LIW-1 Quick Guide

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) thisdevice must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC’s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.
Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

FCC ID: 2AEPW-LIW-1

Warning:
Please remove logger after power off.

Quick Guide

WiFi Kits LIW-1

From this page

This manual is suitable for firmware version of H4.01.40Y2.0.02W1.0.03+.

WiFi Kit LIW-1 is an external data logger in the SolarMAN PV monitoring series.

By connecting with single or multiple inverters through RS485/422/232 interface, the Kit can collect information of PV systems from inverters. With the integrated WiFi function, the Kit can connect to router and transmit data to the web server, realizing remote monitoring for users. In addition, Ethernet is also available for connection to router,enabling transmission of data.

Users can check the runtime status of the device by checking the 4 LEDs on the panel, indicating Power, 485/422, Link and Status respectively.

A : Unpack

B : Install data logger

C : Connect data logger and inverters

D : Connection setting

E : Register on SolarMAN Portal

F : Log in SolarMAN Portal to manage power station

G : Trouble shootings

This Quick Guide is intended to assist users in quick installation and start of WiFi Kit LIW-1. If any problems, please refer to corresponding chapters of LIW-1 User Manual for details.

A : Unpack

I. Checklist

After unpacking the box, please make sure all the items are contained as follows:

1 PV data logger (WiFi Kit LIW-1)

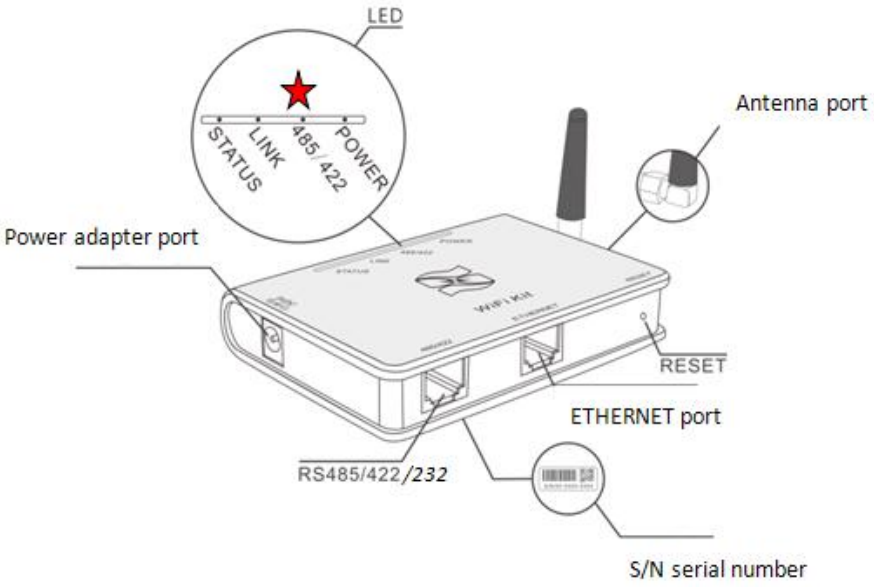
1 power adapter with European or British plug

2 screws

2 expandable rubber hoses

1 Quick Guide

II. Interface and connection



★*Notice: Some products may use RS232.*

B : Install data logger

WiFi Kit can be either wall-mounted or flatwise. Please refer to User Manual for details.

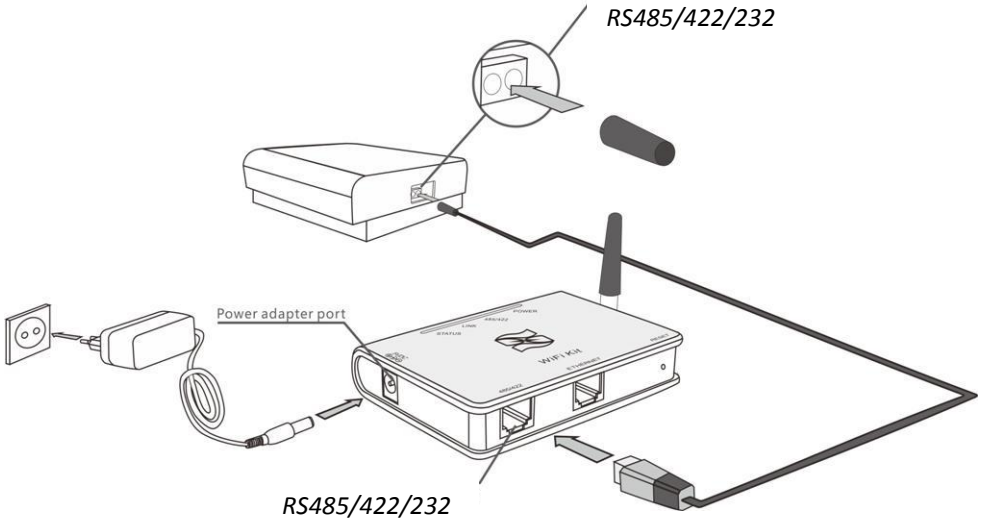
C : Connect data logger and inverters

Notice: 1. Power supply of inverters must be cut off before connection. Make sure that all connections are completed, then power the data logger and inverters, otherwise personal injury or equipment damage may be caused.

2. Basic version of WiFi Kit with RS485/422 port can be connected to up to 4 inverters at a time. Advanced version may support up to 32 devices; WiFi Kit with RS232 port can be connected to 1 inverter at a time.

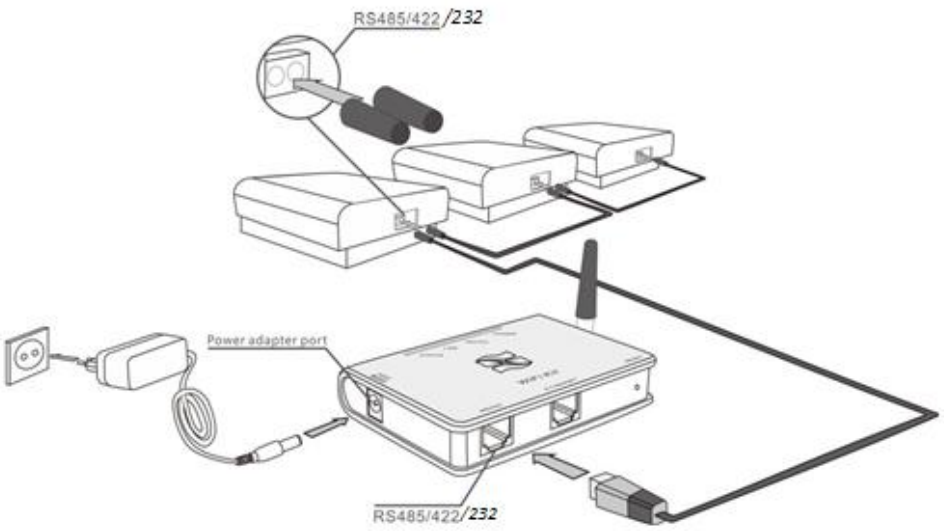
I. Connection with single inverter

Connect inverter and data logger with network cable, and connect data logger and power supply with power adapter.



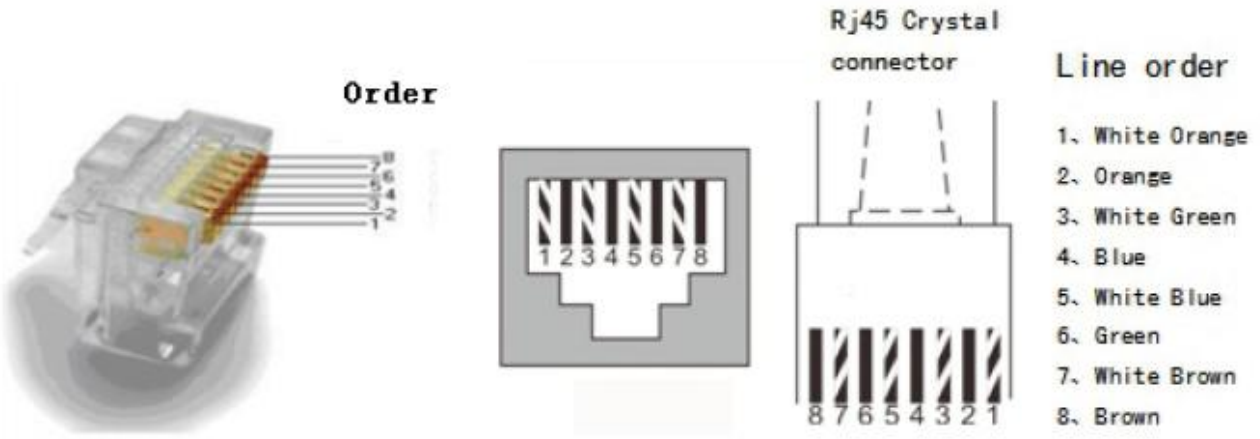
II. Connection with multiple inverters

1. String connect multiple inverters with network cables.
2. Connect the first or last inverter in the string to data logger with network cable.
3. Connect data logger to power supply with power adapter.



Notice:The connectors of the connection cable may differ according to the brands and models of connected inverters.

III. Line order of connector to WiFi Kit



Device	Order	Color	RJ45	RS485	RS422	RS232
WiFi Kit	1	White orange	Pin1	NC	NC	NC
	2	Orange	Pin2	NC	NC	NC
	3	White green	Pin3	NC	RX+	RXD
	4	Blue	Pin4	A	TX+	NC
	5	White blue	Pin5	B	TX-	NC
	6	Green	Pin6	NC	RX-	TXD
	7	White brown	Pin7,	GND	GND	GND
	8	Brown	pin8	GND	GND	GND

IV Confirm connection

When connection between inverter and data logger is finished and with the power on for about 5 minutes, please check the 4 LEDs. If POWER, RS485/422 and STATUS are permanently on, the connection should be successful. If any problems, please refer to G. Debug.

D : Connection setting

The Kit can transfer information via either WiFi or Ethernet, users may choose the appropriate method accordingly.

The configuration of the kit may be set via PC or APP Tool for iPhone and smart phones with Android operation system.

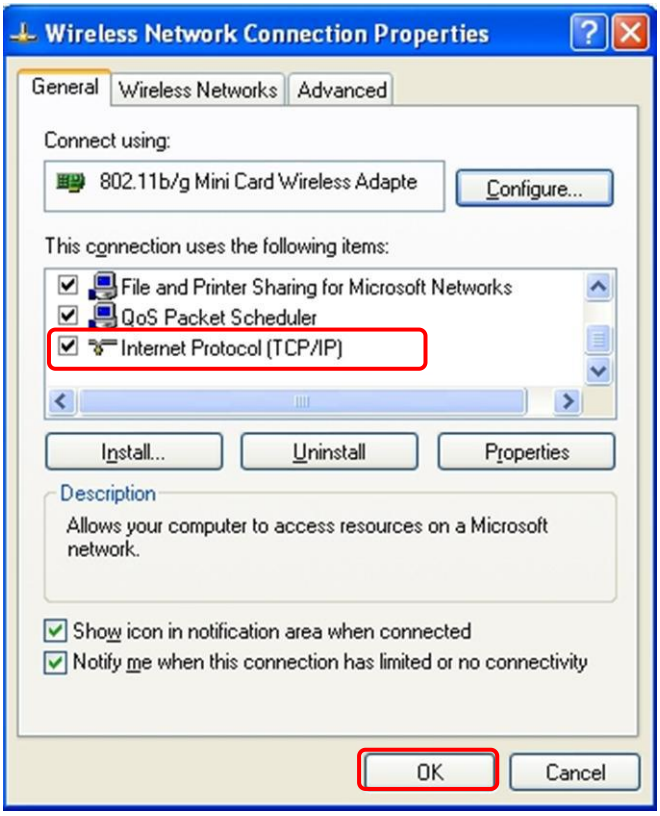
Please visit App Store or Google Play to get SolarMAN App for free.

I. Connection via WiFi

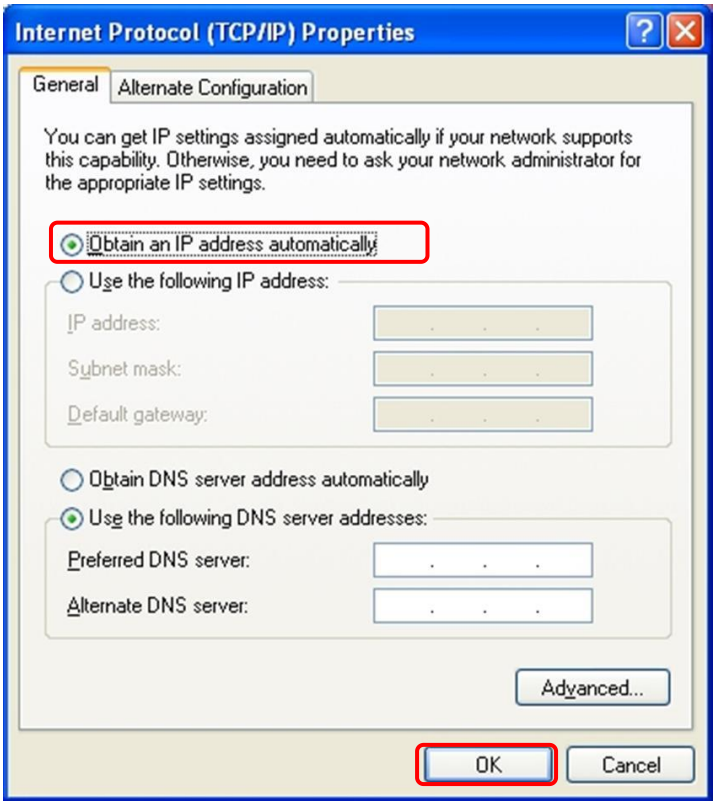
Notice: The setting hereinafter is operated with Windows XP for reference only. If other operating systems are used, please follow the corresponding procedures.

1. Prepare a computer or device with WiFi, e.g. tablet PC and smartphone with WiFi function.
2. Obtain an IP address automatically.

① Open **Wireless Network Connection Properties**, double click **Internet Protocol (TCP/IP)**

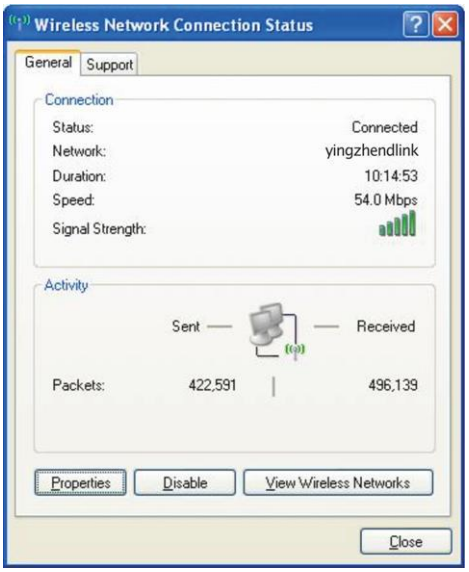


②Select **Obtain an IP address automatically**, and click **OK**

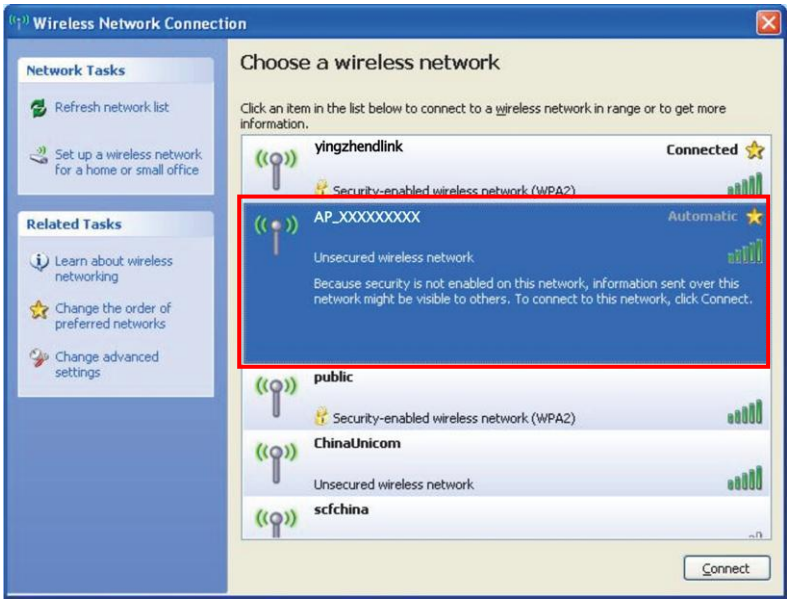


3. Set WiFi connection to the data logger

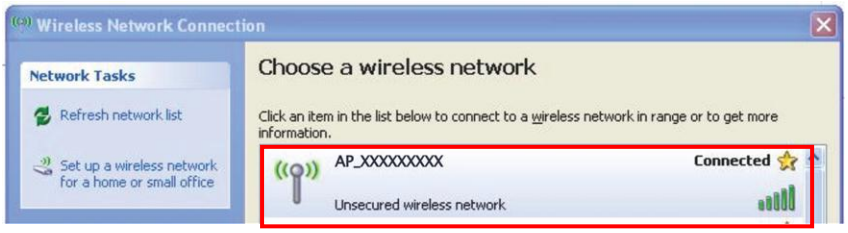
①Open wireless network connection and click **View Wireless Networks**



②Select wireless network of the data logger, no passwords required as default. The network name consists of **AP** and the **serial number of the product**. Then click **Connect**.



③Connection successful

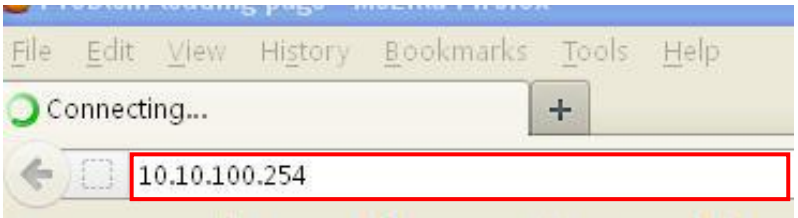


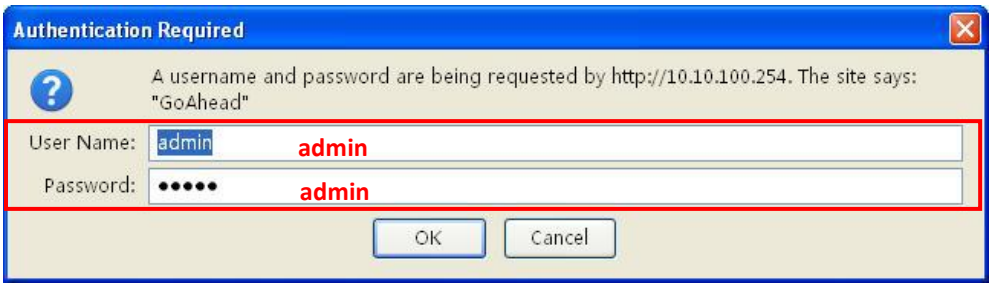
Notice: If **AP_(serial number of product)** is not available in the wireless network list, there may be problems in the connection or setting of data logger. Please refer User Manual for troubleshooting.

4. Set parameters of data logger

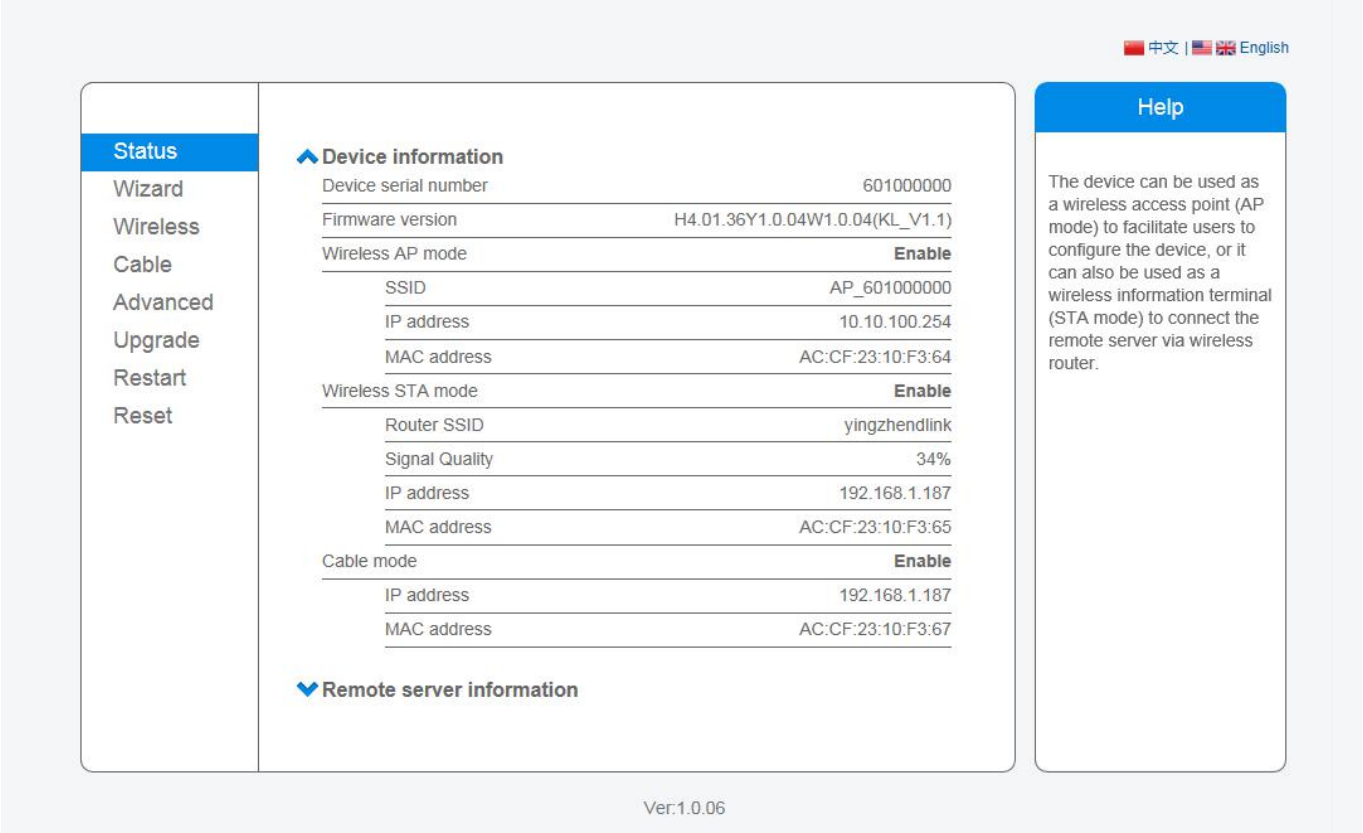
① Open a web browser, and enter **10.10.100.254**, or **http://wifi/** then fill in username and password, both of which are **admin** as default.

Recommended browsers: Internet Explorer 8+, Google Chrome 15+, Firefox 10+



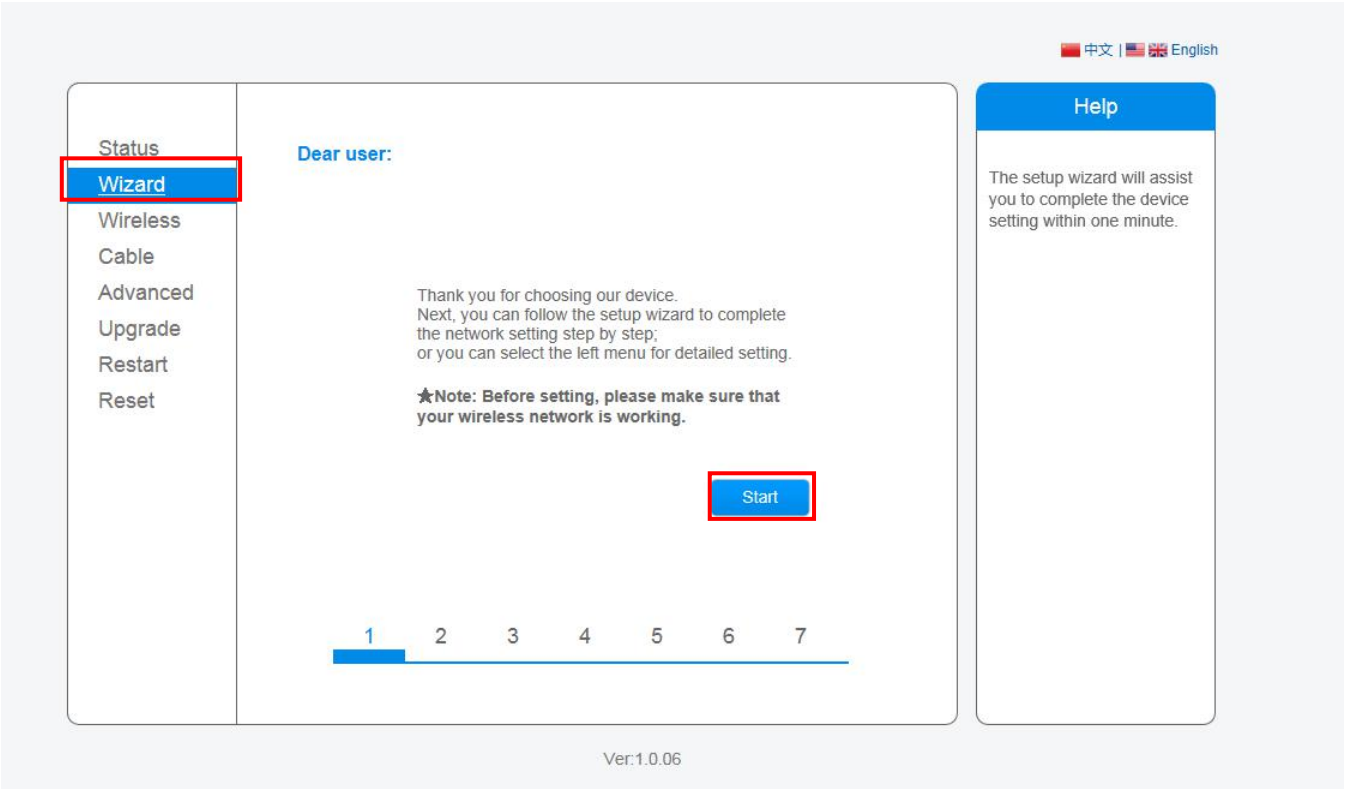


② In the Status page, you can view general information of the data logger.

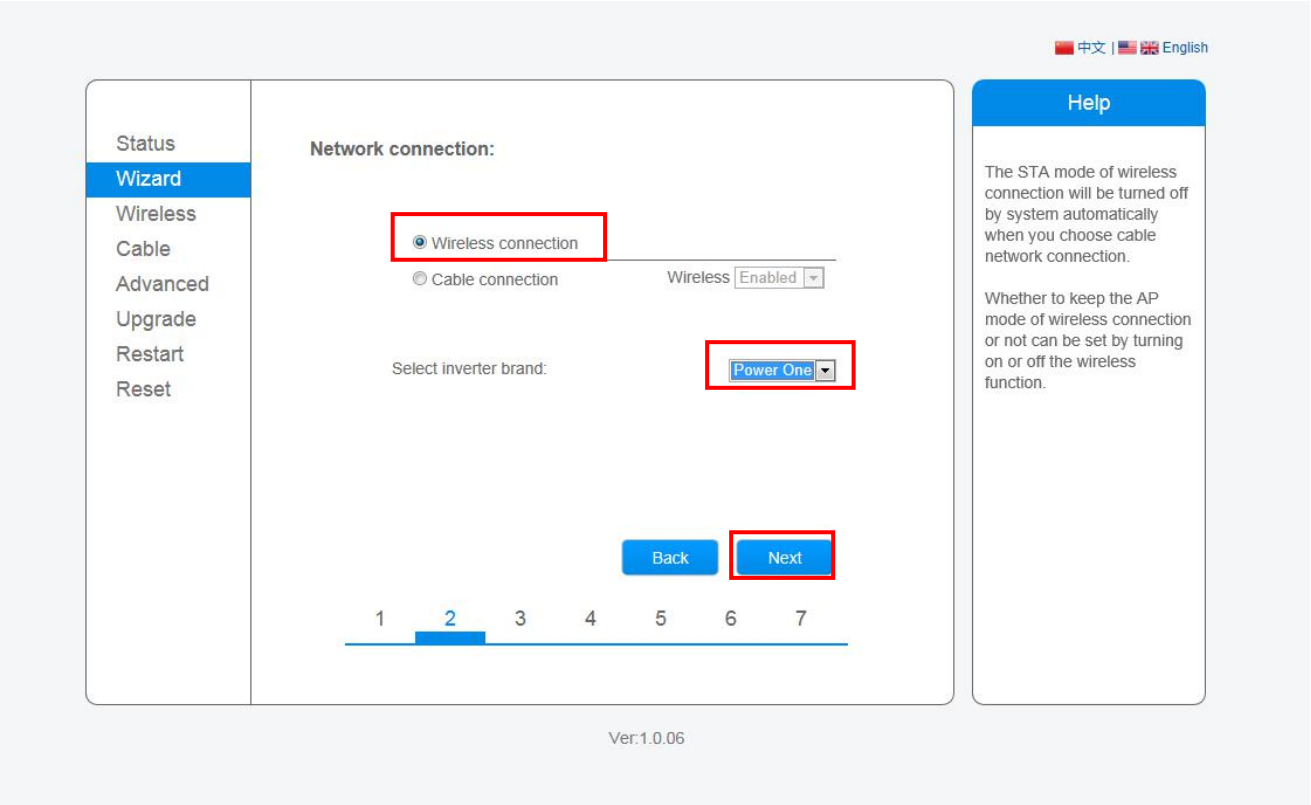


③Follow the setup wizard to start quick setting.

(a)Click **Wizard** to start, then click **Start** to continue..

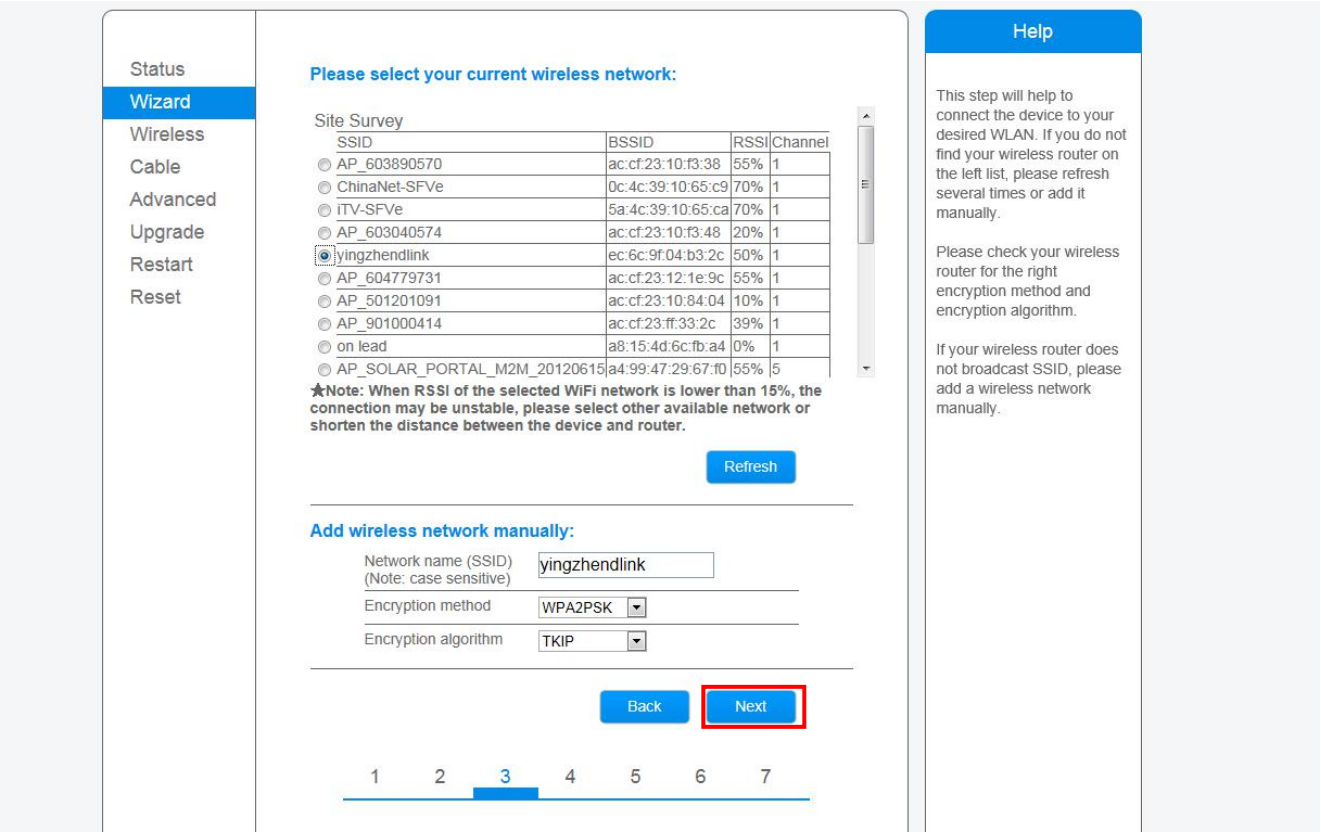


(b)Select **Wireless connection**, and select the type of your inverter, then click **Next**



(c)Click **Refresh** to search available wireless networks, or add it manually.

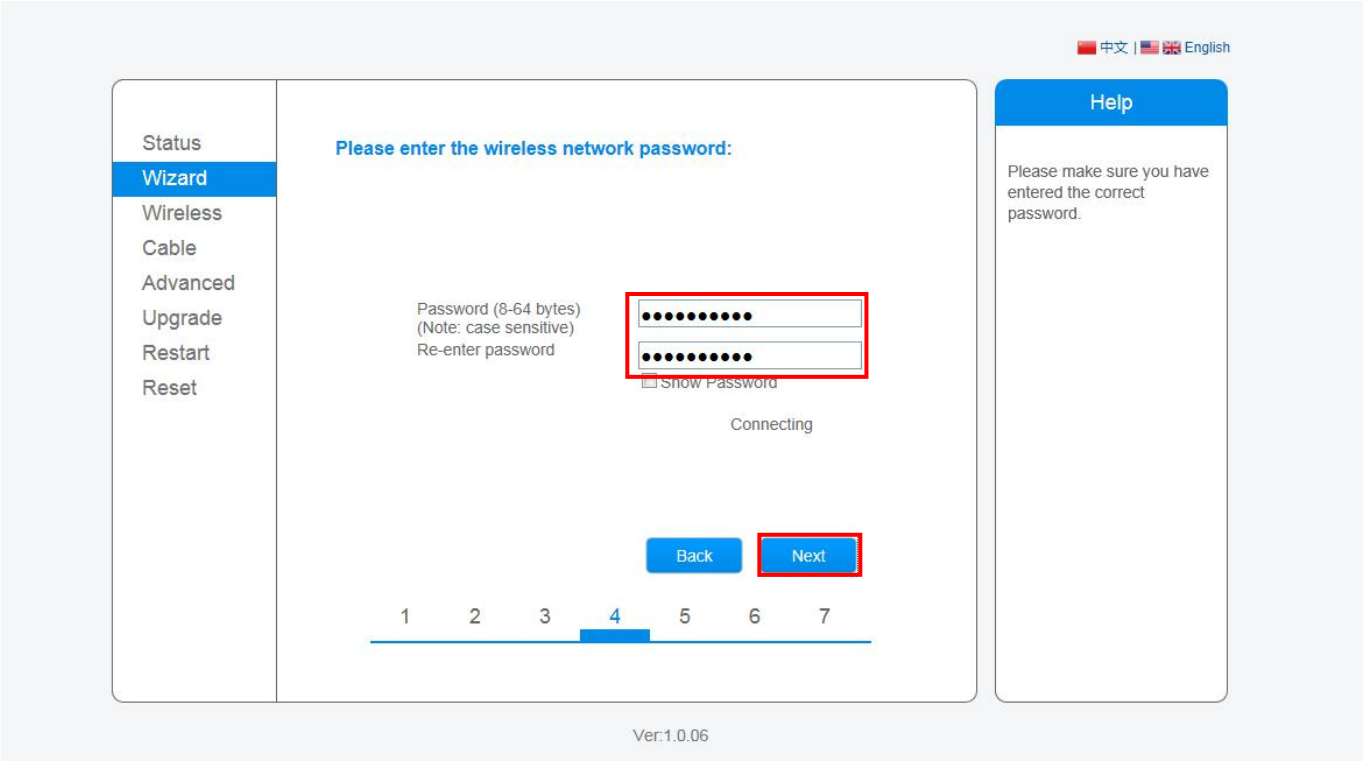
(d)Select the wireless network you need to connect, then click **Next**



Notice: If the signal strength (RSSI) of the selected network is <15%, which means unstable connection, please adjust the antenna of the router, or use a repeater to enhance the signal.

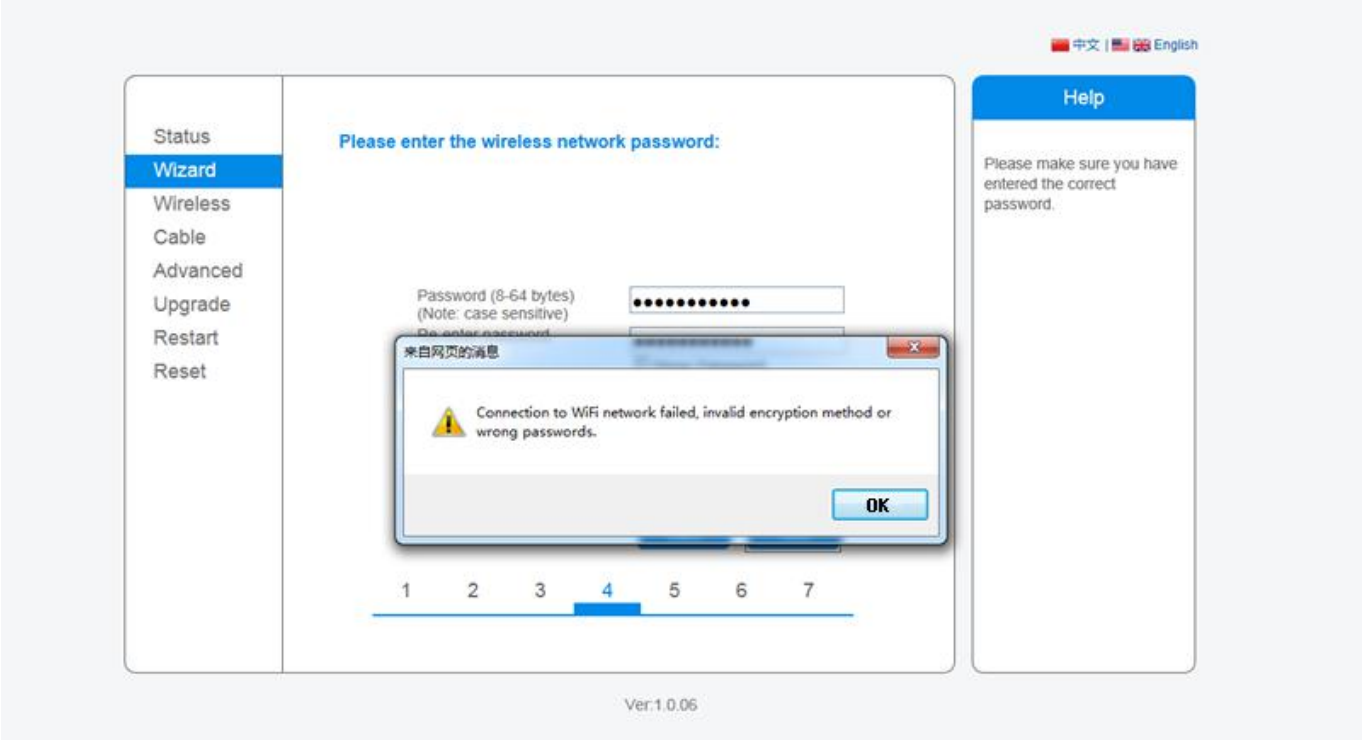
The SSID of your selected router network should be less than 30 characters, in which blank space should not be included.

(e)Enter the password for the selected network, then click **Next**

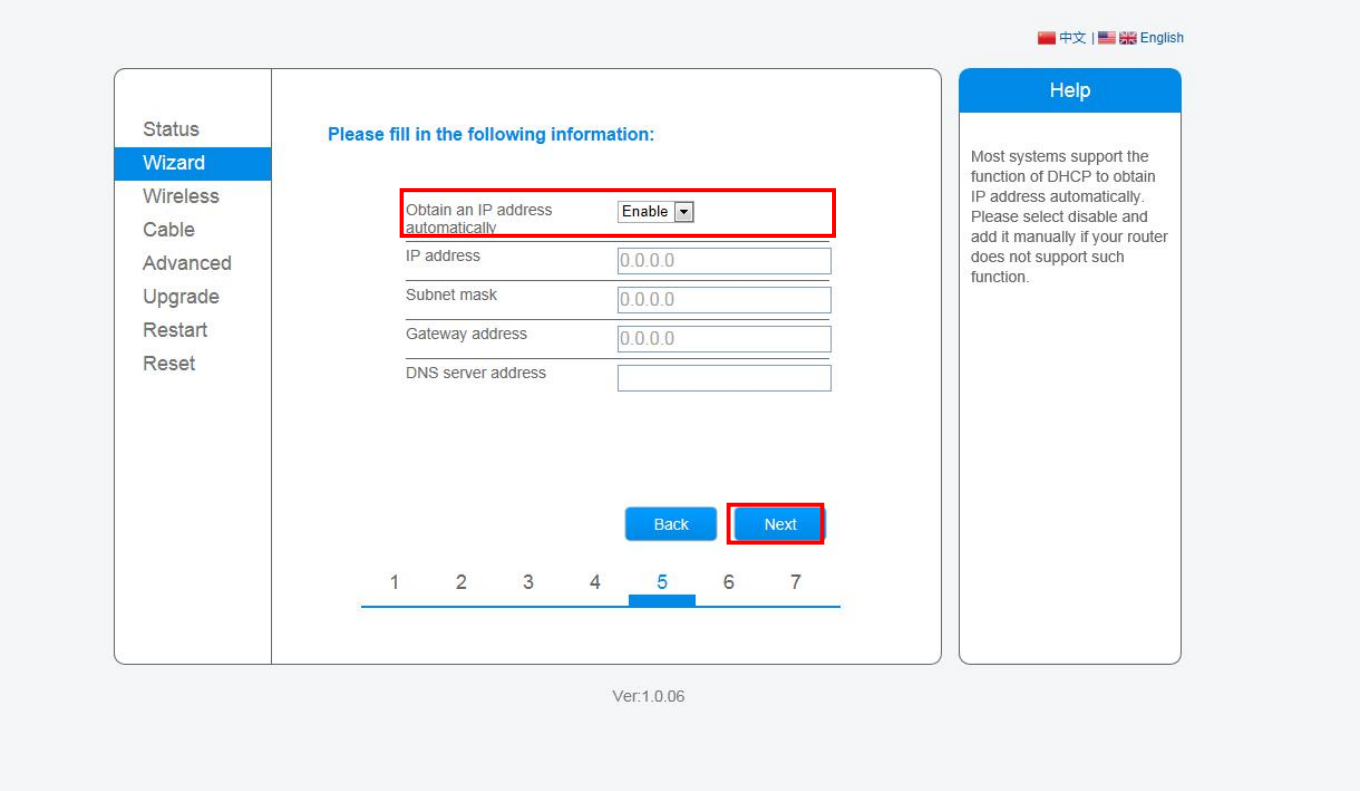


Notice: Router password cannot be recognized if it contains any character such as'&'，'#','%'，and blank space.

The password is being verified, please wait for a while. If you have entered an invalid password or encryption method, an error notice will pop up.

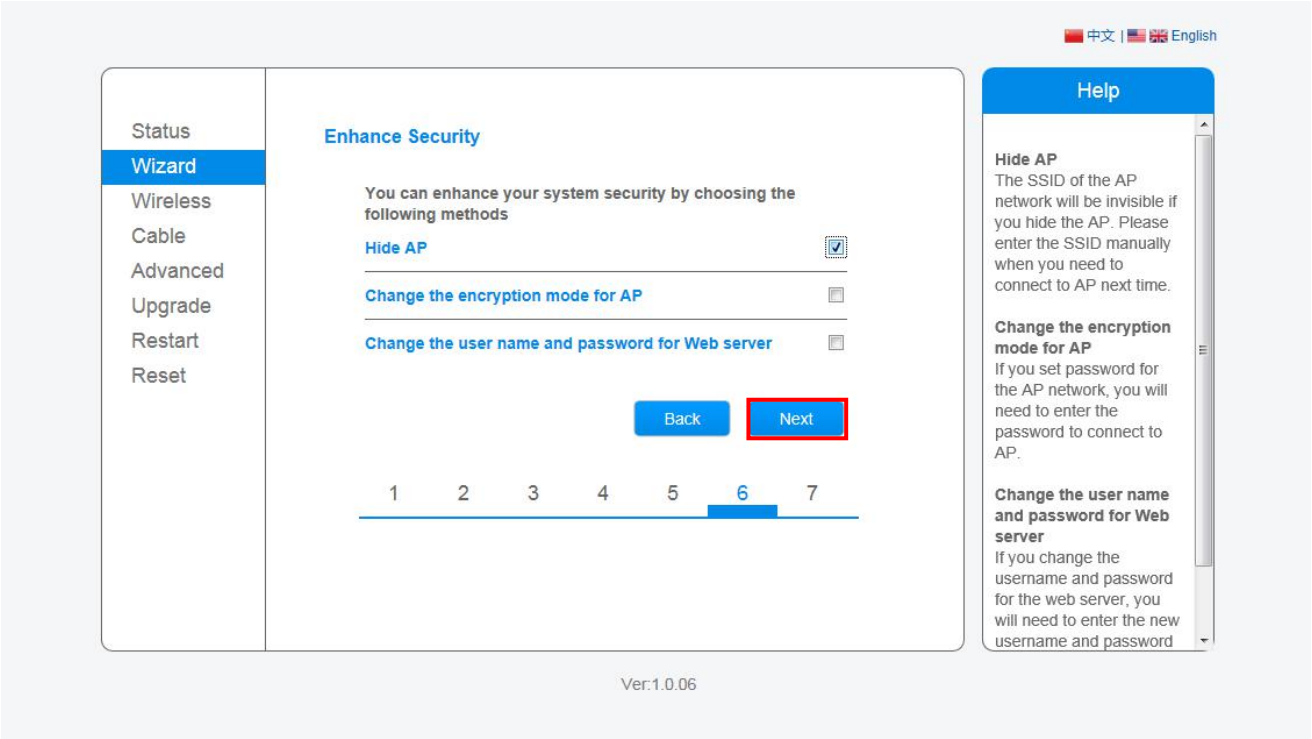


(f)Select **Enable** to obtain an IP address automatically, then click **Next**



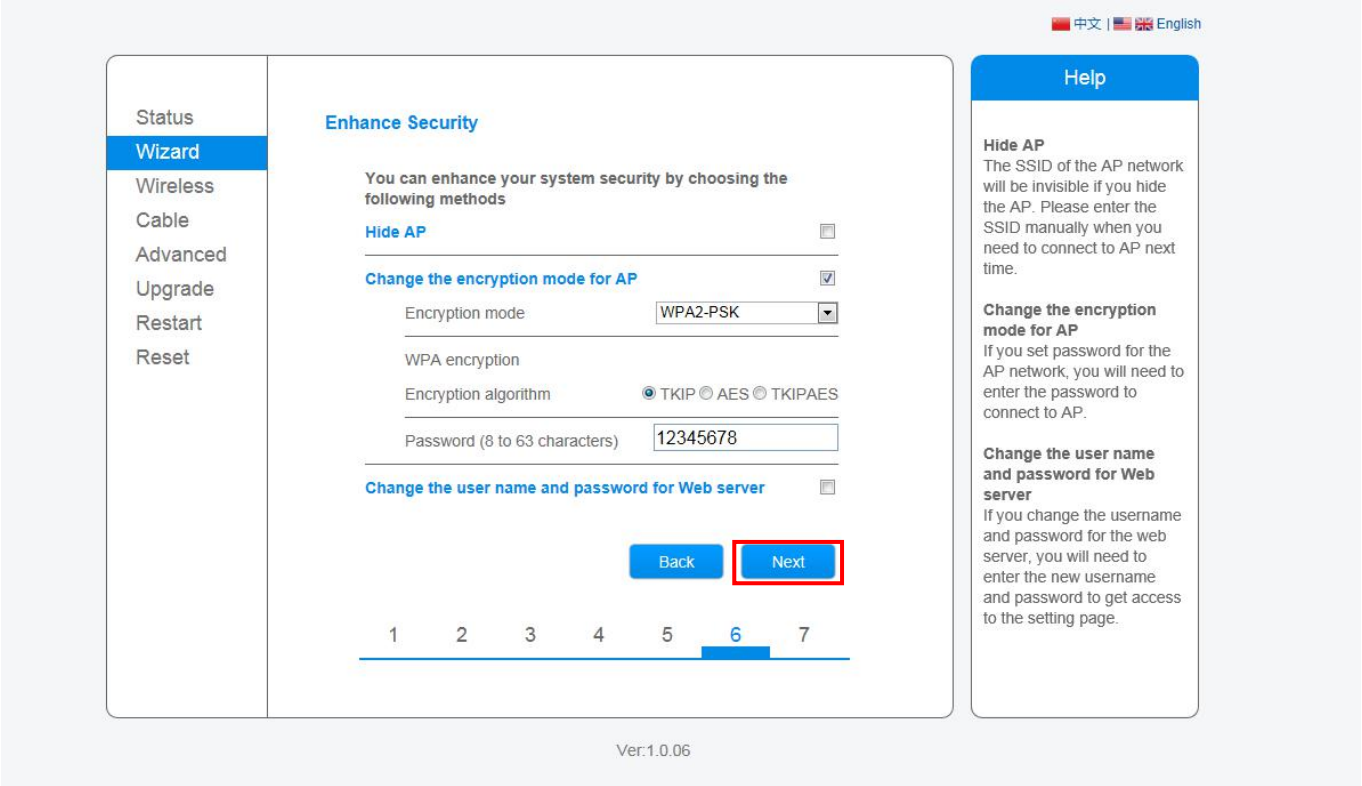
(g) Enhance security settings of the WIFI Kit by selecting any options as listed, then click **Next.**

- Option1



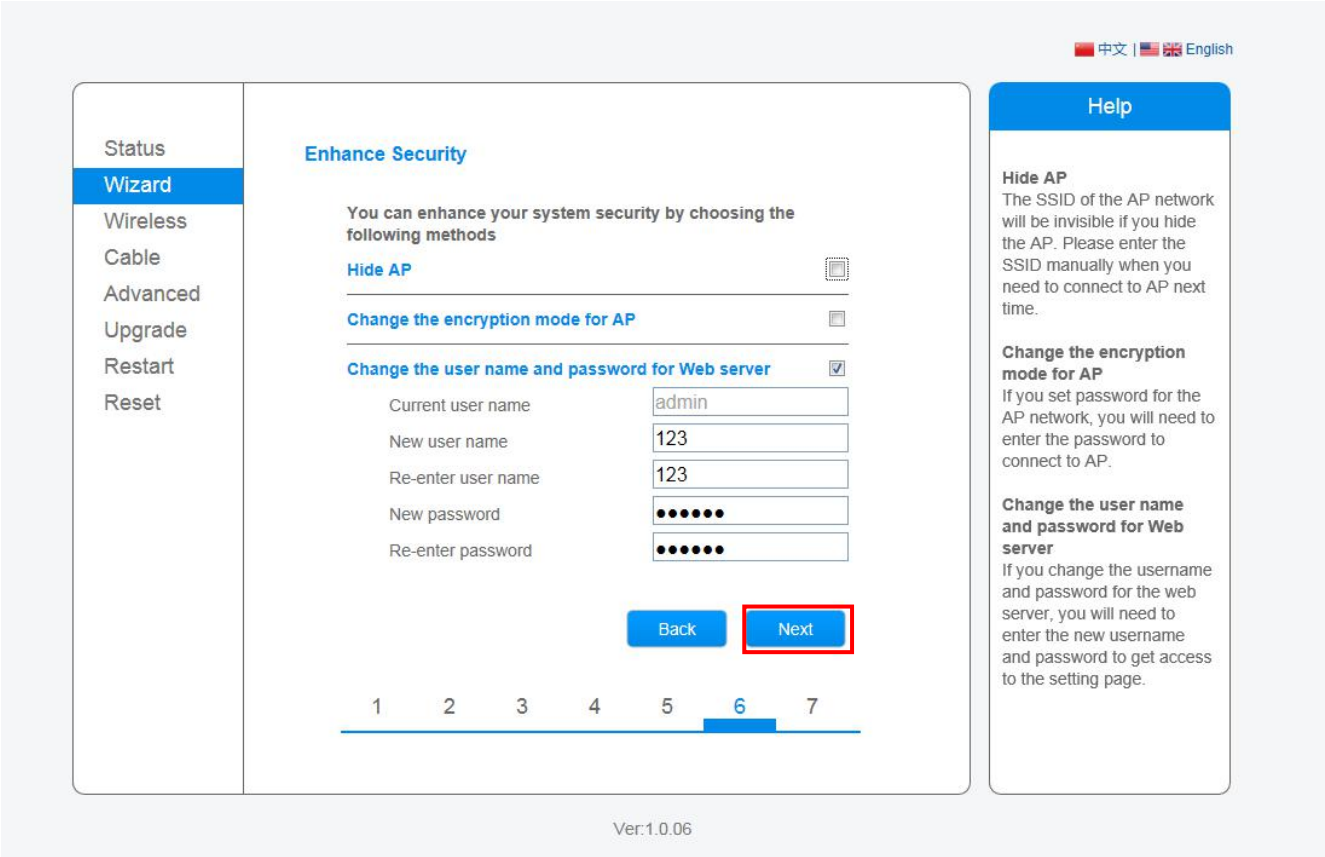
If you choose to **hide AP**, the SSID of the AP network for your WiFi Kit will be invisible on your wireless network list. Please reconfirm the IP address of the WIFI Kit on your router before you log in this server next time.

- Option2



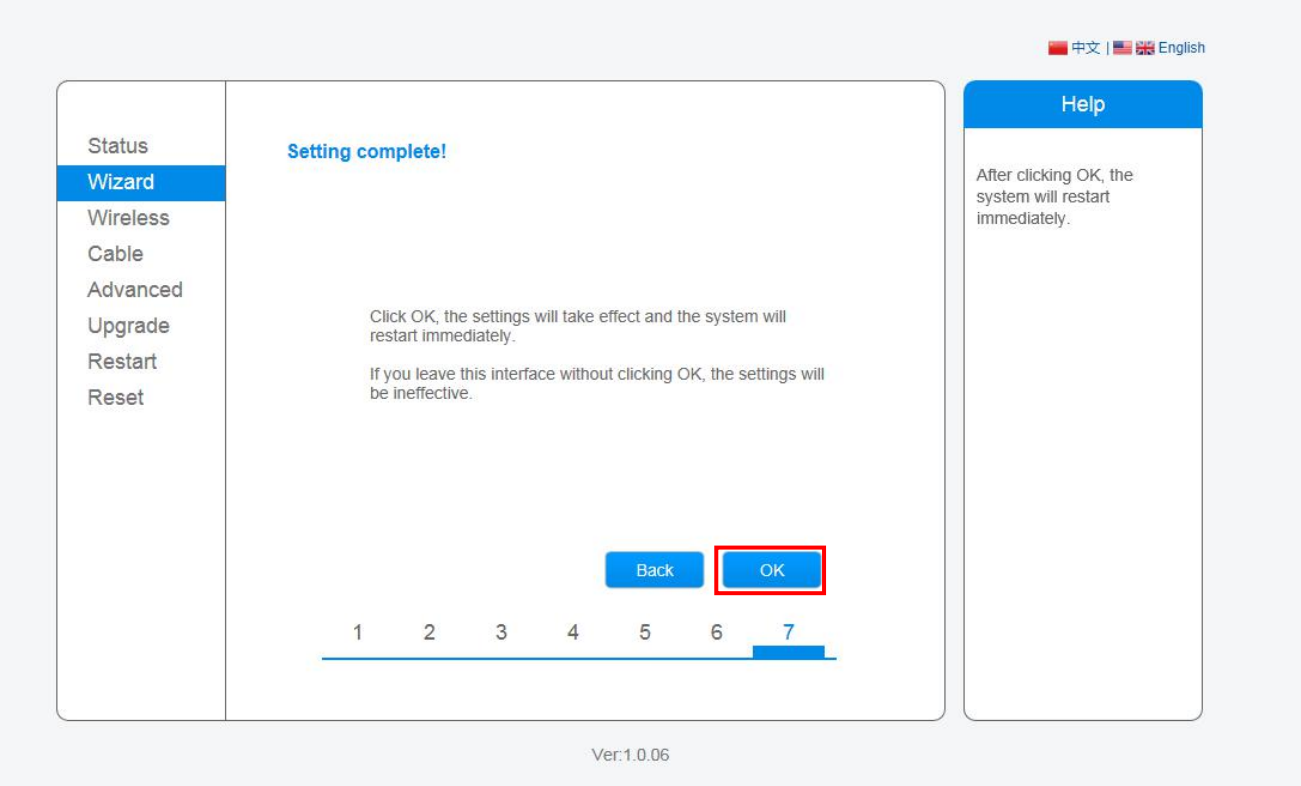
If you wish to change the **encryption mode** of the AP network, you will need to enter the correspondent encryption method and password before you connect to this WIFI Kit next time.

- Option3

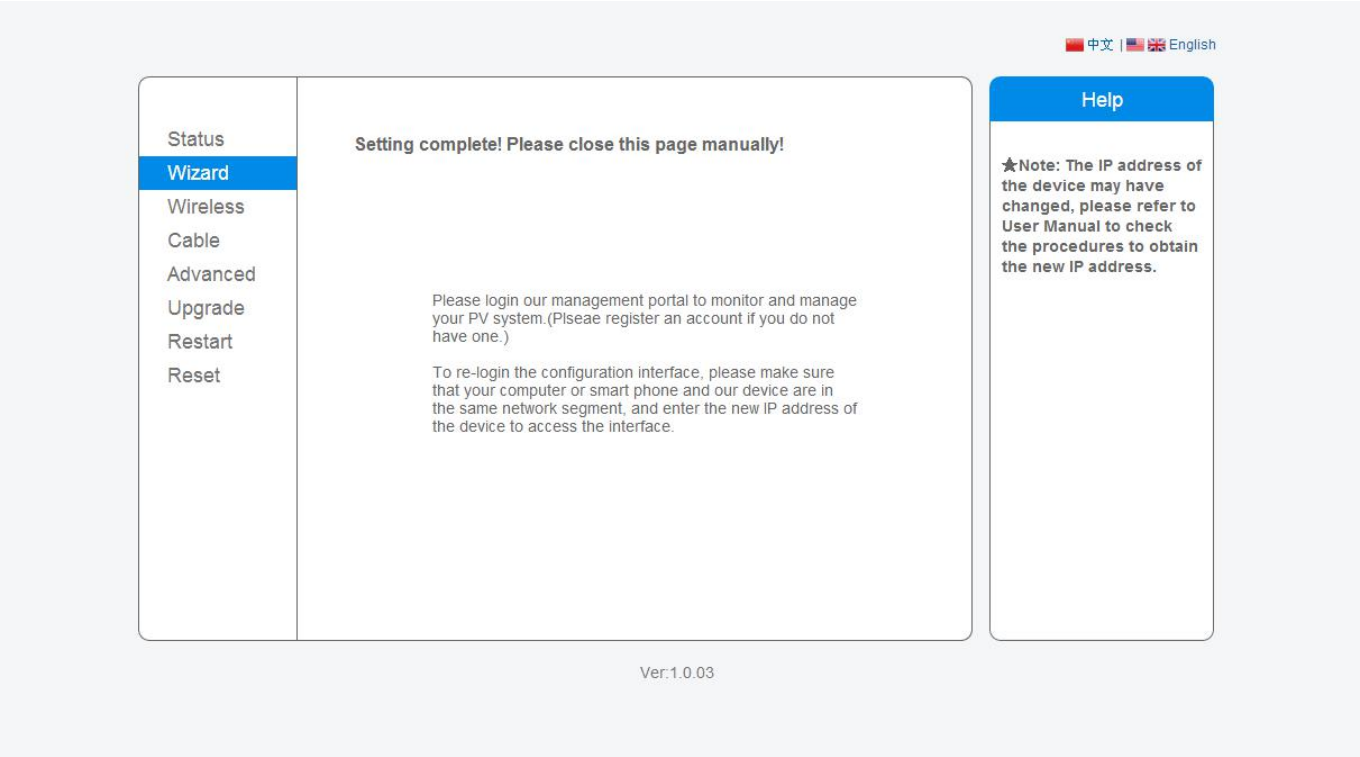


If you wish to change the user name and the password of the Web server, please enter the new username and password when you need to re-log in this server.

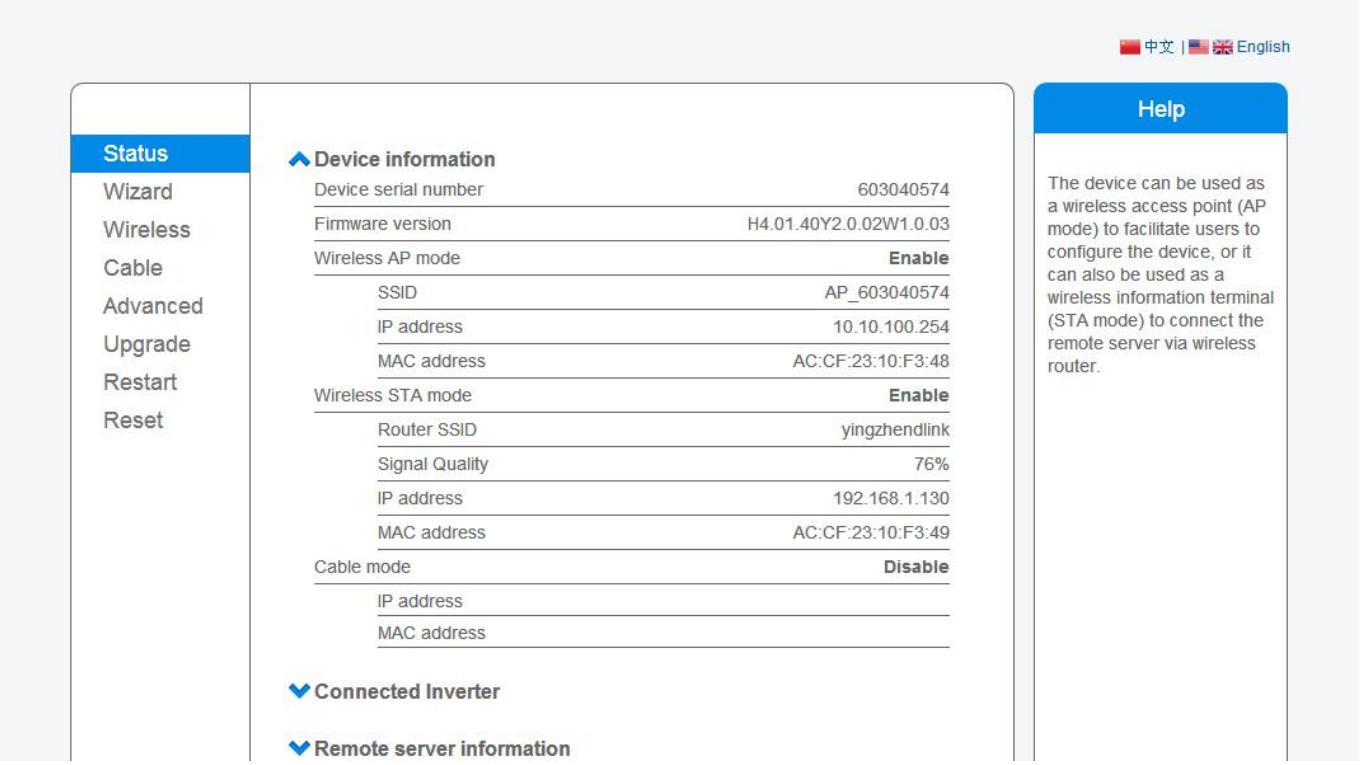
(h)If setting is successful, the following page will display. Click **OK** to restart.



(i)If restart is successful, the following page will display.If this page does not display automatically,please refresh your browser.



(j) Re- log on this setting page to Status interface after the Web server restart, and check the network connection status of the data logger.



Notice: After network setting is complete, the Wireless STA mode should be enabled and relative information of your router will display on the interface automatically. Besides the Remote server A should be pingable as the picture described.

II. Connection via Ethernet

1. Connect the data logger to the router via Ethernet port with network cable. Make sure that your computer and the data logger are connected within the same local area network.

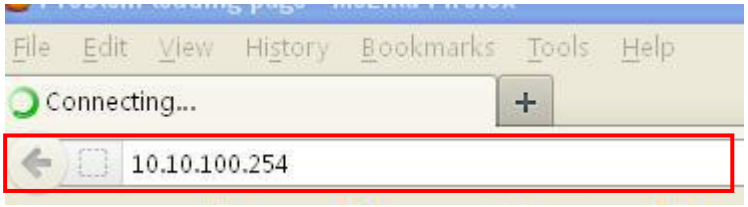
2. Reset the data logger.

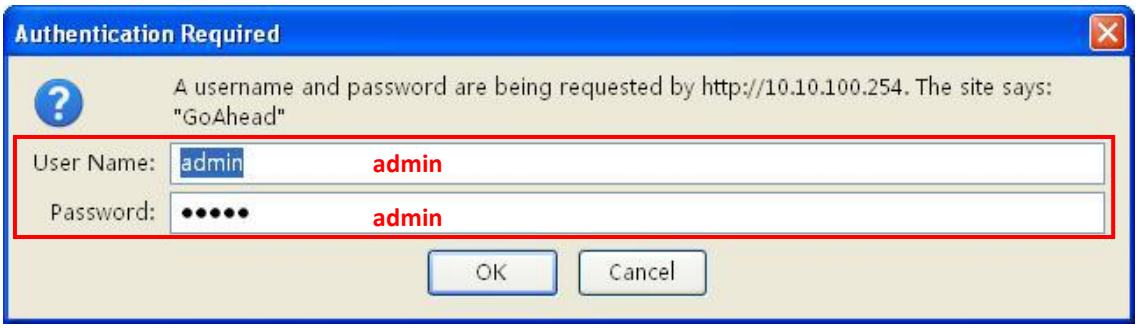
Press the reset button with a needle or open paper clip and hold for a while when the 4 LEDs should be the same as before. Reset is successful when 3 LEDs, except POWER, turn off.

3.Set network to the data logger

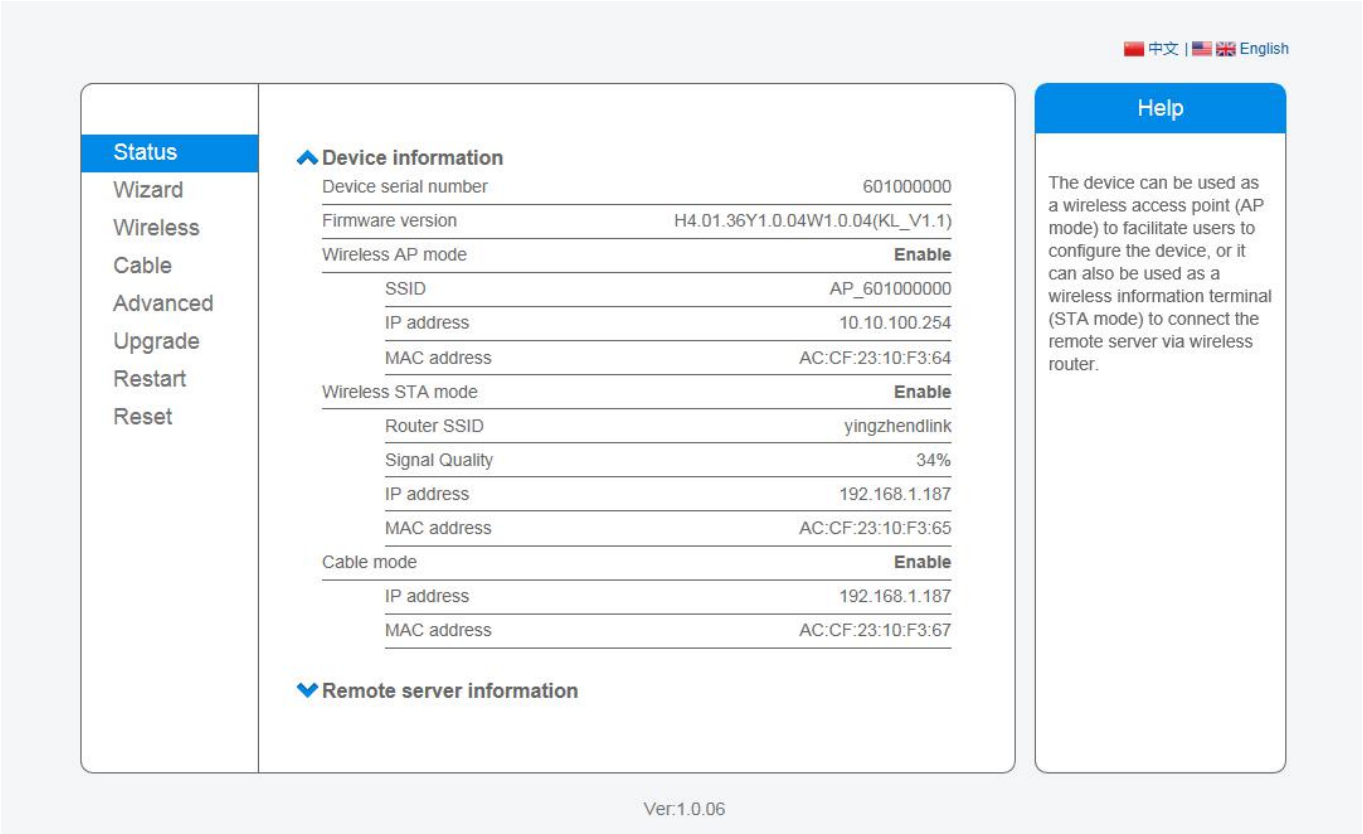
Enter the configuration interface of your router, and check the IP address of the data logger assigned by the router. Open a web browser and enter the assigned IP address to get access to the configuration interface of the data logger. Fill in username and password, both of which are **admin** as default.

Recommended browsers: Internet Explorer 8+, Google Chrome 15+, Firefox 10+



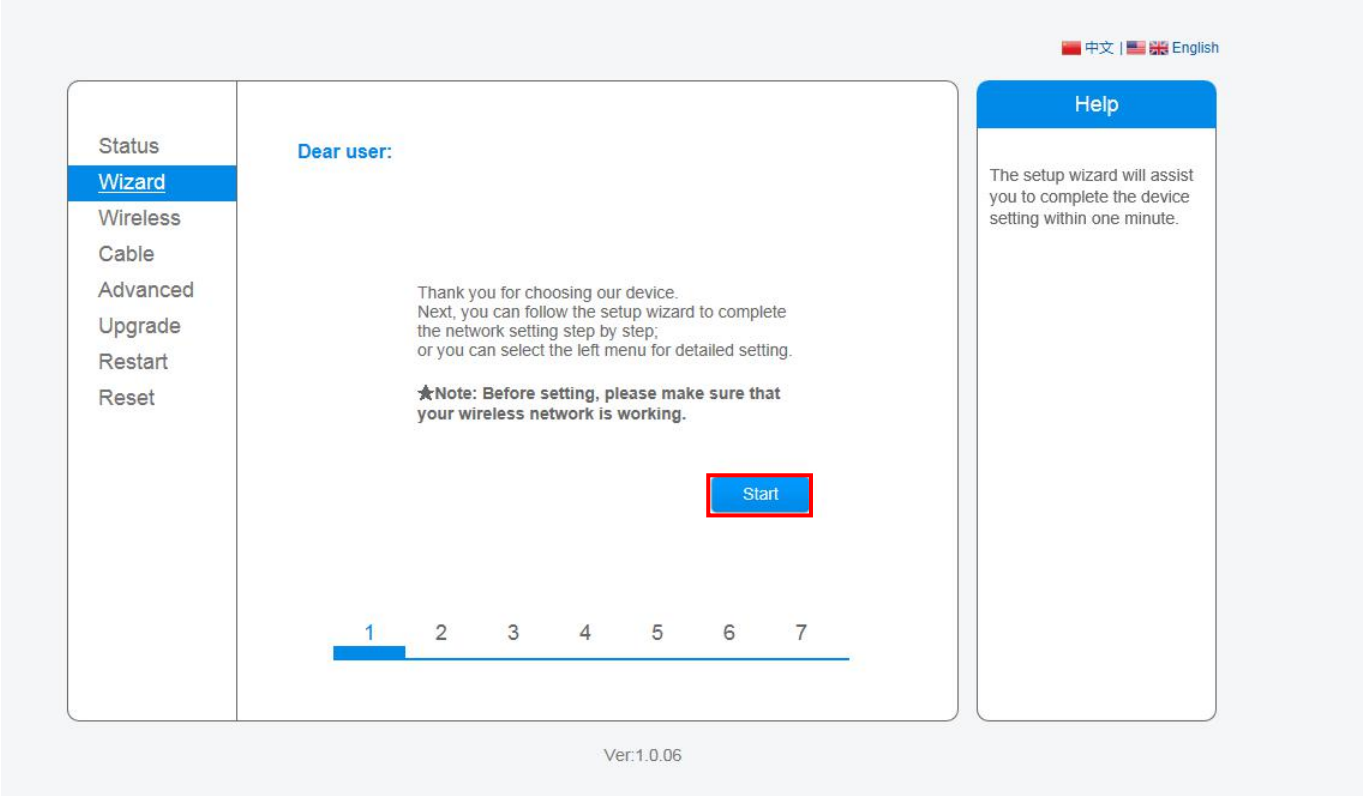


In the Status page, you can view general information of the device.

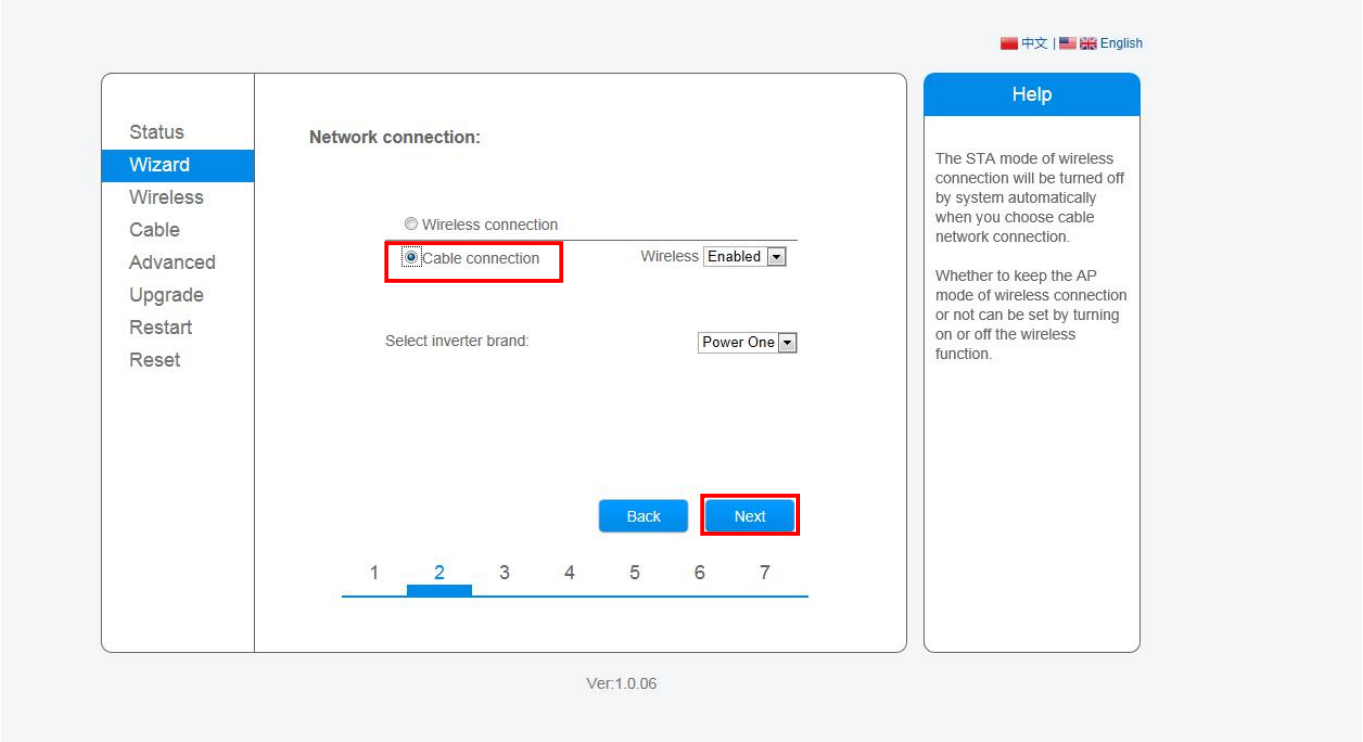


Follow the setup wizard to start quick setting.

①Click **Wizard** to start, then click **Start** to continue.



②Select **Cable Connection** and the type of your inverter, and you can choose to enable or disable the wireless function, then click **Next**



③ Please referring to Step (f) to (h) from page 12 for the following procedures.

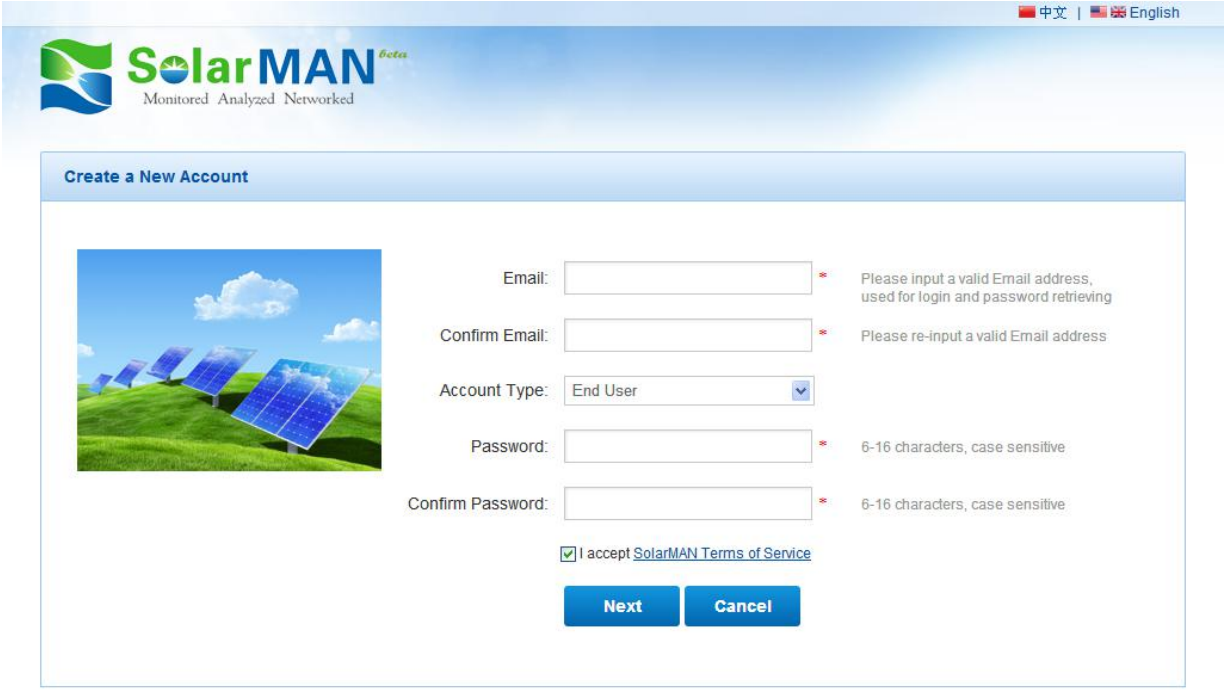
E : Register on SolarMAN Portal

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

Supported browsers: Internet Explorer 8+, Google Chrome 10+, Firefox 9+, Safari 4+

①Click **Register Now**

②Fill in your email address and password, then click **Next**



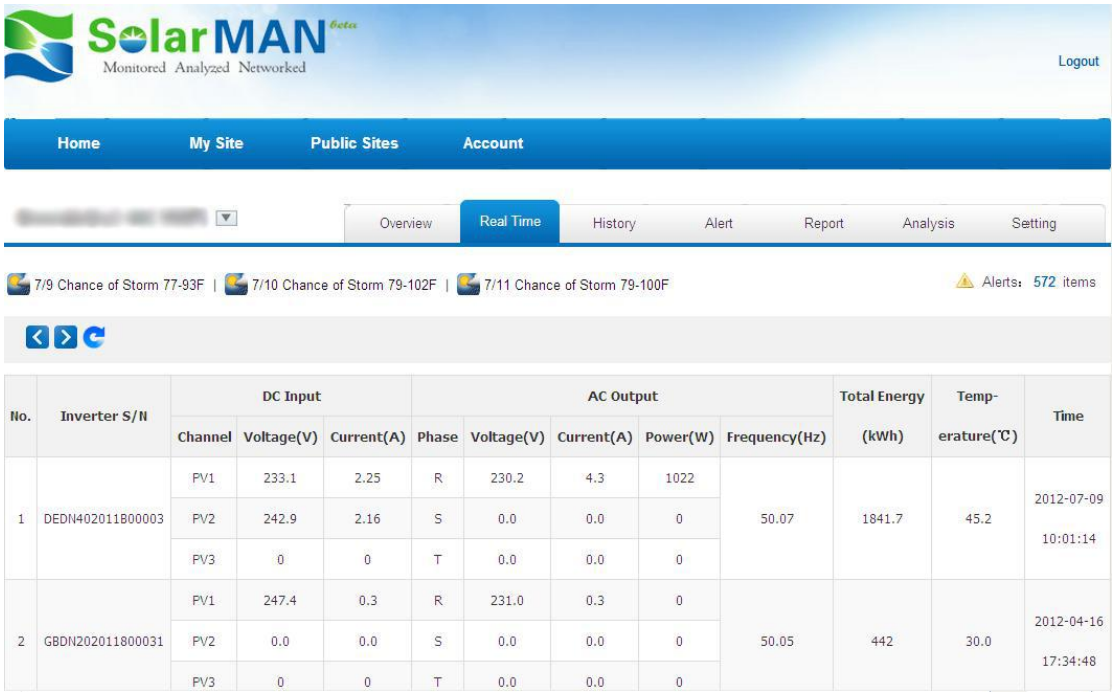
③Fill in the information as required, then click **Complete**

④If registration is successful, the following page will display. Click **OK** to return to the homepage of the portal.

F : Log in SolarMAN Portal to manage power station

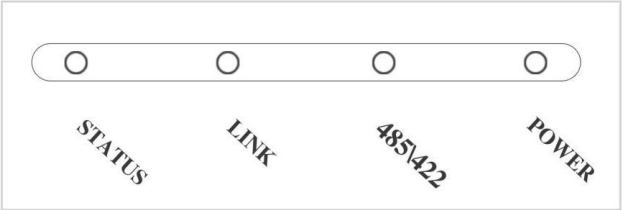
After successful registration and account activation, open the login page of SolarMAN Portal, and input the correct E-mail and password to access the monitoring system and start monitoring and management of power plants.

Notices: If users access the monitoring system for the first time within ten minutes after successful registration, please check the "Real Time" interface as shown below. 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	Temp-	Time
		Channel	Voltage(V)	Current(A)	Phase	Voltage(V)	Current(A)	Power(W)	Frequency(Hz)	(kWh)	erature(℃)	
1	DEDN402011B00003	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	GBDN202011800031	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				

G : Debug



I. LED indication

LEDs	Status	Meaning
POWER	On	Power is normal
	Off	Power is abnormal
485\422	On	Connection between data logger and inverter is normal
	Flashing	Data is transmitting between data logger and inverter
	Off	Connection between data logger and inverter is abnormal
LINK	On	Connection between data logger and server is normal
	Flashing	Data logger is under cable mode or AP mode of wireless mode
	Off	Connection between data logger and server is abnormal
STATUS	On	Data logger works normally
	Off	Data logger works abnormally

II. Trouble shootings

Phenomenon	Meaning	Solutions
Power off	No power supply	Connect power supply and ensure good contacts.
RS485/422 off	Connection with inverter is abnormal	Check the connection cable, and ensure that the cable order comply with descriptions of part III in this text, or the line order described in Inverter quick guide .
		Ensure the stability of RJ-45.
		Ensure that inverter is working under normal condition.
LINK flashing	Wireless setting In AP mode	The data logger has not been connected to Internet.Please configure internet connection to the data logger by following Quick Guide.
LINK off	Connection to remote server failed	Check if router can connect to Internet
		Check if the antenna is loose or falls off. If so, please screw to tighten.
		Check if the device is covered by the range of the router.
		Please refer to User Manul for further information or have the data logger tested with our diagnosis tool.
Status off	Data logger works abnormally	Reset. If reset failed for several times, please contact customer service.
Weak WiFi		Check the connection of antenna
		Add WiFi repeater
		Connect via Ethernet

Note 1 : Please check the status of these 4 LEDS 5 minutes later after the data logger is powered on.

Note 2 : When screw or adjust the antenna, please note that only the metal part can be touched, and do not screw the plastic part, otherwise the antenna may be damaged.

Note 3 : If the equipment still fails to work upon above solutions, please contact your device customer service.

III. Reset

Press the reset button with a needle or open paper clip and hold for a while when the 4 LEDs should be on. Reset is successful when 3 LEDs, except POWER, turn off.

H : Contact

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

- Device model
- Serial number of data logger
- Number of inverters connected
- Problem description
- Screen shot of Status page

IGEN Tech. Co., Ltd.

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