



**OPTI-SOLAR WEBPAGE MONITORING**

**&**

**OPTI-DR**

**Installation & Operation Manual**

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# **OPTI-SOLAR WEBPAGE Monitoring**

## **What we need:**

1. OPTI-SOLAR Hybrid Inverter
2. OPTI-DR : The gateway transceivers data from/to inverters
3. Local computer and mobile device: Computer and mobile device used to view data
4. Router: A network device managing the data transfer in LAN and to Internet
5. Remote computer & mobile device: Computer and device outside LAN

## **System Requirements**

### **Devices**

- 1 Computer or Laptop: installed with web browser such as IE, Chrome and Safari.
- 2 Inverters with RJ45 port (RS232).

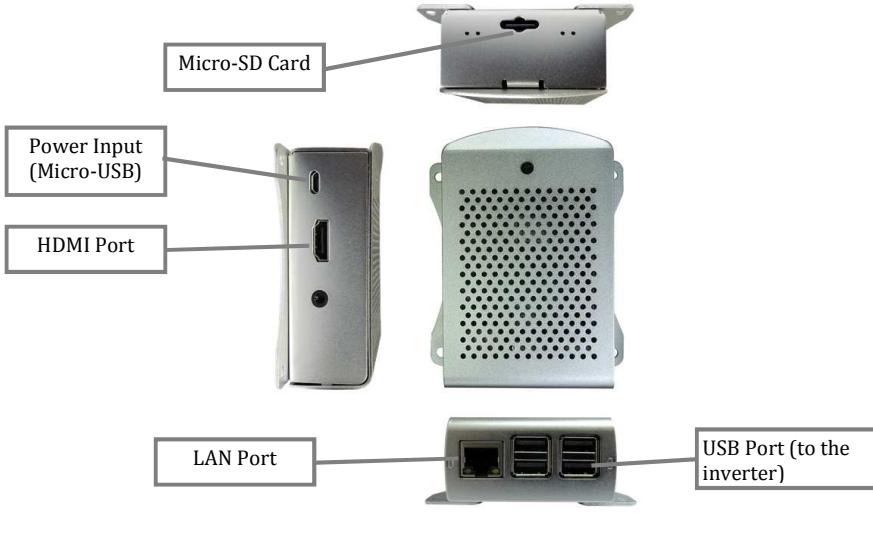
### **Environments**

- 1 Wi-Fi: 802.11 b/g/n.

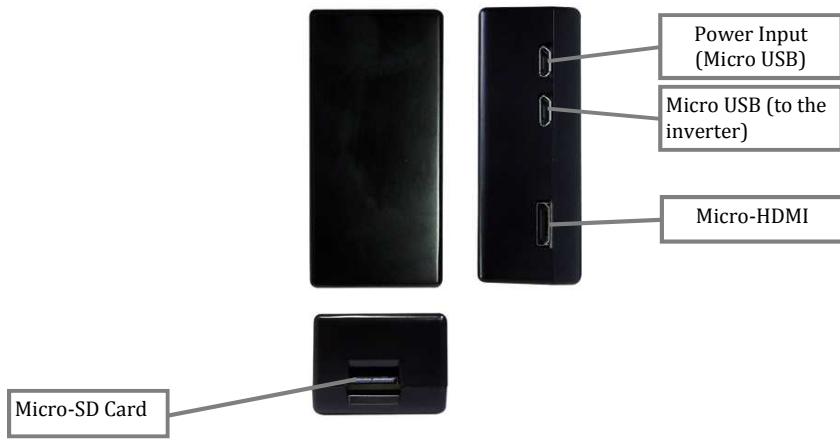
## OPTI-DR

This device(gateway) is to connect with the inverter and transmit the DATA via WIFI(internet). All the DATA will be stored in server of OPTI server room.

## Outlook



OPTI-DR



OPTI-SDR

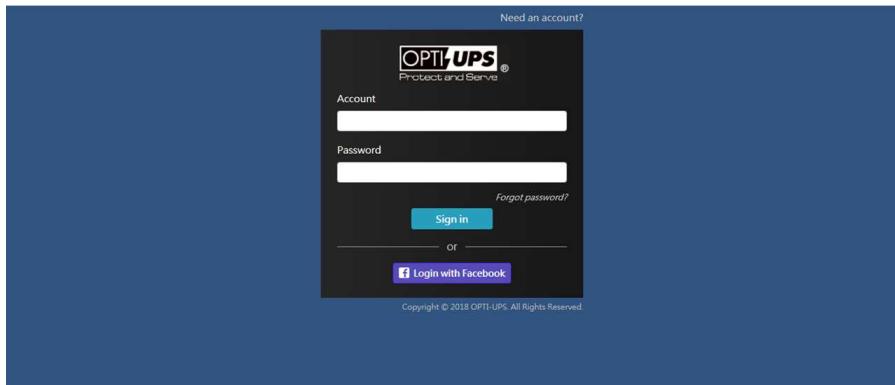


# Setup

## Apply an account in OPTI-SOLAR WEBPAGE

Before transmitting data to OPTI Web server, you need to apply an account for this service.

Please use Internet browser, go to <http://ehub.opti-solar.com>

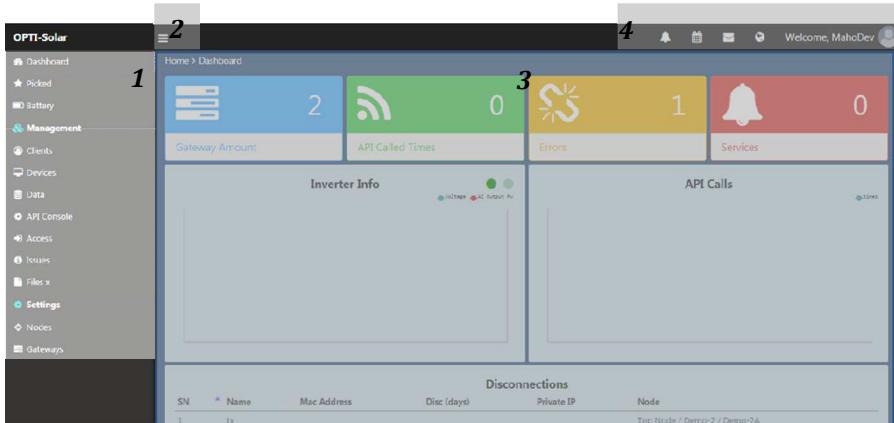


## Register an Account

1. Please register via “Need an account” or Login via “Facebook”.
2. Login OPTI web browser successfully

# About OPTI-SOLAR WEBPAGE

## Layout & Information



- 1 Information List: List all the selection for the data, management & Setting.
- 2 Scroll: hide the Information List
- 3 Information: By clicking on each block, the detail information will appear here
- 4 Menu: There are 5 selections
  - Error History(management issues): view the time of the Error occurred.
  - Calendar: The tool to schedule the tasks
  - Message: System announcement or Q&A.
  - Language: English, Chinese & Japanese.
  - Help: user manual, personal profile & Log-out.

User Manual  
 Profile  
 Logout

(Help)

## Dashboard

This is the main page after log-in.

The dashboard features a left sidebar with navigation links for Dashboard, Picked, Battery, Management (Clients, Devices, Data, API Console, Access, Issues, Files, Settings, Nodes, Gateways), and a central content area. The content area includes four colored boxes (blue, green, yellow, red) with counts (1, 2, 2, 0) and labels (Gateway Amount, API Called Times, Errors, Services). Below these are two large sections: Inverter Info (status: AC Output On, 5) and API Calls (6). At the bottom is a table titled 'Disconnections' with columns SN, Name, Mac Address, Disc (days), Private IP, and Node, showing one entry for 'tx'. A legend at the top right indicates 'Inverter' (green dot) and 'Service' (red dot).

1. Gateway Amount: the QTY of the inverter that you can manage
2. API Calles Times: the times that all the accounts called the OPTI-DR.
3. Error: the times that each Error occurred.
4. Service: the service that the user requests.
5. Inverter Info: the real-time status of the inverter.
6. API Calls: the record of the API calls.
7. Disconnection: it shows the detail that OPTI-DR disconnect from the inverter.

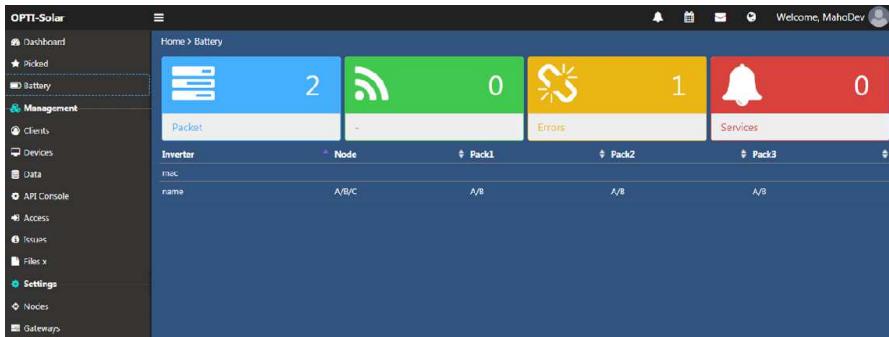
## Picked

In this page, you could view all the “Picked” OPTI-DR. (Please find “Gateway” in page 14 for more information)

The Picked page shows a list of nodes with their details. One node is selected, showing a graph of Grid V (V) over time. The graph shows a sharp drop from approximately 34.6V to 33.0V around 14:45 on 18/01/2019. Below the graph, specific parameters are listed: Grid V: 1 V, AC DC V: 239 V, AC Op. Ac. F.: 0 W, Bty. Ch. C.: 0 A. To the right, a panel displays the selected node's details: Mac Address: b8:27:eb:f9:ef:c9, Private IP: 192.168.0.34, Bind Node: Demo-1, Disc (days): 0.8 day(s), and a list of AC and Bty. Ch. parameters. The top right corner shows a welcome message for 'MahoDev'.

## Battery

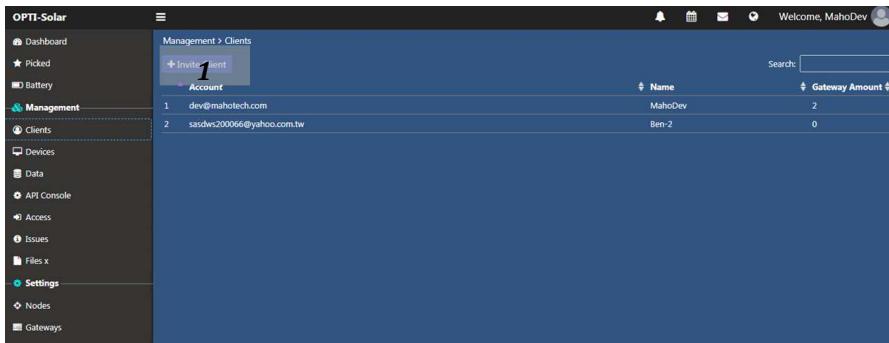
This page is for the special requirement (non-released)



## Management

### Client

The detail of all the accounts



1. Invite Client: Invite the account to observe client's information from OPTI-DR.

## Device

### The information of the OPTI-DR

The screenshot shows the 'Management > Devices' section. On the left, there's a sidebar with 'Management' selected. In the center, a tree view shows 'Demo-2' expanded, with 'Demo-1' and 'test' as children. A modal window titled '+Add Gateway' is open, showing fields for 'Name' (set to '1') and 'Mac Address'. Below the tree view is a table with one row labeled 'Demo-1'. The table columns are: SN, Name, Mac Address, Disc (days), Private IP, Node, and actions. The 'Name' column shows '1'. The 'Mac Address' column shows 'bb827abf9efc9'. The 'Disc (days)' column shows '0.8'. The 'Private IP' column shows '192.168.0.34'. The 'Node' column shows '/Top Node / Demo-1'. There are also a star icon and a delete icon.

1. +Add Gateway: add more OPTI-DR in this section (“Gateway” in Management)
2. This section is to arrange all the OPTI-DR in separate files. (“Nodes” in Settings can add more category or location in this section)

## Data

### All the detail data of the OPTI-DR

The screenshot shows the 'Management > Data' section. On the left, there's a sidebar with 'Data' selected. In the center, a table displays four rows of data. The columns are: Date, GW, PVC Pw, ACO Pw, Btr Vol, BCC, BDC, GD Vol, and ACO Vol. The data rows are:

	Date	GW	PVC Pw	ACO Pw	Btr Vol	BCC	GD Vol	ACO Vol	
1	2018-12-01 11:09	Test	0	0	13.98	0	1	1	229
2	2018-12-01 11:17	Test	0	0	13.98	0	1	1	229
3	2018-12-03 17:35	Test	0	0	13.98	0	1	1	228
4	2018-12-05 15:09	Test	0	0	13.98	0	1	1	229

At the bottom right, it says '4 / 4'. The top right corner shows a search bar with '1' and '2'.

1. : Review the record of the selected month
2. : Export the data in excel file.

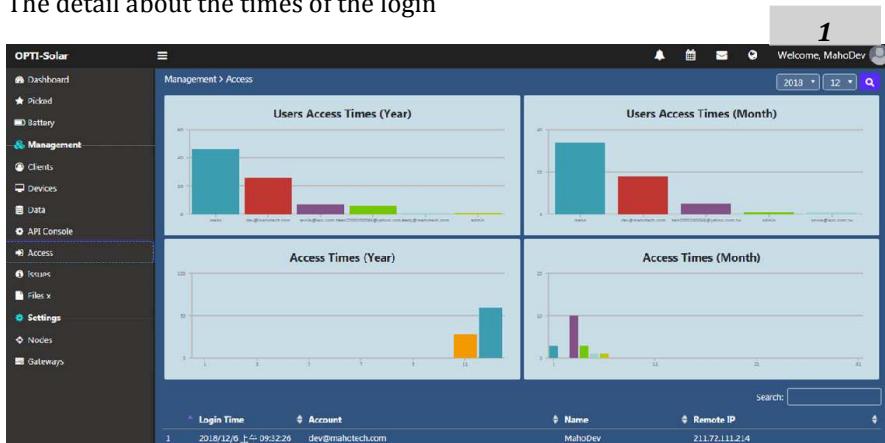
## API Console

This page explain the API method how to get access in OPTI-DR without OPTI-SOLAR webpage monitoring.

The screenshot shows the 'Management > API Console' section. On the left, there's a sidebar with 'OPTI-Solar' navigation items like Dashboard, Picked, Battery, Management, Clients, Devices, Data, API Console (which is selected), Access, Issues, Files x, Settings, Nodes, and Gateways. The main area has tabs for Request Gateway List, Request PVH by Inverter, Request Invert On/Off Status, and Set Invert On/Off. A 'Request' section shows a token input field with '(f4f13-5c7ac9e412ed)' and a 'Submit' button. A 'Response' section contains a code block: `1. /getGeteways.aspx`, a note 'Get gateway list which was bound.', and a table for the 'Request' object with columns Property, type, and Description. The 'Description' column includes an example: 'An unique MDS String with each user's account.' To the right, a 'Response' table shows columns for Obj, type, and Description. The 'Description' column lists three items: 'gwcode: The unique code of gateway.', 'gwname: The name of gateway.', and 'ip: Using IP.'

## Access

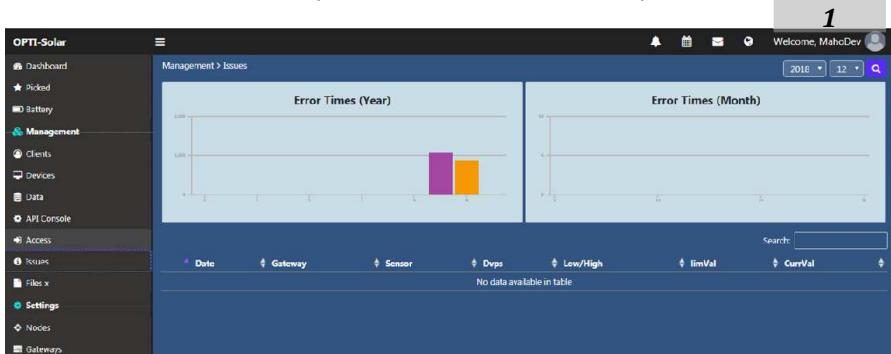
The detail about the times of the login



1. : Review the record of the selected month

## Issues

The detail about the error. (the same as  in the menu)



1.  Review the record of the selected month.

Files X: non-released

## Settings

### Nodes

This page is to create the files in “Device” of the Management



1. +Add 1rd Lv: create the first level category or the name of the location and grade all file in the different sheet.

## Gateway

We could add more OPTI-DR and select the “Picked” OPTI-DR in this page.  
(Please compare with “Picked” in page 9)

The screenshot shows the OPTI-Solar software interface with the following details:

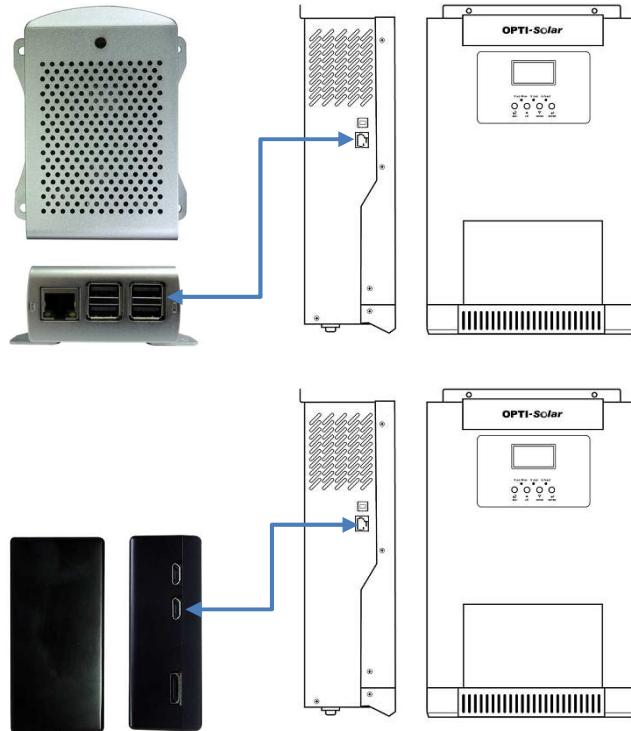
- Left Sidebar:** Includes sections for Dashboard, Picked (highlighted), Battery, Management, Clients, Devices, Data, API Console, Access, Issues, Files, Settings (highlighted), Nodes, and Gateways.
- Header:** Shows "Welcome, MahoDev" and various system icons.
- Page Title:** "Settings > Gateways" with the URL "/mods/Gateway/gateways".
- Table:** Displays gateway information with columns: SN, Name, Mac Address, Disc (days), Private IP, and Node.
- Data in Table:**

SN	Name	Mac Address	Disc (days)	Private IP	Node
1	Test	b8:27:ab:9e:ef:c9	0.9	192.168.0.34	/ Top Node / Demo-1
4	tx				Top Node / Demo-2 / Demo-2A
- Action Buttons:** A "Add Gateway" button is located at the top left of the table area. To the right of the table, there are two red square buttons with white icons: one with a star and another with a circular arrow, both labeled with the number "1".

1. : select as “Picked” and indicate in the “Picked” section  
: show the history of the OPTI-DR(the data from the inverter)
2. : add more OPTI-DR

# Start to Monitor the inverter via OPTI-DR

## Connect the OPTI-DR to the inverter



### Powering OPTI-DR (NOTE !!)

**Use the 5V/0.5A adaptor to power via Power Input**

### Connecting RJ45 port

To communicate with inverter, you should connect the API BOX to the RJ45 port of the inverter

1. OPTI-DR: USB Port
2. OPTI-SDR: Micro-USB Port

## Add the OPTI-DR into the OPTI-Solar WebPage

Each OPTI-DR will come with a serial number.

### Find the WIFI

Make sure the WIFI is active for the OPTI-DR

### Build-up the connection between WIFI & OPTI-DR

Open the WIFI function of Smart-phone and try to find “OPTI-DR” as one of the WIFI source. Then the login page will pop-out automatically and we can connect OPTI-DR with the WIFI.

### Login OPTI-Solar Website Page

Please follow Page 6 and Login the Page

### Build-up the communication

1. Go to the page of Gateway (Settings) and click “Add Gateway”.

SN	Name	Mac Address	Disc (days)	Private IP	Node		
1	Test	b8:27:ab:f9:ef:c9	0.9	192.168.0.34	/ Top Node / Demo-1		
4	tx				Top Node / Demo-2 / Demo-2A		

2. Put the serial number of OPTI-DR in to the blank and click “Add”.

Code

3. The new added OPTI-DR will pop-out in the list of Gateway page.

### **Token code**

The token code is generated automatically after registering an account. Add the token code in API Console and submit it. Afterward, it will allow the account owner to access the DATA via OPTI-DR directly.

