

Quick Guide for FlexOM Gateway V2

4/13/2023
Revision 4

Table of Contents

Product Features	2
Product Specifications	3
-- -- Dimensions and Interfaces	6
-- -- LED Indicators	10
-- -- Typical System Design and Diagrams	11
-- -- Safety Precautions	14
Hardware Installation	16
-- -- List of Required Tools and Materials	16
-- -- Option 1: Internal Wire-box Installation	17
-- -- Option 2a: DIN Rail Side Mounting (in External DAS Box)	21
-- -- Option 2b: DIN Rail Flat Mounting (in External DAS Box)	24
-- -- 4G Cellular Antenna Installation (FlexOM-4G V2 only)	26
-- -- Daisy Chain Wiring	27
Using the CPS Connect Pro App	28
-- -- Check the Internet Connection	28
-- -- Modbus Device Settings	31
-- -- Modbus TCP	32
-- -- Reset / Restart	33
CPS Warranty Policy	34

Product Features

- The FlexOM Gateway V2 is an IoT cloud-based gateway that allows the integration of various hardware and system scenarios
- Connect multiple CPS inverters and other devices to a single RS485 daisy chain
- RS485 pass-thru allows third-party controller to act as a client in parallel with the FlexOM Gateway V2
- Enables diagnosis of RS485 wiring issues through the CPS FlexOM portal
- Modbus TCP pass-thru (Third-party controllers can read/write commands to CPS inverters through Modbus TCP.)
- Easy mass deployment and configuration via the CPS Connect Pro app using built-in BLE
- Reduces the need for truck rolls via remote firmware updates

Product Specifications

RS485 Interface

No. of Ports	1 (A: 6-Pin Connector or B: 5-Pole Terminal Block)
--------------	--

Protocol	Modbus RTU
----------	------------

Modbus RTU Mode	Client
-----------------	--------

Terminator for RS485	120 ohms
----------------------	----------

Isolation	2.5 kV
-----------	--------

AUX Interface

No. of Ports	1 (3-pole Terminal Block)
--------------	---------------------------

Protocol	Modbus RTU
----------	------------

Modbus RTU Mode	Server (RS485 Pass-thru)
-----------------	--------------------------

Terminator for RS485	120 ohms
----------------------	----------

Isolation	2.5 kV
-----------	--------

Ethernet Interface

10/100BaseTX Ports (RJ45 connector)	1
-------------------------------------	---

Connect to the Cloud Applications	MQTT
-----------------------------------	------

SCADA controllers on the same LAN subnet	Modbus TCP
--	------------

Modbus TCP

Mode	Server
------	--------

Max. No. of Client Connections	2
--------------------------------	---

Cellular Interface (FlexOM-4G V2 product only)

Cellular Standards	LTE-FDD/LTE-TDD, WCDMA
--------------------	------------------------

No. of SIM Slot	1
-----------------	---

Cellular Antenna Connectors	1 SMA female
-----------------------------	--------------

Bluetooth Interface

Standard	BLE 4.2
----------	---------

Antenna	Built-in
---------	----------

Power Parameters

Input Voltage	9 to 24 Vdc
---------------	-------------

Power Consumption	2.5 W, Max. 5 W
-------------------	-----------------

Power Connector	Terminal Block
-----------------	----------------

Environmental Limits

Operating Temperature	-30°C to 85°C (-22 to 185°F), Natural convection
-----------------------	--

Storage Temperature	-40 to 85°C (-40 to 185°F)
---------------------	----------------------------

Ambient Relative Humidity	5 to 85% (non-condensing)
---------------------------	---------------------------

Physical Characteristics

Housing	Plastic
---------	---------

IP Rating	IP 20
-----------	-------

Dimensions	70 mm / 100 mm / 28 mm (2.76 in x 3.94 in x 1.10 in)
------------	--

Weight	73g (0.16 lb)
--------	-----------------

Standards and Certifications (DoC)

CE-EMC	EN 55032
--------	----------

	EN 55035
--	----------

	EN 61000-3-2
--	--------------

	EN 61000-3-3
--	--------------

CE-RED	EN 301 908
--------	------------

	EN 300 328
--	------------

	EN 301 489-1 / -17 / -52
--	--------------------------

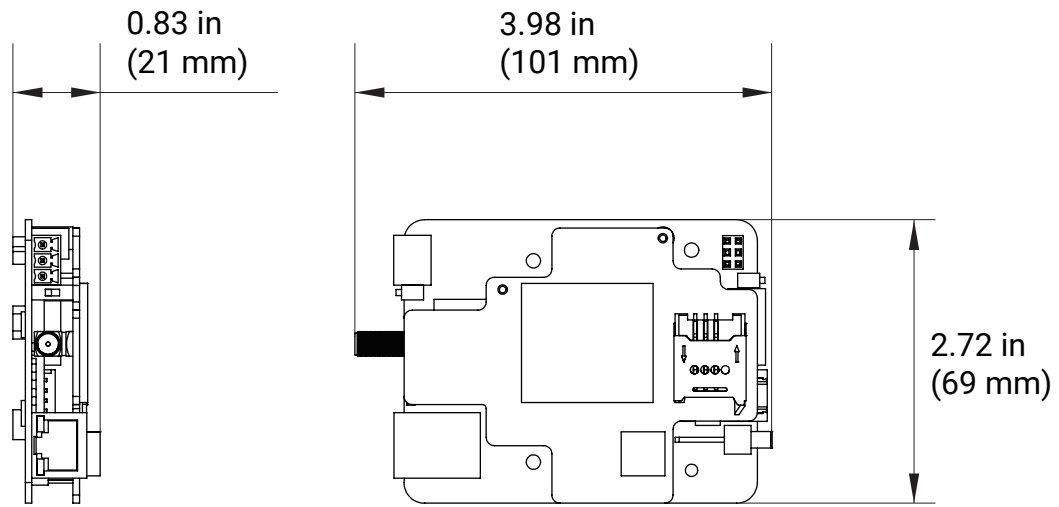
	EN 62368-1
--	------------

CE-LVD	EN 62368-1
--------	------------

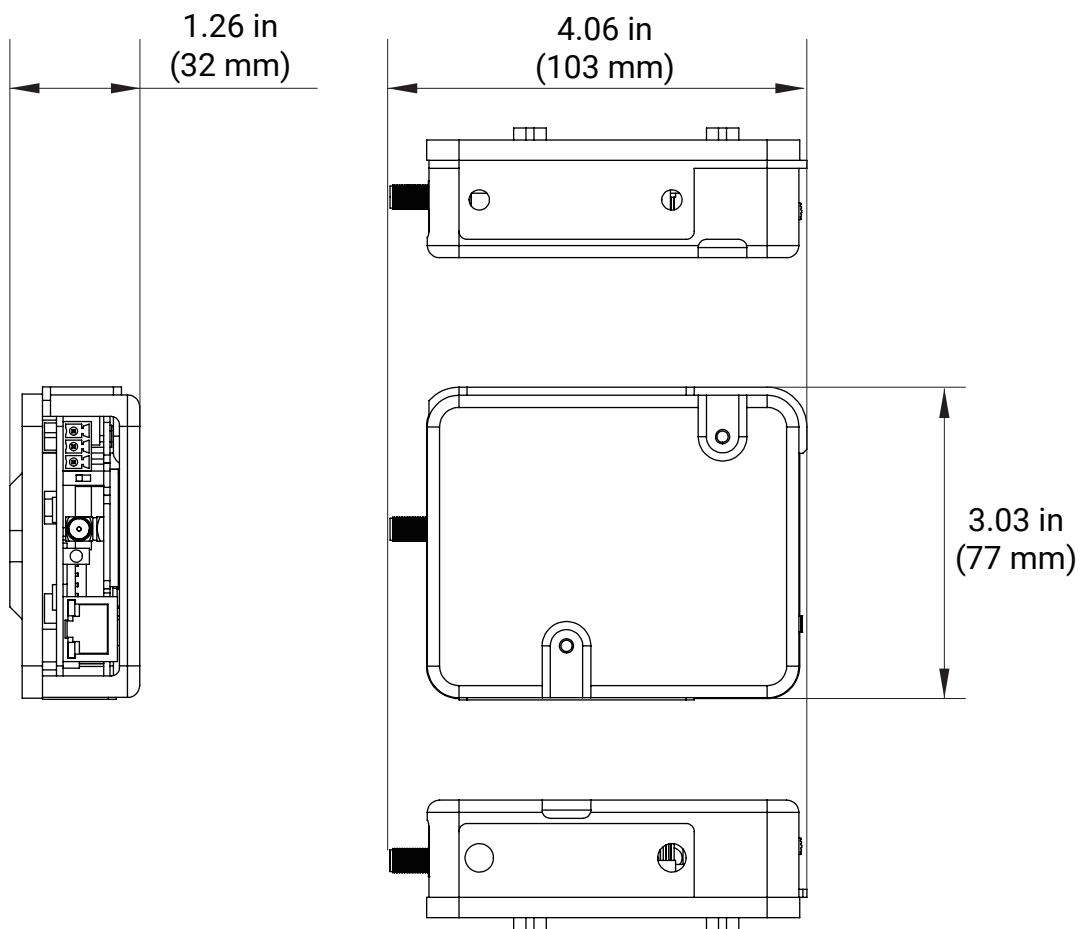
FCC SDoC	Part 15B
----------	----------

FCC ID	Part 15C
--------	----------

Dimensions and Interfaces

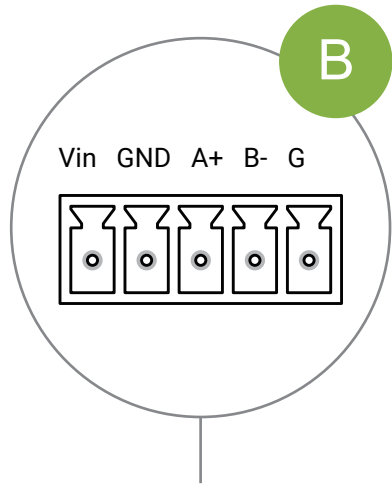


Dimensions without DIN rail housing



Dimensions with DIN rail housing

Dimensions and Interfaces



5-PIN Port B:
External DAS box installation
(see installation options 2a and 2b)



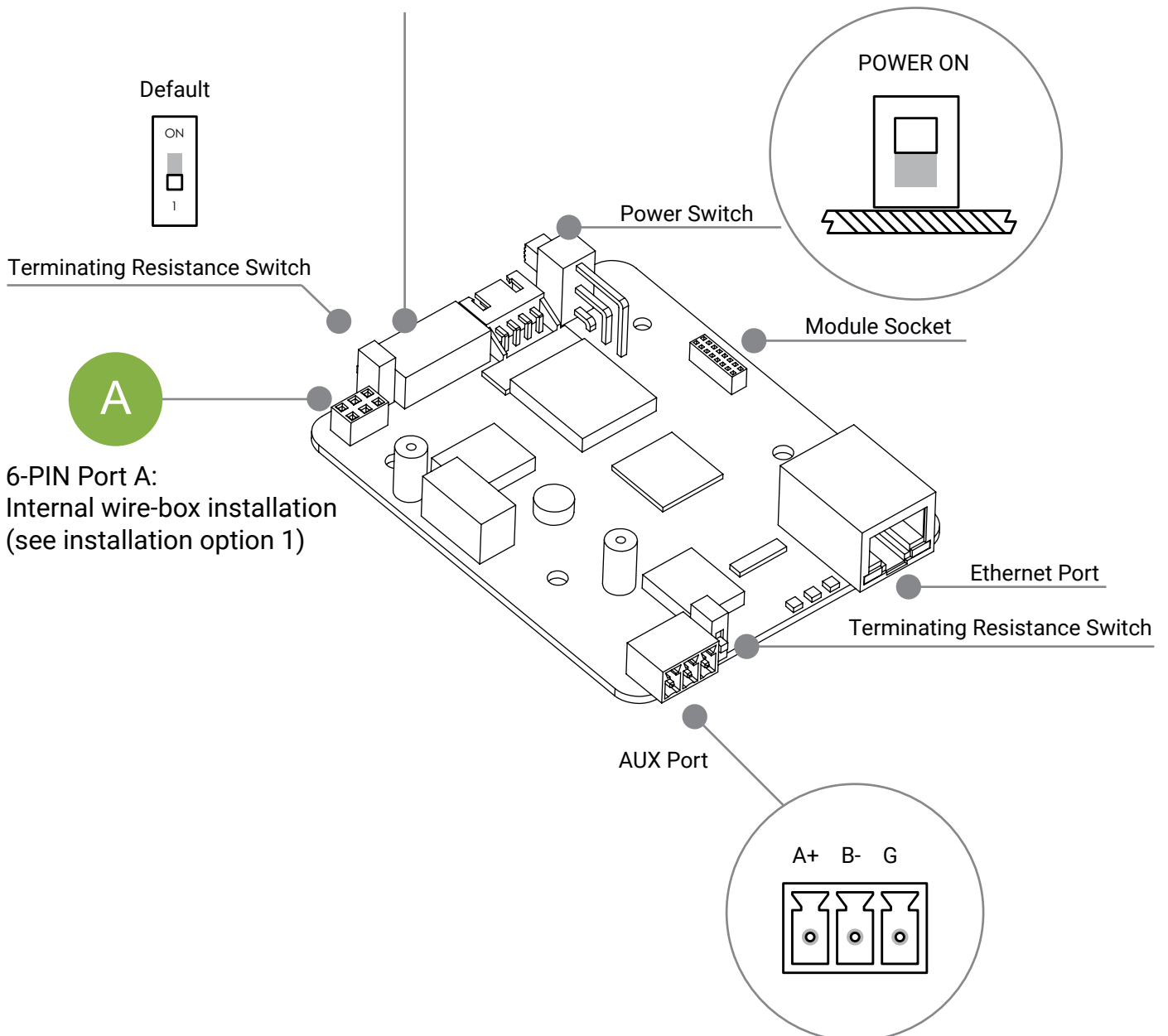
Caution:

If the length of either the cable connecting to the RS485 port or the AUX port of the gateway is over 1000 meters, the switch for the 120 ohm terminating resistor corresponding to the port must be set to ON.



Caution:

Before configuring the gateway, ensure the power switch is set to ON.



Default



Terminating Resistance Switch

Power Switch

POWER ON

Module Socket

6-PIN Port A:
Internal wire-box installation
(see installation option 1)

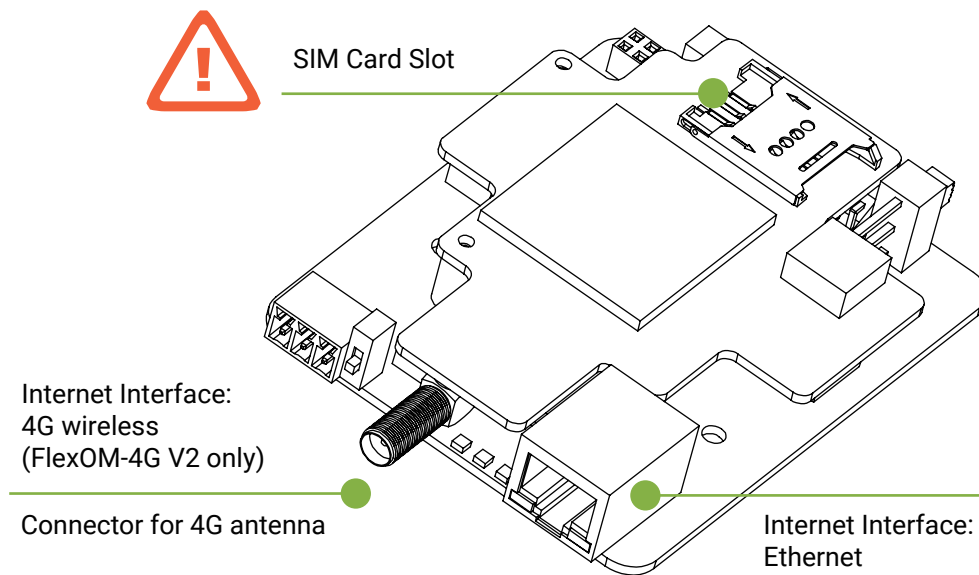
Ethernet Port

Terminating Resistance Switch

AUX Port

A+ B- G

Dimensions and Interfaces



Note:

Confirm the gateway model by checking the model number and SN listed on the label on top of the gateway card.

The **FlexOM Gateway V2** cards must have an Internet connection to enable remote data communications via the CPS Portal.

The standard **FlexOM Gateway V2** requires an Internet connection via the Ethernet port. The **FlexOM-4G Gateway V2** includes a pre-installed SIM card and 5-year 4G cellular plan.

The **FlexOM-4G Gateway V2** may not use, be configured with, or be activated with a third-party SIM card.

Dimensions and Interfaces

Internet Interface: Ethernet (FlexOM Gateway V2)

The **FlexOM Gateway V2** requires a connection to the Internet using Ethernet. Any LAN firewall ports must be opened before commissioning the **FlexOM Gateway V2**.

The following ports must be opened both ways (for incoming and outgoing communications):

TCP 1884 with destination IP 47.254.52.209
(mqtt.chintpowersystems.com)

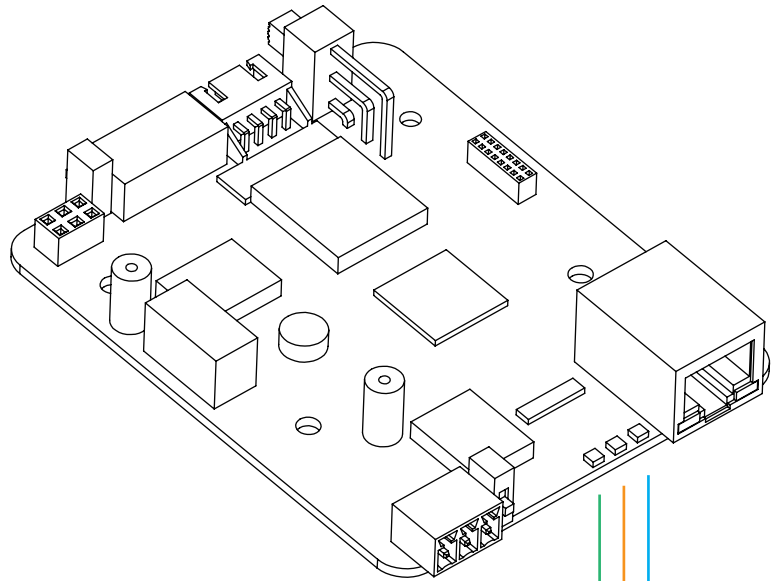


Internet Interface: 4G (FlexOM-4G Gateway V2 only)

The **FlexOM-4G Gateway V2** includes a pre-installed SIM card and is compatible with AT&T, T-mobile, and Verizon networks. The standard 4G cellular data plan period is 5 years.




Once the **FlexOM-4G Gateway V2** is powered on and the 4G antenna has been installed (see page 26), it will automatically select and connect to the provider network with the strongest or most stable signal.

LED Indicators





● APP Connect

Indicates whether the CPS Connect Pro app is connected to the gateway and whether the device is being configured

- Light Off  BLE Hardware Error
- Blink  No Active Connection
- Light On  Phone Connected




● RS485 Device

Indicates whether the RS485 devices are connected to the gateway and whether there is a RW command to the daisy chain being executed

- Light Off  Found Nothing
- Light On  Some Devices Found

● IP ACK

Indicates whether the gateway acknowledges and is connected to the CPS portal or target server via the Internet protocol (IP)

- Light Off  Unable to connect to LAN router or 4G base station
- Blink  Connected to a LAN router or 4G base station, but not yet connected to the target server
- Light On  Connected to the target server

Typical System Design and Diagrams

The following diagrams in **Figure 1: RS485 Pass-Through**, **Figure 2: Modbus/TCP Pass-Through**, and **Figure 3: Multiple Devices Using One RS485** show the various options for connecting and managing data transmission from the RTU devices (inverters, weather instruments, etc.) to the CPS portal or an optional third-party data logger or SCADA.

The **FlexOM Gateway V2** can be connected to a third-party datalogger/controller by connecting RS485 cable to the AUX port to enable the equivalent of a direct transmission connection with the daisy chain.

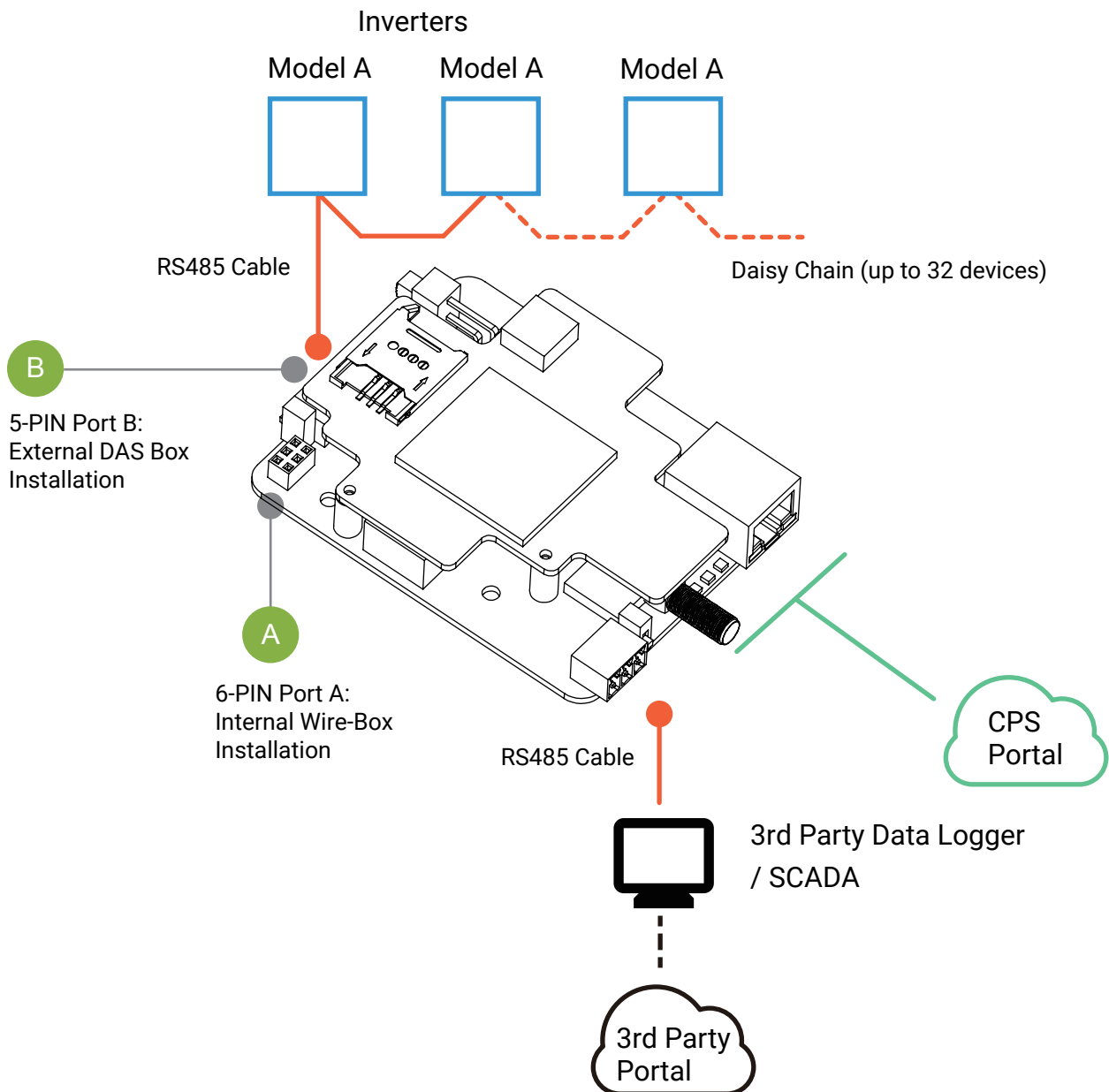


Figure 1: System Diagram for RS485 Pass-Through

Typical System Design and Diagrams

Modbus/TCP Pass-through

The **FlexOM Gateway V2** can be used as a Modbus/TCP server when connected to a third-party SCADA system, and will forward various commands to the daisy chain.

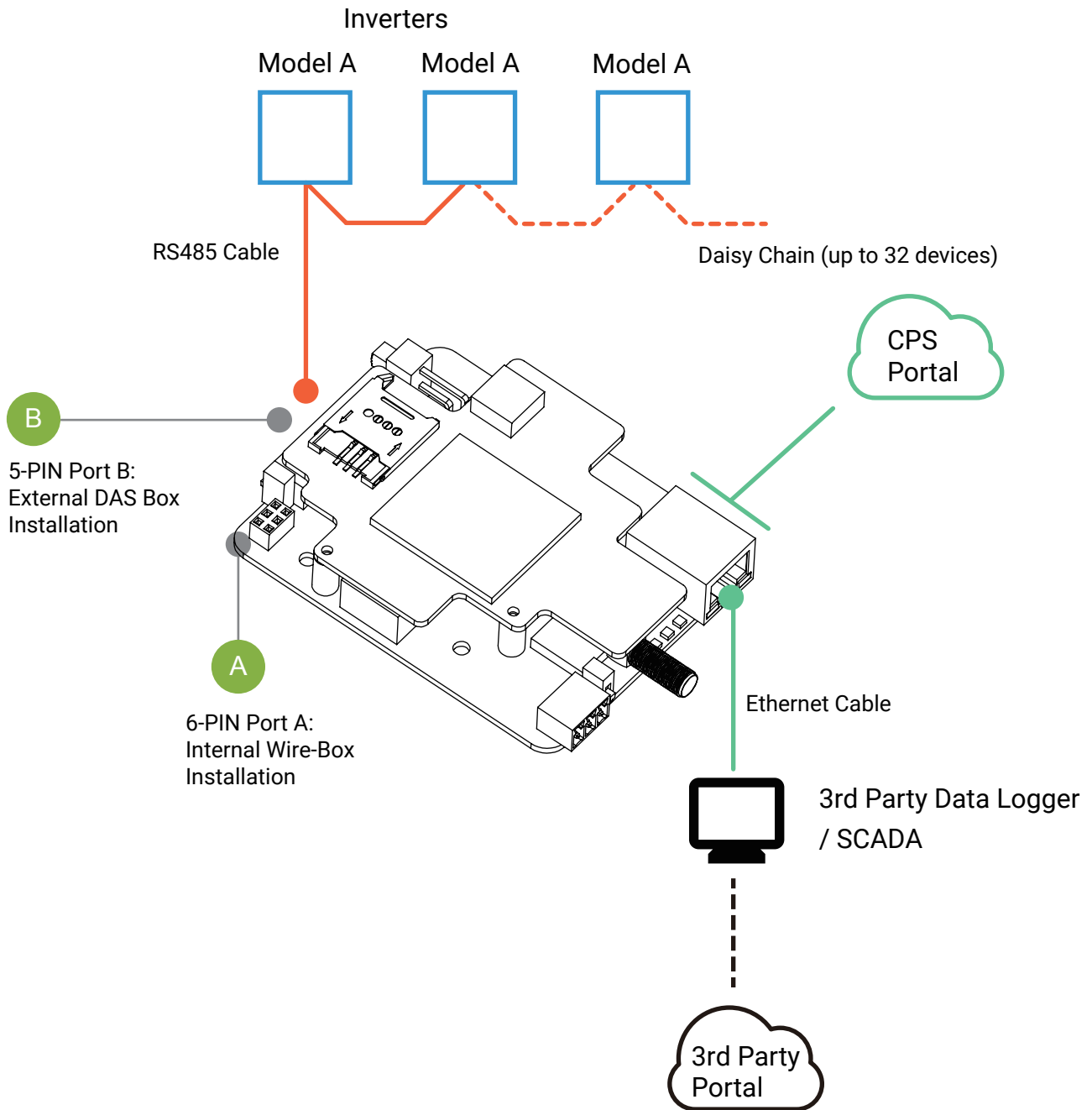


Figure 2: System Diagram for Modbus/TCP Pass-through

Typical System Design and Diagrams

Connecting Multiple CPS Inverters and Other Devices Using One RS485

The **FlexOM Gateway V2** allows users to connect different CPS inverter models and third-party weather sensors (supplied by others) in the same daisy chain via RS485.

The default baud rate for the **FlexOM Gateway V2** is 9600 baud. This setting can be changed manually. Ensure all devices in the RS485 daisy chain are set to the same baud rate.

Please check with CPS America regarding hardware compatibility prior to installation and commissioning. CPS Hotline (choose option #2): +1 855-584-7168

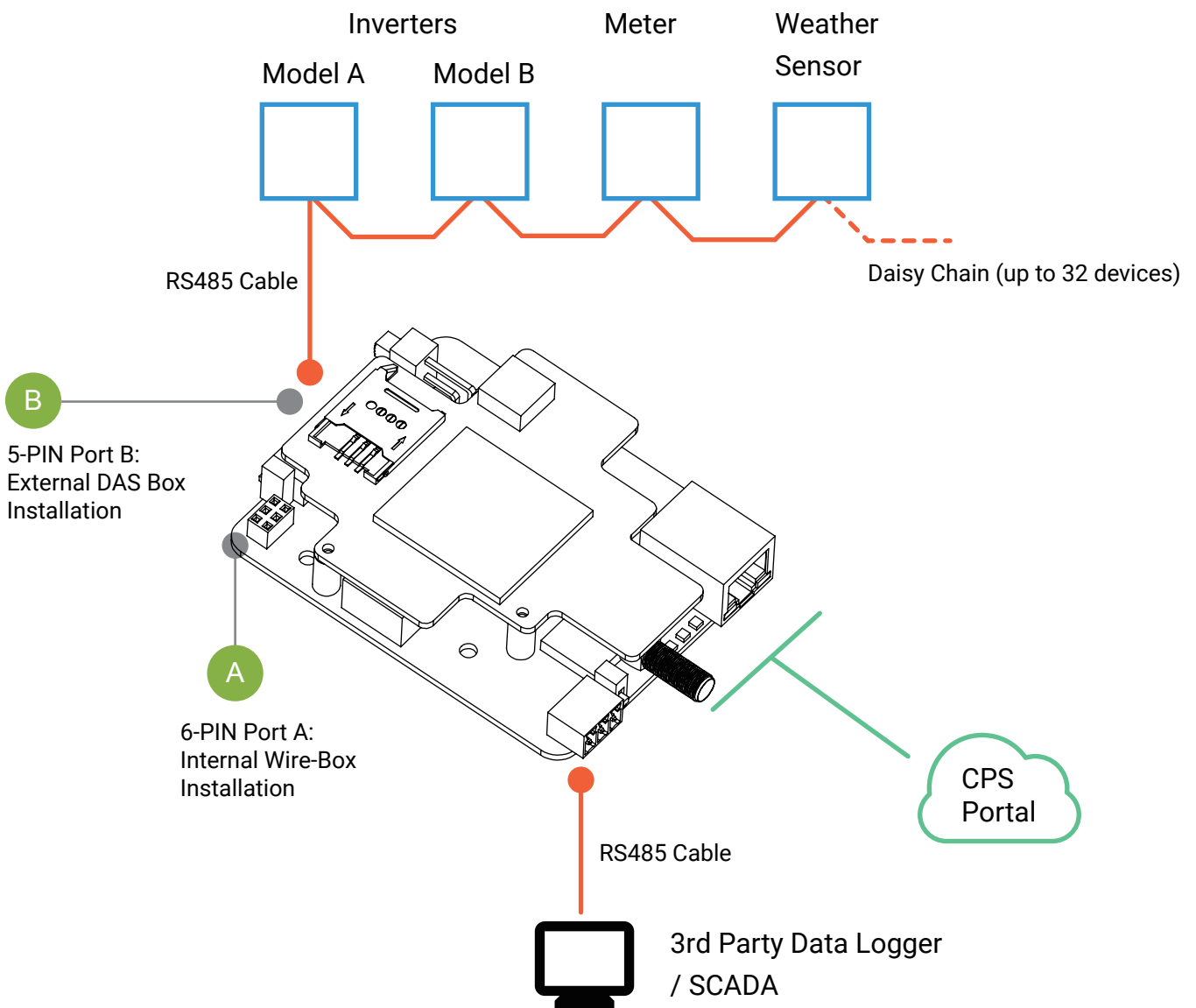


Figure 3: System Diagram for Multiple Devices Using One RS485

Safety Precautions



NOTICE

Before performing operations, read through this manual and follow all the precautions included to prevent accidents. The safety precautions provided in this document do not cover all possible safety precautions. CPS shall not be liable for any consequence caused by the violation of the safety operation regulations and design, production, and usage standards.

Declaration

CPS shall not be liable for any consequence caused by any of the following events:

- Transportation
- The storage conditions do not meet the requirements specified in this document.
- Violation of the operation instructions and safety precautions in this document for installation, cable connecting, and maintenance.
- Operation in extreme environments which are not covered in this document.
- Unauthorized modifications to the product or software code.
- Installation or use in environments which are not specified in related international standards.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Personnel Requirements

- Only qualified electrical technicians are allowed to install and operate the FlexOM Gateway V2.
- Operation personnel should receive professional training.
- Operation personnel should read through this document and follow all the precautions.
- Operation personnel should be familiar with the safety specifications about the electrical system.
- Operation personnel should understand the composition and working principles of the grid-tied PV power system and local regulations.

Safety Precautions

Installation

- Ensure that the **FlexOM Gateway V2** is not connected to a power supply and is not powered on before starting installation.
- Ensure that all electrical connections comply with local electrical standards.



DANGER

High voltage may cause electric shock and serious injuries during **FlexOM Gateway V2** operation.

Do not touch components such as AC cables, circuit breakers and connectors while the **FlexOM Gateway V2** is energized.

-
- Maintain the **FlexOM Gateway V2** with sufficient knowledge of this document and proper tools and testing equipment.
 - Before performing maintenance tasks, power off the **FlexOM Gateway V2** and perform lockout/tagout (LOTO) of the source circuit.
 - For personal safety, wear personal protective equipment (PPE), including insulated gloves and eye protection.

Hardware Installation

The **FlexOM Gateway V2** card can be installed one of two ways:

Option 1: Attached internally to the existing communications board within the inverter wire-box

Option 2: Mounted via DIN rail to an external DAS box

In addition, a 4G cellular antenna must be installed in the **FlexOM-4G Gateway V2** model, regardless of which installation option is selected from the list above.

Tools Required for Installation

- #1 Phillips screwdriver (4" shank length)
- Flathead screwdriver (3/32" or 2.5 mm)
- Hex driver (3/16" socket)
- Wire strippers (30-14 AWG)
- Wire cutters

FlexOM Gateway V2 Accessory Kit includes:

- (3) M/F M3 x 12mm standoffs
- (3) Pan Phillips M3 x 7mm screws
- (2) Flat Phillips M4 x 10mm screws
- (1) 3-pin connector plug (3.5mm pitch)
- (1) 5-pin connector plug (3.5mm pitch)
- (1) DIN rail clip*
- (1) Translucent cover and opaque base*

**Only required for installation option 2*

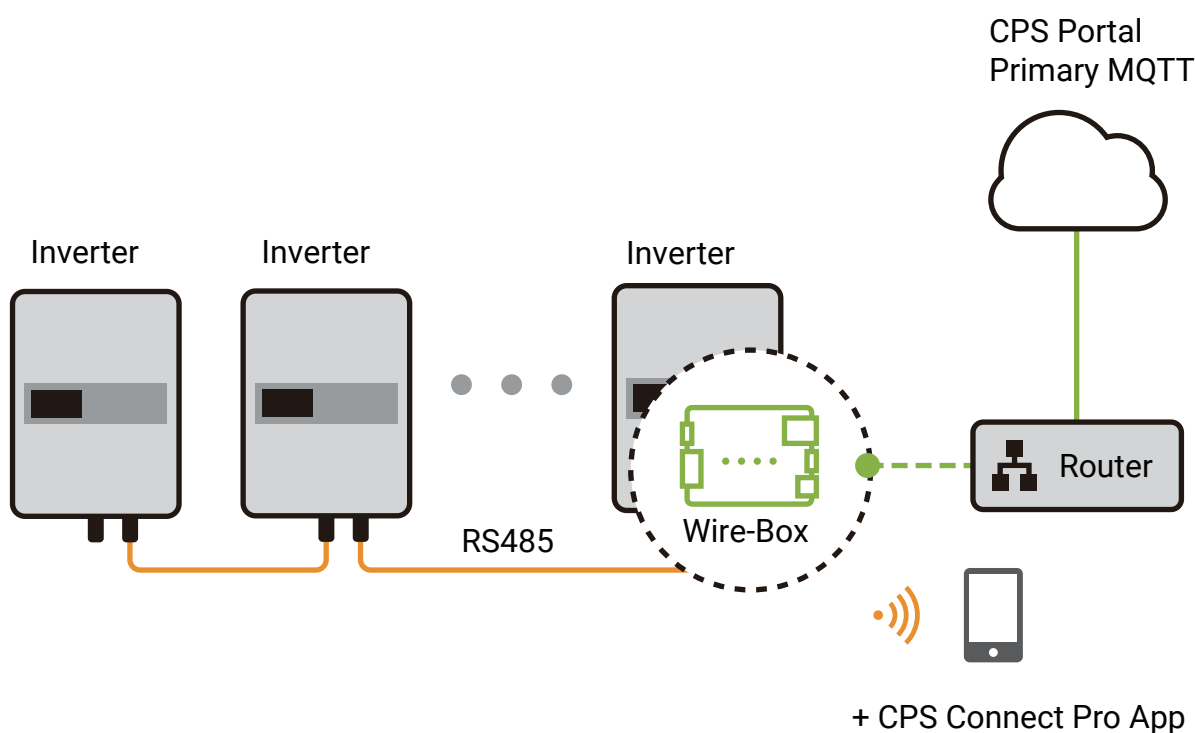
Hardware Installation

Option 1: Internal Inverter Wire-box Installation

The **FlexOM Gateway V2** card can be installed inside the inverter wire-box with no external power source required. The card can be mounted within the wire-box for all CPS inverters excluding the 250/275 kW and the legacy 36 kW inverter models.



Ensure that the inverter AC and DC switches are in the OFF position before installing the **FlexOM Gateway V2** inside the inverter wire-box.



When the inverters are monitored via the **FlexOM Gateway V2**, a unique RS485 address for each inverter must be assigned using the HMI (LCD or CPS Connect Pro app). Refer to the specific CPS inverter User Manual for instructions on setting and assigning the RS485 Modbus address.

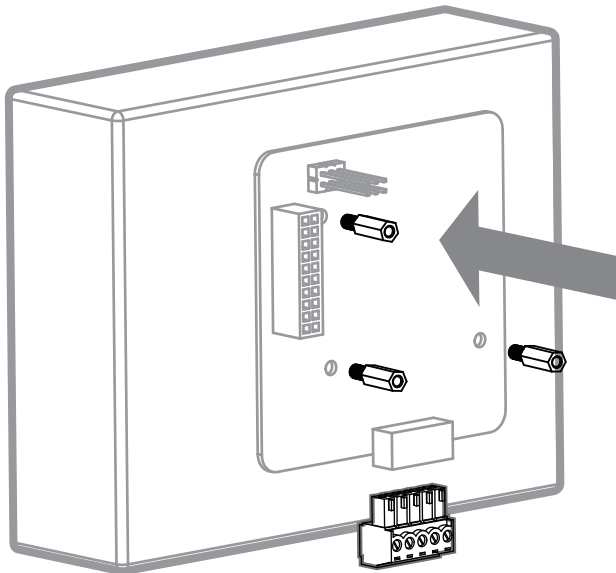
The **FlexOM Gateway V2** can support a maximum of up to 32 inverters or devices connected to the daisy chain network.

Hardware Installation

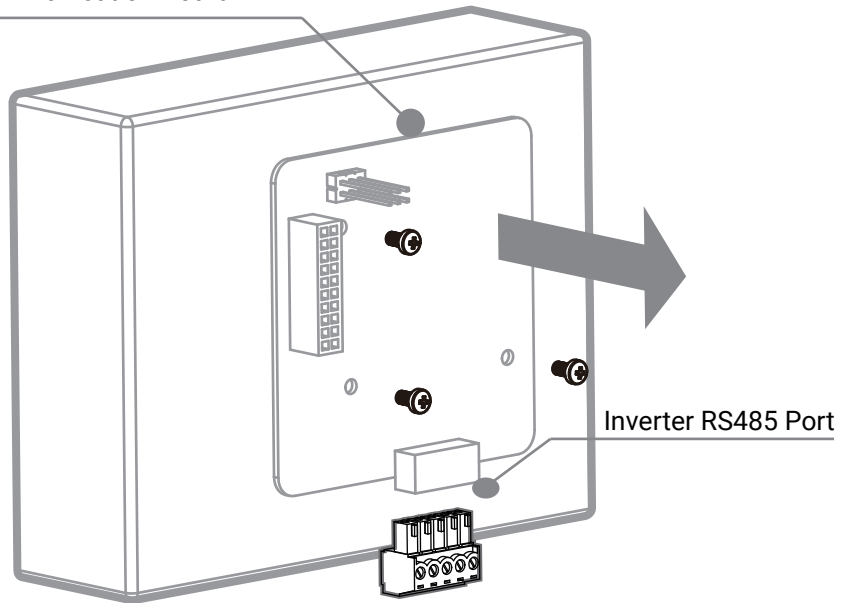
Option 1: Internal Inverter Wire-box Installation

- 1 Remove the screws that attach the inverter communication board in the wire-box using a #1 Phillips bit. Replace the screws with the stand-offs included in the accessories kit.

Repeat this process for each of the (3) screws and standoffs while keeping the communication board in place.



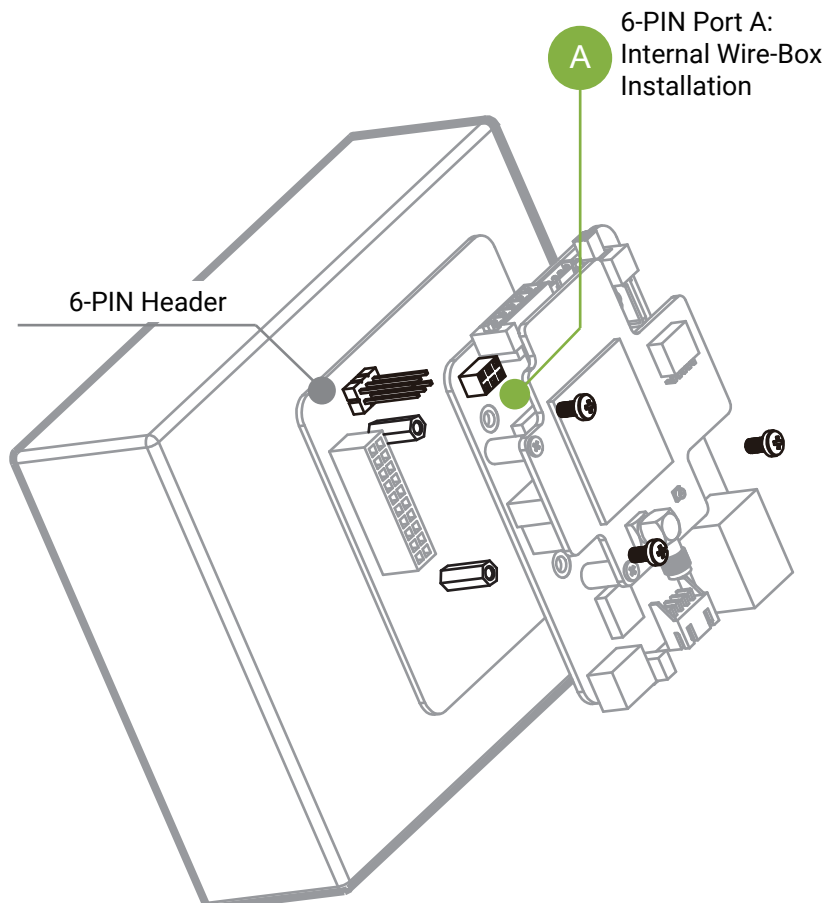
Inverter Communication Board



- 2 Torque standoffs to 7 in-lbs using a 3/16" socket hex driver.

- 3 After all standoffs have been inserted, install the FlexOM Gateway V2 by carefully aligning the 6-PIN Port A with the 6-PIN header in the upper left-hand corner of the communication board.

Install the (3) screws removed in step 1 into the standoffs to secure the FlexOM Gateway V2 in place and torque to 7 in-lbs using a #1 Phillips bit.



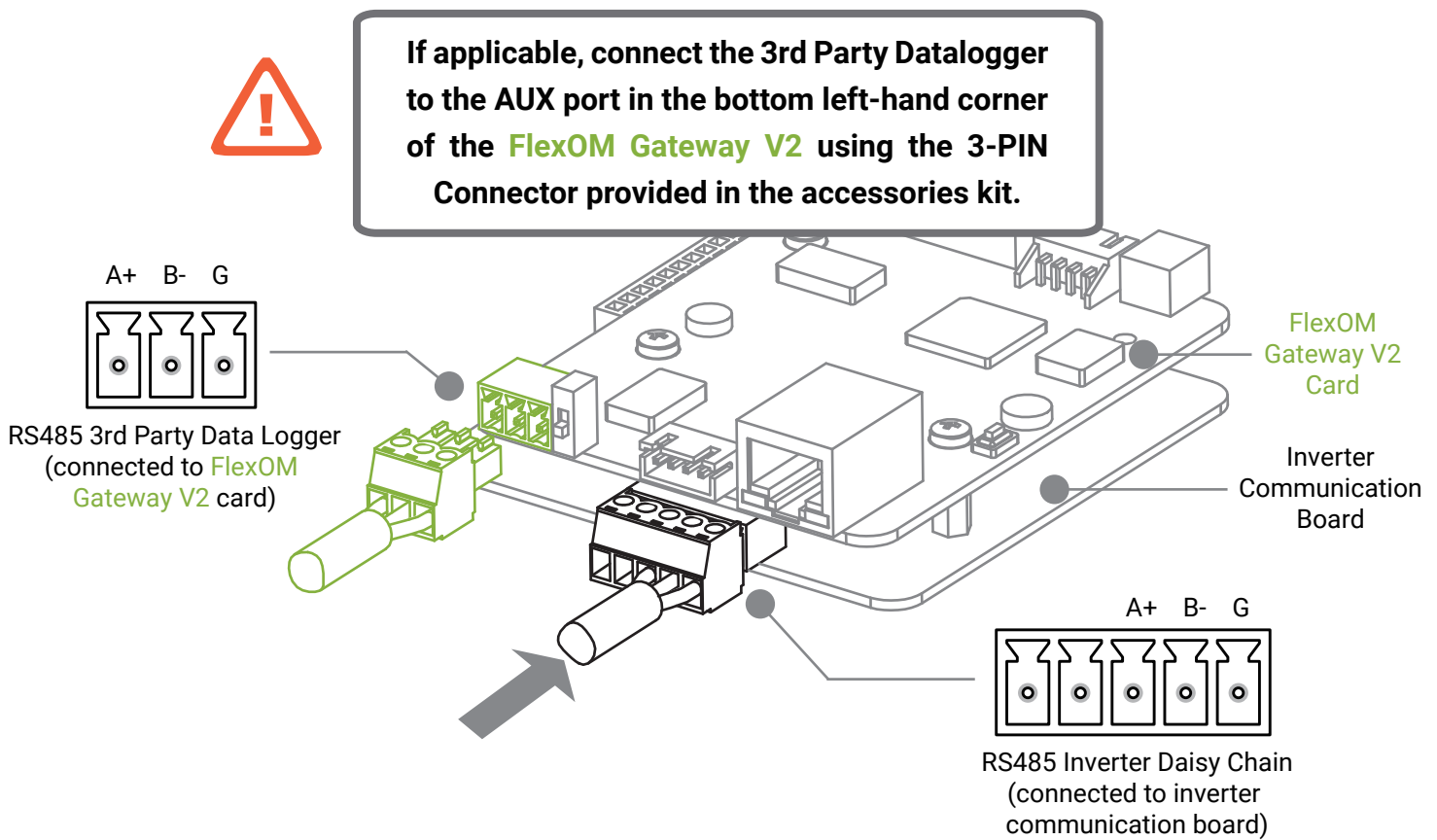
Hardware Installation

Option 1: Internal Inverter Wire-box Installation

- 4 Connect the RS485 inverter daisy chain to the inverter communication board using pins **A+**, **B-**, and **G** in the Connector provided in the inverter accessories kit when mounting inside the inverter wire-box. **Check the inverter User Manual for RS485 installation instructions.**

FlexOM Gateway V2 uses a two-wire Modbus RS485 multipoint serial line system. Shielded, twisted pair, 22 AWG, stranded cable such as Belden 3106A is recommended for the daisy chain.

Once pins **A+**, **B-**, and **G** in the Connector are connected, then insert the Connector into the terminal block in the port **on the bottom of the inverter communication board (behind the FlexOM Gateway V2 as shown below).**



Use the Connector supplied in the inverter accessories kit to connect to the RS485 daisy chain via the inverter communication board. This may be a 5-PIN, 6-PIN, or 8-PIN Connector depending on the inverter model.



Hardware Installation

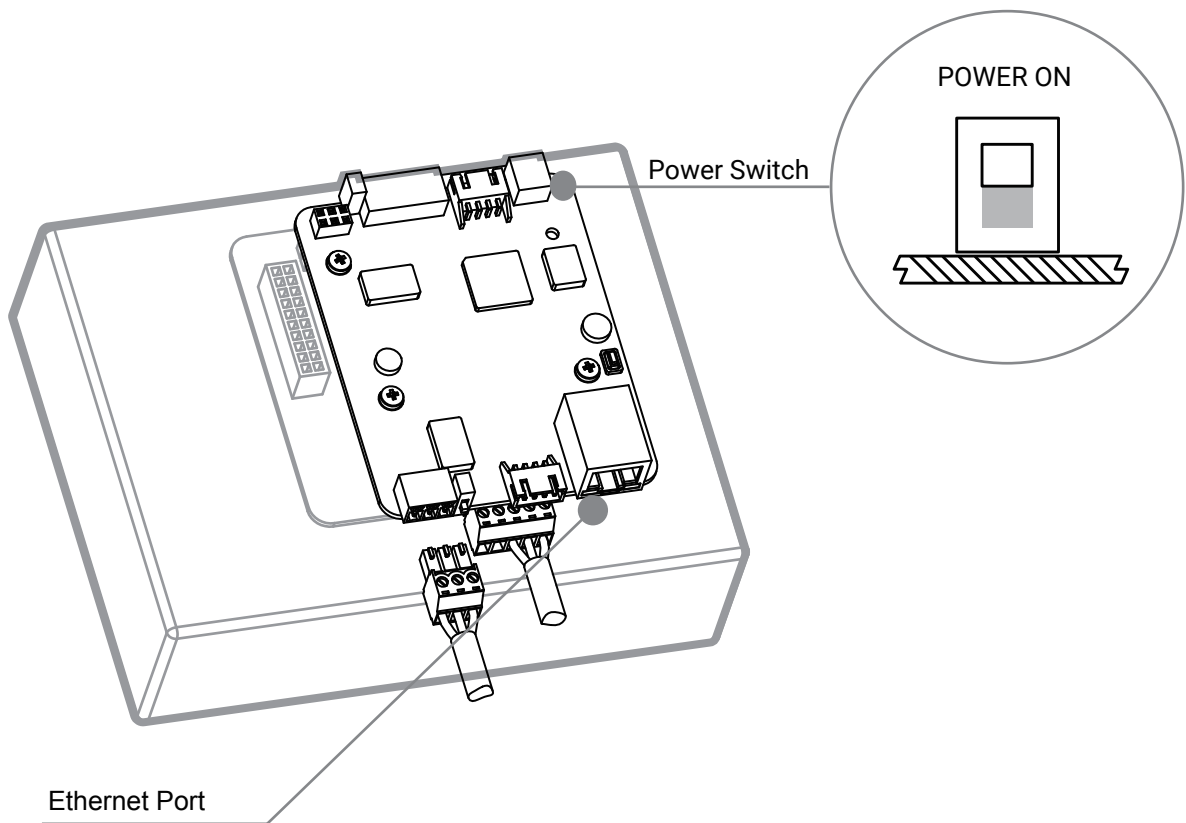
Option 1: Internal Inverter Wire-box Installation

NOTE: If connecting to the Internet via Ethernet, follow step 5 below. If connecting via 4G, skip to steps 1-3 on page 26 and return to this page to complete hardware installation by following step 6 below.

5

To connect to the Internet via Ethernet, insert the RJ45 LAN cable into the Ethernet port of the FlexOM Gateway V2.

The LAN connection must be able to access the Internet without port filtering behind the firewall (see note on page 9 regarding LAN firewall ports).



6

Turn the DC switch on the inverter into the ON position to power the inverter and the FlexOM Gateway V2.

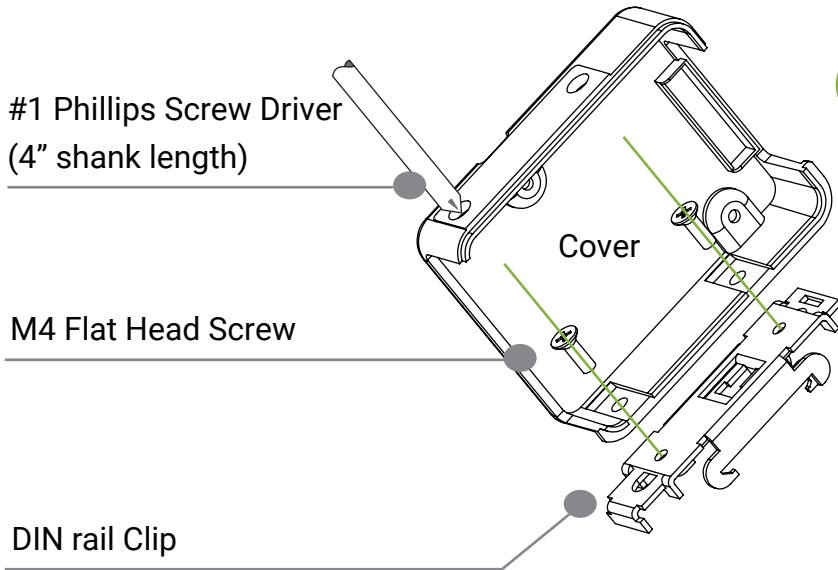
7

Ensure the Gateway Power Switch is set to ON and an LED indicator is ON before closing the inverter wire-box enclosure.

Hardware Installation

Option 2a: DIN Rail Side Mounting (in External DAS Box)

The **FlexOM Gateway V2** card can also be installed inside an external DAS box and mounted with a DIN rail clip. Installation options 2a (side mounting) and 2b (flat mounting) on the following pages describe these steps.



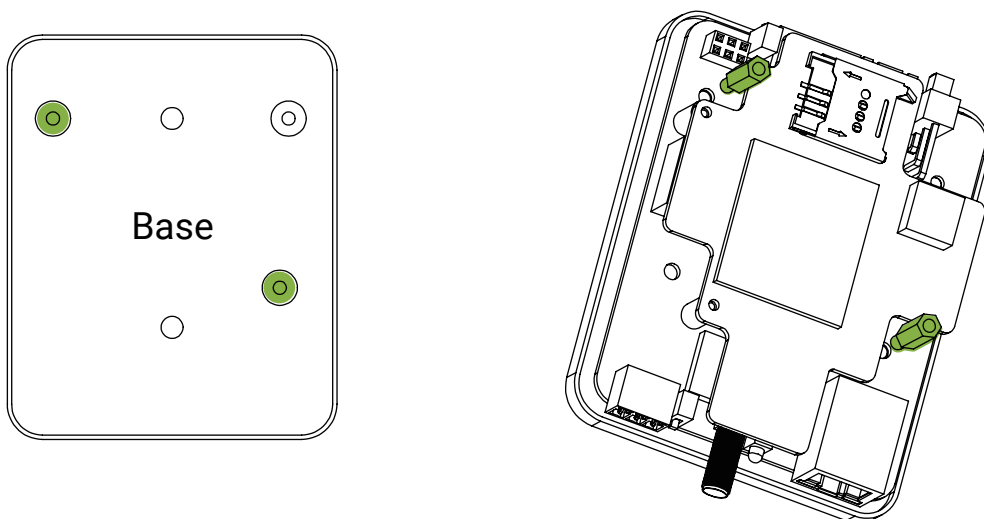
1

As shown in the figure, use a screwdriver to insert and secure the DIN rail clip and the upper cover of the housing together with M4 flat head screws.

2

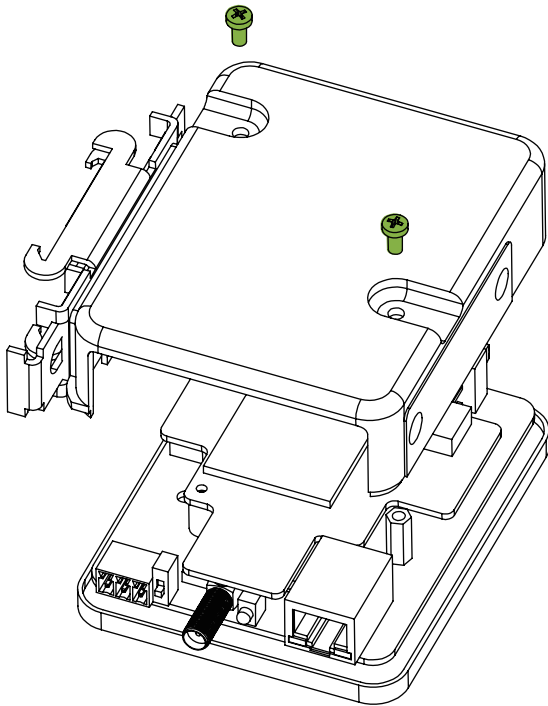
Install the **FlexOM Gateway V2** onto the base of the housing and tighten it at the positions shown in the figure with the standoffs provided in the accessories kit.

Torque to 7 in-lbs using 3/16" socket hex driver.



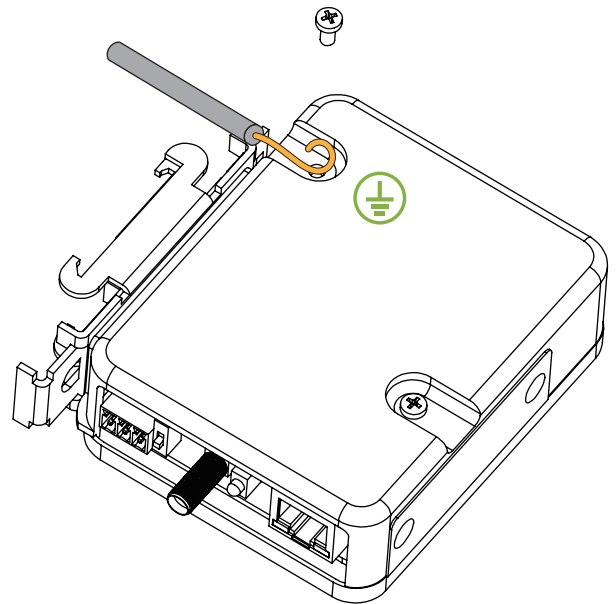
Hardware Installation

Option 2a: DIN Rail Side Mounting (in External DAS Box)



- 3** Align and close the upper and lower housings according to the positions of the screw holes, and use a #1 Phillips screwdriver to fasten the two parts together with M3 screws.

- 4** To ground the **FlexOM Gateway V2** once installed in the DIN rail enclosure, clamp the ground wire into the screw at the position shown in the figure.



- 5** Mount the housing within the DAS box using the DIN rail clip.

Hardware Installation

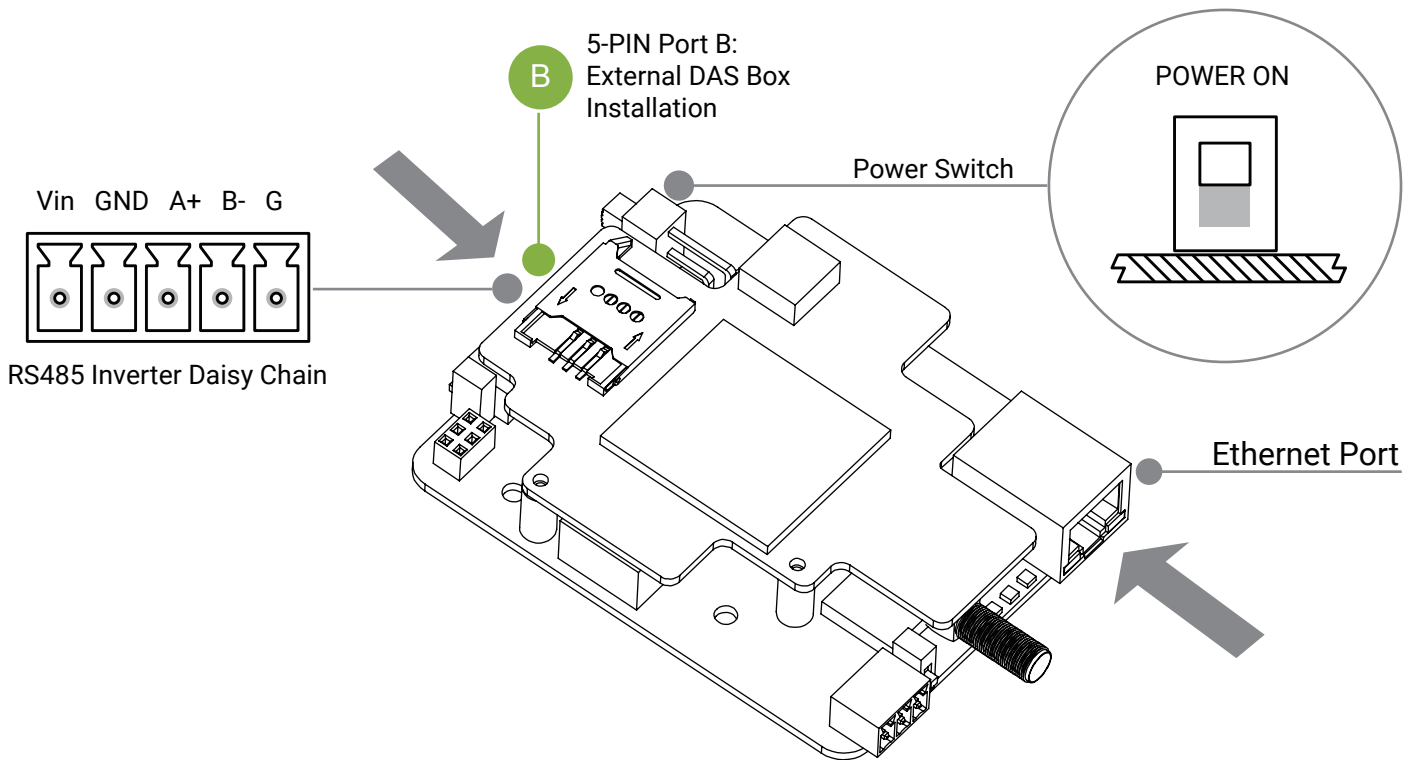
Option 2a: DIN Rail Side Mounting (in External DAS Box)

6

Connect the RS485 inverter daisy chain to the **FlexOM Gateway V2** card using pins A+, B-, and G in the 5-PIN Connector provided in the accessories kit.

FlexOM Gateway V2 uses a two-wire Modbus RS485 multipoint serial line system. Shielded, twisted pair, 22 AWG, stranded cable such as Belden 3106A is recommended for the daisy chain.

Connect DC power to the **FlexOM Gateway V2** card using pins **Vin** and **GND** in the 5-PIN Connector provided in the accessories kit, then insert the Connector into the 5-PIN Port B as shown below.



NOTE: If connecting to the Internet via Ethernet, follow step 7 below. If connecting via 4G, skip to steps 1-3 on page 26 and return to this page to complete hardware installation by following step 8 below.

7

To connect to the Internet via Ethernet, insert the RJ45 LAN cable into the Ethernet port of the FlexOM Gateway V2.

The LAN connection must be able to access the Internet without port filtering behind the firewall (see note on page 9 regarding LAN firewall ports).

8

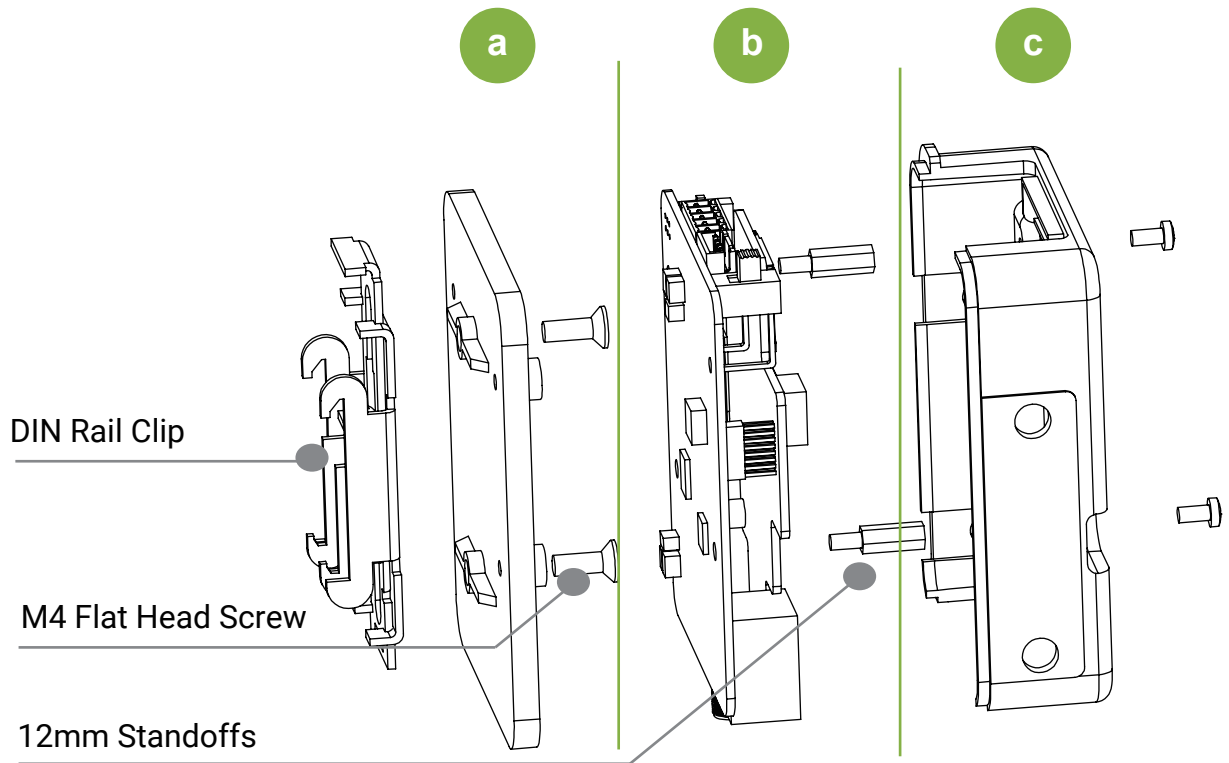
Ensure the Gateway Power Switch is set to ON and an LED light is ON and visible before closing the DAS box enclosure.

Hardware Installation

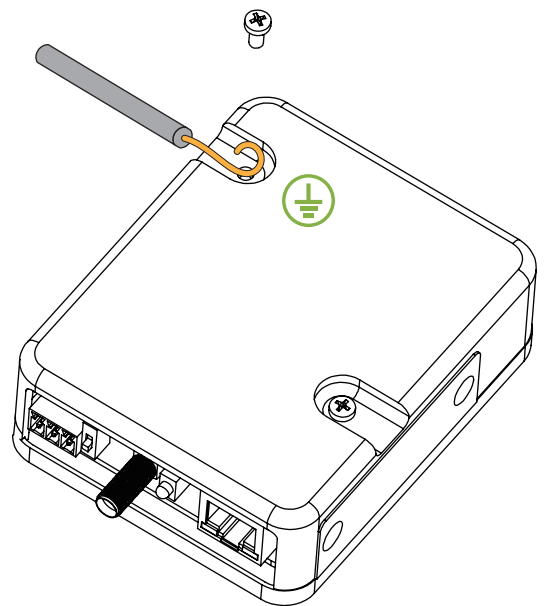
Option 2b: DIN Rail Flat Mounting (in External DAS Box)

- 1 Put the parts in position in the order of a, b, c, and tighten the corresponding screws and standoffs.

Torque to 7 in-lbs using 3/16" socket hex driver.



- 2 To ground the FlexOM Gateway V2 once installed in the DIN rail enclosure, clamp the ground wire into the screw at the position shown in the figure.



- 3 Mount the housing within the DAS box using the DIN rail clip.

Hardware Installation

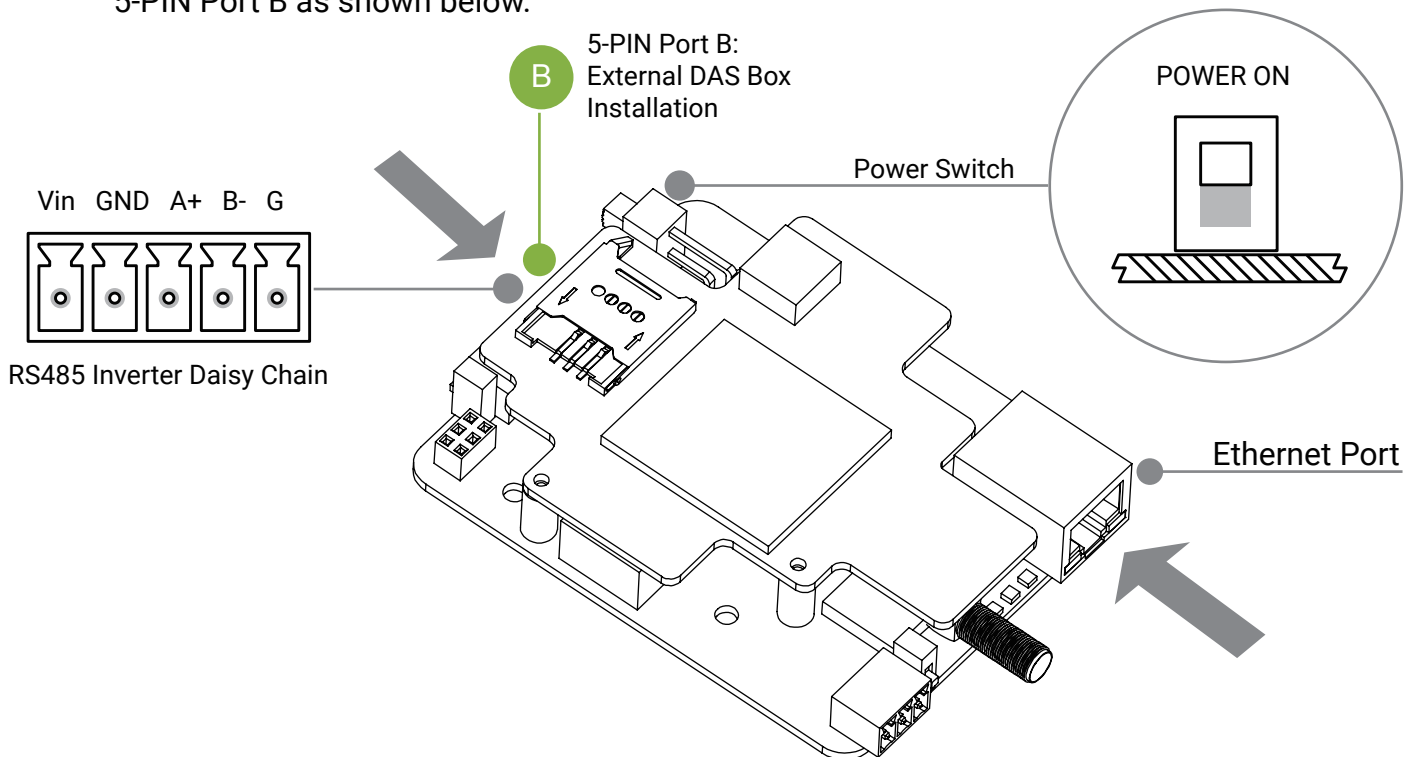
Option 2b: DIN Rail Flat Mounting (in External DAS Box)

4

Connect the RS485 inverter daisy chain to the **FlexOM Gateway V2** card using pins **A+**, **B-**, and **G** in the 5-PIN Connector provided in the accessories kit.

FlexOM Gateway V2 uses a two-wire Modbus RS485 multipoint serial line system. Shielded, twisted pair, 22 AWG, stranded cable such as Belden 3106A is recommended for the daisy chain.

Connect DC power to the **FlexOM Gateway V2** card using pins **Vin** and **GND** in the 5-PIN Connector provided in the accessories kit, then insert the Connector into the 5-PIN Port B as shown below.



NOTE: If connecting to the Internet via Ethernet, follow step 5 below. If connecting via 4G, skip to steps 1-3 on page 26 and return to this page to complete hardware installation by following step 6 below.

5 To connect to the Internet via Ethernet, insert the RJ45 LAN cable into the Ethernet port of the FlexOM Gateway V2.

The LAN connection must be able to access the Internet without port filtering behind the firewall (see note on page 9 regarding LAN firewall ports).

6 Ensure the Gateway Power Switch is set to ON and an LED light is ON and visible before closing the DAS box enclosure.

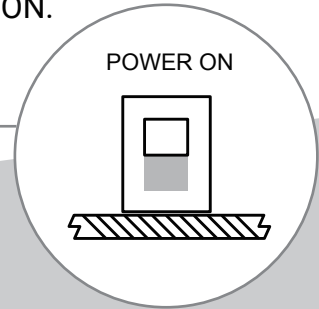
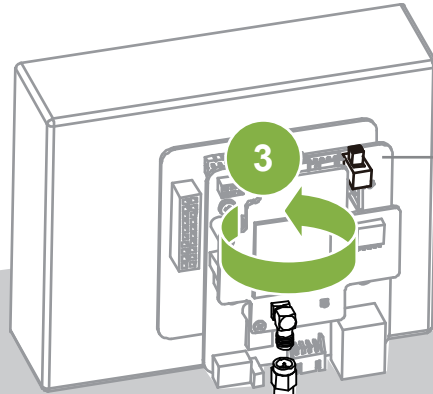
Hardware Installation

4G Cellular Antenna Installation (FlexOM-4G V2 only)

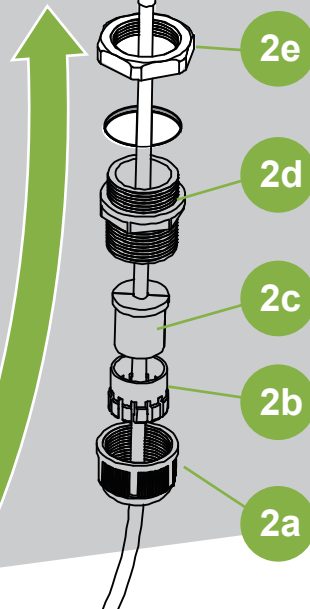


Before closing the cover of inverter wire-box or external DAS box, check again that the gateway's power switch is set to ON.

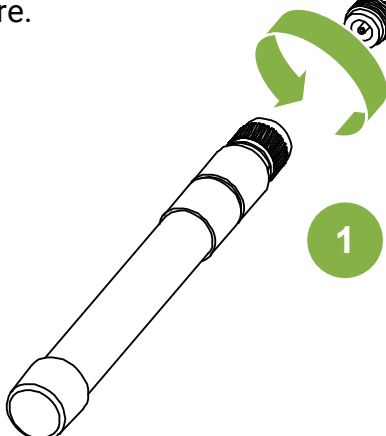
Screw one end of the antenna cable into the cable connector of the gateway (applicable to FlexOM-4G model only).



Pass the SMA end of the coaxial antenna cable through the disassembled cable gland parts in sequence, then tighten the cable glands again.



Mount the 4G antenna as high as possible on a metallic structure.



FlexOM-4G Gateway V2 Accessory Kit includes (in addition to standard accessories):

- (1) IP65 4G cellular antenna
- (1) Antenna coaxial cable (3m)
- (1) Cable gland
- (1) Antenna mounting bracket
- (1) Pre-installed SIM chip

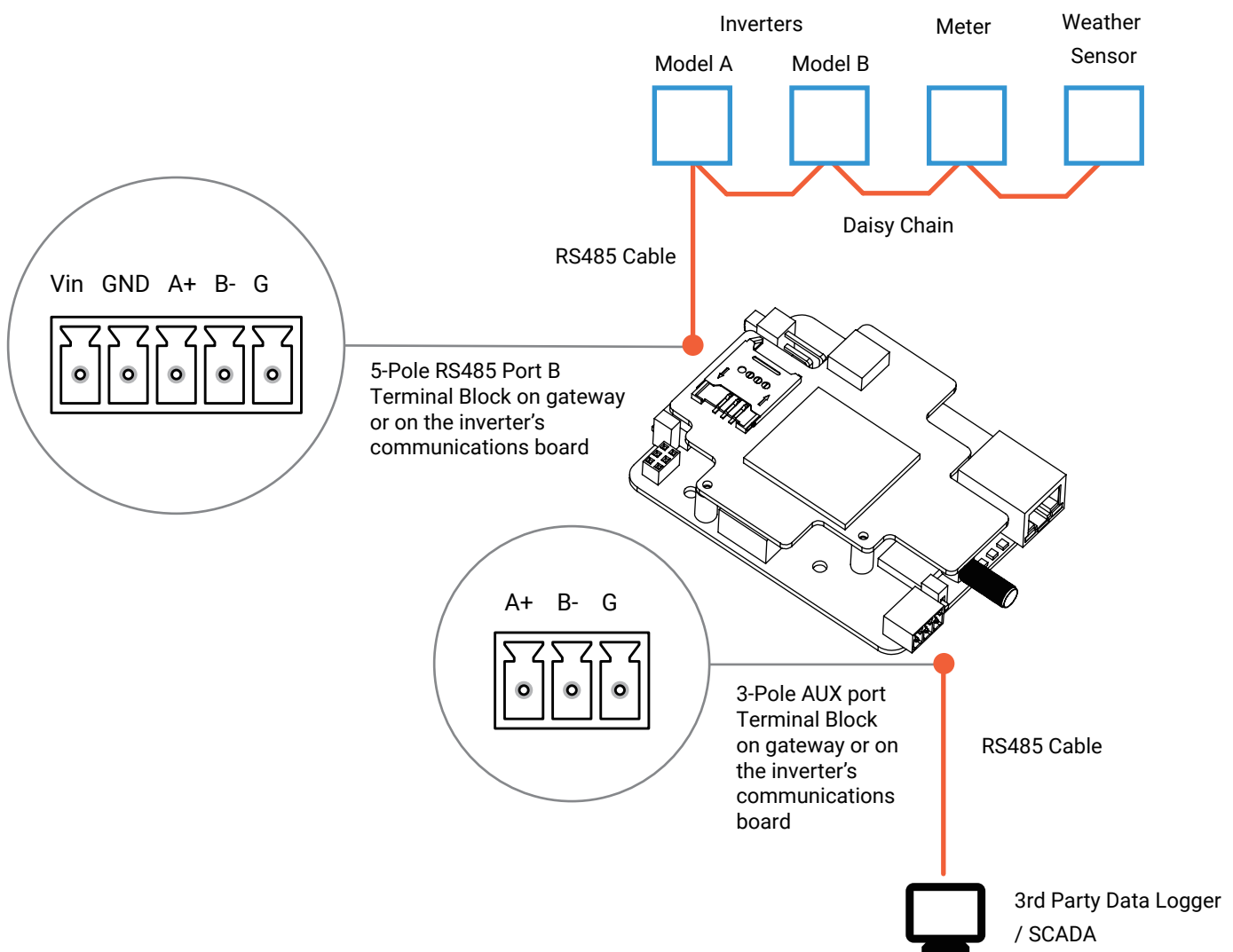
1 Screw the N-Type end of the coaxial antenna cable into the antenna.

Daisy Chain Wiring (All FlexOM V2 Models and Configurations)

FlexOM Gateway V2 uses a two-wire Modbus RS485 multipoint serial line system. Shielded, twisted pair, 22 AWG, stranded cable such as Belden 3106A is recommended for the daisy chain.

Ensure that all devices in the daisy chain are properly connected according to each device's 5-PIN or 3-PIN terminal block as shown in the diagram below.

Note that the daisy chain must be connected to the terminal block in the inverter communication board for internal wire-box installation (see installation option 1) or to the 5-PIN terminal block in the FlexOM Gateway V2 for external DAS box installation (see installation options 2a and 2b).



Using the CPS Connect Pro App

Scan the QR code with a mobile phone to complete the **CPS Connect Pro** app download and installation.

Or search for “**CPS Connect Pro**” in the Apple Store (iOS) or the Google Play Store (Android).

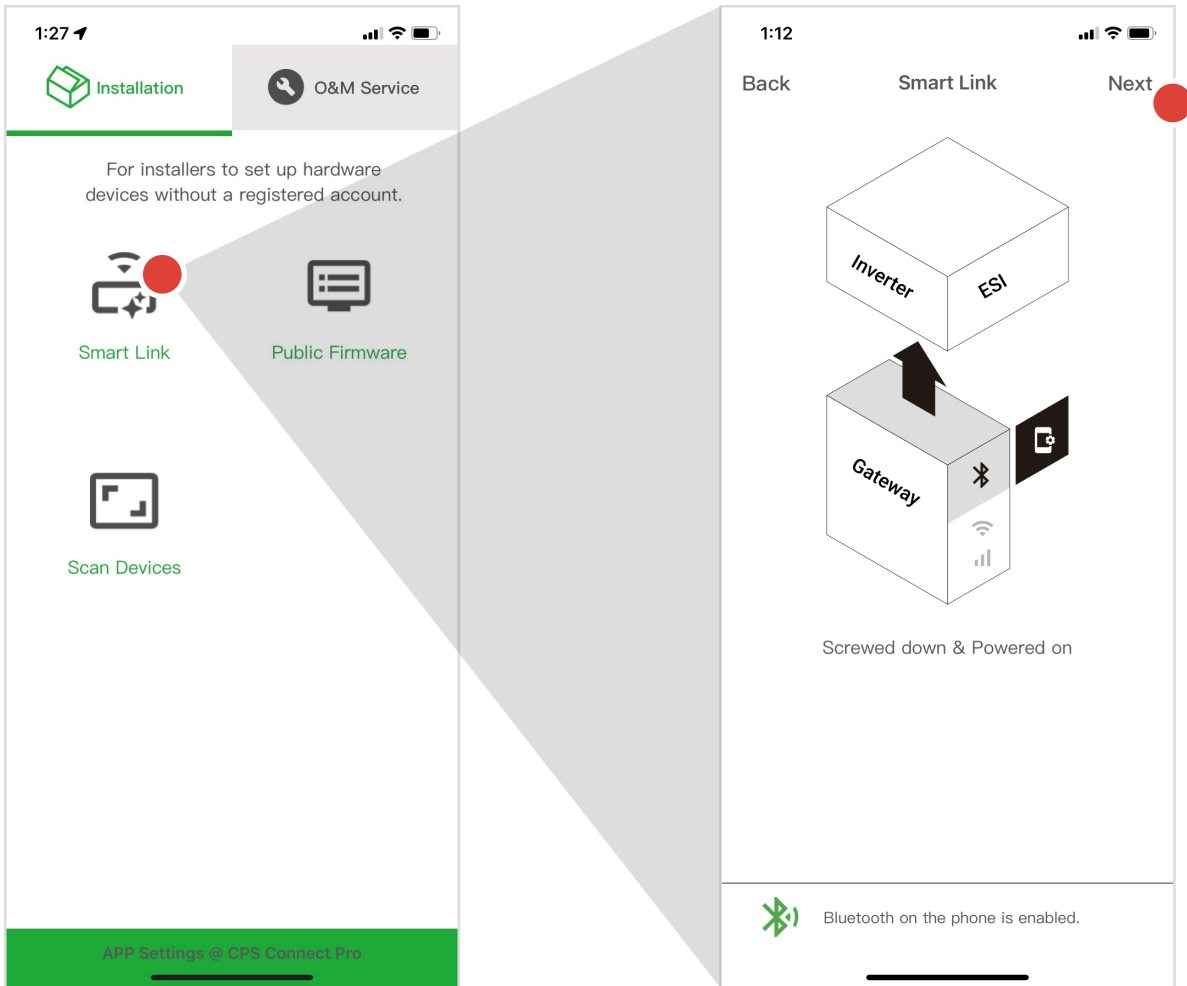


The screenshots shown in the following pages are from the iPhone version of the **CPS Connect Pro** app. The Android user interface may look slightly different but the setup procedure will be the same as shown.



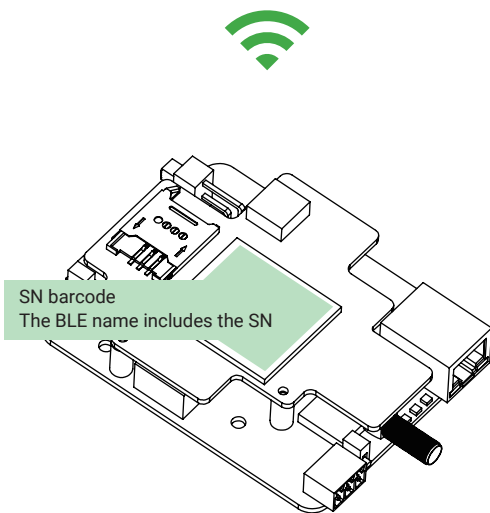
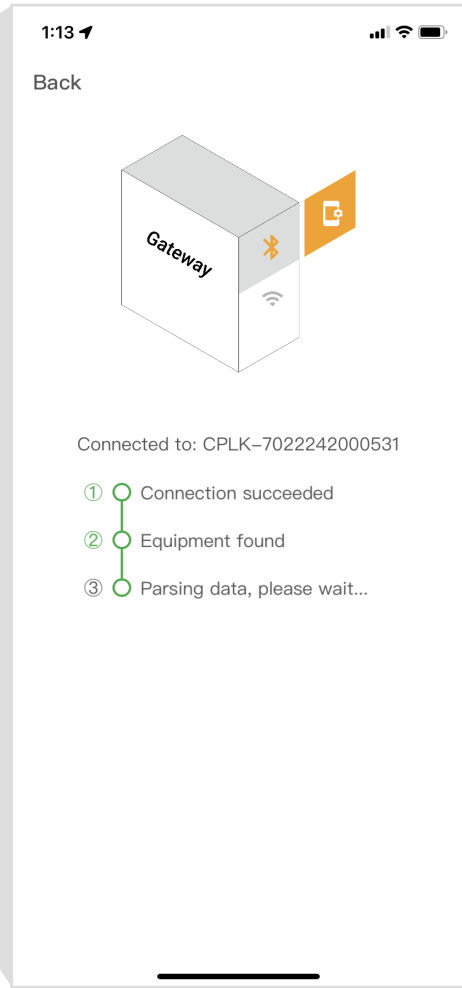
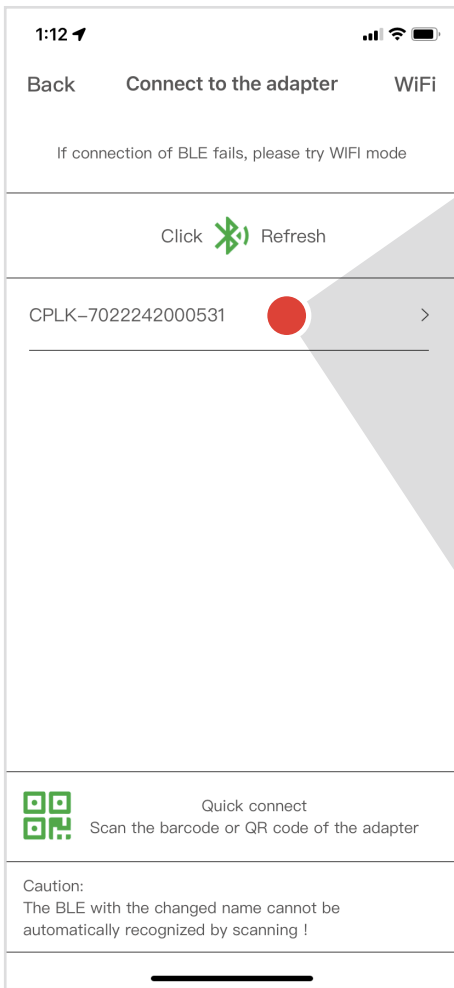
Check the Internet Connection

NOTE: No WiFi dongle is required to interface or activate the FlexOM Gateway V2. The Gateway will connect to the Internet via Ethernet or 4G, and the Gateway will connect to the CPS Connect Pro app via Bluetooth.



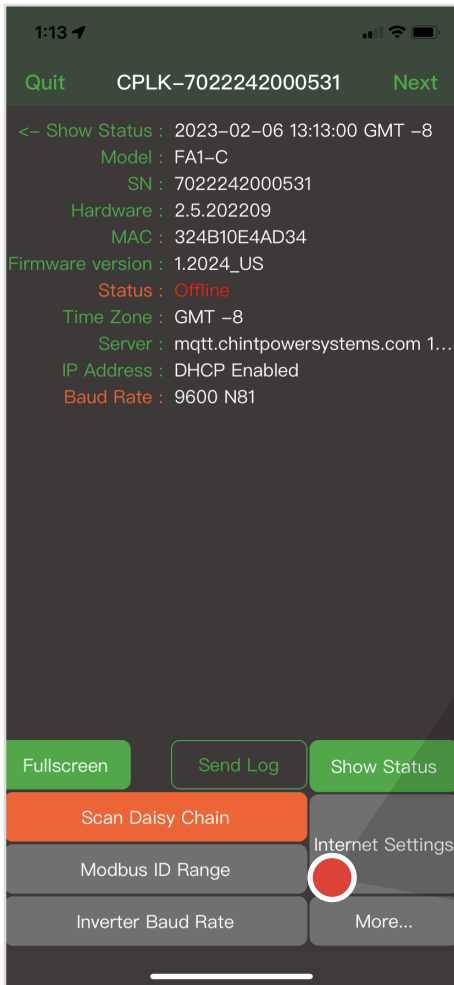
Make sure your phone can connect to the Internet when you run the app for the first time. The CPS Connect Pro app needs to sync important data from the cloud.

Click "smart link" and the app will prompt you to obtain some phone permissions. If there is no abnormal prompt, click "next" in the upper-right corner to proceed.



During the process of connecting and entering the gateway configuration interface, the **CPS Connect Pro** app will prompt detailed information in case of any abnormality. This feature makes it easy for users to diagnose problems.

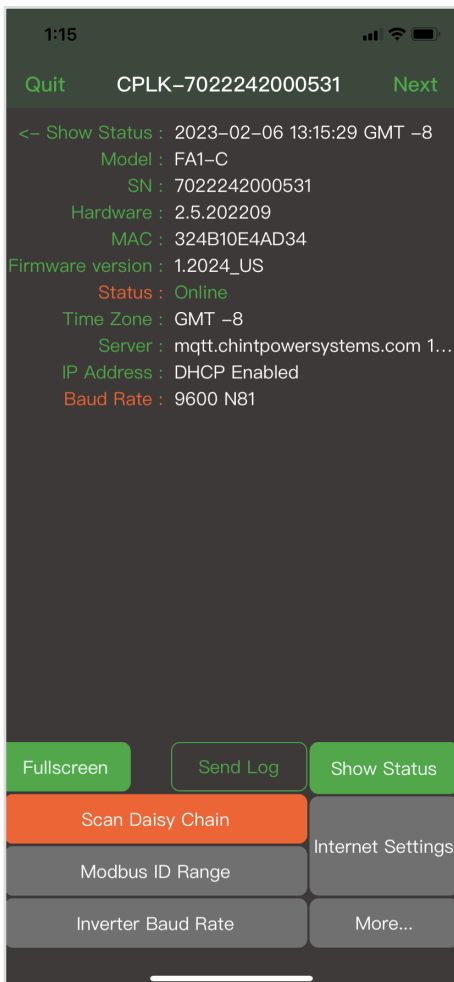
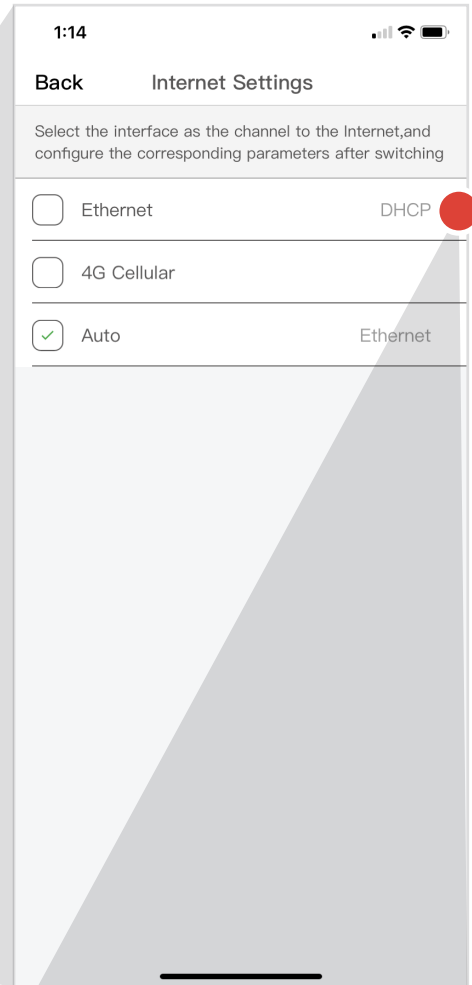
The gateway SN is included in the BLE signal name, and the app will list the scanned signals. Select the SN consistent with the target gateway label and click to enter.



Connecting the gateway to the Internet is the most important step.

During the activation process, once the gateway is powered on it will attempt to connect to the Internet via 4G by default. If this attempt fails, it will automatically attempt to connect via Ethernet.

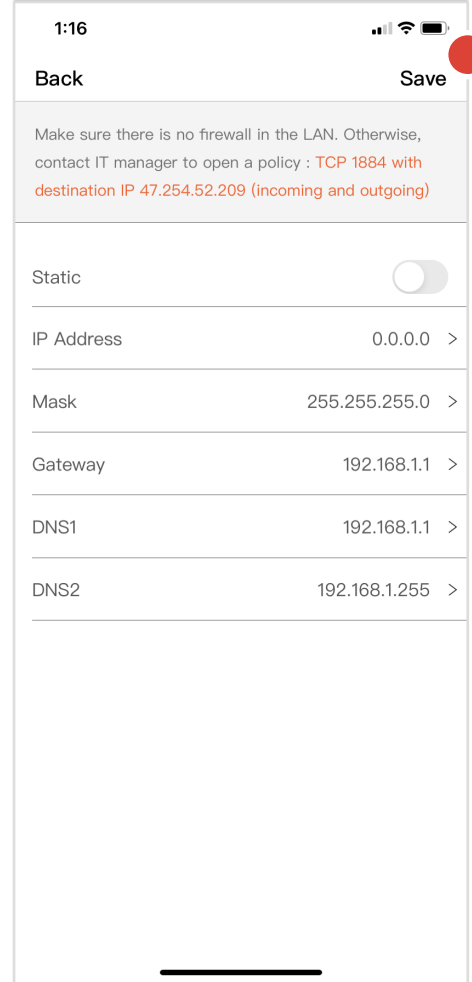
The gateway may also be manually configured to connect via Ethernet. To switch from a 4G to an Ethernet connection, click on "Internet Settings" and select "Ethernet."



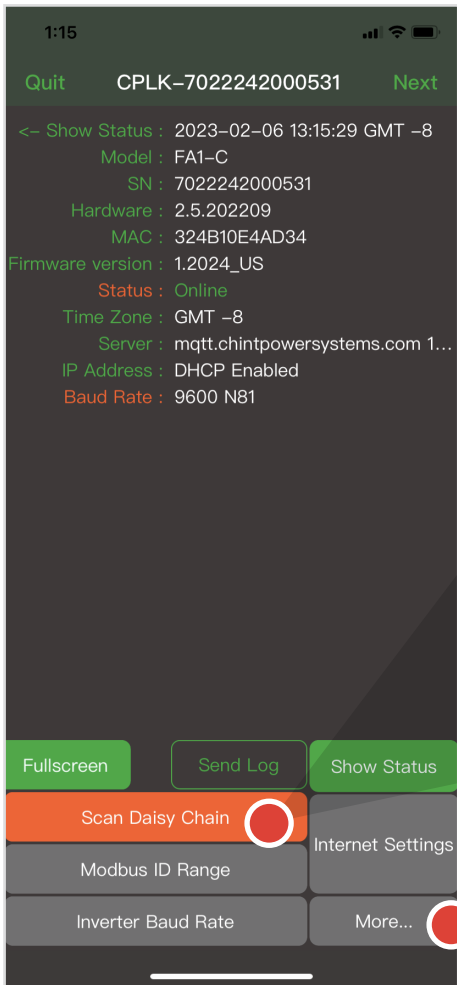
Enter the correct Ethernet IP information and click "Save" in the upper right corner.

If the Status is displayed as "Online" the gateway is connected to the target server.

When the gateway status becomes "Online" the gateway will automatically create related objects on the portal, and the administrator can remotely set the required parameters.



Modbus Device Settings



The gateway is configured with a default modbus ID range.

Click "Scan Daisy Chain" and the gateway will scan the daisy chain.

After scanning, a device list will appear with the default ID.

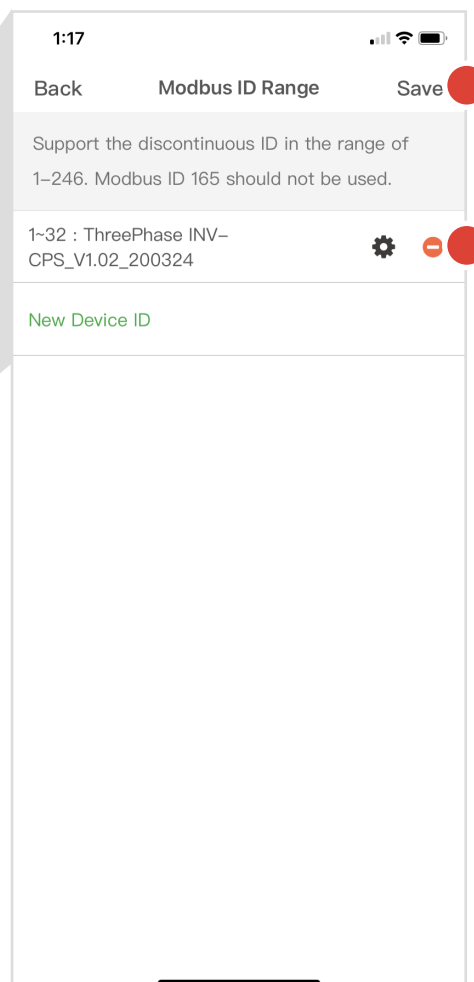
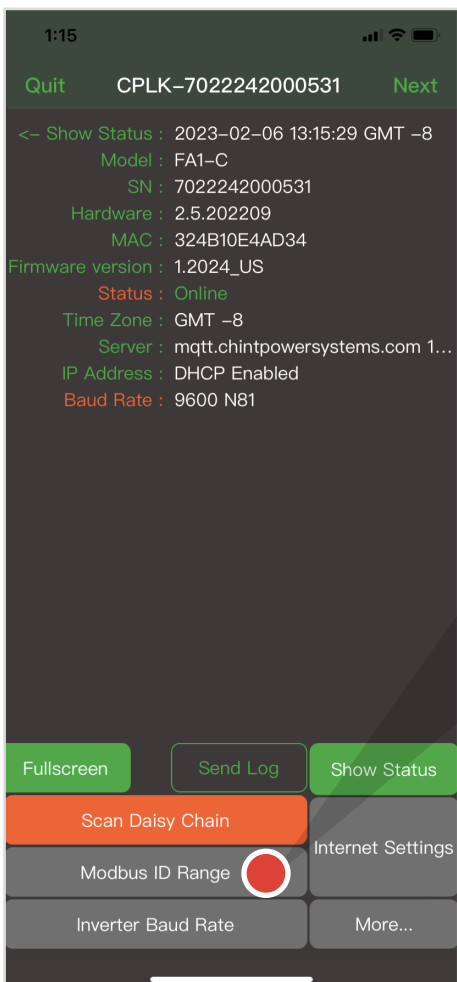
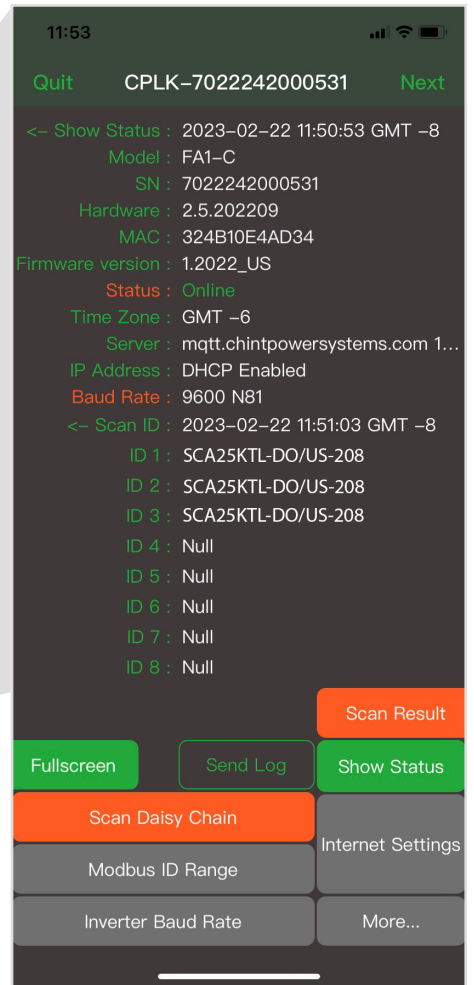
The user can either rescan the target IDs individually in the list, or scan the daisy chain in full.

By clicking "Modbus ID Range" the user can manually edit the modbus ID range.

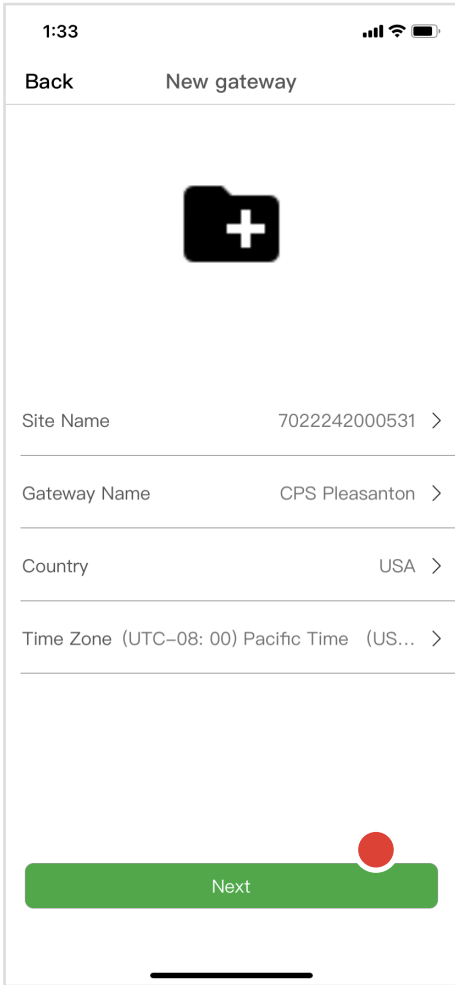
The existing modbus ID must be deleted by clicking the minus-sign button before a new ID can be assigned.

A unique Modbus ID must be assigned to each inverter.

Once all Modbus devices have been found and identified, click "Save" in the upper right corner.



Completing Installation



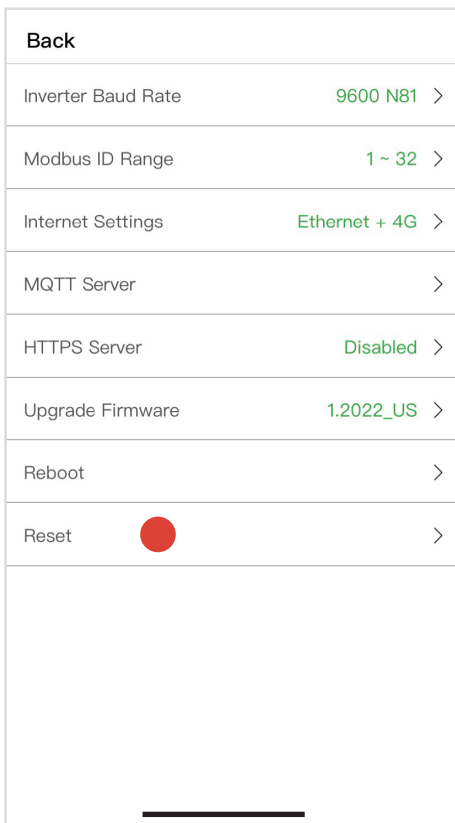
After configuring Modbus settings, the site name, gateway name, country, and time zone may all be specified within the **CPS Connect Pro** app.

To finalize all settings and complete installation, click "Next." A new window with the message "Installation Success" will appear.

Once the **FlexOM Gateway V2** or **FlexOM-4G Gateway V2** is installed and activated, it is recommended to contact the CPS Hotline to request confirmation that the gateway and attached RTU devices are populated in the CPS Monitoring Portal.

CPS Hotline (choose option #2): +1 855-584-7168

Reset / Restart



To restart or reset the **FlexOM Gateway V2** and clear all current setting parameters, select "More.." from the main menu. The Settings menu shown on the left will appear.

Clicking "Reset" will clear all the current **FlexOM Gateway V2** setting parameters and restore the factory settings.

Clicking "Reboot", will automatically power off and restart the **FlexOM Gateway V2** without changing the current setting parameters.

CPS Warranty Policy

The warranty policy of this product is specified in the contract; otherwise, the standard warranty is 2 years.

For service, Chint Power Systems America will provide local support.

For warranty terms, please refer to the CPS America accessories warranty policy in place at time of purchase.

If your product requires troubleshooting or warranty service, contact your installer or dealer. If you are unable to contact your installer or dealer, or the installer or dealer is unable to provide service, contact the **CPS America hotline: +1 855-584-7168**



Service Hotline: 855-584-7168

CHINT POWER SYSTEMS AMERICA CO., LTD.

Email: AmericaSales@chintpower.com

Website: www.chintpowersystems.com