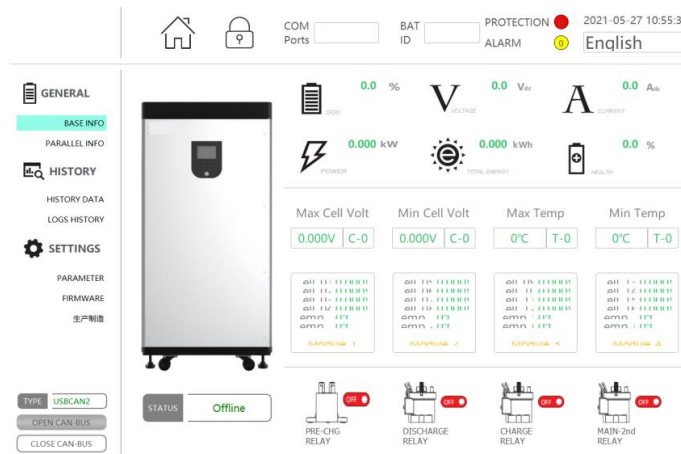


NOTE: It is important to disconnect the battery from the system to update firmware. When the firmware is updating, the eVault Max will shut off. If there is power to or from the system during an upgrade severe damage may occur.

****Downloading firmware from the Fortress power website is necessary to update the battery's firmware. See appendix Sections B & C for details**

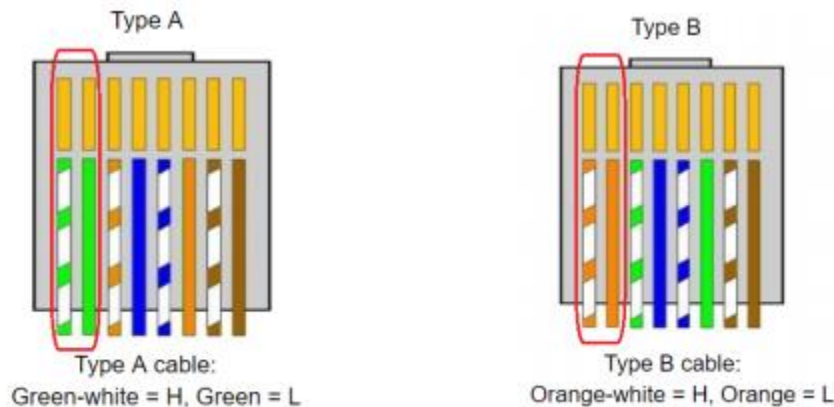
1) Open The eVault Max BMS Tool software “eVaultMaxUpperComputer.exe” Application

The following Screen is the default UI display



2) Connect your modified Cat 5 cable to the Can tool

Pin Out: 1 (green white for type A or orange white for type B) to Can H and 2 (green [A] or orange [B]) to Can L.



3) Connect your Cat 5 Header to the “COM Parallel” port on the eVault Max (In or Out – it is a common bus)

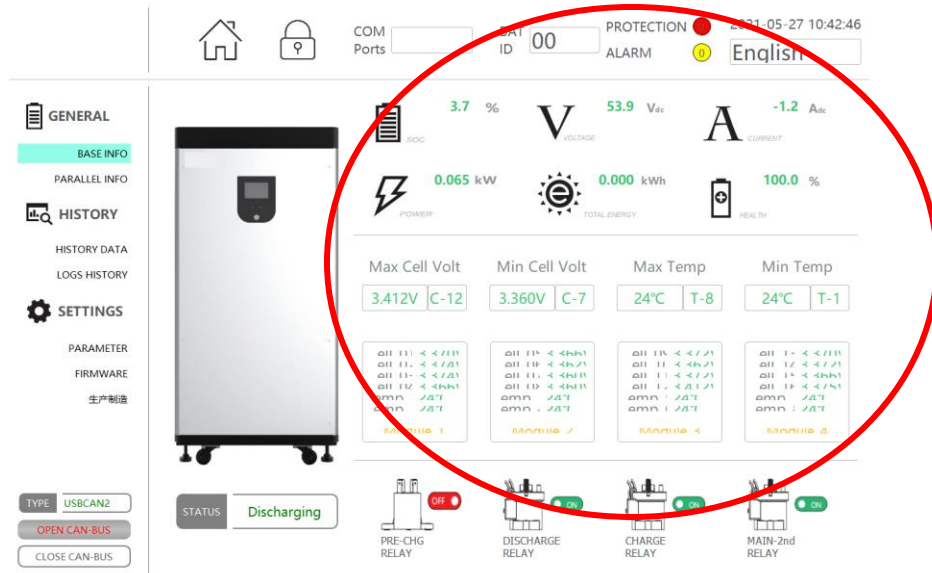
4) Select "USBCAN#" In the bottom left corner

The screenshot displays the battery management system interface. At the top, there are navigation icons (home, lock), COM Ports, BAT ID, PROTECTION ALARM, and the date/time (2021-05-27 10:55:37) and language (English). The left sidebar contains menu items: GENERAL, BASE INFO (highlighted), PARALLEL INFO, HISTORY, HISTORY DATA, LOGS HISTORY, SETTINGS, PARAMETER, FIRMWARE, and 生产制造. The main area shows a battery unit image and various status indicators: SOC (0.0%), VOLTAGE (0.0 V_{dc}), CURRENT (0.0 A_{dc}), POWER (0.000 kW), TOTAL ENERGY (0.000 kWh), and HEALTH (0.0%). Below these are Max Cell Volt (0.000V C-0), Min Cell Volt (0.000V C-0), Max Temp (0°C T-0), and Min Temp (0°C T-0). There are four battery cell status displays labeled SUBMODULE 1, 2, 4, and 5. At the bottom, there are four relay status indicators: PRE-CHG RELAY, DISCHARGE RELAY, CHARGE RELAY, and MAIN-2nd RELAY, all showing OFF. In the bottom left corner, the 'TYPE' dropdown menu is open, showing 'USBCAN2' selected and 'OPEN CAN-BUS' as an option below it.

5) Select "Open CAN-Bus" directly below the "Type" selection

This screenshot is identical to the previous one, showing the same battery management system interface. The 'TYPE' dropdown menu is still open, but now the 'OPEN CAN-BUS' option is highlighted with a red circle, indicating it has been selected.

A successful CAN pairing will display the battery parameters as seen below



- 6) Navigate to www.fortresspower.com/firmware and download the latest eVault Max Firmware to your local device.

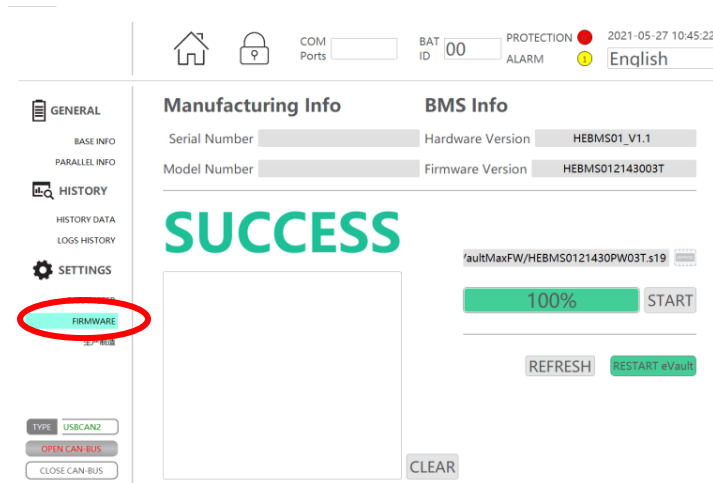
Download current and previous versions of Fortress Power's firmware by selecting the your product and then choosing the latest compatible version of the firmware. Should you have any questions or need technical support with firmware upgrades, we encourage you to please email: technicalsupport@fortresspower.com or call 877-497-6937.

View the [instruction video here](#).

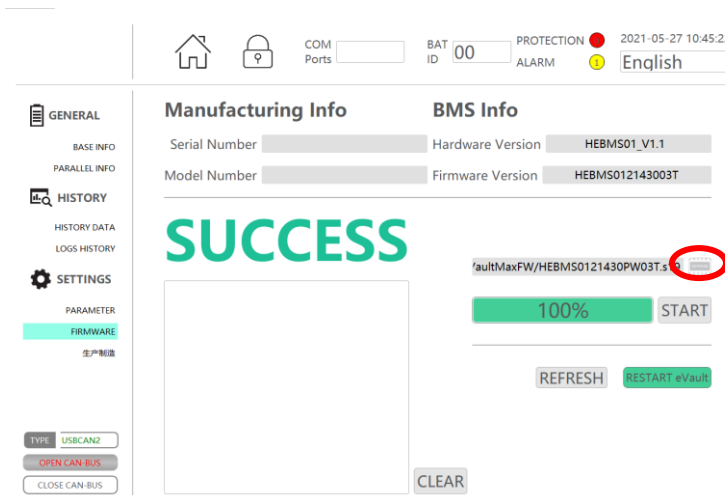
Select Product
 eVault Max
 Go!

Type	Version	Product	Last modified	Download
Firmware	v.121617	eVault Max	26-07-2021	Download
Software	v1.03.04	eVault Max	06-08-2021	Download
Driver	Additional Driver	eVault Max	25-08-2021	Download
Driver	CANbox-driver	eVault Max	25-08-2021	Download

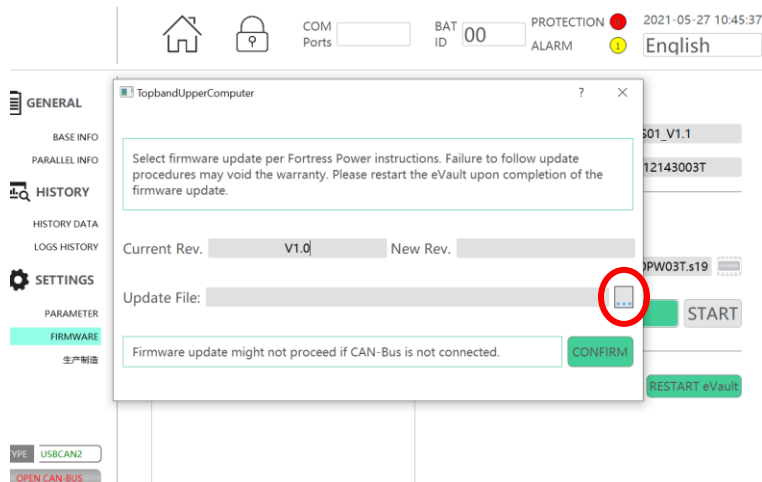
- 7) Upon a successful download of the eVault Max firmware, navigate to the firmware tab in the navigation section of the BMS application



- 8) Open the "Select File" button above the "Start"



- 9) Select the ellipsis button next to the "Update File" display box



Your file browser window will open.

10) Navigate to where you downloaded the firmware file and select the “HEBMS#####PW##T.s19 file. It will have a similar structure to the image below:

HEBMS0121430PW03T.s19	✓	5/24/2021 4:37 PM	S19 File	599 KB
-----------------------	---	-------------------	----------	--------

11) Click “Start”

The screenshot shows a web interface for a device. At the top, there are status indicators: a home icon, a lock icon, COM Ports, BAT ID 00, PROTECTION ALARM, and a date/time stamp of 2021-05-27 10:45:22. Below this is a navigation menu with options: GENERAL, BASE INFO, PARALLEL INFO, HISTORY, HISTORY DATA, LOGS HISTORY, SETTINGS, PARAMETER, and FIRMWARE (highlighted). The main content area is divided into 'Manufacturing Info' and 'BMS Info'. 'Manufacturing Info' shows Serial Number and Model Number. 'BMS Info' shows Hardware Version (HEBMS01_V1.1) and Firmware Version (HEBMS012143003T). A large green 'SUCCESS' message is displayed. Below it, a progress bar is at 100%. A 'START' button is circled in red. Other buttons include 'REFRESH', 'RESTART eVault', and 'CLEAR'. At the bottom, there are buttons for 'TYPE', 'USBCAN2', 'OPEN CAN BUS', and 'CLOSE CAN BUS'.

The eVault will turn off while the update is running.

Do not disconnect the CAN Tool from the computer or battery while the update is running.

The firmware update may take a few minutes. A progress bar will show the status of the update

A Successful firmware update will show like the window below:

The screenshot displays the BMS firmware update interface. At the top, there are status indicators: a home icon, a lock icon, COM Ports, BAT ID 00, PROTECTION ALARM (red dot), and the date/time 2021-05-27 10:42:12. The language is set to English. The left sidebar contains navigation options: GENERAL, BASE INFO, PARALLEL INFO, HISTORY, HISTORY DATA, LOGS HISTORY, SETTINGS, PARAMETER, and FIRMWARE (highlighted in green). The main content area is divided into Manufacturing Info and BMS Info. The Manufacturing Info section shows Serial Number and Model Number. The BMS Info section shows Hardware Version (HEBMS01_V1.1) and Firmware Version (HEBMS012143003T). A large green 'SUCCESS' message is prominently displayed. Below it, a log window shows the following data: 10:37:38:547 Send: id: 0x00040000; data: 30 30 30 30 30 30 30. 10:37:38:549 Send: id: 0x00040000; data: 30 30 30 30 46 34 0d 0a. 10:37:38:574 Send: id: 0x00050000; data: . 10:37:38:580 Recv: id: 0x00050000; data: 55 00 00 00 00 00 00 00. A progress bar shows 100% completion. There are buttons for START, REFRESH, RESTART eVault, and CLEAR. The top right corner shows a fault code: /aultMaxFW/HEBMS0121430PW03T.s19.

12) Manually restart the battery (holding the power button for 10 seconds until the “status” light turns off)

13) The eVault now has the latest firmware. Verify by viewing the Firmware version display box

This screenshot is identical to the one above, showing the successful firmware update. The key difference is that the 'Firmware Version' field in the BMS Info section, which displays 'HEBMS012143003T', is circled in red to highlight the updated version.

APPENDIX

B. Installing the Drivers, Software, and Firmware

1. Go to www.fortresspower.com/resources. Download and uncompress/unzip the following files for your battery:
 - a. Drivers for Canbus communication
 - b. Additional Drivers for Canbus communication
 - c. Software - either BMS.exe or BMSTool
 - d. Firmware - *.bin files
2. Testing the computer connection to the CANbus tool before visiting the site saves valuable time. Install the drivers and then open the Cantest software. A successful CAN connection can be made just with the tool and a computer - no Fortress battery is necessary to test this step.
3. After downloading and uncompressing the first set of drivers, go to the Windows Device Manager by clicking the Windows button on the menu bar and typing "Device Manager". Make sure the Canbus tool is plugged into the computer.
4. Find the Canbus tool within the Device Manager list, it commonly appears in the USB devices or as an unidentified USB device. Select "Update Drivers" and then browse to where the drivers were downloaded - commonly the Downloads folder. Select the "Canbox driver" folder and press OK. You do not need to specify the 64 bit or 32 bit folder, simply selecting the "Canbox driver" folder will install the correct drivers.
5. Update the drivers.
6. Go to the Downloads folder and install the CANTest software which contains additional drivers commonly needed to CANbus communication (CANTest_Setup_V2.70).
 - a. When the windows message appears, select "More info" and then "Run Anyway".
 - b. You may need to respond to your anti-virus software alert, or even disable the anti-virus software for 10 minutes to install the software.
 - c. After the software finishes installing, select "Y" to complete the process.
 - d. You do not need to run the CANTest software. If it opens, go ahead and close it. This software is only installed for the extra CAN drivers.

C. Testing the Driver + Software before visiting Site

1. Go to the Downloads folder by clicking the “Folder” icon in the Windows menu and then selecting the Downloads folder. Find the battery software folder and open the appropriate software program. Here are the folder and software names for each battery.
2. Open the appropriate software and then connect to CAN software. You will see a CAN connection success message. See pictures below. If CAN has not connected, please reinstall the drivers and the additional drivers (Step B4-B6 and check the wired connections (Step A4).