SOLTARO Qendercore Hub App User Guide

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Contents

Qendercore Account Setup Instructions

Before attempting setup, navigate to the Qendercore web portal at https://www.qendercore.com/ and register a Qendercore end user account.
These account details will need to be entered to setup monitoring for your Soltaro All in One 2. Click on “Create an

Account”.

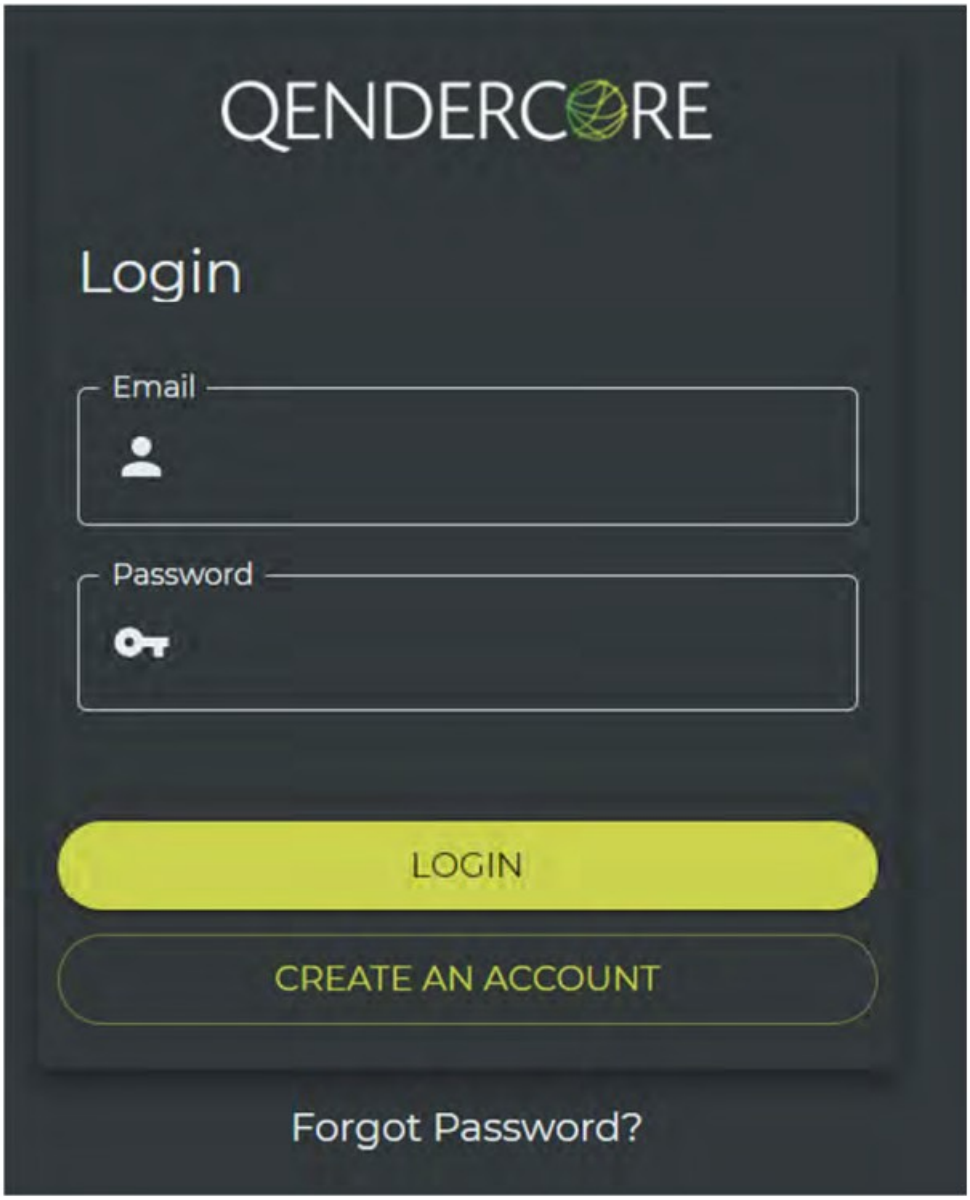


Figure 1 – Account Login Screenshot

Enter the email address for the end user, then click “Register”. An email will be sent to this email address with instructions on how to complete setup of the account.

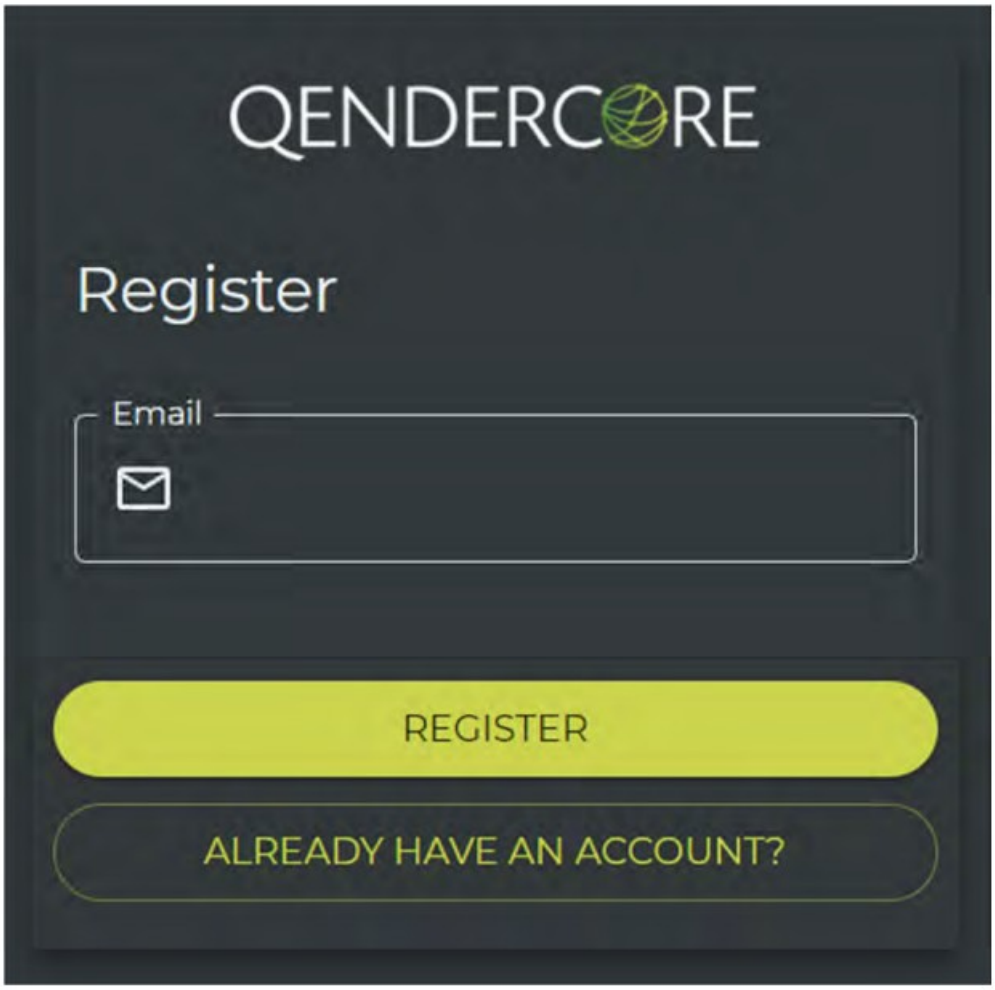


Figure 2 - Register Account Screenshot

Qendercore Hub Overview

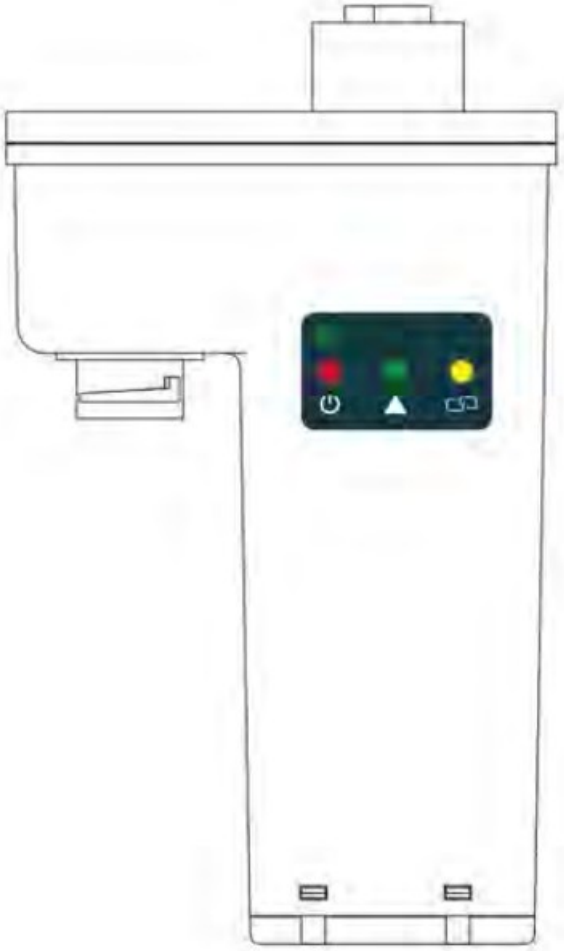


Figure 3 - Qendercore Hub

	Interactive Button: Used to change Hub State
	Power LED: Used to indicate Hub On/Off
	Mode LED: Used to indicate Hub Mode
	Connectivity LED: Used to indicate Hub Connectivity State

Installation of Qendercore Hub

Connect the Qendercore hub to your Soltaro All in One 2 by aligning the round connector with the “EMS” connector on the inverter and pushing it upwards (DO NOT CONNECT WHILE INVERTER IS ENERGIZED). Once connected, tighten the outer lockring until it is firm. Once complete, switch on the inverter and wait for the status LEDs (Green and Yellow) to start flashing.

Figure 4 - Qendercore Hub (Side View)

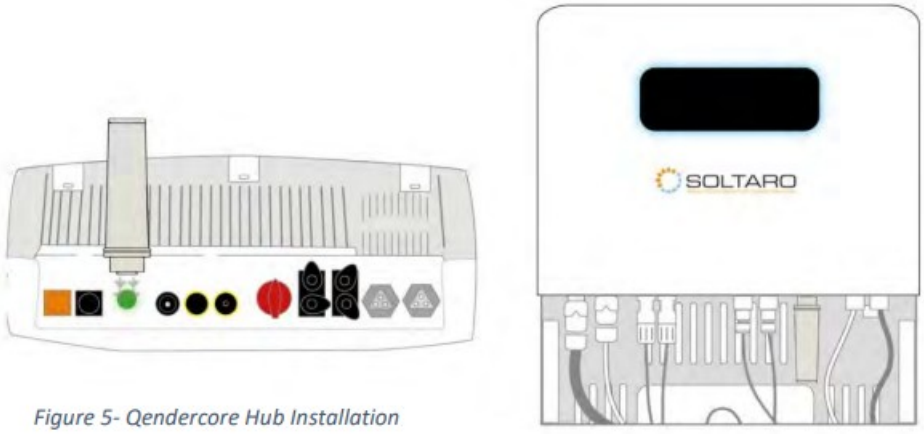


Figure 5- Qendercore Hub Installation

Connecting to Qendercore Hub

LOCAL ACCESS POINT (AP)

Once your Qendercore Hub is plugged in and inverter is powered, the “Power” LED (RED) should light up. Shortly after, the Status lights will start flashing, push the Interactive Button twice (two short presses) to enter Setup Mode. The “Mode” light (Green) should start flashing on and off approximately every 1.5 seconds. Once in Setup Mode you will need to push the Interactive Button three times (three short presses) to enter Local AP Mode. The “Mode” light (Green) should now be flashing on and off every 0.1 seconds.

Once in Local AP mode, the Qendercore Hub will provide a temporary WiFi access point that can be connected to by one device (eg. computer, smartphone, or tablet) to complete the setup process. Using your device, open your WiFi settings, and connect to the AP named “Qendercore”. The password is “p1234567”. **(NOTE:** On some smart devices, it may be necessary to activate Airplane Mode before switching WiFi back on, to prevent the device from prioritizing mobile data connections) It is normal for this network to show a “No Internet” message from your device.

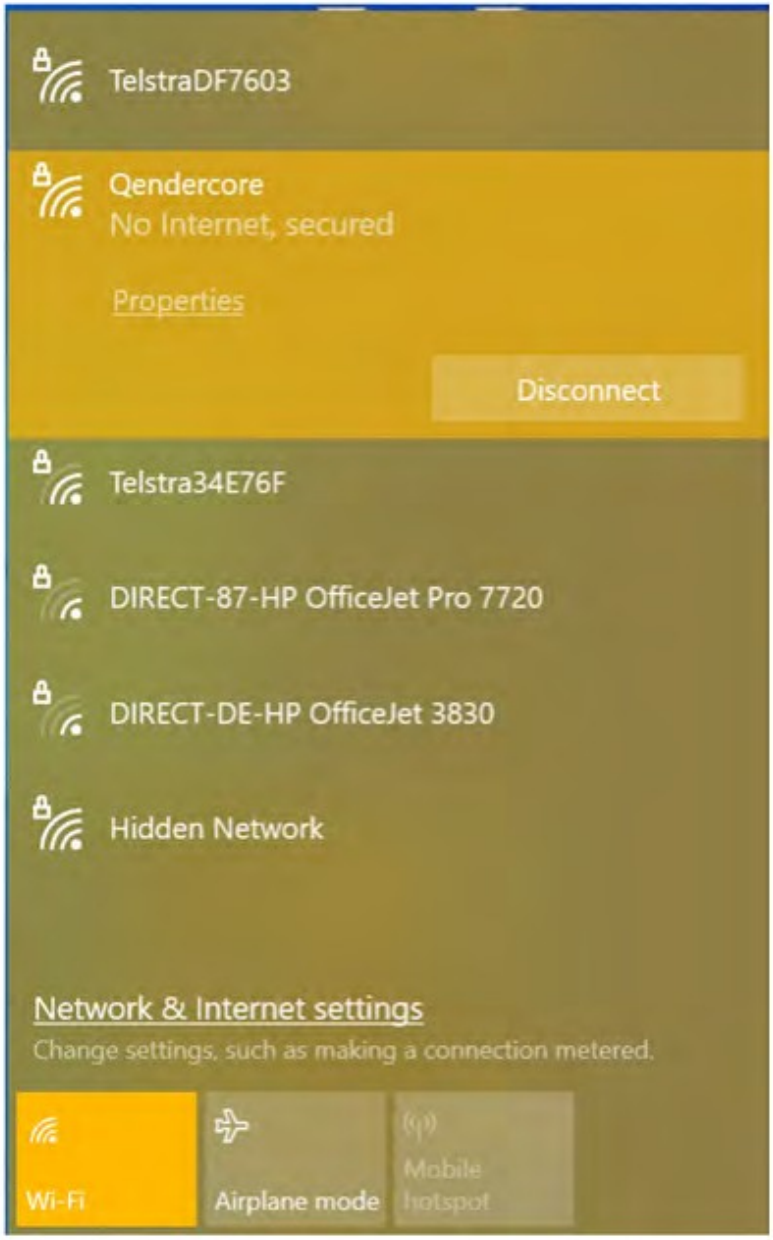


Figure 6 - WiFi AP

Once connected to the Local AP of the Hub, navigate to your preferred Web Browser, and input the Address: **http://qendercore.local/** (Only available for Windows 10 + Above) OR 192.168.89.89
You will be directed to the page below.
From here, you can navigate to Internet Connection or Soltaro Inverter Setup.

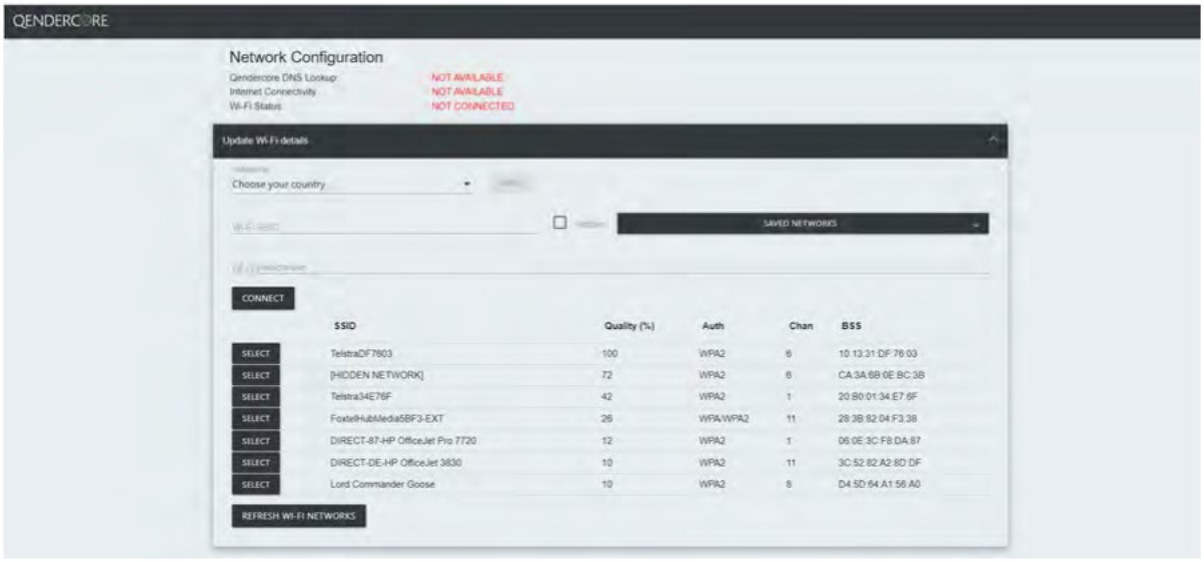


Figure 7 - Network Configuration

LOCAL NETWORK

Press the Interactive Button twice (Two short presses) to activate Setup Mode on the Qendercore Hub. The "Mode" light (Green) should start flashing on and off approximately every 1.5 seconds. Connect your smart device or computer to the same network as the Qendercore Hub. On computers with Windows 10 or above, navigate to **http://qendercore.local/** in your chosen web browser. This should automatically navigate to the Qendercore Setup Page. Otherwise, login to the Modem or use a method of IP scanning to determine the assigned IP address for the Qendercore Hub (Screenshots below from Angry IP Scanner for Windows and WiFiMan for Android).

Figure 8 - Angry IP Scanner for Windows

Figure 9 - WiFiMan for Android

Navigate to the correct IP address (Or **http://qendercore.local/** while the Hub is in Setup Mode. You will be directed to the below webpage, on this webpage you can elect to set a WiFi network as a backup option (WiFi Network Setup –), or you can continue to link a Qendercore Account (Linking a Qendercore Account).

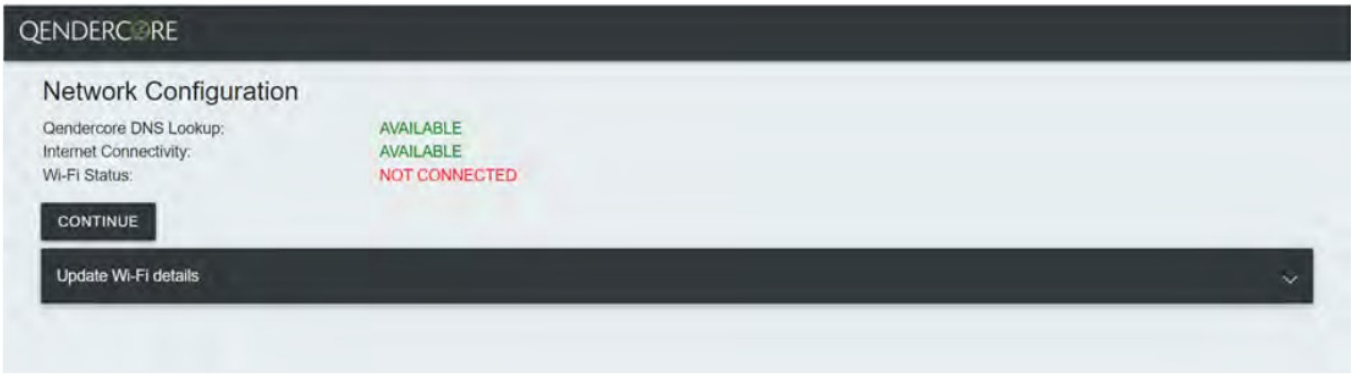


Figure 10 - Ethernet Network Configuration, Completed

Internet Connection

There are various methods of connecting your Qendercore hub to your local network:

1. Local Access Point – WiFi (LOCAL ACCESS POINT (AP))
2. Wi-Fi Protected Setup (WPS) – WiFi (Only available for Wi-Fi routers with WPS Push Button/ PBC functionality) (WiFi Setup – WPS)
3. Ethernet Connection (Ethernet Connection Setup)

These methods are outlined in the following sections. Please note, after initial internet connection, a software update may happen automatically on the Hub (LED Status). During this time, setup mode will be interrupted, and you may be required to reconnect to the Hub after completion of the update.

WiFi Network Setup – Manual Entry

Once you have connected to your Qendercore Hub following the steps above, input your installation Country and press “Apply”. Select your preferred Wi-Fi network by clicking on it and input the correct password for this network into the “Wi-Fi Passphrase” section. If your chosen network is not broadcasting an SSID, you can select “Hidden Network” to enter an SSID manually (please ensure that “Hidden” is selected in this scenario). Once all details have been input, please press CONNECT to attempt Wi-Fi connection to the chosen Wi-Fi network. Once it has successfully connected to the Local network, the page will refresh and will show you the availability of:

1. Qendercore DNS Lookup
2. Internet Connectivity
3. Local Wi-Fi connection

If any of these are not showing as “Connected” or “Available”, please refer to the Troubleshooting section of the manual.

If everything is OK, please press the “Continue” button to move to Linking a Qendercore Account.

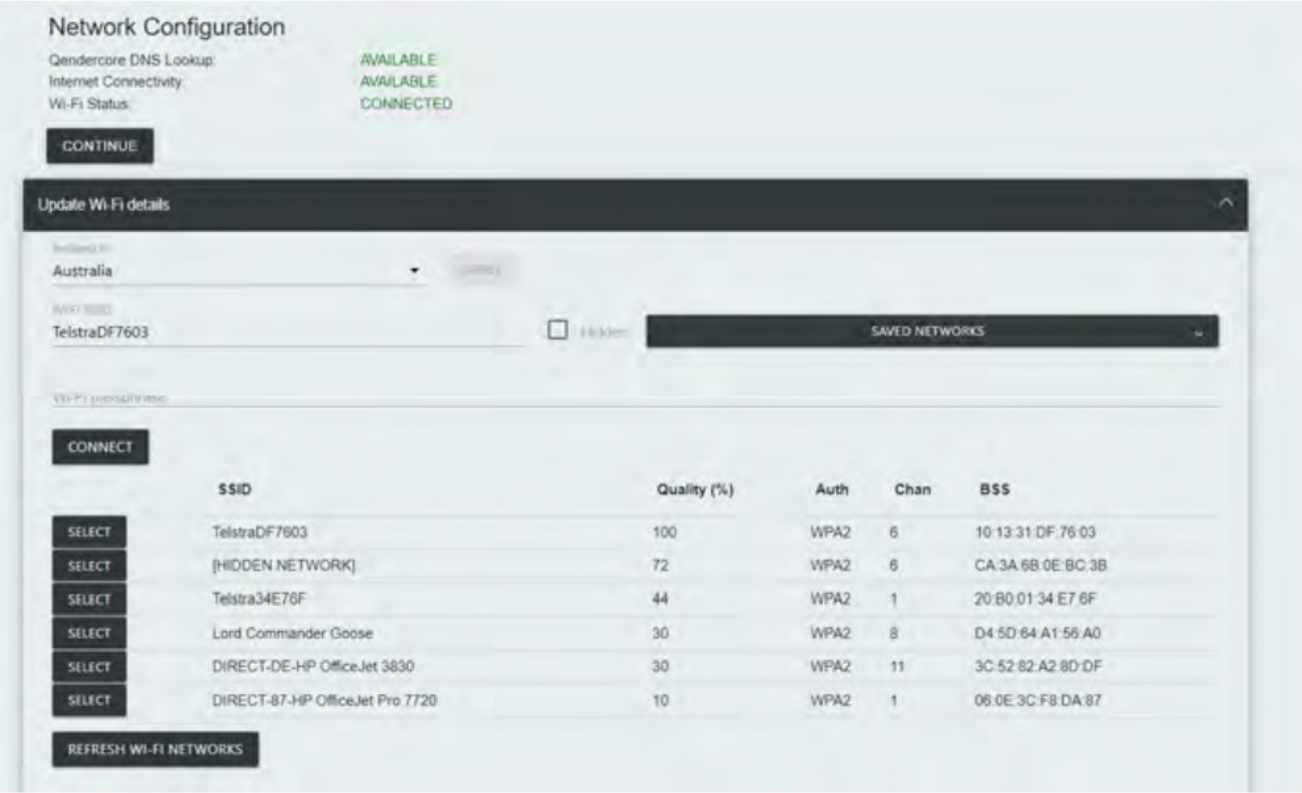


Figure 11- Network Configuration, Completed

WiFi Setup – WPS

Once your Qendercore Hub is plugged in and the Status lights are flashing, push the Interactive Button twice (two short presses) to enter Setup Mode. The “Mode” light (Green) should start flashing on and off approximately every 1.5 seconds. Once in Setup Mode you will need to push the Interactive Button once (one long press 3-6 seconds) to enter WPS Pairing Mode. The “Mode” light (Green) should now be flashing on and off every 0.4 seconds.

Figure 12 - Qendercore Hub (Side View)

Once in WPS mode, follow the instructions for the target WiFi router to activate WPS Pairing mode on the router. This could be by pushing a button on the router, or it may require logging into the router's configuration wizard. Please confirm the process with the router manufacturer if required.
Once both devices are in WPS Pairing Mode at the same time, the Hub should automatically connect to the target WiFi router. Once pairing is complete and WiFi network connection is confirmed, the "Connectivity" (Yellow) LED will flash faster in accordance with the LED Status section of this document. Once the LED remains on, and blinks off every 3 seconds, communications have been established with the Qendercore servers, and it is ready for account setup (Linking a Qendercore Account).

Ethernet Connection Setup
Assemble the Ethernet connector by passing the Ethernet cable through the weatherproof gland, and then fitting off an RJ45 connector using the T-568B connection standard. Once the Status LEDs of the Hub are flashing, connect the RJ45 connector to the Ethernet port of the Qendercore Hub and twist the weatherproof lockring onto the Ethernet port. Tighten the weatherproof gland until it is firm.

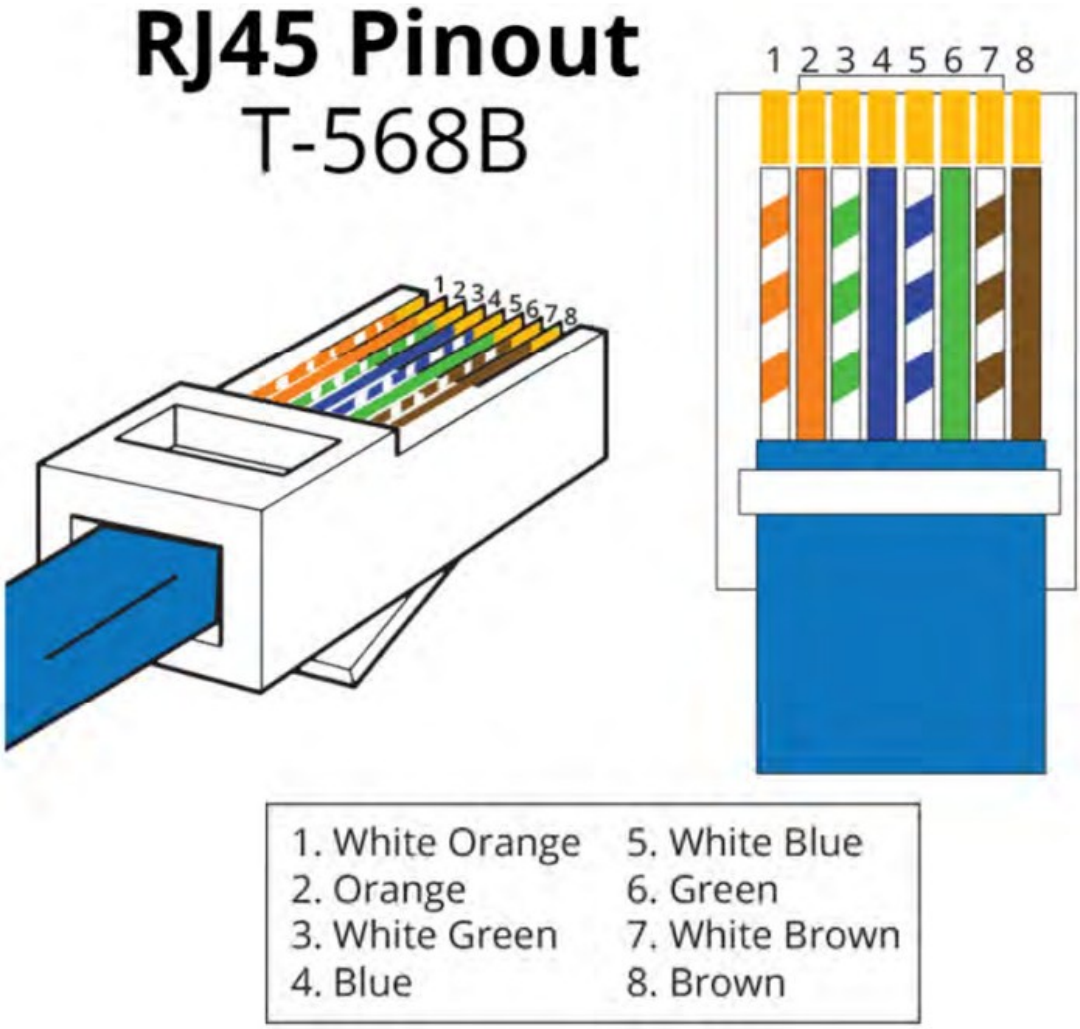


Figure 13 - RJ45 Ethernet Pinout

Once network connection is detected via the Ethernet cable, the “Connectivity” (Yellow) LED will flash faster in accordance with the LED Status section of this document. Once the LED remains on, and blinks off every 3 seconds, communications have been established with the Qendercore servers, and it is ready for linking a Qendercore account (See “Link a Qendercore Account”).

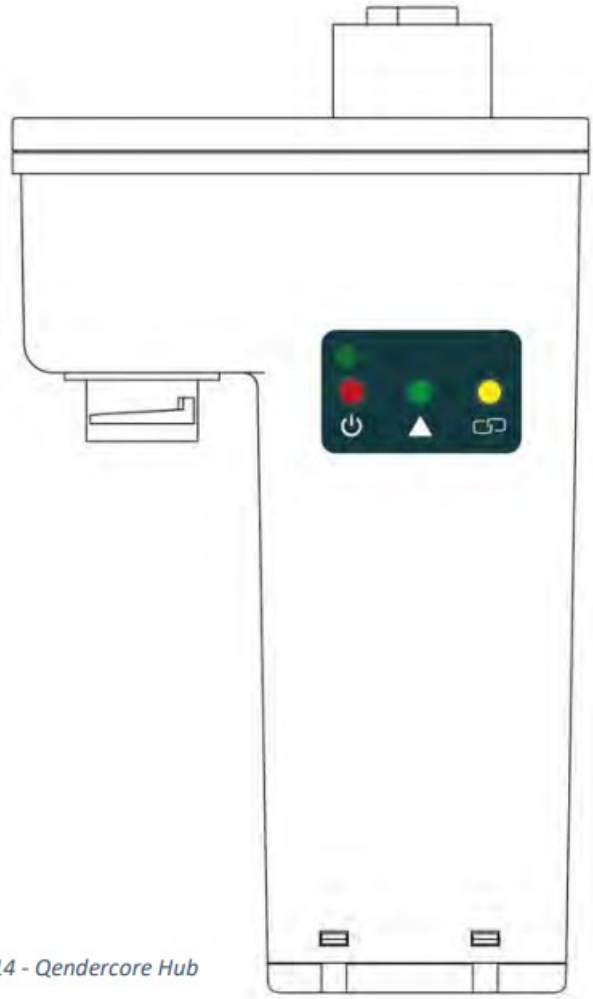


Figure 14 - Qendercore Hub

Linking a Qendercore Account

After connecting to your Qendercore Hub (Connecting to Qendercore Hub)and configuring your internet connection (Internet Connection), click on “Continue” to be taken to Qendercore Account Linkage. Please input the Account information for the End User associated with this Inverter Serial #, and then press Submit. The Hub will attempt to connect to the Qendercore servers and verify the information, if correct, this Hub will be automatically linked to the End User’s account. (Installer Access coming soon)

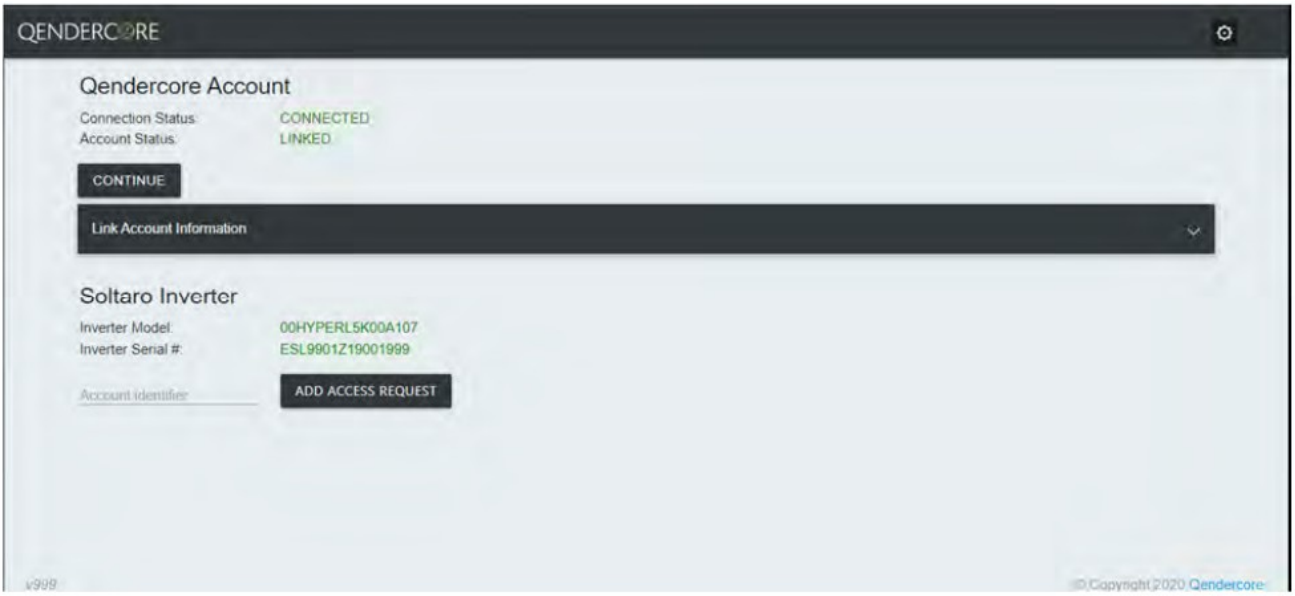


Figure 15 - Qendercore Account, Linked

Once initial verification has been completed, the Account Status should display “Linked”. Please press “Continue”. After pressing “Continue”, you will be directed to the page below. Setup Mode will end, and the Qendercore Hub Setup is complete. You will be able to view your connected inverter on your Qendercore Account within 24 hours.

LEDs should change status to indicate setup mode has exited and account is linked (LED Status

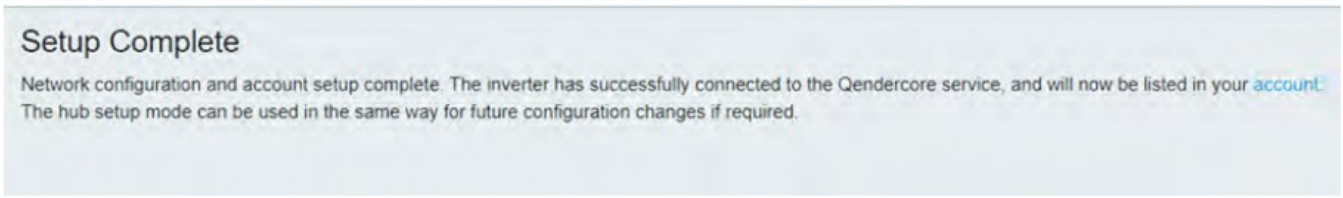


Figure 16 - Setup Complete

Connecting Extra Accounts

After associating the “Owner” account, you can request access for this device to be visible on other accounts during this setup stage. To do so, you will require a Qendercore Account Identifier that correlates to the account and access level that you wish to request (Owner, Installer, Partner, etc). If you do not have a Qendercore Account Identifier, please speak to your Qendercore provider to have this set up for you.

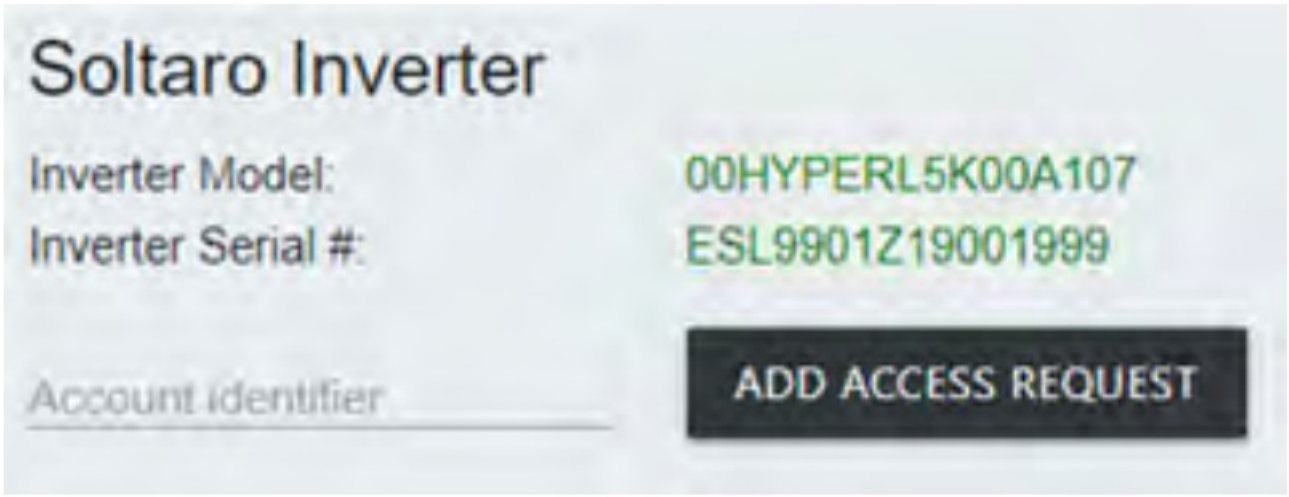


Figure 17 - Access Request

Once you have your Qendercore Account Identifier, input this into the “Account identifier” section of the Qendercore Account page and click on “Add Access Request”. This will then request access to this system for the nominated account. Please allow up to 48 hours for Access Requests to be handled by Qendercore.

Soltaro Inverter Setup

After connecting to your Qendercore Hub (Connecting to Qendercore Hub), click on the  button in the top right corner to be taken to the Soltaro Maintenance Index. The  button can be used on all pages except the Soltaro Maintenance Index page to reach the Soltaro Maintenance Index.

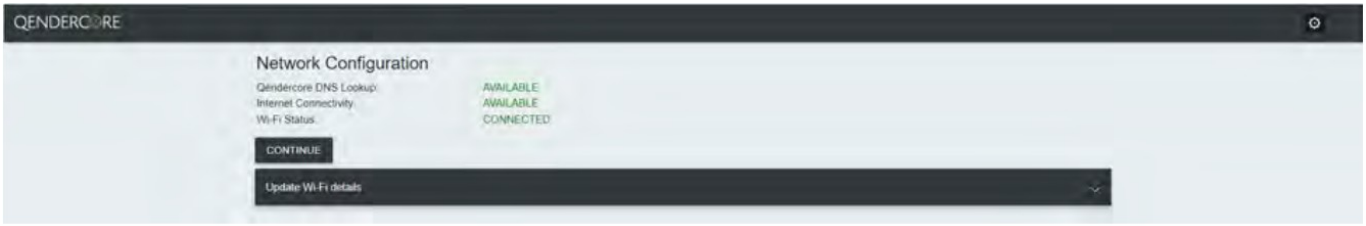


Figure 18 - Network Configuration

You will be prompted to sign in. Leave the Username blank, and input “1111” into the Password section, then press “Sign In”.

Figure 19- Maintenance Authentication

SOLTARO MAINTENANCE INDEX

Once you have signed in, you will be at the Soltaro Maintenance Index. From here, you can access:

- Inverter Measurements
- Basic Settings
- Advanced Settings
- BMS Registers
- Inverter Operations
- Inverter Faults

You can use the  button in the top right corner to log out and reset your authentication if required. Click on any of the options to be directed to the relevant section.

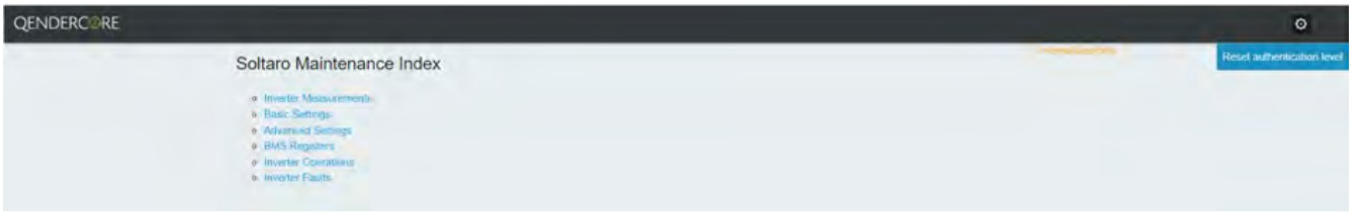


Figure 20 - Soltaro Maintenance Index

INVERTER MEASUREMENTS

This page will show you the values being read by the connected inverter. The values can be updated as required using the “Refresh” button in the top right, orby pushing the  button for each individual group.

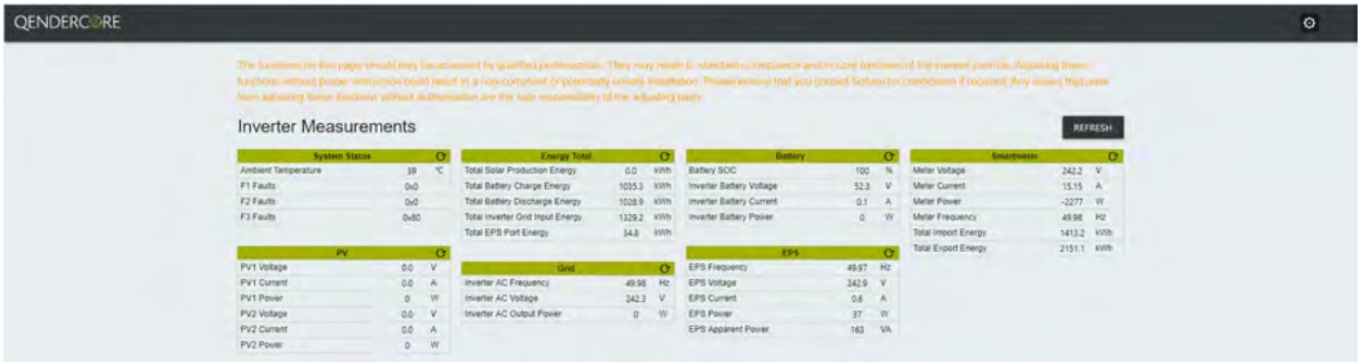


Figure 21 - Inverter Measurements

BASIC SETTINGS

The Basic Settings page is for inverter settings related to typical installations. Sections with “Write Batch” at the bottom must be updated in batches. Fields with  next to them must be updated one by one.

Figure 22 - Basic Settings

Once you click “Write Batch” or  , you will be given a confirmation popup with the values you are about to change. Check that they are correct, and then click“Confirm”. A description of the new value is provided where it is relevant.

Write following register values?

Index	Label	New Value	Raw Value
40047	Work Mode	Back up	1
40048	Country Code	Australia (AS4777.2-2015)	3
40049	Grid Regulation Code	Disable	0
40050	Smart Meter Type	Chint Single Phase	1

CANCEL CONFIRM

Figure 23 - Setting Confirmation

Write following register values?

Index	Label	New Value	Raw Value
40051	Inverter Power Limitation	5000 W	5000
40052	Export Limitation	65535 W	65535
40058	EPS Function	UPS with bypass	3
40061	Beep on Grid Failure	30s per hour	0
40062	Beep on Fault	30s per hour	0

CANCEL CONFIRM

Figure 24 - Setting Confirmation

ADVANCED SETTINGS

The Advanced Settings page is provided for settings not typically required for most installations, and to provide a verification page for compliance-related settings.

Figure 25 - Advanced Settings

BMS REGISTERS

The BMS Registers page is provided to show values recorded by a connected Soltaro Battery.

Figure 26 - BMS Registers

INVERTER OPERATIONS

The Inverter Operations page provides the following functionality:

– Inverter Clock Synchronization

Inverter Clock can be synchronized to the Browser (Your Device) or Hub (Qendercore Hub) time. Please note, Hub Synchronization is only available if Qendercore Hub has a valid internet connection to validate the correct time via our servers. Both options are intended to update the inverter clock, so it is only necessary to use one option.

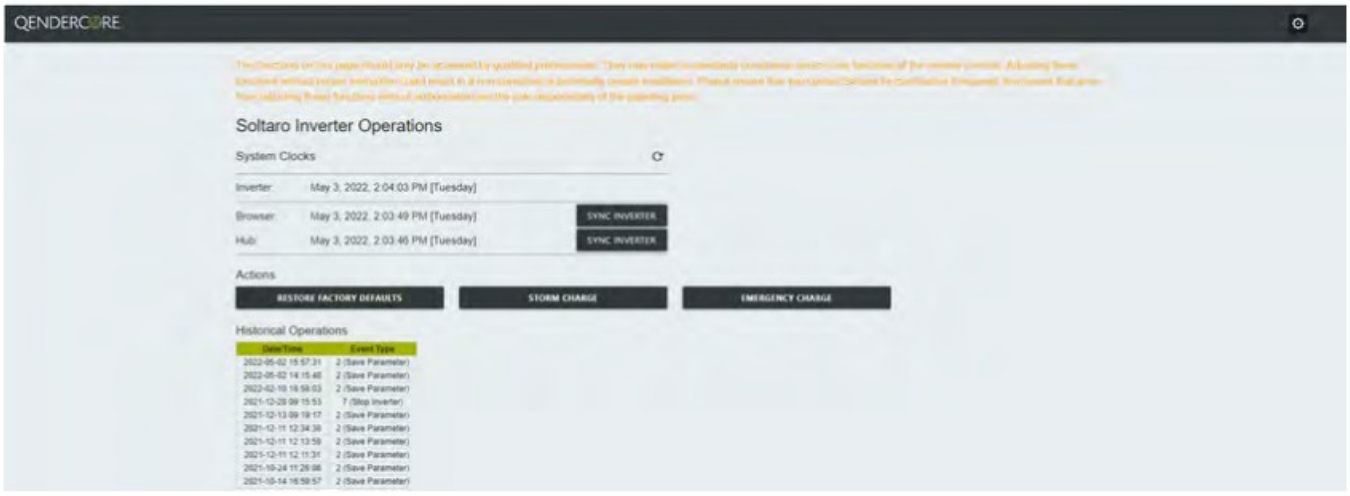
– Restore Factory Defaults

– Emergency Charge

Triggers a 10A, 52V voltage output on the inverter, without requiring battery communications. Intended to “wake up” batteries that have been dormant at low SOC where required.

– Storm Charge

Triggers the inverter to charge any connected batteries to the ChargeEndSOC% at the maximum allowable current. Recommended to set ChargeEndSOC% to 100% when using this functionality.



INVERTER FAULTS

This page will show you the last 10 fault codes recorded by the inverter locally. An explanation of the recorded fault codes is provided at the bottom of the page for your convenience. The Numbers in the second table correlate to the Fault Number in the first table. Date/Time of each fault is based on the Inverter Clock at the time that the fault occurred.

Figure 28 - Inverter Faults

LED Status

Figure 29 - Qendercore Hub LED's

LED State	Mode LED
Off:	Hub is Unpowered, or Hub is in start-up process
On, Slow Flash (1.5s):	Hub is in Setup Mode
On, Regular Flash (0.5s):	Hub is in WPS Pairing Mode
On, Fast Flash (0.1s):	Hub is in Local AP Mode
On, Blink Off (3s):	Normal Operation, No Communication to Inverter (See Troubleshooting)
On, Blink (13s):	Normal Operation
Alternating Flash with Connectivity LED:	Firmware Upgrade in Process, do not disconnect or switch off during this time.

LED State	 Connectivity LED
Off:	Hub is Unpowered, or Hub is in start-up process
Off (3s), Blink On:	Dormant, waiting to attempt connection
On, Slow Flash (1.Ss):	Waiting for Network Access (See Troubleshooting)
On, Fast Flash (0.1s):	Attempting Connection to Qendercore Servers (See Troubleshooting)
On, Blink Off (3s):	Hub Connected to Qendercore Servers, No Account Linked (See Troubleshooting)
On, Blink (13s):	Logged into account, connected to servers, Normal Operation.
Alternating Flash with Mode LED:	Firmware Upgrade in Process, do not disconnect or switch off during this time.

LED State	 Power LED
Off:	Hub is not Powered (See Troubleshooting)
On:	Hub is powered

Troubleshooting

Error Detail	Recommended Actions
Hub is not Powered	Check connection to inverter is correct and firm. Check inverter is powered correctly.
Normal Operation, No Communication to Inverter	Check connection to inverter is correct and firm. Check inverter is powered correctly, and in correct state to receive communications.
Cannot Connect to Hub Setup	Confirm that Hub is in Setup Mode by checking the Status LED state. Check that you are using the correct IP Address (192.168.89.89 for Local AP or set by WiFi router if connecting via local network). If using a smart device, activate airplane mode before switching WiFi on, to ensure the device is not prioritizing its mobile network.
Waiting for Network Access	If using WiFi, confirm that correct password has been used. If us-ing Ethernet, confirm that cable is not damaged and is correctly terminated and fitted. Confirm that Local Network Modem/Router security settings are not preventing connection.
Attempting Connection to Qendercore Servers	Confirm that connected network has internet connection. Check that connected network security settings are not preventing outbound connections to ifa.qendercore.com, TCP, Port 14601
Hub Connected to Qendercore Servers, No Account Linked	Follow instructions at Linking a Qendercore Account. Confirm that you are using the correct account details for linking (use the Forgot Password function on the Qendercore website if required). Check that there is an active internet connection to the Qendercore Hub.

Documents / Resources

	SOLTARO Qendercore Hub App [pdf] User Guide Qendercore Hub App, Hub App, App

References

- Solar Battery Storage Solutions | Save Energy | Soltaro
- Qendercore
- User Manual