
# MICRO-KIT USEMANUAL

**OMNIK NEW ENERGY**

# General

Omnik data collector MICRO - KIT is my company developed intelligent data acquisition products。MICRO - KIT can effective communication with any Omnik MICRO inverter, and the information of omnik MICRO inverter monitoring and storage, let users can easily see the whole network in real-time data of each module。MICRO - KIT includes an integrated HTTP server, can be simple and efficient for the MICRO inverter data for storage, and MICRO - KIT equipped with browser-based user interface, with concise, friendly interface as purpose, to provide users with real-time system-level access, the user can set the various operation parameters through the interface, and monitor the operation condition of various state parameters and statistics of various parameter values。MICRO - KIT is communication through the Internet and the web server, and the inverter real-time data upload, no matter where the user is, as long as there is network, ensures that customers can pay attention to the MICRO inverter device information in real time.

MICRO - KIT main characteristics are as follows:

1、MICRO-KIT through wireless Nrf2.4 G among each node of the network data coverage radius of 50 meters (2.4 G)

2、10/100 m adaptive network。

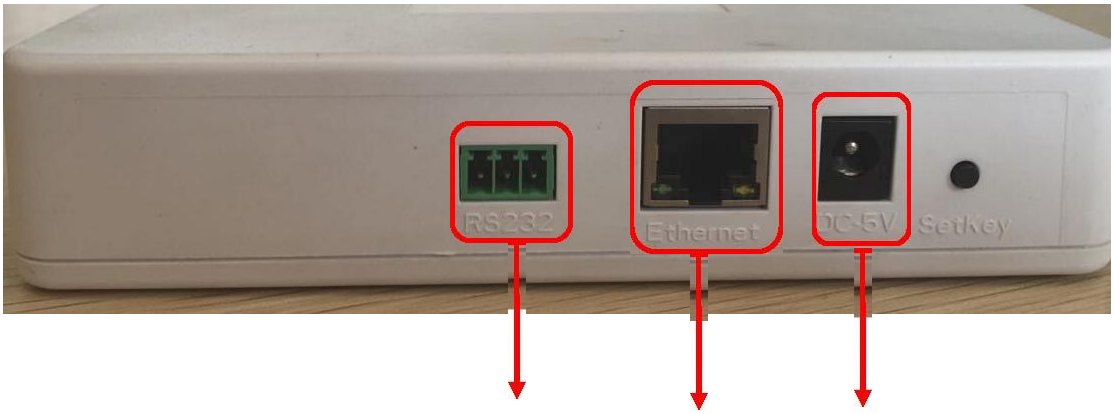
3、The current version supports 99 micro inverter networking.

4、2 x16 LCD display is simple and important information.

# catalog

# 1 Interface specifications

MICRO-KIT Interface and button as shown in the figure below.




RS232 internet power

## 1.1 RS232

Don't output system information (user not)

## 1.2 Internet

With Ethernet cable connected to the router LAN port access to computers, or locally connected to the computer directly to the monitor。

## 1.3 power

DC-5V-1A power input。

## 1.4 Key

Collapse when the application system need to download the application to the MICRO - KIT, hold down the button for 5 seconds (liquid crystal display on IP 192.168.1.99), set the computer IP to the same network segment, and then the browser login to download the application。

# 2 Installation

## 2.1 General conditions

MICRO - KIT installation is concise, before installation, please ensure that the installation site has the following basic requirements：

1、 Standard 220 vac ac socket

2、 A stable Internet connection

3、 A router with Ethernet interface functions or local area network (LAN)

4、 Support access to MICRO - KIT browsers (ie 9 +, FIREFOX9 +, CHROME10 +, safari 4 +)

5、 Used in MICRO -KIT space or the installation of the KIT with metope

MICRO - KIT running environment requirements：

1、 Installation environment away from dust, liquid and acidic or objects and with corrosive gases

2、 Installation site only should satisfy environment - 45 ℃ to + 65 ℃

## 2.2 MICRO-KIT Installation

MICRO - KIT can be put on the table, which can be installed on the wall. Below is the installation steps on the wall

 Step 1 a cool, dry, confirm the installation position, should try to make the MICRO - KIT from heating device (such as oven, heater, etc.)

 Step 2, the two wall with a screw or wall anchor according to the level of the 100 mm distance is fixed on the wall, one of the largest screw head diameter is 0.35 inches, it is recommended to use # 8 type screw

 Step 3, the MICRO - KIT back fixed installed in step 2 screw holes are aligned, the MICRO - fit KIT, sliding down, make the screw caps into MICRO - KIT mounting holes

Note: MICRO - KIT is IP21 protection grade, can not installed in the outdoor or damp, dust, corrosion environment. Avoid direct sunlight, impact and extrusion. Because of the influence of metal components of the wireless signal, so PVMICRO - KIT antenna components and metal to keep a distance of at least 10 cm.

## 2.3 MICRO-KIT connection

Power Connection

Insert one end of the MICRO - KIT of ac power cord KIT of MICRO - power line interface, and then insert the other end of the standard 220 vac ac socket.

Internet Connection

Network connection has a local computer connection monitoring and limited LAN connection in two ways。

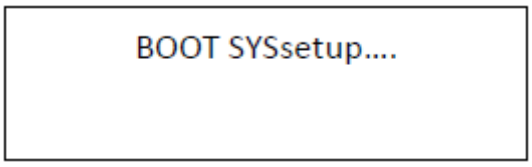
| mun | connection | Specific connection method |
|---|---|---|
| 1 | local computer connection | Insert one end of the cable on the MICRO - KIT so, on the other end connected to the computer directly to the, which can realize local monitoring. |
| 2 | Limited LAN connection | First insert one end of the cable to the MICRO - KIT so on, and then insert the other end cable broadband router in the free port, through the cable KIT and MICRO - LAN routers connected together. |

## 2.4 Initialize the set to confirm the installation is complete

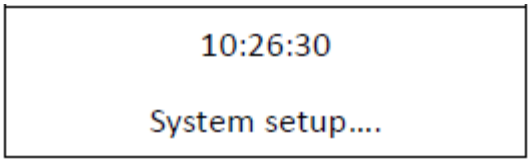
After the installation is complete, the MICRO - KIT, turning on the power supply switch on confirm MICRO - KIT is installed successfully。

Electricity starts, MICRO - KIT comes with information interface will, in turn, according to the following information

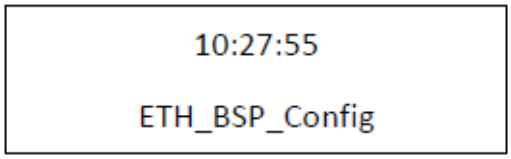
1、BOOTLOADER Normal boot display:



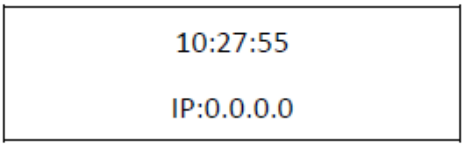

2、System initialization process:



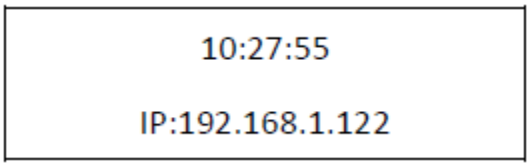
3、Network initialization:



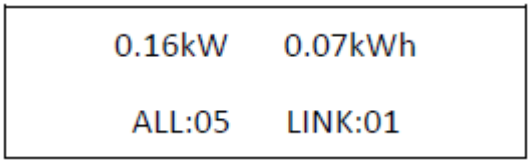

4、Initialization is completed, access to the IP network:




5、Get the IP:




6、Other important information of the program runs：




At this point, installation is successful. MICRO - KIT comes with LCD screen display IP: 192.168.1. XXX, users can use this IP, connected via a browser login MICRO - KIT to detect real-time data。

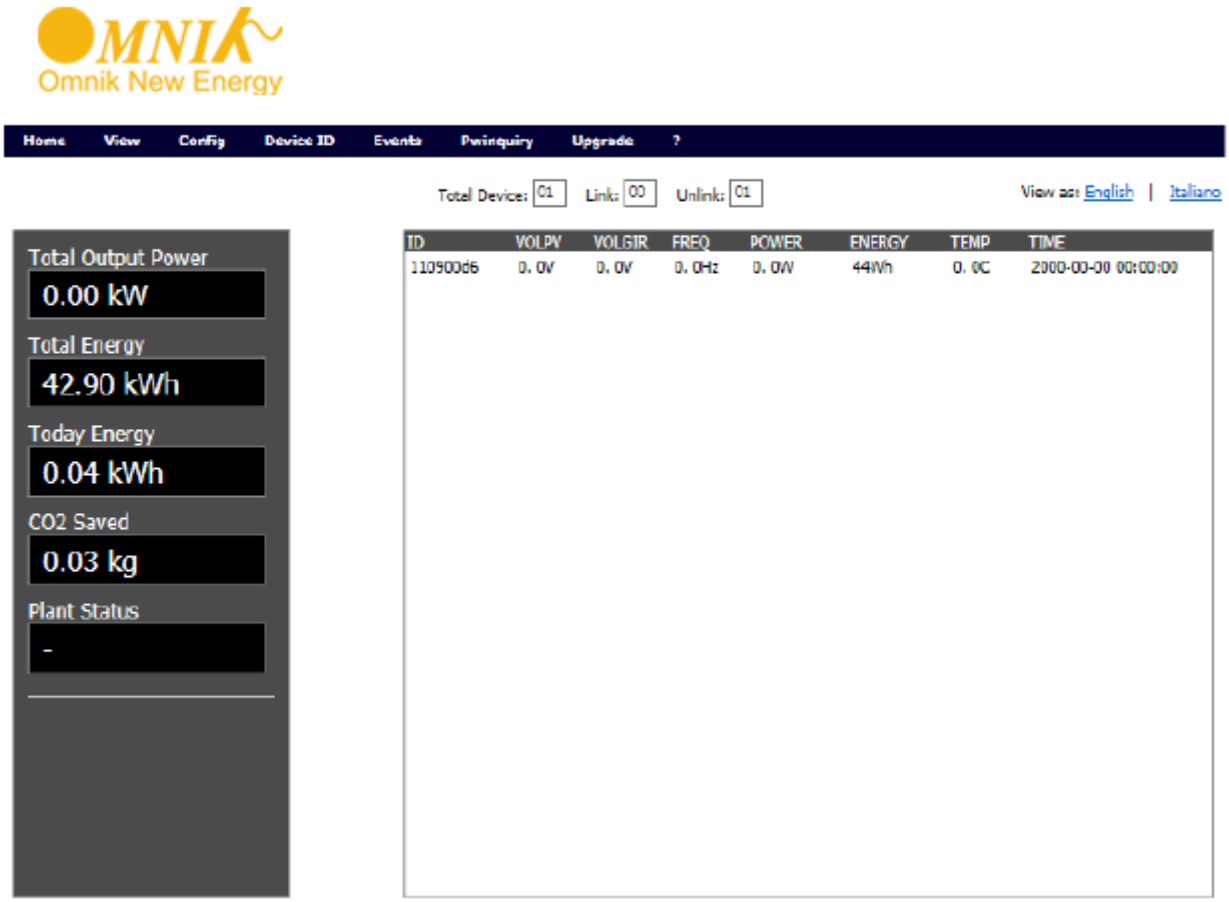
# 3 MICRO-KIT Basic data query functions

After users to install the MICRO - KIT, according to the MICRO - KIT comes with IP displayed on the LCD screen, use the browser to log in MICRO - KIT. The user can through the two ways of connecting MICRO - KIT。

| | |
|---|---|
| main1 | Directly through the Ethernet port to MICRO - KIT are connected to the PC, the PC browser input MICRO - KIT comes with LCD screen display IP for a visit.。 |
| main2 | KIT and MICRO - personal computer through a router LAN networking, OMNIK monitoring site for a visit。 |

## 3.1 MICRO-KIT main interface

Main interface shown below, the basic information of the interface display system, including real-time Total Power (Total Output Power), history, generating capacity (Total Energy), the generating capacity, Energy) and save carbon (CO2 Saved). The user can in the interface to switch from the system language. English and Chinese languages。
Note: ensure the inverse and MICRO - KIT are in working condition monitoring to the data。



Main interface to provide micro inverter system, connected inverter, not connected digits, as shown in the figure below。


## 3.2 System basic information

The basic information for users to view the system and the implementation of the data。

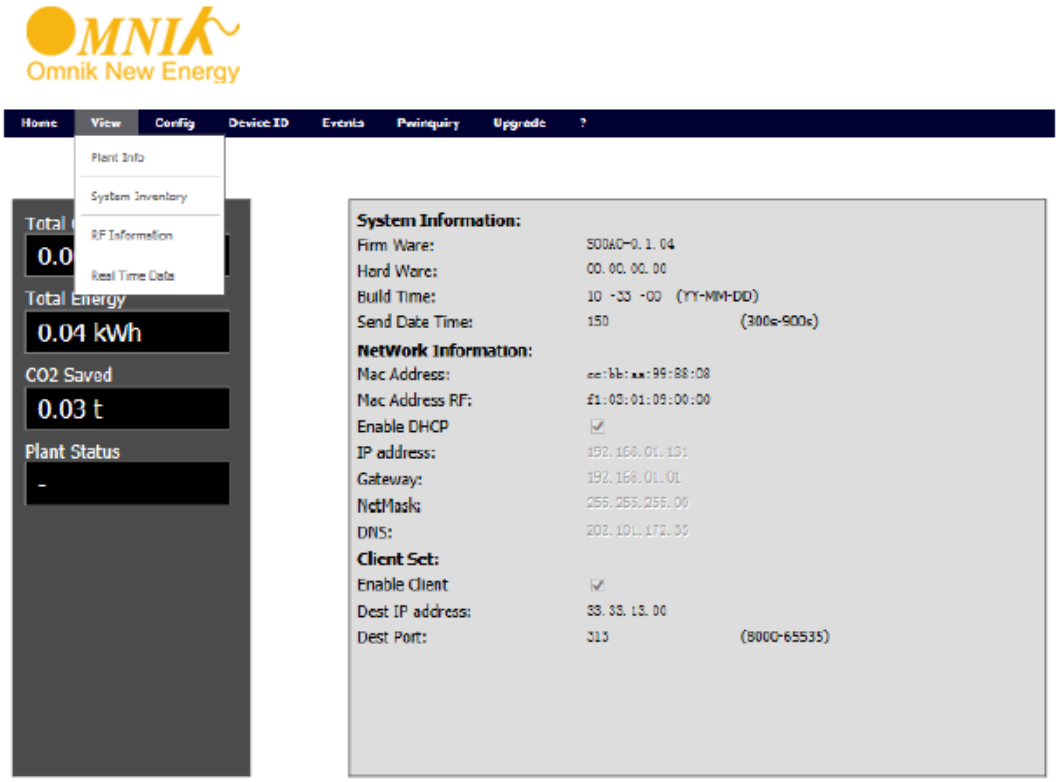
（1） MICRO-KIT basic information

Click View Plant Info Can enter the MICRO - KIT basic information interface, this interface contains the information as below：

a. The configuration of the system is currently some of the ID and time information

b. MICRO - KIT network configuration information

c. The client sends remote data need to configure the IP address and port number

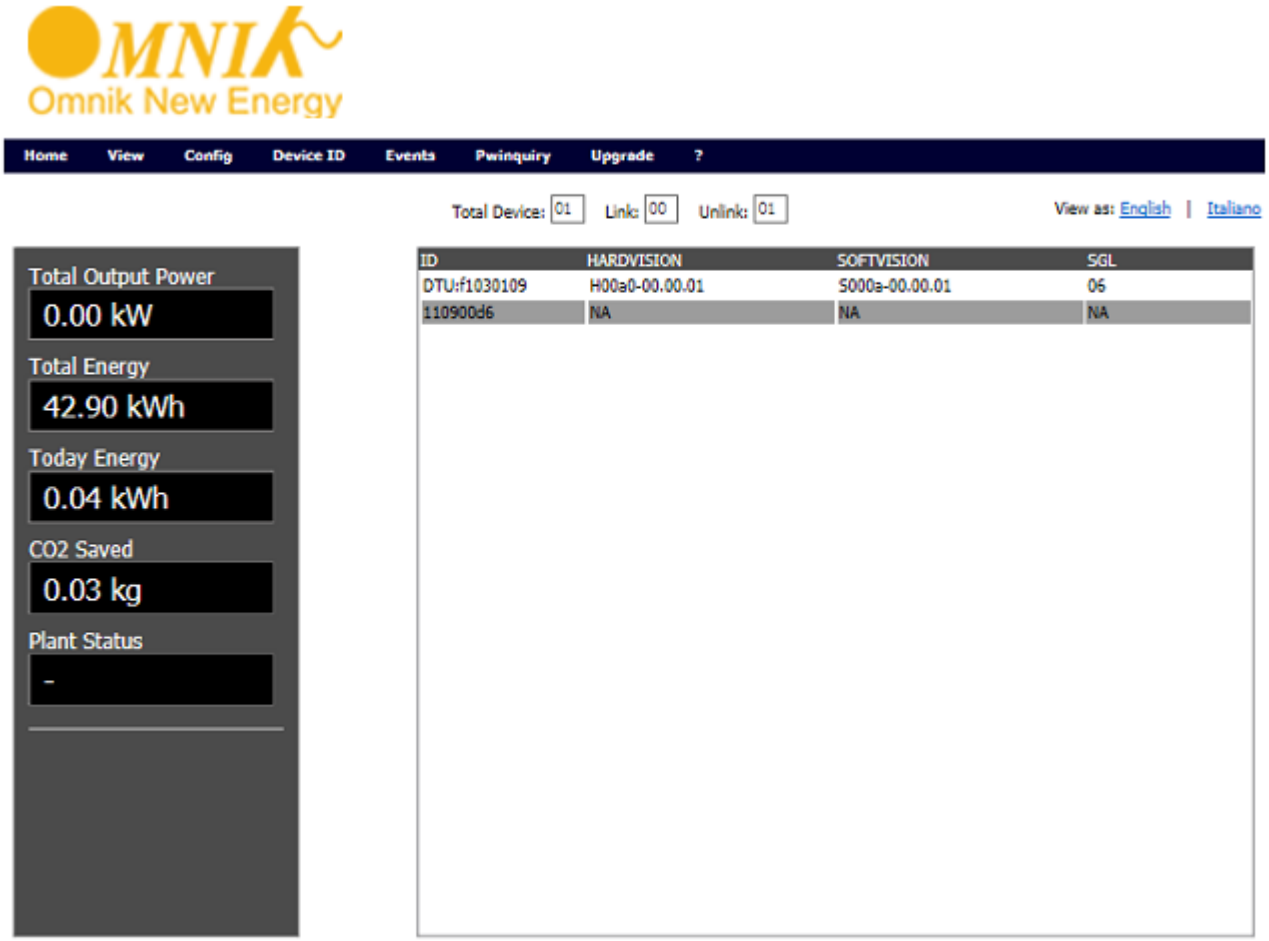


（2） View the micro inverse hardware and software version number

Click Home or View System Inventory，To view inside the micro inverter system hardware and software version number, the first display content in the order: inverter ID, hardware version, software version number, status, installation time。

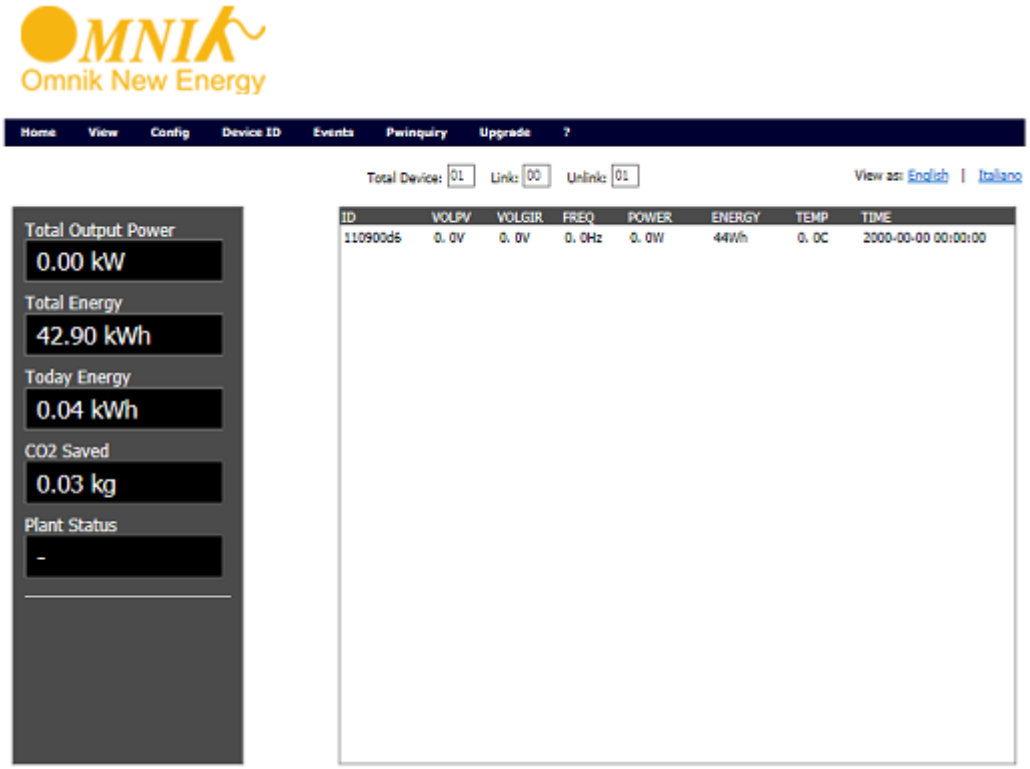

（3） Check the communication module hardware and software version number

Click Home or View RF Information Check in communication module in the system hardware and software version number, display the following figure. One display content in the order: communication module ID hardware version, software version number, status. The first line shows the basic information for the terminal communication module.




（4） To view real-time data

Click Home or View Real Time Data Enter the implementation of data for interface, the user can view the micro inverter in the system the implementation of the data, as shown in the figure below, the first display content in the order: node ID, PV grid voltage, voltage, power grid frequency, power, electricity, temperature and time。



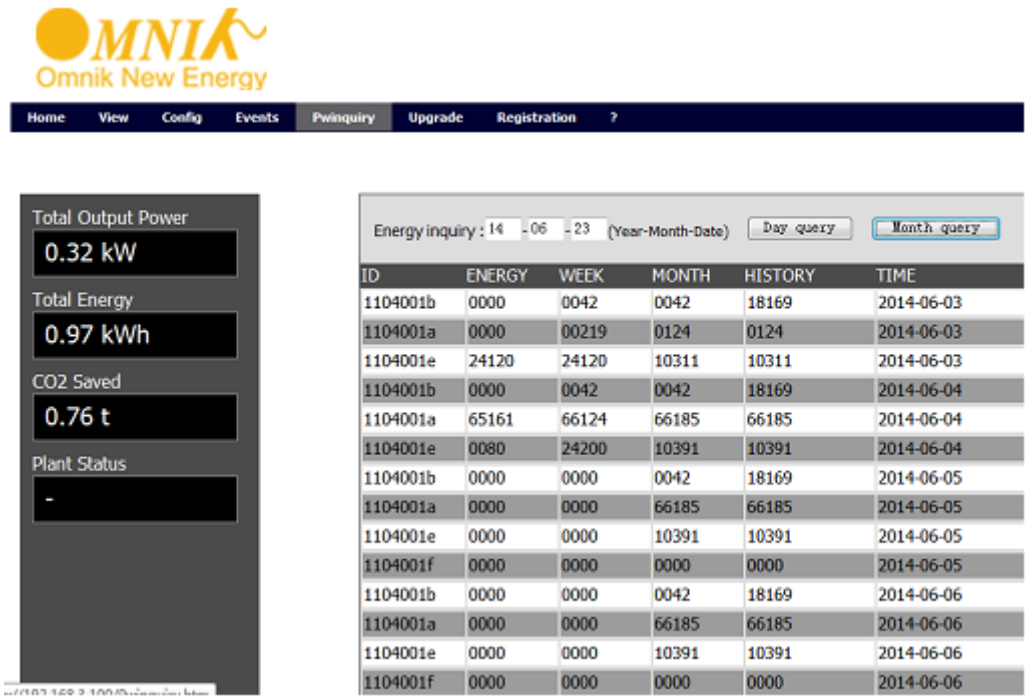

## 3.3 system power query

Click Pwinquiry to query the system output, as shown in the figure below。

Note: for electricity on a daily basis of inquiries, also can query by the month.

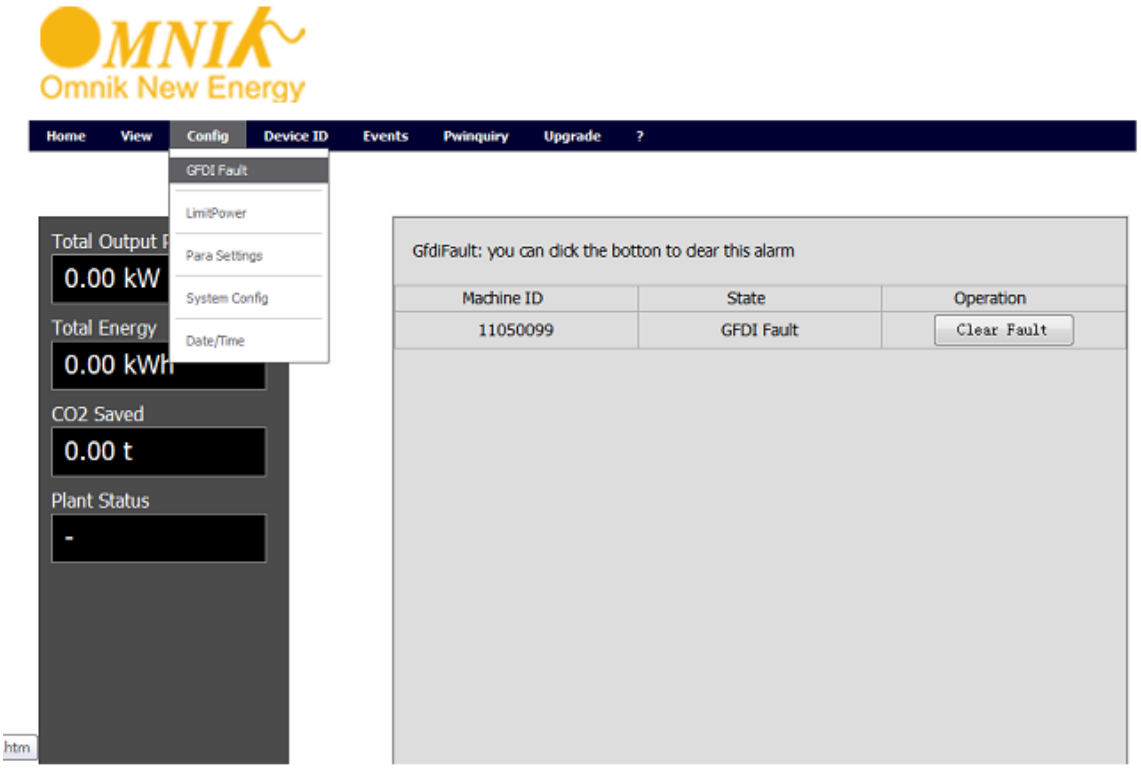
Daily queries: input specific date need to query, accurate to date, click on the "Day query and query" button.

The query by the month; Specific need query input date, accurate to Month, click on "the Month query" button.



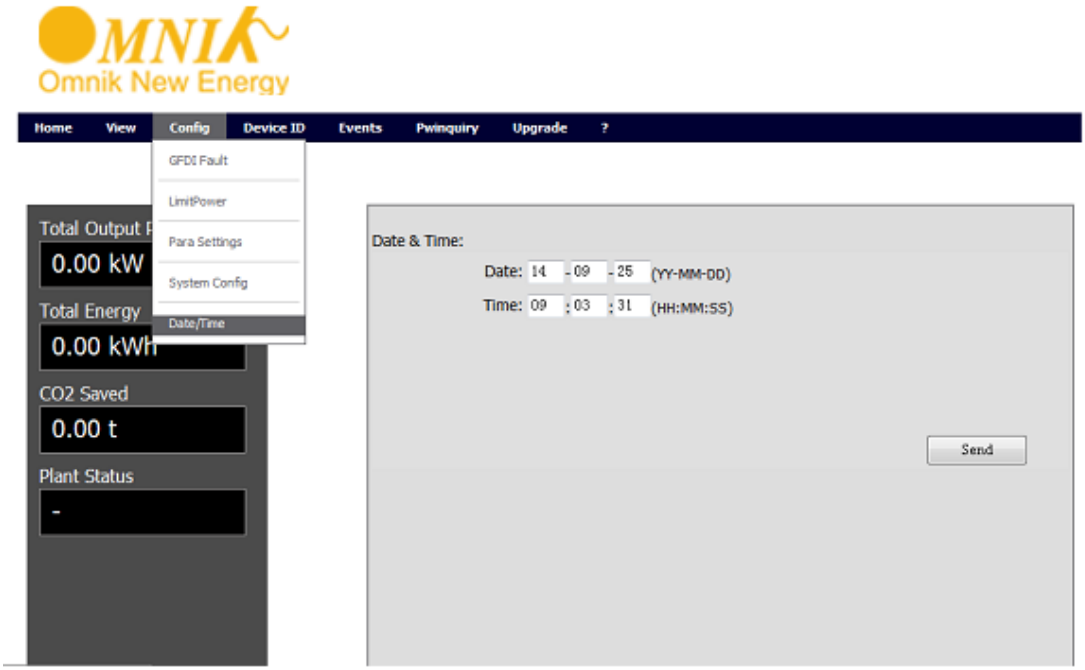

## 3.4 Ground fault display and ruled out

Click Config GFDI Fault，Into the ground fault display and interface, the user interface to see whether there is a miniature inverter ground fault. If any ground Fault, in the actual solution after failure, can click on the Clear Fault contact grounding fault alarm.



## 3.5 Set the time

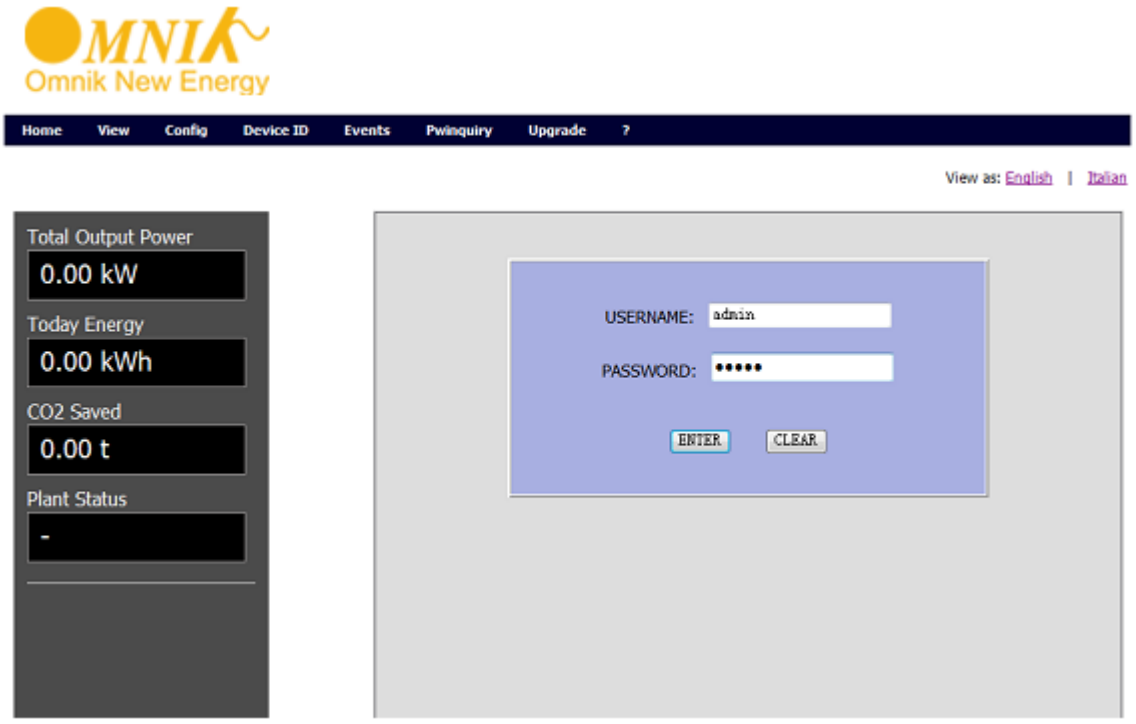
Click Config Date/Time Enter the time setting interface, this interface can set the system time, according to the year, month, day, hours, minutes, seconds, fill in the sequence.



# 4 Add the inverse ID configuration

## 4.1 System login

System login to need some permission for the page, you will need to login user name and password, the default admin/admin, as shown in the figure below。IN the config system config Modify the user name and password in the interface。



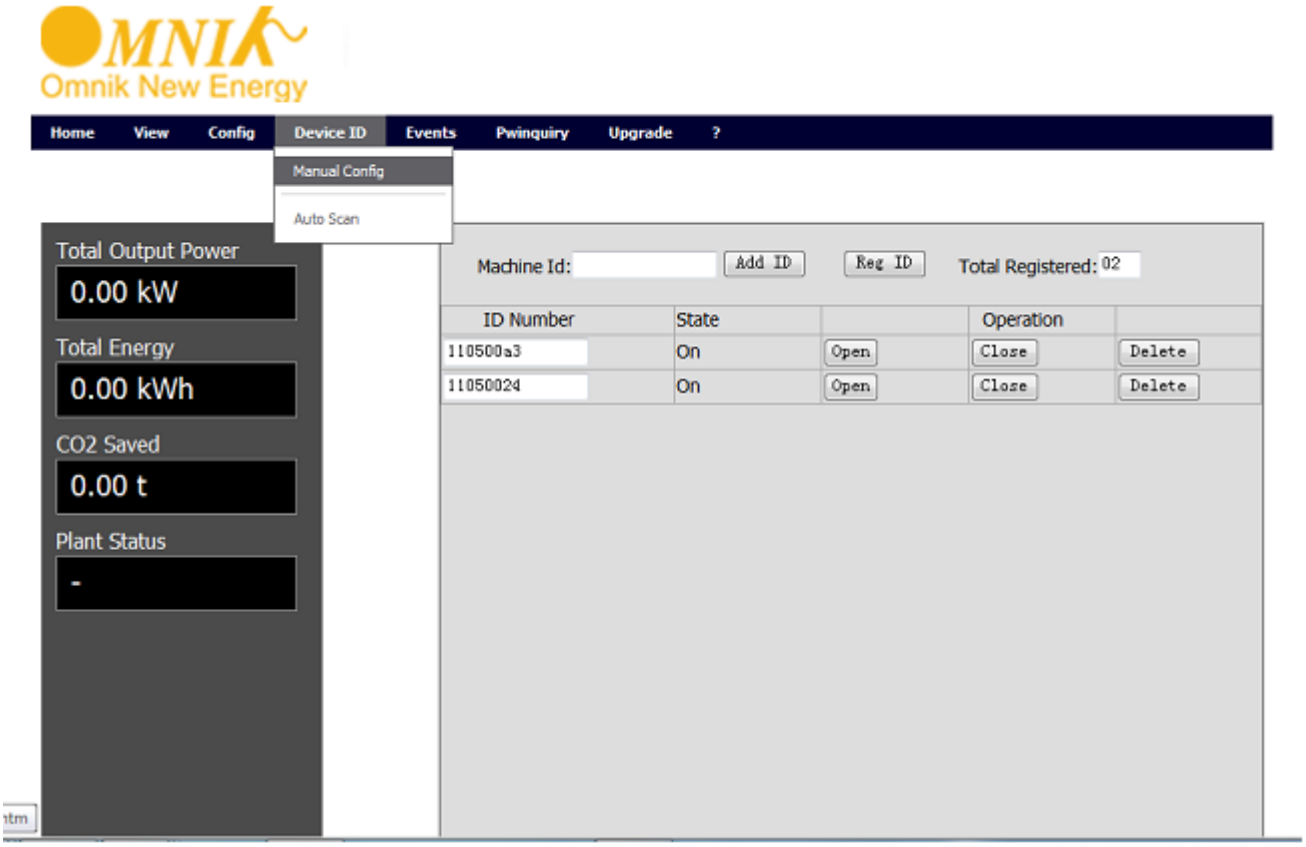

## 4.2 Configure the inverse system ID

Configuration node ID has manual and automatic two ways

（1）Manual configuration system node ID

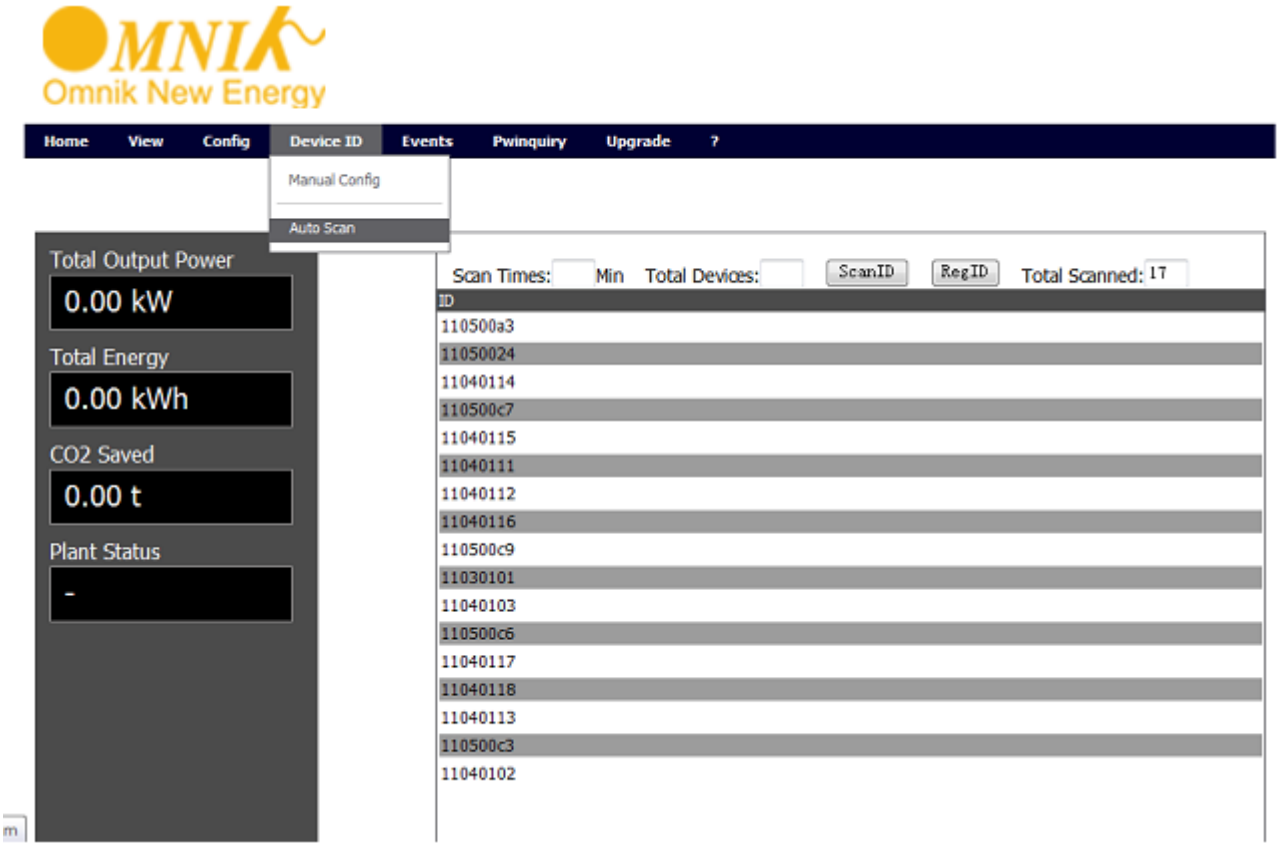
Professional users can click Device ID Manual ConfigTo manually configure system node ID interface, as shown in the figure below。Professional users need to be in in the interface “Machine Id” Option to manually add the ID，Click ADD ID is added to the list。After adding all ID, click the REG ID ID to register into the system.

Note: if there is no Device ID options, can log on to http://192.168.1.XXX/deviceid.htm, can appear

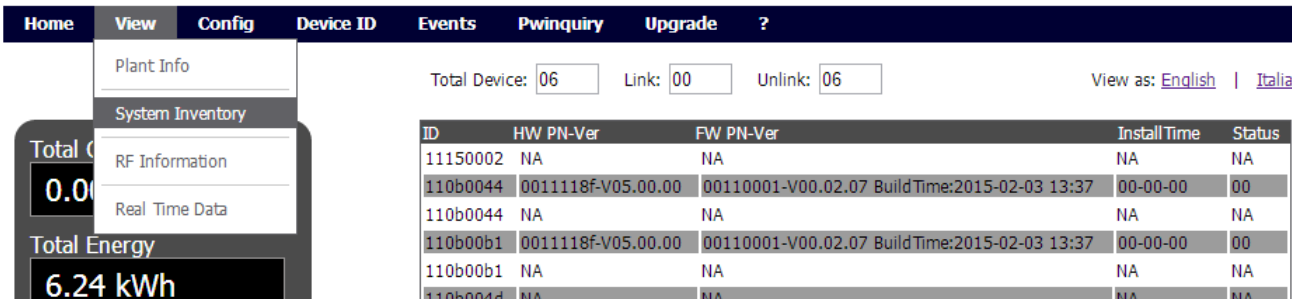



（2） Automatic configuration node ID

Professional users can click Device ID  Auto Scan Automatic configuration system node ID into the interface, as shown in the figure below。In this interface, the system will automatically search for ID, search after the completion of the click on "Reg ID" button to add a user ID to the list。

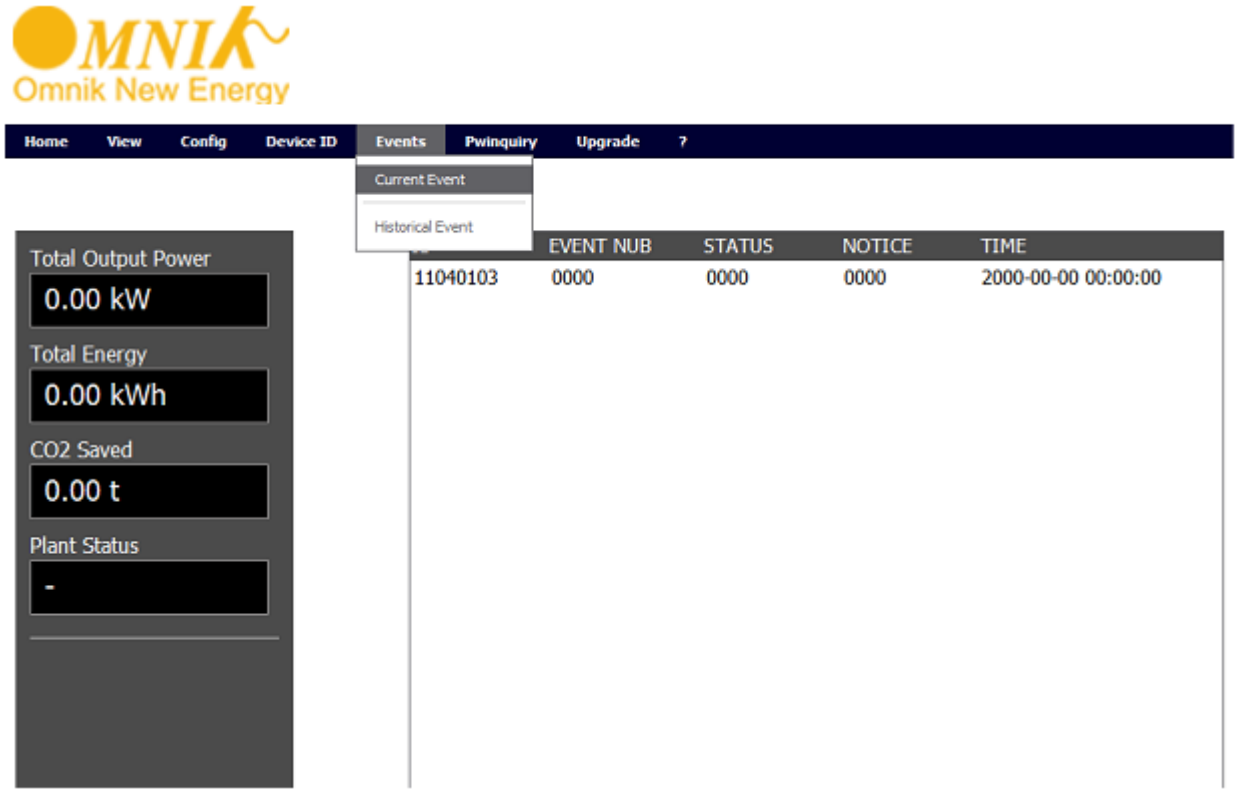



Note: if the M600 machine, after searching the ID, need to read the version number to the correct access to the inverter. The micro inverter version number in View System Inventory In view, as shown in the figure below.



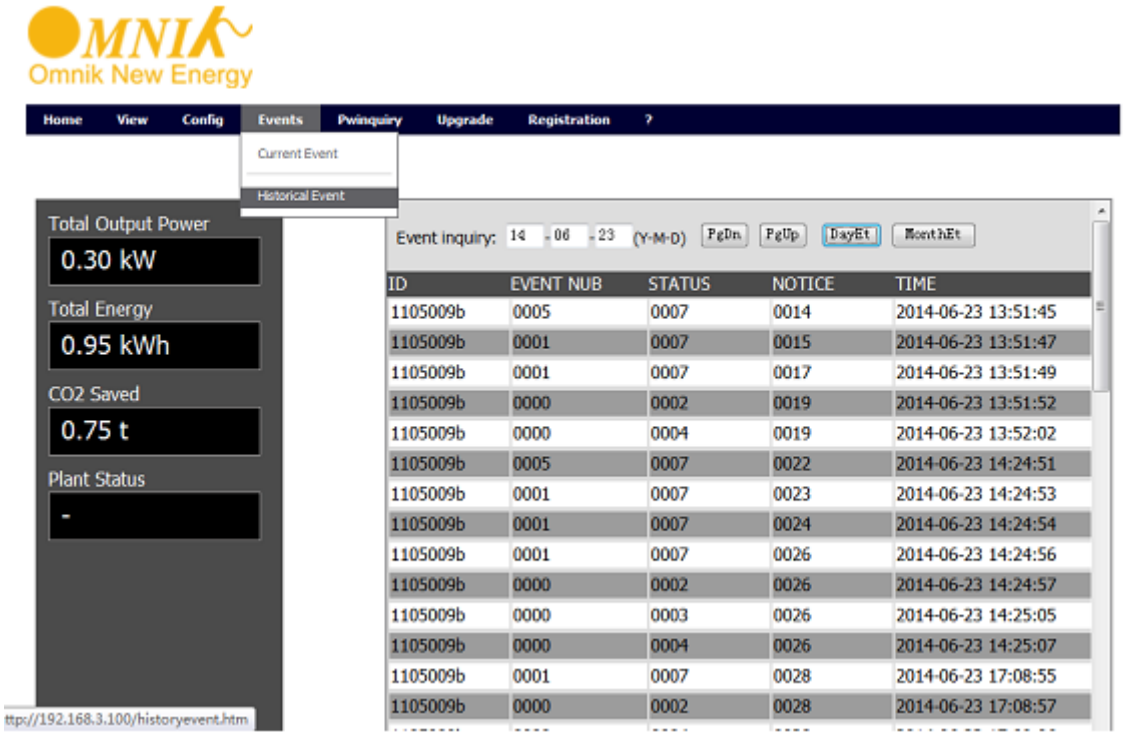

## 4.3 Real-time fault query

Professional users can click Event Current Event Into the real-time fault query interface, the interface, as shown in the figure below.



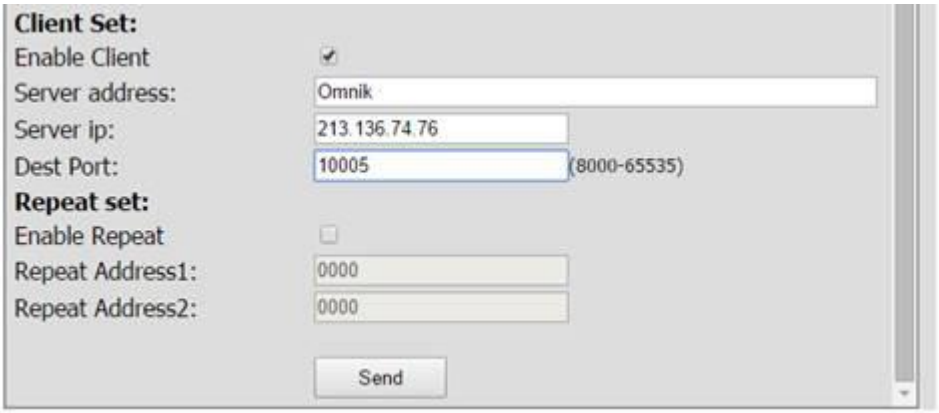

## 4.4 Historical fault query

Professional users can click Event Historical Event Into the real-time fault query interface, the interface, as shown in the figure below. Can query by day or by month. When the data is more than one page by page shows data up and down.




## 4.5 Network monitoring

According to the above steps to connect local monitoring，Click “configuration-system config”，Make sure that the client set configuration values as shown in the figure below, if not, please change to consistent with the following figure：



# 5 MICRO INVERTER monitoring system

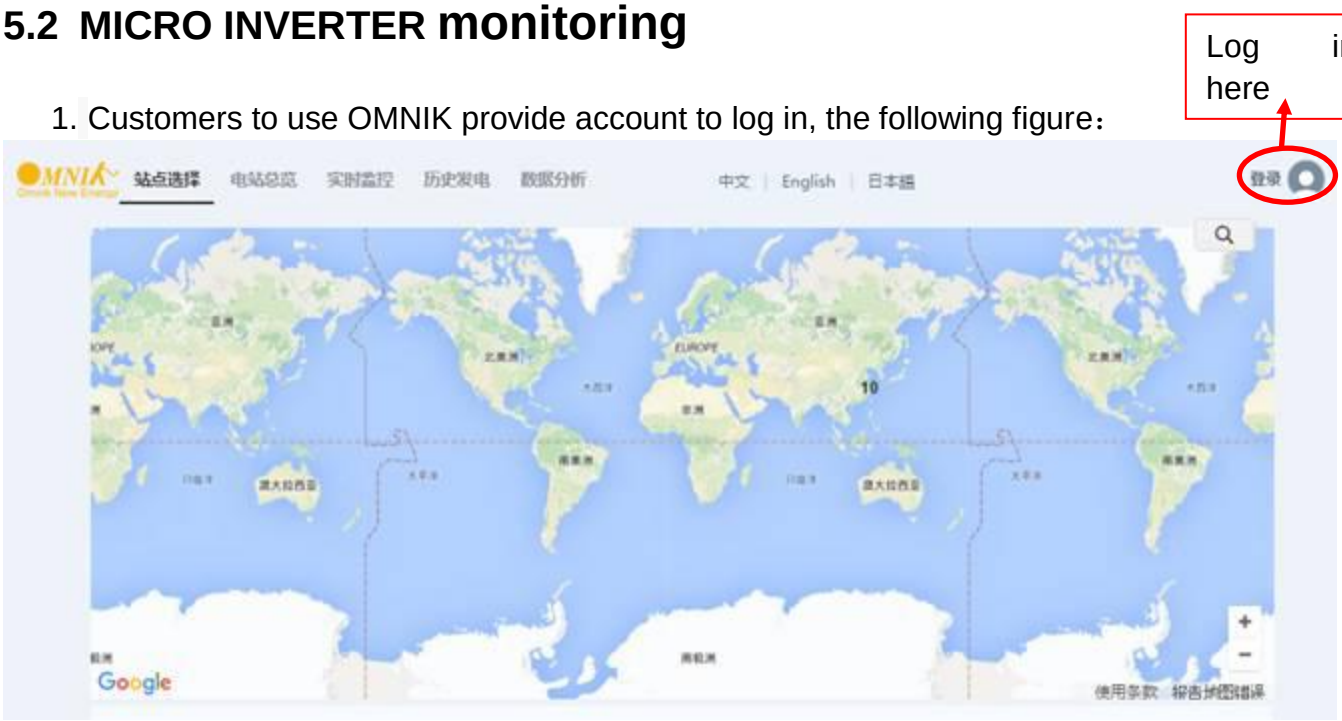
## 5.1 general

Insert one end of the cable to the MICRO - so on KIT, and then insert the other end cable broadband router in the free port, through the cable KIT and MICRO - LAN routers connected together. Ensure the inverse and MICRO - KIT in working status, and to ensure that the router can be connected to the Internet. And then provide the feedback form to OMNIK, by OMNIK application account for the customer and give the customer, then customer log on to http://213.136.74.76:8081/Omnik/ web page, then go up the account information can be monitored.

Note: the current monitoring site does not have the function that the customer account registered monitoring.

## 5.2 MICRO INVERTER monitoring

1. Customers to use OMNIK provide account to log in, the following figure：



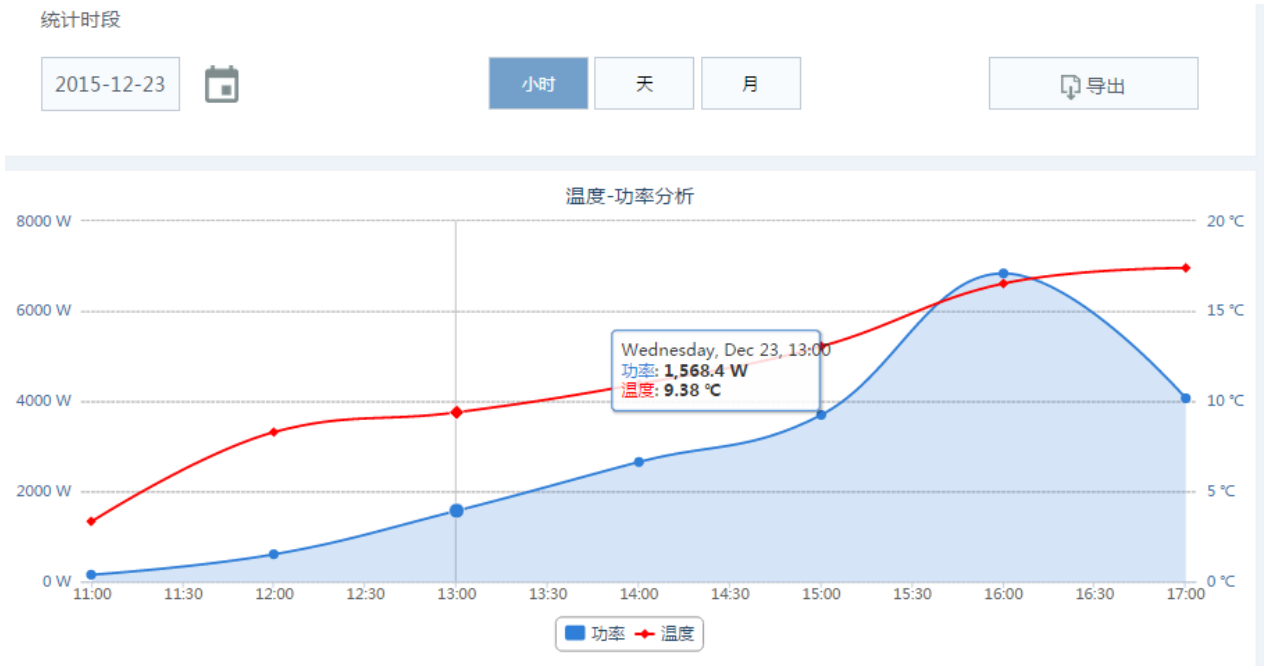

2. After logging in customer has power plant shows the diagram below：


3. Click power station name into the overview screen, to see the day, month, year and total generating capacity。


4. Click menu bar real-time monitoring, monitoring to each component output and working situation: the diagram below：


5. History, click on the menu bar and detected in the power generation and power of history, and can export data, the following figure:


6. Click on the data analysis, can be in irradiation, temperature, the analysis of the micro reverse power and failure of the history of inquiry, the following figure：


统计时段
2015-12-23
小时
天
月
导出
温度-功率分析
8000 W
6000 W
4000 W
2000 W
0 W
20 ℃
15 ℃
10 ℃
5 ℃
0 ℃
Wednesday, Dec 23, 13:00
功率: 1,568.4 W
温度: 9.38 ℃
11:00
11:30
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12:30
13:00
13:30
14:00
14:30
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16:30
17:00
功率
温度

# 6 Contact us

**Suzhou headquarters**
Suzhou industrial park, Xin ze road no. 80 on the second floor
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FAX: +86 512 6295 6682
E-MIAL: info@omnik-solar.com
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**Omnik German service center**
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**Service hotline**
TEL: +86 512 6295 6676
Free service hotline：400-999-0892
FAX: +86 512 6295 6682
EMAIL: service@omnik-solar.com

# Appendix: feedback form

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Customer account name | | | | Customer account password | | | | | |
| Power station name | | | Power station introduction | | | Power station power | | | |
| Power station address | | | longitude | | | latitude | | | |
| line Numbers | Column number | MICRO-KIT SN | MICRO-INVERTER SN | Set of string of Numbers | The component models | Component placement (horizontal/ vertical) | Component towards | Component Angle | The installation time |
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Note: the customer account number and password, name, address, row number and column number, MICRO - KIT SN, MICRO inverse SN, is required, the rest if there is no need to fill in.

Customer account password: customer login account password (can be set by the customer)

Row number and column number: the arrangement of the component serial number Another: a MICRO - KIT as well as the corresponding need to monitor the inverse please fill out a form. If you have multiple systems, please fill out the form.

After fill in this form, please email to OMNIK company email zhiping.wang@omnik-solar.com.