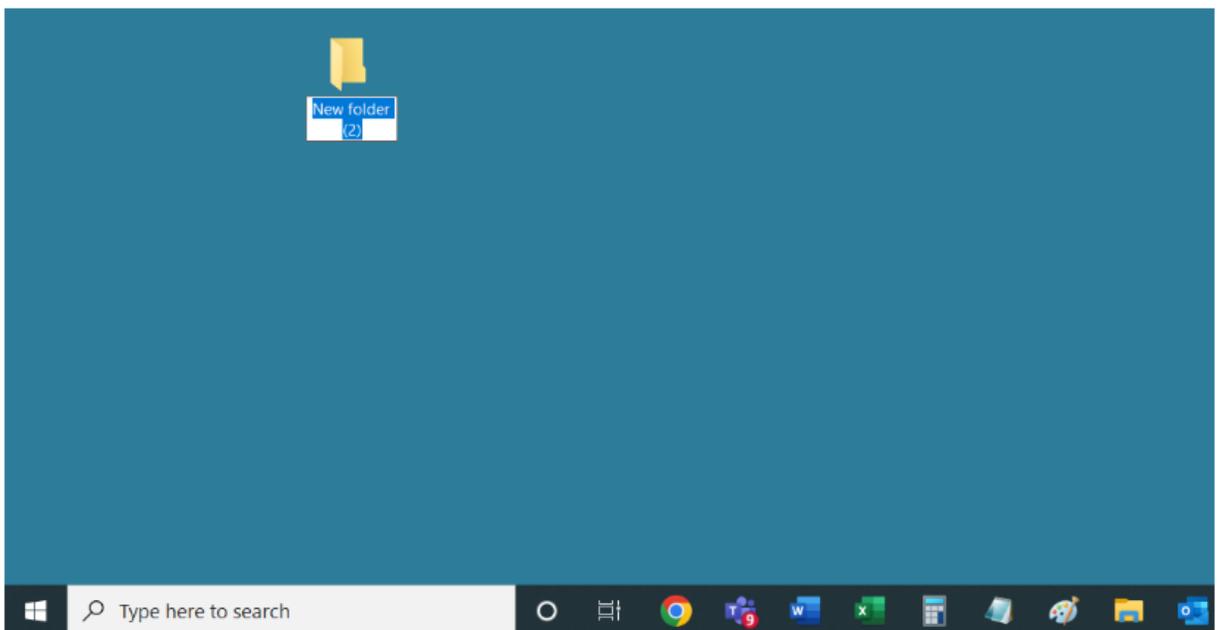
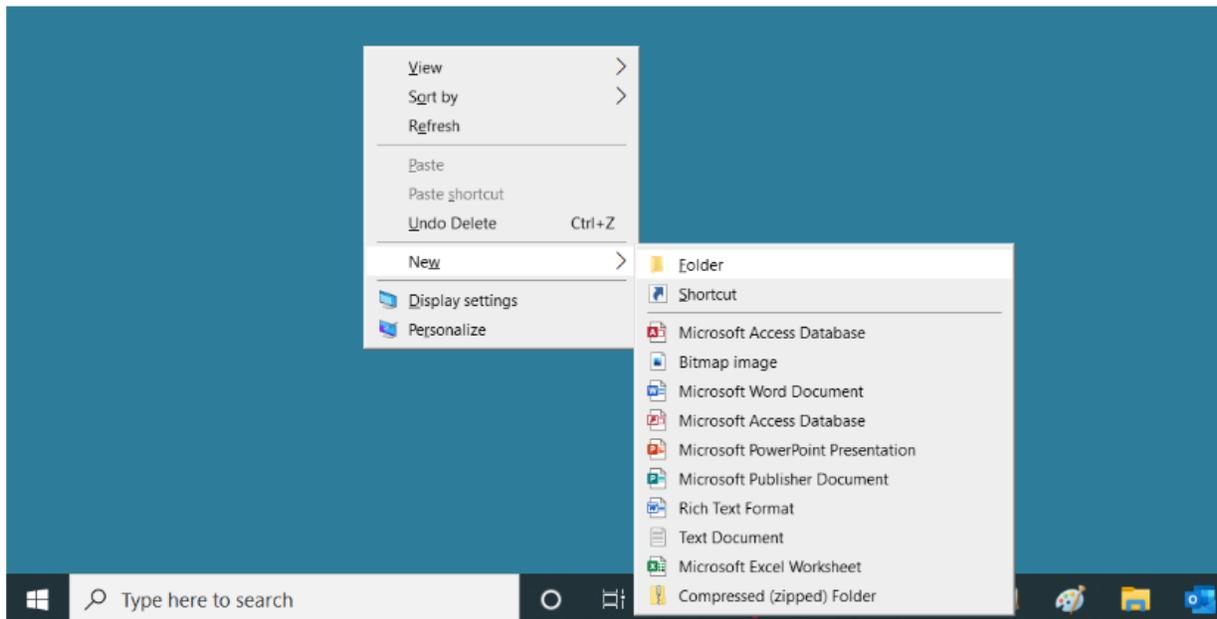


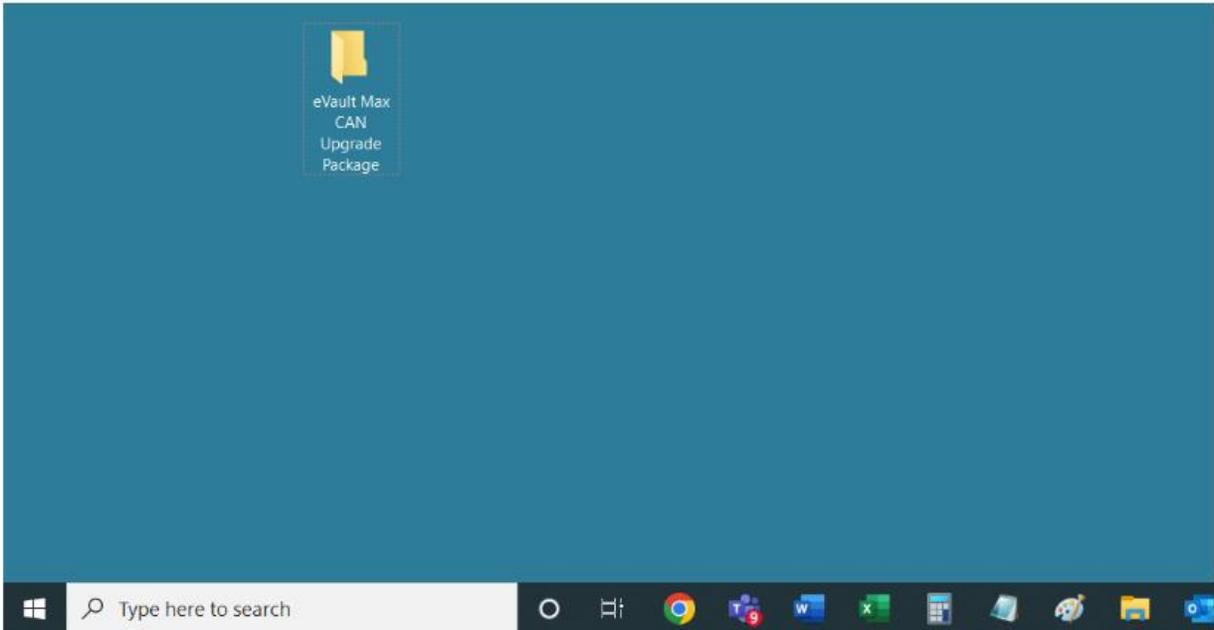
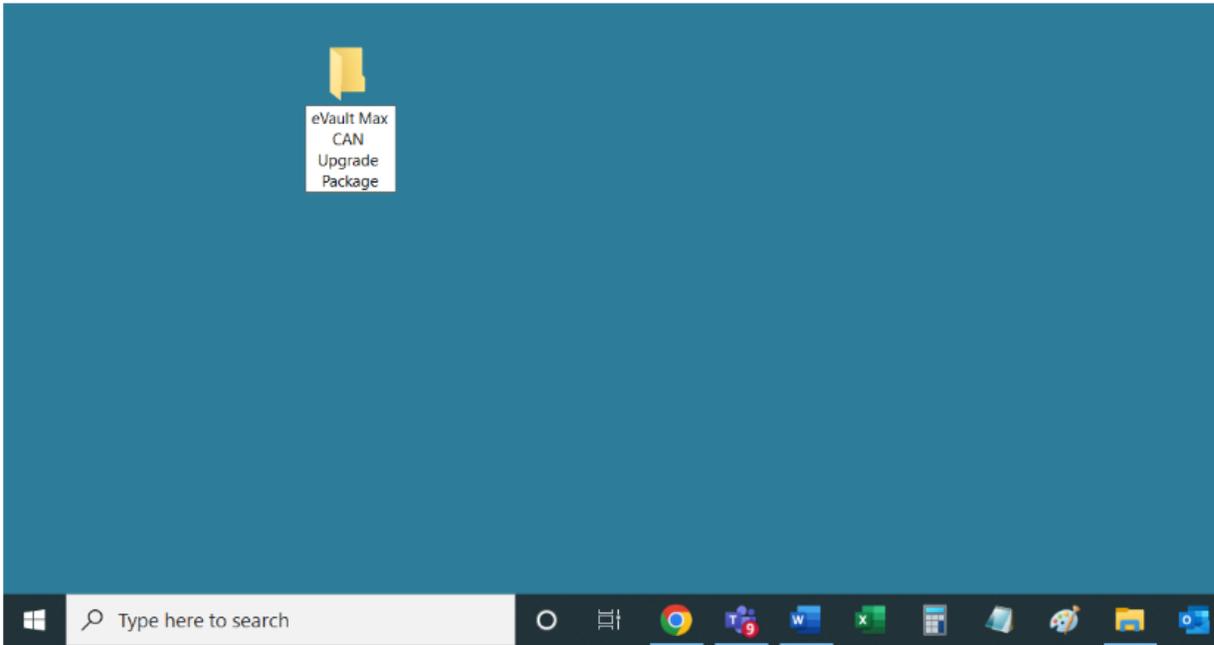
eVault Max Firmware Update Instructions

(Rev.2)

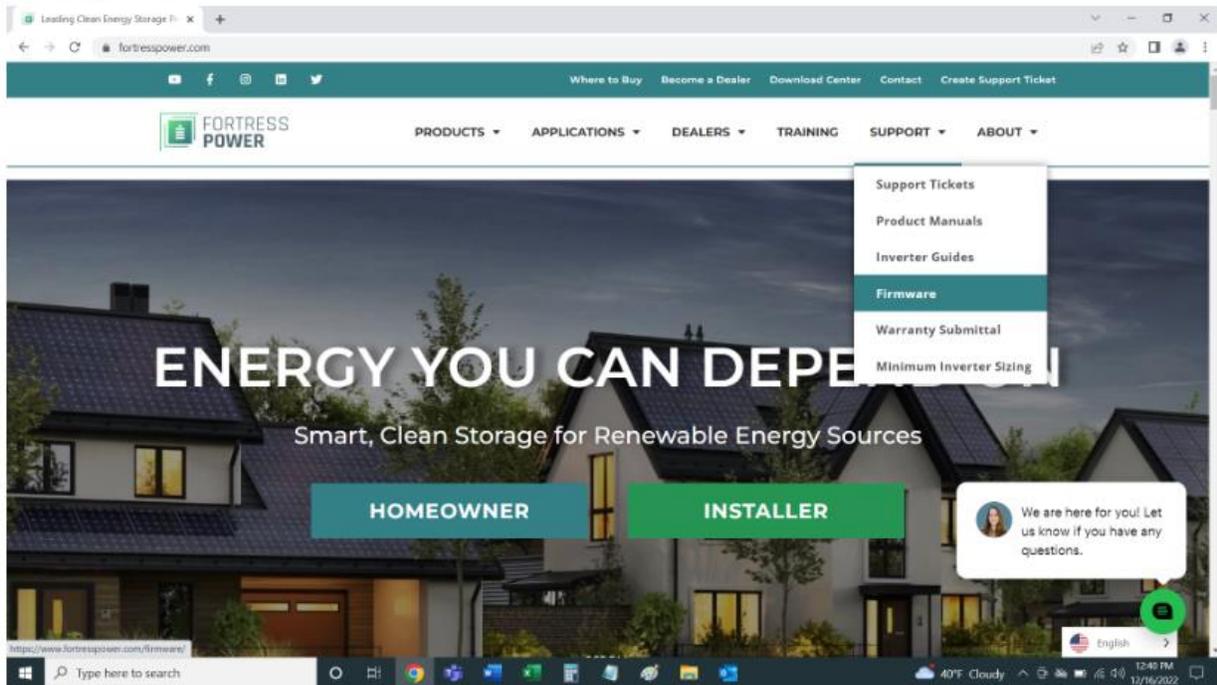
Obtaining and Organizing the Required Files

1. Right-click on the desktop and in the drop down, hover your mouse pointer to "New" and then click on "Folder" and create a title for it. In this guide the folder will be named "eVault Max CAN Upgrade Package" and it is suggested for you to use the same title. Once the title is typed in either double click somewhere on the desktop or click "Enter" on your keyboard.

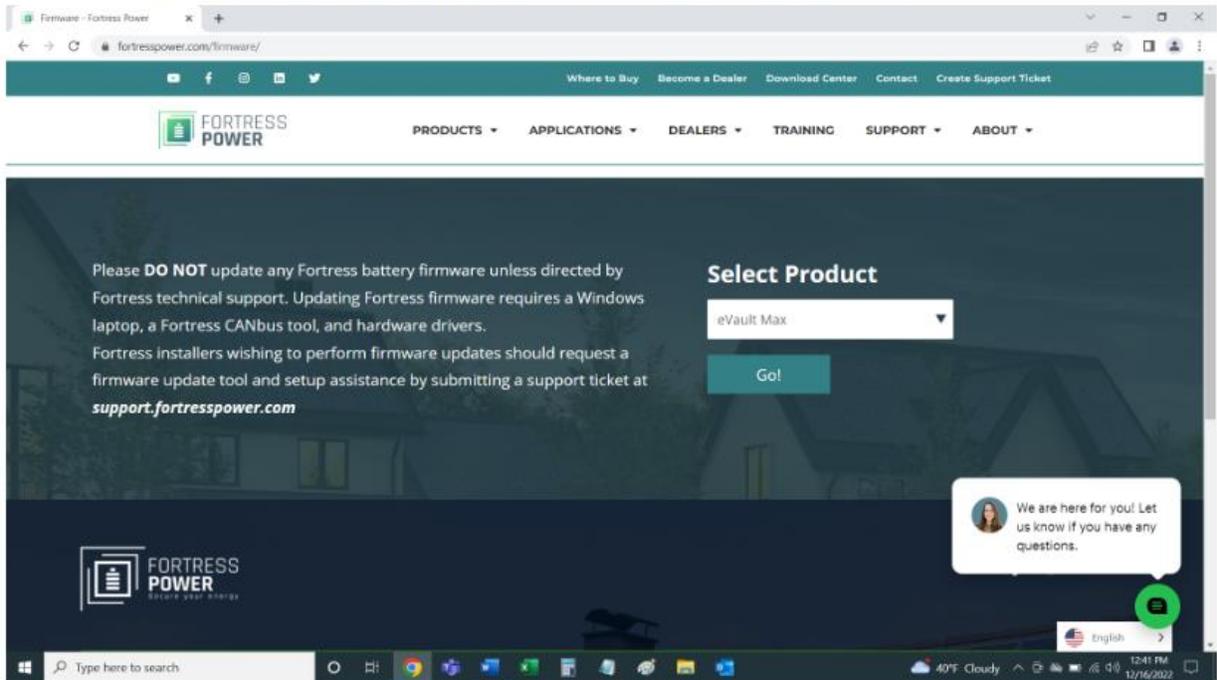




2. Go to website "fortresspower.com", hover your mouse pointer to the "SUPPORT" tab on the website and click on "Firmware".



3. On the next page, click on "--select product--", select "eVault Max" and click "Go!".



4. Below, a table will appear. You need to download software, firmware, and driver. Click on download icons for the corresponding rows (last three download icons).

Note: the version numbers will change in the future. If the versions that you see on your screen don't coincide with the ones in this manual, that's normal, please continue.

Please **DO NOT** update any Fortres battery firmware unless directed by Fortres technical support. Updating Fortres firmware requires a Windows laptop, a Fortres CANbus tool, and hardware drivers. Fortres installers wishing to perform firmware updates should request a firmware update tool and setup assistance by submitting a support ticket at support.fortrespower.com

Select Product

eVault Max

Go!

| Type | Version | Product | Last modified | Download |
|----------|--|------------|---------------|----------|
| PDF | README Disclaimer | eVault Max | 21-11-2022 | |
| PDF | eVaultMax-Firmware-Update-Instructions | eVault Max | 28-01-2022 | |
| Software | eVault Max BMS Software (V.1.03.12) | eVault Max | 25-01-2022 | |
| Firmware | eVault Max Firmware | eVault Max | 02-12-2021 | |
| Driver | CAN-tool Drivers | eVault Max | 25-08-2021 | |

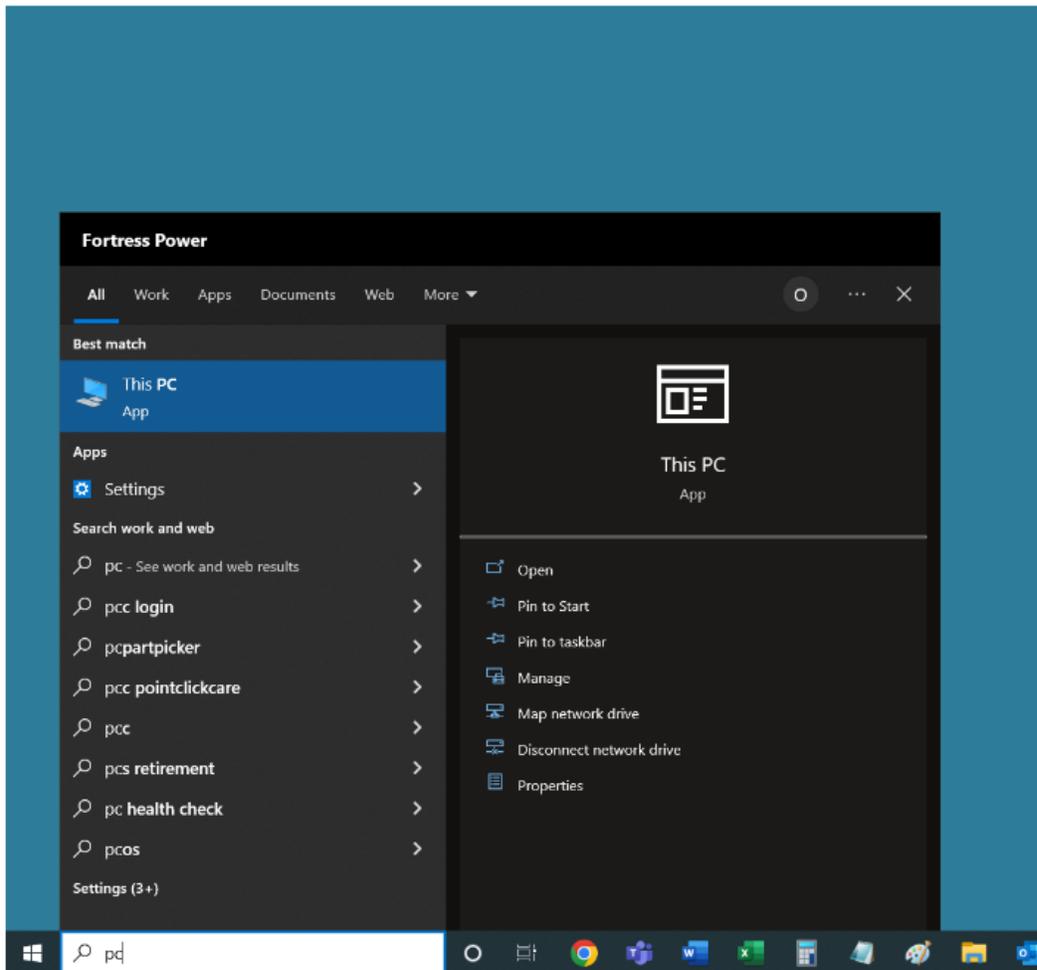
We are here for you! Let us know if you have any questions.

english

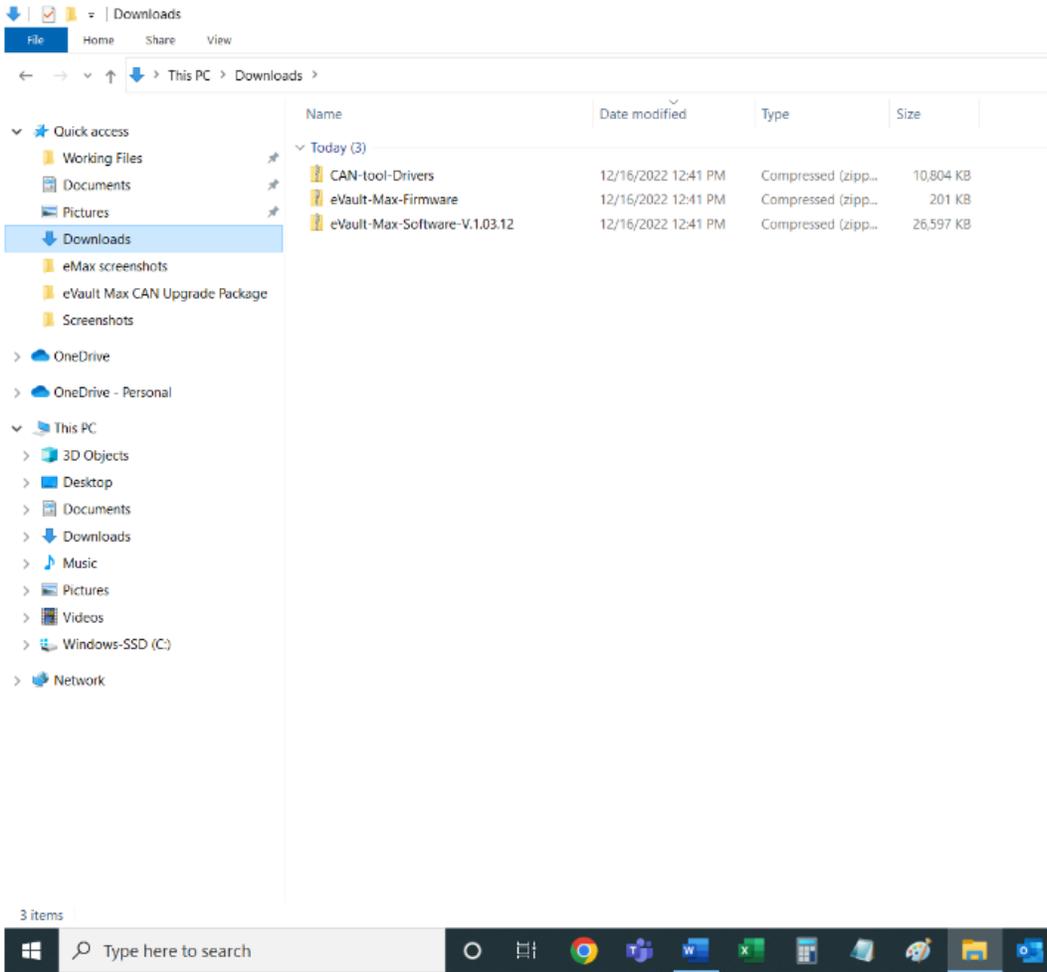
CAN-tool-Drivers.zip eVault-Max-Firma...zip eVault-Max-Softwa...zip

Type here to search 40°F Cloudy 12:41 PM 12/16/2022

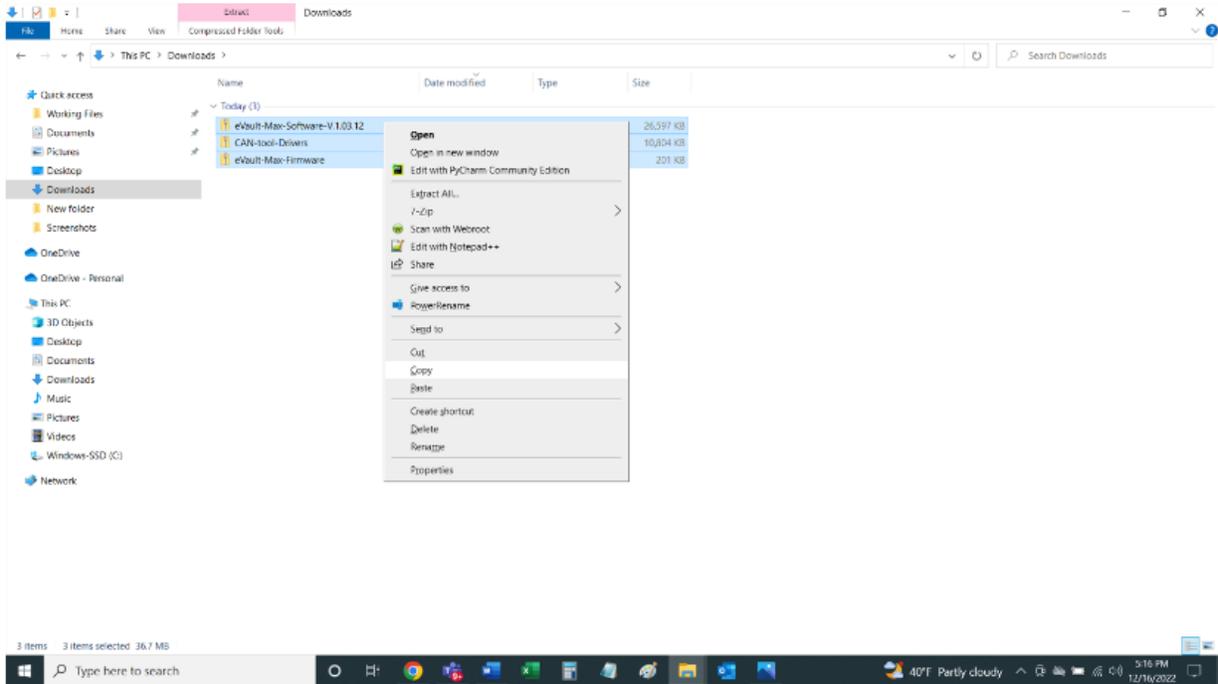
5. Once the downloads are completed, navigate to the "Downloads" folder (or wherever you saved the files from the website). Close the browser, click on the start (looks like a Windows icon) and type in "pc". Then, click on "This PC".



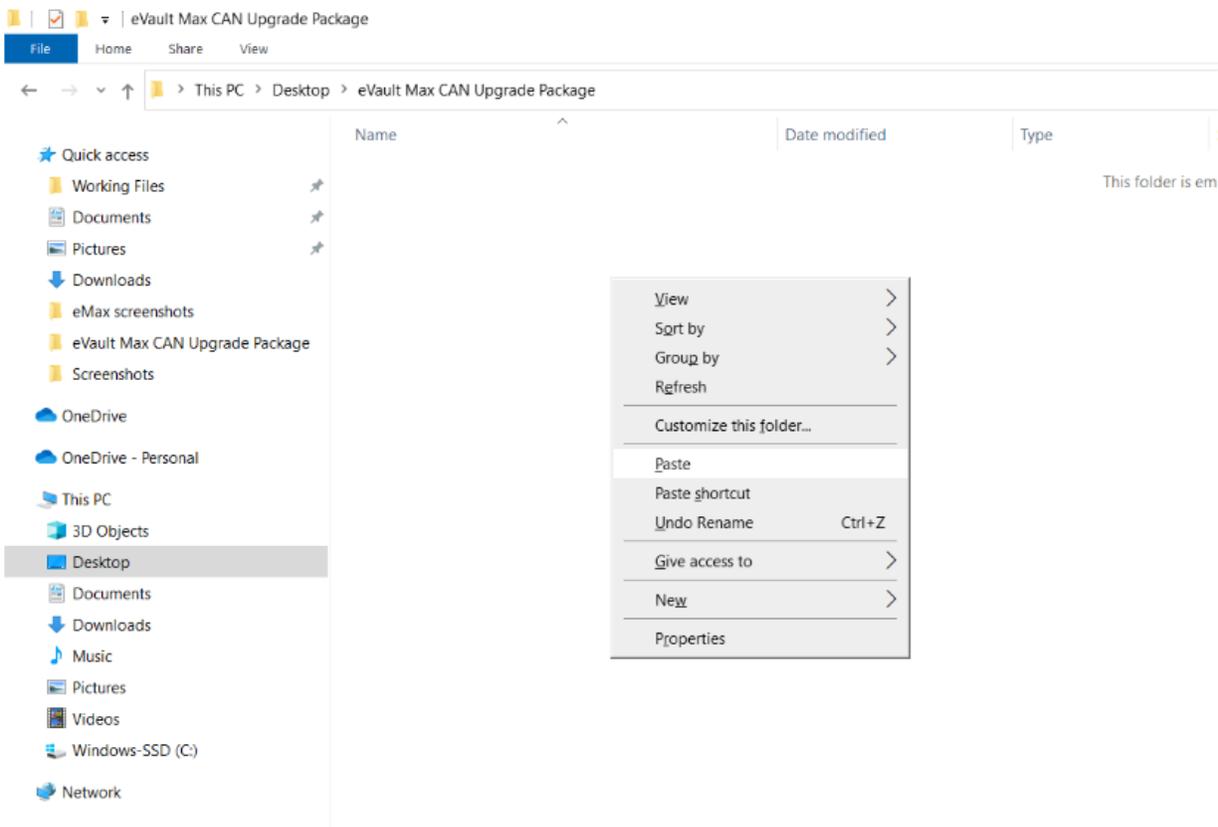
6. Then, go to the "Downloads" folder (or wherever you saved the files from the website) where you'll see the downloaded folder.



7. Select these three files, right-click on the selection and click on "Copy" to copy these files.



8. Navigate to the "eVault Max CAN Upgrade Package" right-click somewhere in the folder and paste the copied files.



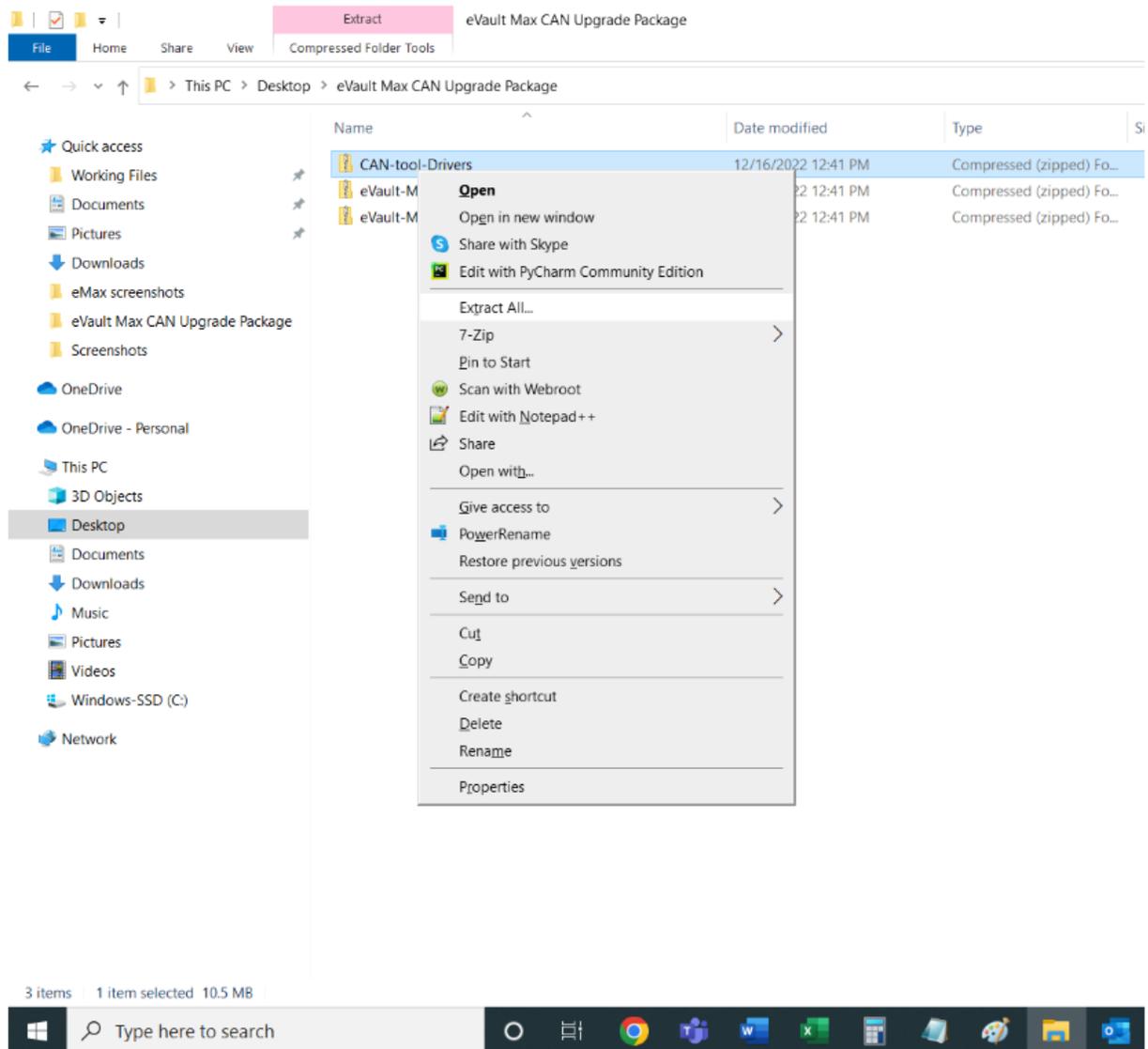
This PC > Downloads >

- Quick access
- Working Files
- Documents
- Pictures
- Downloads**
- eMax screenshots
- eVault Max CAN Upgrade Package
- Screenshots
- OneDrive
- OneDrive - Personal
- This PC
- 3D Objects
- Desktop
- Documents
- Downloads
- Music
- Pictures
- Videos
- Windows-SSD (C:)
- Network

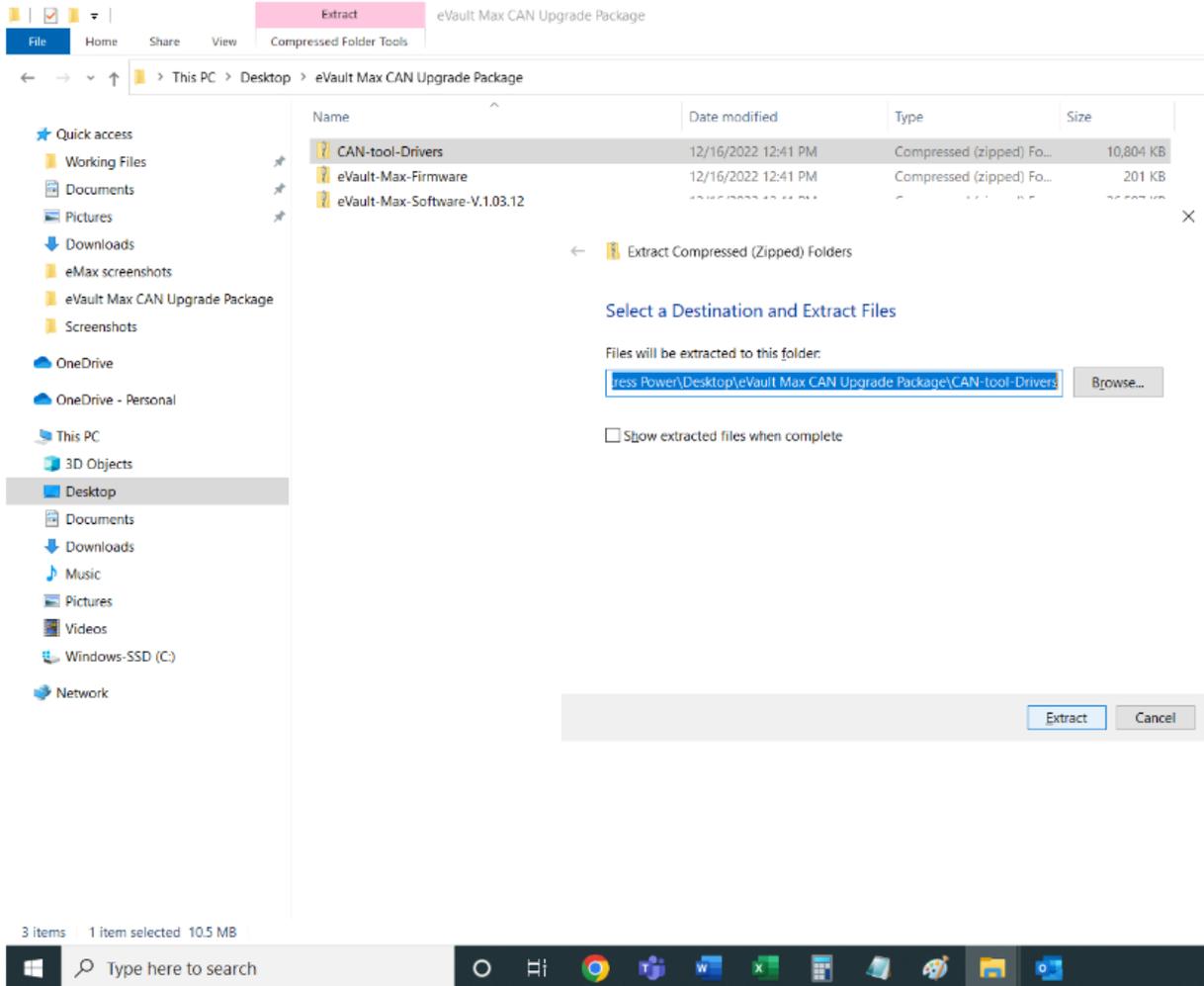
| Name | Date modified | Type | Size |
|-------------------------------|---------------------|---------------------|-----------|
| Today (3) | | | |
| CAN-tool-Drivers | 12/16/2022 12:41 PM | Compressed (zipp... | 10,804 KB |
| eVault-Max-Firmware | 12/16/2022 12:41 PM | Compressed (zipp... | 201 KB |
| eVault-Max-Software-V.1.03.12 | 12/16/2022 12:41 PM | Compressed (zipp... | 26,597 KB |

3 items | 3 items selected | 36.7 MB

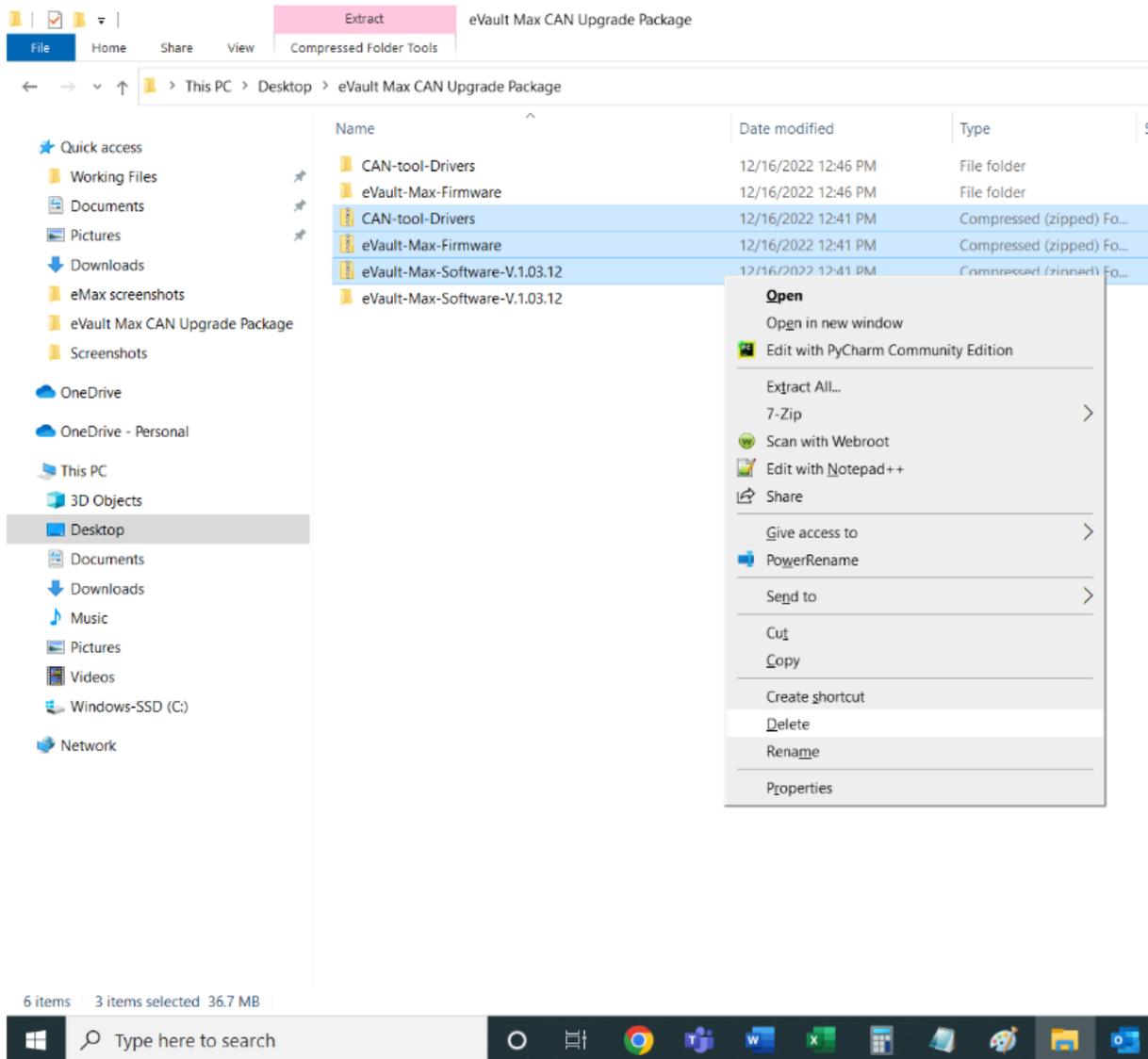
9. Click somewhere in the folder to remove the blue highlight from the files. Then, right-click on one of the files and from the dropdown click on "Extract All..".



10. Afterwards, click on "Extract".



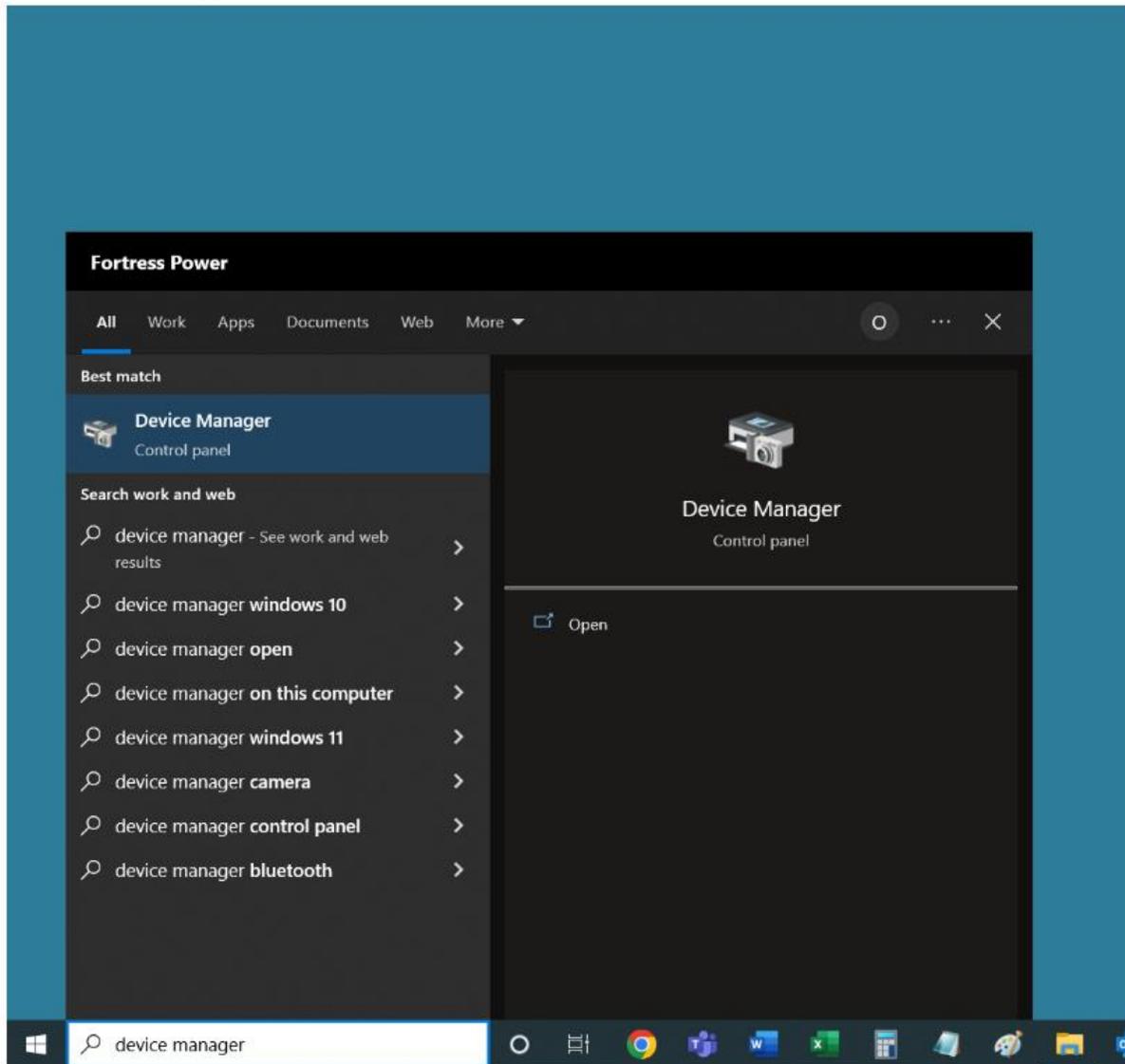
11. Repeat the above two steps (10 and 11) for the two other downloaded files (one at a time). Once all three downloaded files are "extracted", delete the downloaded files so the confusions can be avoided.



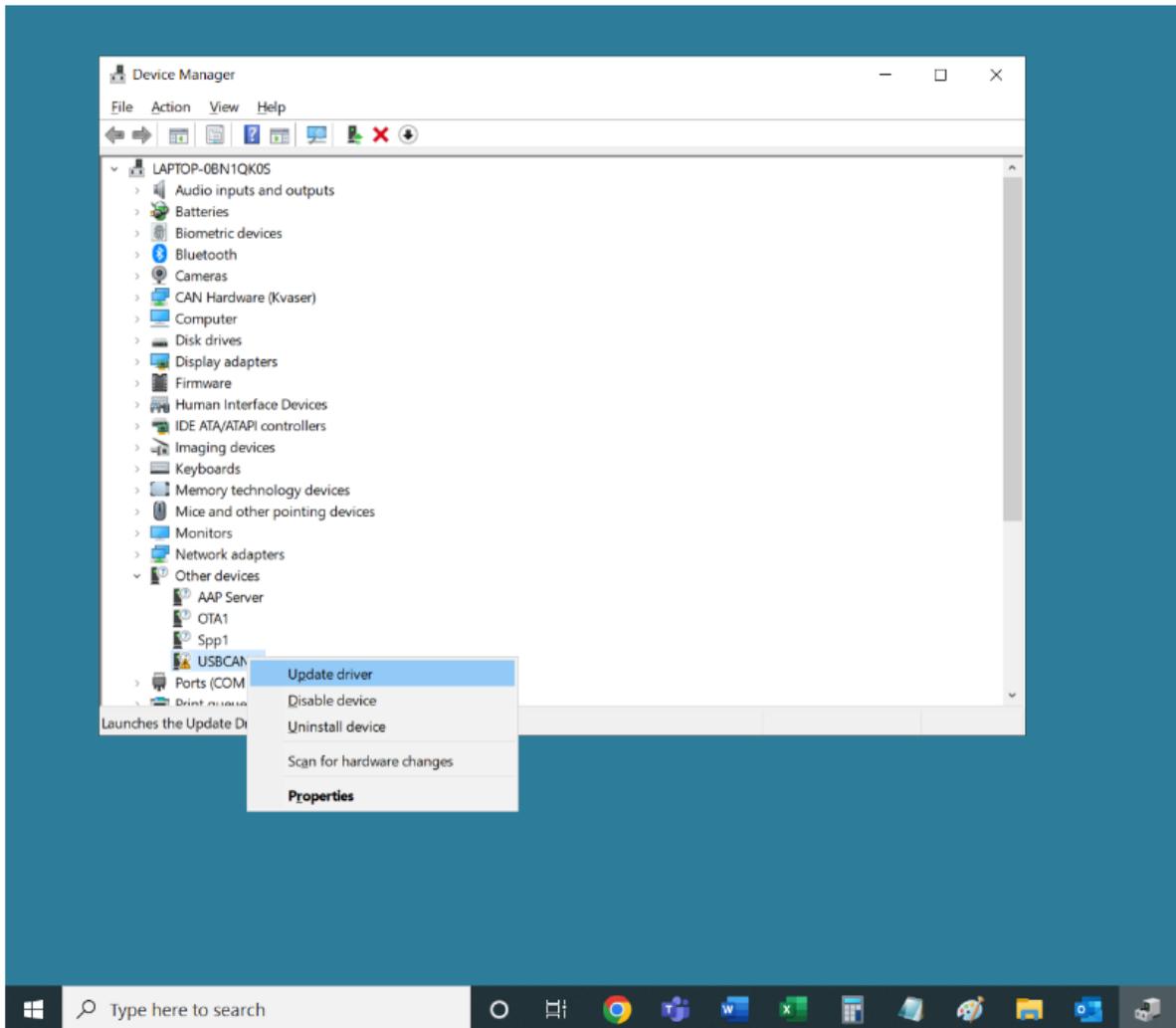
Now the drivers for the CAN tool (USBCAN) need to be installed

Installing the Drivers for the CANtool (USBCAN)

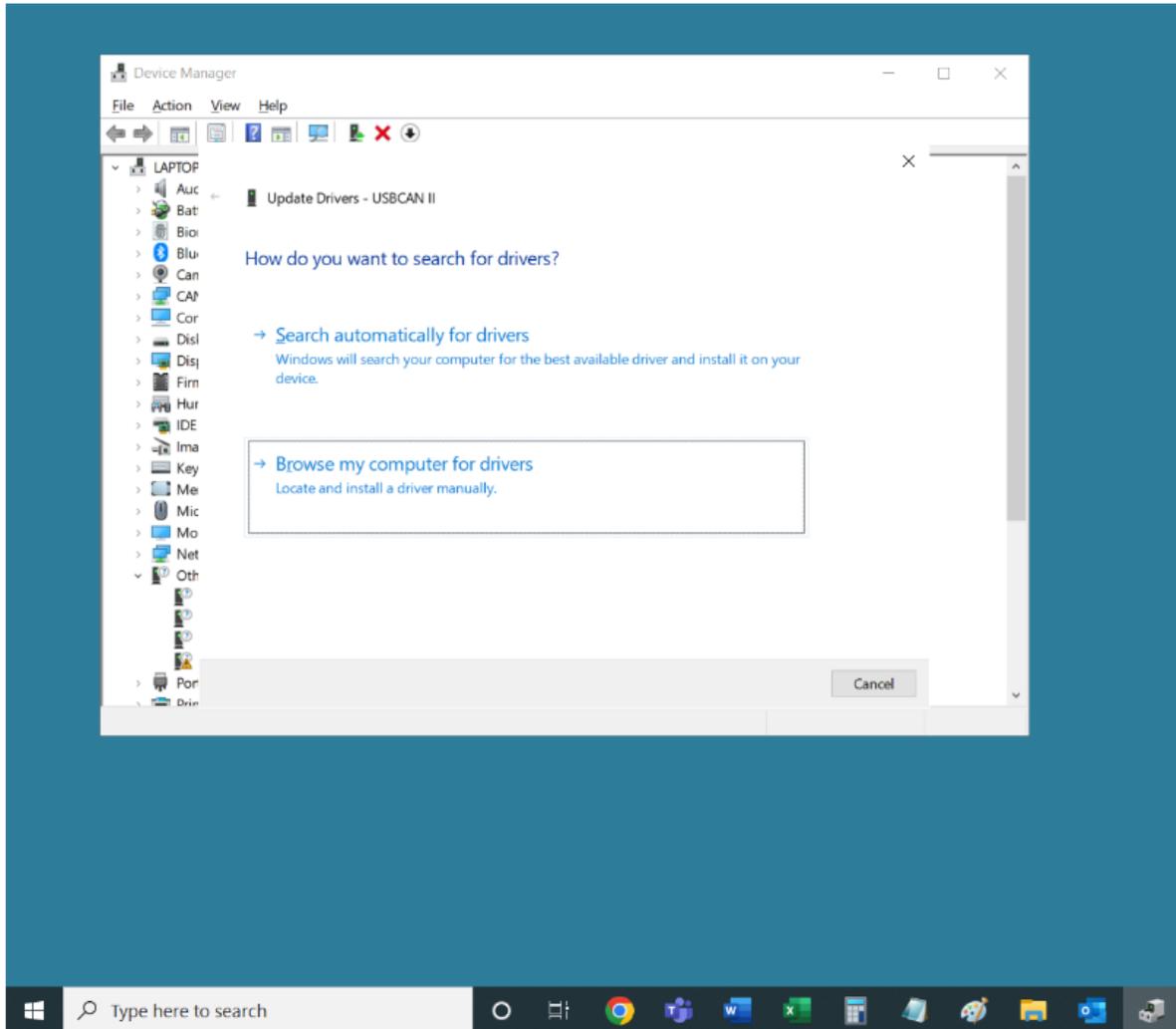
1. Connect the USB cable of the CANtool (USBCAN) to your computer and the CANtool itself.
2. Click on the "Start" icon (looks like a Windows logo) and type in "device manager". Above the search-bar, click on "Device Manager".



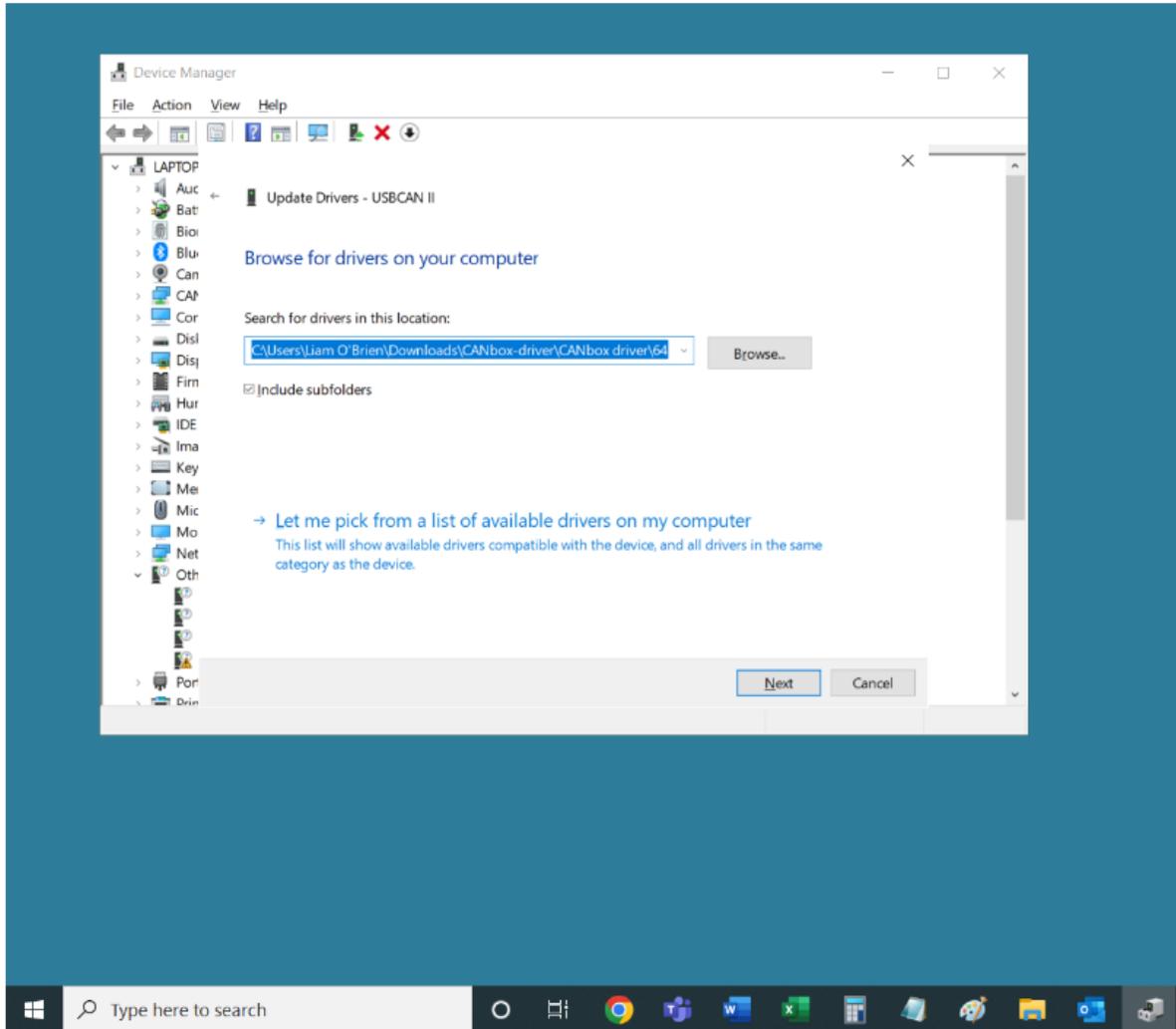
3. A window similar to the one shown below will open and one of the items of the list will be "USBCAN II" with an indent on the left. Right-click on this "USBCAN II" and from the drop-down click on "Update driver".



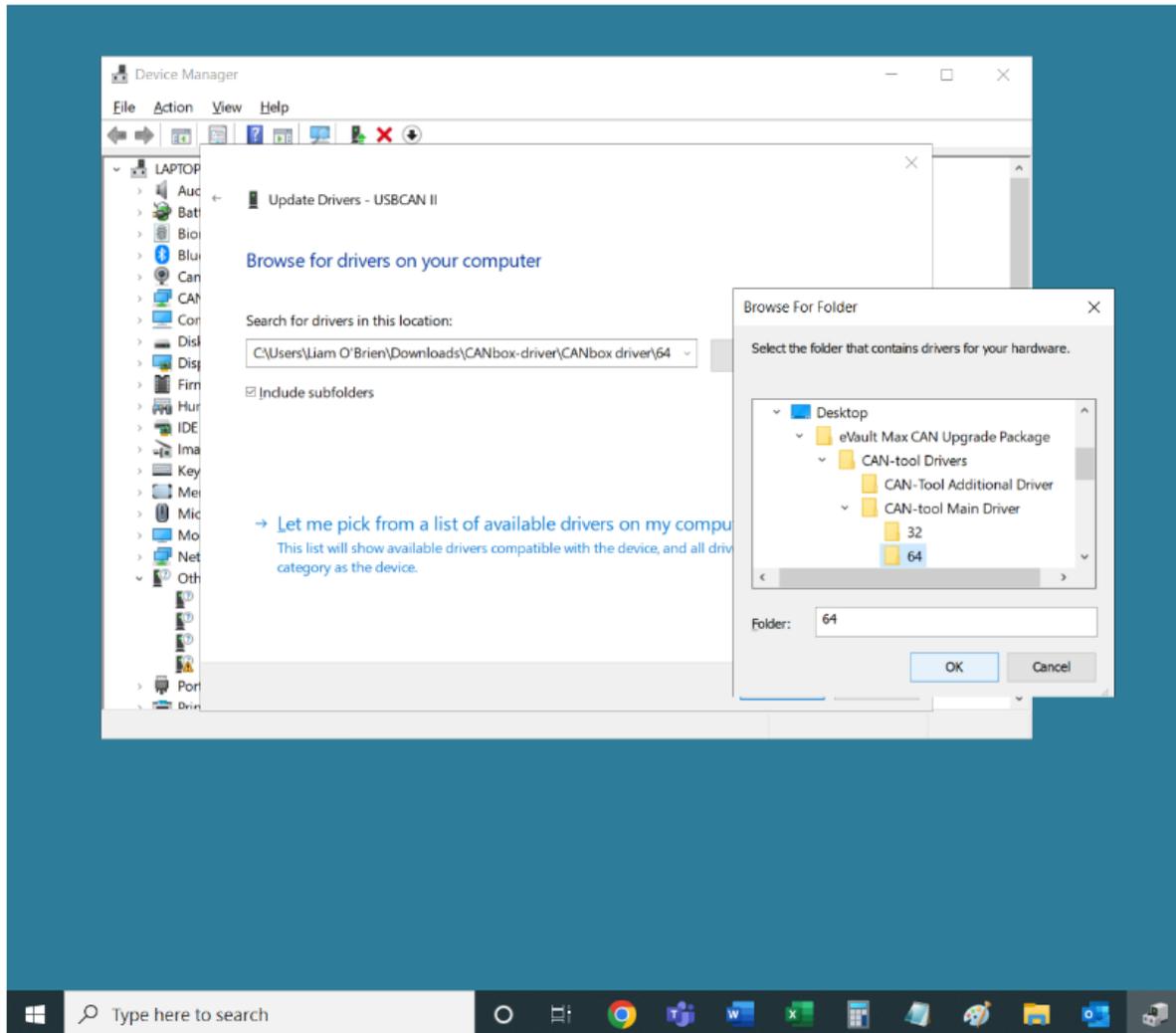
4. Next, click on "Browse my computer for drivers".



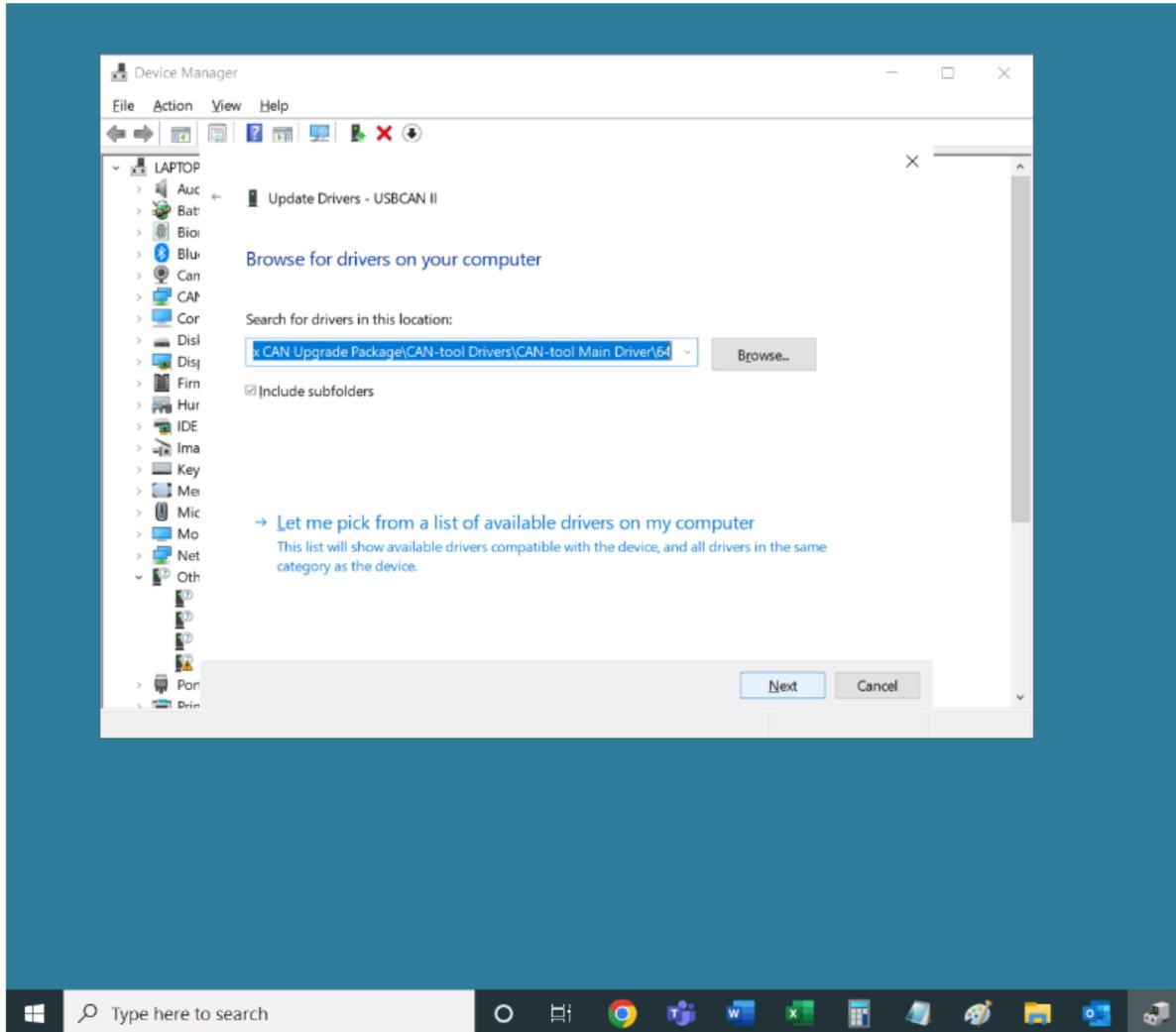
5. Now, click on "Browse..."



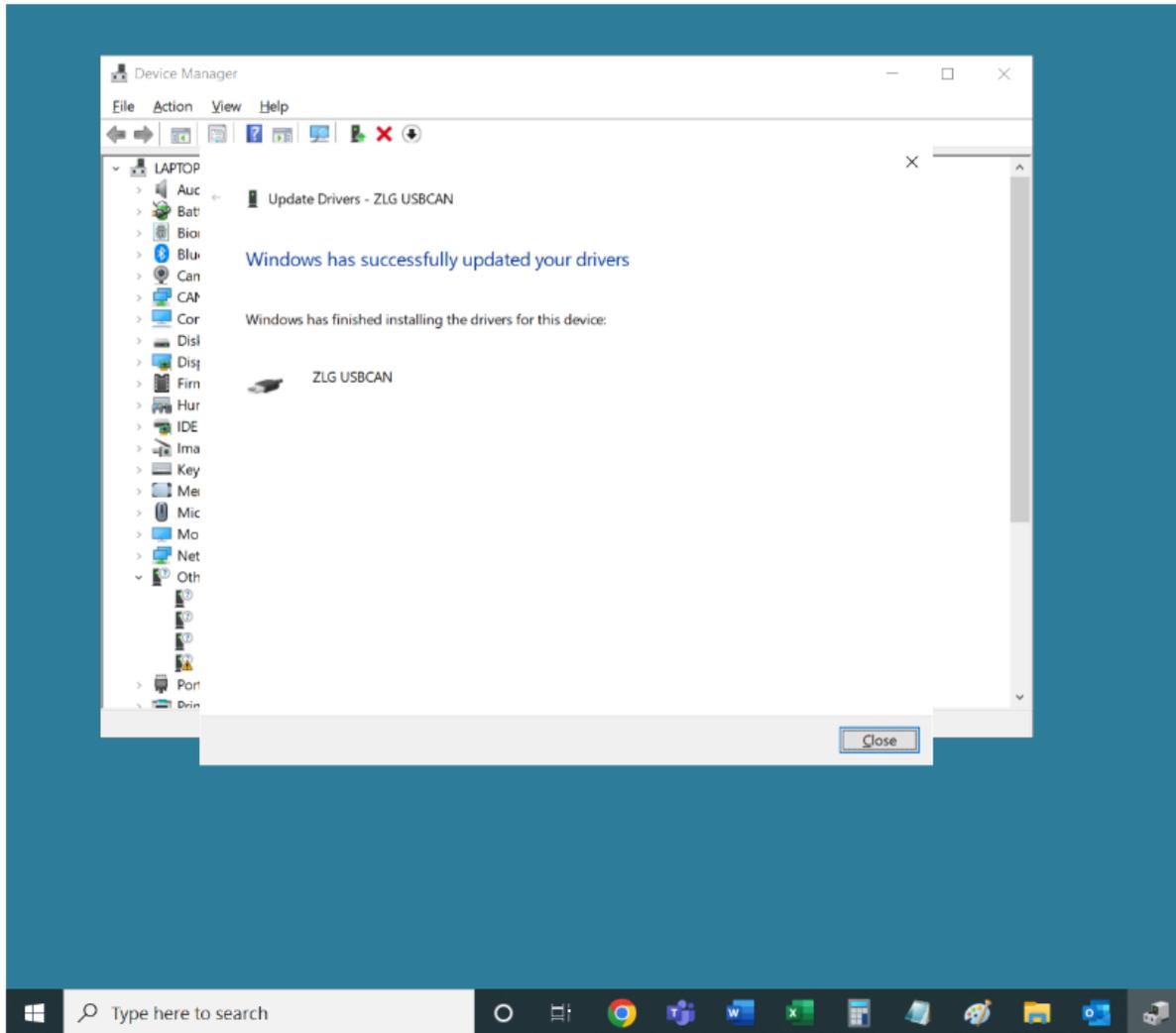
6. Then, navigate to the "eVault Max CAN Upgrade Package" and from there navigate as follows: "eVault Max CAN Upgrade Package" >>> "CAN-tool Drivers" >>> "CAN-tool Main Driver" >>> "64". Once "64" is selected, click "OK".



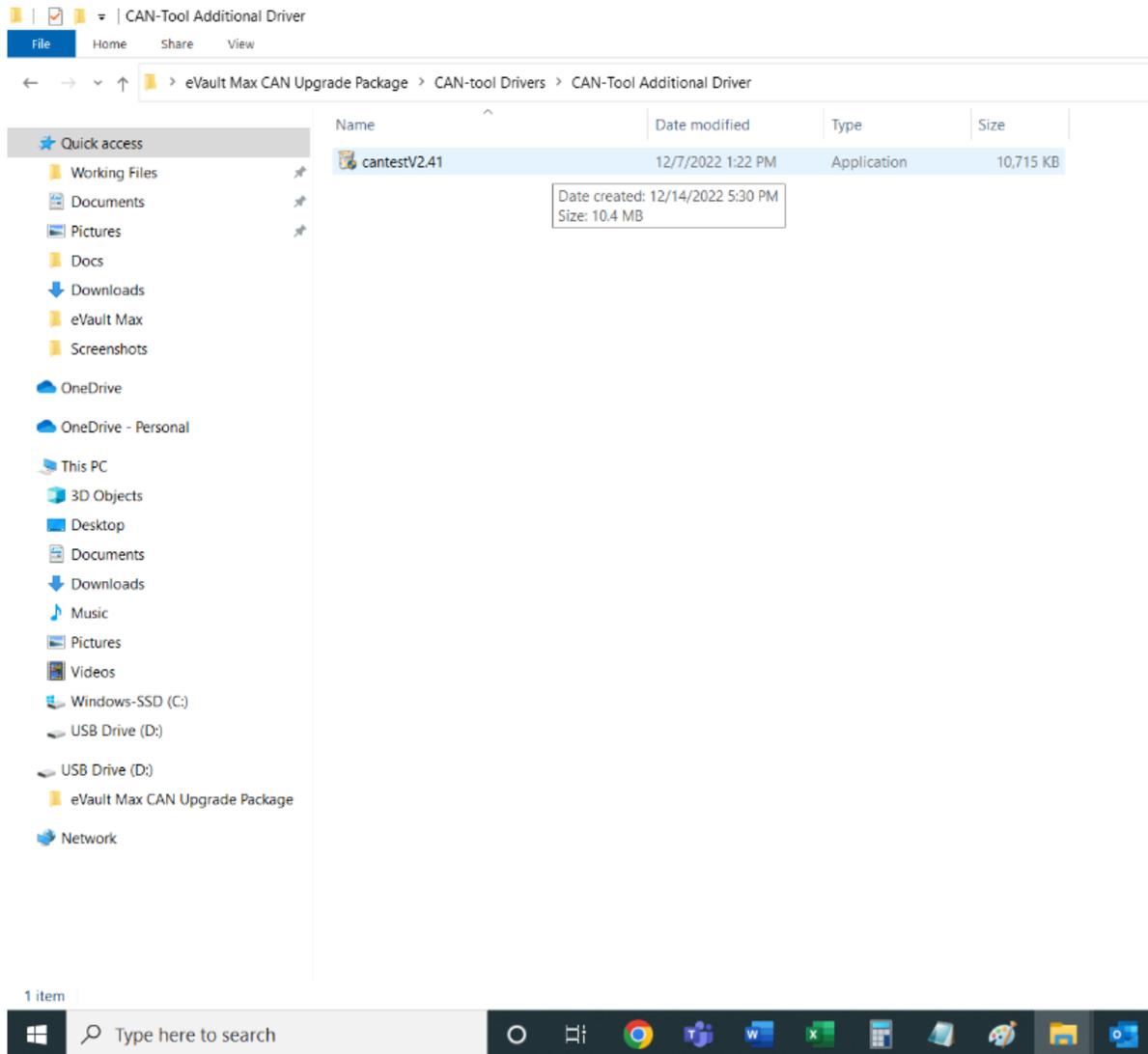
7. Then, click "Next".



8. You will see the success message as shown below. Click "Close" and close the "Device Manager" window.



9. It's time to install an additional document. To do so, first open "eVault Max CAN Upgrade Package" folder. Then, open the "CAN-tool Drivers" folder and afterwards open the "CAN-tool Additional Driver" folder. Now you can see a file titled "cantestV2.41".



10. Double-click "cantestV2.41".

The screenshot shows a Windows File Explorer window with the following details:

- Address Bar:** eVault Max CAN Upgrade Package > CAN-tool Drivers > CAN-Tool Additional Driver
- File List:**

| Name | Date modified | Type | Size |
|--------------|-------------------|-------------|-----------|
| cantestV2.41 | 12/7/2022 1:22 PM | Application | 10,715 KB |
- Left Panel (Quick access):** Working Files, Documents, Pictures, Docs, Downloads, eVault Max, Screenshots, OneDrive, OneDrive - Personal, This PC, 3D Objects, Desktop, Documents, Downloads, Music, Pictures, Videos, Windows-SSD (C:), USB Drive (D:), USB Drive (D:), eVault Max CAN Upgrade Package, Network.
- Taskbar:** Shows search bar with "Type here to search" and various application icons including Chrome, Word, Excel, and File Explorer.

The 'CANTest 2.41 Setup' dialog box contains the following text:

Welcome to CANTest 2.41 Setup

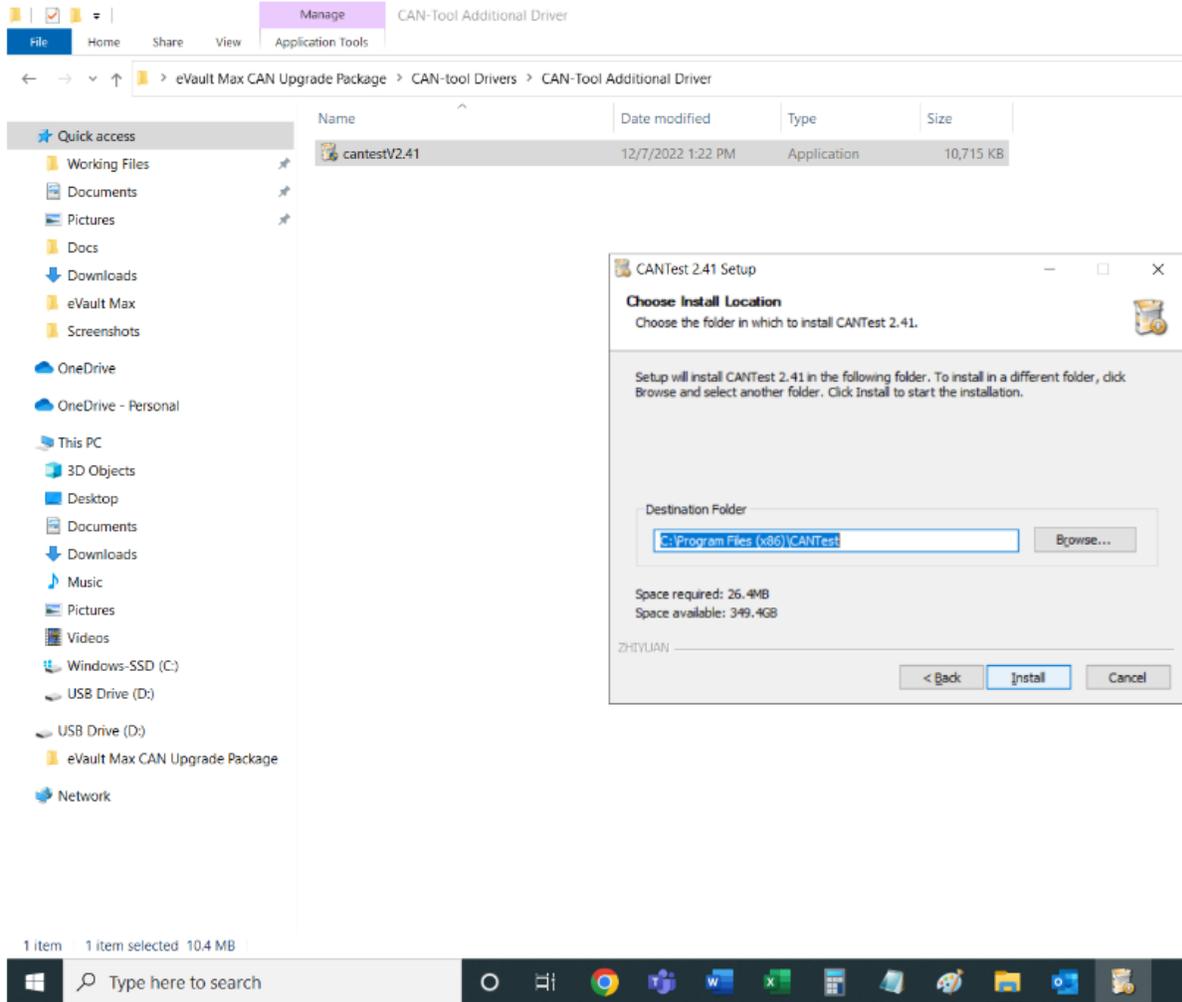
Setup will guide you through the installation of CANTest 2.41.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

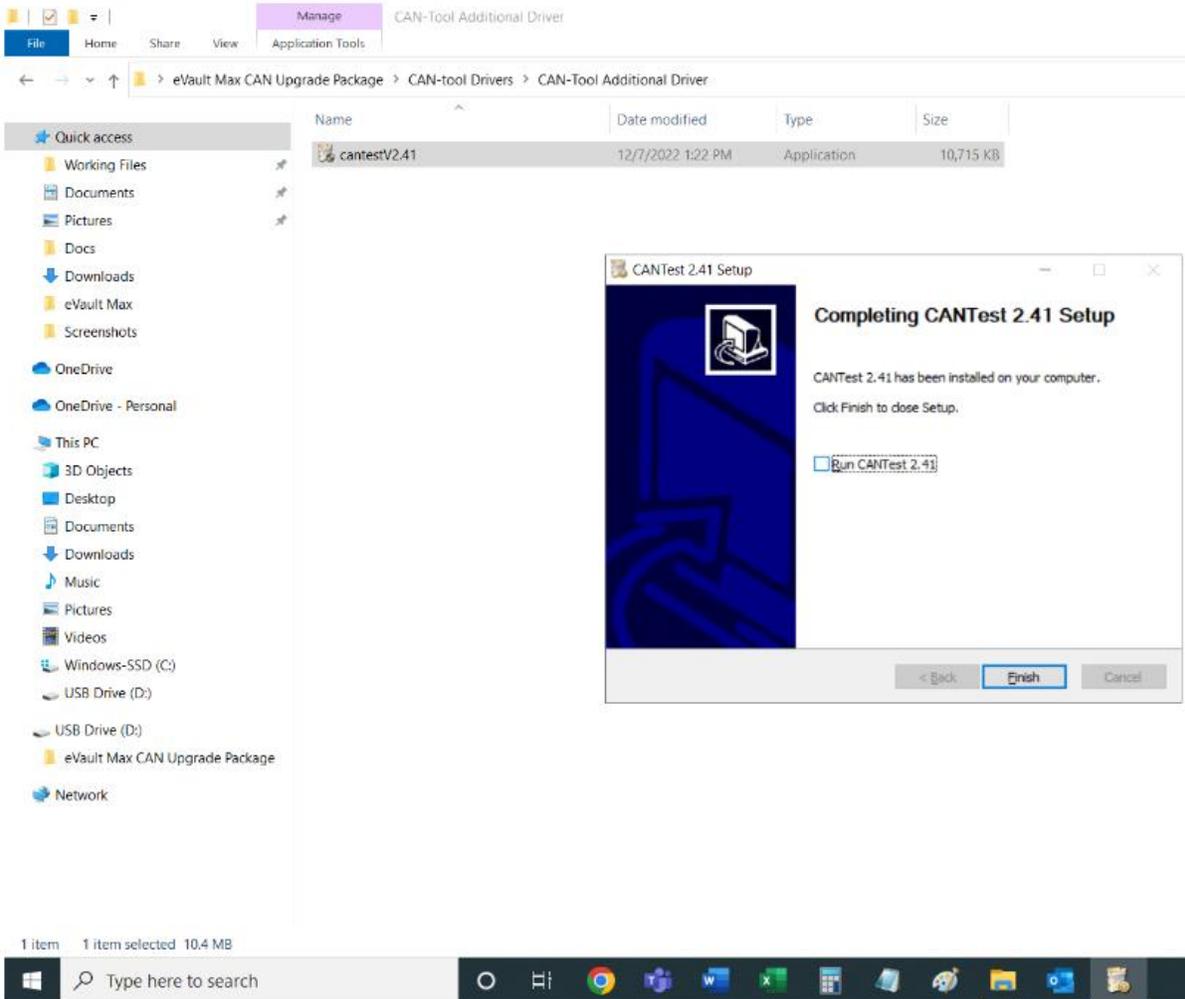
Click Next to continue.

Buttons: **Next >** (highlighted), **Cancel**

11. Then click "Install" and the installation process will start.



13. Once the installation is completed, uncheck "Run CANTest 2.41" and click "Finish".



14. Go back to folder "eVault Max CAN Upgrade Package".

The drivers only have to be installed once. Keep the CANtool connected to the computer and now it's time to perform an actual firmware update.

Obtaining and Organizing the Required Files

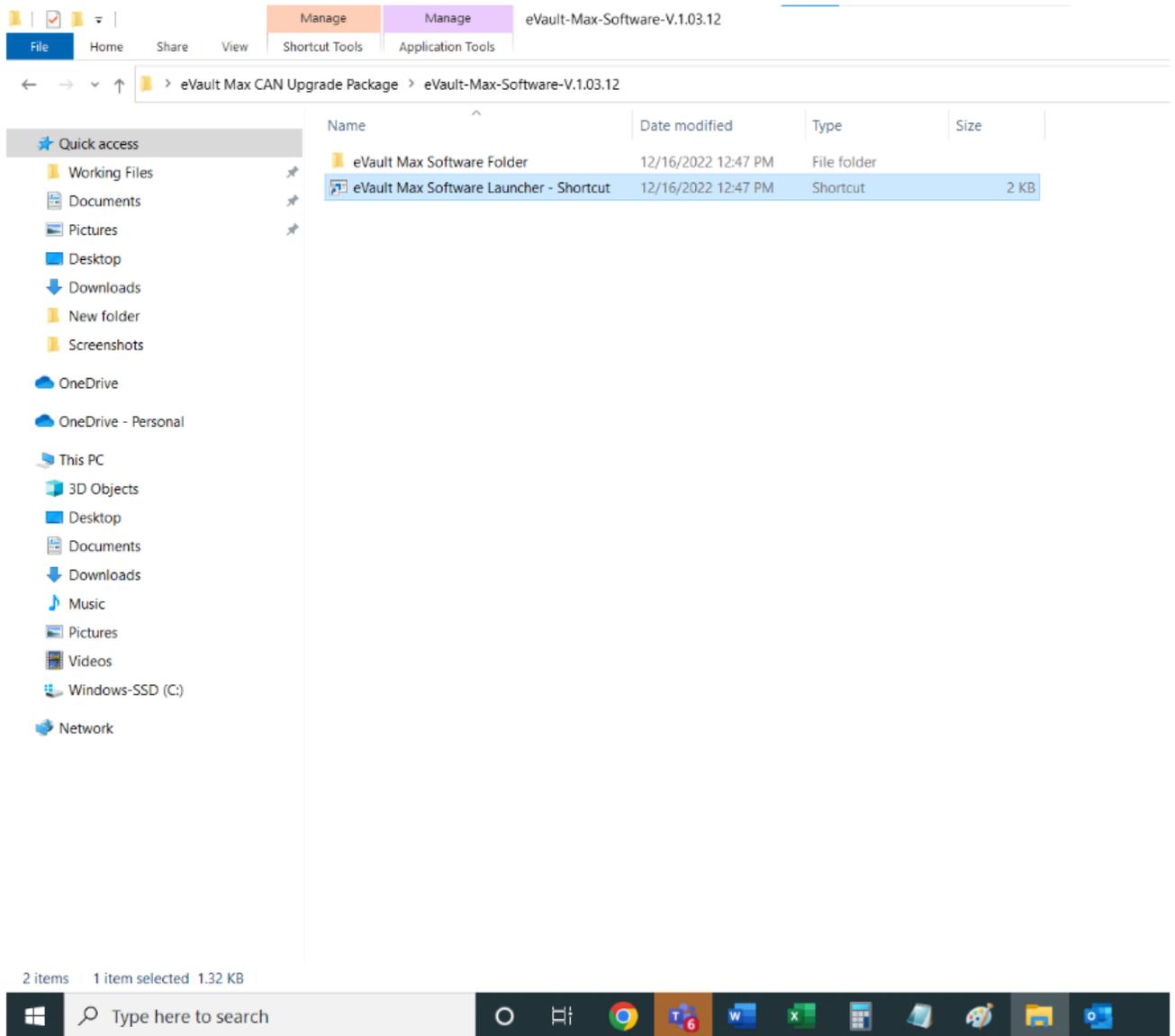
Important!

There must be no current flow to or from any battery in the system during the firmware update process. It is a good idea to have DC breakers in the 'OFF' position on all batteries in the system or to have the battery breakers on all Sol-Arks in the system in the 'OFF' position.

Firmware must be updated on one battery at a time. During the firmware update, the battery must be communicating neither with an inverter nor with any other battery. While not having the battery to inverter communication cable connected to any of the batteries, either turn off the other batteries in the loop and keep turned on only the battery that is receiving the new firmware (later turning off this battery and turning on the next battery to receive the firmware, repeating this for all the batteries in the system) or have one end of the battery to battery communication cable disconnected for all battery to battery communication cables present in the system. There must be now current flow to or from the batteries in the process.

Make sure that both cables that came with the CANtool (USBCAN) are connected to the CANtool. Then, make sure that the USB cable is connected to the computer and that the ethernet cable is connected to either of the two COM Parallel ports (in/out).

1. Open "eVault Max CAN Upgrade Package" folder, then open "eVault-Max-Software-V....." folder and double click on "eVault Max Software Launcher - Shortcut".



2. Click "Open".

The screenshot shows a Windows File Explorer window with the address bar set to "eVault Max CAN Upgrade Package > eVault-Max-Software-V.1.03.12". The main pane displays a table of files:

| Name | Date modified | Type | Size |
|---|---------------------|-------------|------|
| eVault Max Software Folder | 12/16/2022 12:47 PM | File folder | |
| eVault Max Software Launcher - Shortcut | 12/16/2022 12:47 PM | Shortcut | 2 KB |

A "Security Warning" dialog box is overlaid on the right side of the window. The dialog title is "Open File - Security Warning". It asks "Do you want to open this file?" and provides the following details:

- Name: ...03.12\eVault Max Software Launcher - Shortcut.Lnk
- Publisher: **Unknown Publisher**
- Type: Shortcut
- From: C:\Users\Avtandil Giorgadze\OneDrive - Fortress P...

At the bottom of the dialog, there is a checked checkbox labeled "Always ask before opening this file". Below the checkbox, a warning icon (a shield with an exclamation mark) is shown next to the text: "While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not open this software. [What's the risk?](#)"

At the bottom of the File Explorer window, the status bar shows "2 items 1 item selected 1.32 KB". The Windows taskbar is visible at the bottom of the screen, showing the Start button, search bar, and several application icons.

- Then, click on "OPEN CAN-BUS" in the bottom left corner of the window. If the CAN tool. Remember, at this time the battery that you have the CAN tool connected to must not be communicating with any other element of the system. If the communication between your computer and the battery is present, "OPEN CAN-BUS" will change font to red and the cell voltages for example would show non-zero values.

The screenshot displays the eVaultMax software interface on a Windows computer. The window title is "eVaultMax_Upper_Computer V1.03.09". The interface includes a sidebar with navigation options: GENERAL, BASE INFO, PARALLEL INFO, HISTORY, HISTORY DATA, LOGS HISTORY, SETTINGS, PARAMETER, FIRMWARE, and MANUFACTURE. The main display area shows various battery metrics:

- SOX: 95.3 %
- VOLTAGE: 53.3 Vdc
- CURRENT: 0.0 Adc
- POWER: 0.000 kW
- TOTAL ENERGY: 1.23 MWh
- HEALTH: 100.0 %

Below these metrics, there are four columns of data for cell voltages and temperatures:

| Max Cell Volt | | Min Cell Volt | | Max Temp | | Min Temp | |
|---------------|------|---------------|-----|----------|-----|----------|-----|
| 3.336V | C-15 | 3.334V | C-1 | 22°C | T-2 | 20°C | T-1 |

Each column also contains a list of individual cell and temperature readings:

- Module 1:** Cell_01 (3.334V), Cell_02 (3.334V), Cell_03 (3.336V), Cell_04 (3.335V), Temp_1 (20°C), Temp_2 (22°C)
- Module 2:** Cell_05 (3.336V), Cell_06 (3.336V), Cell_07 (3.336V), Cell_08 (3.334V), Temp_3 (20°C), Temp_4 (20°C)
- Module 3:** Cell_09 (3.334V), Cell_10 (3.336V), Cell_11 (3.336V), Cell_12 (3.334V), Temp_5 (20°C), Temp_6 (20°C)
- Module 4:** Cell_13 (3.336V), Cell_14 (3.336V), Cell_15 (3.336V), Cell_16 (3.334V), Temp_7 (20°C), Temp_8 (20°C)

At the bottom, there are four control buttons with status indicators: PRE-CHG (OFF), DISCHARGE (ON), CHARGE (ON), and MAIN-2nd (ON). The status of the battery is shown as "Static".

At the bottom left, there are three buttons: TYPE (USBCAN2), OPEN CAN-BUS (highlighted in red), and CLOSE CAN-BUS. The bottom of the image shows the Windows taskbar with the search bar and system tray.

4. It's time to select a firmware file to be used. Click on "FIRMWARE" under the "SETTINGS".

eVaultMax_Upper_Computer V1.03.09

FORTRESS POWER

COM Ports: **COM5** BAT ID: **01**

PROTECTION: ● 2022-12-14
ALARM: ● 17:36:19

GENERAL

- BASE INFO
- PARALLEL INFO

HISTORY

- HISTORY DATA
- LOGS HISTORY

SETTINGS

- PARAMETER
- FIRMWARE**
- MANUFACTURE

TYPE: **USBCAN2**
OPEN CAN-BUS
CLOSE CAN-BUS

Manufacturing Info

Serial Number: **21050518B0031**
Model Number: **eVault Max**

BMS Info

Firmware Version: **51360ST0102**

SUCCESS

Select File

0% START

CLEAR

1 item selected 1,32 KB

Type here to search

35°F Mostly clear

5. And Click on "Select File".

eVaultMax_Upper_Computer V1.03.09

FORTRESS POWER   COM Ports **COM5** BAT ID **01** PROTECTION  2022-12-14
ALARM  17:36:22

GENERAL
BASE INFO
PARALLEL INFO
HISTORY
HISTORY DATA
LOGS HISTORY
SETTINGS
PARAMETER
FIRMWARE
MANUFACTURE

Manufacturing Info **BMS Info**

Serial Number

Model Number

SUCCESS

Select firmware update per Fortress Power instructions. Failure to follow update procedures may void the warranty. Please restart the eVault upon completion of the firmware update.

Current Rev. New Rev.

Update File:

Firmware update might not proceed if CAN-Bus is not connected.

ems 1 item selected 1.32 KB

Type here to search  35°F Mostly clear

6. Across "Update File" on the other side you'll see an icon with three dots. Click on the latter.

eVaultMax_Upper_Computer V1.03.09

FORTRESS POWER COM Ports **COM5** BAT ID **01** PROTECTION 2022-12-14 ALARM 17:36:28

GENERAL

- BASE INFO
- PARALLEL INFO
- HISTORY**
- HISTORY DATA
- LOGS HISTORY
- SETTINGS**
- PARAMETER
- FIRMWARE**
- MANUFACTURE

Manufacturing Info **BMS Info**

Serial Number Model Number

File Explorer: Select Firmware File

« eVault Max User » eVault Max Software Folder »

| Name | Date modified | Type | Size |
|--------------|-------------------|-------------|------|
| bearer | 12/7/2022 1:33 PM | File folder | |
| iconengines | 12/7/2022 1:33 PM | File folder | |
| imageformats | 12/7/2022 1:33 PM | File folder | |
| imgs | 12/7/2022 1:33 PM | File folder | |
| kerneldlls | 12/7/2022 1:33 PM | File folder | |
| platforms | 12/7/2022 1:33 PM | File folder | |
| setting | 12/7/2022 1:33 PM | File folder | |
| translations | 12/7/2022 1:33 PM | File folder | |

File name: upgrade file (*.bin *.s19)

Buttons: Select File, START, CLEAR

ims 1 item selected 1.32 KB

Type here to search 35°F Mostly clear

7. Navigate to the "eVault Max CAN Upgrade Package" in this pop-up window, double-click on "eVault Max CAN Upgrade Package" and then double click on "eVault Max Firmware (.....)" and double-click on the single file that this folder contains. Afterwards, click "CONFIRM".

The screenshot displays the Fortress Power eVault Max software interface. At the top, the title bar reads "eVaultMax_Upper_Computer V1.03.09". The interface includes a navigation menu on the left with sections for GENERAL (BASE INFO, PARALLEL INFO), HISTORY (HISTORY DATA, LOGS HISTORY), and SETTINGS (PARAMETER, FIRMWARE, MANUFACTURE). The main area is divided into "Manufacturing Info" and "BMS Info". A modal dialog box is open, titled "eVaultMaxUpperComputer", with a close button and a refresh icon. The dialog contains the following text: "Select firmware update per Fortress Power instructions. Failure to follow update procedures may void the warranty. Please restart the eVault upon completion of the firmware update." Below this, it shows "Current Rev. V1.0" and "New Rev. V7.01.1". The "Update File:" field contains the path "rade Package/eVault Max Firmware (V.51360ST0102)/51360ST0102.s19". A warning message states "Firmware update might not proceed if CAN-Bus is not connected." with a green "CONFIRM" button. On the right side of the dialog, there are buttons for "Select File" and "START". At the bottom of the dialog is a "CLEAR" button. The background interface shows "COM Ports" set to "COM5" and "BAT ID" set to "01". Status indicators for "PROTECTION" (red) and "ALARM" (yellow) are visible, along with the date "2022-12-14" and time "17:36:55". The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with "35°F Mostly clear".

8. Initiate the firmware update by clicking "START".

eVaultMax_Upper_Computer V1.03.09

FORTRESS POWER COM Ports **COM5** BAI ID **01** PROTECTION 2022-12-14 ALARM 17:36:59

GENERAL
BASE INFO
PARALLEL INFO
HISTORY
HISTORY DATA
LOGS HISTORY
SETTINGS
PARAMETER
FIRMWARE
MANUFACTURE

Manufacturing Info
Serial Number **21050518B0031**
Model Number **eVault Max**

BMS Info
Firmware Version **51360ST0102**

SUCCESS

It Max Firmware (V.51360ST0102)/51360ST0102.s19 **Select File**

0% **START**

CLEAR

TYPE **USBCAN2**
OPEN CAN BUS
CLOSE CAN-BUS

1ms 1 item selected 1.32 KB

Type here to search 35°F Mostly clear

9. Firmware update is only completed when progress bar shows 100% **AND** on the left side it displays "SUCCESS" (instead of "Sending").

The screenshot shows the eVaultMax web interface. At the top, the title bar reads "eVaultMax_Upper_Computer V1.03.09". The main header includes the "FORTRESS POWER" logo, a home icon, a lock icon, "COM Ports COM5", "BAT ID 01", "PROTECTION 2022-12-14", and "ALARM 17:36:59".

The left sidebar contains navigation menus: "GENERAL" (with sub-items BASE INFO, PARALLEL INFO), "HISTORY" (with sub-items HISTORY DATA, LOGS HISTORY), and "SETTINGS" (with sub-items PARAMETER, **FIRMWARE**, MANUFACTURE). At the bottom of the sidebar are buttons for "TYPE USBCAN2", "OPEN CAN-BUS", and "CLOSE CAN-BUS".

The main content area is divided into "Manufacturing Info" and "BMS Info". "Manufacturing Info" shows "Serial Number 21050518B0031" and "Model Number eVault Max". "BMS Info" shows "Firmware Version 51360ST0102".

The central area features a large green "SUCCESS" message. Below it is a progress bar showing "0%" and a "START" button. To the right, there is a "Select File" button and a "CLEAR" button.

The bottom status bar shows "1 item selected 1.32 KB", a search bar, and system tray icons including a search bar, taskbar icons, and a weather widget showing "35°F Mostly clear".

The firmware is now updated!