ShineNET

Growatt

V.1.2

2010-11-19

| Software Version	Date	Notes
1.0	2010/6/22	New
1.1	2010/7/21	Add 4.4
1.2	2010/8/31	Add 5.3.3 and 6
1.2	2010/9/20	Add 5.3.4
1.2	2010/9/20	Add 4.5
1.2	1020/11/19	Update some pictures

Contents

1 Introduction

ShineNet is designed to collect data from Growatt Inverters with strong analysis functions. It has multi-communication channels and completed data analysis function. Users could monitor the status of Growatt inverters in real-time, browse and analysis the history data in the past.

2 Specification.

1. Multi-communication: RS232, Bluetooth

2. Acquiring data from multi-inverters.

3. Real time data detection, history data review and analysis.

4. Comparing multi-inverters data.

5. Multi-language

6. Operation system support for Windows XP/Vista/Win7/2000/2003 .

3 Communication network application
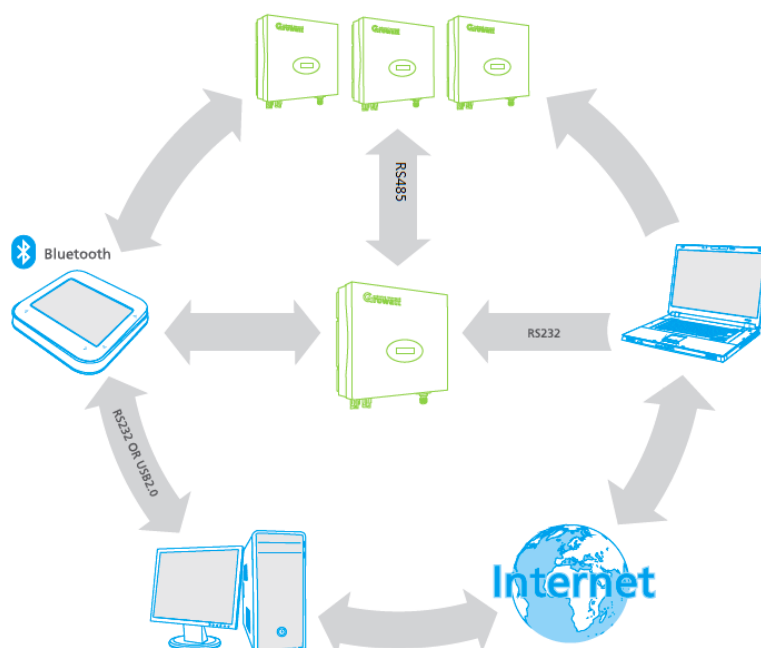
4 Software

4.1 Installation

ShineNet is developed in C# language. While the operation system is below Vista system, should install Freamwork2.0 in advance. Framwork2.0 could be installed by the "dotnetfx.exe" in the install package.

For operation system which already include framework2.0

4.2 User registe

While using the ShineNet first in the operation system, below dialogue will pop up.
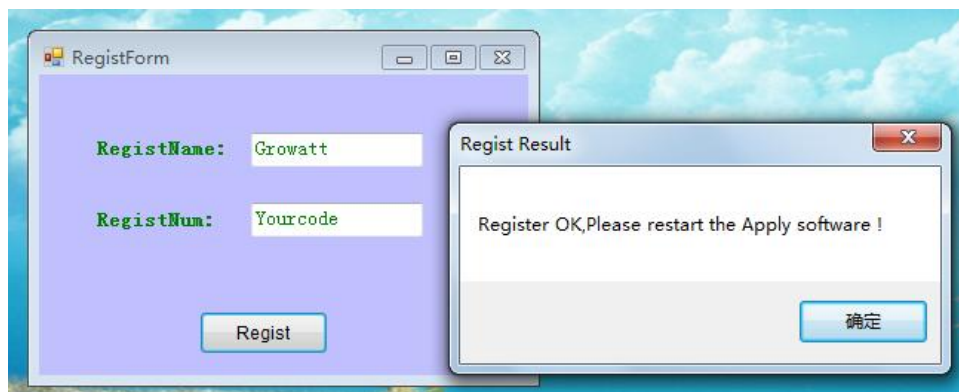
Fig 4.2.1

Fill in your register name and password.

User could get some special function through our specify account and password.

4.3 Interface

ShineNET Interface could be divide into 4 region:

a. System menu

b. System button

c. Inverter list

d. PV System information

Fig 4.3.1

a). System Menu bar:

SoftSystem: software settings menu

System Set: access the communication setting dialogue.

Soft Language:

Exit: exist ShineNet

Inverter: Inverter operation menu

Connect/Disconnect: connect or disconnect the computer and inverter

Setting: access the inverter parameter settings.

Interface:

Change Interface: Switch the interface between Wave diagram and multi-inverters

monitoring interface.

b) System Button:

、 : connect or disconnect inverter；

If disconnect the inverter, the button will be lighted,

If the inverter are already connected, will be lighted.

：access inverter parameter setting. If user does not specify a inverter, it will access the communication setting interface.

：access the communication setting interface；

：access the interface of multi-inverter monitoring interface；

：switch the interfaces；

c) Inverter List

This region is used to show the inverter series number and communication protocol.

indicate the list title and selected node；

：indicate the inverter is connected by RS232

：indicate the inverter is connected by Bluetooth

d) PV System information

This region is used to show the working information of inverters. It include two interfaces: Waveform diagram and multi-inverter monitering interface.

Waveform Diagram Interface: provide power curves, data and fault information, all these information could change by time setting. Fig 3.3.1 for referrence.

Multi-inverters Monitoring Interface: provide specified data and power curves of multi-inverters, it is easy for users to check and compare the situation of these inverters. Fig 3.3.2 for referrence.

Fig4.3.2

4.4 Language settings

Access menu "SoftSystem->SoftLanguage->", choose your favorite language.

Fig4.4.1

Customize language:

a). Open the document folder of the software, open the file "LanguageData.xml";

b) Choose a language that you will not use, for example Chinese/简体中文.

    The position is at the <MLanguages>

                         <LanguageList>.

                             <LX> Language <LX>

Fig4.4.2

c) Translate the language in the position<MLanguages>

                             <LanguageList>.

                             <LX> Language <LX>

     Users can copy English version to replace the useless language, then translate the copied english words directly. Please check fig. 4.4.2 as referrence.
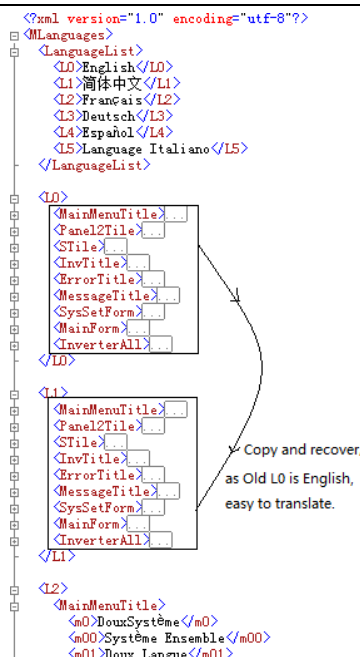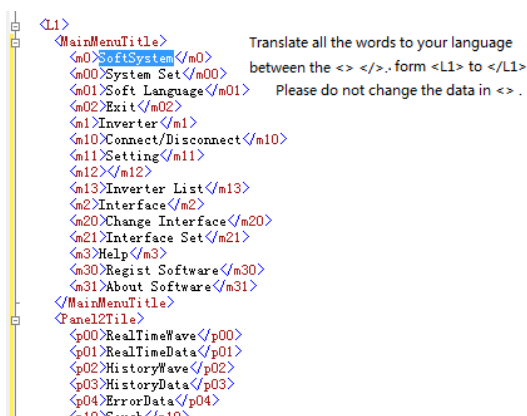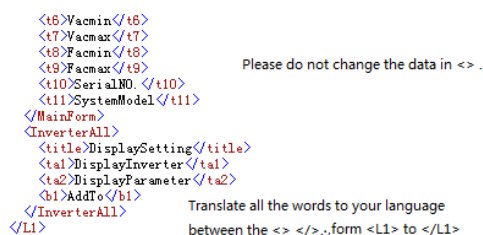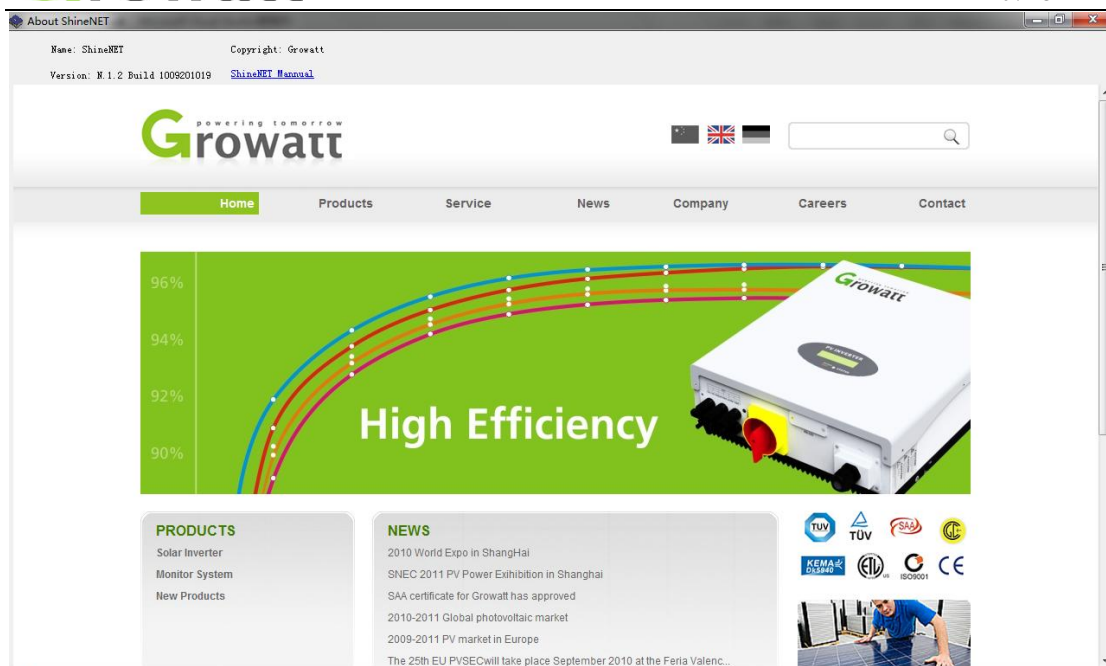
Fig4.4.3

Fig4.4.4   Fig4.4.5

d) save the modified the file and reboot the software.

4.5 About ShineNET

Access menu "Help->About ShineNET" go to "About ShineNET" interface, you can get the software version and the user manual document, also you can get the newest information of Growatt.

5 Software Operation

5.1 Connection settings

Click ![icon] or access "SoftSystem->System Set", will get the communication settings interface.

GROWATT NEW ENERGY CO., LTD
Yongchang Building, Xicheng Industrial
Zone, Bao'an District, Shenzhen, China

浙江格瑞特新能源有限公司
深圳宝安区西乡街道西成工业区永昌楼
P.C. 518000

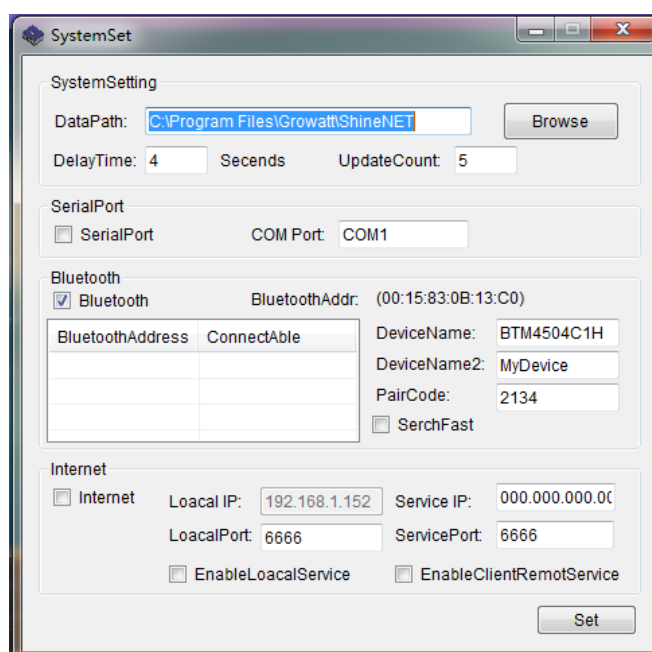T / F + 86 755 2749 1460
info@ginverter.net
www.ginverter.com

Fig 5.1.1

SystemSetting：

DataPath：The save path for inverter data；

DelayTime：The communication interval, the value should be over 2 second.

SerialPort：

SerialPort：enable RS232 function；

COMPort：the port of PC RS232；

Bluetooth：

Bluetooth：enable Bluetooth function;

BluetoothList：local bluetooth devices list, click the item to choose;

BluetoothAddr：the address of the communication bluetooth;

DeviceName、DeviceName2：the blutooth device Name of inverter, to filter outlying bluetooth device. If users can not connect to a new inverter, you can set one of the DeviceName2 to empty, the software will connect all exist bluetooth devices;

SerchFast：it will search the bluetooth device already in the memory. While new device added or could not find the old device, user could cancel the function.

Internet：

Reserve function；

5.1.1 Connect inverter and disconnect

Connect inverter: Click or access "Inverter->Connect/Disconnect" to connect inverter. While the connection set up, the symbol will change to . PC will connect the inverter through specify communication mode. The software will list the inverter serial number and communication mode.

Fig 5.1.2

Disconnect: Click or access "Inverter->Connect/Disconnect" to disconnect. The symbol will be change to .

5.2 Parameter setting

a). Choose inverter, then click the inverter name of "Inverterlist", the communication mode will be , it indicate the communication is started.

b). Click or access " Inverter-> Setting" to inverter parameter settings interface.

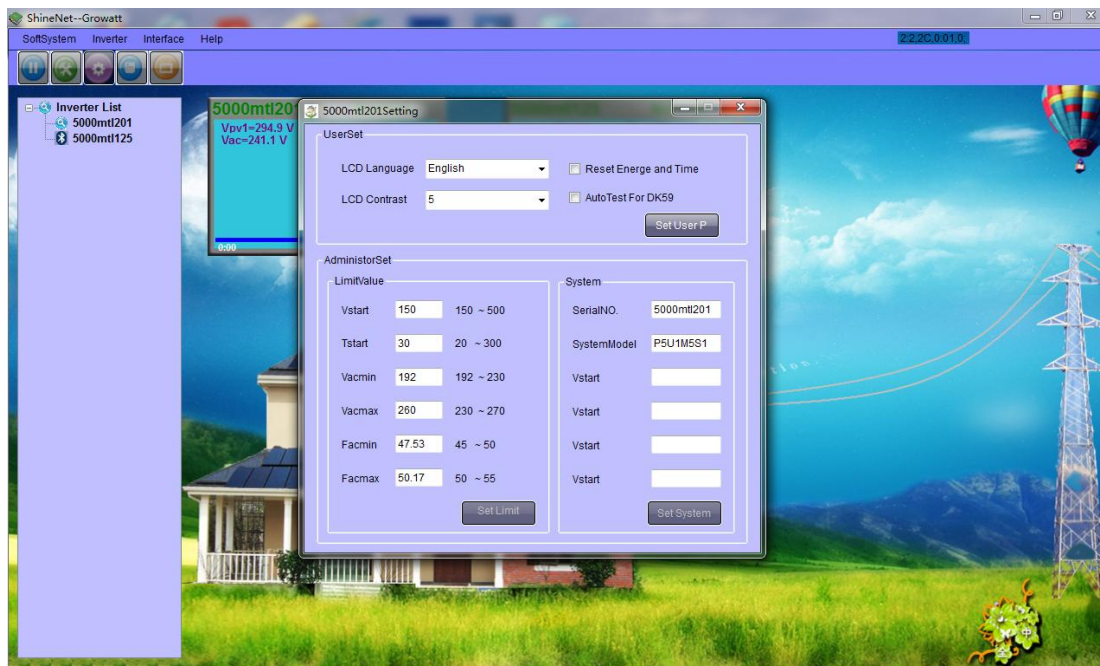Notice: normal user can only modify the Items in the "UserSet" ;

Fig 5.2.1

LCD Language: set inverter LCD Language;

LCD Contrast: set inverter LCD contrast;

c). Click " SetUserP" button to start.

d). The software will pop up "SetResult" dialogue show the result.

5.3 Working information

The main working information will be show in the "Inverter wave&data" region. The region can show two interface, "waveform diagram" and "multi-inverter monitoring interface". Fig 3.3.1 and Fig 3.3.2 for referrence.

5.3.1 Waveform diagram Interface

Waveform interface is main interface. It is used to inquiry data, power curves and fault information online or in history。

Waveform diagram Interface has been divided to operation region, parameter region and waveform region;
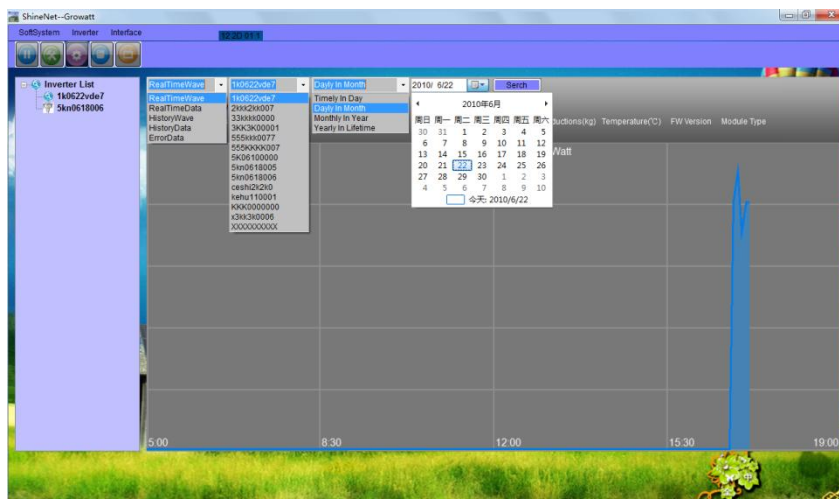

Fig 5.3.1

Operation region: include operation options, inverter list, waveform option, date and inquiry button.

Parameter region: indicate the default parameter of working inverters.

Waveform region: show the waveform or data of the inquiry result.

5.3.1.1 Inquiry power curves

Follow the steps in the operation region: RealTimeWave->SerialNo.-> -> ->Search, users will have the a day waveform of the specify inverter. The software will automatically update the curves after the operation.
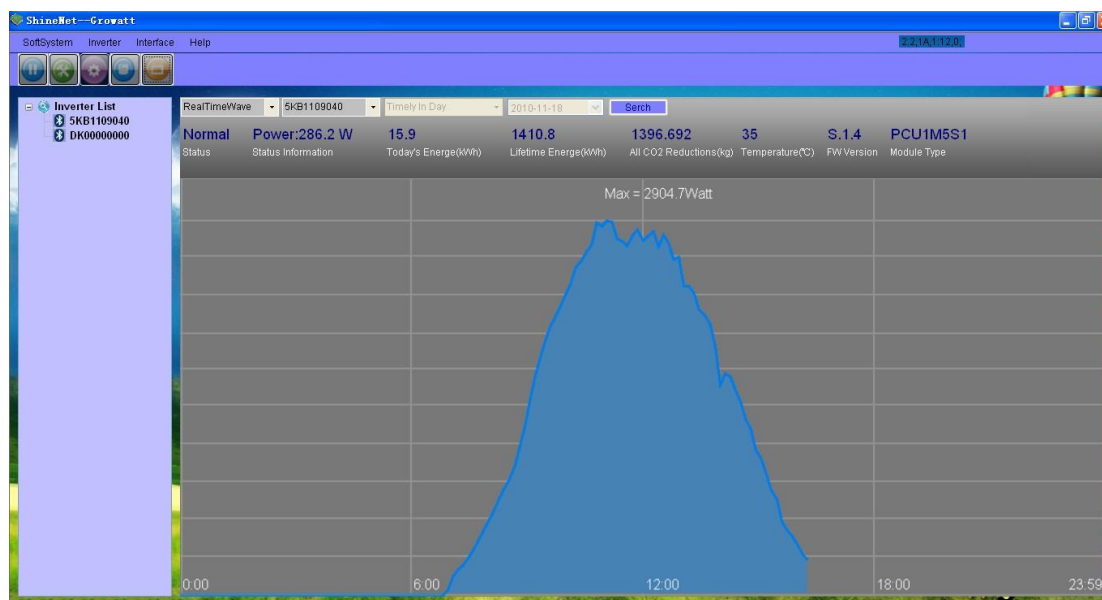

Fig 5.3.2

5.3.1.2 Inquiry real time data

Follow the steps in the operation region: RealTimeData->SerialNo.-> -> ->Search, users will have the a day data of the specify inverter. The software will automatically update the datasheet after the operation.

Fig 5.3.3

5.3.1.3 Inquiry history waveform

History waveform include:

TimelyDay: power curve diagram of specify date

DaylyinMonth: column diagram for every day electric energy production in one specify month.

MonthlyInYear: column diagram for every month electric energy production in one specify year.

YearlyInLifetime: column diagram for every year electric energy production.

Follow the steps in the operation region:

HistoryWave->SerialNo.->WaveType->Date->Search, users will have the waveform of the specify inverter.
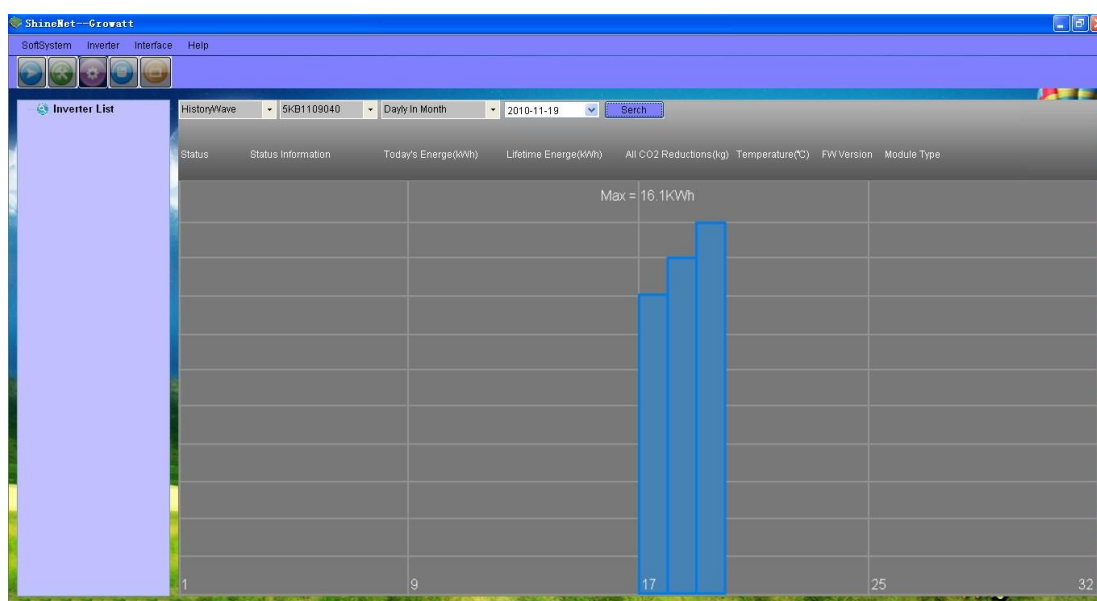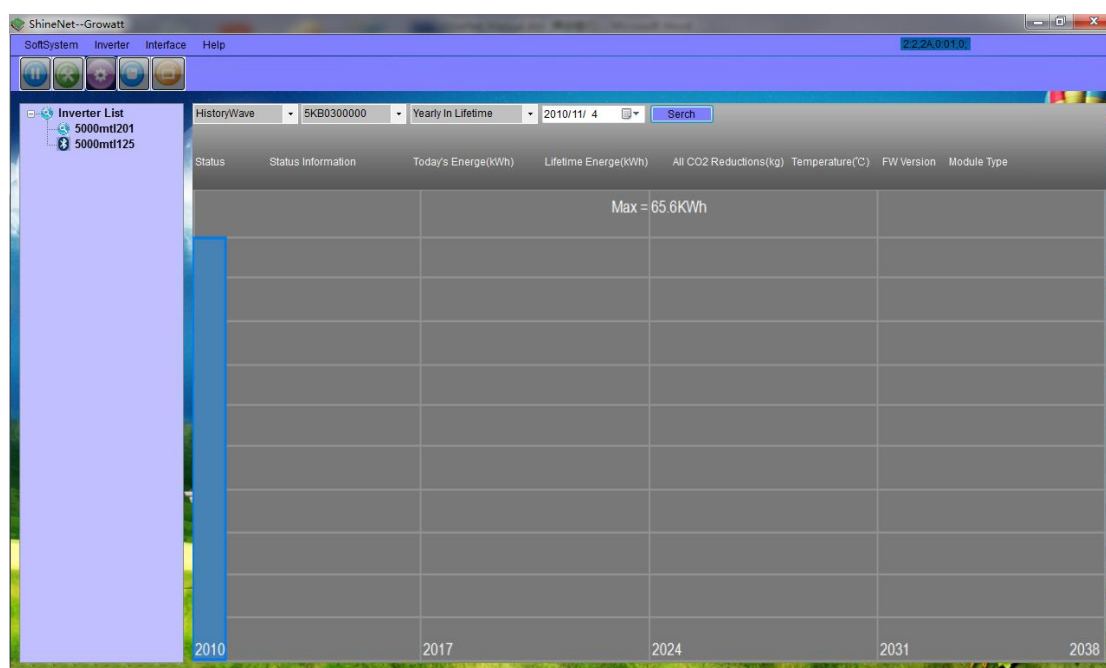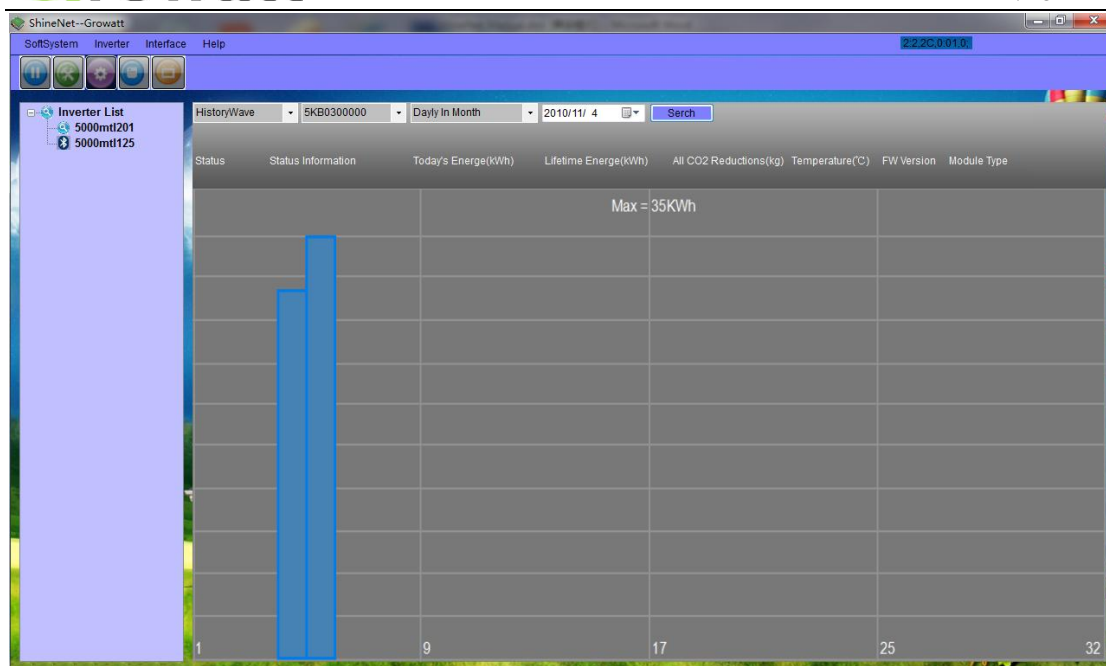
Fig 5.3.4

Fig 5.3.5

GROWATT NEW ENERGY CO., LTD
Yongchang Building, Xicheng Industrial
Zone, Bao'an District, Shenzhen, China

浙江格瑞特新能源有限公司
深圳宝安区西乡街道西成工业区永昌楼
P.C. 518000

T / F + 86 755 2749 1460
info@ginverter.net
www.ginverter.com
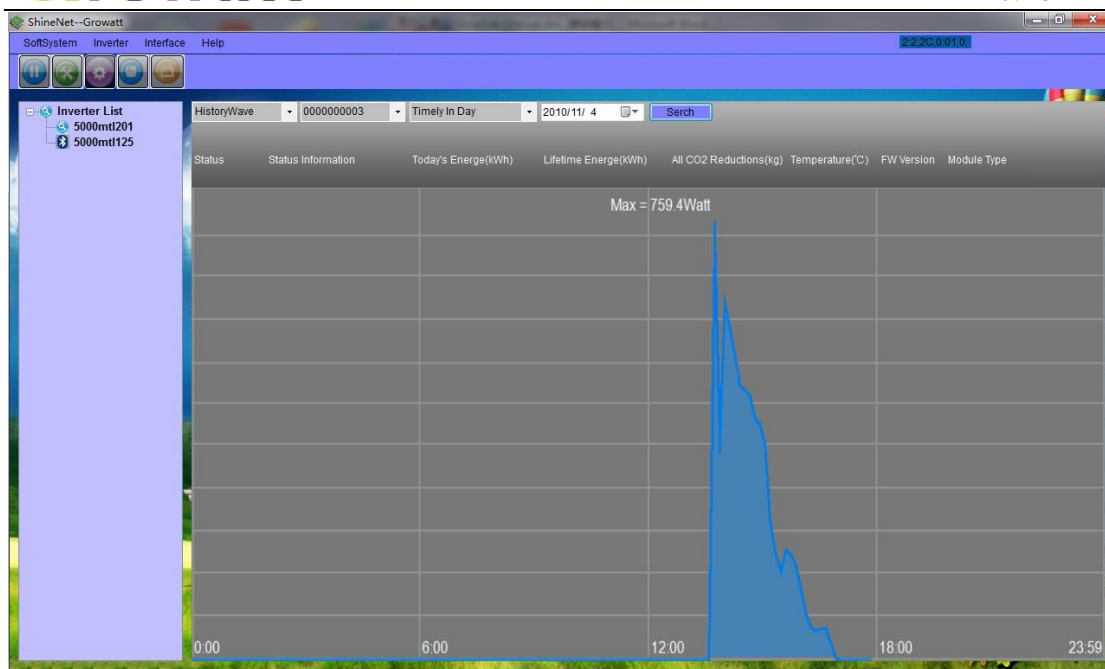
Fig 5.3.6

5.3.1.4 Inquiry history data

Follow the steps in the operation region: HistoryData->SerialNo.-> ->Date->Serch, users will

have the datasheet of the specify inverter in the specify date.

Fig 5.3.7

5.3.1.5 Inquire fault information

Follow the steps in the operation region: ErrorData->SerialNo.-> ->Date->Search, users

will have the fault sheet of the specify inverter in the specify month.

Fig 5.3.8

5.3.2 Multi-inverter monitoring interface

Multi-inverter monitoring in one screen, it is easy to check many inverter working situation.

Fig 5.3.9

5.3.2.1 monitoring interface

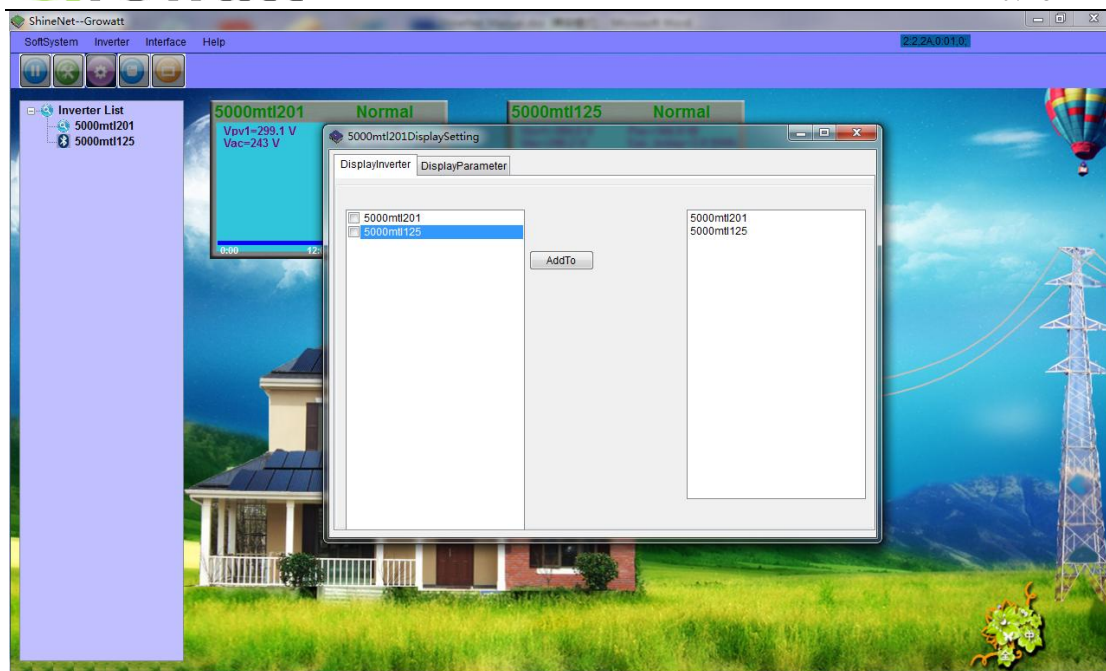Click ![icon] or access "Interface->Interface Set" to inverter chosing dialogue.

Fig 5.3.10

SelecteInverter：the page of selecting inverters;

SelecteData：the page of select inverter parameters；

Add：add new inverters;

a). choose inverters

Choose "SelecteInverter" page, click the inverter on the left inverter list. Click

Add button, the screen will show the inverter. Maximum number is 20.

b). Choose the inverter parameters.
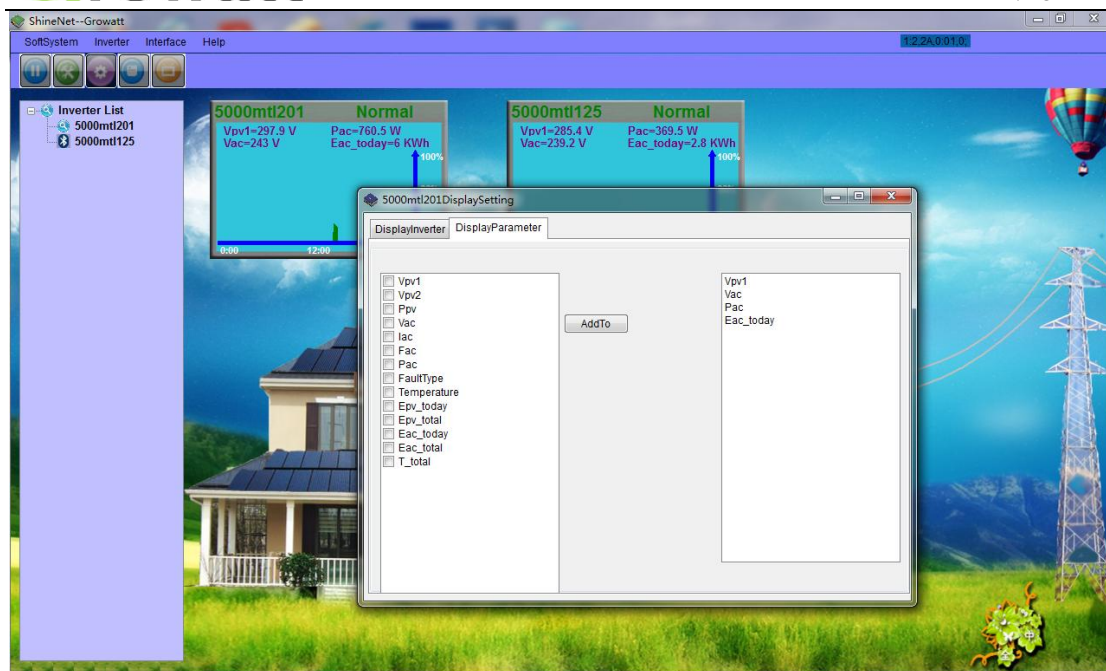
Fig 5.3.11

Choose the "SelectData" page in the operation interface, then choose the parameters in

the left list, click [Add] button, the screen will show the chosen parameters. The

maximum number is 4.

5.3.3 PV System Information Interface

In this interface you could see the total Power, Energy of your system, and also there are the load information for each inverter.
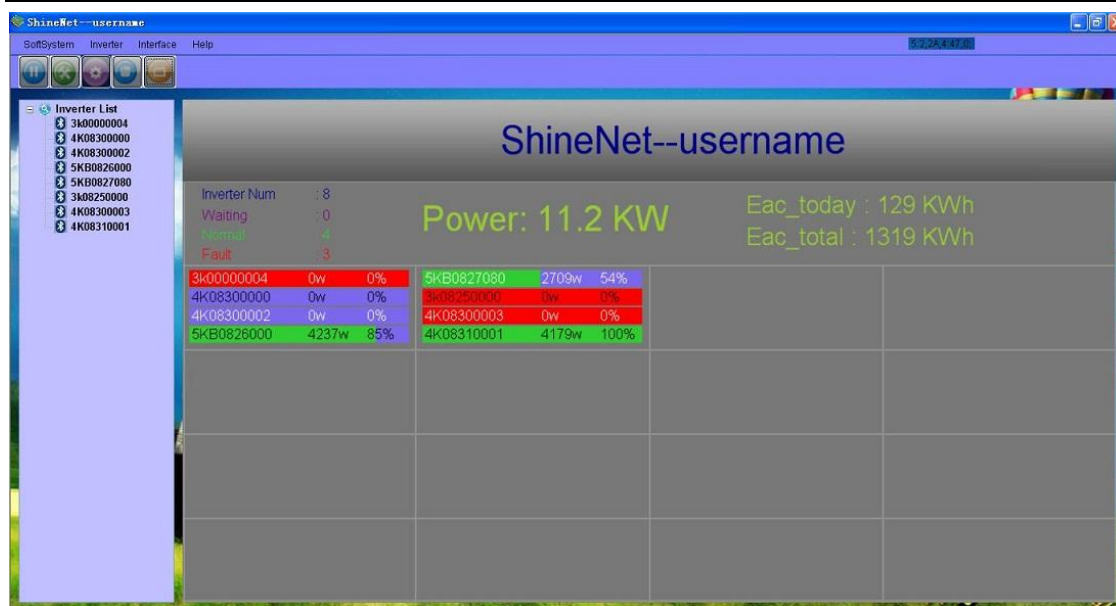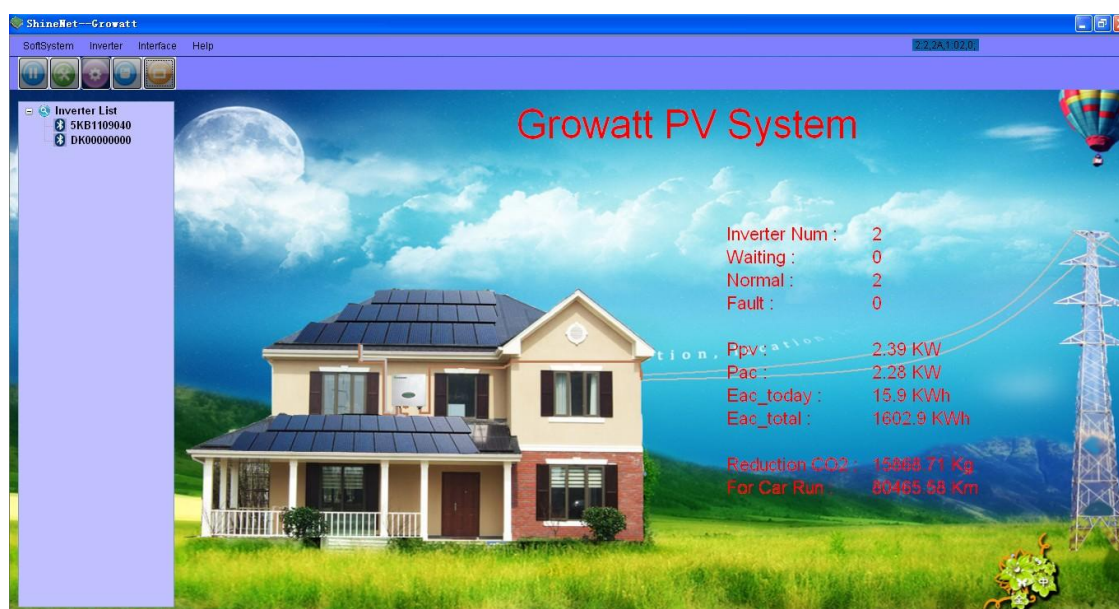
Fig 5.3.12

"xxW" is the Inverter power now;

"xx%" is the load percents;

Red means then inverter is in the fault status;

Green shows the load percents also;

5.3.4 PV System Information Interface Other

This interface has the same function as the interface in 5.3.3, but this is more intuitive.

6 Q&A

Q: Why cannot I find my inverter by RS232 or RS485 ?

A: First: Check do you have enable the communicate by Serial Port in 5.1 contact;

     Second: Check your RS232 wire is The connected directly;

     Third: Check the connection of RS485, make sure the Pin1 to Pin1 and Pin2 to Pin2;

Q: How do I connect my inverter to PC by RS485 ?

A: First: Connect the inverters to one string by RS485, make sure the Pin1 to Pin1 and Pin2 to Pin2;

     Second: Connect one inverter to PC by RS485;

     Third: Set the ShineNET communicate by Serial Port;

Q: Why cannot I find my inverter by Bluetooth ?

A: First :   If the BTDevice is the first time used on this PC, should cancel the fast sertch function in 5.1 connect Setting, try start connect for times, if could not find device also, you could set "Device Nmae2" to be empty, retry again.

     Second: If there are more than one Bluetooth devices, and there is no result after you try the first operation, maybe this is caused by your BTRadio functions. Now you can get "USB Bluetooth Dongle" form Growatt, it can connect max 7 BTDevices at the same time.

     Note: BTRadio: the Bluetooth radio on PC;

                   BTDevice: the Bluetooth device on Inverter;

Q: Why cannot I find the history data of my inverter ?

A: First: Check the Data path is right in 5.1 connect setting;

     Second : Check the Data files are there under the data path, always is under "Datapath\Inverterdata\SerialNo\xxxxx.mdb";