# EVB300 User Manual

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USM-EVB300-2024-V01

# Content

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# 1. Overview

## 1.1 Brief Introduction

The monitoring device EVB300 is the interaction interface of microinverters, which can effectively communicate with any Envertech microinverter and remote control the Envertech microinverter. Users can have access to data and precise analysis through a simple, flexible and convenient way. You can have access to of each inverter and module in your solar system with our EnverPortal and EnverView app. The user-friendly interface lets you manage your solar system in real-time.

## 1.2 Features

- 3 Years Warranty
- Power Line Communication Simple Installation and Operation
- IP48 Protection Rating (Indoor)
- Real-time Monitoring and remote control through Website & App Local data storage

## 1.3 Key Equipment

- Microinverter
- Monitoring Device EVB300
- Smart Monitoring Webportal- EnverPortal
- Monitoring Device EVB300 Smart Monitoring Application- EnverView

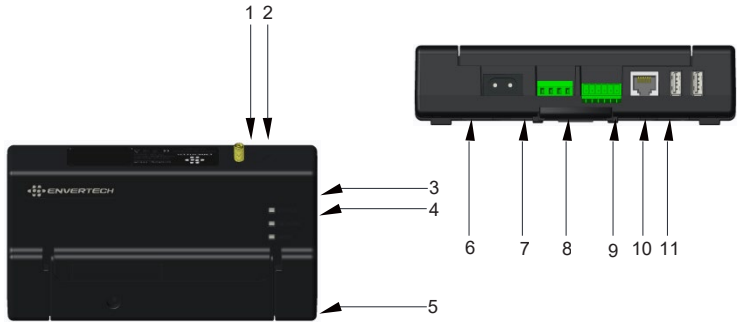


# 2. Structure

## 2.1 Package List

| | Component | Quantity | Description |
|---|---|---|---|
| A | EVB300 | 1 | Monitoring device. |
| B | Networking Cable | 1 | Connect to the router. |
| C | Power Cable | 1 | Provide power for EVB300. |
| D | Expansion screws | 2 | For mounting EVB300 on the wall. |
| E | Hexagon Wrench | 1 | Unscrew the front cover. |
| F | Ejection Pin | 1 | To reset EVB300. |
| G | Antenna Protection Cap | 1 | To protect antenna hole. |
| H | Antenna | 1 | Enhance wireless signal of EVB300. |

## 2.2 Interface Layout



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| No. | Description | Description |
|---|---|---|
| 1 | Antenna Mounting Hole | Mount antenna in the hole. |
| 2 | Reset Hole | Reset EVB300. |
| 3 | Mode Light | When EVB300 works under different model corresponding light blinks. |
| 4 | Network Light | This light will be on When the EVB300 connects to the server. |
| 5 | Status Light | This light will be on when the EVB300 works well. |
| 6 | Power Connection Port | The power connection port connects power through the power adapter. |
| 7 | 3-phase Electrical Interface | To plug in 3-phase electricity. |
| 8 | Current Sampling Interface | To plug current sampling sensors. |
| 9 | Ethernet Port | This port allows the EVB300 to communicate with the Envertech server. |
| 10 | RS485 Port | Virtual communication port, used for communication and control between RS485 equipment and EVB300. |
| 11 | USB Port | Plug USB disk to record local data. |

### 2.3 Technical Parameters

| Model | EVB300 |
|---|---|
| | |
| **Features** | |
| Communication Method | PLCC (Power Line Carrier Communication) |
| Monitor Mode | Real-time data monitored and remote control on app |
| Ethernet Connection | TCP/IP |
| Wireless Communication | Wi-Fi (802.11g/n) |
| Applicable Voltage | Single Phase / Three Phase |
| Storage (Optional) | USB Local Storage |
| Power Control (Optional) | Automatic Control of Power Output |
| RS485 Port | Virtual communication port, used for communication and control between RS485 equipment and EVB300. |
| **Capacity** | |
| Number of Devices Connected | Up to 60 Units of PV Modules in total |
| **AC Supply/Consumption** | |
| AC Supply | 108~264VAC, 47.5~62.0Hz |
| Power Consumption | 3 W |
| **Mechanical Data** | |
| Dimensions (W*H*D) | 172mm*100mm*45.5mm |
| Weight | 750 g |
| Cooling | Natural Convection- No Fans |
| Ambient Temperature Range | -40℃~+65℃ |
| Ingress Protection (IP) | IP40 |
| **Interface** | |
| Compliance | CE |
| Warranty | 3 Years |

## 3. Installation

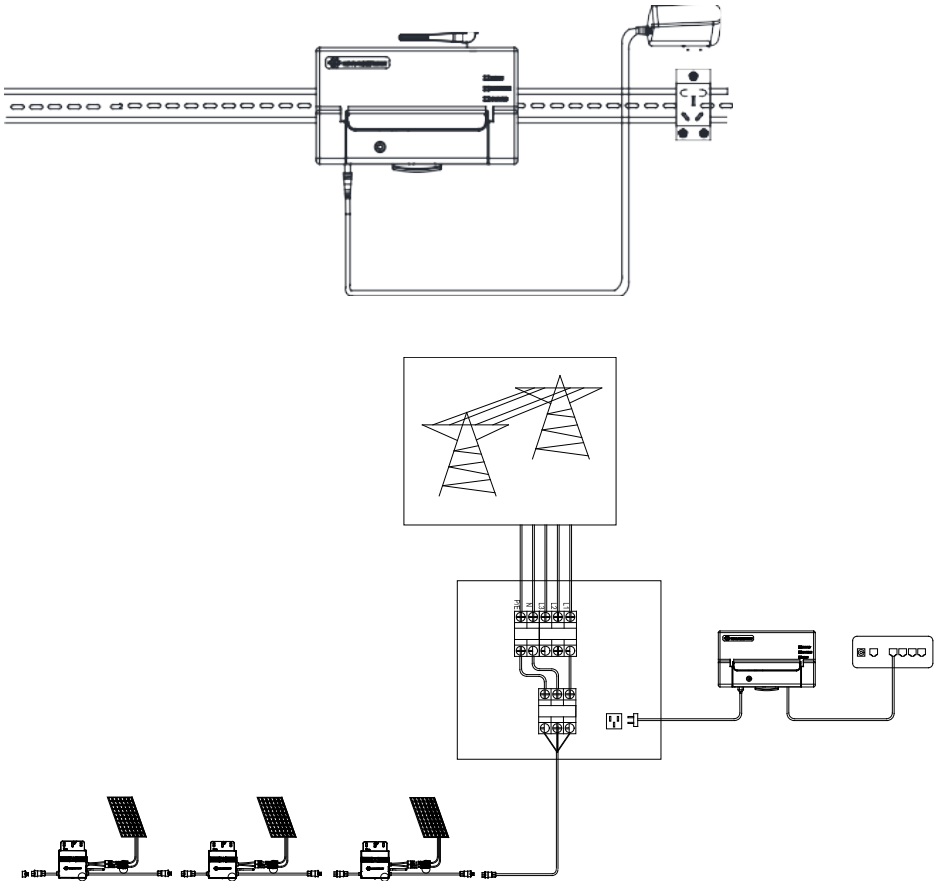
### 3.1 Preparation

Make sure you have the following components ready before beginning to install the EVB300:

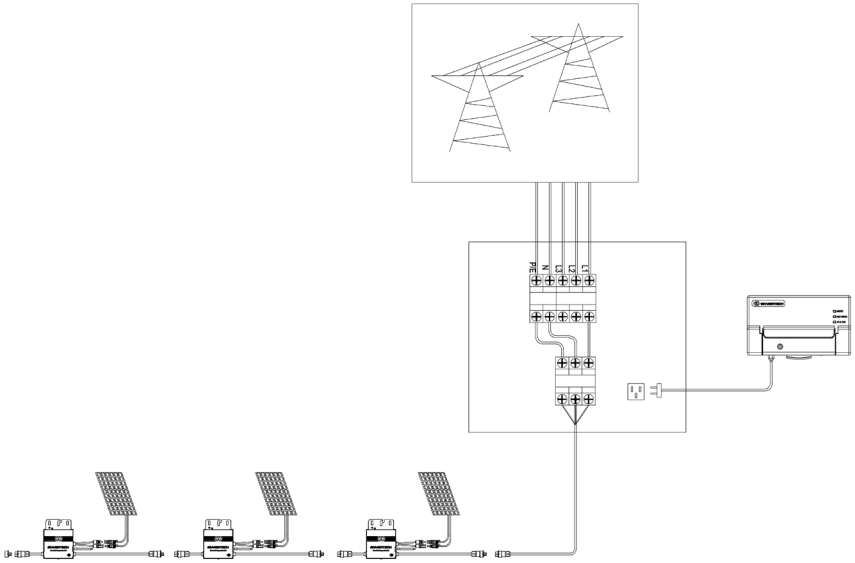
- An AC electrical outlet (connected to microinverter).
- A steady Internet connection (CAT5 Ethernet, or a wireless router).
- A computer/cellphone.
- EnverView app (search “EnverView” on Google Play or iOS Appstore)

### 3.2 System Diagram

(1) Ethernet Mode



(2) Wireless (Wi-Fi) Mode



### 3.3 Installation Steps

Note: When mounting the EVB300 to a wall, make sure to select a cool, dry indoor location.

Step 1. Screw on the antenna.

Step 2. Drill two holes on the wall surface (10cm apart), then insert 2 mounting screws.

Step 3. Align and slide the EVB300 onto the mounting screws.

Wait 3 minutes and you can start the operation after booting EVB300.

### 3.4 Internet Connection

**(1) Wireless Mode**

**A. Cellphone Configuration**

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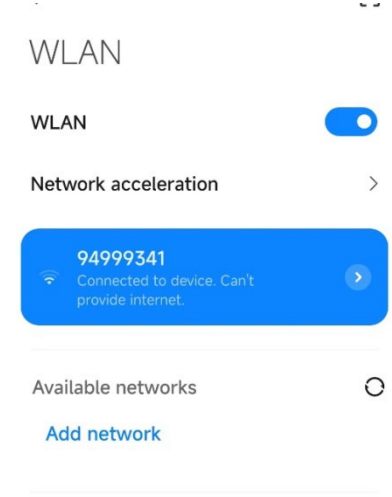
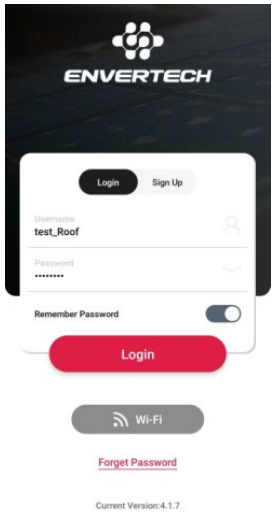
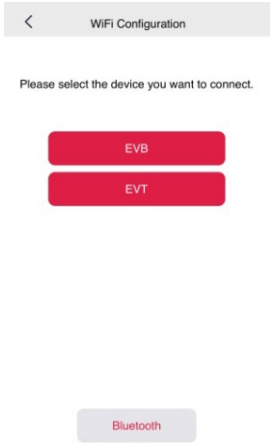
a. Connect to the network whose name is the same as your monitor's SN in your cellphone.



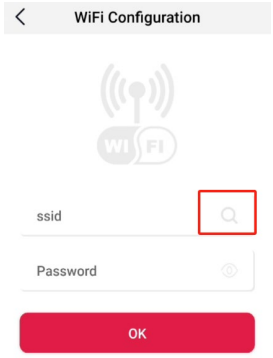

b. Open EnverView and click "Wi-Fi".




c. Select "EVB".




d. Click search icon and select target Wi-Fi.




e. Please Enter the password and click "ok".

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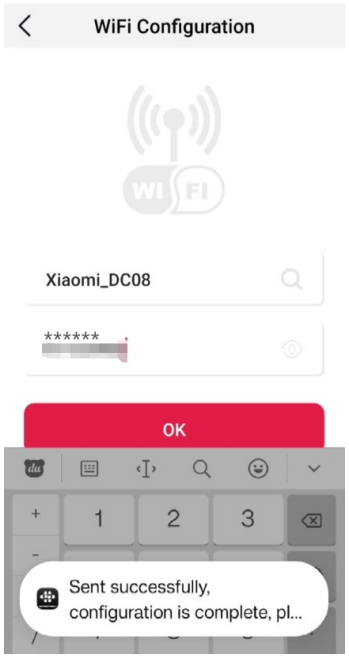



**B. Computer Configuration**

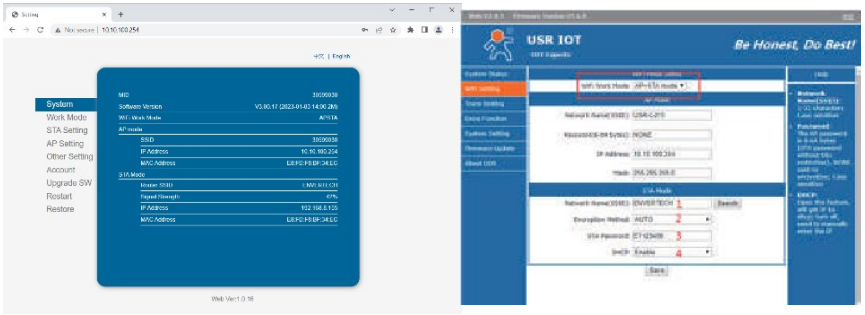
a. Connect the monitor to the power supply.

b. Connect network whose name is same as your EVT/EVB SN.


c. Use a browser to open the web page: http://10.10.100.254/, and login the account (username: admin and password: admin).



d. Click "Wi-Fi Setting" for relevant configuration:



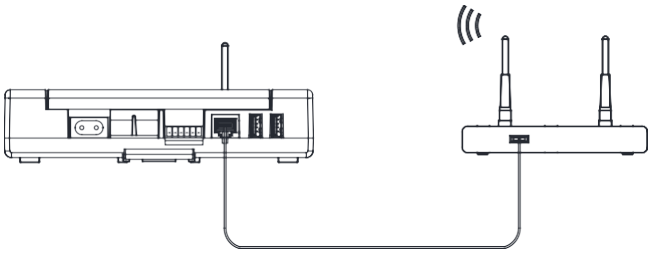

As shown in the figure above, enter the Wi-Fi name at "1", or click the search button to select the corresponding Wi-Fi name.

e. After the above operation, click save.

**(2) Direct LAN Cable Connection.**

A. Make sure the LAN cable is connected to the network port on the bottom of the EVB300.

B. Connect the LAN cable to a spare port on the router.



**3.5 Add Microinverter in Local Mode**

Note: Please ensure that both EVB300 and your cellphone are in the same router network.

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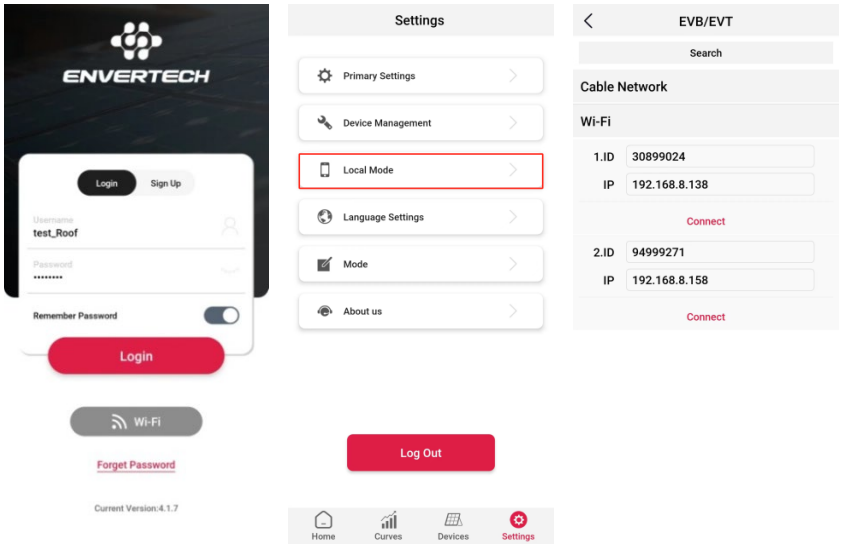
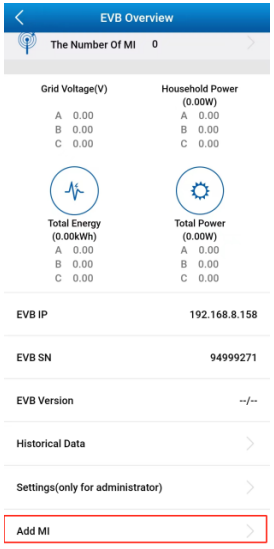
Step1. Launch EnverView app, enter Local Mode. Connect your EVB300.

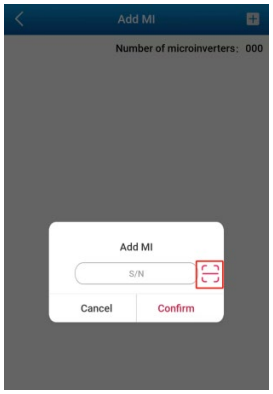



Step2. On EVB Overview page, enter Settings. Click Add MI you could choose enter MI SN manually or click the grid icon to scan the MI SN automatically.




Or you can scan the bar code.


Step3. Click confirm to finish Adding MIs.




## 4. Main Functions

By the Power Line Carrier Communication (PLCC) technology, EVB300 collects power generation data from the microinverter, and transmits to the EnverPortal database. Correspondingly, user can also manage his own devices through EnverPortal or EnverView app.

### 4.1 Register a New Account

EnverPortal, an intelligent monitoring system developed by Envertech, monitors the performance of the whole Envertech microinverter system as well as that of every module in the system. New users need to register an account.

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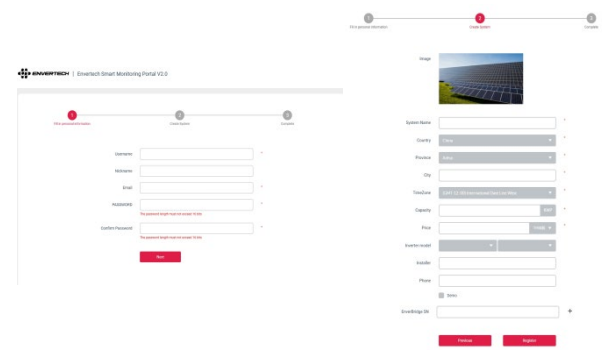
Registration address: www.envertecportal.com

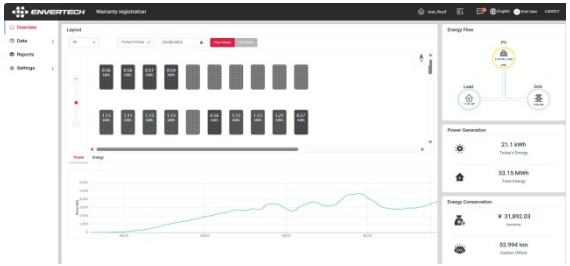


Click “Next”, and create a power station.

## 4.2 EnverPortal Monitoring System

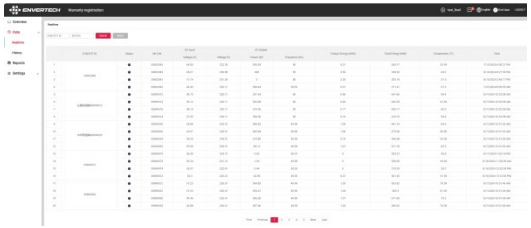
### 4.2.1 Overview Page

Smart Monitoring Web portal——EnverPortal, for single power station.



### 4.2.2 Real-time Monitoring

Click “Real-time” button to enter the real time data page.

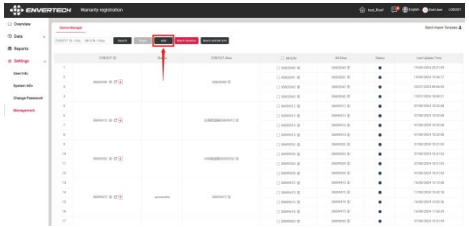


### 4.2.3 Historical Data

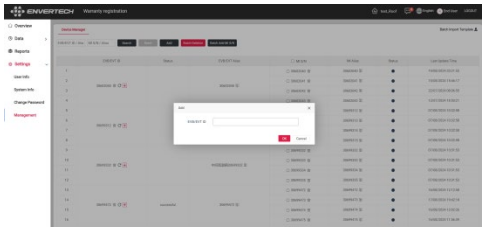
Click “History” to enter the data graphs page.

### 4.2.4 Add Devices

Select “Settings”→ “System Info”→ “Device Manager”, and click “Add” to enter the interface.



Enter the correct SN of EnverBridge in the popup box and click “OK”.



## 4.3 EnverView APP

EnverView is Envertech’s monitoring APP. Envertech end users can log in their monitoring accounts on EnverView.

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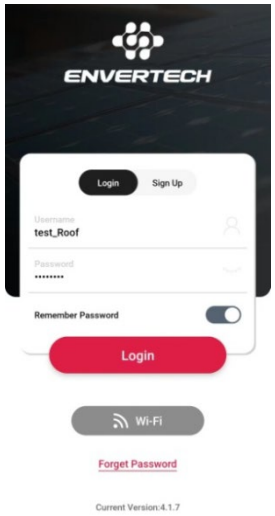
#### 4.3.1 Login

First of all, download EnverView from the application store and login with your account.




#### 4.3.2 Homepage

Below is the homepage after logging in.


**Total Energy:** The total energy produced by current login end user account to date.

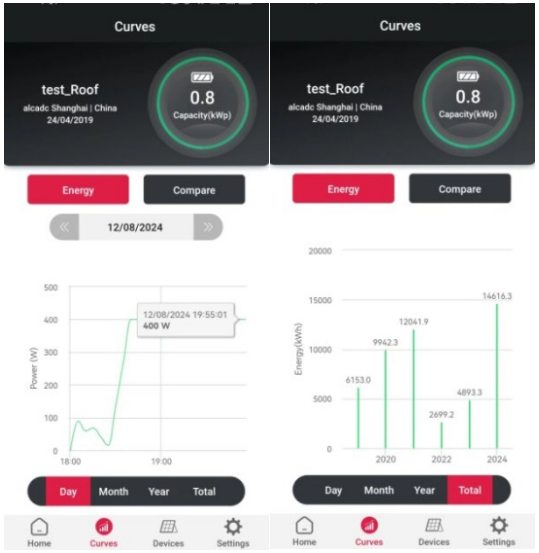
**Current Power:** The total generating power of the last piece of data uploaded by all inverters under the current login end user.

**Today's Energy:** The total power output of current login end user account on the current day.

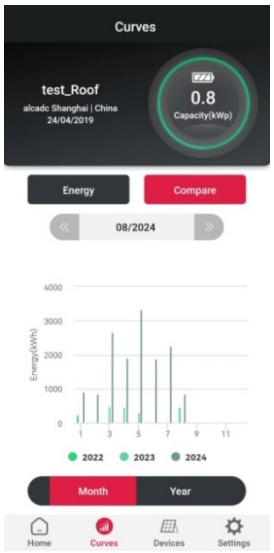
**Carbon Offset:** The amount of carbon emissions can be reduced by all the energy produced by current login end user.

#### 4.3.3 Curves

Click “Curves” at the bottom. Here you can see the power curve of the day, the month, the year and the total according to the time period you selected. Put your fingertip on the curve and the data at that specific time period will be displayed.



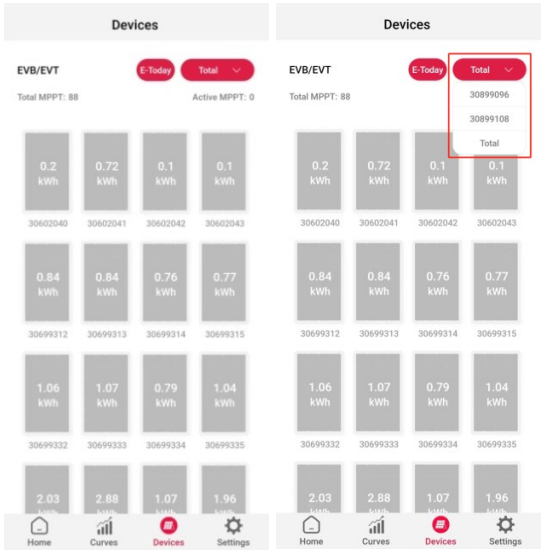
Click “Compare”, select “Month” and you will see the bar chart comparing the energy production by month up to the time selected. Select “Year” and you will see the bar chart comparing the energy production by year up to the year selected.




#### 4.3.4 Devices

Click “Devices” in the bottom menu, and you will find all the EnverBridge info and MI info associated with this account. Select different EnverBridge to read the corresponding data.






Scroll down the screen, then you can see the AC power curve as below. Put your fingertip on the curve and the realtime data will be displayed.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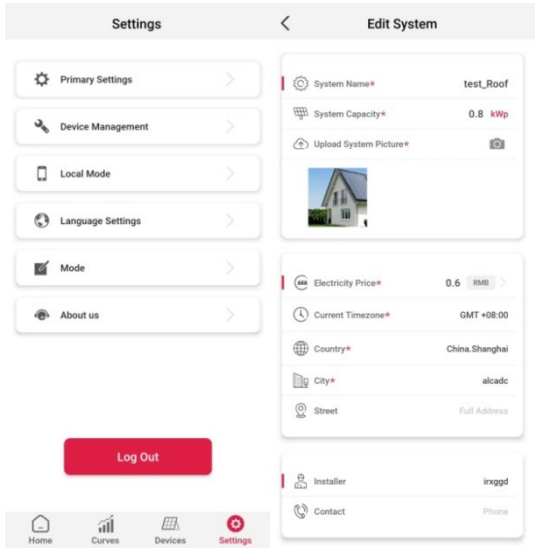
### 4.3.5 Settings

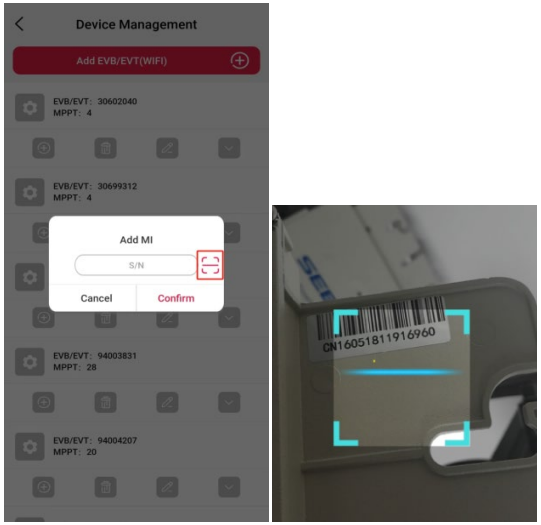
On the “Settings” page, you can edit this system and manage its devices.




Go to “Device Management”. Click “+” on the up right corner of the page to add an EnverBridge.


Click “Add EVB/EVT” to add a new microinverter under this EnverBridge. Type the microinverter SN in the input box, or click the barcode icon and scan the barcode on the microinverter to automatically show up in the input box.


Click “Confirm”. This newly added microinverter will be in the microinverter list successfully.



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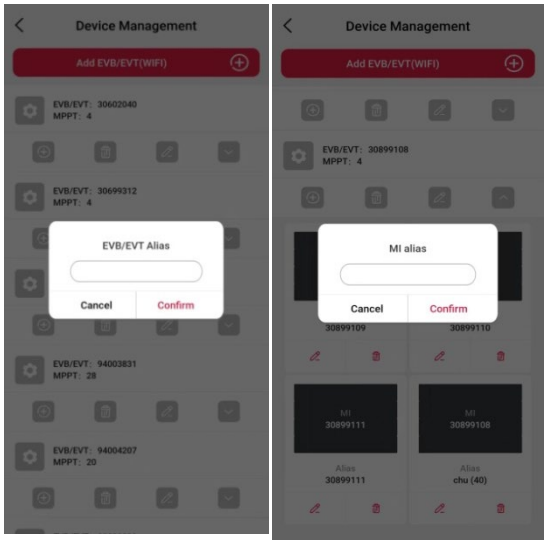
Here you can also rename the EnverBridge and MIs.




#### 4.3.6 Support

If you have any question or need, please don't hesitate to contact our tech support team via tech@envertec.com. We are at your service any time.

### 4.4 Others

To know more about EnverView, please refer to EnverView App User Guide (End User) on our website www.envertec.com

## 5. Basic Operations

### 5.1 Safety Checks

Safety checks should be performed at least every 12 months by manufacturer's qualified person who has adequate training, knowledge, and practical experience to perform these checks. The data should be recorded in an equipment log. If the device is not functioning properly or fails in any of the tests, the device has to be repaired.



### 5.2 Maintain Periodically

For more information of safety checks, please see below the three safety instructions of this manual.

| | |
|---|---|
|  | **NOTE**<br>The "Note" mark in this manual indicates important product information. |
|  | **WARNING**<br>Do not attempt to repair the Envertech monitoring device without authorization, because it does not contain parts available for users to repair. If the microinverter fails, please contact Envertech customer service. |
|  | **WARNING**<br>Please ensure that all power is off and there is no electric current when connecting Envertech monitoring device. |

## 6. About Us

**Envertech (Shanghai) Corporation Ltd.**

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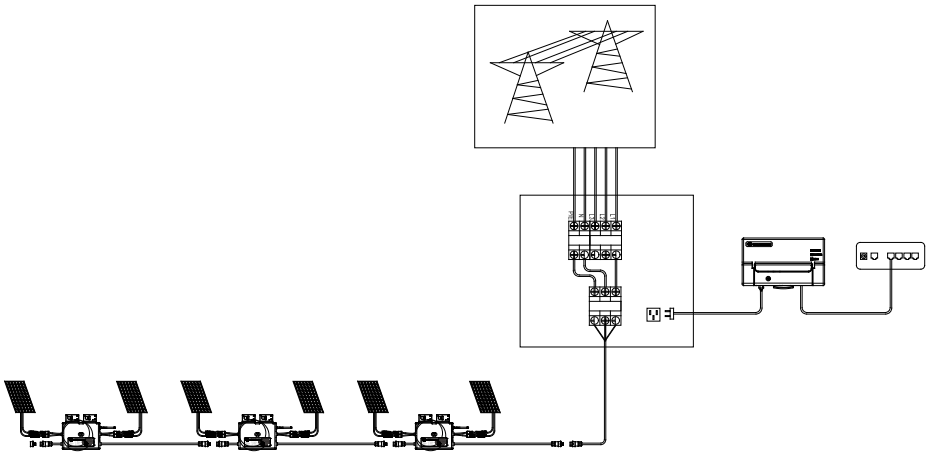
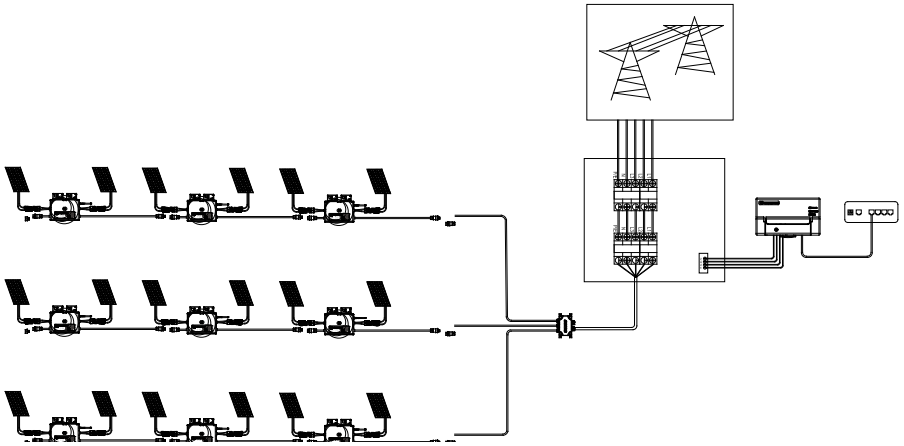
## 7. Attachments

1. Single Phase

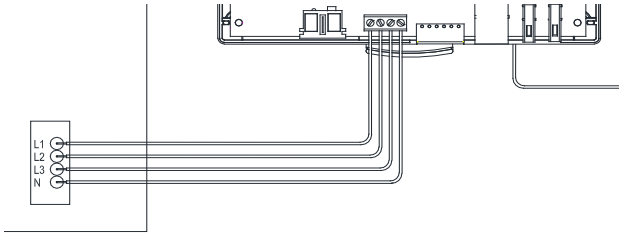


2. Three Phase





Unscrew the front cover with the complimentary hex screwdriver, then plug wires on each phase into the corresponding connector of EVB300.




**WARNING**
Tighten the screws that fix the plastic baffle plate. Make sure not to connect single-phase and three-phase power ports at the same time to prevent electric shock.