EG4® BATTERY FIRMWARE ADAPTER

USER MANUAL

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VERSION 1.0.2 | INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE.

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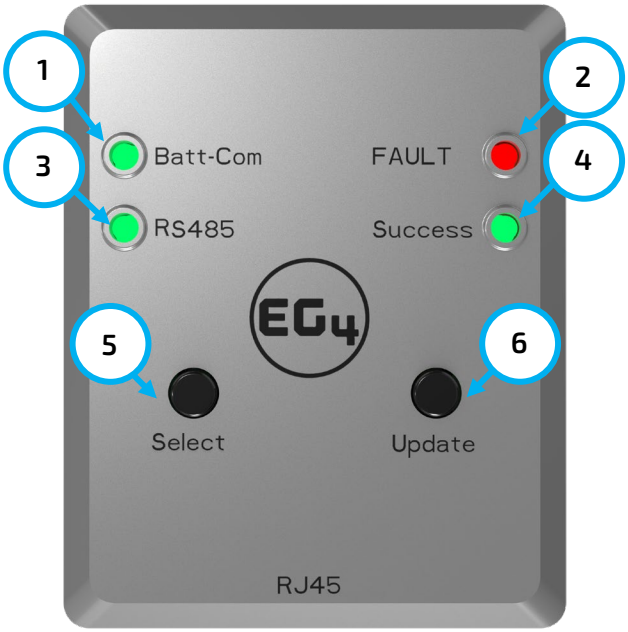
1. PRODUCT OVERVIEW

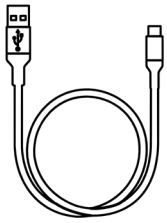
The EG4® Battery Firmware Adapter allows the end-user to perform firmware updates on EG4 batteries with ease. Read the guide thoroughly before attempting to perform the update and only perform the update on ***one*** battery at a time. Confirm that the adapter only holds the firmware update file needed for the specific battery. Only updates for one battery model can be loaded onto the adapter at a time. Do NOT attempt to load more than one firmware update onto the adapter at a time.



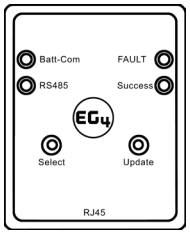
Callout	Description
1	Batt-Com Update Indicator
2	Fault Indicator
3	RS485 Update Indicator
4	Update Success Indicator
5	Select Button
6	Update Start Button
7	RJ45 Port
8	USB-C Port

2. PACKING LIST

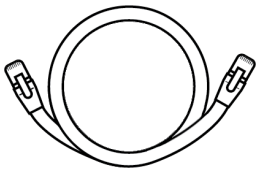
The items listed below will arrive with the product shipment:



USB – USB C Cable x1



Battery Firmware Adapter x1



RJ45 Cable x1

3. BATTERY COMPATIBILITY

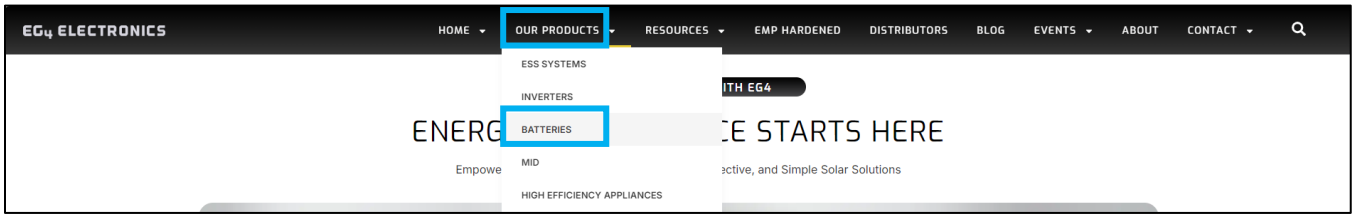
The table below shows the battery models that are compatible with the Battery Firmware Adapter:

COMPATIBLE EG4® BATTERY TYPES	INCOMPATIBLE BATTERY TYPES
WallMount Indoor 100Ah 48V	LL-V1
WallMount Indoor 280Ah 48V	LifePower4 V1
WallMount All Weather 280Ah 48V	GYLL
LL-S	
LL-V2	
LifePower4 V2	

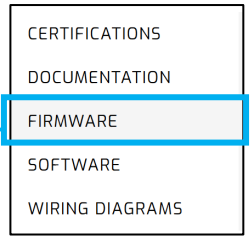
4. FIRMWARE DOWNLOAD/UPLOAD

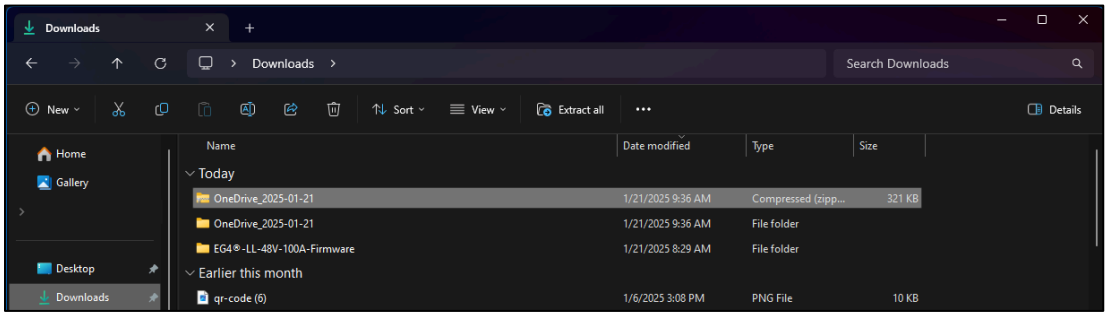
Follow the steps listed below to download the battery firmware to the PC and upload the files to the EG4® Battery Firmware Adapter.

1. First, navigate to www.eg4electronics.com and select “Our Products”, “Batteries”, then select the corresponding battery needing the update.



2. Scroll towards the bottom of the product page and select the “Firmware” tab. Choose the appropriate firmware file for the product. The download should begin.
3. Once the download is complete, extract the .ZIP file to an easily accessible location. These files will be used throughout the process.

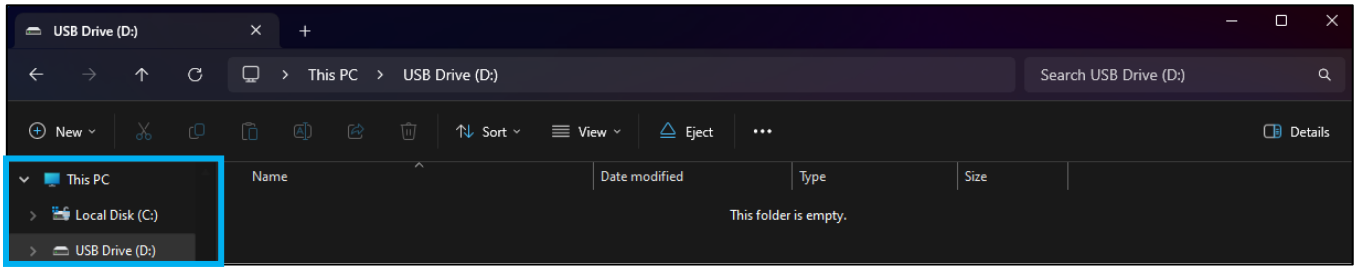




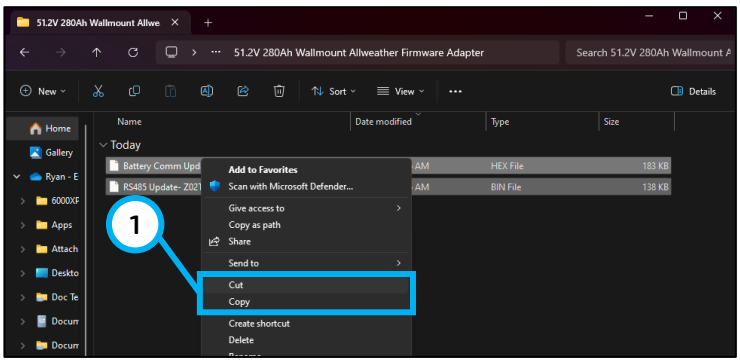
NOTE:

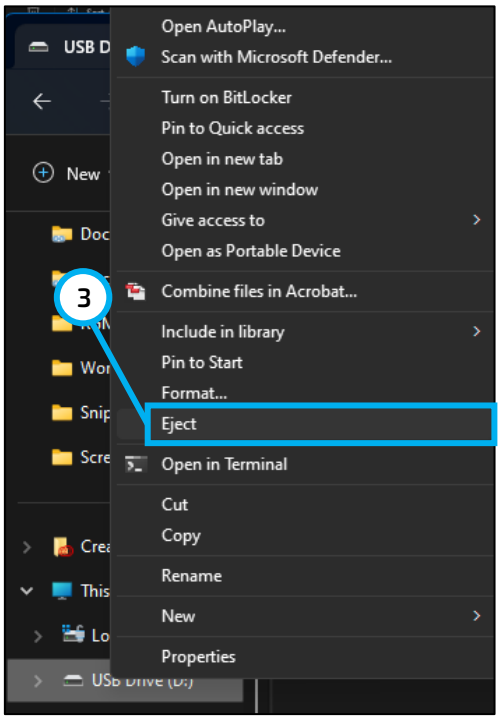
The images in this guide are for representative purposes only.

4. Using the adapter's USB-A to USB-C cable, plug the adapter into the computer's USB port. The file explorer for the adapter should automatically open. If it does not, please navigate to the appropriate USB drive through the file explorer. If the drive does not populate, ensure that the USB cable being used is also capable of providing a 5V power supply to power the adapter.



5. Copy and paste, or cut and paste, the firmware files (see step 2 on previous page) into the adapter's folder in file explorer and safely eject the USB.





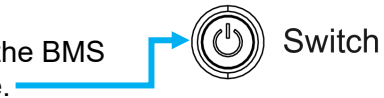
6. Remove the USB-A male end from the computer.

The firmware adapter should now be ready to apply updates.

NOTE:

Ensure the updater files for only a single battery type are loaded onto the updater at one time. If there is more than one batch file on the updater, the update will fail. For example, the EG4 LifePower4 V2 RS485 & RS232 files can both be uploaded to the adapter, but if the EG4 WallMount All Weather RS485 & RS232 files are also uploaded, the update would fail.

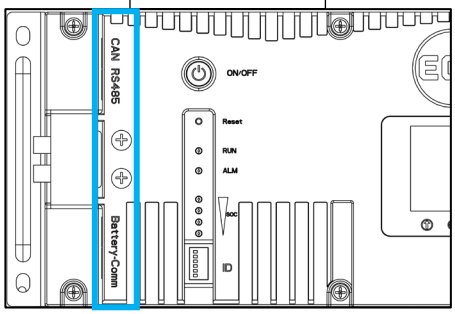
5. UPDATE PROCESS



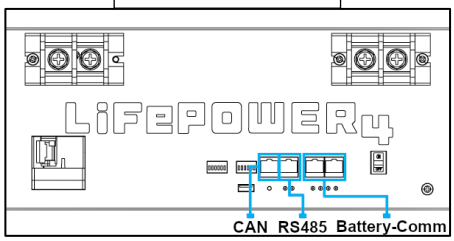
1. Begin by powering OFF the battery via the circuit breaker and the BMS via the BMS “Switch” button (if applicable) receiving the update.
2. Remove all inter-battery RJ45 communication cables from the battery and set one aside for the update.
3. If applicable, remove the communication cable going from the battery to the inverter.
4. Take the communication cable that was set to the side from step 3 and connect it to the RJ45 jack on the firmware adapter.
5. Connect the other end of the cable to either the RS485 port or the Batt Comm port depending on the update being applied. See the images below for the location of the connection, and the table beneath for specific updates per port.

See images below for examples:

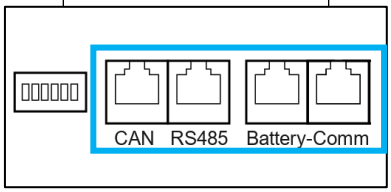
LL-S/LL-V2



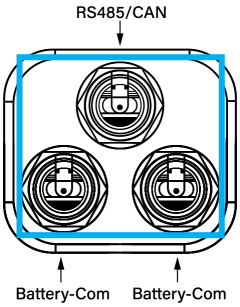
LifePower4 V2



WallMount Indoor 280Ah Battery



WallMount All Weather 280Ah Battery



BATTERY TYPE	RS485 UPDATE PORT NEEDED (BATTERY)	RS232 UPDATE PORT NEEDED (BATTERY)
WallMount All Weather	RS485/CAN	Battery-Com
LL-S	RS485	Battery-Com
LL-V2	RS485	Battery-Com
WallMount Indoor	RS485	Battery-Com

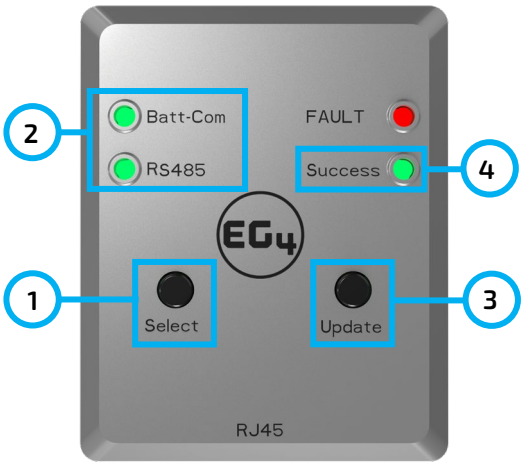
UPDATE TYPE	FILE TYPE NEEDED
RS485	.BIN
RS232	.HEX

6. Provide power to the Battery Firmware Adapter using the USB-A to USB-C cable, or a USB-C to USB-C cable with an adequate power source, such as a mobile power bank or PC. Ensure the power supply provides 5V.
7. Power on the battery BMS via the On/Off switch. Switch
8. Press the “Select” button (see callout 1 in the image below) to wake up the device, then press it again to choose either the “Batt-com” or the “RS485” (callout 2) update.
9. Once the correct update is selected, press the “Update” button (callout 3) to begin the update. The “Batt-com” and “RS485” indicator lights will flash green while the update is being pushed.

NOTE:

When performing the RS485 update, the battery BMS must be reset once the “Update” button is pressed. If it is not reset, the update will fail. If the update fails, press the “Update” button again, and reset the battery BMS.

10. Once the update is complete, the device will let out an audible beep, and the “Success” light (callout 4) will flash twice and then stay solid green.



REMINDER:

The RS485 update requires only the .BIN file and should take ~35 seconds.
The Batt-Com Update requires only the .HEX file and should take ~40 seconds.

Repeat the steps listed above if needing to update multiple batteries of the same type.
Ensure the update is only being applied to one battery at a time!

6. CLEARING ADAPTER FILES

If the user needs to update a different battery type using the same adapter, the .BIN and/or .HEX files must be deleted from the device's storage and be replaced with the correct .BIN and/or .HEX files loaded for the corresponding battery. To delete these files, follow the steps below:

1. Using the adapter's USB-A to USB-C cable, plug the adapter into the computer's USB port. The file explorer for the adapter should automatically open. If it does not, please navigate to the appropriate USB drive through the file explorer. If the drive does not populate, ensure that the USB cable being used is also capable of providing a 5V power supply to power the adapter.
2. Once in the adapter's file explorer, delete any existing .BIN or .HEX files that are not related to the battery needing updates.
3. Follow the steps listed in Section 4 to upload new files to the device.

7. TROUBLESHOOTING

The device will let out a long solid beep if the update fails, and the fault light will turn solid red.
If this is the case, remove the downloaded files placed onto the adapter, power down the device, then repeat the steps listed in Section 3.

NOTE:

Ensure the updater files for only a single battery type are loaded onto the updater at one time. If there is more than one batch file on the updater, the update will fail. For example, the EG4 LifePower4 V2 RS485 & RS232 files can both be uploaded to the adapter, but if the EG4 WallMount All Weather RS485 & RS232 files are also uploaded, the update would fail.

Please see the table below for definitions of the specific light sequences.

LED	LIGHT SEQUENCE	AUDIBLE TONE	DESCRIPTION
Batt-Com	Green light flashing	-	Update in progress
RS485	Green light flashing	-	Update in progress
FAULT	Solid red	Long beep	Update failed
Success	Green light flash x2 > Solid	Long beep	Update successful

8. CHANGELOG

v1.0.2

- Added additional step for RS485 update

v1.0.1

- Removed battery DIP switch requirement
- Added WallMount Indoor 100Ah compatibility

v1.0

- Published document

CONTACT US

support@eg4electronics.com
(903) 609-1988
www.eg4electronics.com