

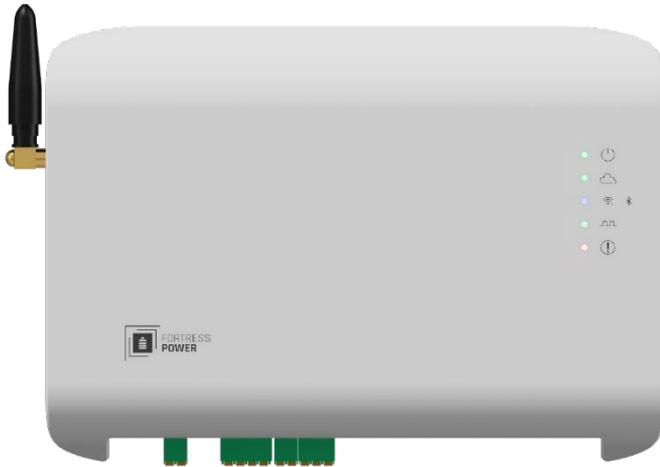


FORTRESS
POWER
Secure your energy

Guardian

IOT GATEWAY & APP

QUICK INSTALLATION MANUAL



Important: Verify the system configuration before installing.
A proper system design is required for warranty purposes.
Improper system configuration will void the warranty.

**Information subject to change without notice.
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GM-V2**



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1. CHANGE LOG

VERSION	CHANGES
GM-V2	<ol style="list-style-type: none">1. Manual restructuring.2. Addition of images for descriptive steps.3. Commissioning step process when using with a VPP program



2. INTRODUCTION

2.1 LEGAL NOTICE

All information in this document is subject to copyright and other intellectual property rights of Fortress Power, LLC. and its licensors. This material may not be modified, reproduced or copied, in whole or in part, without the prior written permission of Fortress Power, LLC. and its licensors. Additional information is available upon request. All other trademarks contained in this document are the property of their respective owners and their use herein does not imply sponsorship or endorsement of their products or services. The unauthorized use of any trademark displayed in this document or on the product is strictly prohibited.

2.2 ABOUT FORTRESS POWER

Our mission is to provide compact, user-friendly, and affordable energy storage solutions using the latest technology for all homes and businesses. Fortress solar energy storage batteries can easily integrate with new and existing PV systems and work with a wide range of existing inverter and charge controller manufacturers for ease in system design.

2.3 ABOUT THE GUARDIAN

The Guardian hub is a monitoring and controls device for your Fortress eFlex and eVault MAX battery products. It uploads your Fortress batteries' data to the cloud over Wi-Fi or Ethernet connection. You can view key information on your battery system in the Guardian companion app such as charge percentage, time until full charge, voltage, current, and more. Additionally, if you are enrolling in a VPP program with your local utility the Guardian is able to work with your Fortress Power Envy inverter to meet compliance requirements. Check with your local utility and/or create a support ticket for further details.

2.4 CONTACT INFORMATION

Corporate Headquarter Address: 2010 Cabot Blvd West, STE L
Langhorne, PA 19047
United States

Website: www.fortresspower.com

Support: www.fortresspower.com/support

Phone: US: (877) 497-6937
LATAM: (215) 710-8960

2.5 WARRANTY SUPPORT

Unless otherwise submitting a Fortress warranty through the Guardian hub, please submit your warranty here:

<https://fortresspower.com/warranty>

Beyond that, please find additional resources within our Support Portal

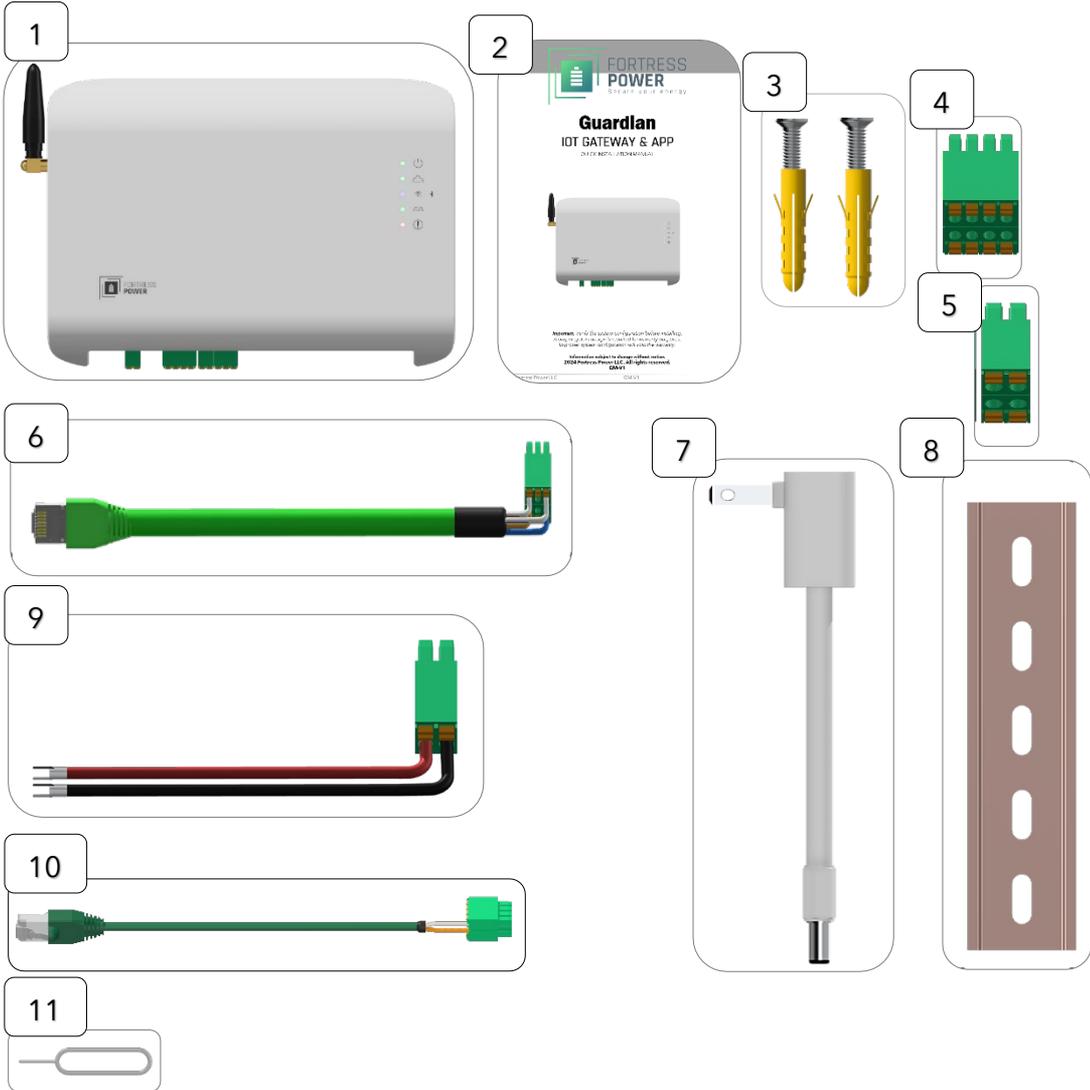
<https://support.fortresspower.com/portal/en/kb>

- Create a support ticket.
- Inverter Guides
- Product Manuals
- Firmware Updates
- Warranty Submittal
- System Design
- Application Notes
- Scheduled Meetings
- Accessories

Note: Sign into the Support Portal to access all features



3. UNBOXING



PART	DESCRIPTION	QTY
1	Guardian Monitoring Hub	1
2	Quick Installation Manual	2
3	Wall Plug and Screw	2 each
4	4P*2 Terminal Plug	1
5	2p*2 Terminal Plug	1
6	Guardian/Battery Communication Cable	1
7	120V AC to 24V DC Power Supply	1
8	Din Rail	1
9	48V DC Power Supply Cable	1
10	Guardian-Envy Cable	1
11	Guardian Reset Pin	1



4. SPECIFICATIONS

4.2 PHYSICAL FEATURES

- [IP23 Rated](#)
- Two power supply sources, one is a AC/DC adapter wall socket, the other a DC input from your battery system.
- Connects to internet over home WI-FI connection or an ethernet cable.
- CAN bus communication port for your Fortress battery products.
- Reset Button.
- Status Lights (details in physical specifications).
-

4.3 DATASHEET

4.3.1 ELECTRICAL

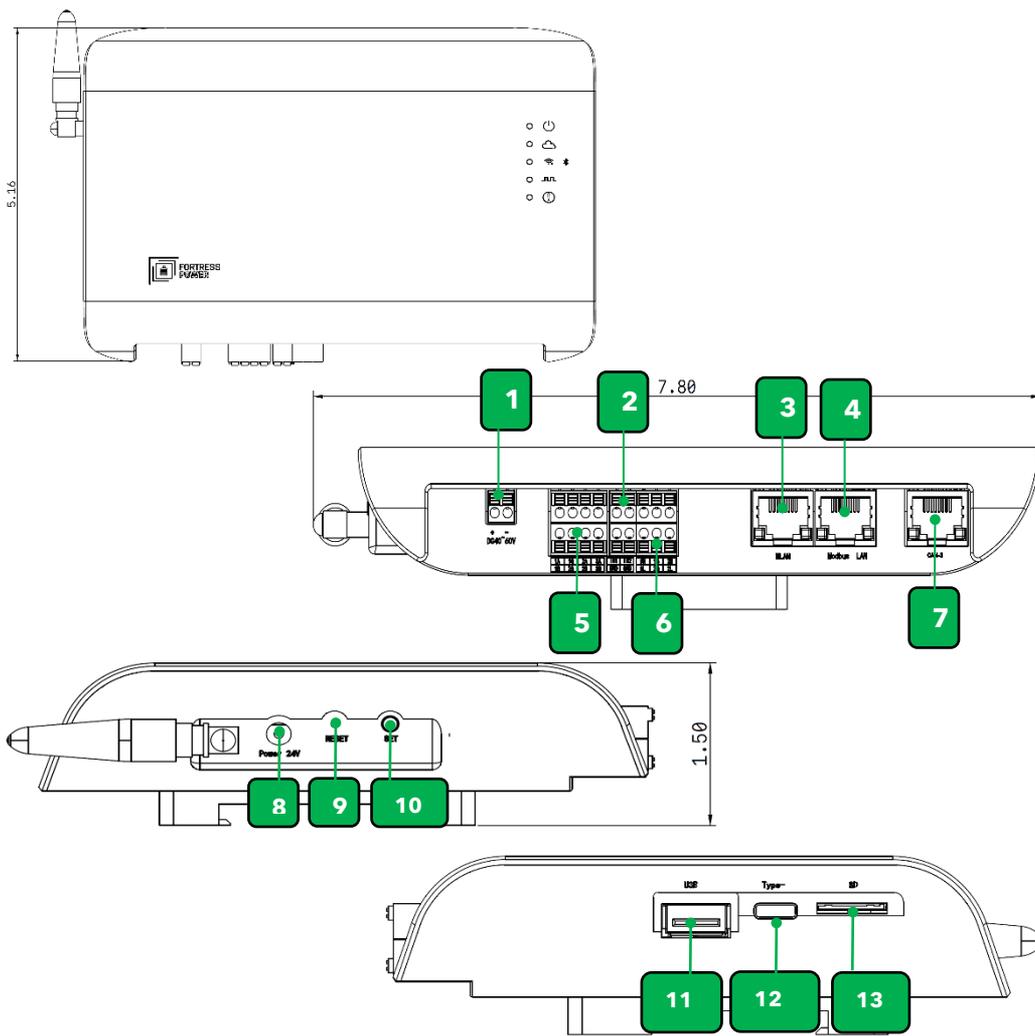
POWER CONSUMPTION	5W - 24V@1A power supply.
AC/DC ADAPTER	120V/5A 24V DC 5.5mm
SUPPORTED COMMUNICATION TYPES	1x MODBUS/TCP, 2x MOBUS/RTU, 2xCAN 2.0
OPERATION FREQUENCY	2.4GHz, 5GHZ
ANTENNA	SMA standard connector
ENVIRONMENT	Indoor or inside a Junction box

4.3.2 PHYSICAL

WEIGHT (DEVICE ONLY)	0.8 lbs. (0.4kg)
DIMENSIONS (DEVICE ONLY) (W X H X D)	7.25" x 6" x 1.25"
SHIPPING PACKAGE DIMENSIONS	14" x 8" x 5"
SHIPPING PACKAGE WEIGHT	3.6 lbs.
HOUSING/	IP23 /
MOUNTING SYSTEM	Din Rail Mount
STATUS DISPLAY LEDS	From top to bottom: Power Cloud connection, Bluetooth or Wi-Fi connection, Serial communication with battery, Error signal



4.4 DIMENSIONS AND PORT DEFINITION



AREA	DESCRIPTION
1	48v Battery Connection port
2	DI port
3	Internet Ethernet Connection port
4	Modbus LAN Port
5	RS485 PORT/GUARDIAN-ENVY INV485 PORT
6	CAN BUS Battery Connection Port
7	Reserved Use, CAN port
8	AC to DC power supply connection
9	Reset Button
10	SET Button
11	USB port
12	TYPCE-C port
13	SD card port



5. INSTALLATION



If using in conjunction with the Fortress Power Envy inverters, particularly for VPP/Energy Broker programs, please commission the inverter first by plugging in the dongle and update the inverter firmware. Then you may proceed with the next step that pertains to Guardian installation. Failure to follow these commissioning steps may result in reduced performance from the Envy Inverter.

5.2 DOWNLOAD THE APP

Scan the QR CODE



OR Click on the link below

Commission the Fortress Guardian hub using the Fortress Power Guardian App.

Apple:

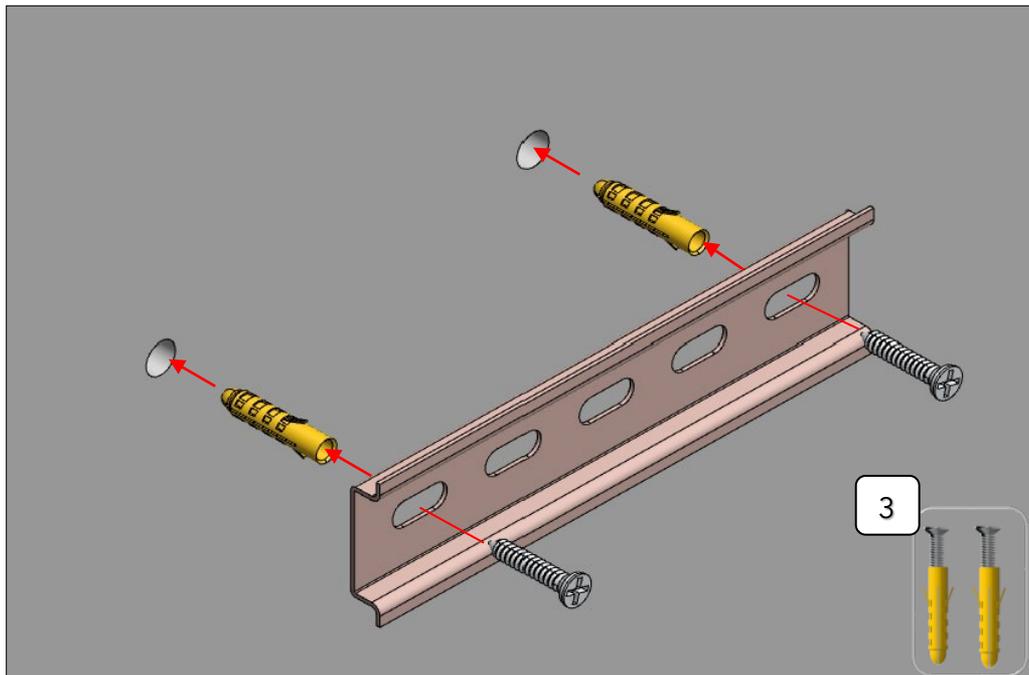
<https://apps.apple.com/us/app/fortress-power-guardian/id1632364415>

Google Playstore:

<https://play.google.com/store/apps/details?id=com.app.fortresspower>



5.3 MOUNTING THE GUARDIAN



The Guardian is Din Rail mountable. Mount the Guardian to a wall using the included Din Rail or by using the included Din Rail in the FlexTower or DuraRack. If the installation is outdoors, you must install the Guardian inside a watertight junction box.





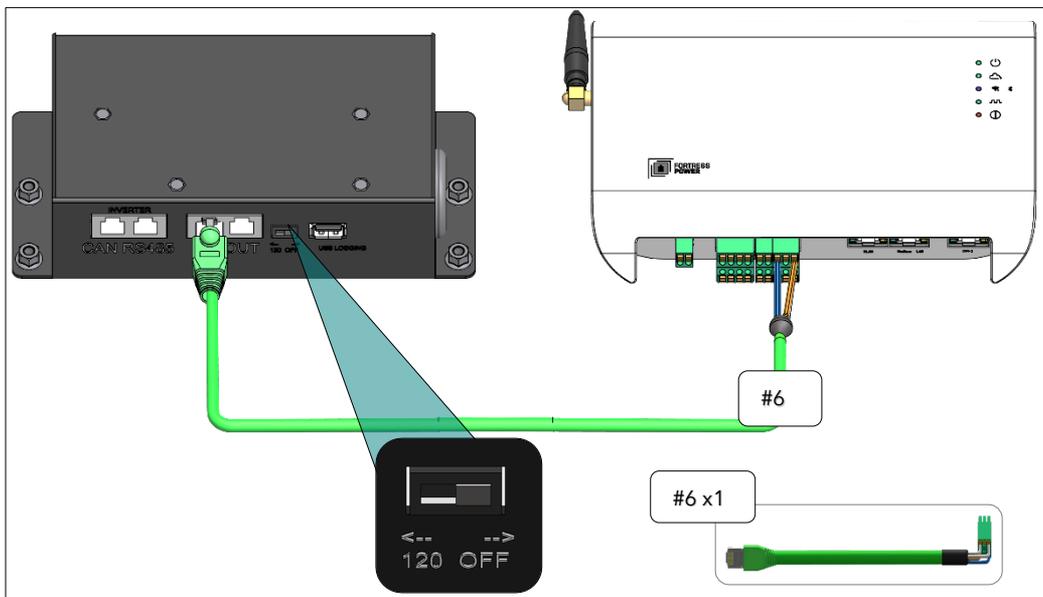
5.4 WIRING THE HUB

5.4.1 COMMUNICATION WITH BATTERIES

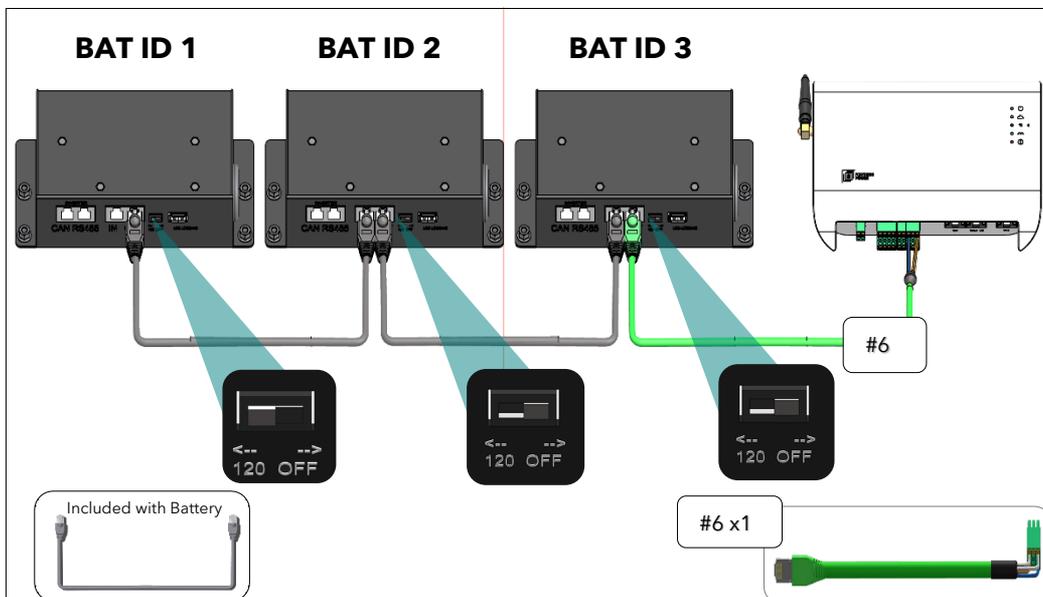
5.4.1.1 eVAULT MAX AND GUARDIAN CONNECTION



Note that for the eVault MAX battery you must ensure the dip switch on the last battery of the entire storage bank is in the "Off" position as the Guardian will act as the terminating resistance for communication. In addition, "In" and "Out" ports are bidirectional.



5.4.2 eVAULT MAX PARALLELED CONFIGURATION AND GUARDIAN CONNECTION

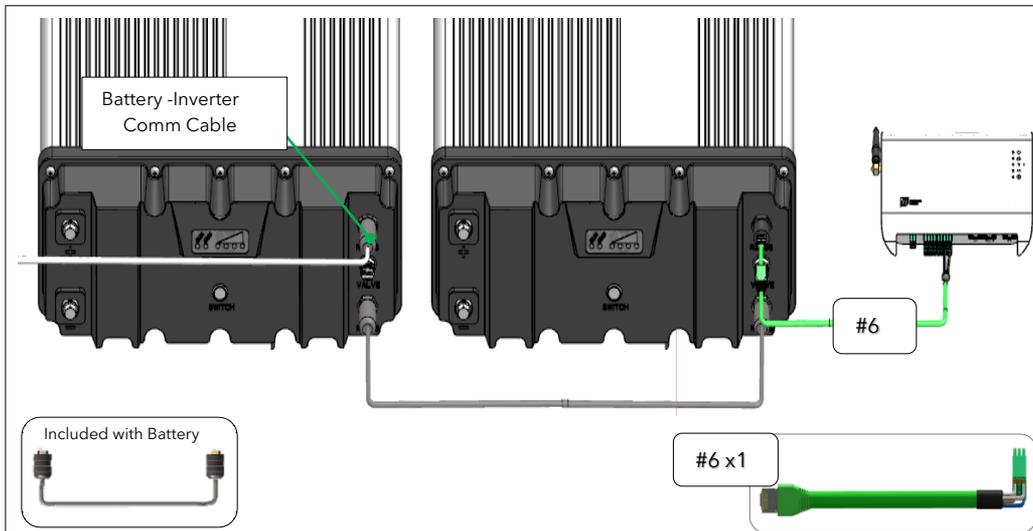




5.4.2.1 eFLEX AND GUARDIAN CONNECTION



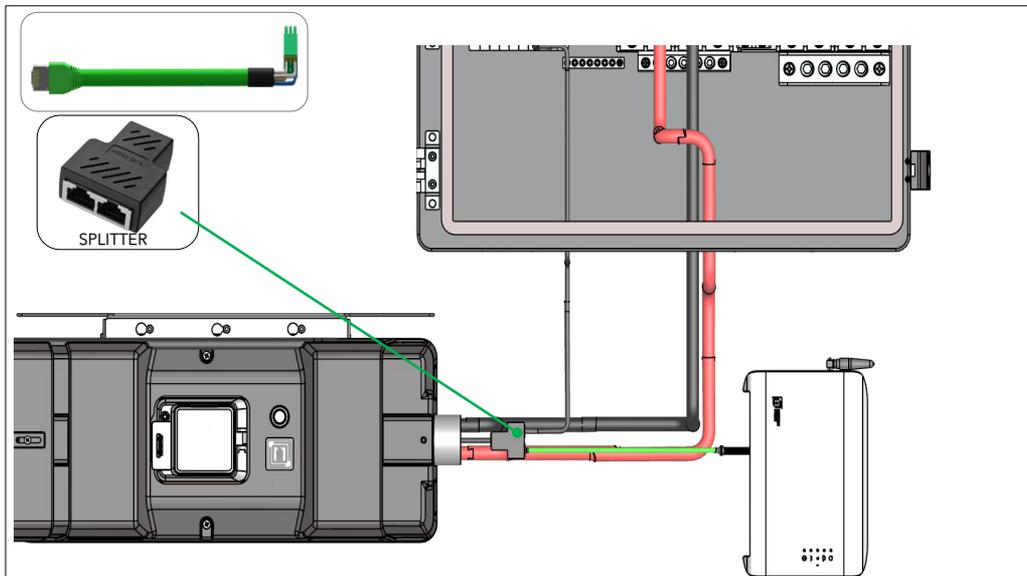
Remove the terminator Rj45 plug on the last battery's' CAN/R485 port and install the Battery- Guardian Green communication cable.



5.4.2.2 eFLEX MAX AND GUARDIAN CONNECTION



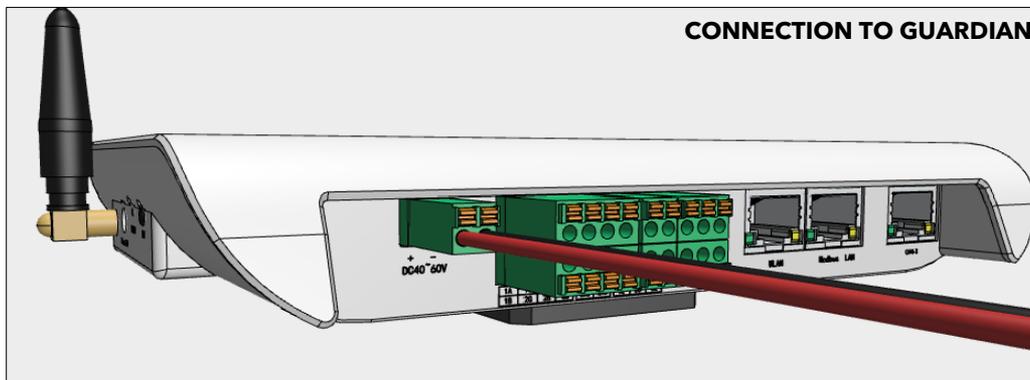
Connect the Gurdian battery-Guardian green cable to one of the common ports of the Splitter included with the eFlex MAX





5.4.3 DC POWER TO THE GUARDIAN FROM BATTERIES.

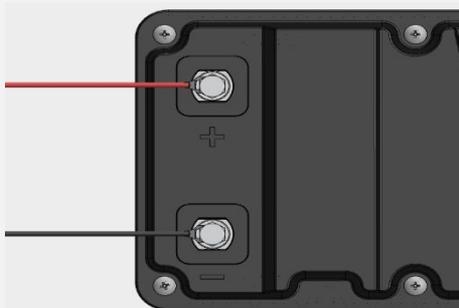
1. If you plan to power the Guardian with battery power, please use the included DC power supply cable. Please be sure to double-check the polarity of the DC supply cable before plugging into the Guardian. Land on the other side to the corresponding battery terminals.



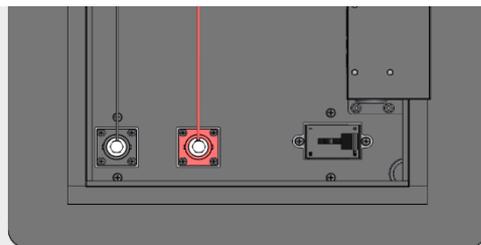
CONNECTION TO BATTERY

DC CONNECTION AREA

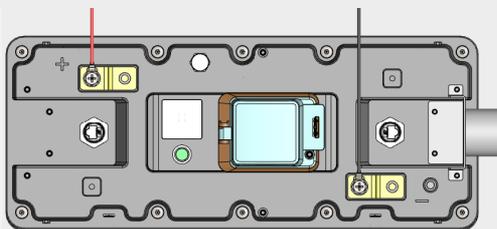
EFLEX OR COMMON BUSBAR (preferred)



EVault MAX OR COMMON BUSBAR (preferred)



EFLEX MAX OR COMMON BUSBAR (preferred)

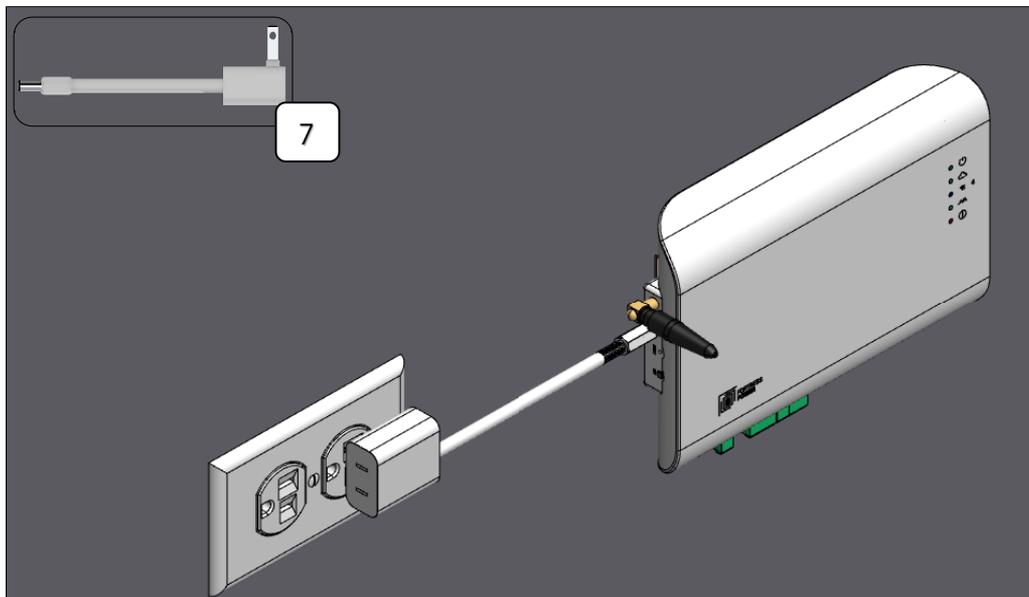




5.4.4 AC POWER SUPPLY TO THE GUARDIAN 120V AC WALL OUTLET RECEPTACLE (OPTIONAL)



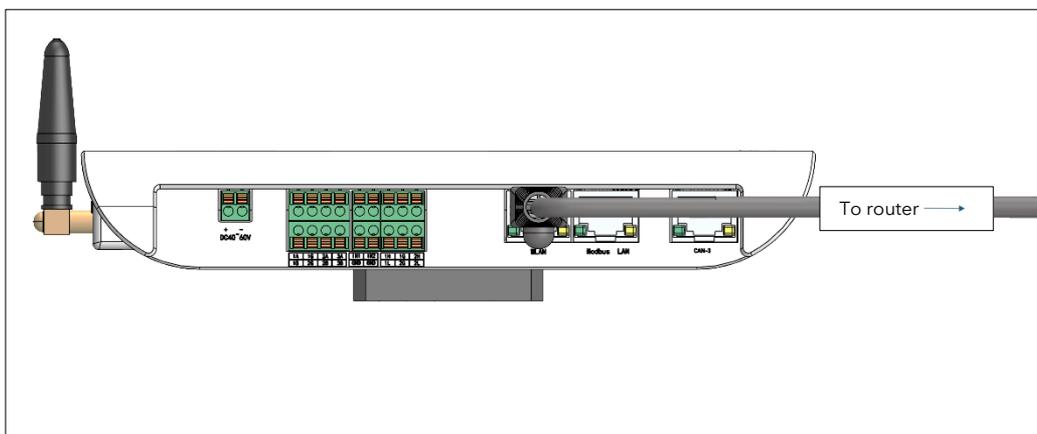
Do not connect both AC wall plug and DC Battery power cable together. Choose one option. We recommend using the DC battery cable for Off-grid. Use the Ac wall plug for Grid tied or Virtual Power Plant (VPP)/Energy Broker Programs.



Connect the AC plug to the Guardian and then connect to the wall plug. Guardian will turn on.

5.4.5 WIRING INTERNET CABLE DIRECTLY TO THE GUARDIAN (OPTIONAL)

If you wish to hardwire your internet to the Guardian, use a **traditional rj45 cable** and connect one end to the **Internet/WLAN** port and connect the other end to your **router**.

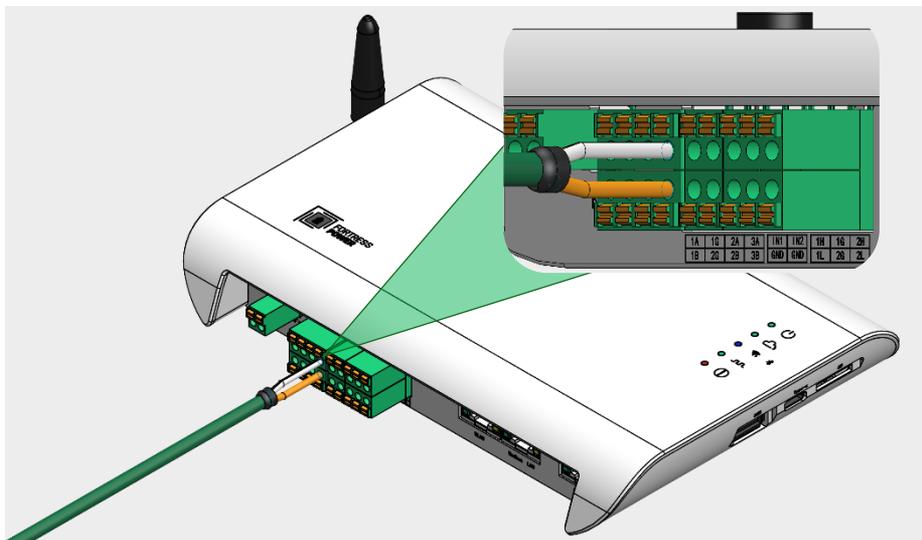




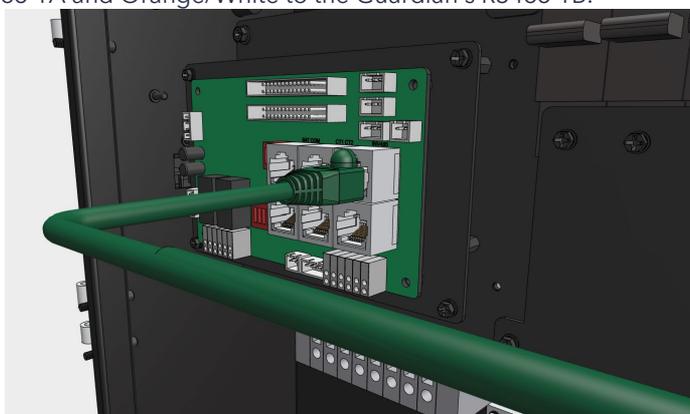
6. VPP /ENERGY BROKER PROGRAMS.



Only allowed with Fortress Power Envy inverters. Fortress Power VPP programs and Energy Broker services only qualify for certain regions and programs such as WattSmart, LUMA, CT



When setting up a Guardian with an Envy inverter, Please use the two row/four column plug to wire into the Guardian connection port. For reference, the cable pin-out is Orange to the Guardian's RS485 1A and Orange/White to the Guardian's RS485 1B.



After you have finished wiring this step, please plug the other end of the Envy/Guardian cable into your INV485 port of the Envy inverter. Please go ahead and power on the Guardian and proceed with commissioning through the Guardian

PLEASE CONTACT TECHNICAL SUPPORT TO VERIFY CONNECTION TO THE ENVY INVERTER AFTER YOU COMMISSION THE GUARDIAN. VPP LINE: (215-710-8966)



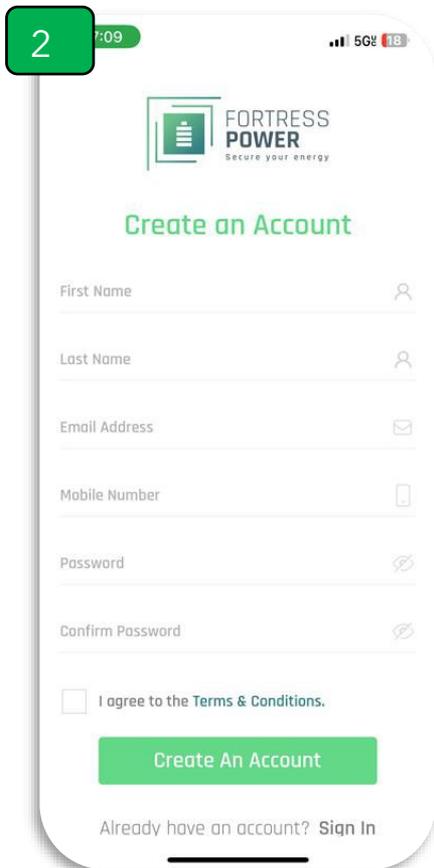
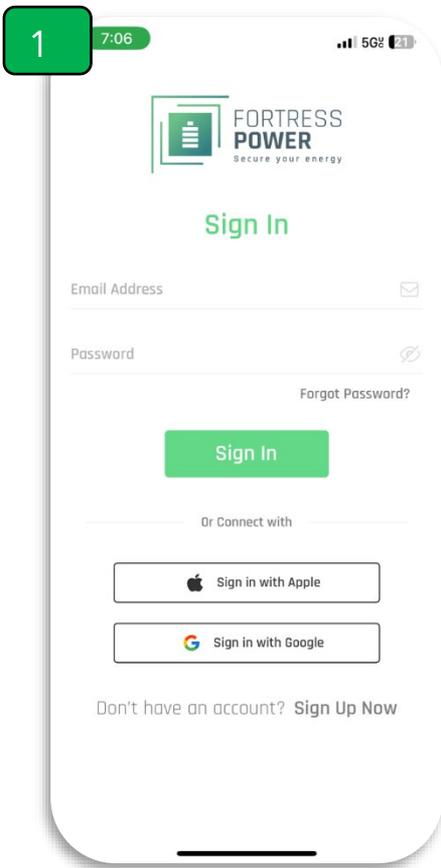
7.COMMISSIONING

All the lights will come on when you first power on the Guardian. Wait for about 10 seconds.

Begin registering/Sign in on the app via email, Google, or Apple. The Wi-Fi light (📶) will blink quickly (about 2 blinks every second). Make sure your Guardian is located close to your Wi-Fi router for a strong signal.

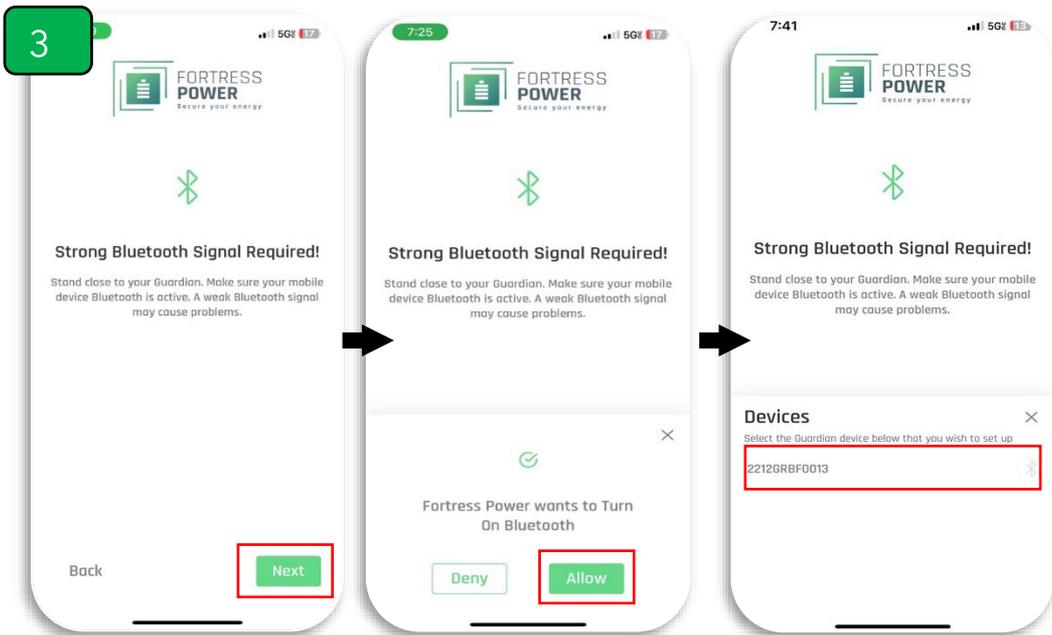
7.2 STEPS TO CONFIGURING THE GUARDIAN

1. A cell phone app is used (with Bluetooth) to set up internet access. Hardwired Ethernet may be used if Wi-Fi is not available. Note that it can take up to 10 minutes for the Guardian to validate the Ethernet connection when it is first plugged in.
2. Login or Signup for the Guardian App by entering new account credentials or authenticating with a provider such as Google or Apple.

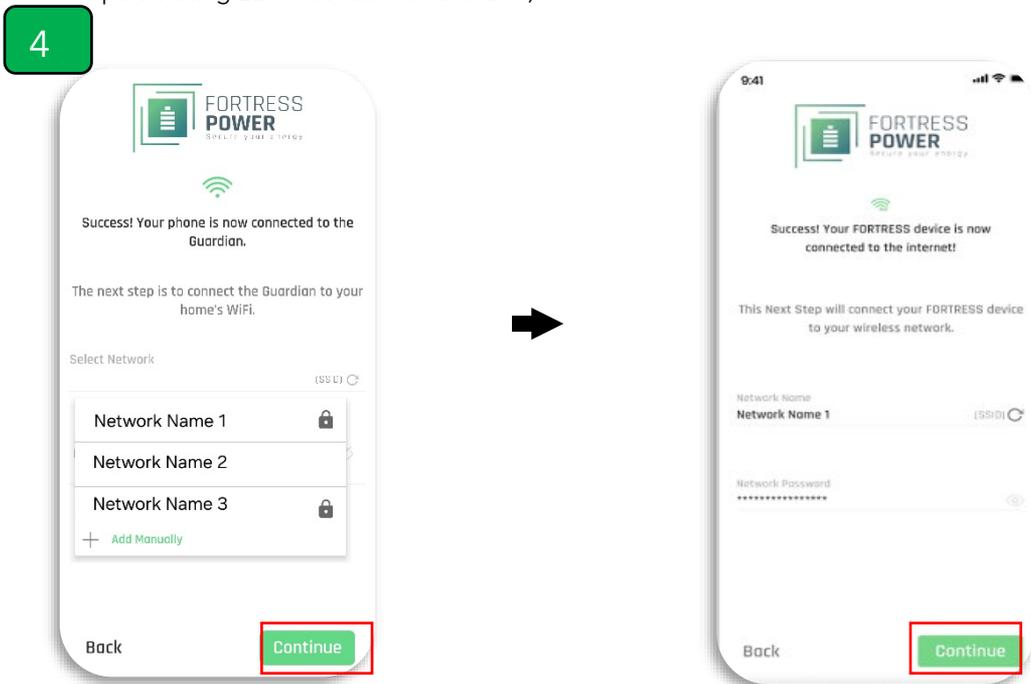




3. Connect your phone to the Guardian hub over Bluetooth connection. Select the Guardian's serial number which can also be found on the back of the device.

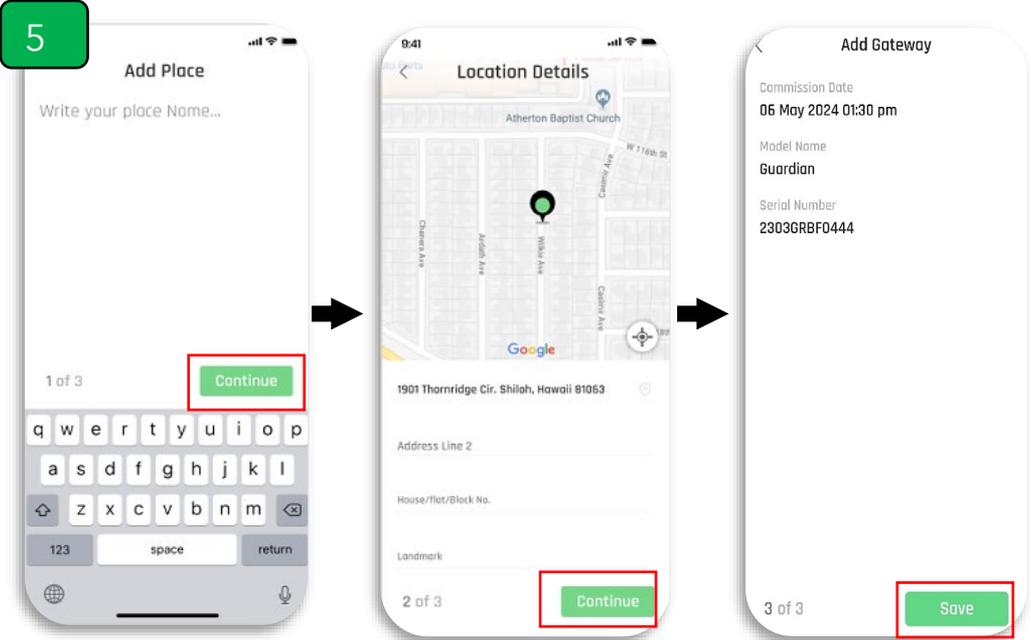


4. Connect your Guardian hub to the internet over your home Wi-Fi (You can skip this part if using Ethernet cable connection):

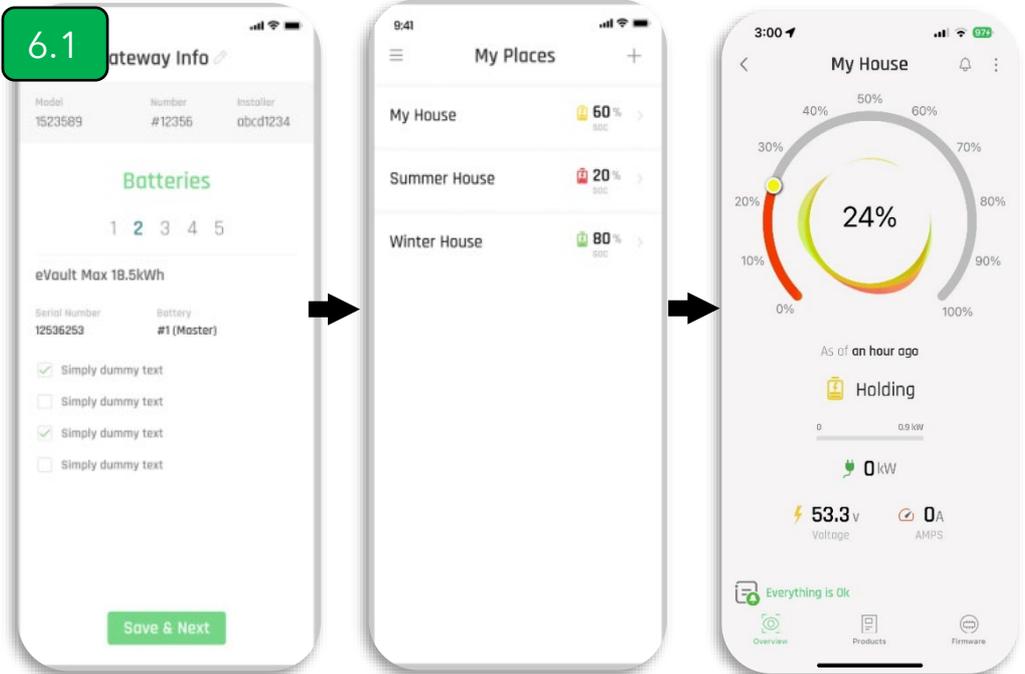




- Name your Fortress system and provide your address. Configure your Guardian Hub's information in the app. It should populate automatically:



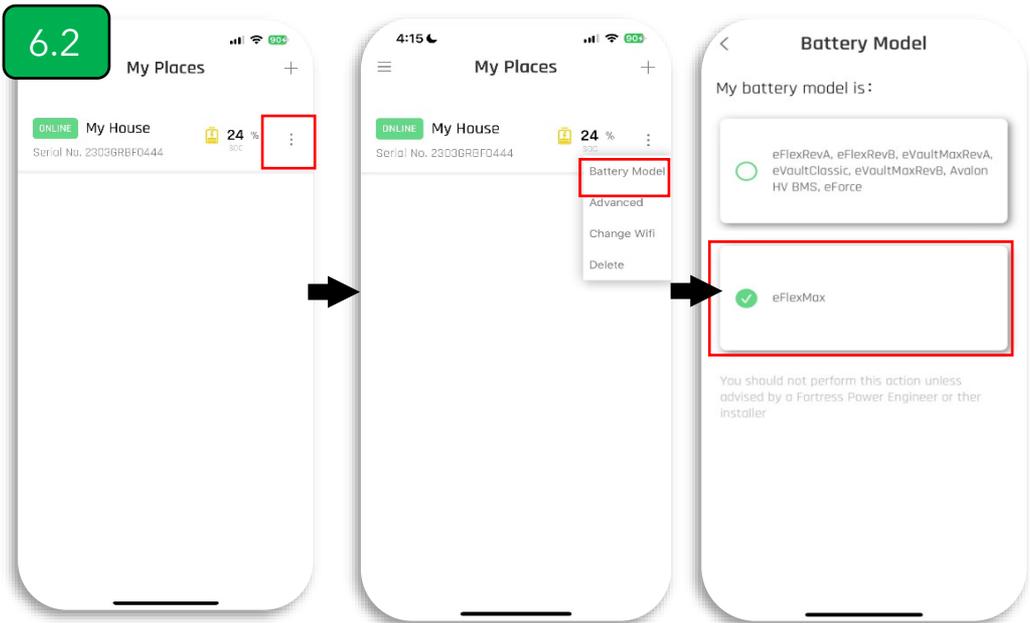
- Scan for batteries. **Skip to step 6.2 when installing eFlex MAX.** After submitting your battery information, you should now be able to see your newly created place. If



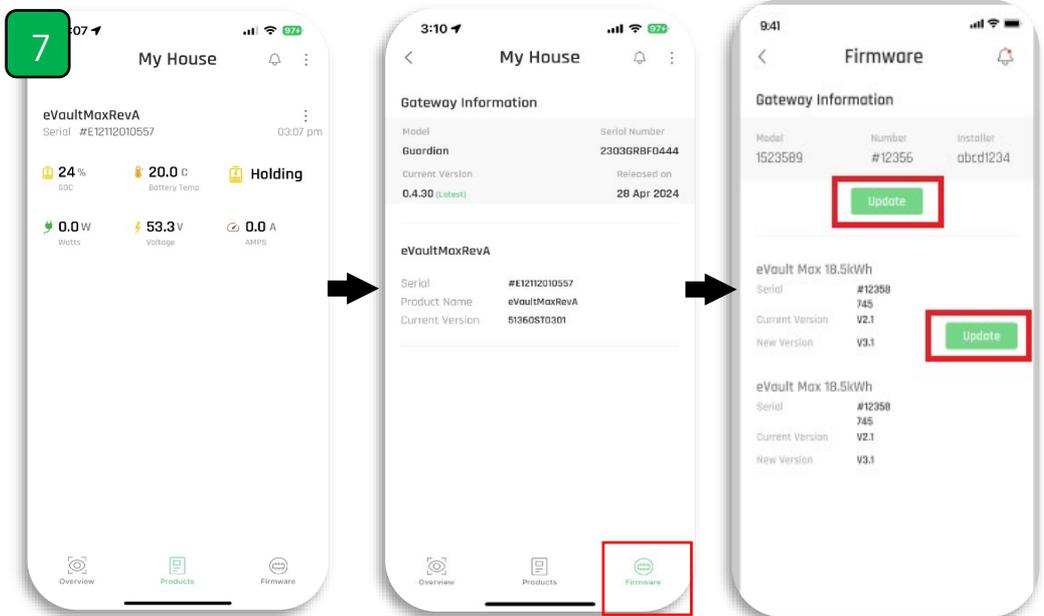


you press on it, you will see a general overview of your battery system.

6.2 Switch the Battery Model to eFlex MAX. Begin Searching



7. Press any of the tabs highlighted in red above to get more information on your Fortress battery system. After submitting your battery information, you should now be able to see your newly created place. If you press on it, you will see a general overview of your battery system. Press any of the tabs highlighted in red above to get more



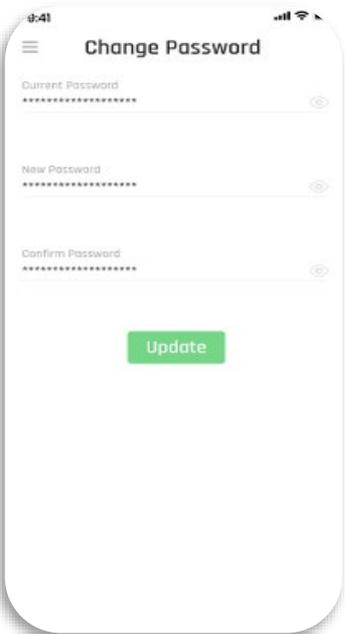
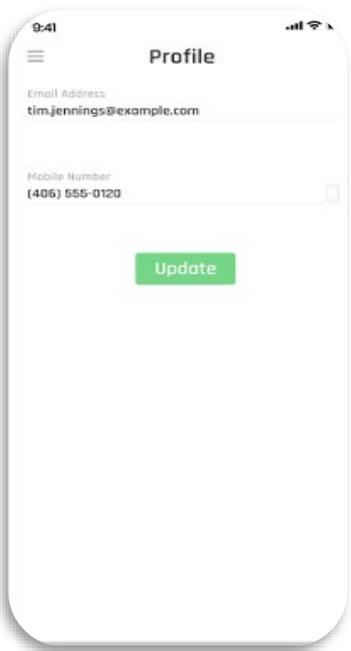
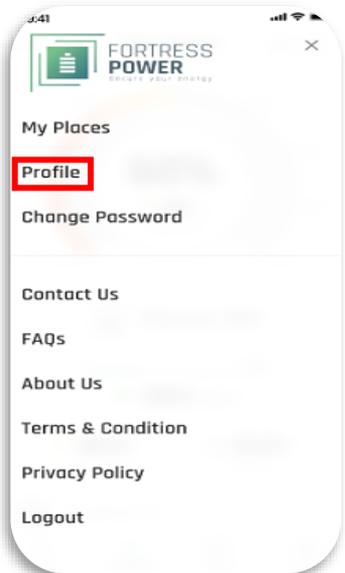
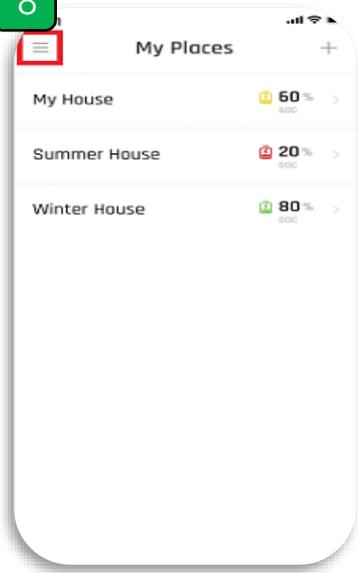


information on your Fortress battery system. To check if the batteries have the latest firmware, go to the **FIRMWARE SECTION**.

8. Changing Guardian Settings

In the **"My Place"** section click on the dashboard icon in the top left to view the companion app dashboard. Press on **"profile"** to update email and phone number information and on **"change password"** to update account password:

8





8. FIRMWARE

Upgrading Firmware

Firmware Revision

The initial firmware version of the Guardian is 0.1.0.

The Guardian is new hardware, so be prepared to update Guardian firmware at each site visit.

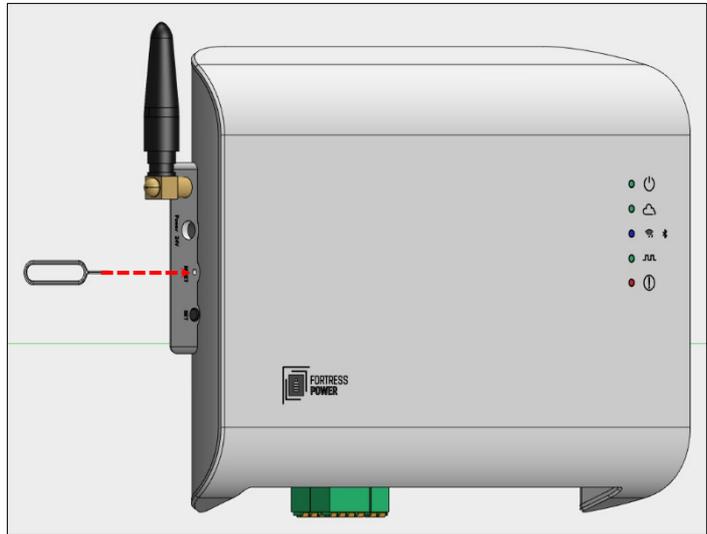
- Select the place where you want to update firmware, then select a firmware option from the icons
- Update the firmware of the Guardian hub by pressing the update button within the app. This can be done for the Guardian and battery firmware.

9. TROUBLESHOOTING

9.2 RESETTING THE GUARDIAN HUB.

If any issues arise use the following method to reset the Guardian.

The Guardian has a reset button that can be pressed for 5 seconds to restore the Guardian to factory settings. Only use this function if directed by technical support. You can use the included pin to press the button.



9.3 TROUBLESHOOTING AND FIRMWARE

Troubleshooting

To troubleshoot Guardian issues, please fill out a support ticket at

<https://support.fortresspower.com>



9.4 REPORT BUGS

If you are experiencing issues with the **APP**, please take a **Screenshot**. Immediately a window will open that allows you to report the issue and make any annotations on your screenshot. Please follow the example below. Please write a short descriptive message to explain the issue or image taken. You may keep record of these messages and access them under the messages section.

