

# 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

	Size in	No Of	
Model	кw	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
- 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.



## 2. Physical connection

#### Behind the meter configuration overview

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



Position	Description
А	PV modules
В	DC load circuit breaker
С	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.



#### 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.





#### 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 <u>refer to page 43 on this manual</u>.



#### Connect the main 4G antenna



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

#### Power up the SGD

Ensure you connect the power supply as below.





## **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.

< BACK			
GE	NERAL PARAMETERS		
Ene	ergy Management Mode		
Cha	Charging/Discharging Command >		
Chi 10.0	arging/Discharging Power 10 kw		
C 0	Energy Management Mode		
D	Self-Consumption		
ľ	Compulsory Mode		
I.	External Energy Dispatch		
I.	VPP		
L	MicroGrid System Mode		



## **4. Commissioning the SGD**

Open the Stormcloud application and sign in.

Please follow this <u>link</u> 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.





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#### 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.

Home	Create New Portfolio Cancel	Portfolio monitoring
Portfolio List Create		Portfolio List Create
Search Q	Create New Portfolio	Search Q
	Name*	
This User has no Portfolios	My Smart Solar Home	
by S switchDin	Mute Alarms	• My Smart Solar Home
	Create	by SwitchDin

#### 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.

Endpoint configura	ti	Droplet Firmware U ×	Droplet Firmware U ×	•III Vodafone AU 4G 11:32 pm Endpoint configurati	•
DEVICES		Updating Droplet firmware	Updating Droplet firmware	DEVICES	
available	pdate O			Droplet #1	
Droplet #1				0000000-0000-0000-0000-0001c03315bf	
00000000-0000-0000-0001c03315bf				Updated a few seconds ago	
Status: Online • Updated a few seconds ago		Initiating Firmware Update 🛛 🗸	Initiation Firmware Undate	Endpoint attributes	~
Endpoint attributes	~	Status: Installing Progress: 90%	Status: Success Progress: 100%	0 Devices	$\sim$
0 Devices	~	Download complete. Please wait while we install the latest firmware. Do not unplug the		Add device	
Add device		droplet. It can take 2 $-$ 3 minutes to complete the installation.			
				Next	
Next			Done		



#### Manage Devices

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

Endpoint configurati	Add Device $ imes$	Add Device $ imes$	Add Device X
DEVICES	DROPLET(S)	DEVICE ADD TYPE	CONTRACTION
Droplet #1 Endpoint ID: 00000000-0000-0000-0000-0001 Status: Online • Updated a few seconds ago	Select a Droplet to add Device 18 Brodie-Hall Drive - Bentley - SkW - 0001c03315bf Type: Droplet Plus 2.0	Discovery Manual	Connecting to Droplet ⊘ Waiting for the initial inventory Inventory received. ⊘
Endpoint attributes $\checkmark$ 0 Devices $\checkmark$			Connection with the Droplet is successful you can now manage devices
Add device			
Next			

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'.

Endpoint configurati	Add Controller Cancel
< CONTROLLERS	
<ul> <li>Inventory received</li> </ul>	Add Controller
Droplet #1 Endpoint ID: 00000000-0000-0000-0000-0000-0001-033155/	0000000-0000-0000-0000- 0001c03315bf
Status: Online  Updated a few seconds ago	Controller type
Endpoint attributes 🗸 🗸	Name
0 Controllers 🗸	
Add Controller	Create
Done	

