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# WiFi Plug

## User Manual



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## 1. Introduction

SolarMAN WiFi Plug is a data logging module. With its "plug & play" function, the WiFi Plug can collect information of PV systems from the inverter when it is connected with an inverter.

With the integrated WiFi function, the WiFi Plug can connect with a router and transmit data to the web server, enabling users to view the collected data by logging in the online monitoring portal ([www.solarmanpv.com/portal](http://www.solarmanpv.com/portal)). In addition, users can also get access to the internal web server of the WiFi Plug via WiFi and directly obtain data from it.

## 2. Device Layout



Picture 1

## 3. Connect the WiFi Plug with the Inverter

- 3.1. Power off the solar inverter
- 3.2. Remove the cover of the RS 232 Port on the bottom of the inverter.
- 3.3. Connect the WiFi Plug with the RS232 Port on the inverter by fastening screws. Please double check if the WiFi Plug is locked tightly or not as the sealability is important.

## 4. Network setting

- 4.1 Power on the solar inverter and the WiFi Plug will start to work.

**Notice:**

*The setting hereinafter is operated with Windows XP for reference only. If other operating systems are used, please follow the corresponding procedures.*

4.2 Prepare a computer or device, e.g. tablet PC or smart phone that enables WiFi.

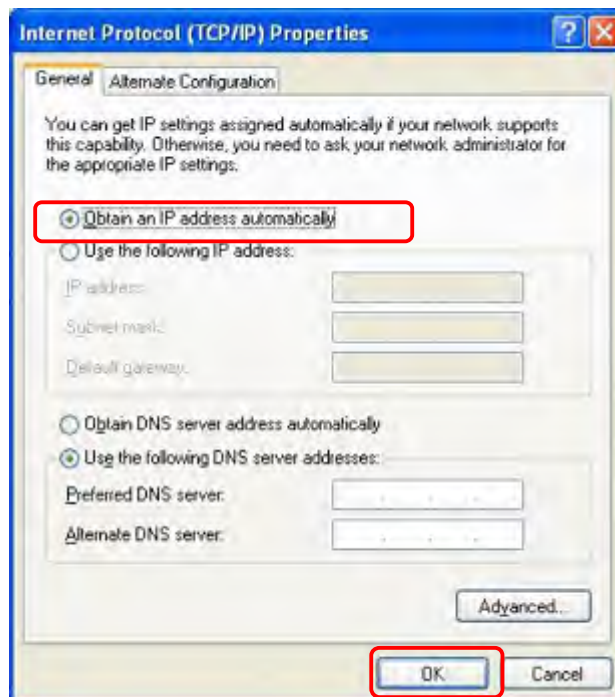
4.3 Obtain an IP address automatically

4.3.1 Open **Wireless Network Connection Properties**; double click **Internet Protocol (TCP/IP)**



Picture 2

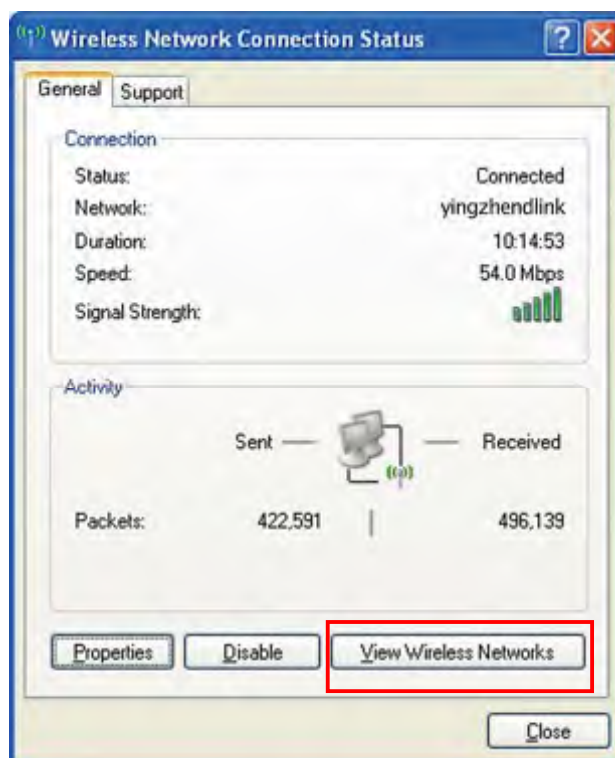
4.3.2 Select **Obtain an IP address automatically**, and click **OK**



Picture 3

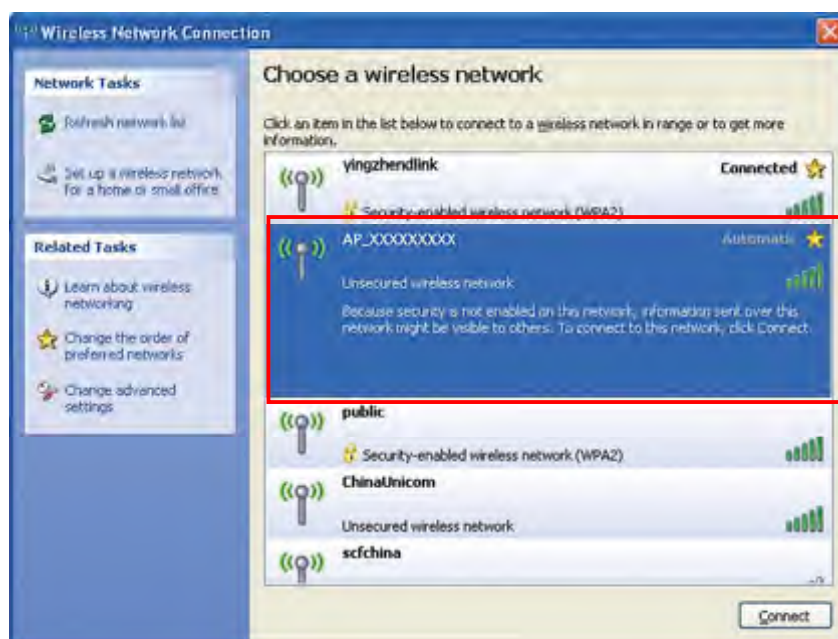
## 4.4 Set WiFi connection to the WiFi Plug

### 4.4.1 Open wireless network connection and click **View Wireless Networks**



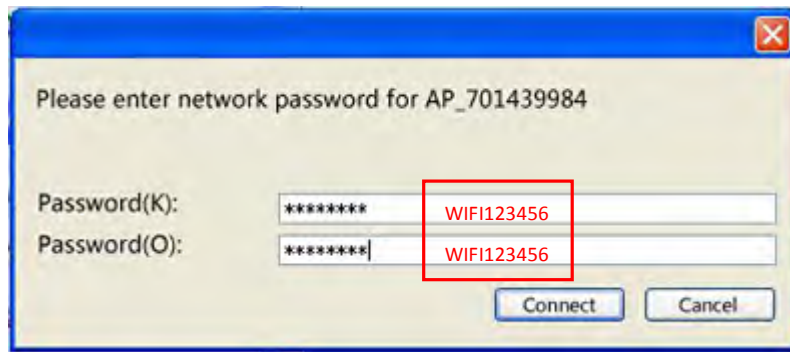
Picture 4

### 4.4.2 Select wireless network of the WiFi Plug. The network name consists of **AP** and the **serial number of the product**. Then click **Connect**.



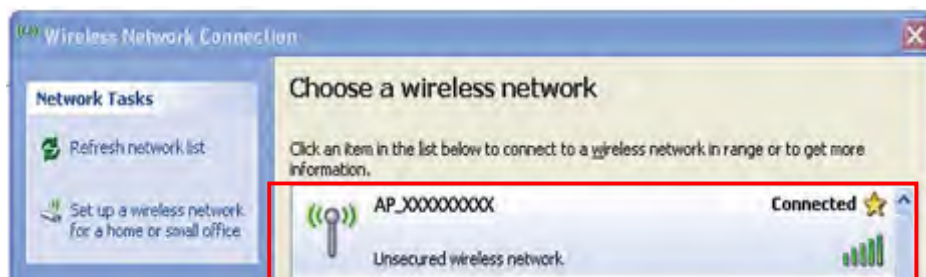
Picture 5

4.4.3 Please enter password which are both WIFI123456 as default.



Picture 6

4.4.4 Connection successful



Picture 7

**Notice:**

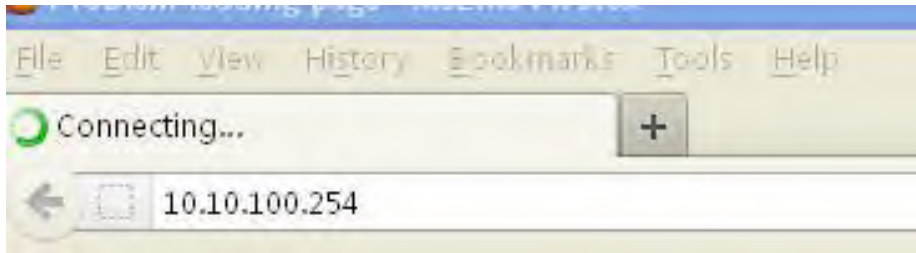
*If AP\_ (serial number of product) is not available in the wireless network list, there may be problems in the connection between the WiFi Plug and the inverter or in setting of WiFi Plug. Please check if the WiFi was installed ok, and inverter has been powered on.*

## 5. Parameters setting

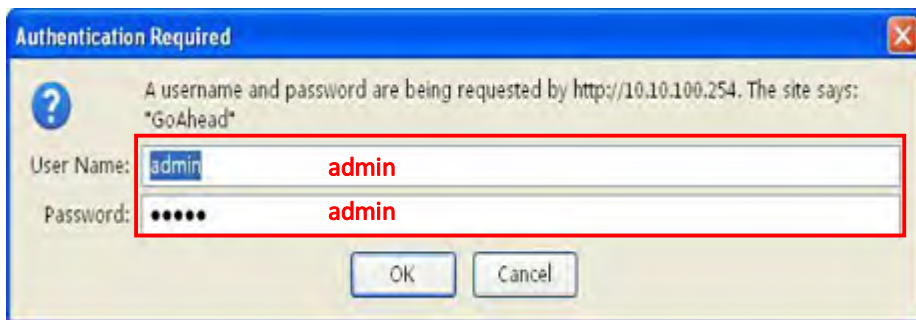
5.1 Open a web browser, and enter **10.10.100.254**, the “Authentication Required” interface will appear, and then fill in username and password, both of which are **admin** as default.

*If the “Authentication Required” interface cannot appear, please use another web browser!*

*Recommended browsers: Internet Explorer 8 or above, Google Chrome 15 or above, Firefox 10 or above!*



Picture 8



Picture 9

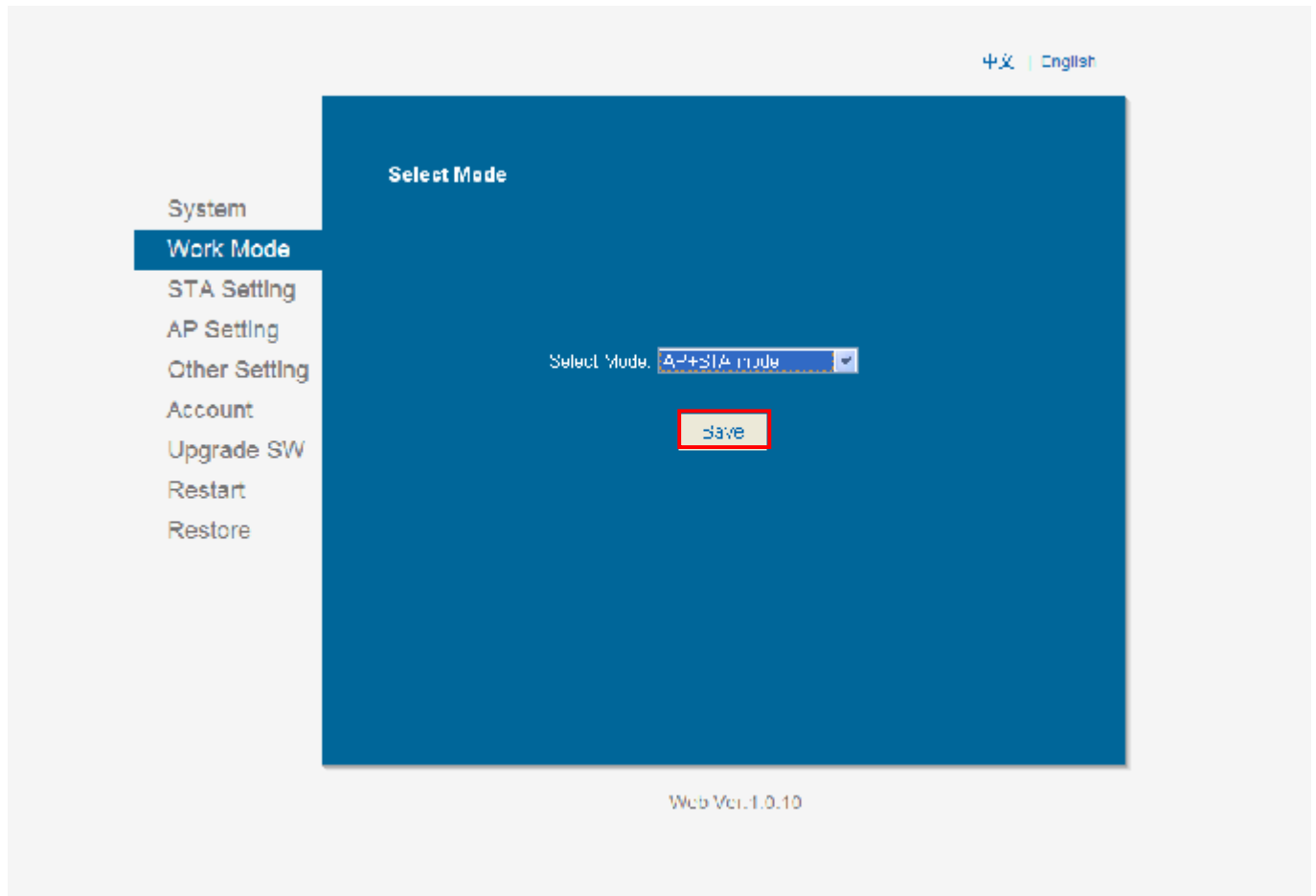
5.2 In the System interface of WiFi Plug, you can view general information of the WiFi Plug.



Picture 10



5.3 Click “Work Mode” and the “Work Mode” interface will appear, here you can set the “Work Mode”. Please see Picture 11



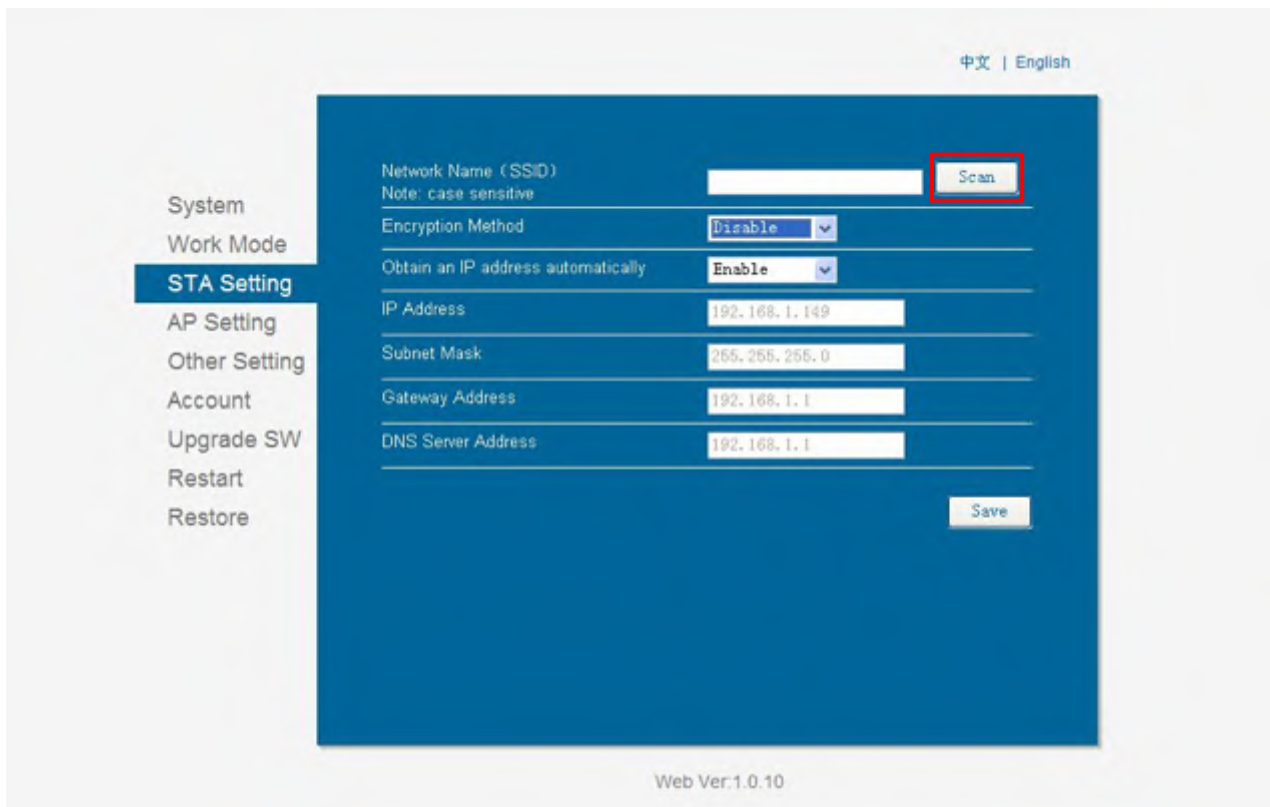
Picture 11

**Notice:**

1. In STA mode, after the web server is connected to the router, it will work as a client only, and the SSID of AP network will be invisible.
2. In AP mode, after the web server is connected to the router, it will work as another router, and the SSID of the AP network will be visible.
3. The WiFi Plug works under both AP and STA mode is recommended.

## 5.4 Start quick setting via “STA Setting” interface

### 5.4.1 Click **Scan** to search the wireless network



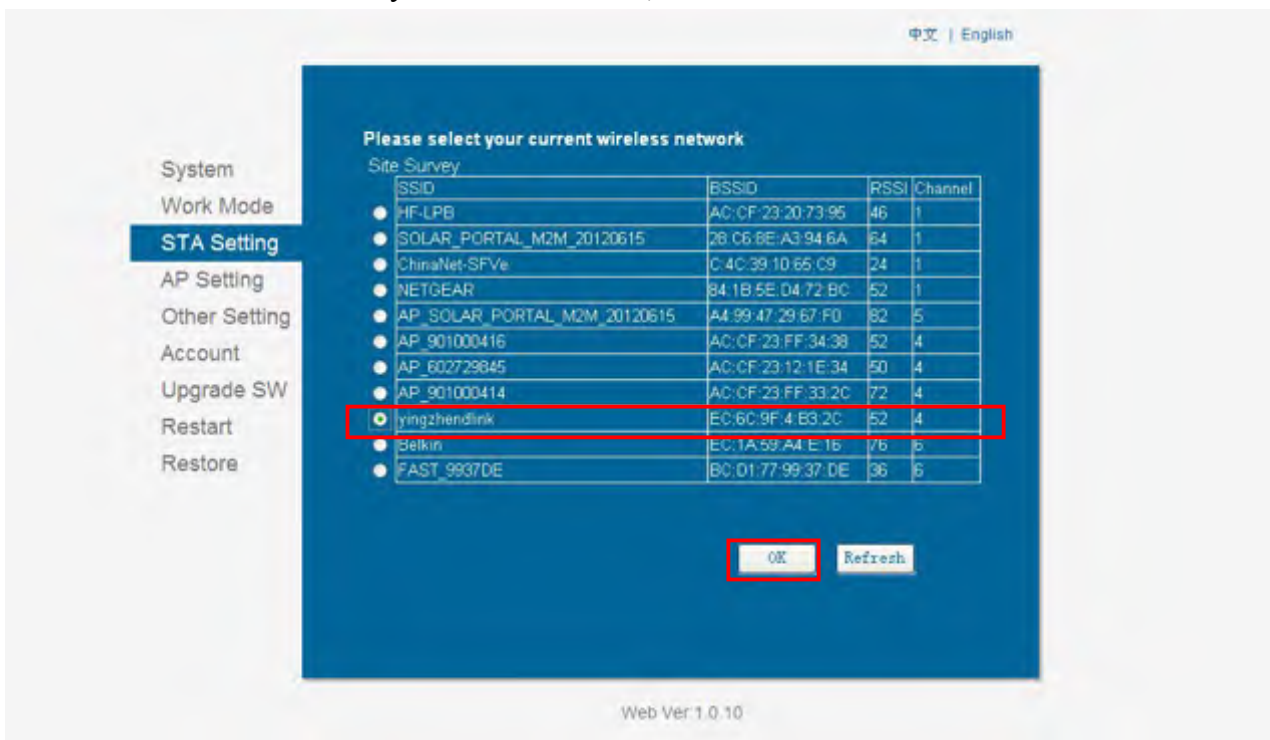
The screenshot shows the 'STA Setting' interface. On the left is a sidebar menu with options: System, Work Mode, **STA Setting** (highlighted), AP Setting, Other Setting, Account, Upgrade SW, Restart, and Restore. The main area has a blue background with the following fields:

- Network Name (SSID): [Text input field] **Scan** button (highlighted with a red box)
- Note: case sensitive
- Encryption Method: **Disable** (dropdown menu)
- Obtain an IP address automatically: **Enable** (dropdown menu)
- IP Address: 192.168.1.149
- Subnet Mask: 255.255.255.0
- Gateway Address: 192.168.1.1
- DNS Server Address: 192.168.1.1
- Save** button

At the bottom right, it says 'Web Ver:1.0.10'.

Picture 12

### 5.4.2 Select the wireless network you need to connect, and then click **OK**



The screenshot shows the 'Please select your current wireless network' interface. On the left is the same sidebar menu as in Picture 12, with 'STA Setting' highlighted. The main area has a blue background and contains a table titled 'Site Survey'.

SSID	BSSID	RSSI	Channel
HF-LPB	AC:CF:23:20:73:95	46	1
SOLAR_PORTAL_M2M_20120615	28:C6:8E:A3:94:6A	64	1
ChinaNet-SFVe	C:4C:39:10:65:C9	24	1
NETGEAR	84:1B:5E:D4:72:BC	52	1
AP_SOLAR_PORTAL_M2M_20120615	A4:99:47:29:67:F0	82	5
AP_901000416	AC:CF:23:FF:34:38	52	4
AP_602729845	AC:CF:23:12:1E:34	50	4
AP_901000414	AC:CF:23:FF:33:2C	72	4
<b>yingzhendlink</b>	<b>EC:6C:9F:4E:3:2C</b>	<b>52</b>	<b>4</b>
Belkin	EC:1A:59:A4:E:15	76	6
FAST_9937DE	B0:01:77:99:37:DE	36	6

The 'yingzhendlink' row is highlighted with a red box. Below the table are two buttons: **OK** (highlighted with a red box) and **Refresh**.

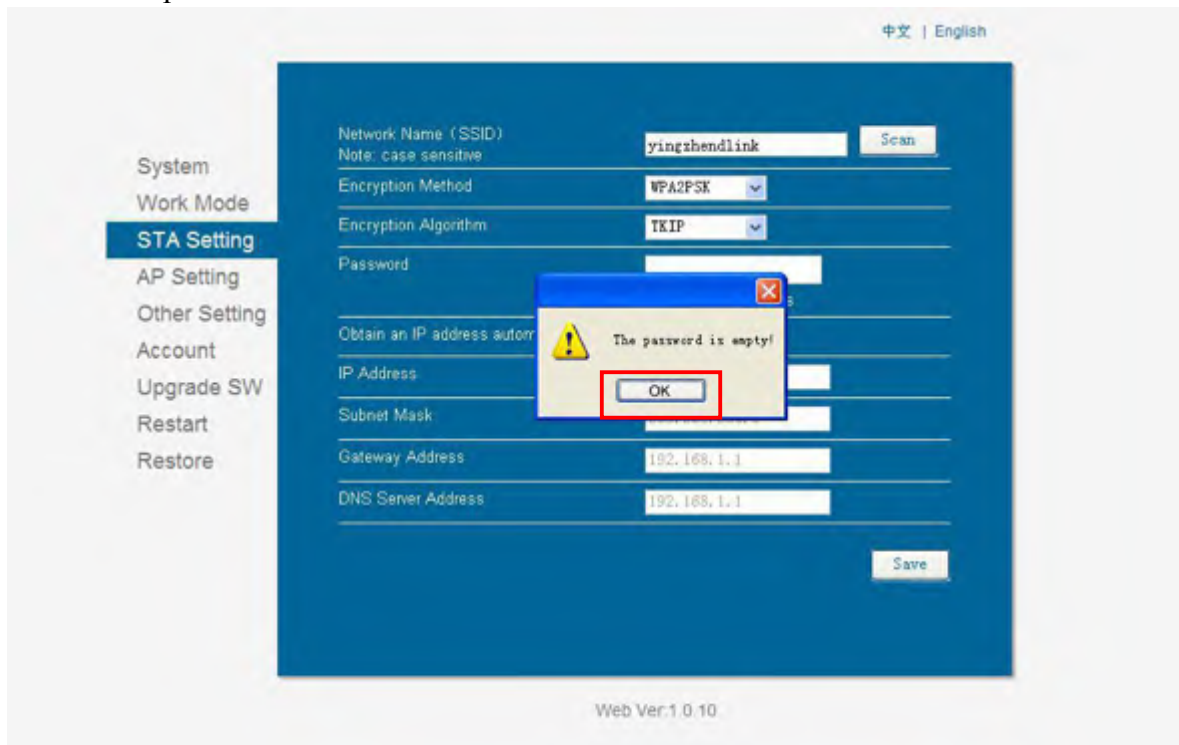
At the bottom right, it says 'Web Ver:1.0.10'.

Picture 13

**Notice:**

1. If the wireless network you need to connect is unavailable, please click Refresh to search it again.
2. If the signal strength (RSSI) of the selected network is lower than 15%, which means unstable connection, please adjust the antenna of the router, or use a repeater to enhance the signal.

5.4.3 After clicking OK, the interface will return to the following page (see picture 14), please click **OK** and enter the password for the selected network and then click **Save**.



Picture 14

5.4.4 Enter the password for the selected network, then click **Save**

中文 | English

System  
Work Mode  
**STA Setting**  
AP Setting  
Other Setting  
Account  
Upgrade SW  
Restart  
Restore

Network Name (SSID)  
Note: case sensitive yingzhendlink Scan

Encryption Method WPA2PSK

Encryption Algorithm TKIP

Password  
Show passwords

Obtain an IP address automatically Enable

IP Address 192.168.1.149

Subnet Mask 255.255.255.0

Gateway Address 192.168.1.1

DNS Server Address 192.168.1.1

Save

Web Ver.1.0.10

Picture 15

5.4.5 If saved successfully, the following page will display. Please click **Restart**

中文 | English

System  
Work Mode  
**STA Setting**  
AP Setting  
Other Setting  
Account  
Upgrade SW  
Restart  
Restore

**Saved Successfully!**

Configurations will take effect after restart.  
After restart, you will need to re-login the configuration interface for other settings, so it is recommended to restart after completing all settings.  
Please click [Restart] to restart now, or click [Back] to continue setting.  
You can restart after all configuration.

Restart Back

Web Ver.1.0.10

Picture 16

**Notice:** Only after clicking **Restart**, the setting will take effect.

5.4.6 Re- log on this setting interface after the Web server reset, and check the network connection status of the module on “System” interface.



Picture 17

**Notice:**

1. After network setting is completed, the Wireless STA mode should be enabled and relative information of your router will display on the interface automatically as follows:

Router SSID: the SSID of your router.

Signal Strength: \*% (please refresh the page if it shows “0”)

IP address: 192.168.1.\*\*\* (Please refresh the page if it shows 0.0.0.0)

Mac address: the Mac address of your local network

2. Network setting might be failed if it still shows 0 or 0.0.0.0 in the signal strength and IP address column. Please try to reconfigure the network connection to the device from step (a) on page 6.

## 6. Modify the account information for the WiFi Plug

6.1 Please enter the new username as well as password you would like to use, then click Save.

The screenshot shows a web interface for setting a new account and password. On the left is a sidebar menu with options: System, Work Mode, STA Setting, AP Setting, Other Setting, Account (highlighted), Upgrade SW, Restart, and Restore. The main content area is titled 'Set a New Account and Password' and contains the following fields:

Current User Name	admin
Current Password	admin
New User Name	<input type="text" value="123"/>
New Password	<input type="password" value="123"/>

Below the fields is a 'Save' button. Two callout boxes with arrows point to the input fields: 'Enter a new username' points to the 'New User Name' field, and 'Enter a new password' points to the 'New Password' field. The bottom of the page shows 'Web Ver: 1.0.12'.

Picture 18

6.2 After clicking Save, the following interface will display, please click Restart

The screenshot shows a 'Saved Successfully!' message on a blue background. The sidebar menu is the same as in Picture 18. The main content area contains the following text:

**Saved Successfully!**

Configurations will take effect after restart.  
After restart, you will need to re-login the configuration interface for other settings, so it is recommended to restart after completing all settings.  
Please click [Restart] to restart now, or click [Back] to continue setting.  
You can restart after all configuration.

At the bottom, there are two buttons: 'Restart' (highlighted with a red box) and 'Back'. The bottom of the page shows 'Web Ver: 1.0.12'.

Picture 19

**Notice:**

1. Only after clicking **Restart**, the setting will take effect
2. Please enter the new username as well as password when you try to logon to this module next time

## 7. Register on SolarMAN Portal

Open a web browser and visit the portal website: <http://www.solarmanpv.com/portal> .

*Recommended browsers: Internet Explorer 8 or above, Google Chrome 15 or above, Firefox 10 or above, Safari 4 or above!*



Click **Register Now**

Picture 20



The screenshot shows the 'Create a New Account' page for SolarMAN. At the top, there is a logo for SolarMAN with the tagline 'Monitored Analyzed Networked'. In the top right corner, there are language selection options: '中文' and 'English'. The main heading of the form is 'Create a New Account'. On the left side of the form, there is a small image of solar panels on a green hill. The form contains the following fields and instructions:

- Email:** A text input field with a red asterisk. To its right, it says: 'Please input a valid Email address, used for login and password retrieving'.
- Confirm Email:** A text input field with a red asterisk. To its right, it says: 'Please re-input a valid Email address'.
- Account Type:** A dropdown menu currently showing 'End User'.
- Password:** A text input field with a red asterisk. To its right, it says: '6-16 charaders, case sensitive'.
- Confirm Password:** A text input field with a red asterisk. To its right, it says: '6-16 charaders, case sensitive'.
- Below the password fields, there is a checkbox labeled 'I accept [SolarMAN Terms of Service](#)'.
- At the bottom, there are two buttons: 'Next' (highlighted with a red box) and 'Cancel'.

Fill in your email address and password, and then click **Next**


Picture 21



Create a New Account

Site Name  \*Maximum 20 Letters

Upload Image



OK

Country  \*

Province/State  \*

City  \*

Street  [Locate Your Site On Map](#)

ZIP Code

Timezone

Number Format

Temperature Unit

System Size(kWp)  \*

Feed-in Tariff(FIT)

Panel Type

Inverter Type

Description

☒ Make This Site Public

Registration

Datalogger S/N  \*

Installer

Contact

Name

Phone

Complete

Cancel

You can find the Serial Number at the bottom of the Wifi Plug

Fill in the information as required, then click **Complete**

Picture 22

Wifi Plug.LPB-V1.0--EN

15



If registration is successful, the above interface will display. Click **OK** to return to the homepage of the portal.

Picture 23

## 8. Log in SolarMAN Portal to manage power station

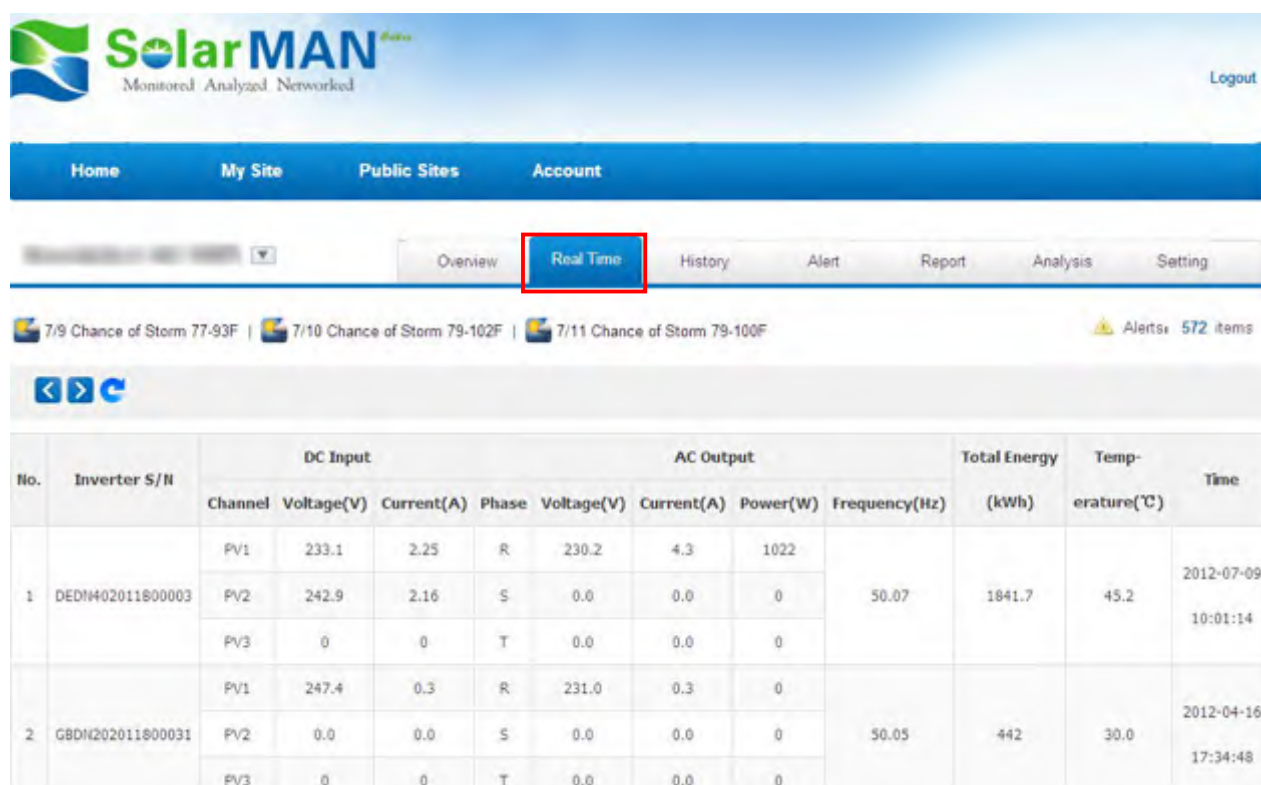
After successful registration, visit the login page of SolarMAN Portal, and input your E-mail and password to access the monitoring system and start monitoring and management of power plants.



Picture 24

### **Notice:**

*If users access the monitoring system for the first time within ten minutes after successful registration, please check the "Real Time" interface. If there are data shown in the Real Time interface, network setting of data logger and other connection are deemed successful.*



No.	Inverter S/N	DC Input				AC Output				Total Energy (kWh)	Temp- erature(°C)	Time
		Channel	Voltage(V)	Current(A)	Phase	Voltage(V)	Current(A)	Power(W)	Frequency(Hz)			
1	DEDH402011800003	PV1	233.1	2.25	R	230.2	4.3	1022	50.07	1841.7	45.2	2012-07-09 10:01:14
		PV2	242.9	2.16	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				
2	GBDN2020118000031	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				

Picture 25

## 9. Contact us

If any technical problems, please contact us, with the following information in hand:

- ◆ Device model
- ◆ Serial number of WIFI Plug
- ◆ Type of your inverter

### IGEN Tech. Co., Ltd.

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