



POWER CENTER

# USER MANUAL

Model: PC-PRO-WIFI

For use with Duracell® Power Center Microinverters

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# 1 Important Notes

## 1.1 Product

This manual describes the installation, commissioning, and maintenance of the POWER CENTER HUB.

## 1.2 Target Group

This manual is only for qualified technicians, who have been trained or have demonstrated skills to install and maintain this product under the guide of this document for safety purposes.

# 2 Safety

## 2.1 Important Safety Instructions

This product is designed and tested according to international safety requirements. The installer must read and follow all instructions, cautions and warnings in this installation manual.

All operations including transport, installation, start-up and maintenance, must be carried out by qualified, trained personnel.
Before installation, check the unit to ensure free of any transport or handling damage, which could affect insulation integrity or safety clearances. Choose the installation location carefully and adhere to specified cooling requirements. Unauthorized removal of necessary protections, improper use, incorrect installation and operation may lead to serious safety and shock hazards or equipment damage.
Do not install the equipment in adverse environment conditions such as flammable, explosive, corrosive, extreme high or low temperature, and humidity. Do not use the equipment when the safety devices do not work or disabled.
Do not use the equipment if any operating anomalies are found. Avoid temporary repairs.
All repairs should be carried out using only qualified spare parts, which must be installed in accordance with their intended use and by a licensed contractor or authorized Power Center+ service representative.
Power Center+ accepts no liability for damage from incorrect or improper operation.

## 2.2 Explanation of Symbols

Symbol	Usage
	<b>Disposal:</b> Equipment that has reached the end of its life must be collected separately and returned to an approved recycling facility. Any device no longer required must be returned to an authorized dealer or approved collection and recycling facility.
	<b>Caution:</b> Indicates directions which must be fully understood and followed in entirety in order to avoid potential safety hazards including equipment damage or personal injury.
	<b>Note:</b> Indicates that the reader should stop, use caution and fully understand the operations explained before proceeding.
	<b>FCC mark</b> The inverter complies with the requirements of part 15 of FCC rules.



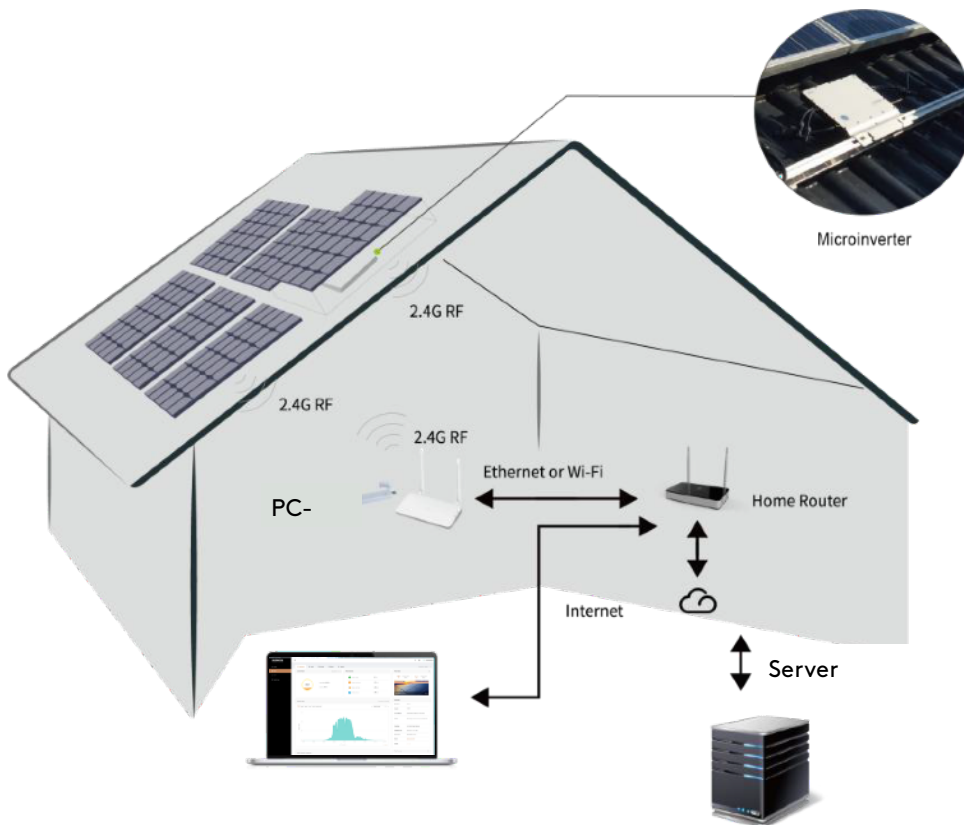
### 3 Product Introduction

### 3.1 System architecture

The POWER CENTER HUB is the communication gateway for the line of Duracell Power Center microinverters. The gateway collects microinverter data via Wi-Fi and reports this data to the Power Center's server via a customer supplied internet connection, either via hard-wired ethernet (recommended) or Wi-Fi. Local monitoring applications include PC-based web-browser and IOS/Android apps.

### 3.1.1 System Capacity

A single POWER CENTER HUB can monitor up to a total of 99 PV panels (PV port inputs). Multiple gateways can be provisioned where PV arrays exceed this limit.



### 3.1.2: Basic requirements & prerequisites

- 120VAC power outlet required for the POWER CENTER HUB power adapter.
- Indoor installation only. Outdoor installation requires a non-metallic, NEMA type 4 rated enclosure (not included). Operating temperature range is -20°C to +55°C.
- Internet service required. Router with dedicated Ethernet port recommended.
- Wall-mounting bracket requires two #8 screws. Use anchors appropriate for wall material.
- **Completed serial number map from the Duracell Power Center Microinverter Installation Manual.**

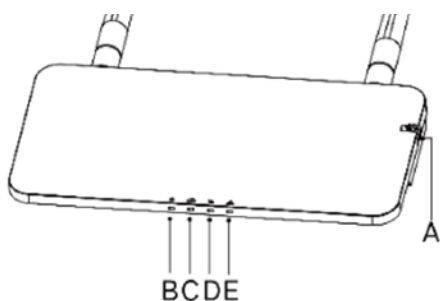
- Installer must have a registered Installer APP account (Contact dealer/reseller for details).

### 3.1.3 Inspection of materials

Check the box for the following items:

- PC-PRO-WIFI gateway
- Two antennas
- 5V power adapter
- Wall bracket
- 5-pin plug

### 3.2 LED indicators and port definitions

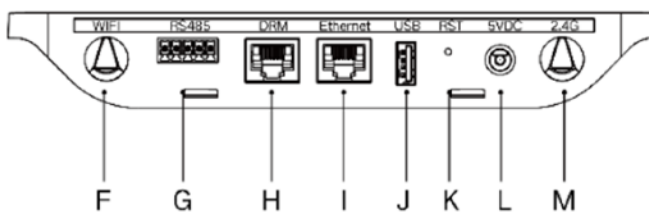
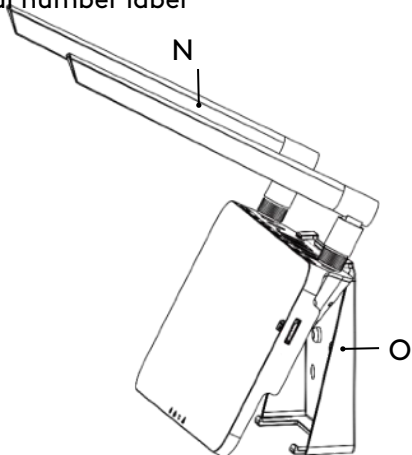


#### Indicators

- B - Power
- C - Server communication
- D - Microinverter communication
- E - System alarm

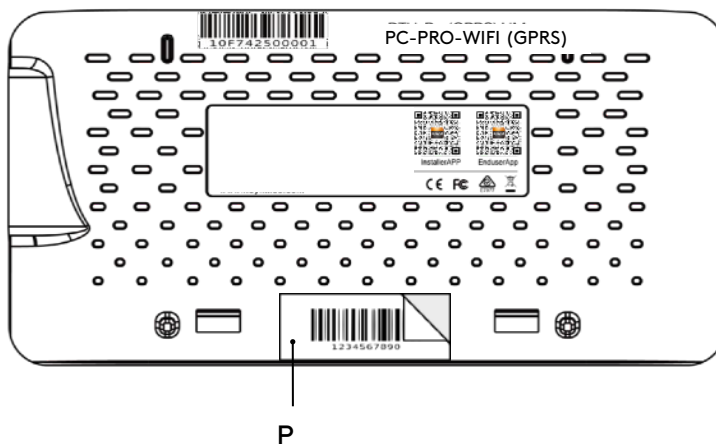
#### Other Features

- A - SD card slot
- N - Antenna, screw type
- O - Wall bracket
- P - Serial number label



#### Ports

- F - Wi-Fi antenna input (2.4G)
  - G - RS-485
  - H - DRM (Australia only)
  - I - Ethernet
  - J - USB
  - K - Reset (Bottom)
  - L - Power adapter input 5V/2A
  - M - Wi-Fi antenna input (2.4G)
- (not shown - AC/DC wall adapter)





## 4 Locating the Power Center Hub

### 4.1 Installing the antennas

1. Screw the antennas to the Wi-Fi ports on the rear of the unit.
2. Adjust the antennas approximately 90 degrees to the base of the unit.

### 4.2 Proximity to the PV array

Locating the POWER CENTER HUB as close as physically possible to the PV array is highly recommended to ensure a strong Wi-Fi signal to the microinverters. For flush mount rooftop PV arrays on wood roof construction, the unit should be installed on the floor nearest the roof and central to the array.

Roof construction types that include concrete forms and/or standing seam metal may create signal interference. For these roof types, locating the unit temporarily to establish the strongest signal is recommended prior to a permanent installation. An outdoor location near to the roof may be required (enclosure not included). Additional gateways can be installed to pickup undetected microinverter IDs.

### 4.3 Proximity to the customer supplied internet router

The POWER CENTER HUB can communicate with the router via hard-wired ethernet or Wi-Fi. The ideal location for microinverter communication may conflict with router communication. In the case that the resulting Wi-Fi signal between the router and the gateway is weak, there are three options:

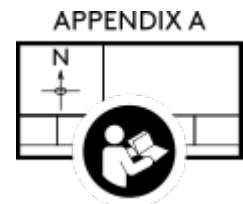
1. Relocate the customer router.
2. Hardwire the gateway to the customer router via an ethernet cable (not included).
3. Install a 3<sup>rd</sup> party Wi-Fi bridge/repeater between the gateway and the router.

### 4.4 Mapping the Power Center Hub to the PV array



**NOTE:** The following instruction requires the microinverter serial number map created during the microinverter installation process.

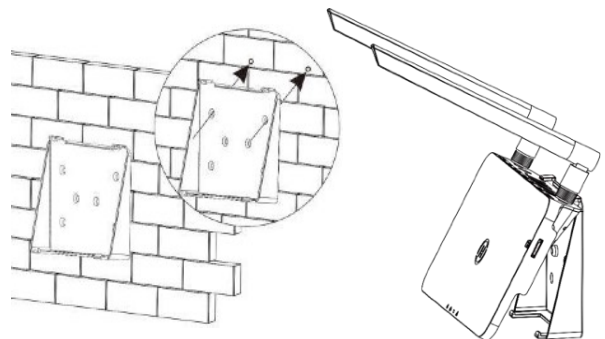
1. Remove the s/n label (section 3.2, item - P) from the back of the unit and paste it to the same sheet used to map the microinverters.



## 5 Wall mounting option

It is recommended to mount the unit permanently to the wall using the supplied bracket after location is established.

1. Secure the bracket to the wall with #8 (or M4) hardware.
2. Align the bracket's upper buckle with the unit.
3. Align the bracket's lower buckle, and snap into place.







## 6 System power-up

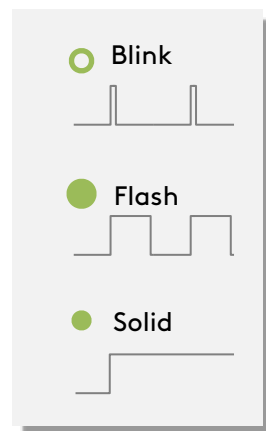
1. Connect the power adapter 5V input to the unit.
2. Plug the power adapter into a 120V receptacle.











## 7 LED indicators

### Functions

LED	Color	Description
	Green	Power
	Green	Network communication
	Green	Microinverter communication
	Red	Alarm / Fault



### Modes

LED	State	Description
		Firmware update
		Initializing
		Power ON
		Server online
		Internet offline
		Internet online, server offline
		Local APP connected
		Microinverter communication OK
		Microinverter IDs incomplete
		No Microinverter IDs detected
		POWER CENTER HUB alarm detected
		Microinverter alarm detected
		Meter alarm detected

## 8 Downloading the Installer App

Phone/Tablet: Use the QR code to download the app >>>

Web-browser:

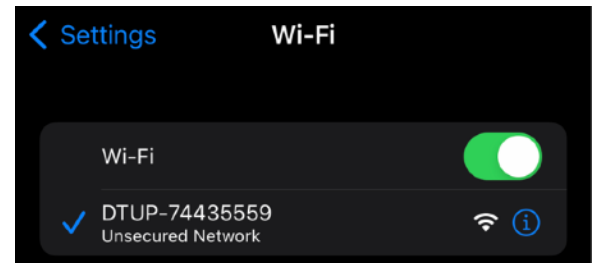


Note: Users must have a registered installer account to proceed with setup and commissioning of a PV system. Consult a Duracell Power Center technical representative to obtain an account.

## 9 Wi-Fi Setup

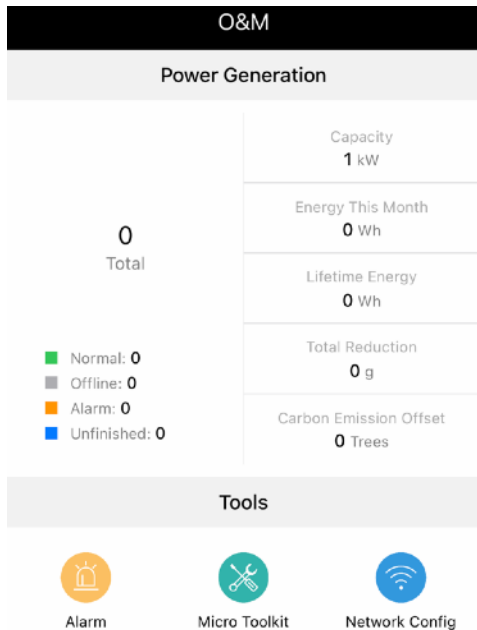
### 9.1 DTU Connection

- 1 Open mobile device and navigate to WiFi settings
- 2 Connect phone to the WiFi broadcast named: DTUP- (device serial number)
- 3 Once connected to the DTU, exit settings

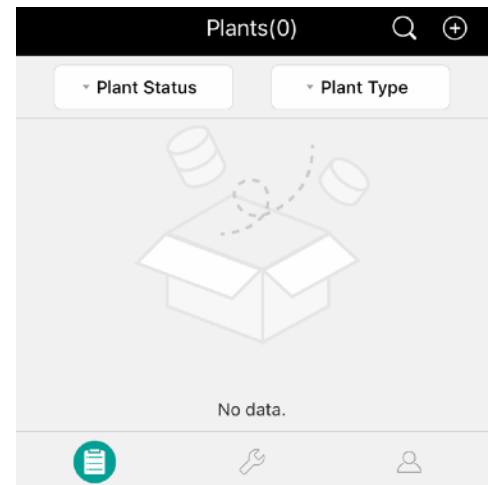


### 9.2 App Navigation

- 4 Open the Duracell Micro Inverter app



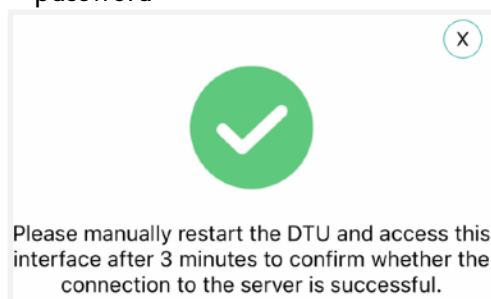
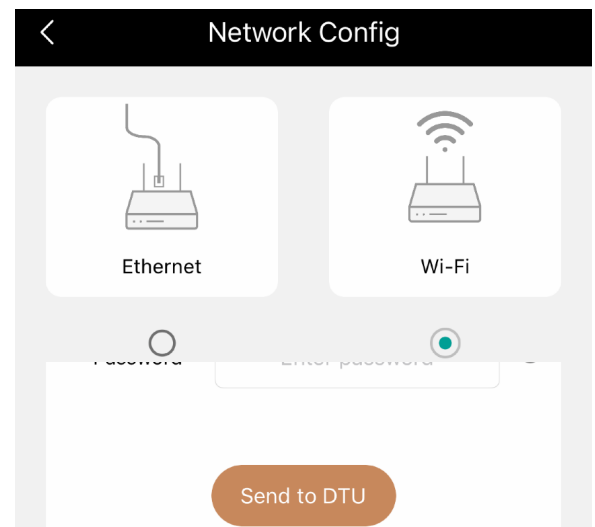
- 5 Press the [Wrench] icon at the bottom of the screen.



- 6 Press the [Network Config] icon at the bottom of the screen.

### 9.3 Network Config

- 7 At the top choose whether Ethernet or WiFi connection. App defaults to Wifi
- 8 Enter the WiFi account name, or press the [Down Arrow] ▾
- 9 Type out the networks [Password] into the field. Press the [Eyeball] 👁 icon to the right of the window to view the password



- 10 Press the [Send to DTU] button when finished

- 11 The app will process the data then ask for the DTU to be restarted. It is advisable to unplug the DTU transformer from the wall and then set a 2 minute timer

- 12 Reconnect to DTU in Settings, reopen app, and confirm DTU is connected to WiFi

## 10 Commissioning

For complete commissioning instructions, refer to one of the following guides:

PC-PRO-WIFI Mobile APP Commissioning Guide (Smart Phones/Tablets)

PC-PRO-WIFI Web Browser Commissioning Guide (PC)

## 11 Maintenance

This product does not require any maintenance. Inspect periodically for dust accumulation and wipe with a soft bristle brush as required. Do not clean with water or solvents.

## 12 Technical Data

Model	PC-PRO-WIFI		
Microinverter communication			
Type	2.4 GHz proprietary RF (Nordic)		
Maximum distance (open space)	200m		
Maximum PV panels	99		
Server communication			
Type	WIFI(802.11b/g/n)/Ethernet		
Sample rate	15 minute		
Mechanical Data			
Ambient temperature range (°C)	-20°C ~ +65°C		
Dimensions	200mm x 101mm x 29mm		
Weight	0.20 kg		
Mounting system	Wall bracket / desktop (free standing)		
Features			
Display	LED: Power/Server/Microinverter/Alarm		
Power supply	5V/2A plug in wall adapter		
Power consumption	2.5W typical, 5.0W maximum		
Compliance	FCC 15B, FCC 15C, EN60950-1, EN61000-3-2, EN61000-3-3, EN301489, EN300328, EN300440, RCM		

To sheet \_\_\_\_\_

To sheet \_\_\_\_\_

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