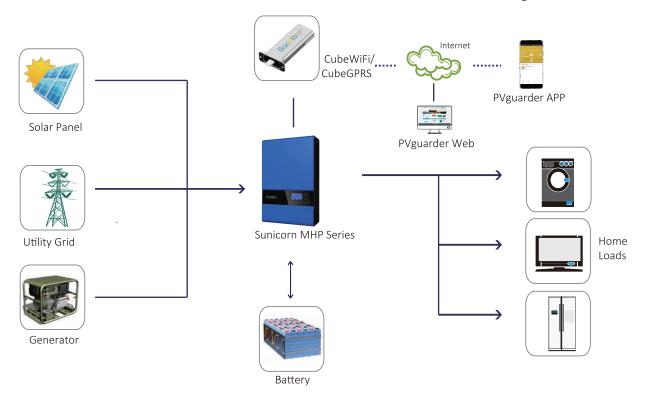
## **Monitoring Solution**

## CubeWiFi/CubeGPRS

#### **MAIN FEATURES:**

- Easy to use
- Plug-and-play commissioning
- 100-meter wireless connection for CubeWiFi/2G network for CubeGPRS
- Free online monitoring via PVguarder Web





#### **INTRODUCTION:**

CubeWiFi/CubeGPRS is a plug-and-play monitoring device to help monitor the status of the PV system. This device is installed on a Sacolar inverter or controller, uploading and receiving datas from the PV guarder server.

### **SPECIFICATION**

#### CubeWiFi

#### CubeGPRS

#### General Data

Dimensions (Length/width/Height): 135/79/29 mm

Weight: 63g

Language: English, Chinese

Dimensions (Length/width/Height): 135/79/29 mm

Weight: 70g

Language: English, Chinese

#### Wireless Parameters-

Certification: FCC/CE

Wireless Type: WiFi

Wireless Standard: 802.11 b/g/n

Transmit Power: 802.11b: +20dBm(Max.); 802.11g: +18dBm(Max.);

802.11n: +15dBm(Max.)

Receiver Sensitivity: 802.11b: -89dBm(Max.); 802.11g: -81dBm(Max.);

802.11n: -71dBm(Max.)

Certification: FCC/CE

Wireless Type: GPRS

GSM/GPRS/EDGE Frequency Range: 850/900/1800/1900 MHz

Antenna Gain: 3dbi

Max. Output Power: GSM850/GSM900: 2W; DCS1800/PCS1900: 1W

Speed: Max. 85.6Kbps(DL); Max 42.8Kbps(UL)

#### Hardwar/Software Parameters

Data Interface: UART: 9600bps; Ethernet: 100Mbps

Operating Voltage: 5V (+/-15%)
Operating Current: 100mA ~ 300mA

Operating Temperature:  $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$ Storage Temperature:  $-30^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 

Network Type: AP (Acess Point); Station Mode (with Soft AP)
Security Mechanisms: WEP / WPA-PSK / WPA2-PSK / WAPI

Encryption: WEP64 / WEP128 / TKIP / AES

WLAN Default IP: 192.168.10.100

Serial Port Speed: 9600bps

Operating Voltage:5V (+/-15%)

Operating Current: 1.5A

Operating Temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ 

Storage Temperature: -40°C ~ +85°C

#### **Application Parameters**

#### Server: Pvguarder

Inverter Communication: RS232 ( Modbus RTU protocol)

Sever Communication: WiFi via router ( Modbus TCP protocol)

Supported Routers: Wireless router (Include 3G router)

User Configuration Interface: Wireless web server (Internet Browser)

Max. Communication Range: 100m

Data Transfer Interval: 5 minutes

Default Server URL: pvguarder.sacolar.com

Server: Pvguarder

Inverter Communication: RS232  $\,$  ( Modbus RTU protocol)

Sever Communication: TCP (Modbus TCP protocol)

Configuartion Interface: APP

SIM Type: Regular SIM card

Uploading Interval: 5 Mins (1~15 adjustable)
Default Server URL: pvguarder.sacolar.com

# **Monitoring Solution**

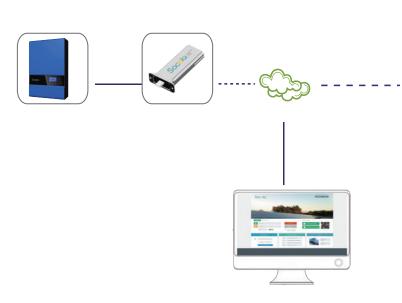
## **PVguarder Web / APP**

### **MAIN FEATURES:**

- Easy to operate

- Quick overview of all PV plants status
   Monitor and record several of PV plants with centralized management
   Professional analysis function to help maximize the system performance
   Real-time access to key performance worldwide via PC or mobile phones







### **INTRODUCTION:**

Sacolar can manage to deliver a satisfactory monitoring solution based on PVguarder server. PVguarder provides access to key system datas at anytime and any place.



Android & iOS

## **SPECIFICATION**

System Requirements	
Supported Operating Systems	All
Recommended Browsers	Internet Explorer, Google Chrome, Firefox, Opera, Safari
Supported Data Logger	CubeWifi,CubeGPRS
Access —	
Website	http://pvguarder.sacolar.com
Plant Information —	
Plant Overview	Quick yield overview of all your PV plants
Specified Plant	All important data at a glance including energy output, yield gains, environmential status
Plant Installation Data	Summary of all plant information which contains installation date, lacation date and income data
Device Overview	Display of all important data about datalogger,inverters,environment monitor,smart meter,etc
Time Periods	5 mins
Plant Management	
Account	Use can manager all PV plants with one same account
Monitoring	
Inverters Status	All inverter running status are recorded automatically, The warning of fault is immediate and highlightde
Status Reporting	
Event Reports	Timely email reports on system fault and plant error
Background Operating	
Plant Management	Add new plant, edit and delete existed plant
Device Management	Intuitive operation to manage all devices
Inverter Setting	Simple parameter setting for inverters including power management
Model	PVguarder APP
General Data	
Supported Operating Systems	Android / iOS
Source of Data	pvguarder.sacolar.com
Plant Information	
Plant Overview	Quick yield overview of all your PV plants
Specified Plant	All important data at a glance including energy output,
Plant Installation Data	environmential status Summary of all plant information which contains installation
Device Overview	data,lacation data and income data Display of all important data about datalogger,inverters,enviroment
Plant Enver Log	monitor,smart meter,etc Display of all the warning events of the plant
Device Information —	
Inverter Data	All inverter running status and data could be obtained at any time
Enviroment Monitor Data	Key parameter about environment could be obtained
Dlectric Meter Data	Primary parameters at the point of connection are collected in ever measured period