

User Manual

HYPONTECH
ENERGIZING FUTURE

HYPONTECH PV MONITORING

HiPortal: App Full Guide

iOS / Android



Version History

Version 1.0, November 2020 – First release, App Version 2.0

App Patch History

Version 2.0, November 8th, 2020 – First release (iOS, Google Play)

1. INFORMATION ON THIS DOCUMENT

This document describes the configuration and standard operation procedure of HiPortal Smartphone App as well as problems may occur along the operation of product user interface.

This document is intended for all HiPortal App users.

Latest update of this document can be found on Hypontech.com, where new versions of App will be released via Apple App Store and Google Play.

This document is valid for: **HiPortal Smartphone App (Version: 2.0 and above)**

All functions described in this document are demonstrated on iPhone 11, iOS 14.2

All problems regarding the HiPortal App, please e-mail us at service@hypontech.com

2. PRODUCT OVERVIEW

2.1 Introduction to HiPortal App (2.0+)

HiPortal is a cloud-based monitoring portal available as a smartphone App. The app is designed for visualization of data, the technical and financial performance management of PV Plants at fingertips, while professional toolset and management of PV systems are accessible for authorized user levels.

HiPortal App offers accurate statistics about generation profile of each plant system and device, but also a unique ecosystem for user interconnections:

- Wholesalers accounts are granted with access to pinpoint and troubleshoot faults from remote, who could then authorize and manage Installer accounts, as well as creating and editing internal roles.
- Installer accounts are equipped with professional toolset for troubleshooting, maintenance and configuration purposes, whether on-site or off-site.
- End User accounts have a friendly and intuitive interface, with feedback of plant profitability and performance at a glance.

Depending on the products, versions of communication protocol, and system components (e.g. integration of smart meter, sensors, and optimizers), available features may differ: live tracking of power, voltage, current of inverters and PV arrays, consumption of loads, event recorder, status indicators, statistical indicators of system performance, and more.

2.2 System Requirements

- An end device with operating system that facilitates with phone-based software and internet (smartphone device brands). For best visual experience, screen size above 5.5 inch is recommended.
- An established, active internet connection, Wi-Fi, or network with 3G and above. Guaranteed internet

speed and signal strength is highly recommended during the operation.

The respective version or equivalent of the following smartphone OS must be installed: **iOS 10+**, **Android OS 5+**

2.3 Useful URLs and Links

- Download from Apple App Store / [Link](#)
- Download from Google Play / [Link](#)
- Latest version of this document and further description of the App / www.hypontech.com
- HiPortal Web User Interface / www.hyponportal.com/signin

All information of plants, users and settings are synchronized on both HiPortal App and Web.

If you spot any statistical difference from the Web and App, please contact us on Hypontech.com or send us an e-mail to service@hypontech.com.

2.4 Required Inverter Models and Accessories

Please note that the availability of HYPONTECH products are region-specific. Cross-country distribution is strictly forbidden and will void all product warranty. Please contact your local distributor or wholesaler to consult about HYPONTECH product models.

Technical details of products are available on Hypontech.com.

The following product models are supported with data communication via HiPortal App:

Grid-tied Inverters

- HPK-1000, HPK-1500, HPK-2000, HPK-2500, HPK-3000 (*Single Phase, 1 MPPT*)
- HPS-1500, HPS-2000, HPS-2500, HPS-3000, HPS-3000L, HPS-3680, HPS-4000, HPS-5000, HPS-6000, HPS-6500 (*Single Phase, 1 MPPT/2 MPPTs*)
- HPS-7000, HPS-8000 (*Single Phase, 2 MPPTs*)
- HPT-3000, HPT-4000, HPT-5000, HPT-6000, HPT-8000, HPT-10000, HPT-11000 (*Three Phase, 2 MPPTs*)
- HPT-15K, HPT-17K, HPT-20K, HPT-25K (*Three Phase, 2 MPPTs*)
- HPT-33K, HPT-40K, HPT-50K (*Three Phase, 3 MPPTs/4MPPTs*)

Storage Inverters

- HHS-3680, HHS-4000, HHS-5000 (*Hybrid Single Phase, 2 MPPTs*)
- HBS-3680, HBS-4000, HBS-5000 (*AC-Couple/Retrofit*)

Communication Devices

- Wi-Fi Stick (*Plug-and-play, Wireless Access Point*)
- GPRS Stick (*Plug-and-play, 2G SIM Card*)
- HiManager (*RS485 and Wireless Access Point, for plants with multiple devices*)

3. USER INTERFACES

3.1 PLANTS

In PLANTS the HiPortal App provides access to all PV plants owned by and under management of your account. The layout could vary from plants depending on the system's structure, functional scope, and grid type. You can easily view the generation data and operating status of your PV plant(s), and sort multiple plants easily from the tools provided. If anytime you wish to change a plant parameter (e.g. Installation capacity, income rate, grid type), simply press and hold on its tab to edit.

Individual plant display would be more detailed with emphasis on power generation profile and status, and access to devices and event log of this plant. Parameterization of connected devices and inverters are available from authorized users.

3.2 HOME

HOME is an essential interface with a summarized display of system information, status, capacity, and lifetime generations. The performance ratio of all plants is learnt easily from the dashboard.

With the aid of Google Maps, the plant locations are available on a map overview, which is of particular importance for plant management and maintenance over states.

Display of widgets could be user-specific depending on the types of plants involved.

Please note the system properties must be entered correctly, and end users have the legal right not to disclose any geographical information as a system owner.

3.3 ACCOUNT

Settings of user information, country and currency and security settings are available on the ACCOUNT interface at all times.

HiPortal automatically assigns every user with 5-digit account recognition ID. This ID is applied in user bindings and interconnections.

It is strongly recommended for installers and end users to actively bind to your administrative account for optimal service and management.

Please note that plant transfer and user management are available on HiPortal Web only and requires a user level equivalent to installer and above.

3.4 User Levels and Rights

In HiPortal, accounts have different user levels. The levels determine which functions and widgets are available to this user account in App interface. Some functions that are level-specific will not be displayed due to missing authorization.

Functions may be changed by HiPortal updates, and by authorization of accounts.

The following user levels are available:

- Wholesaler
- Installer
- End User

Accounts created on HiPortal App Log-in Screen is set to End User by default. The account that created a plant get administrator rights of the plant.

Functions	Availability to Account User Level		
	Wholesaler	Installer	End User
PLANTS – MENU			
Displaying Plant List	✓	✓	✓
Creating New Plant	✓	✓	✓
Editing Existing Plant (e.g, name, capacity)	✓	✓	✓
Deleting Existing Plant	✓	✓	✓
Sorting Plant List	✓	✓	✓
PLANTS – STATUS			
Displaying Plant Status	✓	✓	✓
Displaying Generation and Yield	✓	✓	✓
Displaying Consumption (Smart meter)	✓	✓	✓
PLANTS – DEVICES			
Displaying Device List	✓	✓	✓
Displaying Charts	✓	✓	✓
Adding Devices to Plant	✓	✓	✓
Removing Devices from Plant	✓	✓	✓
Displaying Device Properties	✓	✓	×
Changing Device Alias	✓	✓	✓
Configuring Device Parameters	✓	✓	×
Configuring Wi-Fi Connections	✓	✓	✓
Displaying Device Events	✓	✓	✓
Solving Events	✓	✓	×
Displaying Device Logs	-	-	-
Clearing Events	-	-	-
PLANTS – EVENTS			
Displaying Plant Events	✓	✓	✓
Solving Events	-	-	-

Displaying Plant Logs	-	-	-
Clearing Events	-	-	-
Displaying Troubleshooting Tab	✓	✓	✓
ACCOUNT – MENU			
Account Settings	✓	✓	✓
Displaying Account ID	✓	✓	✓
Displaying Manage Account ID	-	✓	✓
User Management	-	✓	✓
Security Settings	✓	✓	✓
Find Device	✓	✓	✓
About Us	✓	✓	✓
ACCOUNT – USER MANAGEMENT			
Binding to a Higher-Level Account	-	✓	✓
Unbinding from a Higher-Level Account	-	✓	✓

4. GETTING STARTED IN HIportal

4.1 Registering in HiPortal App

Procedure:

1. Enter HiPortal App
2. In the Log-in page, select Sign Up
3. Enter your account details, including
 - E-mail address
To receive verification code, reset password, plant notifications, etc.
 - Password
4. Select Send. A 4-digit verification code will be sent to the e-mail address in a few minutes.
5. Enter verification code
6. Tick the box for user agreements
7. Select SUBMIT
8. Registration Completed

NOTE:

All accounts registered in the App are End-User Accounts.
To register an installer account, please contact your Wholesaler.

NOTE:

When you cannot receive registration e-mail, check if:

- E-mail address is invalid or entered incorrectly
- Your phone has no internet connection
- Registration e-mail is moved to junk mail folder

And if none of above worked for you, please send an inquiry e-mail to service@hypontech.com

4.2 Log into HiPortal App as an Existing User

Account created by HiPortal App and Web are synchronized.

With access to internet on your smartphone and access to a user account in HiPortal.

Procedure:

1. Enter HiPortal App
2. Enter the e-mail address and the HiPortal password
3. Select Sign In

4.3 Account and Security Settings

After logging into your account, please go to the settings page.

If your account is created by your Wholesaler, we strongly recommend you changing the default password in the first log-in to improve account security.

Procedure:

Account Settings

4. Log into HiPortal App
5. Go to ACCOUNT
6. Select your account profile
7. It is strongly recommended to set appropriate Currency and Country

Security Settings

1. Go to ACCOUNT
2. Select Security Settings
3. Change your password

4.4 Retrieving Password

If you have forgotten your account password, you can reset it:

- a. using the registered e-mail address in the log-in page
- b. by asking for your Wholesaler's assistance
- c. e-mailing service@hypontech.com, provide with any of your account (e-mail address), ID or inverter SN

5. STANDARD OPERATIONS

5.1 Creating A New Plant

In order to monitor and configure the inverter and devices in your PV system, create a plant in HiPortal App. In

plant editing page the parameters can be changed at all times once the plant is created.

Requirements:

To ensure correct readings of performance and quality of service, Currency, Country, Installed Capacity and Time Zone must be filled correctly.

Procedure:

1. In PLANTS, tap on the "+" widget on top right corner.
2. The following information of the plant must be filled correctly:
 - Name
 - Capacity
 - Time Zone
 - Country
3. Select NEXT
4. If you wish to add a communication device (e.g. a Wi-Fi / GPRS Stick) to the plant you just created, select ADD MONITOR.
5. Scanning the QR Code on communication device(s) will be added to the plant. Otherwise, select DONE. To add new devices to this plant, refer to 5.4.

The plant parameters can be changed. Please refer to 5.2 for editing plant parameters.

NOTE:

Currency and Income Factor are important parameters to determine your ROI indicators and some display features in plant. Inappropriate numbers may cause display of performance to be misleading.

Once the plant is created, many calculations in HiPortal will rely on these 2 inputs. It is strongly recommended to double check and enter them correctly.

NOTE:

Devices need to be configured with working internet connection to be displayed in a plant. For example, GPRS Sticks, configured Wi-Fi Sticks and HiManager.

Please refer to 5.3 for internet configuration of Wi-Fi Sticks.

5.2 Editing and Deleting Plants

You can edit plant information and settings in the Plant Parameters page. For example, if you plan to add devices and solar modules to an existing plant, you can increase the capacity of the plant. A mis-created or unwanted plant can also be deleted on this page.

Keep in mind that you require administrative rights over the plant for both editing and deleting functions.

NOTE:

All plant data will be lost when deleted.

NOTE:

When Currency and Income Rate are edited, the past monetized results will not be changed.

- A change in currency will be applied immediately.

- A change in income factor will be applied on the next day.

5.3 Configuring A Wi-Fi Gateway (w/ Wi-Fi Sticks Only)

Please skip this sector if you do not intend to establish internet connection with a Wi-Fi Stick.

For PV plants that include WLAN connected inverters, the user needs to configure wireless gateways to establish internet connection for monitoring and configuration on HiPortal.

Wi-Fi Stick is a wireless networking hardware packed with HYPONTECH inverters. When the Wi-Fi Stick is connected to a powered inverter (e.g. operating with a minimal startup input), it generates an Access Point (AP/WAP) signal that requires user configuration to connect to a router.

There are 3 methods to configure a Wi-Fi Stick on HiPortal App:

Go to **ACCOUNT** > Select the menu **Find Device**

Go to **PLANT** > Select Plant> Select the menu **Devices** > Select the **"Find Device"** button

Go to **Log-in Page** > Select LOCAL button > Select the menu **Find Device**

From any of 3 methods, you have access to the configuration page for Wi-Fi Sticks.

Procedure:

ANDROID OS

1. Select Find Device
2. Select an AP
3. The AP signal is named as "EAP- [Last 5 digits of Wi-Fi Stick]"
4. Select CONNECT
5. Select the router SSID from the list (e.g. name of home wireless network)
6. Enter the password of wireless network
7. Select CONFIRM

NOTE:

For Android users – After joining a network that has no internet access, such as the AP network of inverter, your phone might not show any of the wireless networks around you. In this case, disable your mobile data and try again.

Procedure:

Apple iOS

1. Select Find Device
2. Select GO SETTING
3. Select WLAN in Settings
4. Select an AP
5. The AP signal is named as "EAP- [Last 5 digits of Wi-Fi Stick]"
6. Enter AP's default password: 12345678 and Join
7. Go back to HiPortal
8. Select the router SSID from the list (e.g. name of home wireless network)
9. Enter the password of wireless network
10. Select CONFIRM

NOTE:

When a smartphone is connected to AP, it will lose connection to internet. Please go to Settings and disconnect from AP to restore internet access.

NOTE:

A Wi-Fi Stick can be added to a created PV plant in HiPortal App, whether it is Online or Offline. The added device becomes visible and online if:

- It is properly configured to a router/hotspot with internet access
- The inverter is operating

5.4 Adding New Devices

You can add devices to a plant that **directly communicates** with HiPortal. These devices are the ones capable of collecting data of PV system and send them to HiPortal.

The devices include:

- Wi-Fi Stick(s)
- GPRS Stick(s)
- HiManager(s)

Procedure:

1. Log into HiPortal App
2. Go to PLANTS
3. Select Plant
4. Select DEVICES
5. Select the scan button
6. Scan the QR Code on the device

OR

Manually enter Serial Number (S/N) and Key (if available) of the device

NOTE:

A communication device is automatically tied to the plant when added, and cannot be added to other plants in HiPortal App.

If you wish to move the communication device to another plant, please go to HiPortal Web.

To unbind a device from known plant, refer to the HiPortal Web Guide.

5.5 Rules of Device Movement (Advanced)

After your PV installation and you have a plant created and monitored on HiPortal, there is usually no need to move any devices.

However, if you physically move one of your inverter or communication device in a plant (e.g. inverter/Wi-Fi Stick replacement, plant ownership transfer), cases in this chapter might help you to understand the logics of device movement and what to expect on your HiPortal.

Example:

Plant A has Inverter Alpha, connected by Wi-Fi Stick 1

Plant B has Inverter Beta, connected by Wi-Fi Stick 2

Given that both plants and all devices are working and online.

Case 1: Switching Wi-Fi Sticks from 2 inverters, from 2 Plants

User physically disconnects Wi-Fi Stick 1 from Inverter Alpha and Wi-Fi Stick 2 from Inverter Beta

Connects Wi-Fi Stick 1 to Inverter Beta

Connects Wi-Fi Stick 2 to Inverter Alpha

No operations performed on HiPortal App and Web.

Result

Plant A: Inverter Beta now displayed, connected to Wi-Fi Stick 1

Plant B: Inverter Alpha now displayed, connected to Wi-Fi Stick 2

Case 2: Switching Wi-Fi Stick from 2 Inverters, from 1 plant

User physically disconnects Wi-Fi Stick 1 from Inverter Alpha.

Inverter Gamma now installed in Plant A's PV System, without a communication device (e.g. replacement)

Connects Wi-Fi Stick 1 to Inverter Gamma

No operations performed on HiPortal App and Web

Result

Plant A: Inverter Alpha offline. Inverter Gamma now displayed, connected to Wi-Fi Stick 1

Plant B: No change.

Case 3: Switching Wi-Fi Sticks from 2 Plants, but on a new inverter

User physically disconnects Wi-Fi Stick 1 from Inverter Alpha

Inverter Gamma now installed in Plant B's PV System

Connects Wi-Fi Stick 1 to Inverter Gamma

User attempts to add Inverter Gamma to Plant B, by scanning Wi-Fi Stick 1

Result

Plant A: Inverter Alpha offline. Inverter Gamma now displayed, connected to Wi-Fi Stick 1

Plant B: No change. Adding Inverter Gamma to Plant B failed, as Wi-Fi Stick 1 is still bound to Plant A.

5.6 Deleting A Device

NOTE:

Deleting device from a plant removes the inverter but not the bind of communication device to this plant.

NOTE:

Deleting device from a plant will not change history statistics of this plant.

NOTE:

Past yield of the deleted inverter will not be transferred to the new plant on HiPortal, but you could see the past

yield on LCD screen of inverter.

Procedure

1. Log into HiPortal App
2. Go to PLANTS
3. Select Plant
4. Select DEVICES
5. Long press on the device
6. Select Delete
7. Select Submit

5.7 Active Power Mode and Smart Meter (Advanced)

The operations described in this chapter must be done by licensed professionals.

Smart meters can be configured in HiPortal and added to a plant. As a result, energy consumption from grid and feed-in to the grid can be calculated and displayed.

The smart meters, mostly connected via RS485, are synchronized with the HYPONTECH inverter modbus and communication device. Active power control could be activated when the meter modbus is configured.

NOTE:

For products targeted for residential solutions, 1 smart meter could be paired to 1 inverter, in 1 plant.

Procedure

1. Log into HiPortal App
2. Go to PLANTS
3. Select Plant
4. Select DEVICES
5. Select Device
6. Select SETTINGS
7. Select Fixed Active Power
8. In Mode, choose Meter:3
9. In Meter Type, choose SDM230:0 for Single-Phase Inverters (HPS, HPK)
OR
Choose SDM630:0 for Three-Phase Inverters
10. If you wish to limit energy exported to grid, e.g. 50%, in Fixed Active Power (0-100%Pn), enter 50.
11. Select SUBMIT

Zero-export is activated following the procedure above and Fixed Active Power is set to 0.

5.8 Events and Troubleshooting

Events such as grid voltage overshoot are detected by active inverters in the plant and uploaded to HiPortal for diagnosis and troubleshooting purposes.

A brief guide to pinpoint the fault is provided per Error Code.

For introductions of Error Codes, please go to www.hypontech.com/faq

Procedure

12. Log into HiPortal App
13. Go to PLANTS
14. Select Plant
15. Select EVENTS

5.9 User Management

By having your account ID bind to another, you can get and give administrative rights of plants created by other accounts.

On HiPortal App, bindings between user accounts must be conducted from lower account level to the higher. For example, an End User account can bind to an Installer Account, and an Installer Account can bind to a Wholesaler Account, but not in reverse.

Procedure:

1. Log into HiPortal App
2. Go to ACCOUNT
3. Select User Management
4. Enter the user ID of your installer/wholesaler
5. Select CONFIRM

Once an account is bind under a higher-level account, all plants owned by and managed by the account is visible for the higher-level account. The higher-level account will have administrative rights and functions depending on its current user level.

You can choose to unbind from an administrative account.

Procedure:

1. Log into HiPortal App
2. Go to ACCOUNT
3. Select User Management
4. Select UNBIND

NOTE:

For End Users, it is strongly recommended to have your account bind to installer's for service quality and remote maintenance purposes.

5.10 Inverter Device Settings (Advanced)

The operations described in this chapter must be done by licensed professionals.

If you believe it is necessary to change device settings in your plant, please consult your Installer or Wholesaler, or ask for assistance from HYPONTECH.

On Settings there are options for parameters of devices in the plant. This page requires account user level equivalent to Installer and above.

NOTE:

For safety reasons, all changes to device settings are recorded upon submission in database.

NOTE:

Default settings of inverters are designed according to grid conditions and utility specifications.

Certain changes to such parameters may violate region-specific requirements, which may be determined as voiding warranty terms.

NOTE:

Before committing any changes of parameter to a plant/device, you must fully understand the significance and outcome of making such change.

Consequences directly and/or indirectly induced by changing parameters will be held accountable on the operator who committed such change.

The following list is the general parameters available, where part of the options may not be displayed due to missing authorization.

- Grid Standards
- Grid Protection Settings
- Active Power Control
- Reactive Power Control

For guides on these options, refer to HiPortal Safety Settings Guide.

6. FREQUENTLY ASKED QUESTIONS

7. CONTACT

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