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HORIZON POWER

Quick Reference Guide

SGD + Sungrow Installation

1. Sungrow compatible devices

Here is the list of Sungrow inverters compatible with Horizon Power Smart Connect Solar

Model	Size in KW	No Of Phases	Equipment Category
SG5.0RT (AS4777-2 2020)	5	3	Grid Connect PV Inverter
SG7.0RT (AS4777-2 2020)	6.999	3	Grid Connect PV Inverter
SG8.0RT (AS4777-2 2020)	8	3	Grid Connect PV Inverter
SG15RT (AS4777-2 2020)	15	3	Grid Connect PV Inverter
SG20RT (AS4777-2 2020)	20	3	Grid Connect PV Inverter

2. Hardware & Software Checklists

Hardware

A   Sungrow RT

B   Horizon Power Secure Device Gateway 'SGD'

C   SGD Power Supply

D   Any serial/twisted pair cable (RJ45) and an RS485 to USB converter.
        Please note these are not provided with the SGD box and must be catered by the installer.

Software

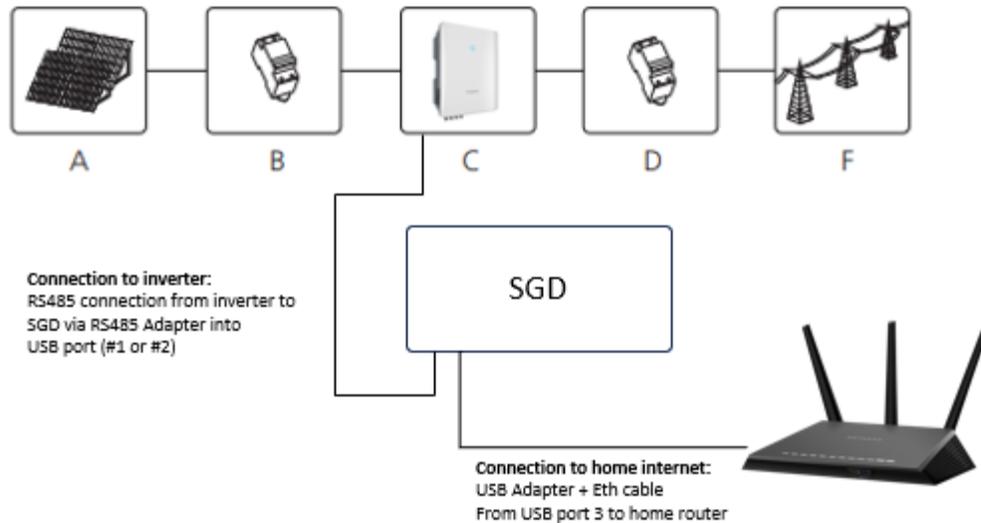Ensure you have a user account with installer accreditation for the following applications:

iSolarCloud (Sungrow): Some Sungrow inverter settings may be accessible from the OLED display of the inverter.

Stormcloud (SwitchDin): Ensure you pass the HP Installer accreditation to get installer permissions open on the user account you create on this app.

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2. Physical connection

Behind the meter configuration overview

Here is the overview of the physical connections you need to establish between devices

Connection to inverter:
RS485 connection from inverter to SGD via RS485 Adapter into USB port (#1 or #2)

Connection to home internet:
USB Adapter + Eth cable
From USB port 3 to home router

Position	Description
A	PV modules
B	DC load circuit breaker
C	Inverter
D	AC load circuit breaker
F	Utility grid

Mount the SGD

Start by mounting the SGD on a DIN Rail using the pre-fitted DIN Rail mounting bracket.

DIN rail mounting bracket

Connect to Home Internet

Then connect the SGD to the internet by plugging the USB-Ethernet adapter with a CAT 6 cable from the home router into the USB port number 3 as shown here.

Please be aware that there is no other USB port that will accept any Internet traffic.

**For home internet
connect USB-Ethernet adapter here ONLY**

Connect to Sungrow inverter

The connection is done via the RS485 cable, and runs from the droplet to the master inverter, then to slave(s). The RS485 (A1, B1) connection can establish the communication between the inverter and any external device.
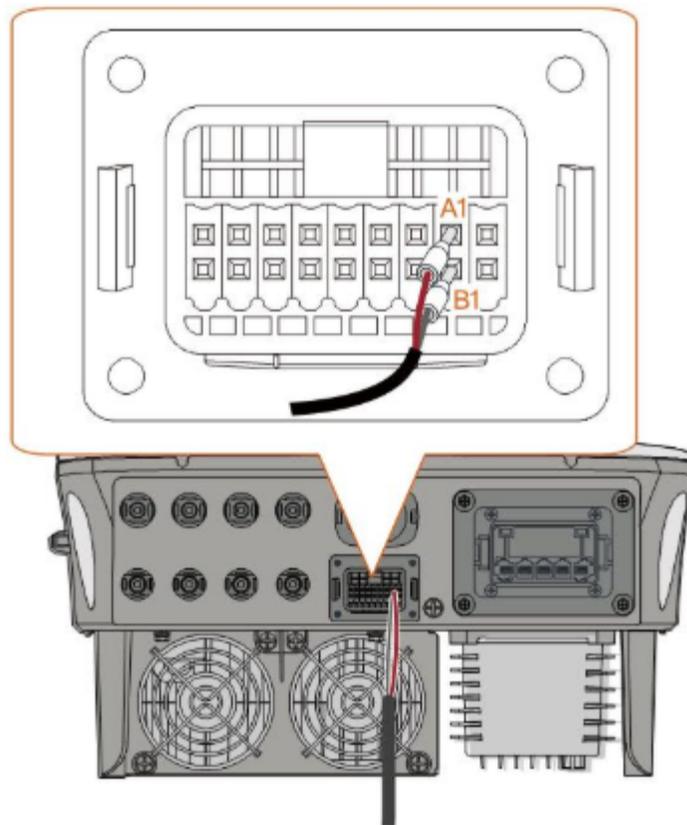
At the other end you will need to use a RS485/USB adapter before connecting into USB port 1 or port 2 of the SGD.
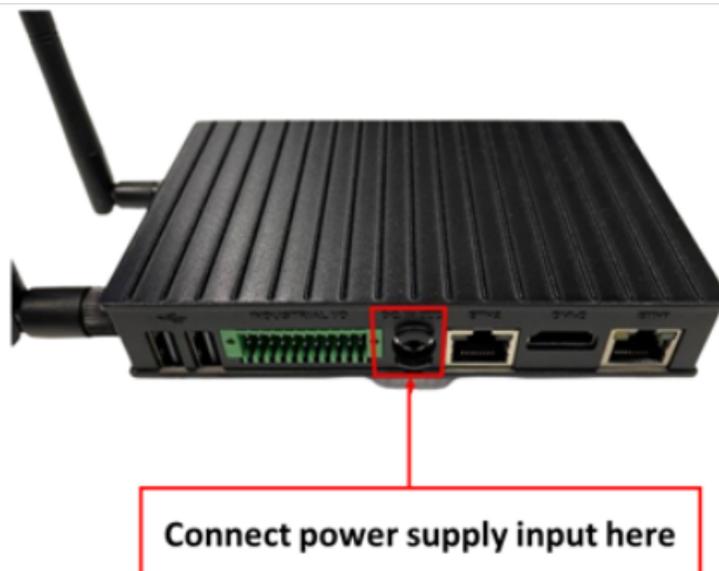For more detailed information about setting up an RS485 connection with Sungrow, please refer to page 43 on this manual.

Connect the main 4G antenna

Make sure you connect the main 4G antenna to the WLAN-B connection as shown here.

Connect main 4G antenna here

Power up the SGD

Ensure you connect the power supply as below.

Connect power supply input here

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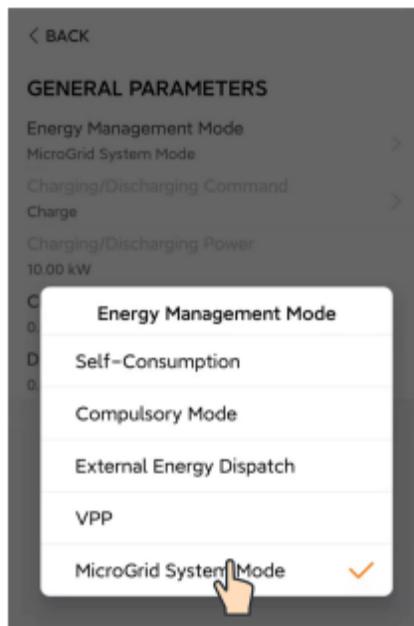# 3. Sungrow inverter settings for Horizon Power

Login to Sungrow iSolaCloudr App as an Installer

Tap **Settings**

> **Energy Management Parameters**

> **General Parameters**

> **Energy Management Mode**

and select External Energy Dispatch for the list.

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4. Commissioning the SGD

Open the Stormcloud application and sign in.

Please follow this link if you are creating your user account. You must ensure you have permissions on this account opened by SwitchDin.

Your username is an email address. (both username and password are CASE sensitive)
If two-factor authentication has been enforced, you will receive a passcode valid for 300 seconds in your email inbox to finish logging in to the SwitchDin portal.
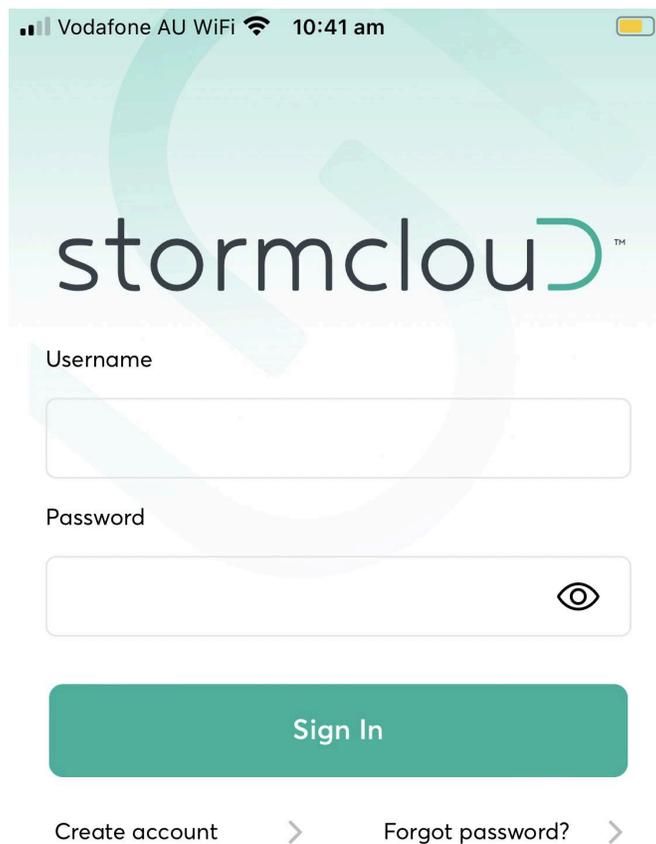
Create a portfolio

On first signing into the application, you can create a folder regrouping all the sites where you install SGDs. We call this folder a portfolio. As an installer, feel free to use the name of your business or area.
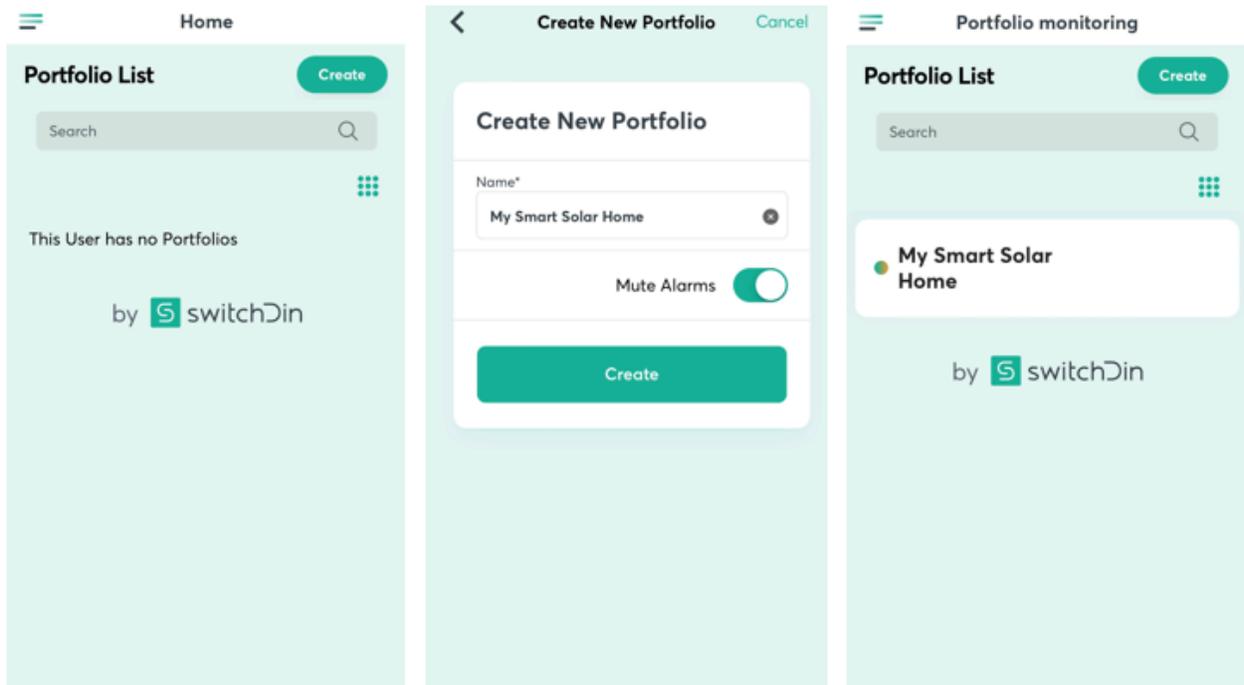

Create a unit

Tap on your portfolio to create your first unit. Tap on 'Create' in the top right corner.

In the Unit Name field, please use the following naming convention:
Street address or significant place name - Town - Inverter size (kW)

For example:

1.   12 Test Road - Onslow - 5kW
2.   Broome Test School - Broome - 25kW

Then enter the address in the Street Address field and tap Create New Unit.
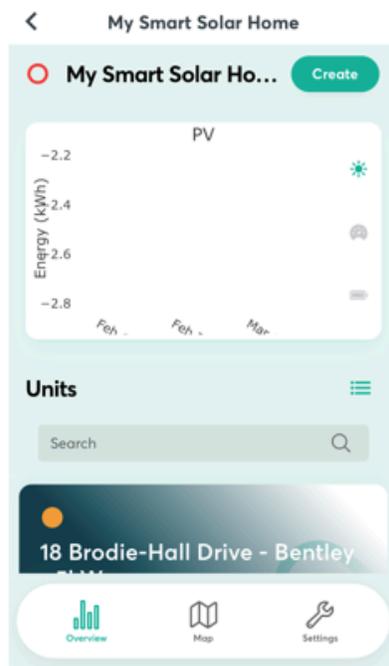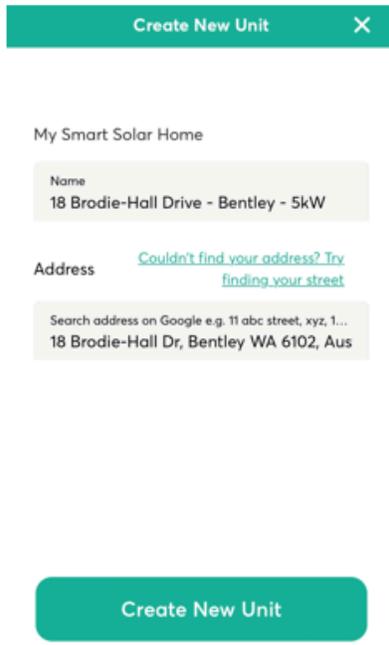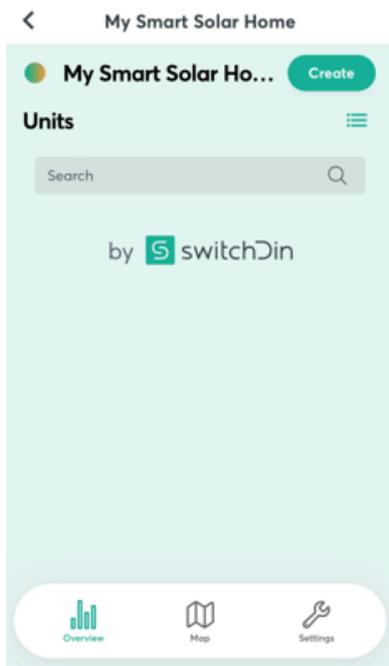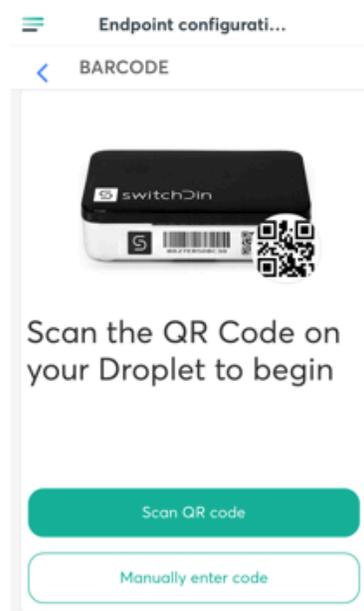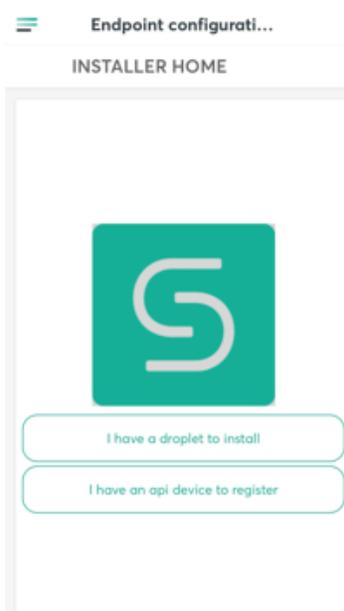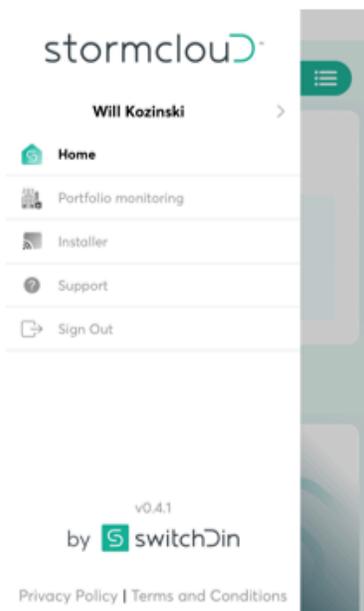
Add the SGD to the unit

Start the Installer application from your mobile application's top left menu bar.
Select 'I have a droplet to install'
Scan the QR code on the SGD or manually enter the serial number (located below the bar code on the SGD). If you cannot reach the QR code or serial number on the SGD, it can also be found on the packaging it arrived in.
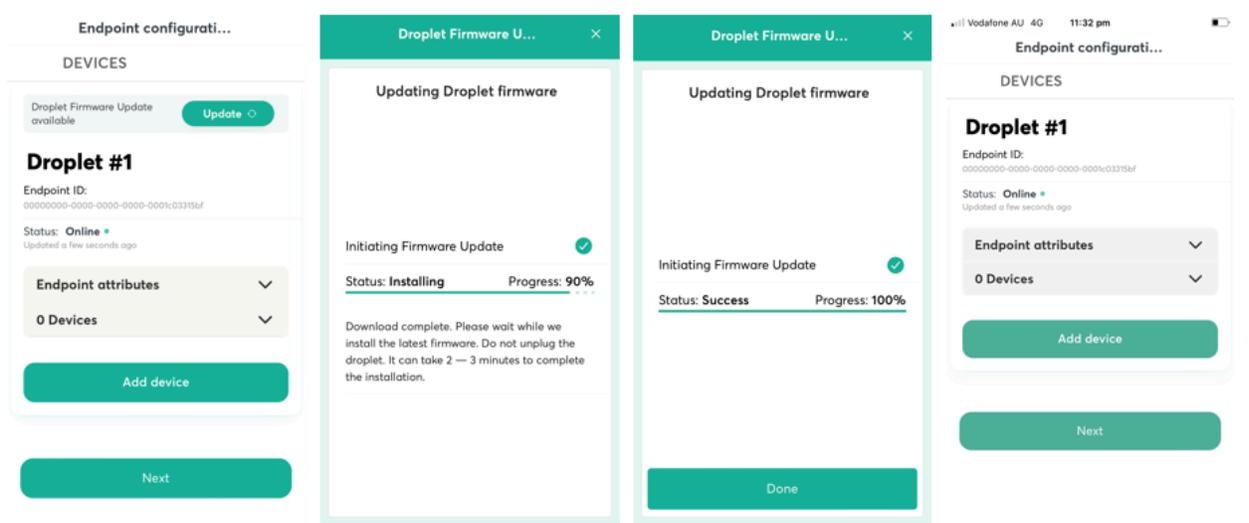
Then select 'Connect via Ethernet' as you should have plugged the USB/ETH adaptor into the local LAN and port USB3 of the SGD.
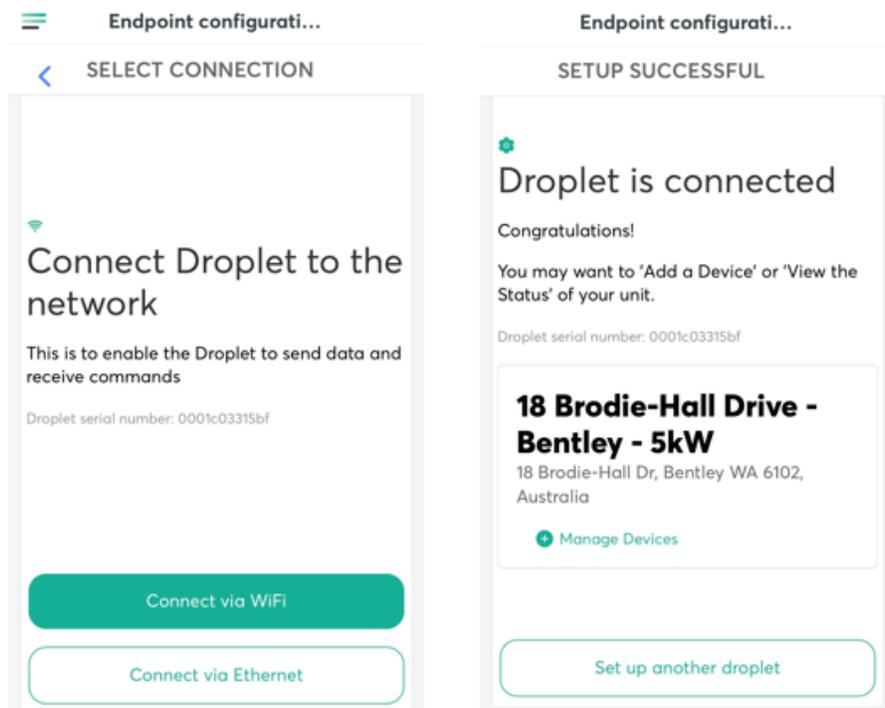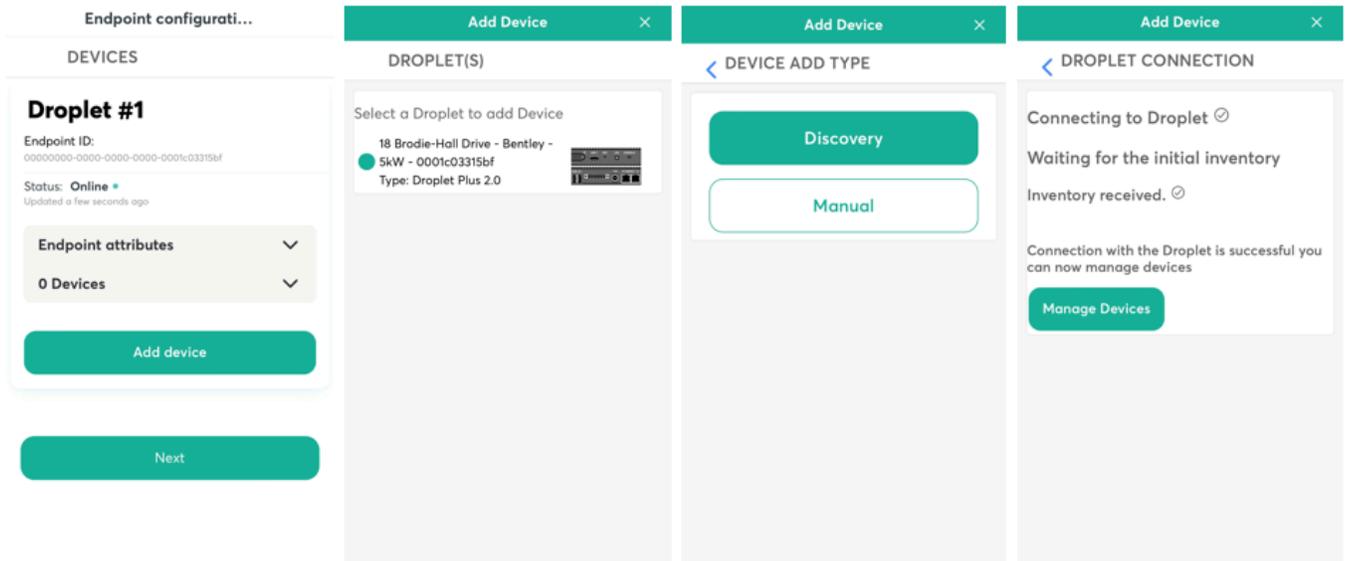

Update firmware

Select 'Manage Devices' and tap at the top of the screen to download the latest firmware update if available.

Manage Devices

Tap on Add device, tap on the droplet you want to select, then tap on 'Discovery'.
Tap on 'Manage Devices'

Tap the settings button in front of the USB port you have used to connect the inverter to the SGD. Then select the model/type of inverter. Specify if you have a grid or load meter.

Optional: If you have connected a smart meter, you will configure it by selecting the other USB port you have used.

Add the Horizon Power Controller

Now that a device has been added to the SGD, you will be able to tap on 'Add Controller'. Select 'Horizon Power Controller' from the drop-down menu then 'Create'.