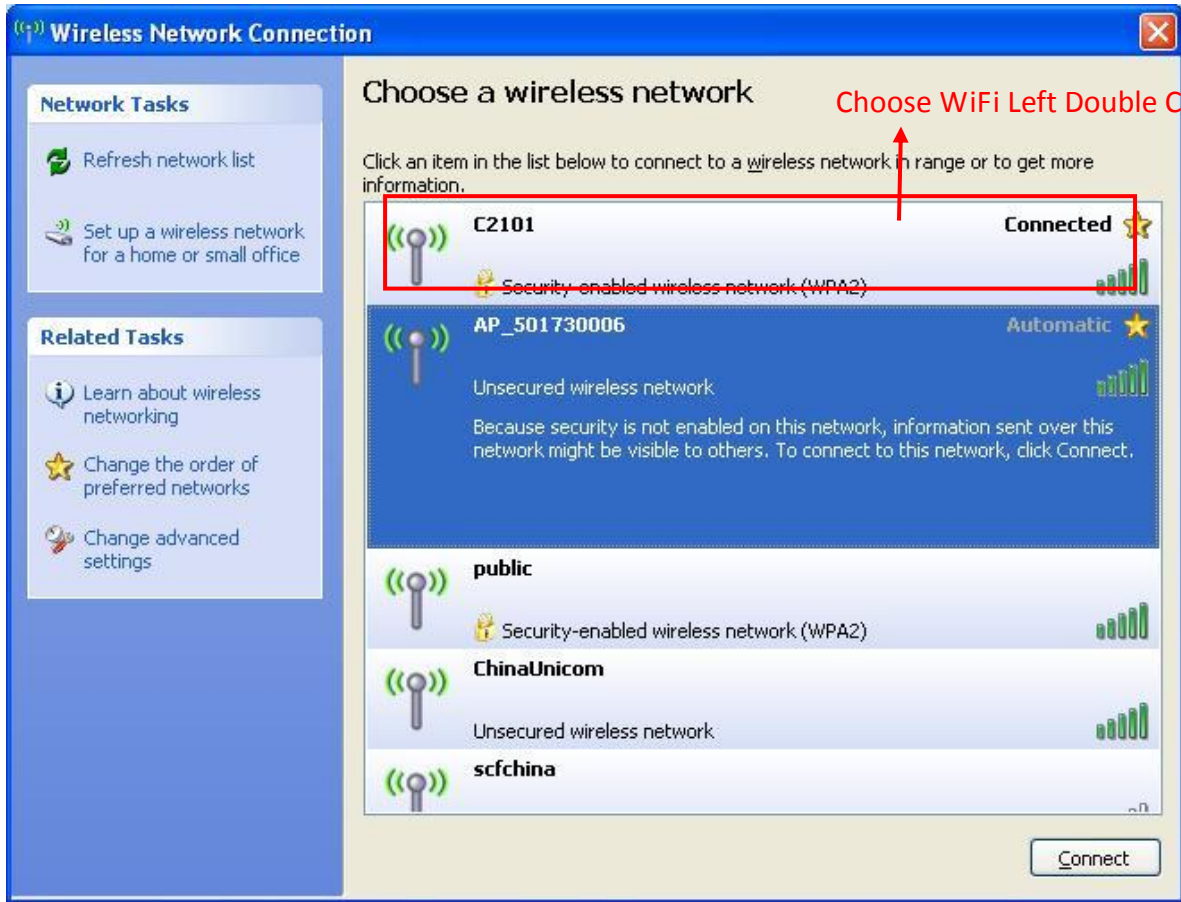
2.4 WiFi settings

2.4.1 Wireless Network

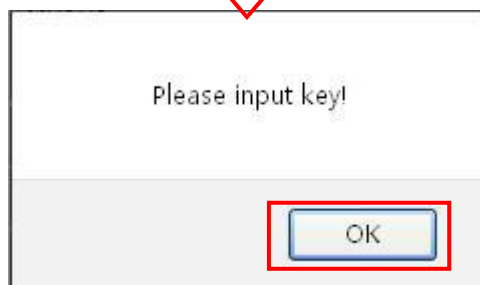
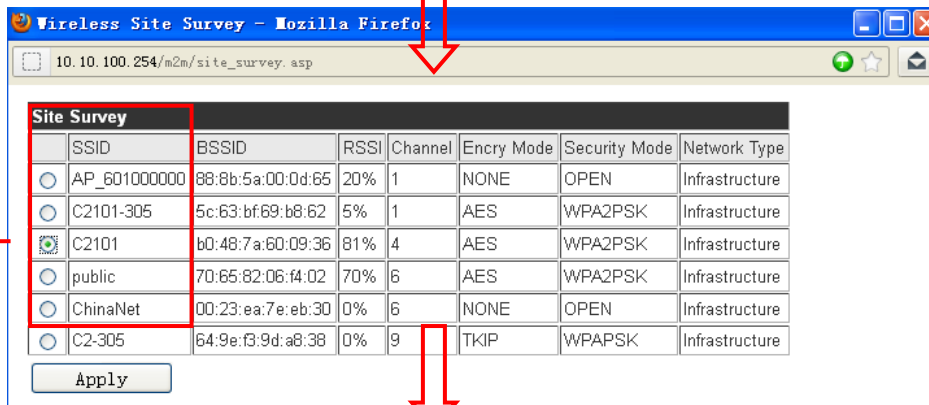
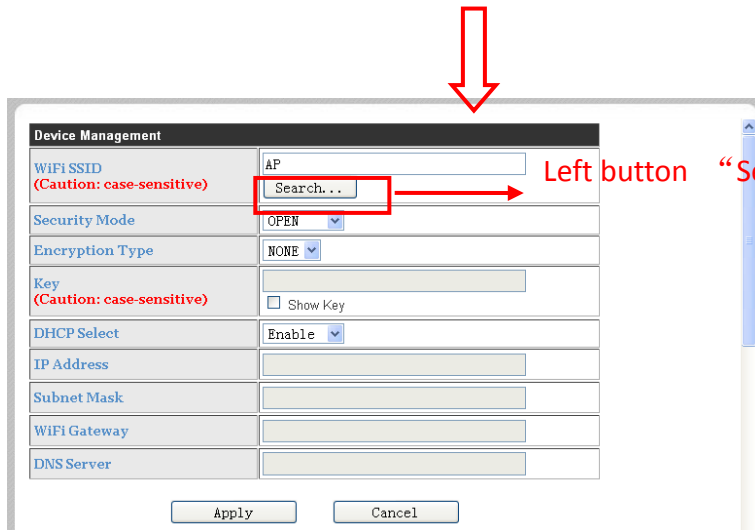
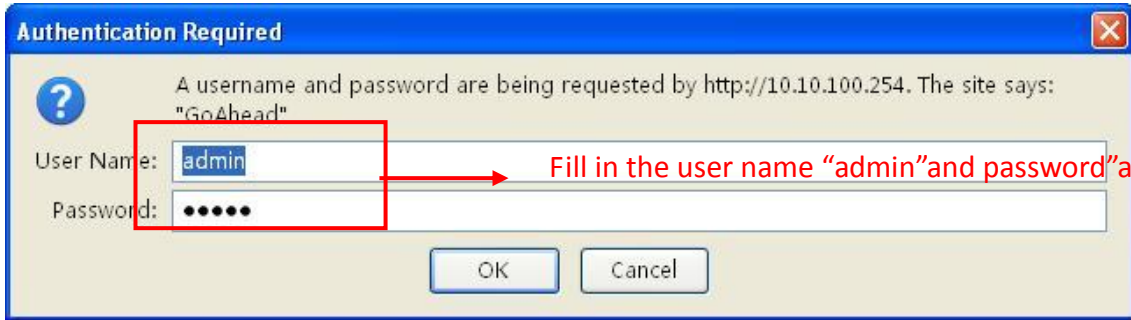


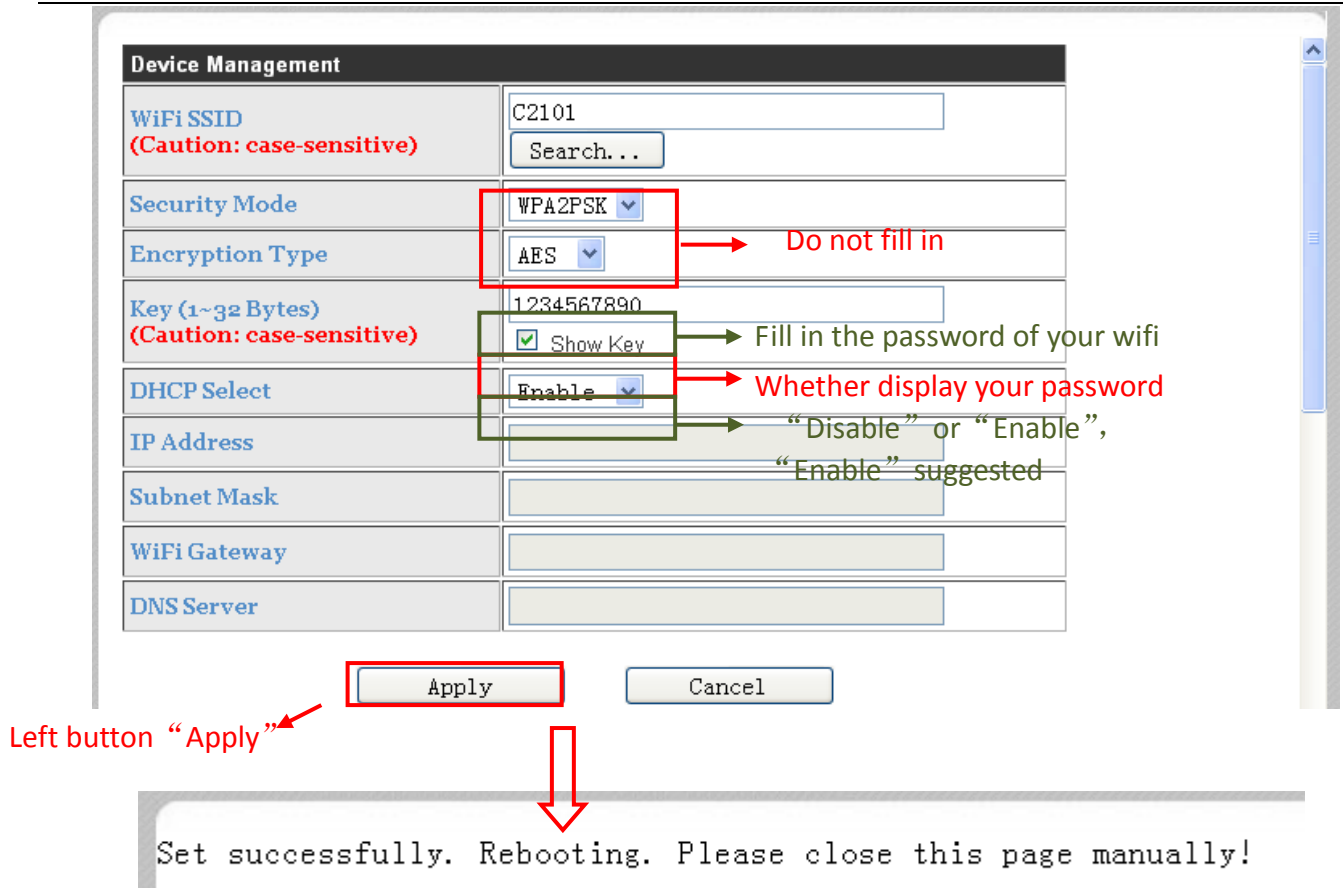
Insert the wifi part, turn on DC power, 3minutes later continue the next part





Enter 10.10.100.254 in your browser





Picture 2.4.1

Note: this default setting is router DHCP is on, if you can not connect to the network, please check if you open the DHCP function.

2.4.2 Wired network

As the picture 2.4.2, you can use network cable to connect to the Ethernet port of WIFIKIT and the port of router. Then the inverter info received by WiFi will be directly transferred to the remote server.

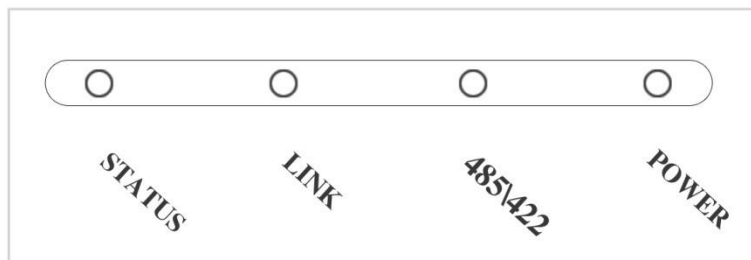
Note: the default WIFIKIT is WiFi network, if use the Ethernet port, please restore to the factory default status.



Picture 2.4.2

2.5 Debug

LED indicating lamp Introductions



Picture 2.5.1

Name of LED	Status	Description of status
POWER	Light	The power is normal
	Dark	The power is abnormal
485\422	Light	The connection between collector and inverter is normal
	Flashing	Data is transferring between collector and inverter
	Dark	The connection between collector and inverter is abnormal
STATUS Dark	LINK Flashing	Connecting WiFi
STATUS Light	LINK Flashing	Data is transferring of WiFi
	LINK Light	The connection of collector is normal
	LINK Dark	The connection of collector is abnormal
STATUS Flashing	LINK Flashing	Data is transferring of port
	LINK Light	WiFi is in the AP way , <i>a</i> terminal is connecting with the
	LINK Dark	WiFi is in the AP way , <i>no</i> terminal is connecting with the

Trouble shootings with LEDs

phenomenon				Possible reasons	Dealing ways
POWER	485/422	LINK	STATUS		
Dark	Dark	Dark	Dark	Haven't connected to the power	Connect power and ensure that the power supply is good.
Light	Dark	X	X	The connection of inverter is abnormal	Check the connection cable is right and ensure that the order is according to 568-B
					Ensure the stability of RJ-45 connector line
					Confirm the status of

					inverter and ensure it's working condition is normal
Light	X	X	Flashing	In the AP Mode	Set network settings
Light	X	Flashin g	Dark	Collector is not connected with WIFI	Confirm if the antenna is loose or fall off. If so, please screw it.
					Check if the WIFI wanted is covered.
					Restore the factory settings according to the installation manual and reset.
Light	Light	Dark	Light	Fail to connect the remote server	Please confirm that WIFI can be connected with the Internet.
Light	Dark	Dark	Dark	The system is initialized	Please wait. If there is no change in 2min, please reset the collector.
<p><i>Note 1: x means the status is instability</i></p> <p><i>Note 2: when screw or adjusting the antenna position, please note only the metal part can be screwed, plastic part cannot be screwed, or the antenna will be damaged</i></p> <p><i>Note 3: If the equipment still cannot work according to the above instructions, please connect your device customer service.</i></p>					

2.6 Register on monitoring website

Our products supported by PV monitoring system Web site browser: IE8, Firefox, Chrome, safari, log into the website <http://www.omnikportal.com>, Click on register, enter the user registration page, follow the requirements for registration, after successful registration, enter the mailbox and activate the account, then complete the registration.

2.6.1 Click Register button to go to registering interface for new account



Picture 2.6.1

2.6.2 Fill in user's information as required



Picture 2.6.2

Remarks: please read the <Omnik service agreement >carefully, the enclosure is the cost list for all the countries, please choose your operators


Owner means the final user

"*" you must fill it

“Owner” Account

Site Name *

Upload Image → Click and choose the aim pic



→ Click "OK" save the pic

Capacity(kW) *

Panel ▼

Inverter ▼

Datalogger S/N → Fill in WiFi card's S/N code, see pic 2.6.4

Country ▼ *

Province/State ▼ *

City ▼ *

Steet → Click the map, choose the installation site

Timezone ▼

Make This Site Public → Select, and choose it to be the share mode, other user can see

Contact

Name

Phone

← Finish the register

Picture 2.6.3



Picture 2.6.4

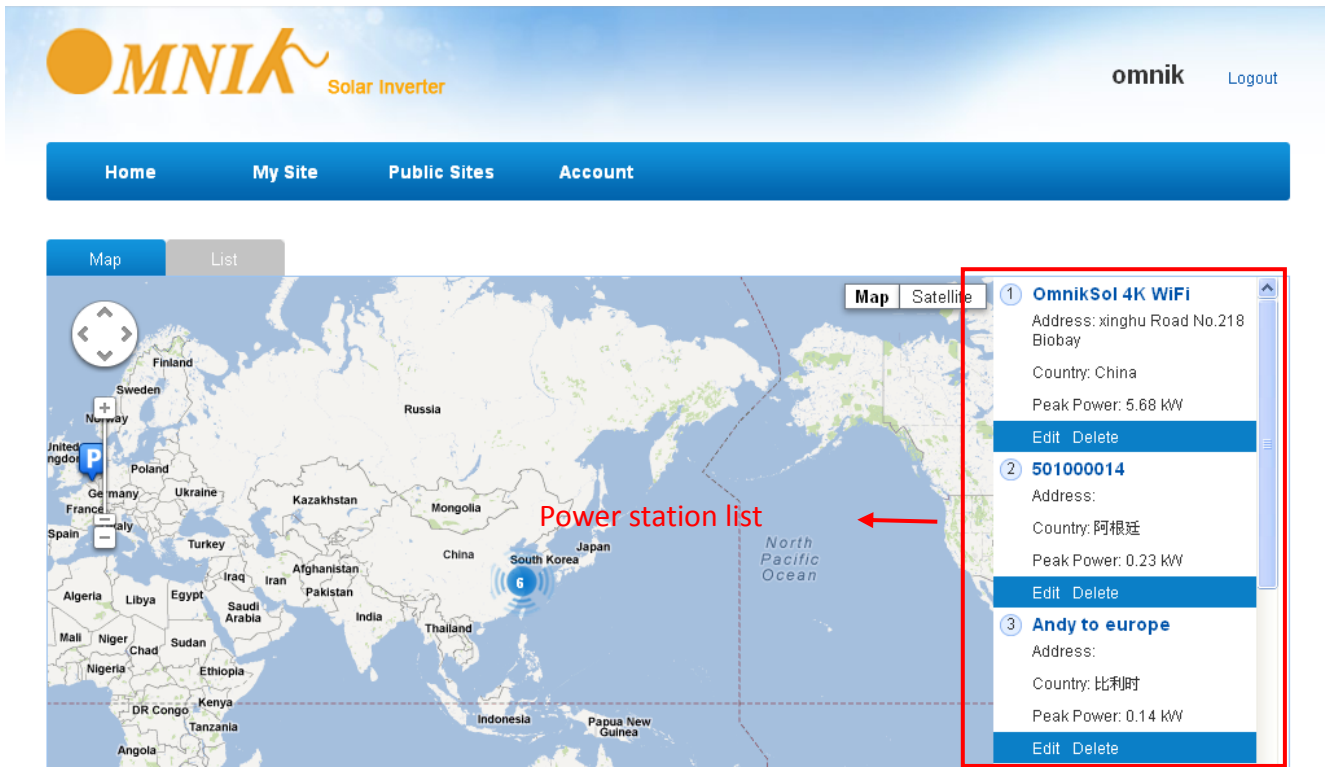
2.7 Login the PV monitoring system to manage the power station

After the successful register and account activation, open the login interface as below picture 2.7.1, input the correct email and code and enter the PV monitoring system, then you can monitor and manage the power station.

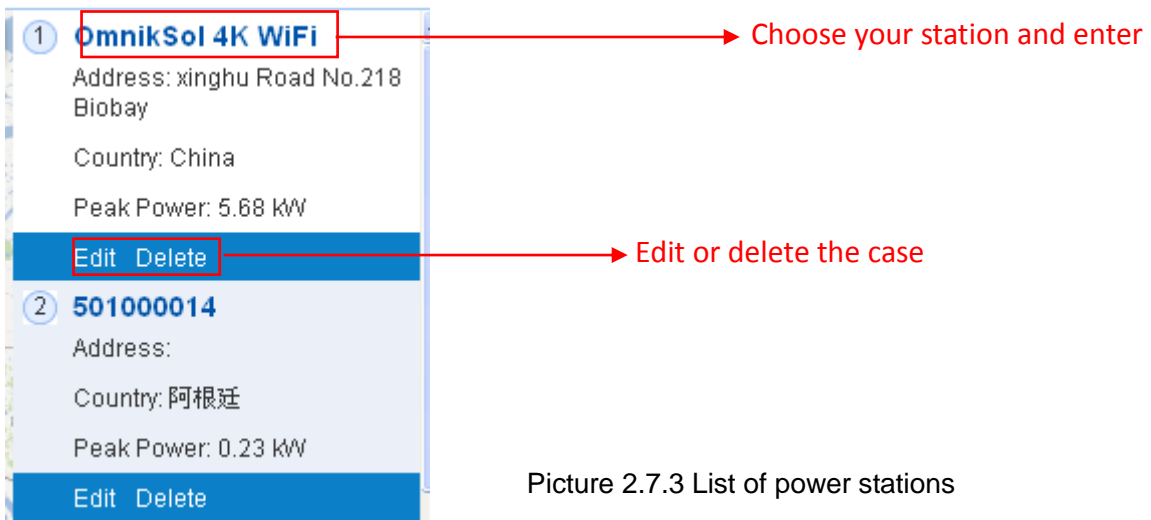


Picture 2.7.1

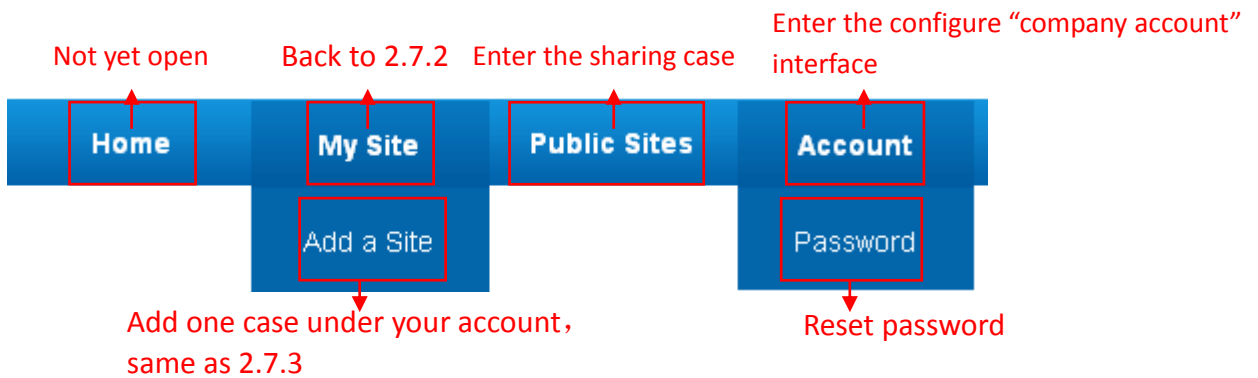
“Owner” User Interface



Picture 2.7.2



Picture 2.7.3 List of power stations



Picture 7-4 Navigation Bar


Home
My Site
Public Sites
Account

OmnikSol 4K WiFi Change case


Overview
Real Time
History
Alert
System

523 Clearance of Rain 64-75F |
 524 Clearance of Rain 63-72F |
 525 Clearance of Rain 61-72F
Alerts: 563 Items

Site Image



Location



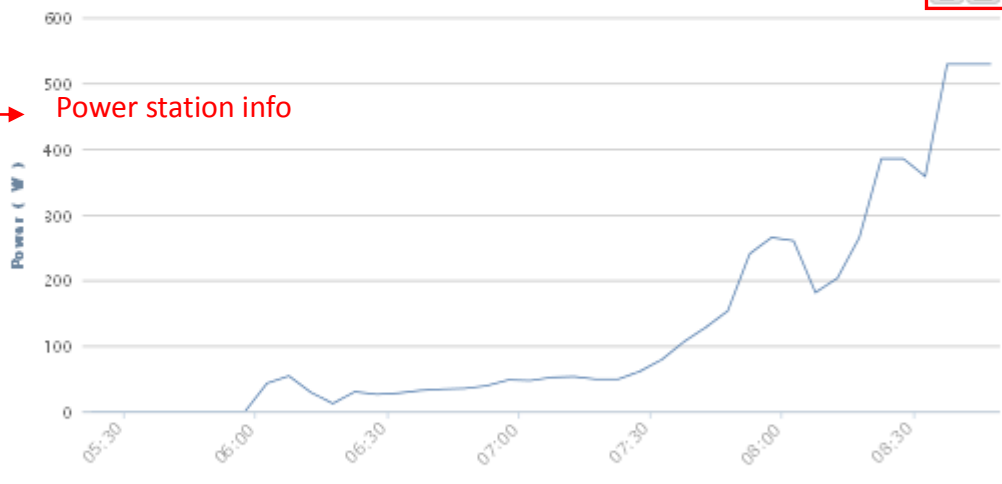
Site Profile

- Installed Capacity: 2 kW
- Inverter: 品牌1
- Panel: 36

Power Now	Today Energy	Monthly Energy	Yearly Energy	Total Energy
0.00 kW	0.30 kWh	105.81 kWh	1675.28 kWh	1730.6 kWh

Power
Energy
Real-time power and generated energy

OmnikSol 4K WiFi Print current



From
5/23/2012
Day
Week
Time

Trees Planted

73.55 trees

Carbon Offset

1.73 ton

Energy saving

Picture 2.7.5 Main interface of power station

OmnikSol 4K WiFi [Dropdown]

Overview | **Real Time** | History | Alert | System

☁️ 5/23 Chance of Rain 64-75F | ☁️ 5/24 Chance of Rain 63-72F | ☁️ 5/25 Chance of Rain 61-72F ⚠️ Alerts: 563 items

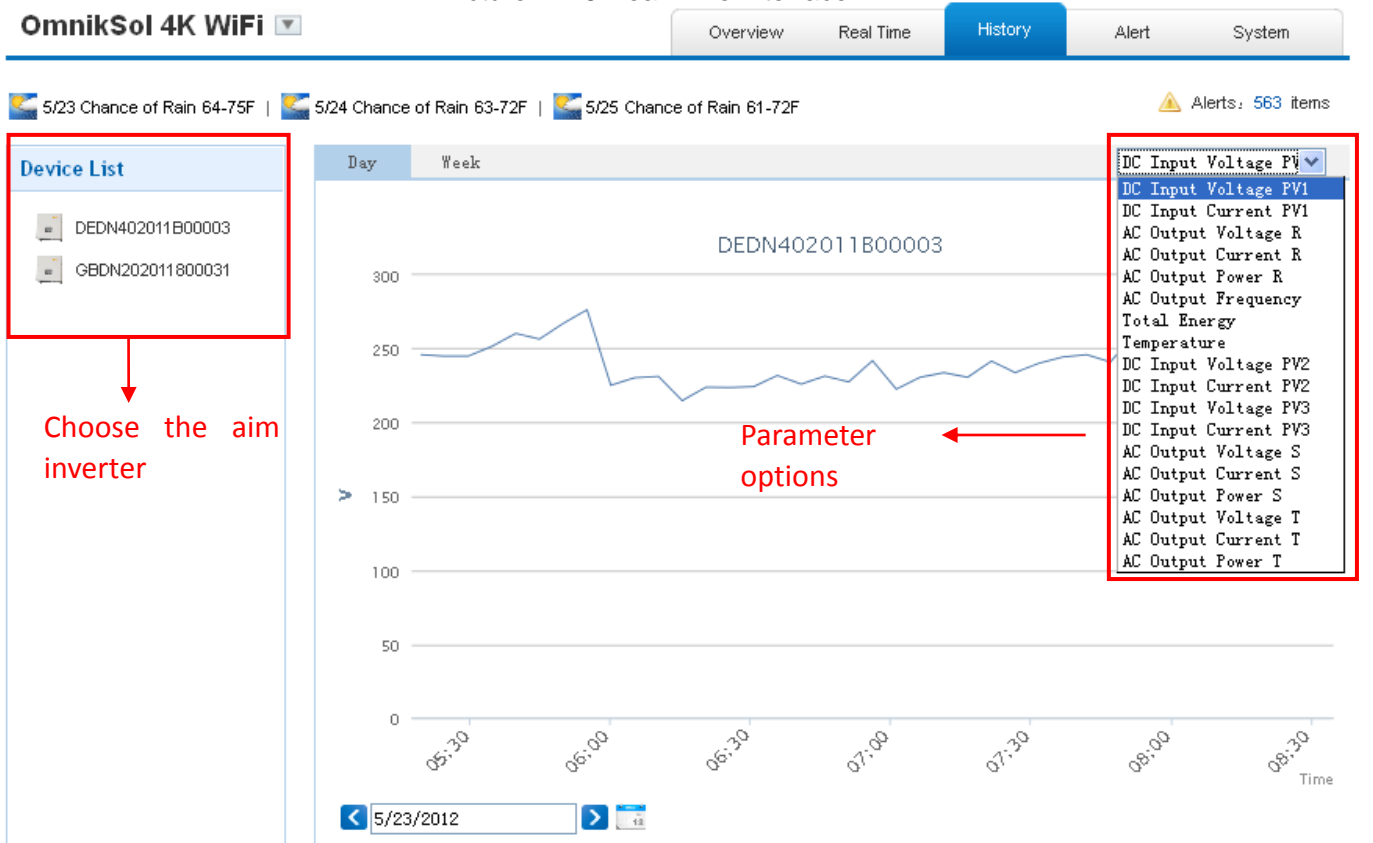
⏪ ⏩ ⏲

No.	Inverter S/N	DC Input			AC Output				Total Energy (kWh)	Temperature(°C)	Time	
		Channel	Voltage(V)	Current(A)	Phase	Voltage(V)	Current(A)	Power(W)				Frequency(Hz)
1	DEDN402011B00003	PV1	255.5	2.2	R	231.8	2.2	529	50.04	1288.6	23.0	2012-05-23 08:32:56
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				
2	GBDN202011B000031	PV1	247.4	0.3	R	231.0	0.3	0	50.05	442	30.0	2012-04-16 17:34:48
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				

Internal temperature ↑

Latest data collecting time ↓

Picture 2.7.6 Real Time Interface



Picture 2.7.7 History Interface

OmnikSol 4K WiFi ▾

Overview Real Time History **Alert** System

☁ 5/23 Chance of Rain 64-75F | ☁ 5/24 Chance of Rain 63-72F | ☁ 5/25 Chance of Rain 61-72F

⚠ Alerts: 563 items

Select: View All ▾ View All ▾ Page 1 of 57

Inverter	Inverter Manufacturer	Information	Code	Alert Time	Status	View History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:10:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:9:3	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 12:56:36	Unhandled	History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:11:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:14:7	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:1:42	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:19:10	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:6:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:24:14	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:11:42	Unhandled	History

Click, turn to picture 2.7.7

Picture 2.7.8 Alert Interfaces

OmnikSol 4K WiFi ▾

Overview Real Time History Alert **System**

☁ 5/23 Chance of Rain 64-75F | ☁ 5/24 Chance of Rain 63-72F | ☁ 5/25 Chance of Rain 61-72F

⚠ Alerts: 563 items

Site Device

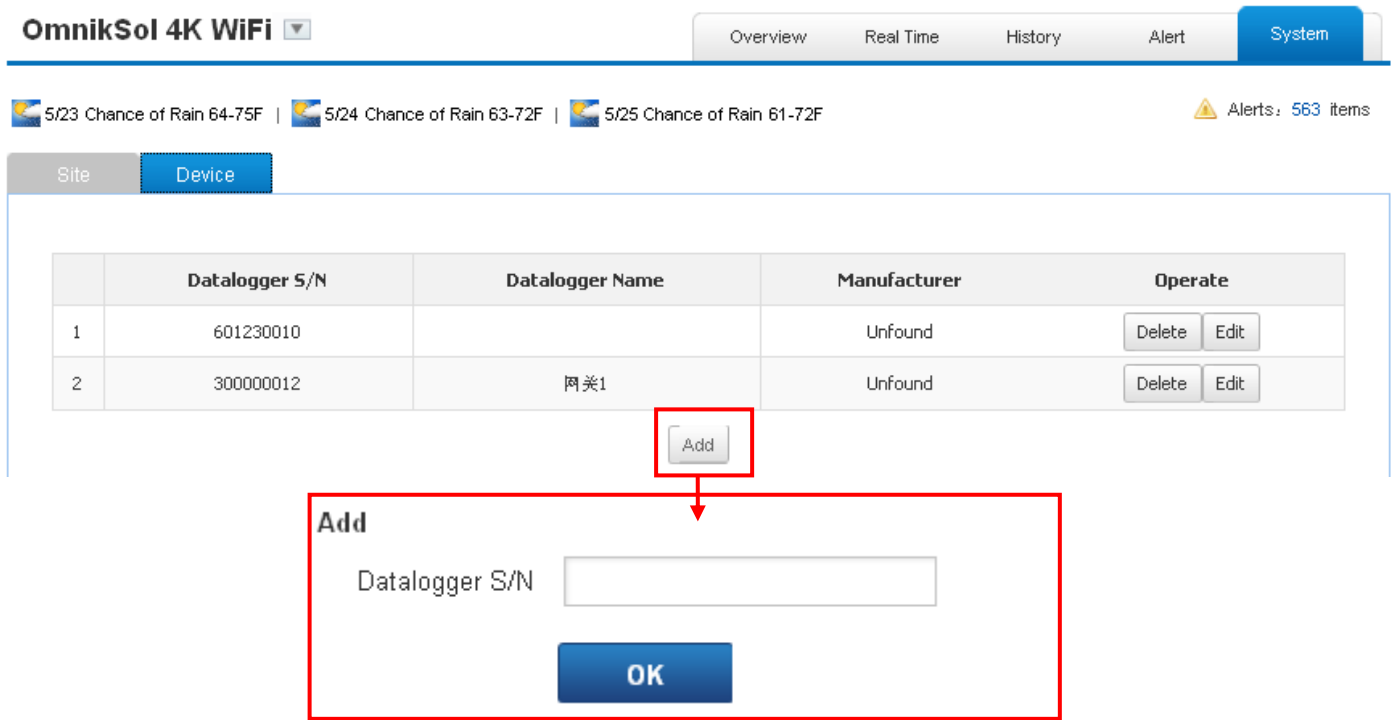
The interface same as picture 2.7.3

Site Name *

Upload Image



Picture 2.7.9 System Setting Interface

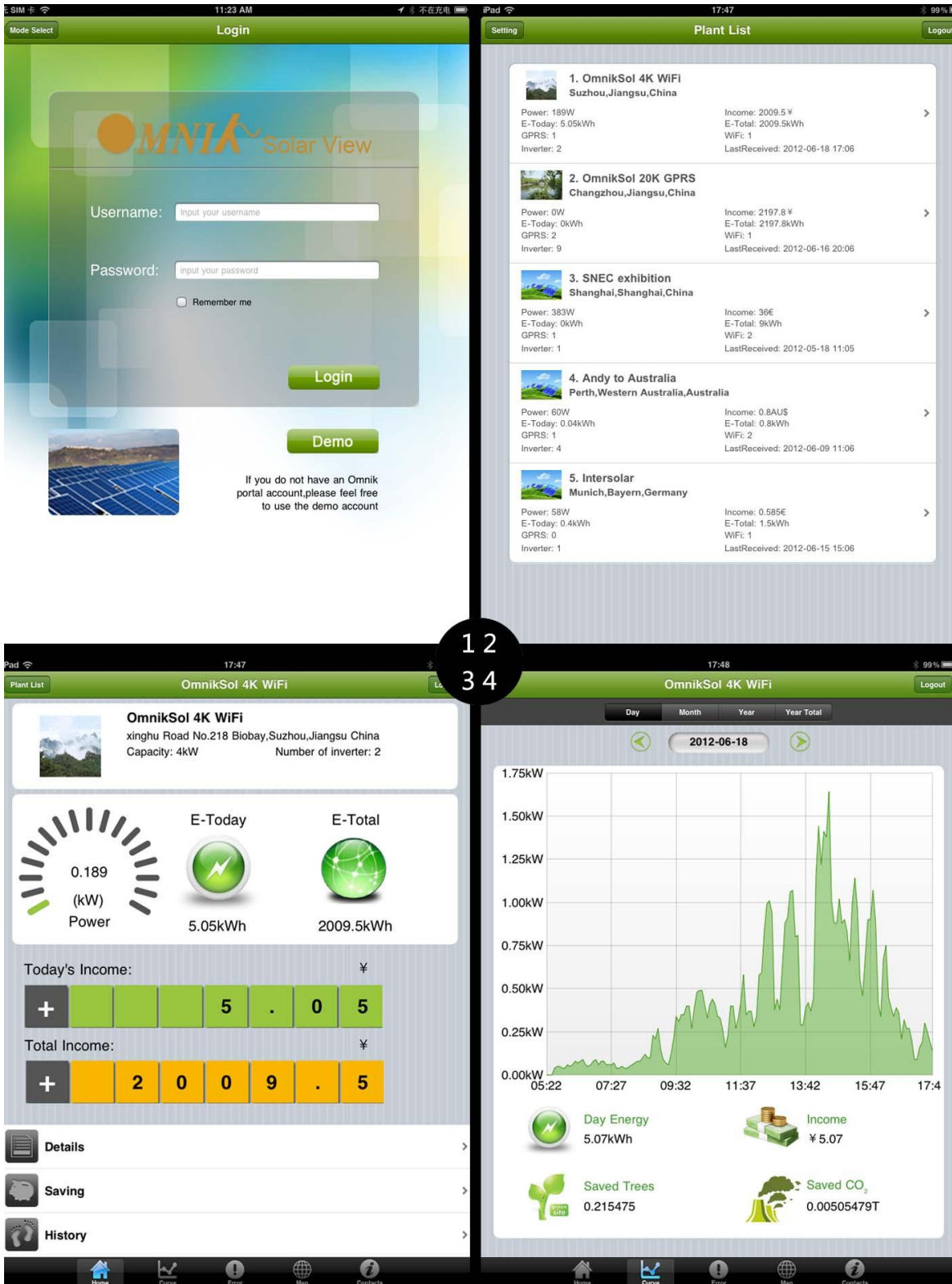


Picture 2.7.10 System Setting Interface

2.8 iPhone & iPad application

After registration of the power station, you can input the key words: Omnik ,solar, inverter, PV, energy ,plant, monitor at the app store, then you can download the Omnik solar (iPhone) and Omnik Solar HD(iPad) at app store.

After the download input your user name and password, then visit your station,(we supply a free demo, for the users who do not register)choose the power station and enter the main interface, then you the daily energy etc. will be displayed. Meanwhile, you can view the relevant date to view the curve as below:



Picture 2.8.1

1. Log in interface
2. Power station list interface
3. Main interface
4. Daytime curve interface

3 Contact

If you have any technical problems about our products , please contact us , you should confirm the follow things before contact us:

- ◆ Device model
- ◆ Data collector serial number
- ◆ The number of connected inverter

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Zip code : 215213

Fax: +86 512 6295 6682

Tel: +86 512 6295 6676

Mail: Sales@omnik-solar.com