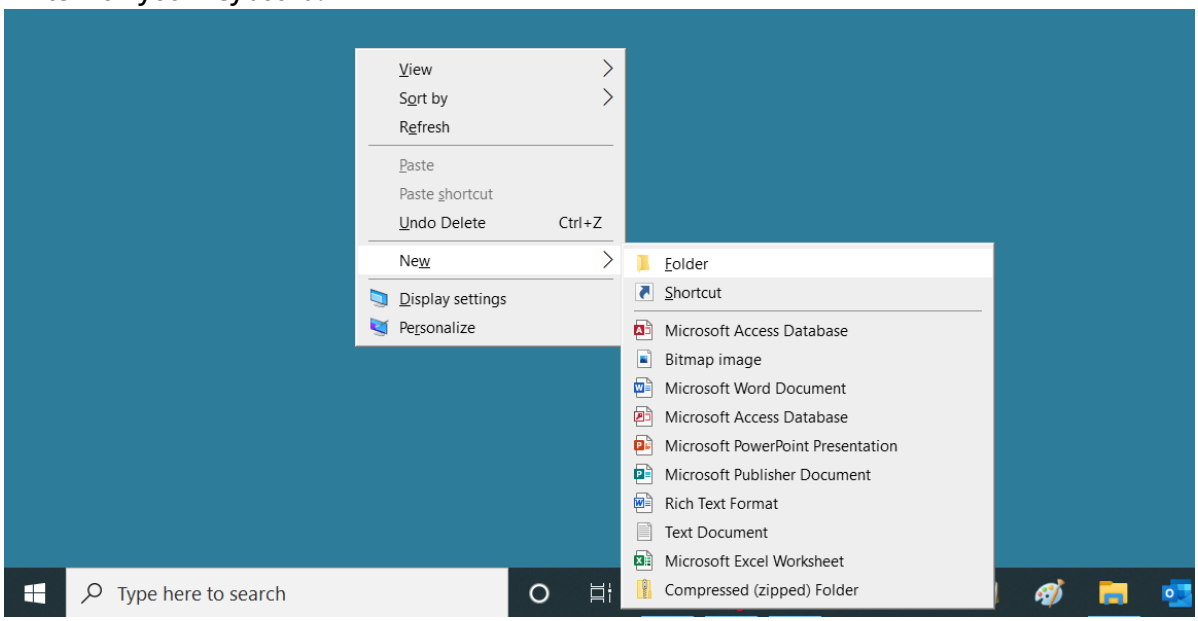
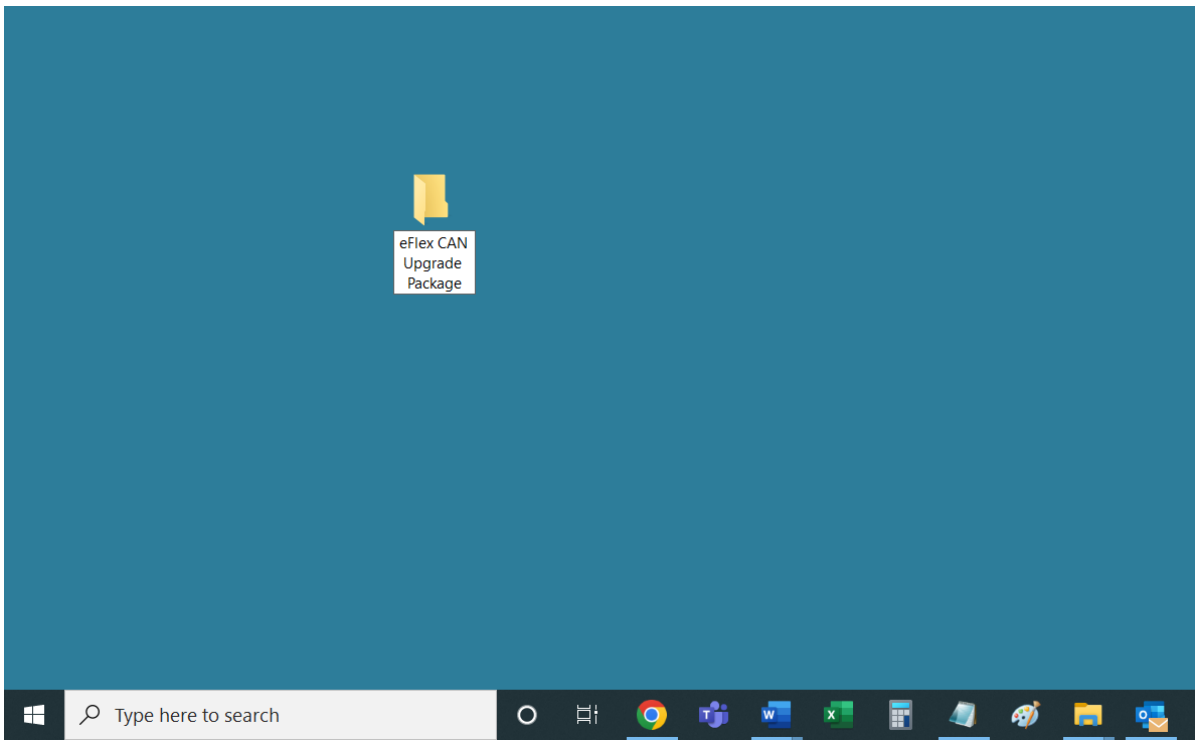
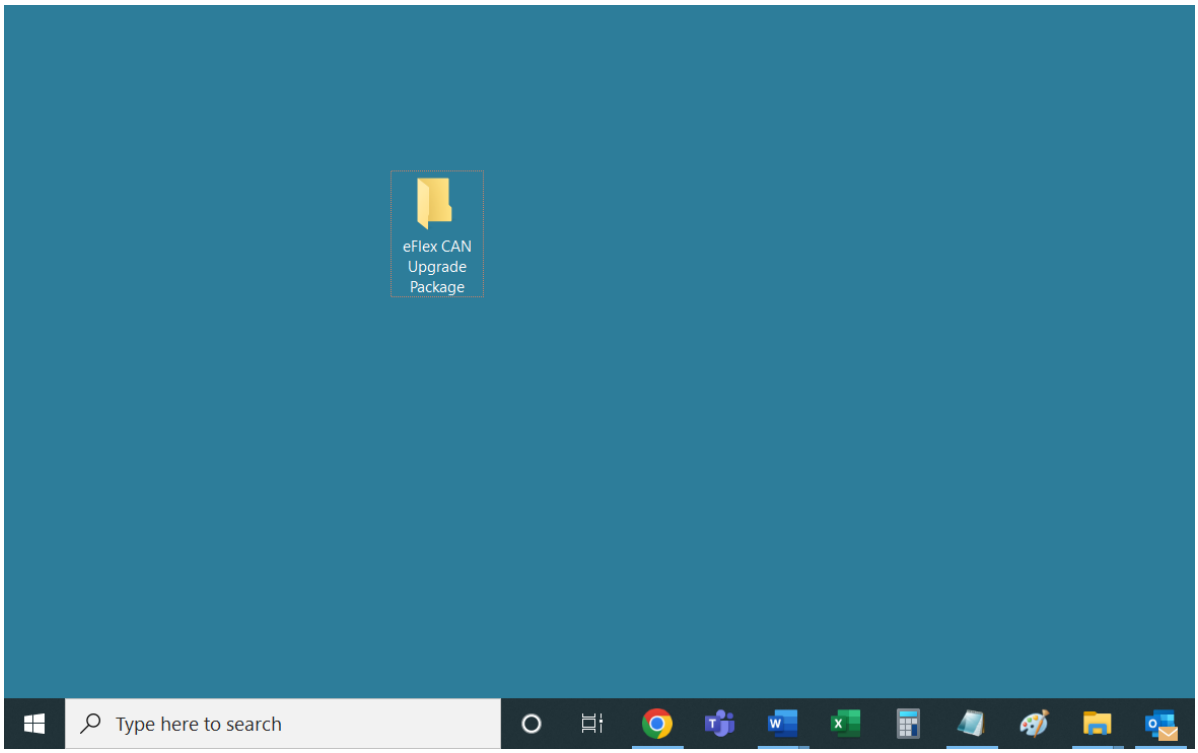
Obtaining and Organizing the Required Files

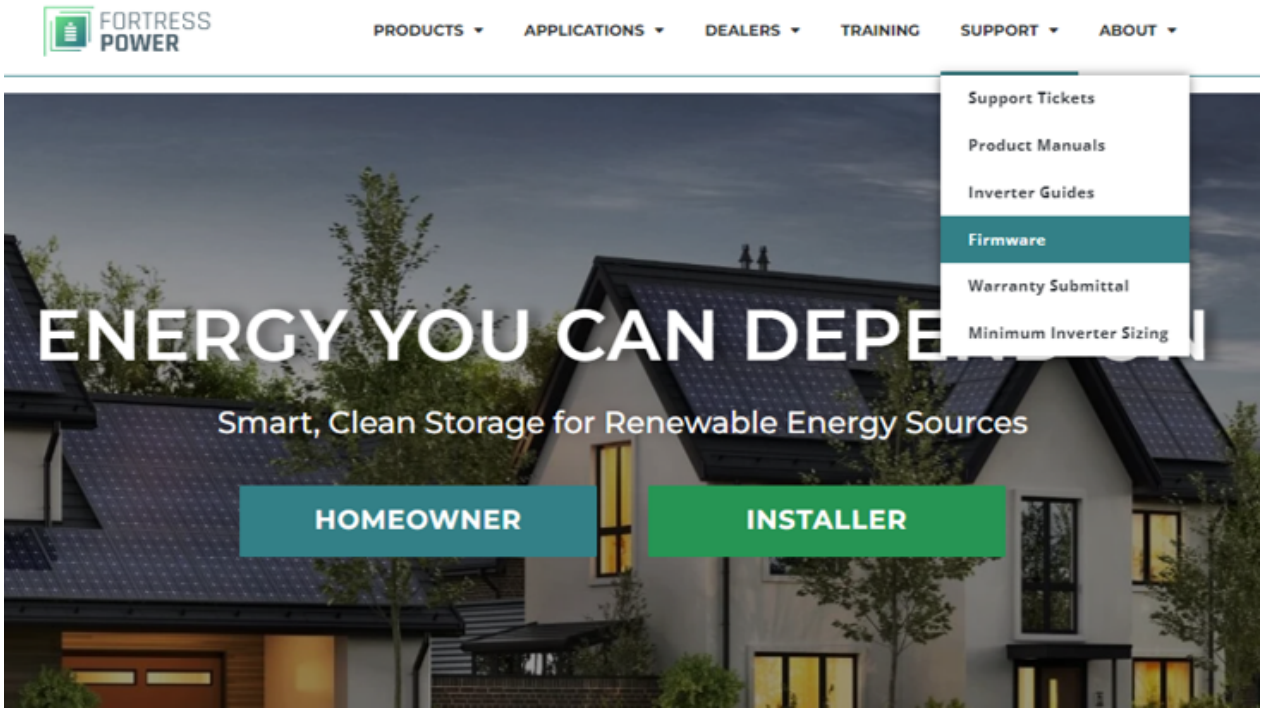
1. Right-click on the desktop and in the drop down, hover your mouse pointer to "New" and then click on "Folder" and create a title for it. In this guide the folder will be named "eFlex CAN Upgrade Package" and it is suggested for you to use the same title. Once the title is typed in either double click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



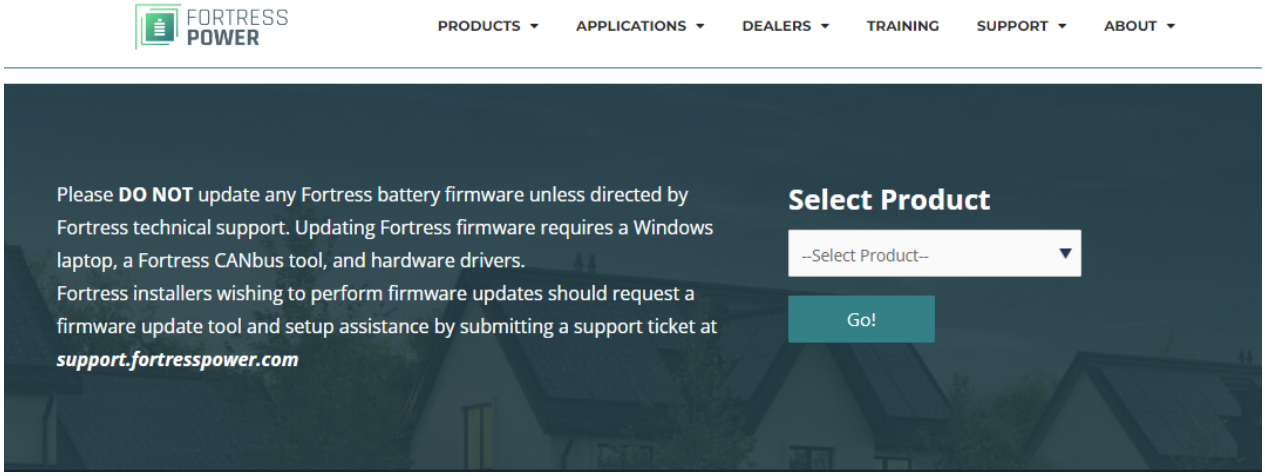




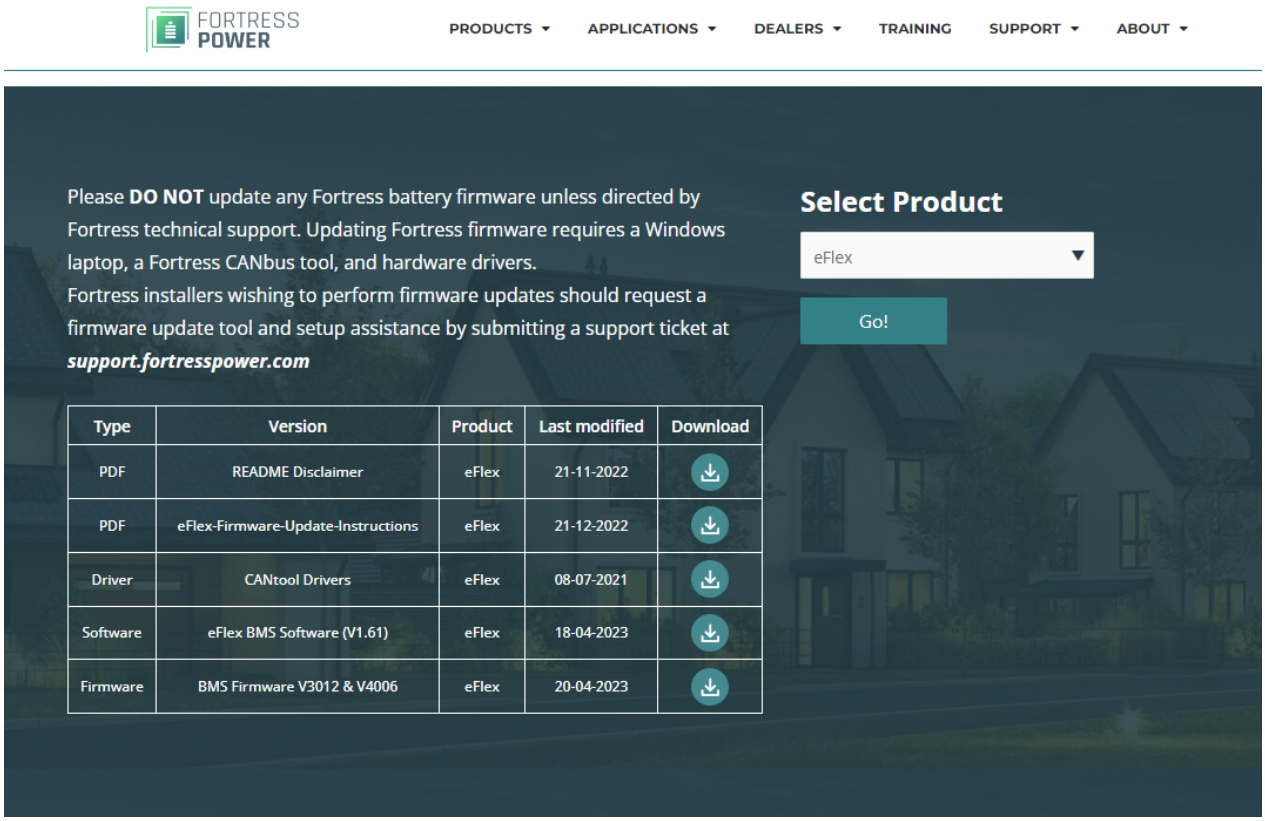
2. **Go to website "fortresspower.com", hover your mouse pointer to the "SUPPORT" tab on the website and click on "Firmware".**



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

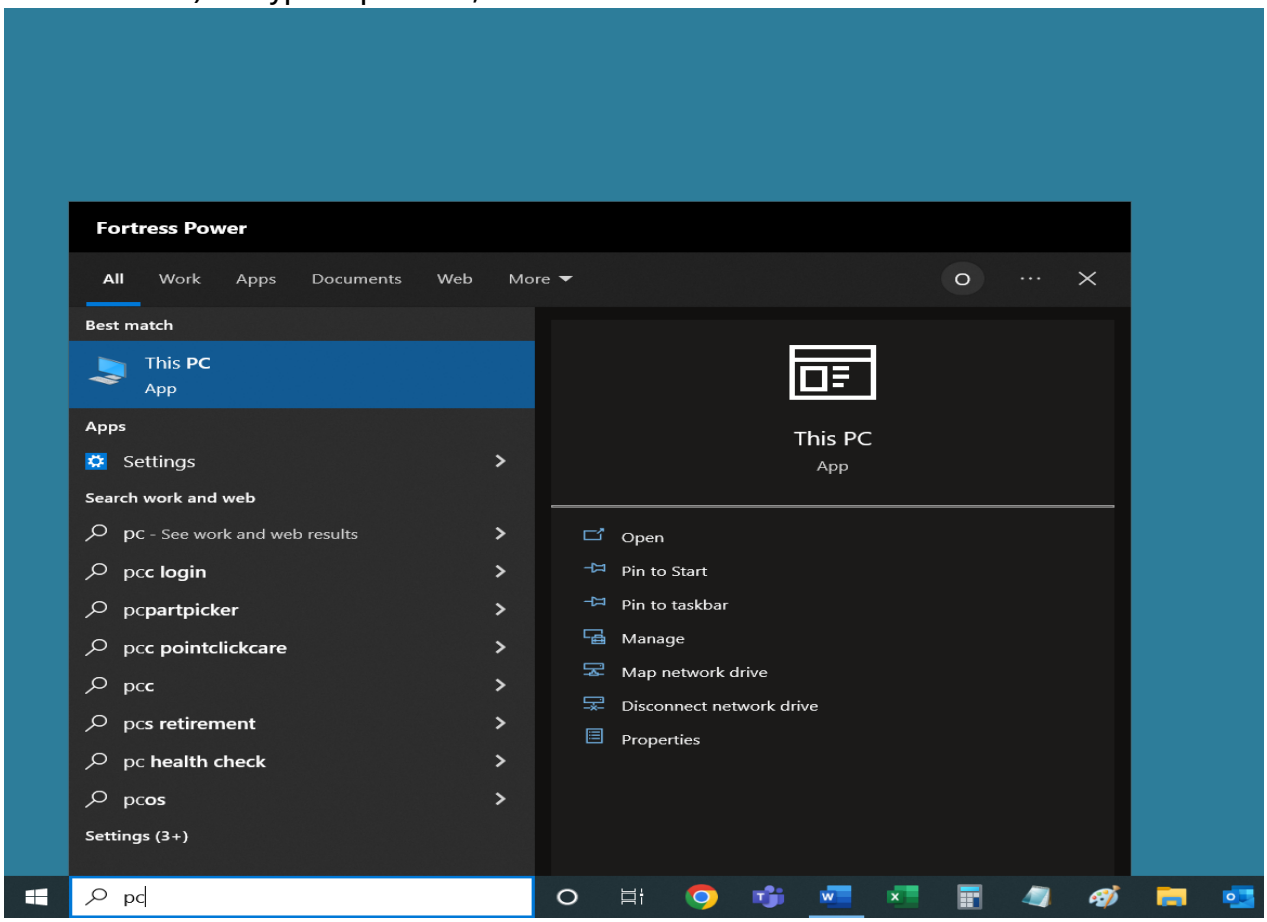


4. Below, a table will appear. You need to download software, firmware, and driver. Click on download icons for the corresponding rows (last four download icons).
Note: the version numbers will change in the future. If the versions that you see on your screen don't coincide with the ones in this manual, that's normal, please continue.

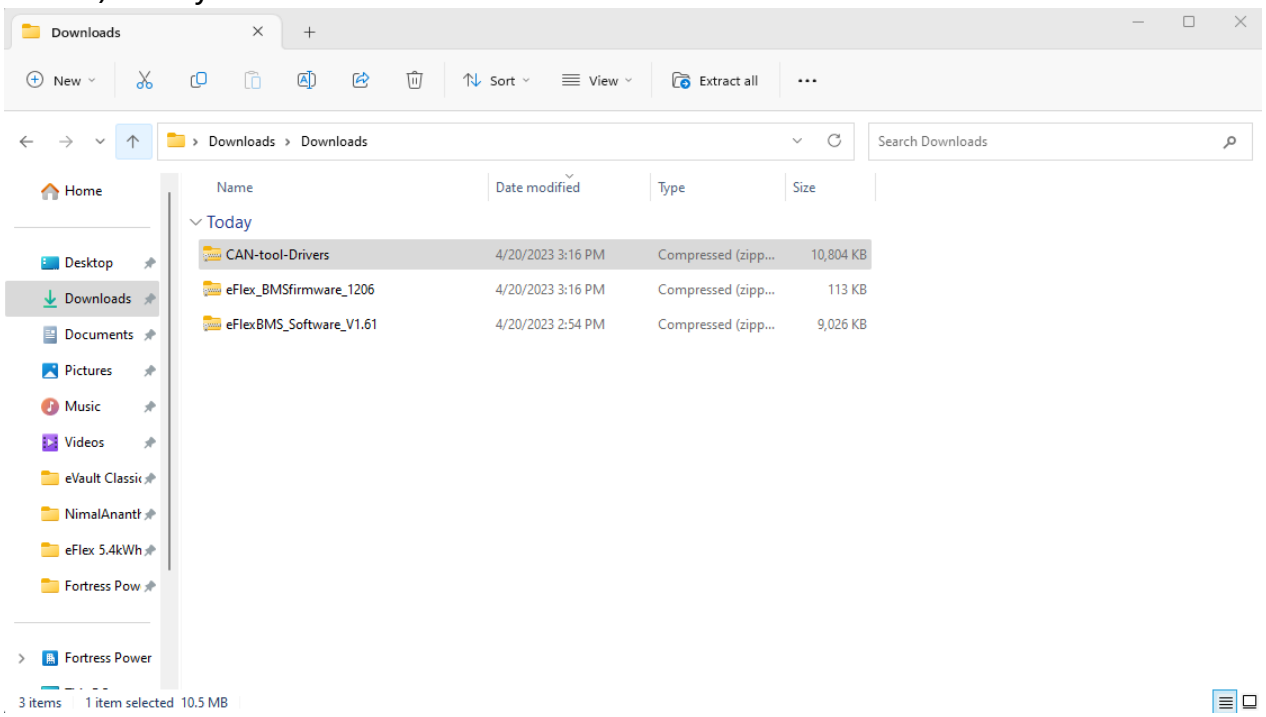


5. Once the downloads are completed, navigate to the "Downloads" folder (or wherever you saved the files from the website). Close the browser, click on the start (looks like

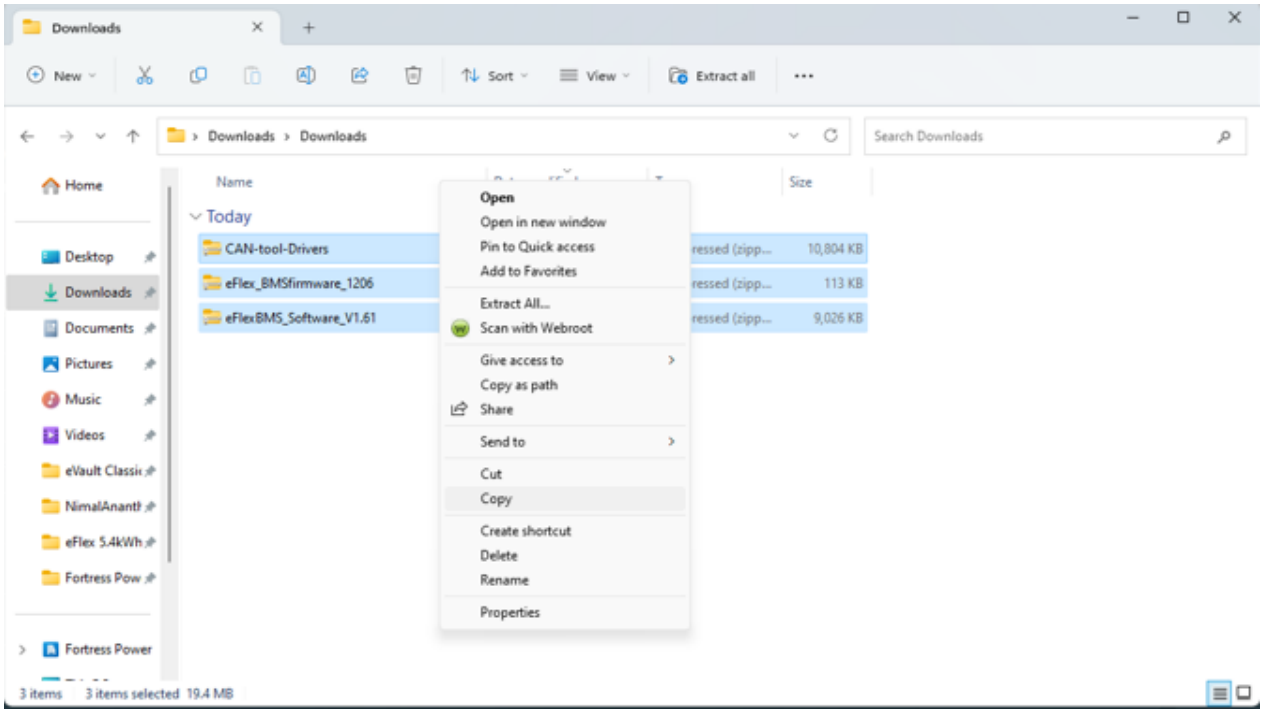
a Windows icon) and type in "pc". Then, click on "This PC".



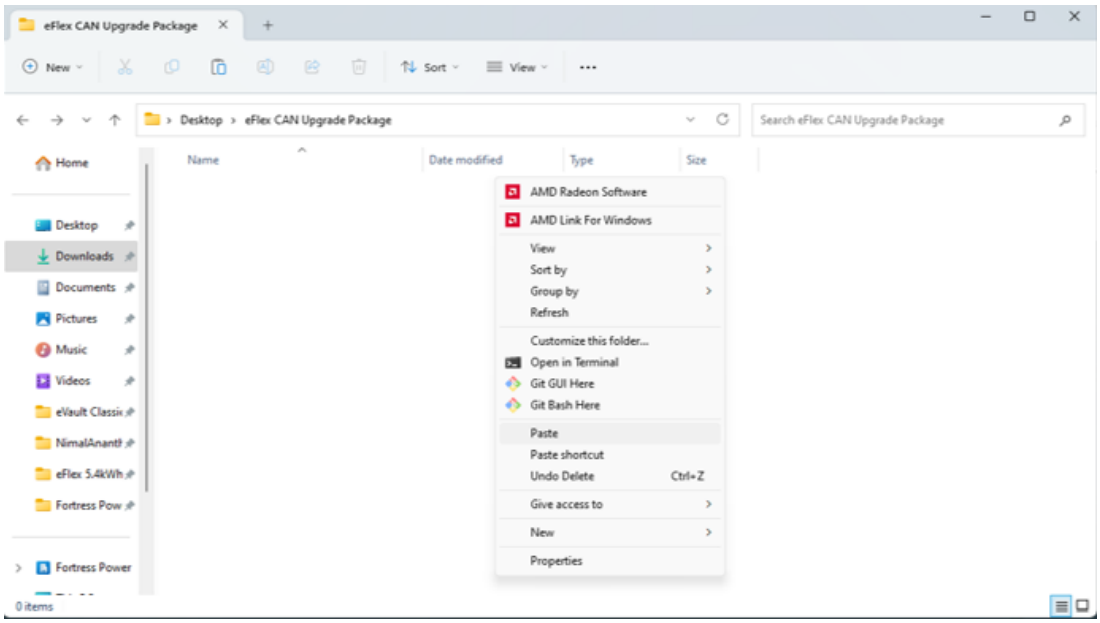
6. Then, go to the "Downloads" folder (or wherever you saved the files from the website) where you'll see the downloaded folder.

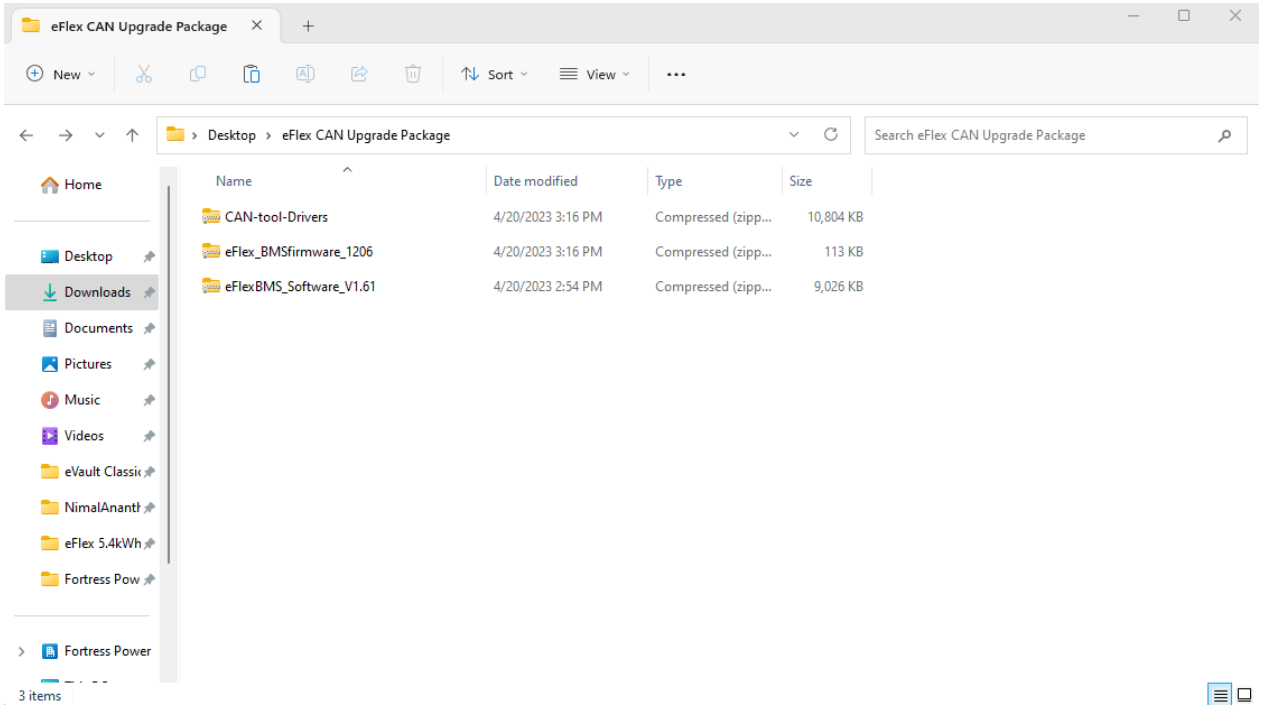


7. Select all the files, right-click on the selection and click on "Copy" to copy these files.

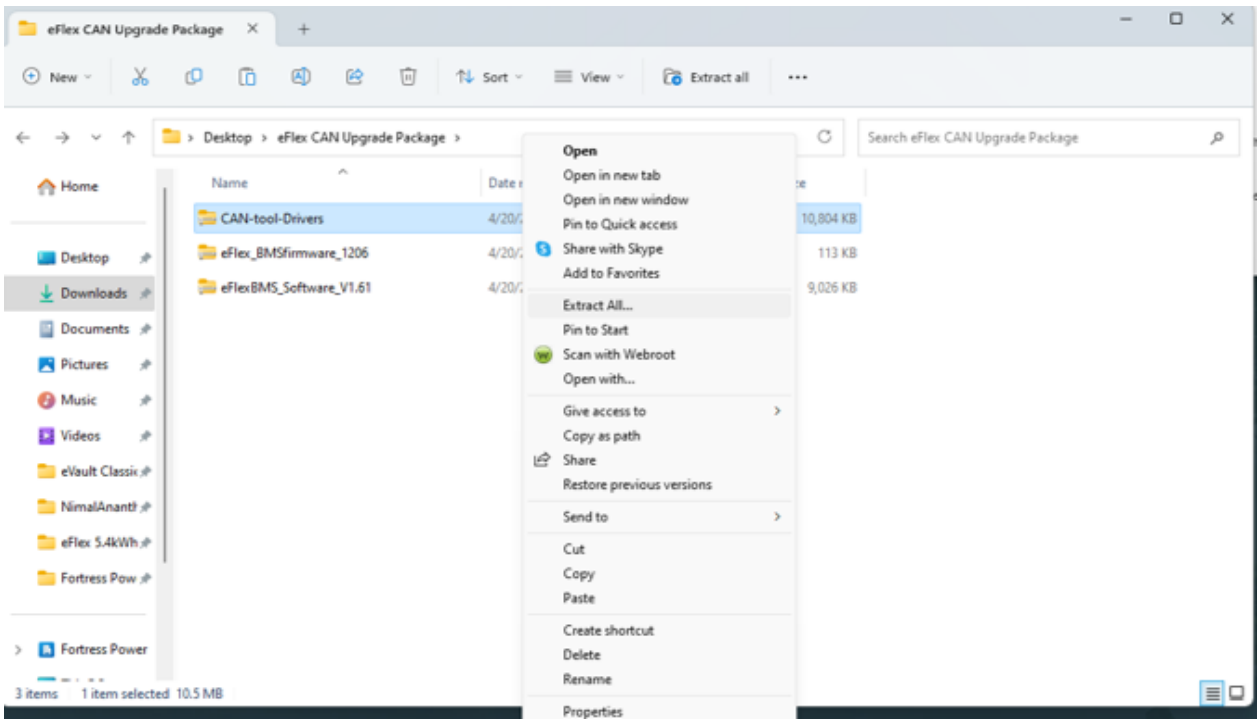


8. Navigate to the "eFlex CAN Upgrade Package" right-click somewhere in the folder and paste the copied files.

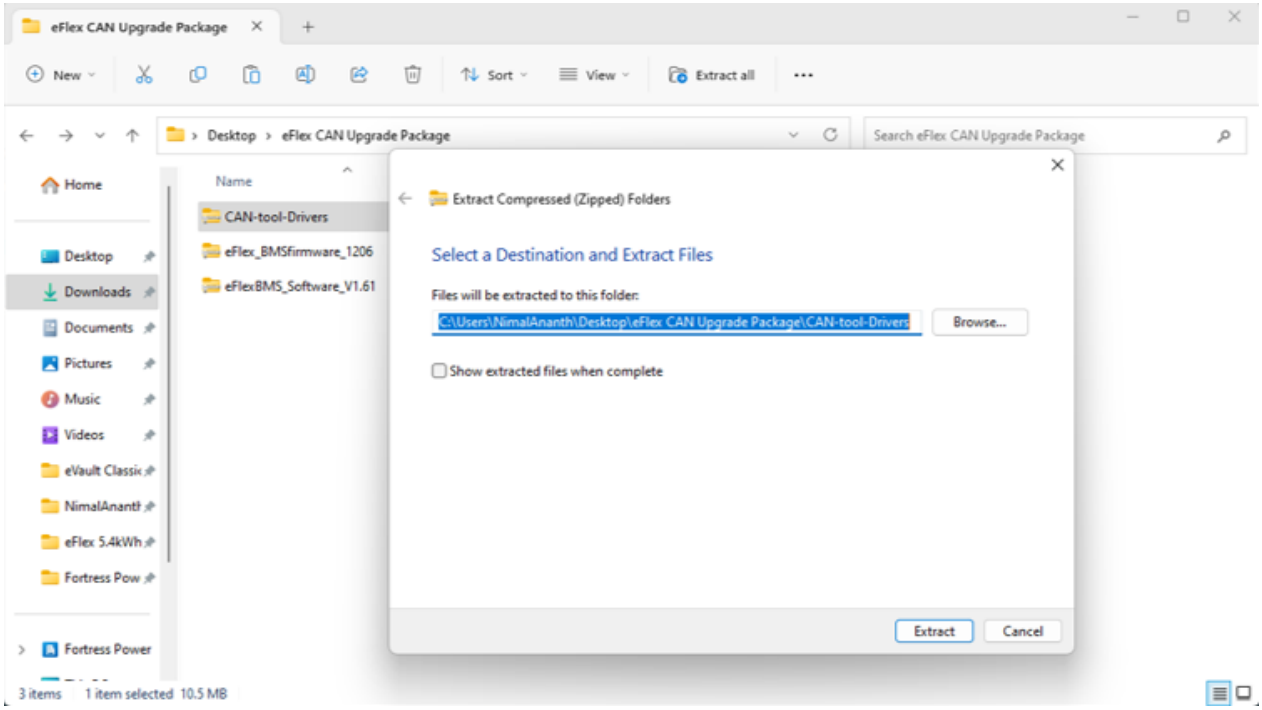




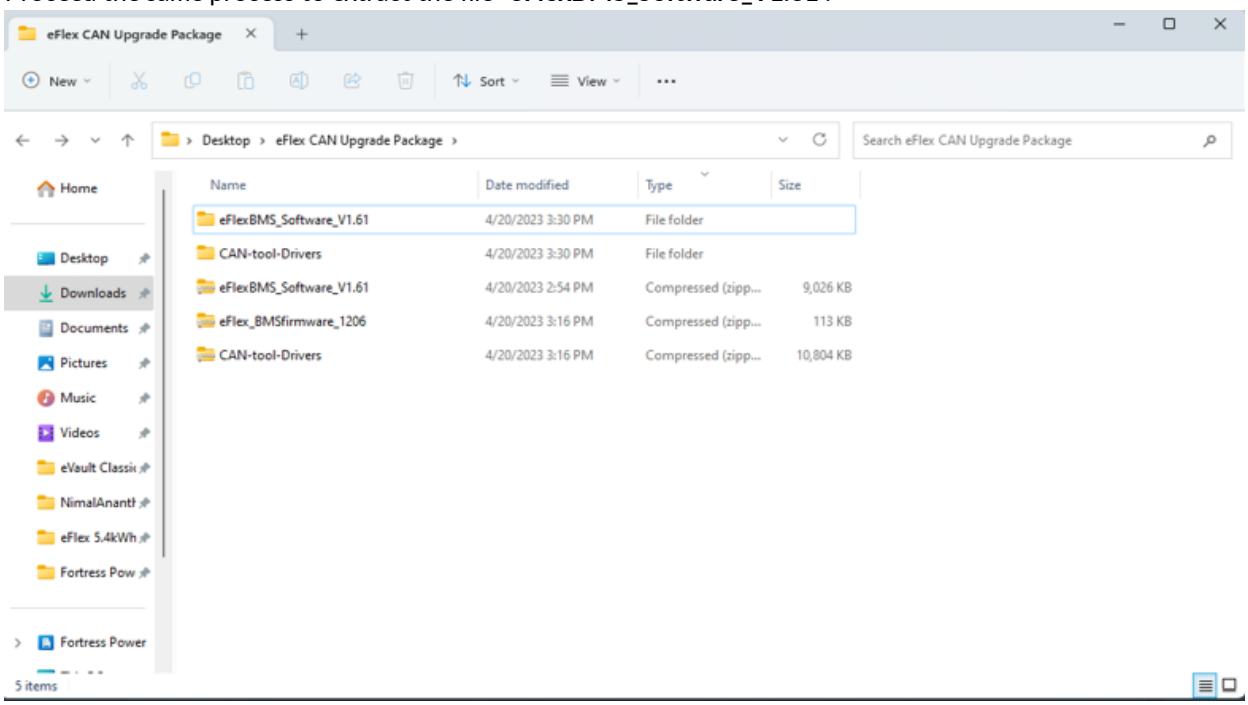
9. Click somewhere in the folder to remove the blue highlight from the files. Then, right-click on one of the files and from the dropdown click on "Extract All...".



10. Afterwards, click on "Extract".



11. Proceed the same process to extract the file" **eFlexBMS_Software_V1.61**".

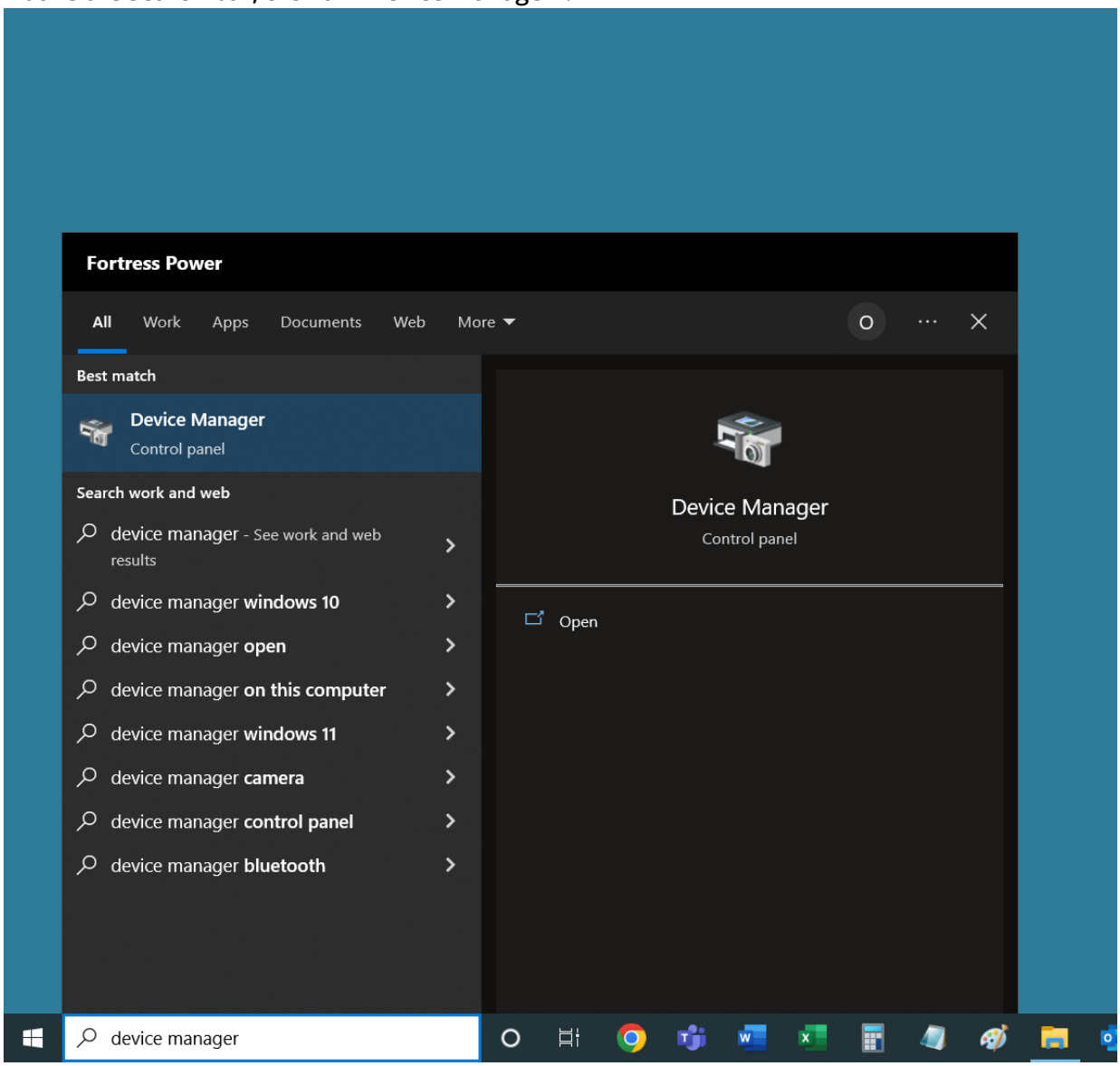


Now the drivers for the CAN tool (USBCAN) need to be installed

Installing the Drivers for the CANtool (USBCAN)

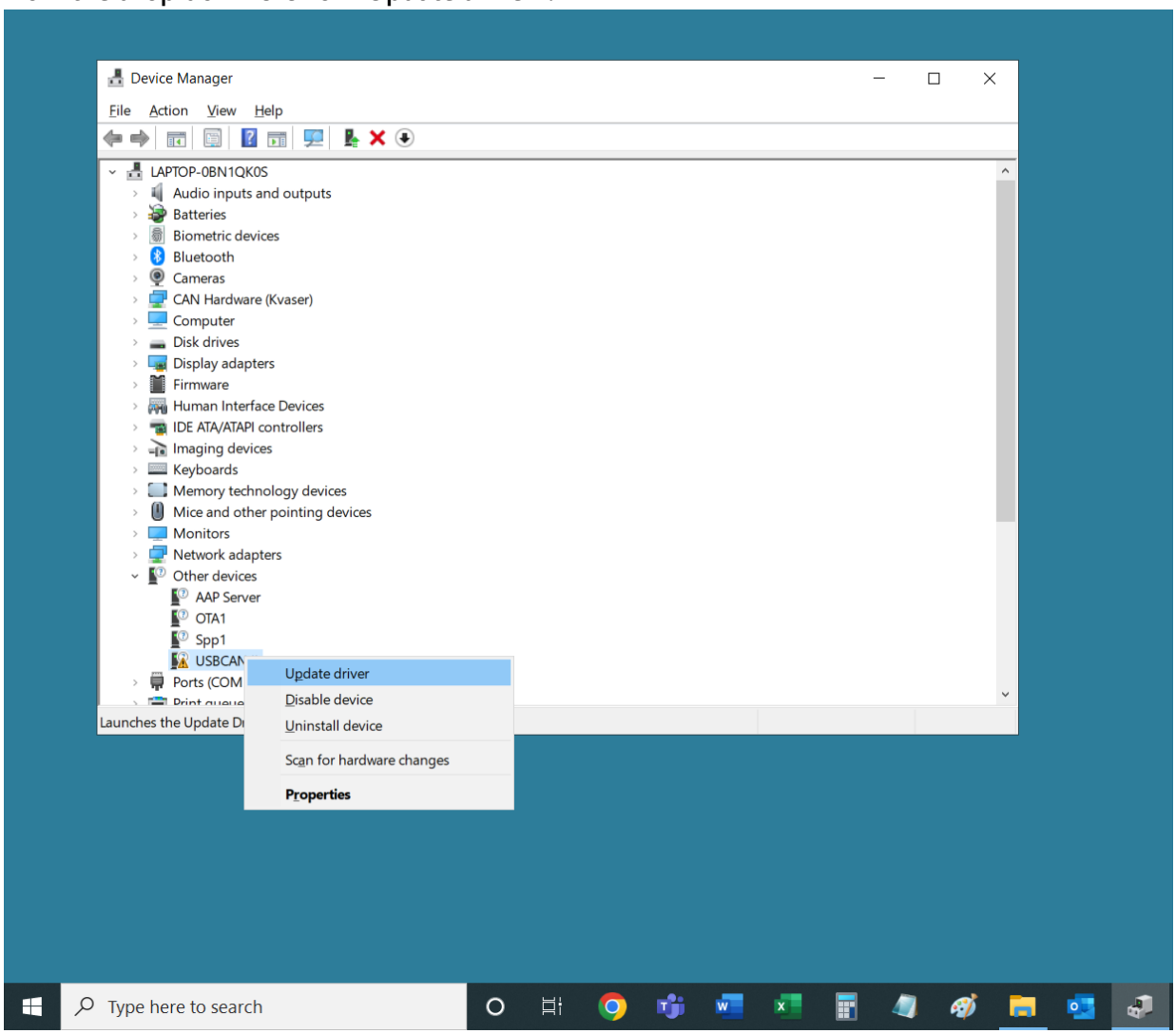
1. Connect the USB cable of the CANtool (USBCAN) to your computer and the CANtool itself.

2. Click on the "Start" icon (looks like a Windows logo) and type in "device manager". Above the search-bar, click on "Device Manager".

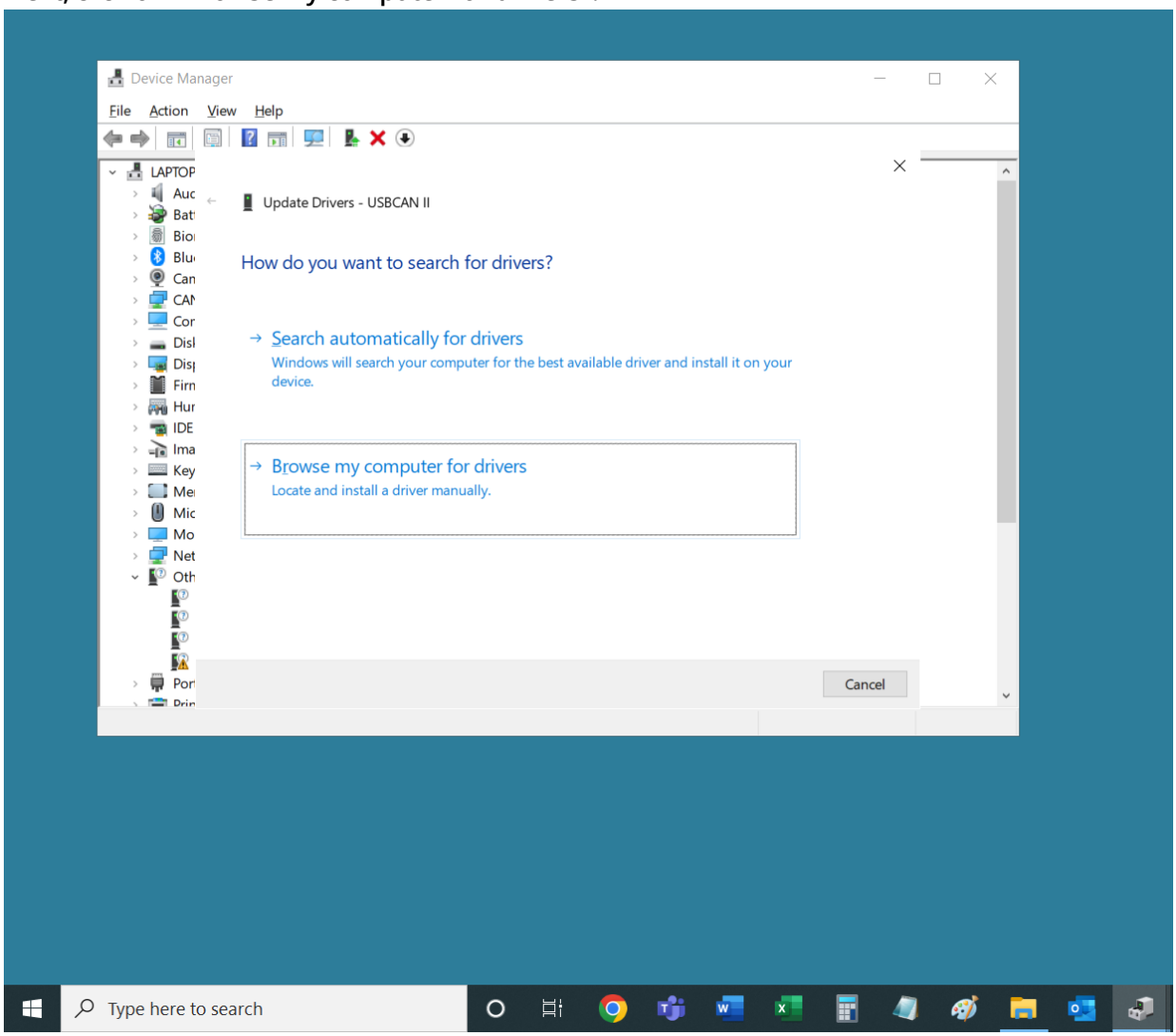


3. A window similar to the one shown below will open and one of the items of the list will be "USBCAN II" with an indent on the left. Right-click on this "USBCAN II" and

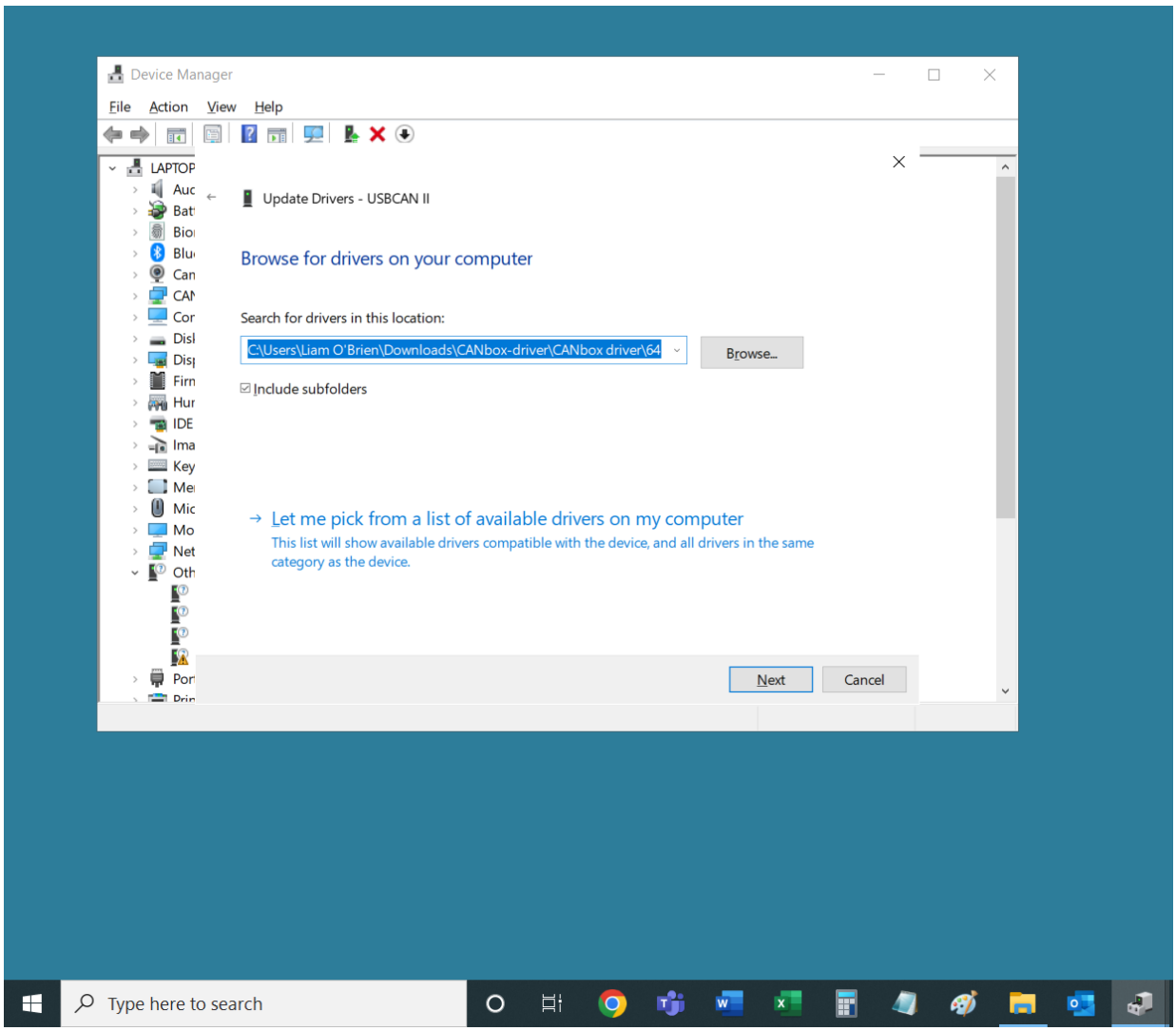
from the drop-down click on "Update driver".



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

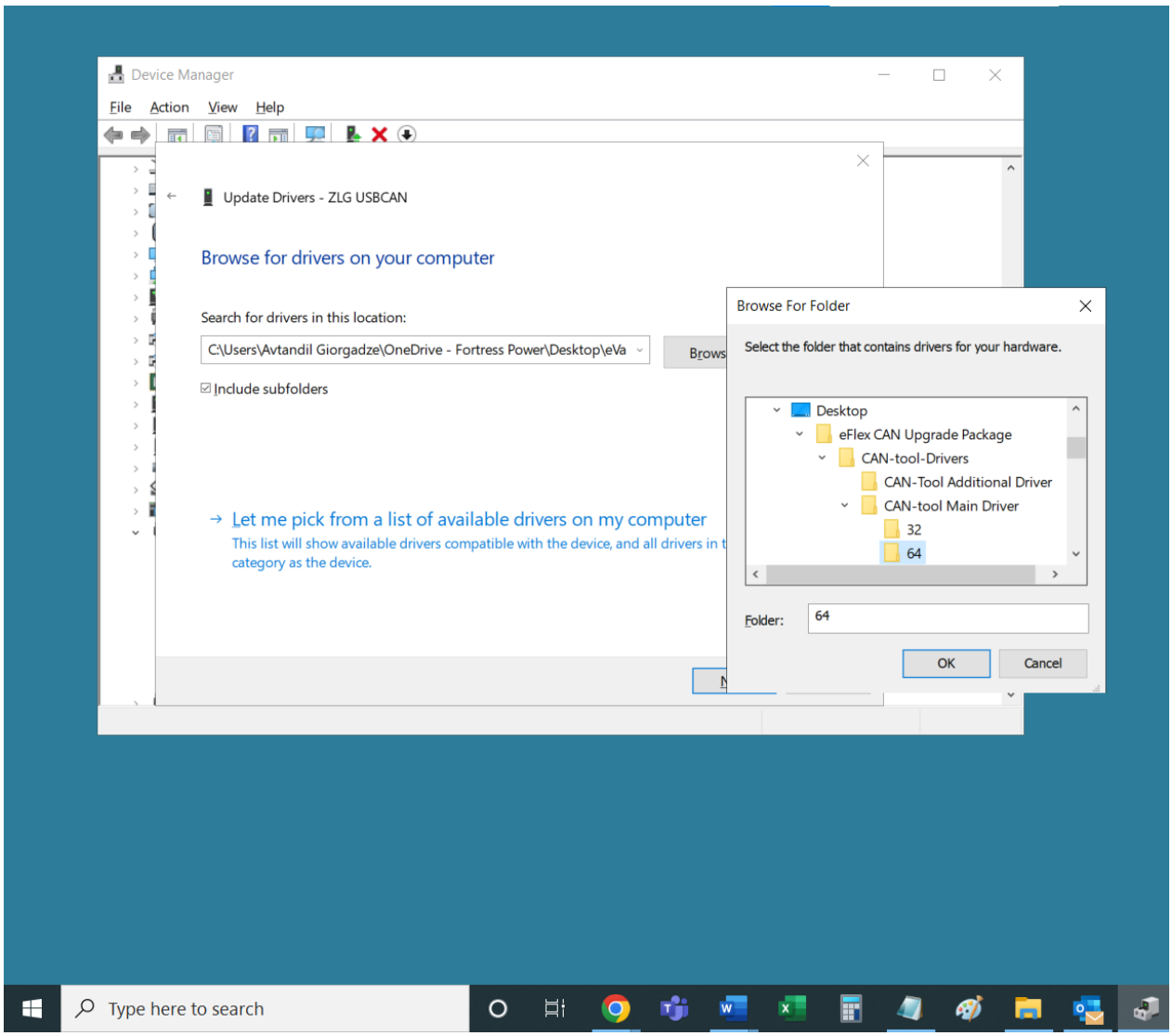


5. **Now, click on "Browse..."**

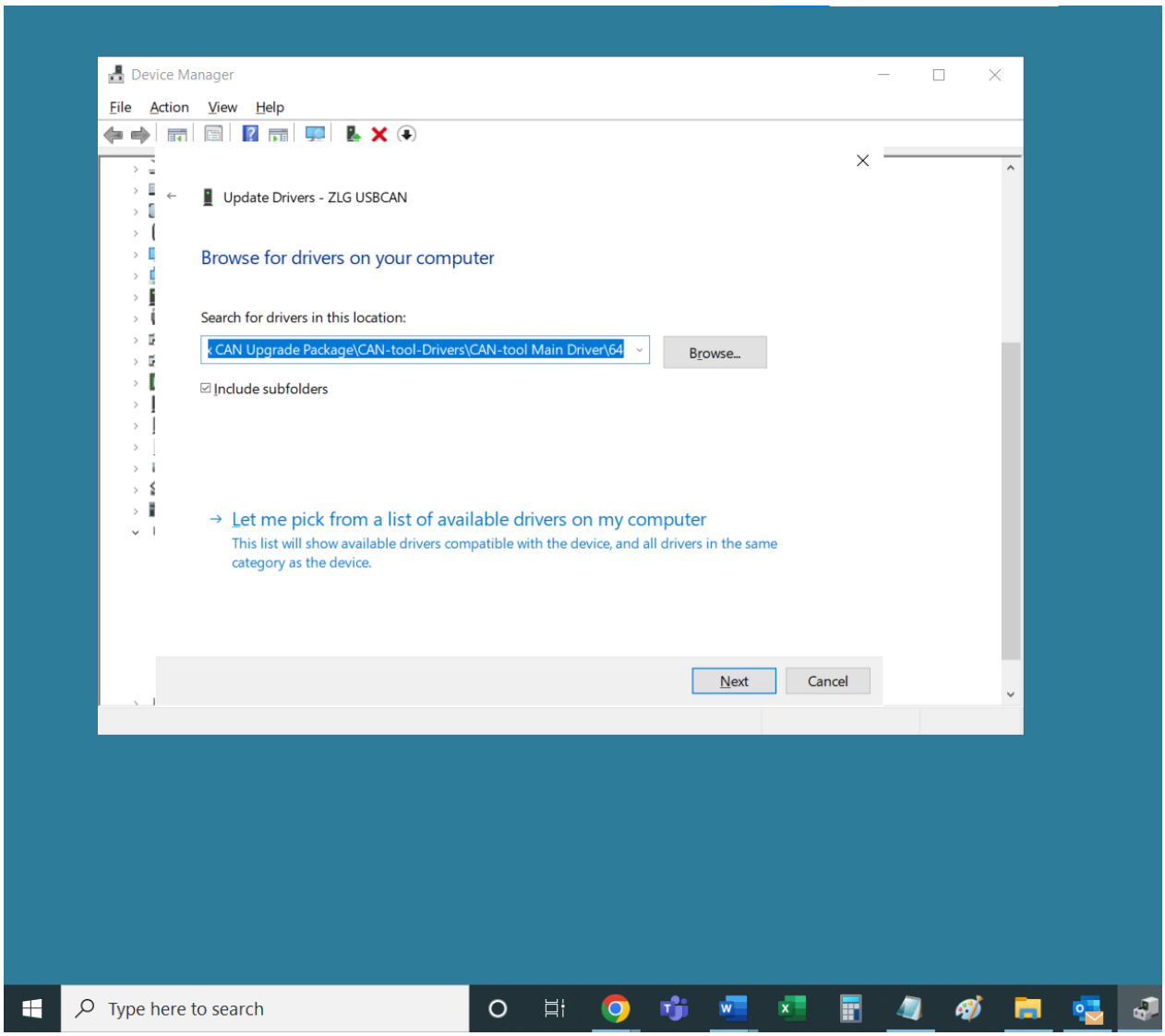


6. **Then, navigate to the "eFlex CAN Upgrade Package" and from there navigate as follows: "eFlex CAN Upgrade Package" >>> "CAN-tool Drivers" >>> "CAN-tool Main**

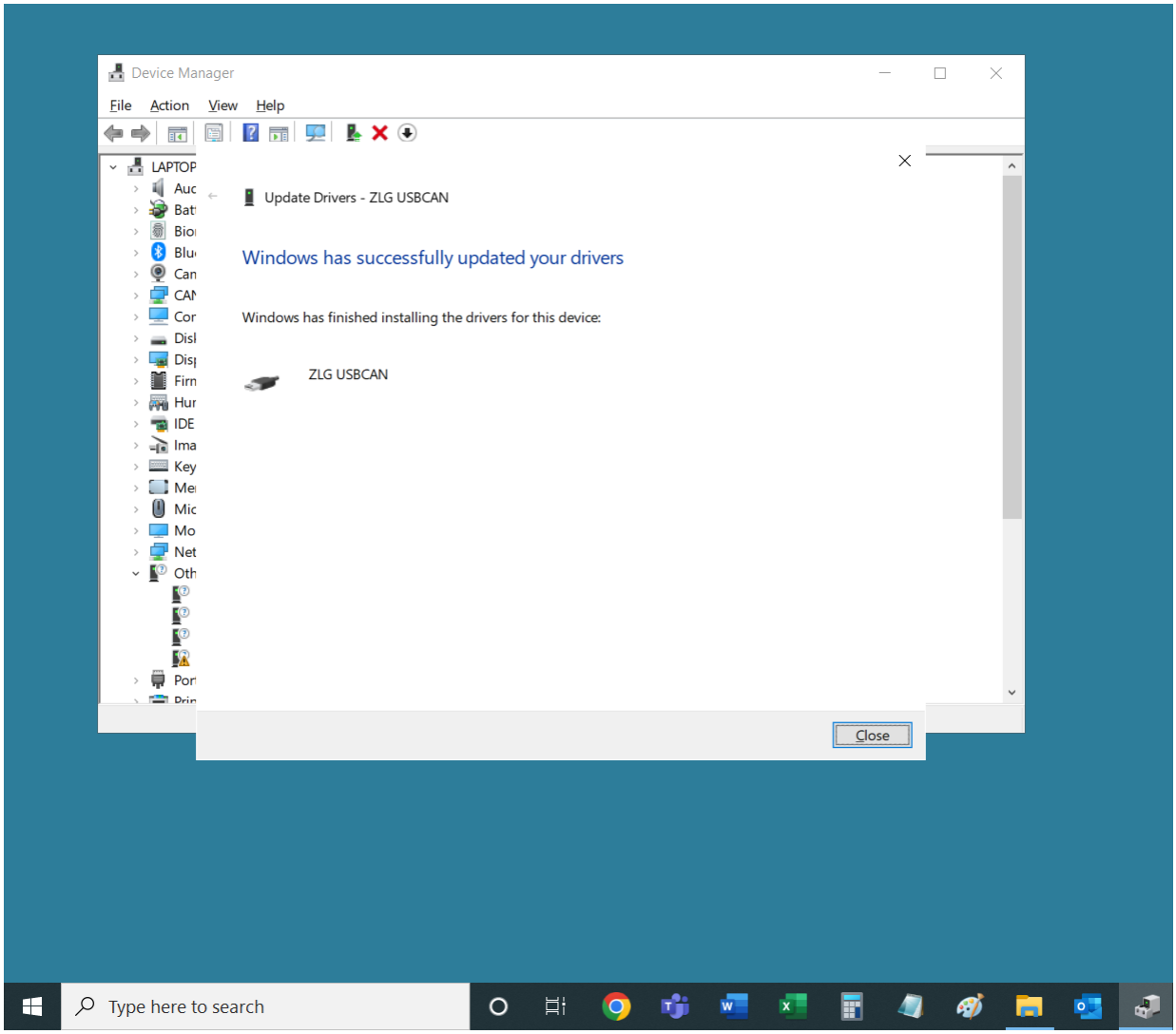
Driver" >>> "64". Once "64" is selected, click "OK".



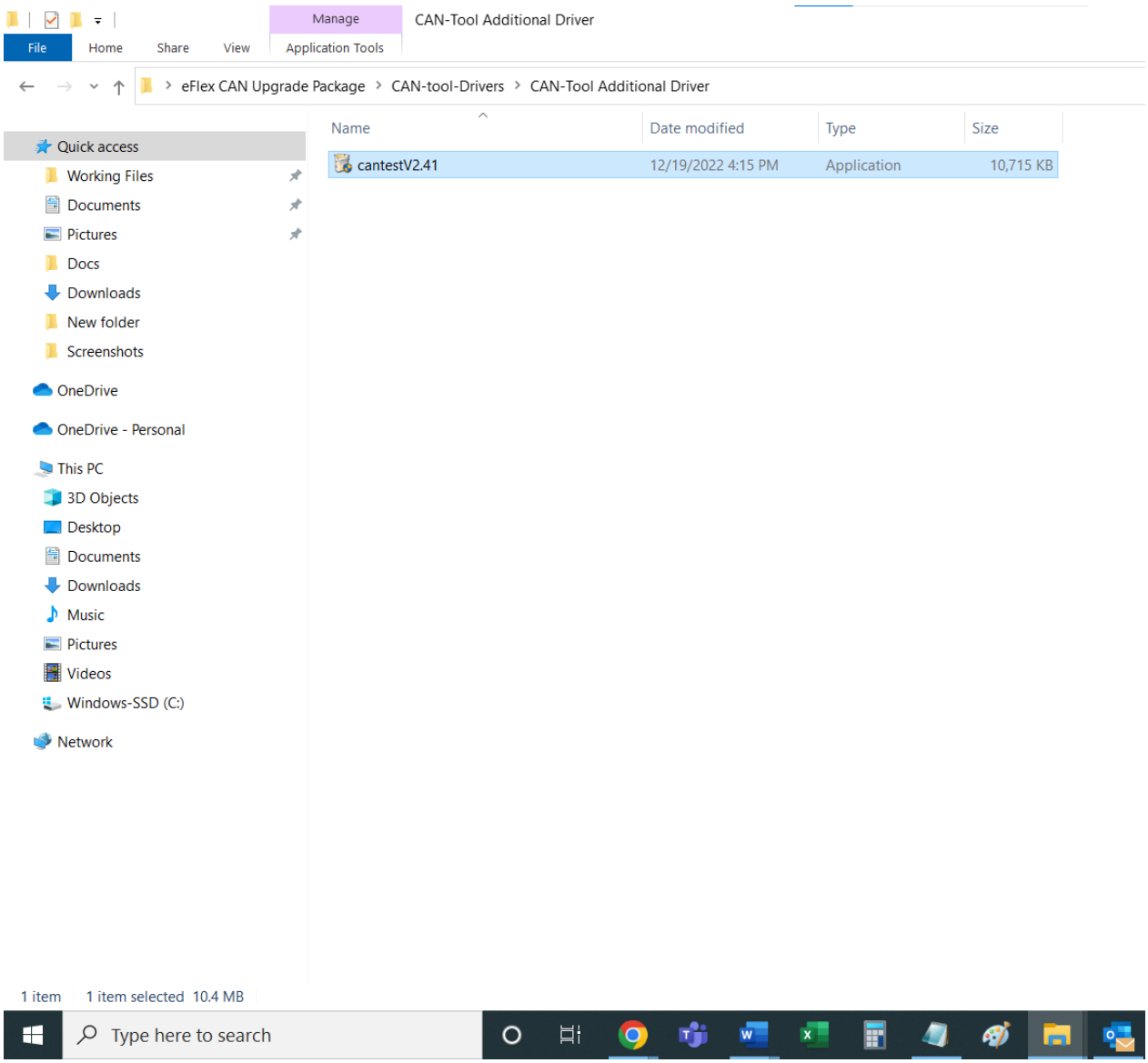
7. **Then, click "Next".**



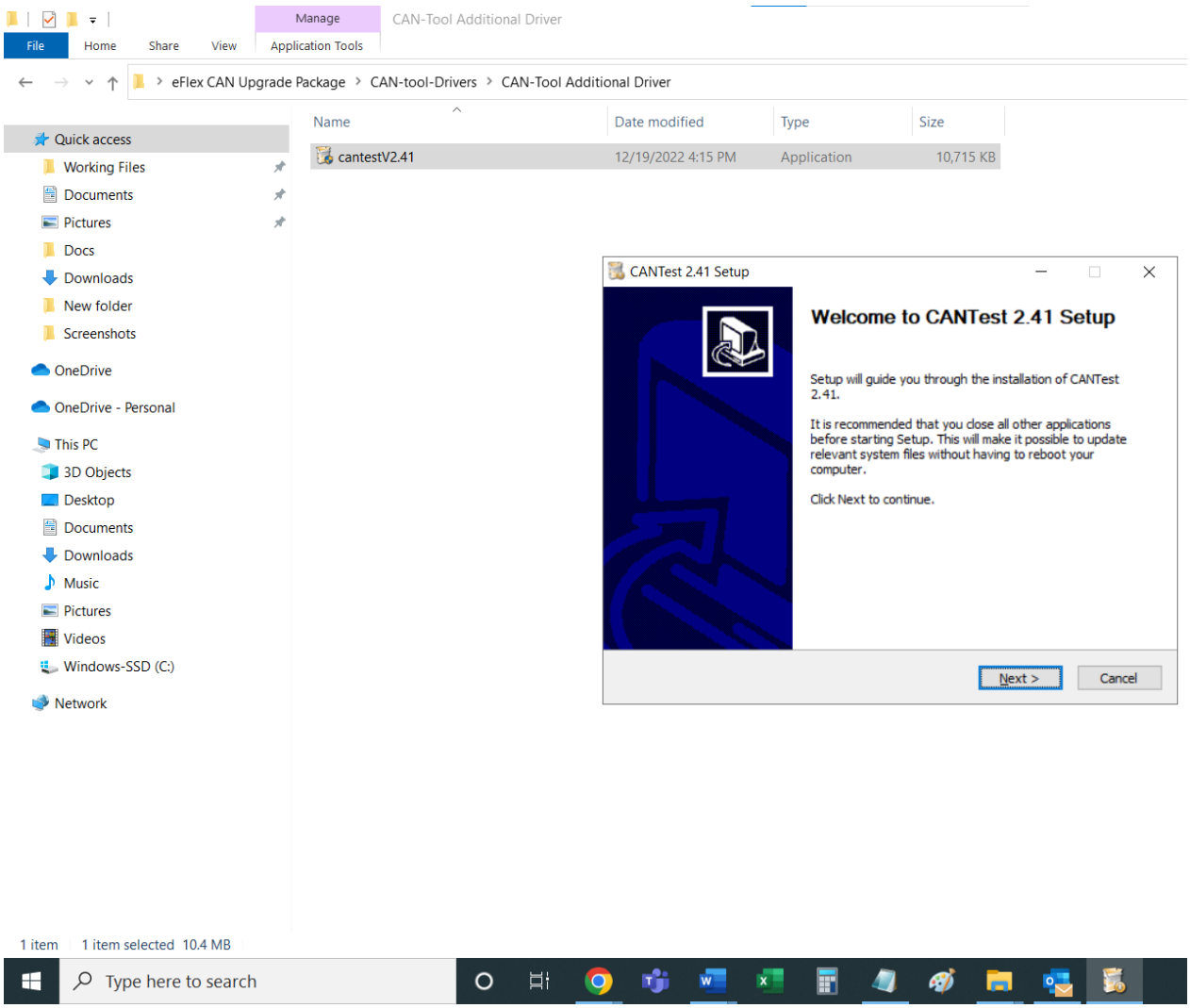
8. **You will see the success message as shown below. Click "Close" and close the "Device Manager" window.**



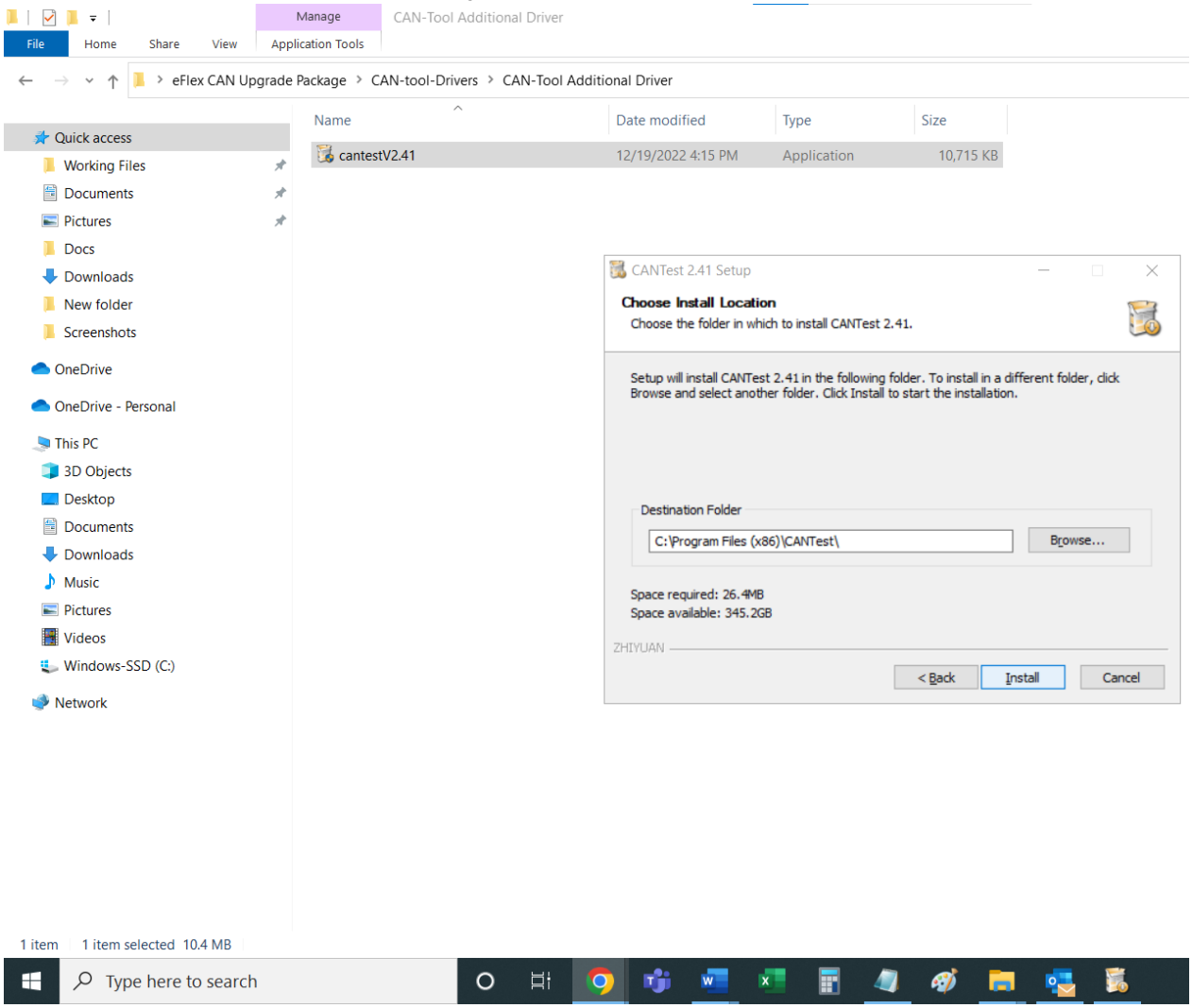
9. It's time to install an additional document. To do so, first open "eFlex CAN Upgrade Package" folder. Then, open the "CAN-tool Drivers" folder and afterwards open the "CAN-tool Additional Driver" folder. Now you can see a file titled "cantestV2.41".


Manage
CAN-Tool Additional Driver
File
Home
Share
View
Application Tools
eFlex CAN Upgrade Package
CAN-tool-Drivers
CAN-Tool Additional Driver
Quick access
Working Files
Documents
Pictures
Docs
Downloads
New folder
Screenshots
OneDrive
OneDrive - Personal
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Windows-SSD (C:)
Network
Name
Date modified
Type
Size
cantestV2.41
12/19/2022 4:15 PM
Application
10,715 KB
1 item
1 item selected 10.4 MB
Type here to search

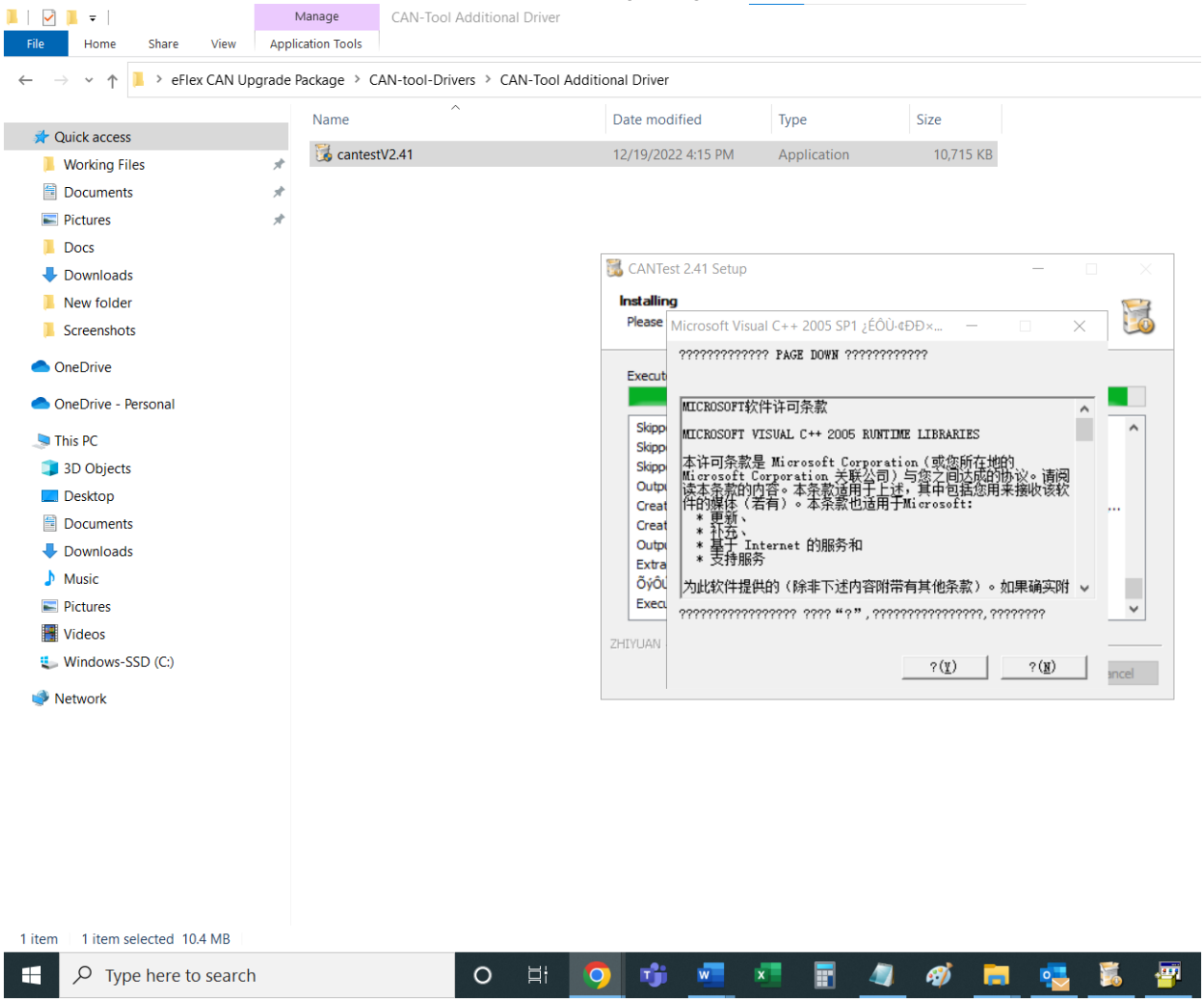
10. **Double-click "cantestV2.41".**



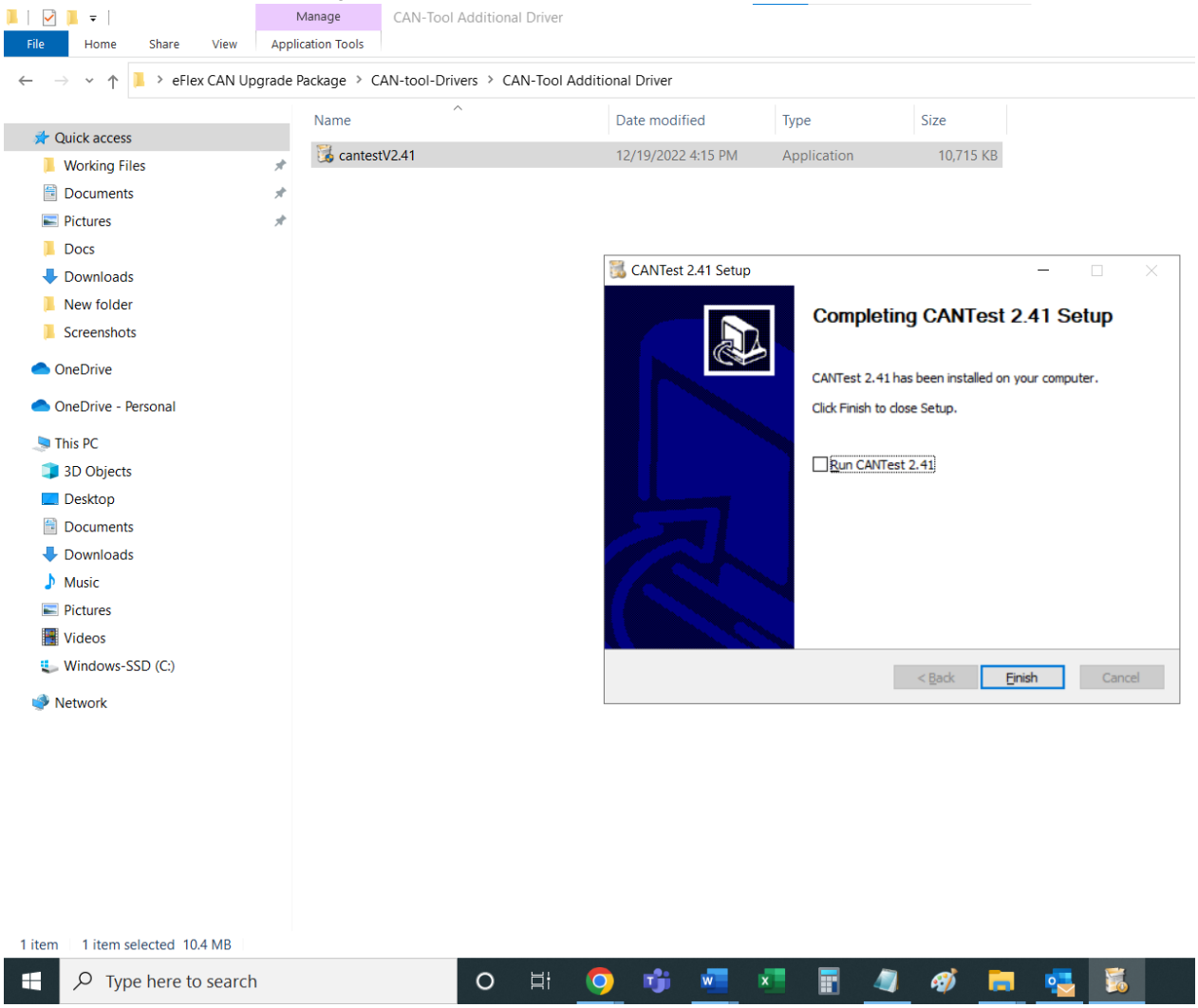
11. **Then click "Install" and the installation process will start.**



12. **Almost at the end of the installation, there will be a prompt. Click on "? (Y)".**



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



14. Go back to folder "eFlex 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.

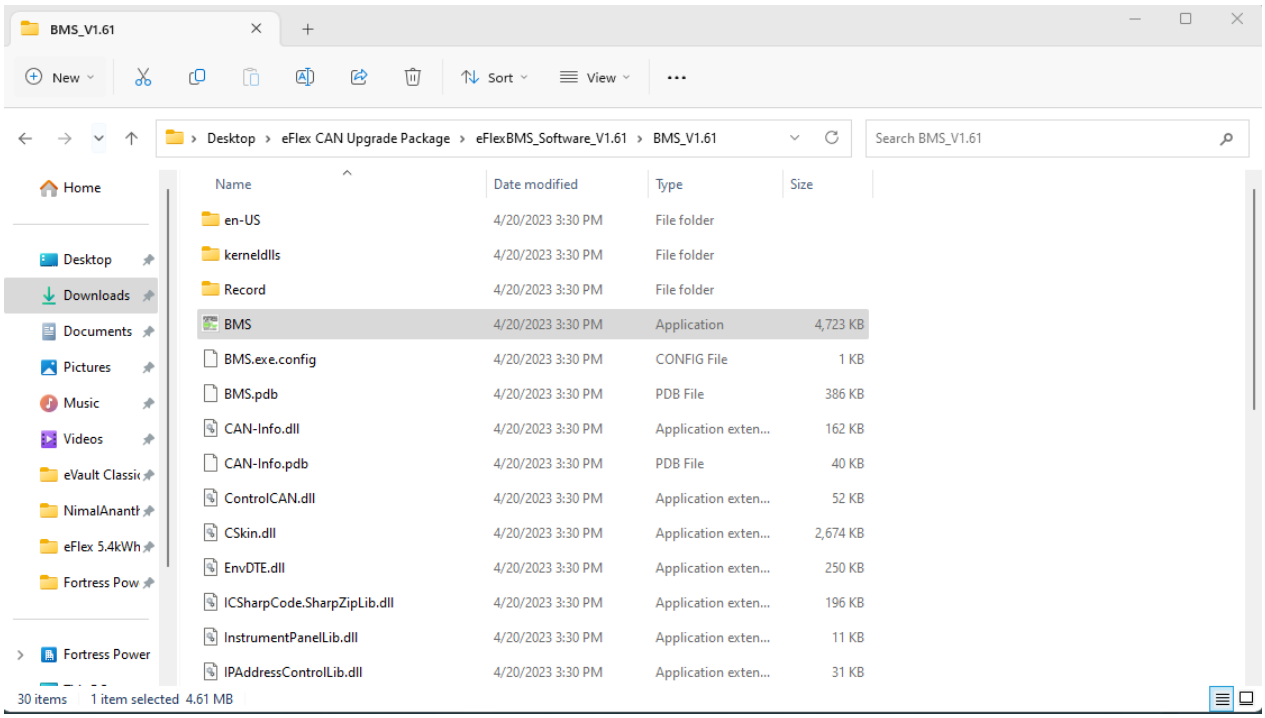
Updating Firmware

Important!

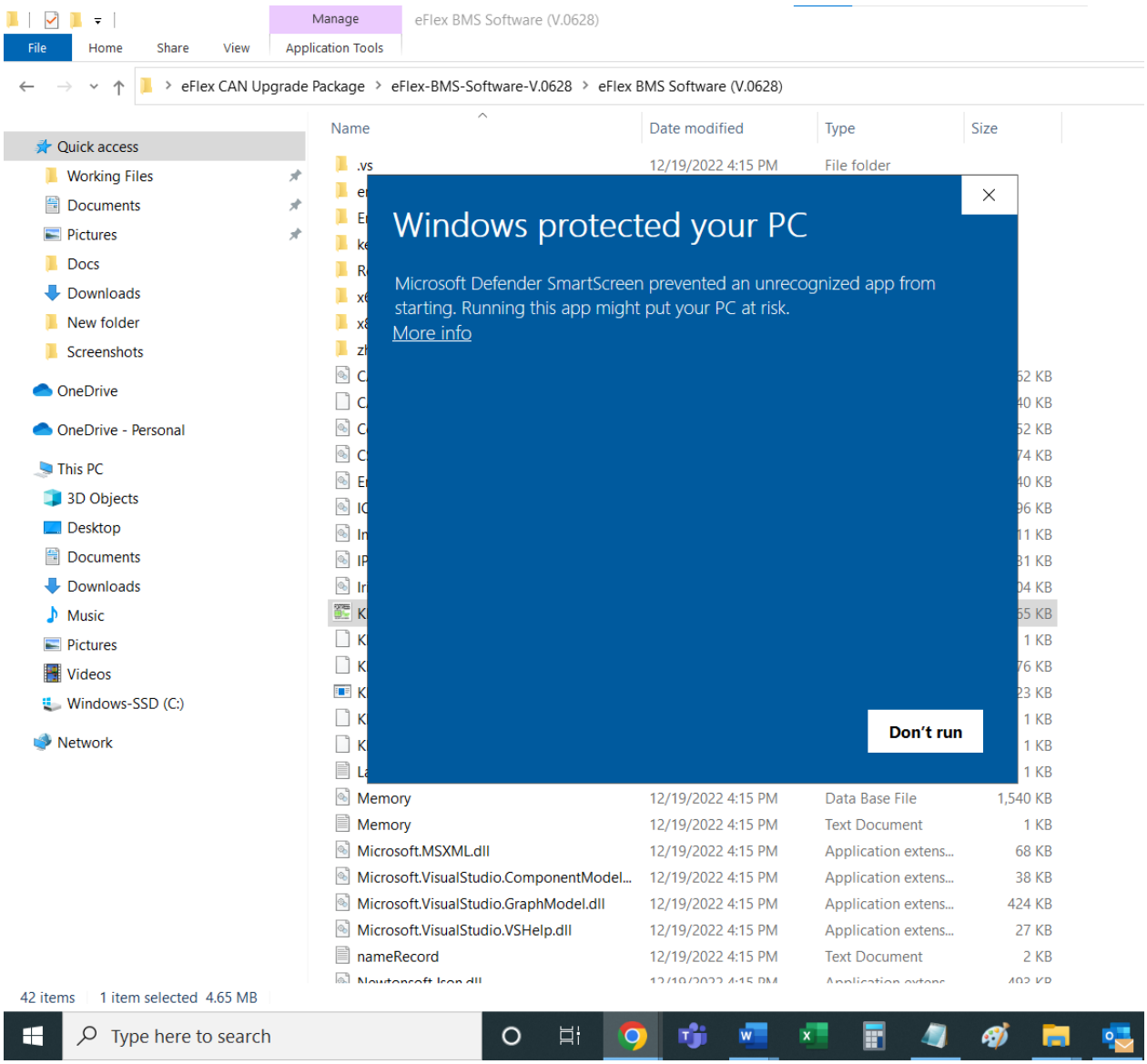
There must be no current flow to or from any battery in the system during the firmware update process. It is a good idea to have the battery breakers on all Sol-Arks in the system in the 'OFF' position.
Firmware must be updated on one battery at a time. During the firmware update, the battery must be communicating neither with an inverter nor with any other battery. Unplug the battery to inverter communication cable, next, 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). 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 ethernet ports.

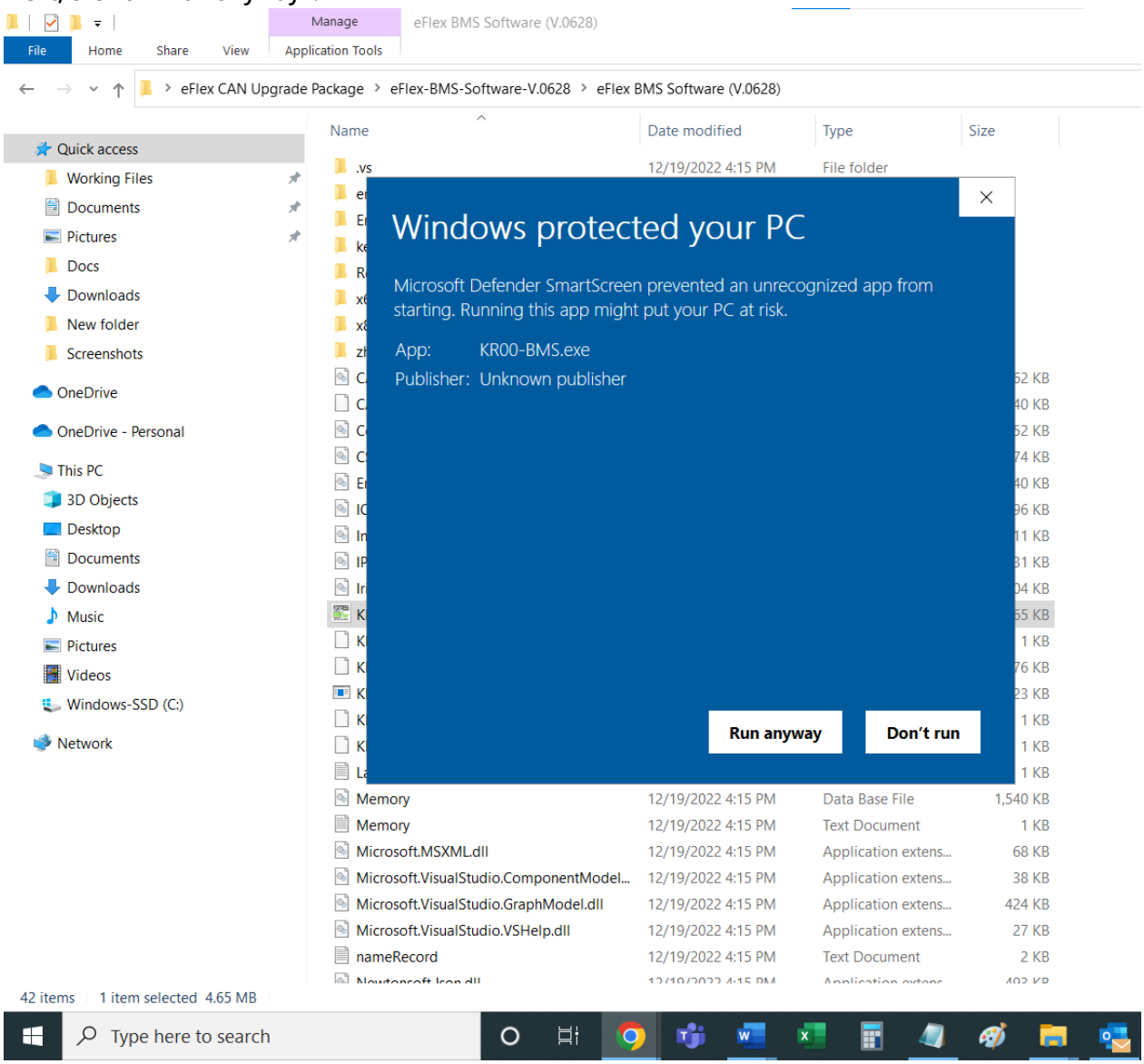
1. Open "eFlex CAN Upgrade Package" folder, then open "eFlex-BMS-Software-V...." folder and double click on the subfolder with the same folder name, "eFlex-BMS-Software-V....". Afterwards, Find a file named "**BMS**". Open this file by double-clicking on it.



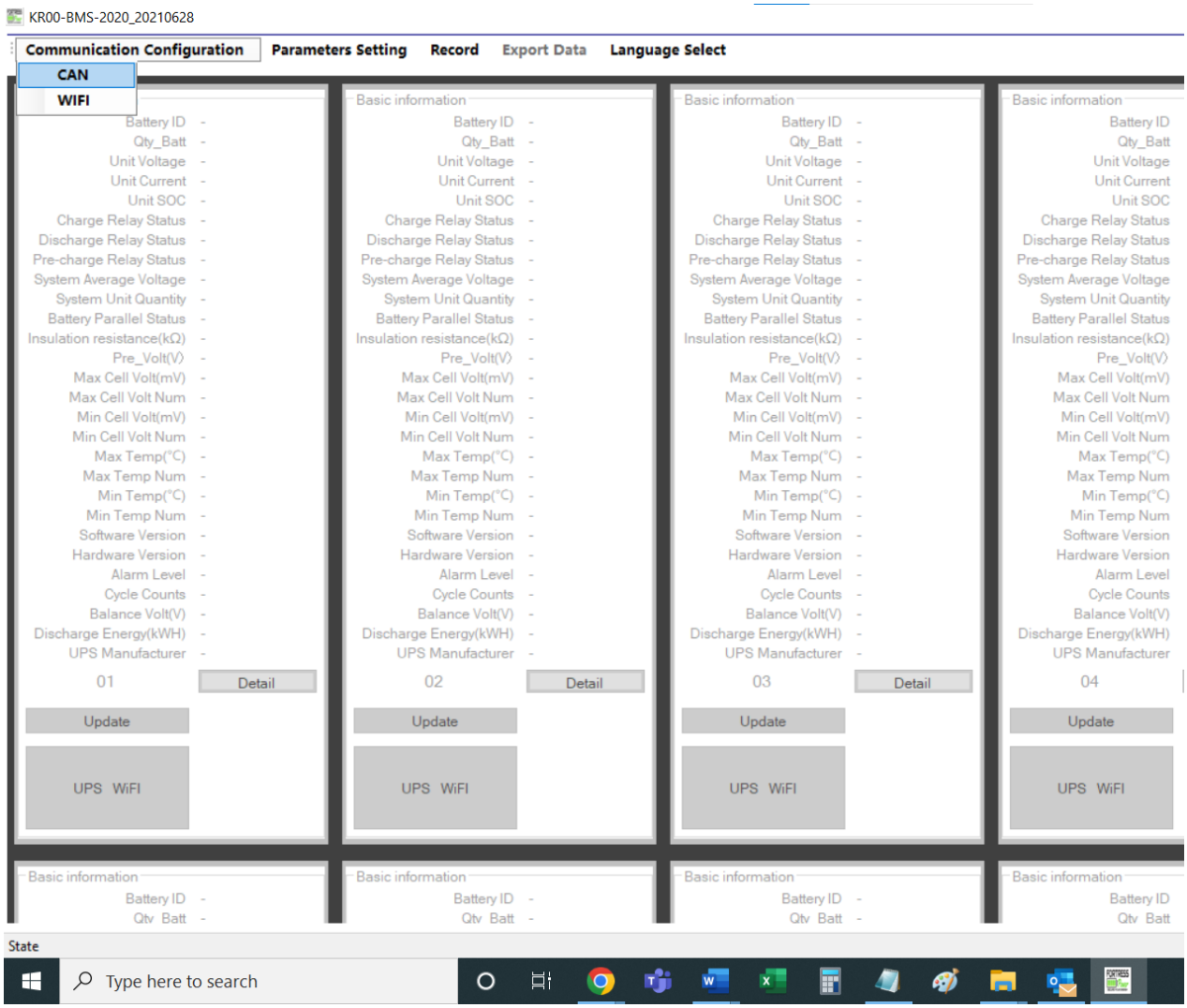
2. You might see something similar to the one shown below. If so, click on "More info" in the blue window.


Manage
eFlex BMS Software (V.0628)
File
Home
Share
View
Application Tools
eFlex CAN Upgrade Package
eFlex-BMS-Software-V.0628
eFlex BMS Software (V.0628)
Quick access
Working Files
Documents
Pictures
Docs
Downloads
New folder
Screenshots
OneDrive
OneDrive - Personal
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Windows-SSD (C:)
Network
Name
Date modified
Type
Size
.vs
12/19/2022 4:15 PM
File folder
Windows protected your PC
Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk.
More info
Don't run
Memory
12/19/2022 4:15 PM
Data Base File
1,540 KB
Memory
12/19/2022 4:15 PM
Text Document
1 KB
Microsoft.MSXML.dll
12/19/2022 4:15 PM
Application extens...
68 KB
Microsoft.VisualStudio.ComponentModel...
12/19/2022 4:15 PM
Application extens...
38 KB
Microsoft.VisualStudio.GraphModel.dll
12/19/2022 4:15 PM
Application extens...
424 KB
Microsoft.VisualStudio.VSHelp.dll
12/19/2022 4:15 PM
Application extens...
27 KB
nameRecord
12/19/2022 4:15 PM
Text Document
2 KB
42 items
1 item selected 4.65 MB
Type here to search

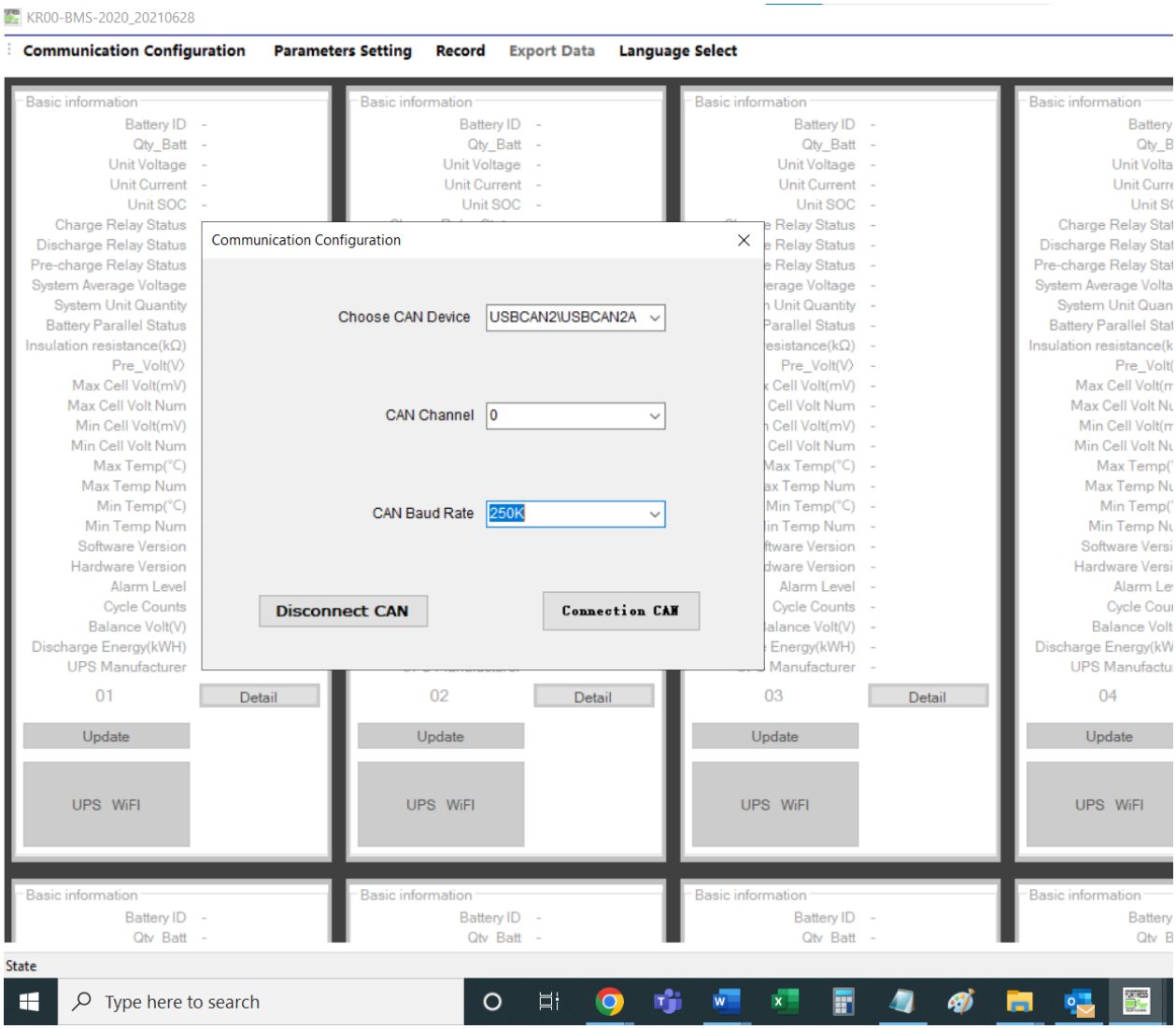
3. **Next, click on "Run anyway".**



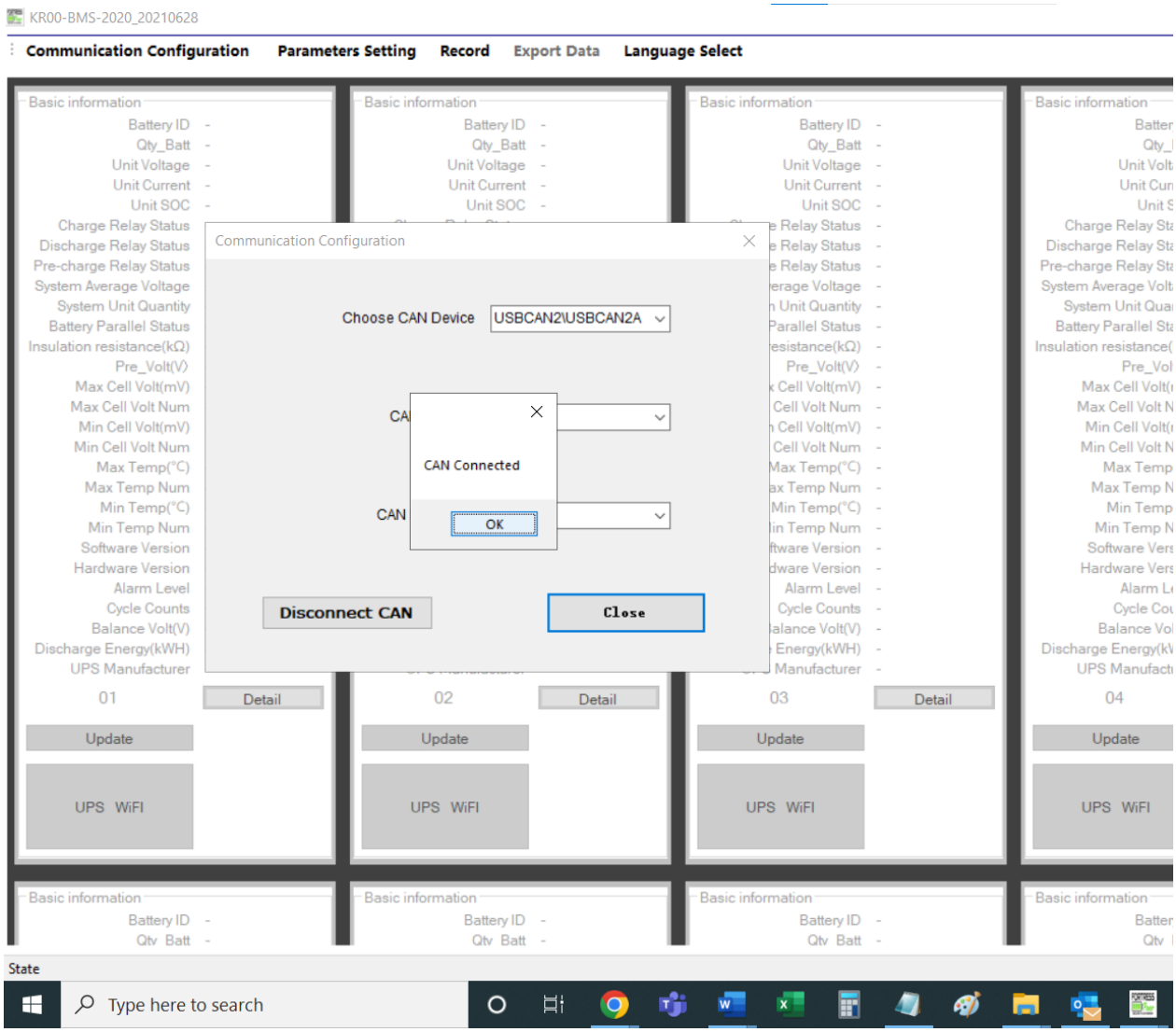
4. **Now the BMS software is open. In the top left corner of the software click on "Communication Configuration" and in the dropdown of it click on "CAN".**



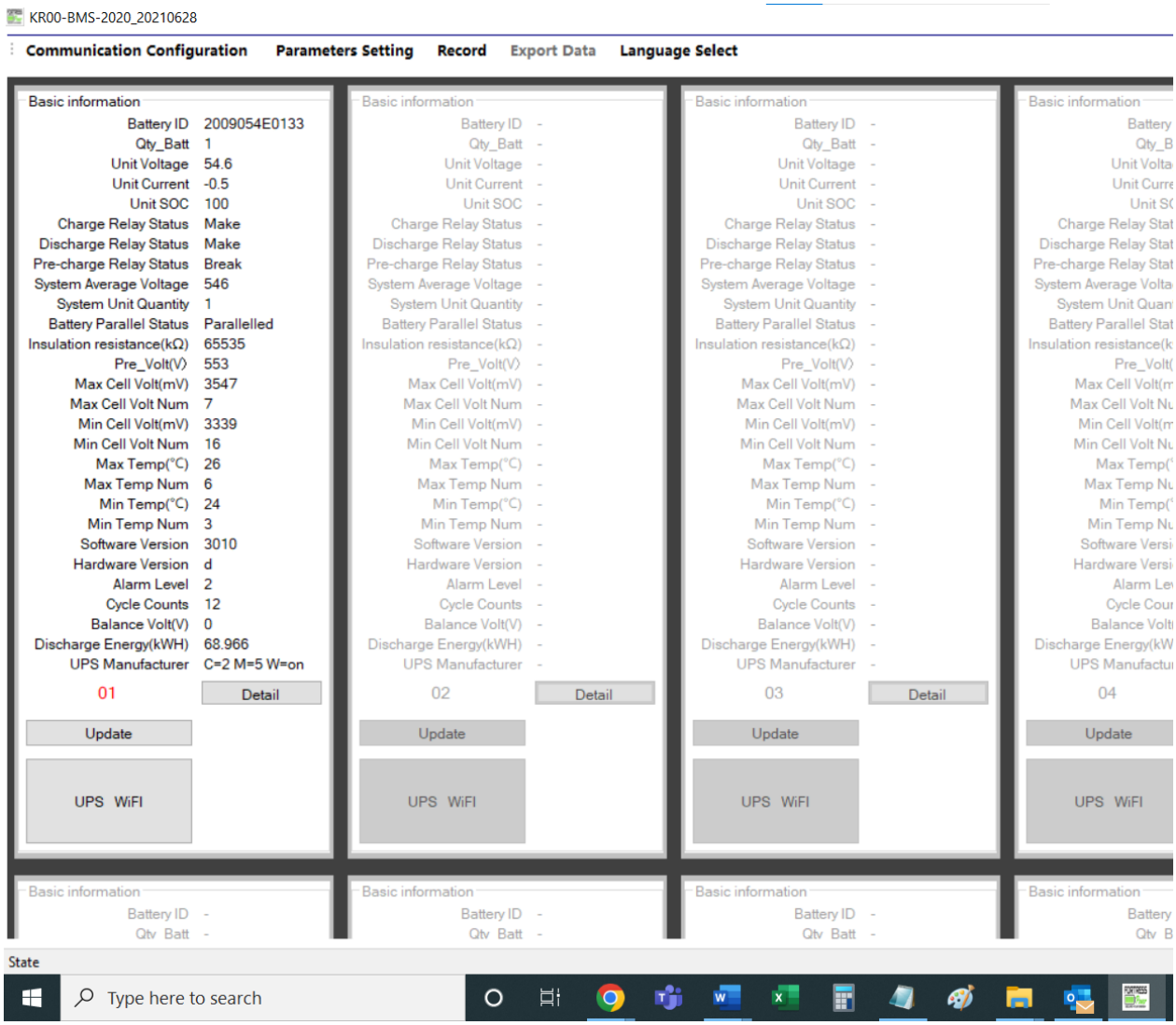
5. **In the window that opens next, click on "Connection CAN" without changing any parameters.**



6. **If everything so far was done correctly, you'll see "CAN Connected", click "OK" in the success window.**

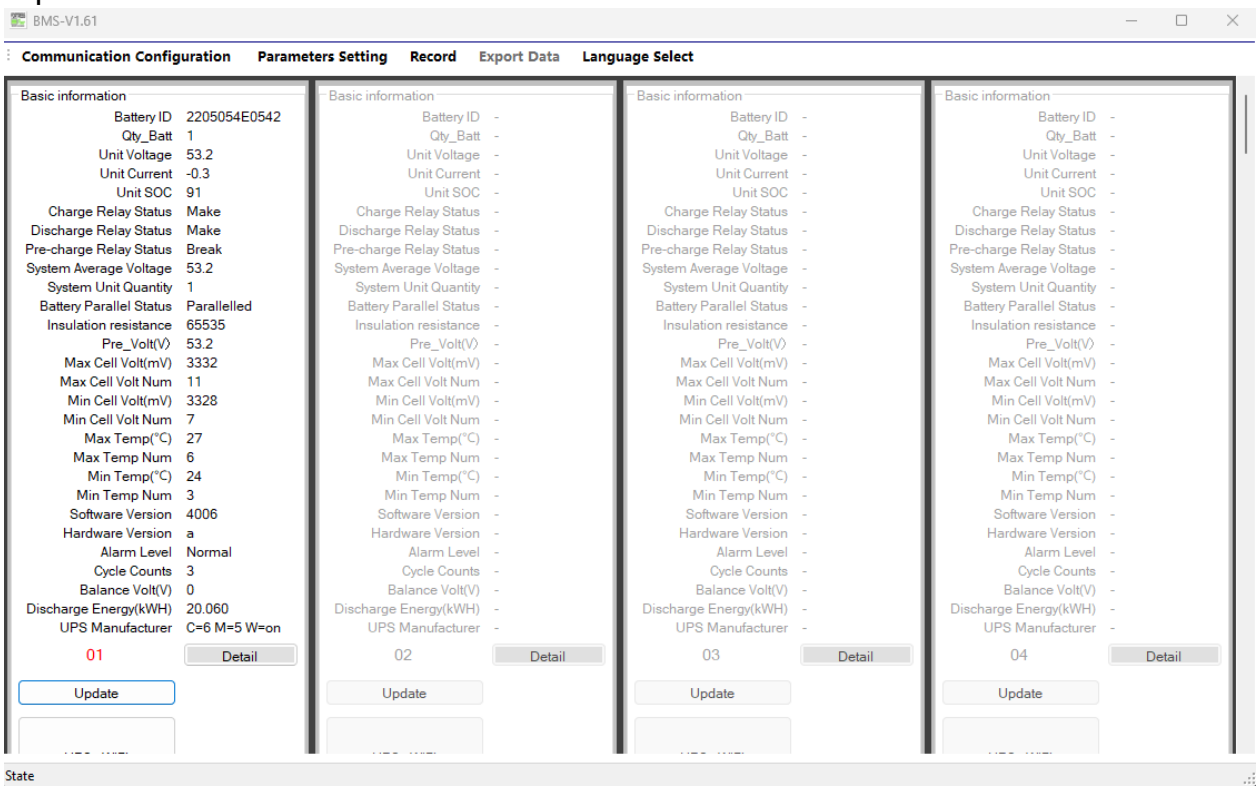


7. Once the communication between a computer and a battery is established, the lines are populated as seen below.

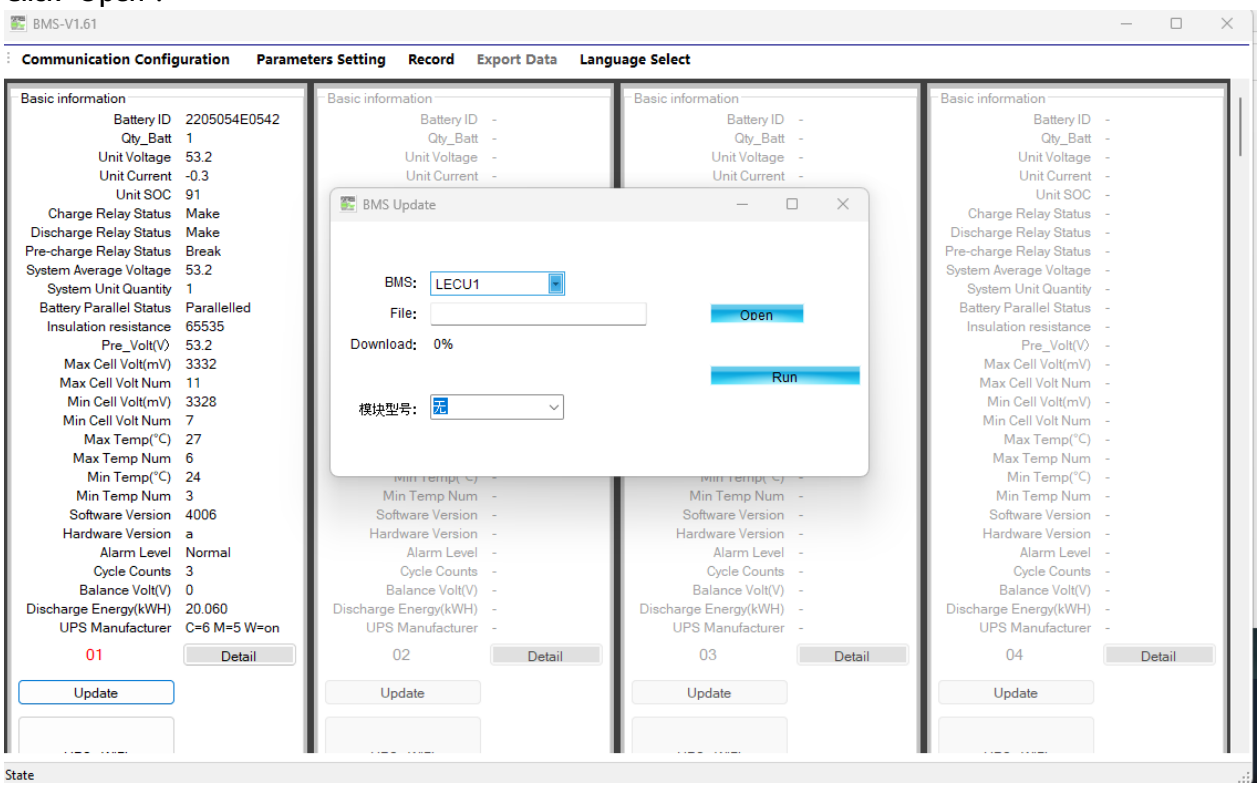


8. **It's time to update the firmware file.**
   To continue the process by selecting the appropriate firmware version, click on

"Update".

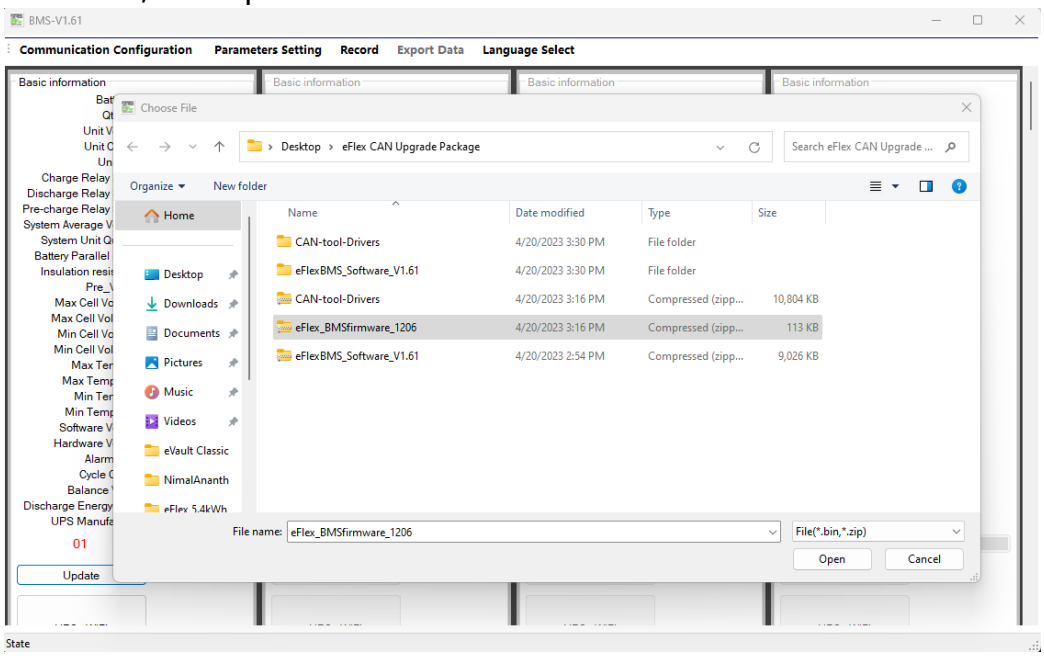


9. Click "Open".

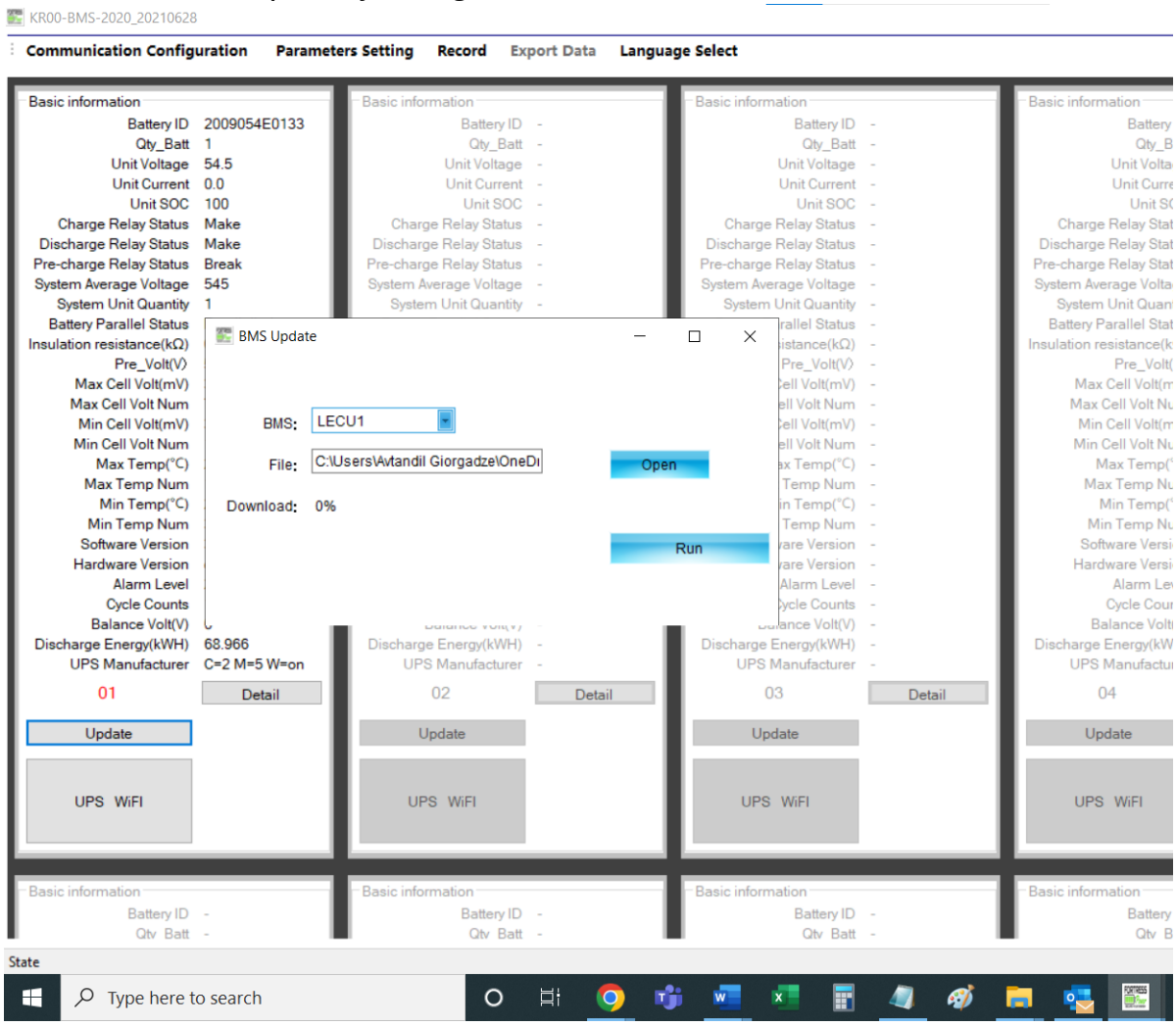


10. Navigate to the "eFlex CAN Upgrade Package" in this pop-up window, double-click on "eFlex CAN Upgrade Package" and then click on "eFlex _BMSfirmware_12.06".

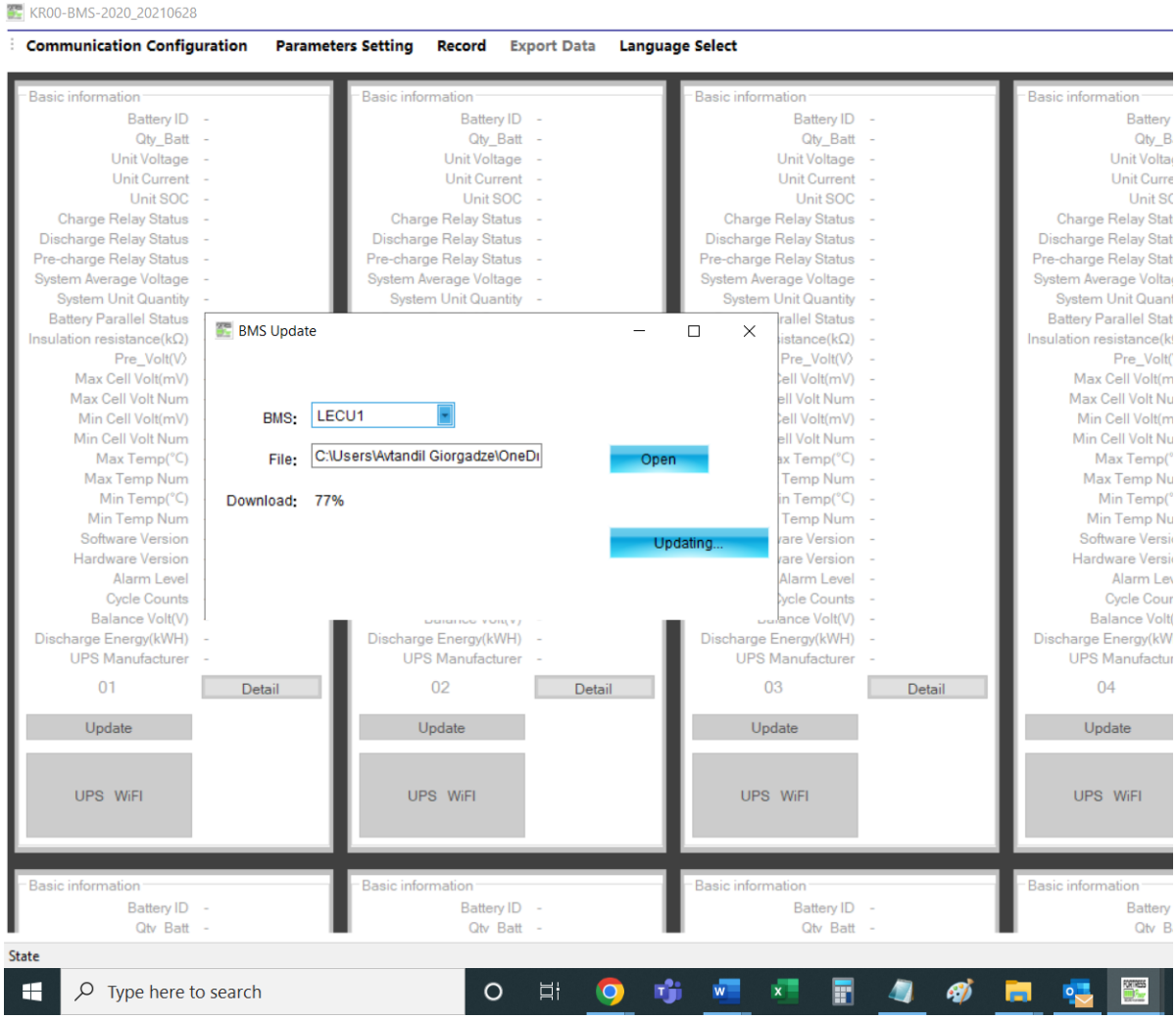
Afterwards, click "Open".



11. Initiate the firmware update by clicking "Run".

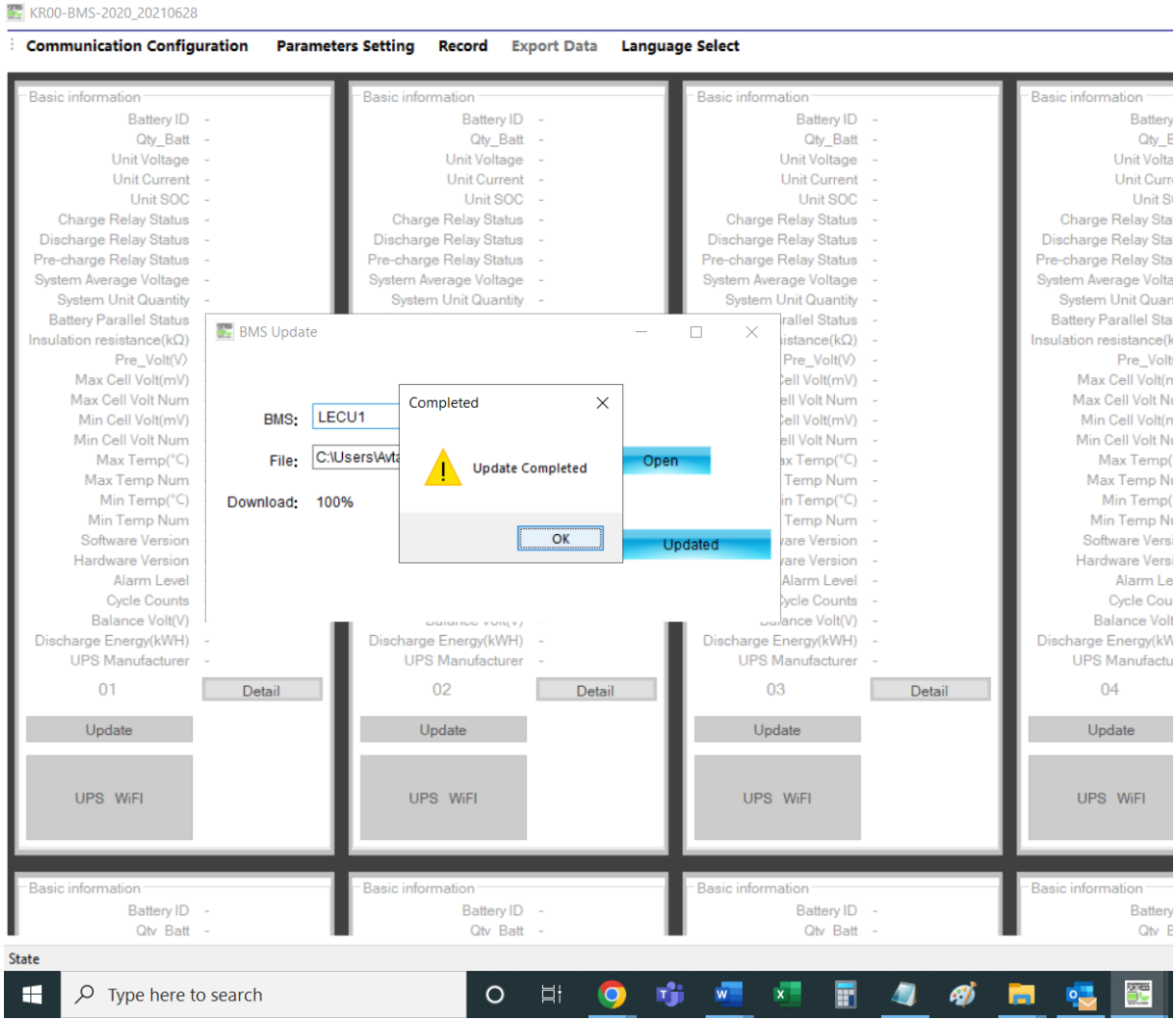


12. **Percentage will start increasing.**



13. **At the end of the firmware update, you'll see a success message as shown below. Now the firmware is updated. You may close this window and disconnect the CAN**

tool from the battery.

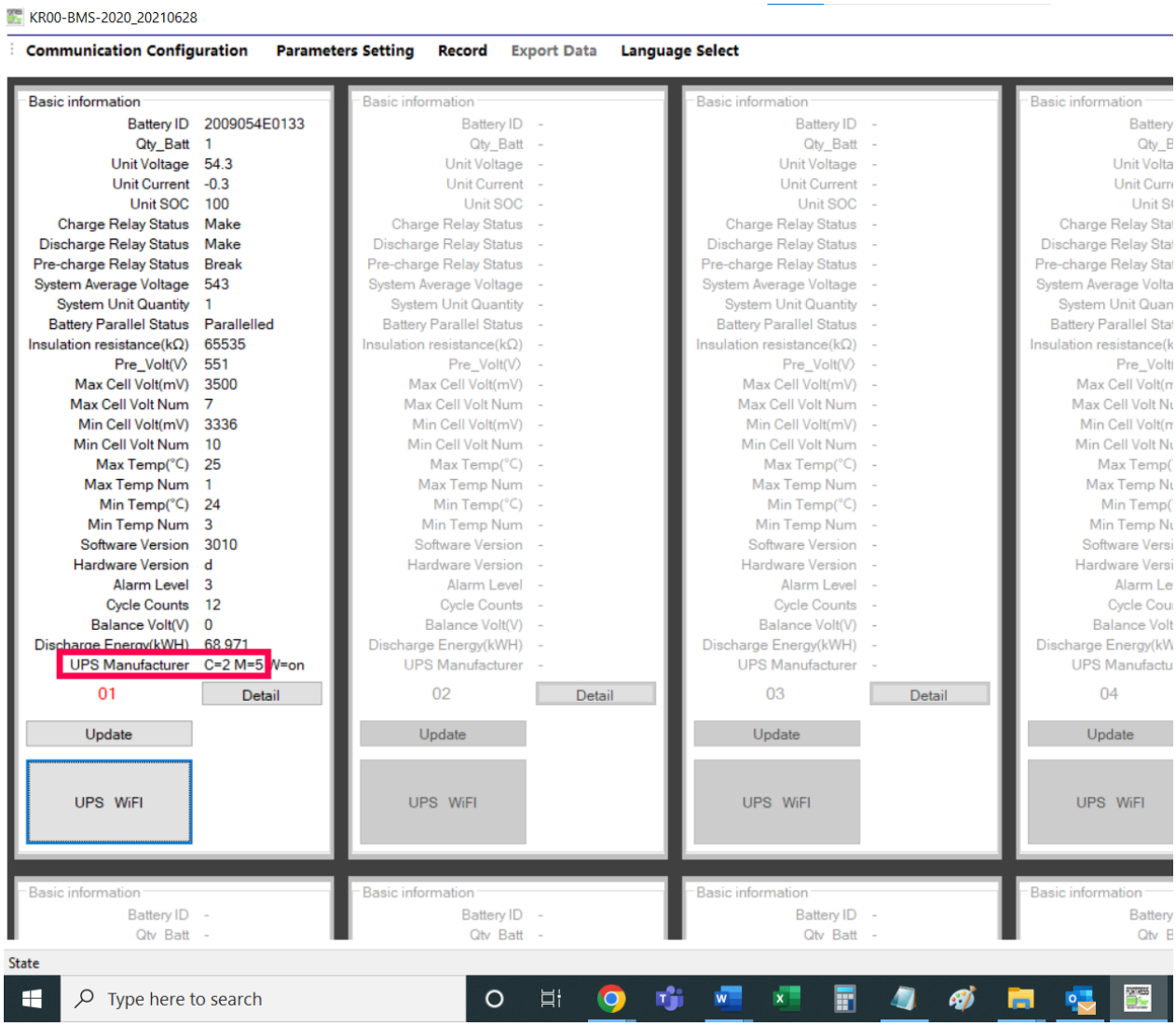


The firmware is now updated!

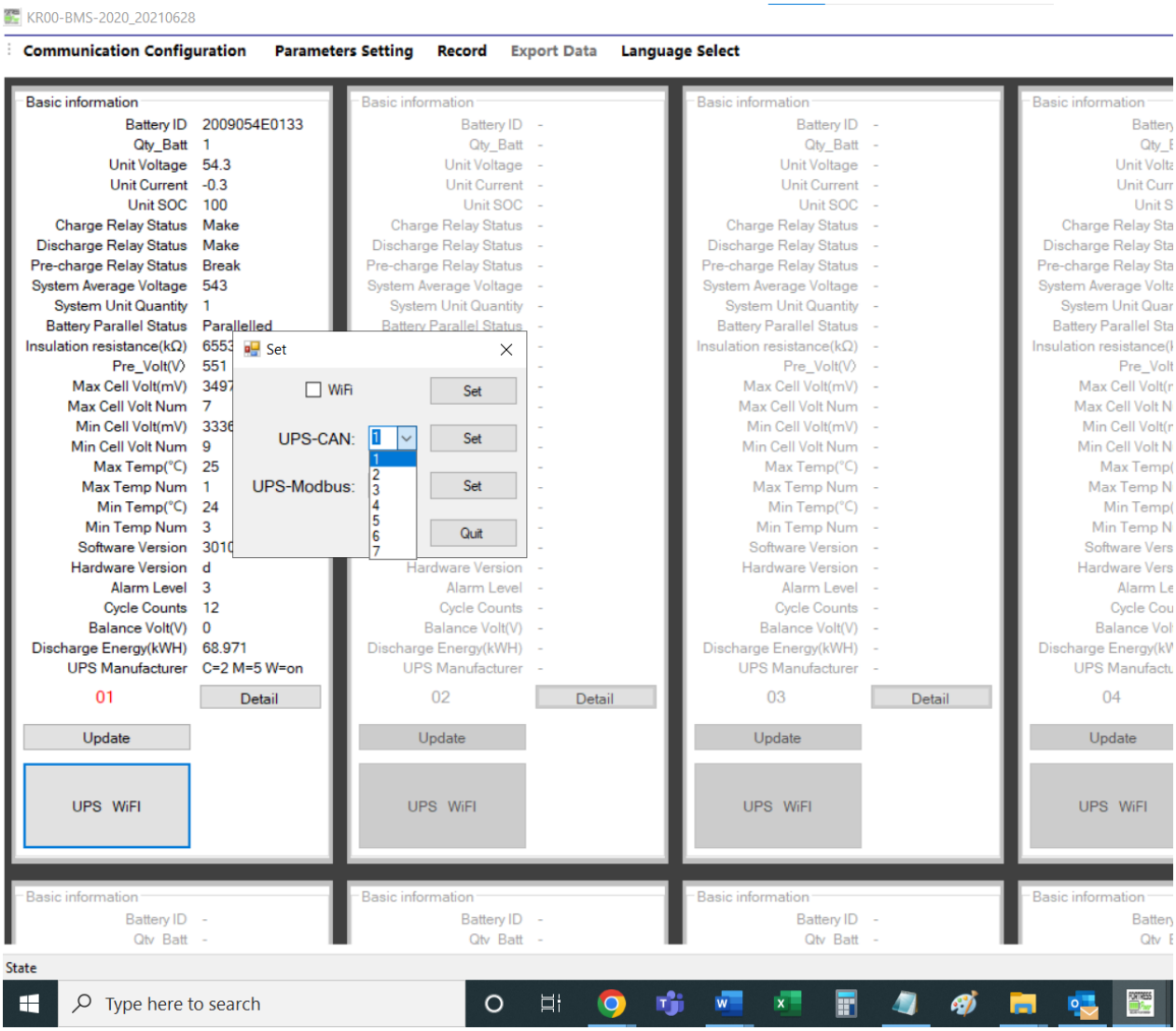
Selecting Protocol ID

1. Different communication protocols are required for different inverters. This article shows how to change CAN ("C") protocol ID. Refer to the table below to see which protocol ID is appropriate for your inverter.

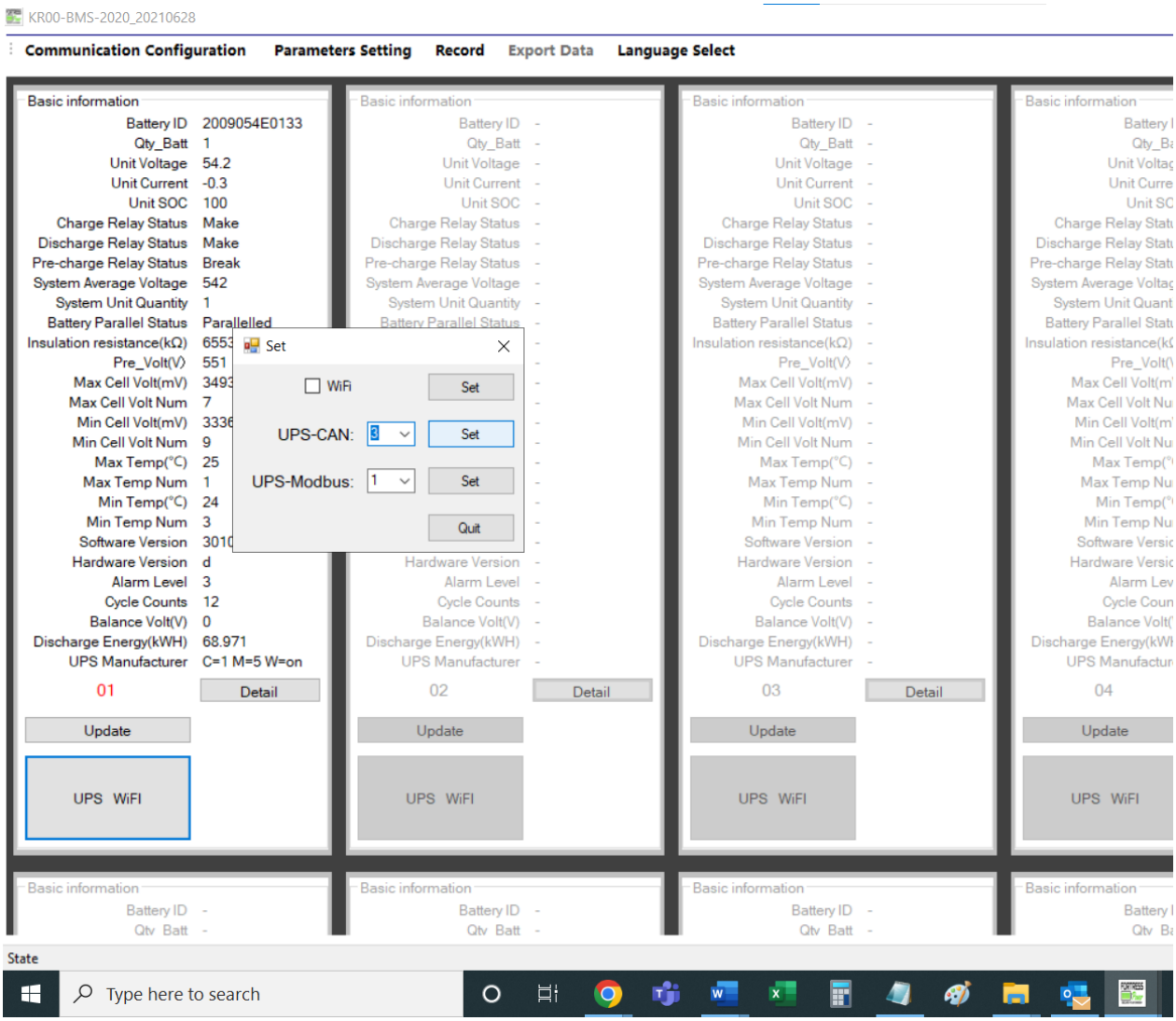
CAN ("C") Protocol IDs	
Sol-ark	2
SMA	2
Victron	3



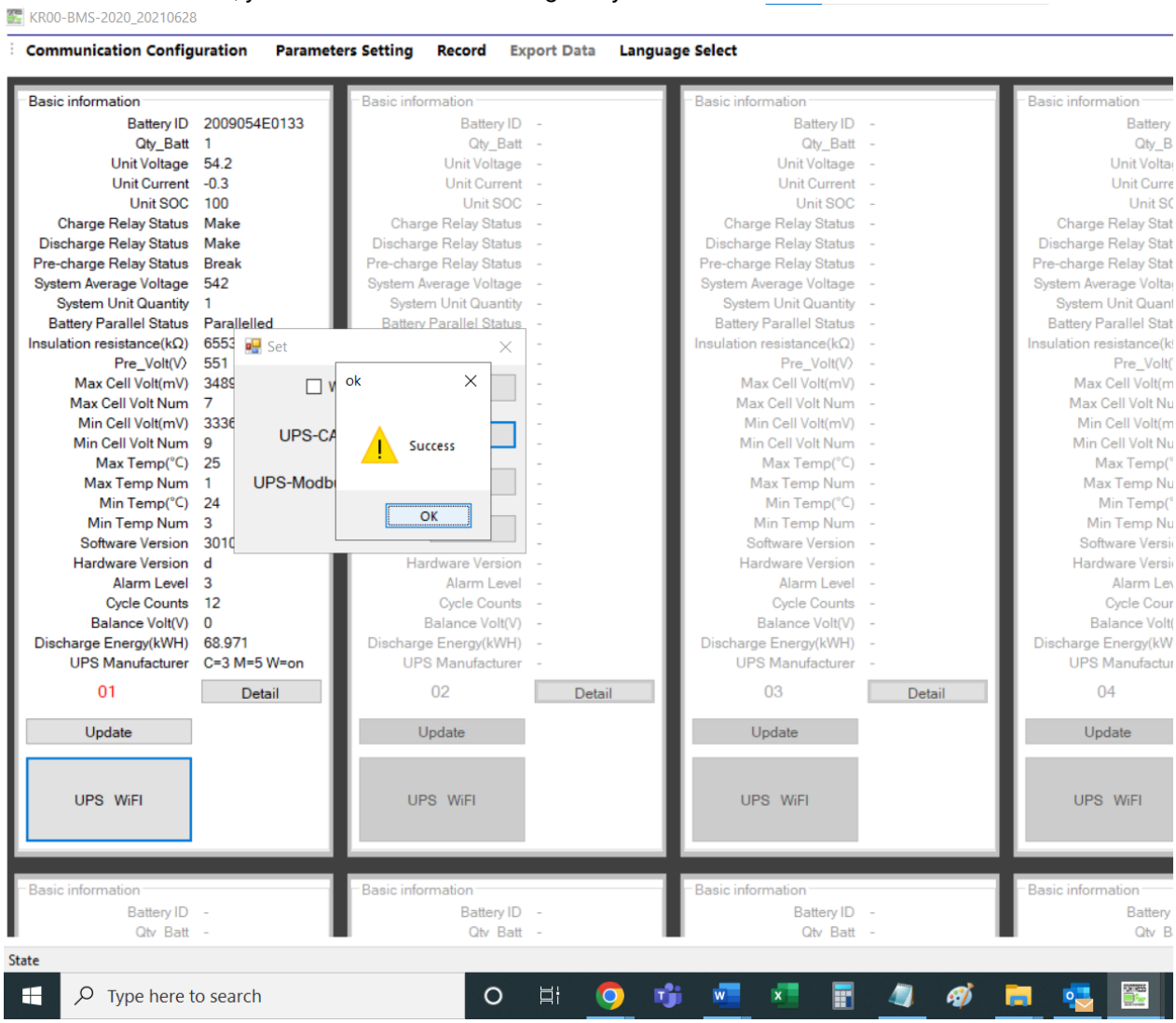
2. Click on "UPS WiFi" and Click on the downward arrow next to the number next to "UPS-CAN:", afterwards click on the appropriate number from the dropdown list of the numbers.



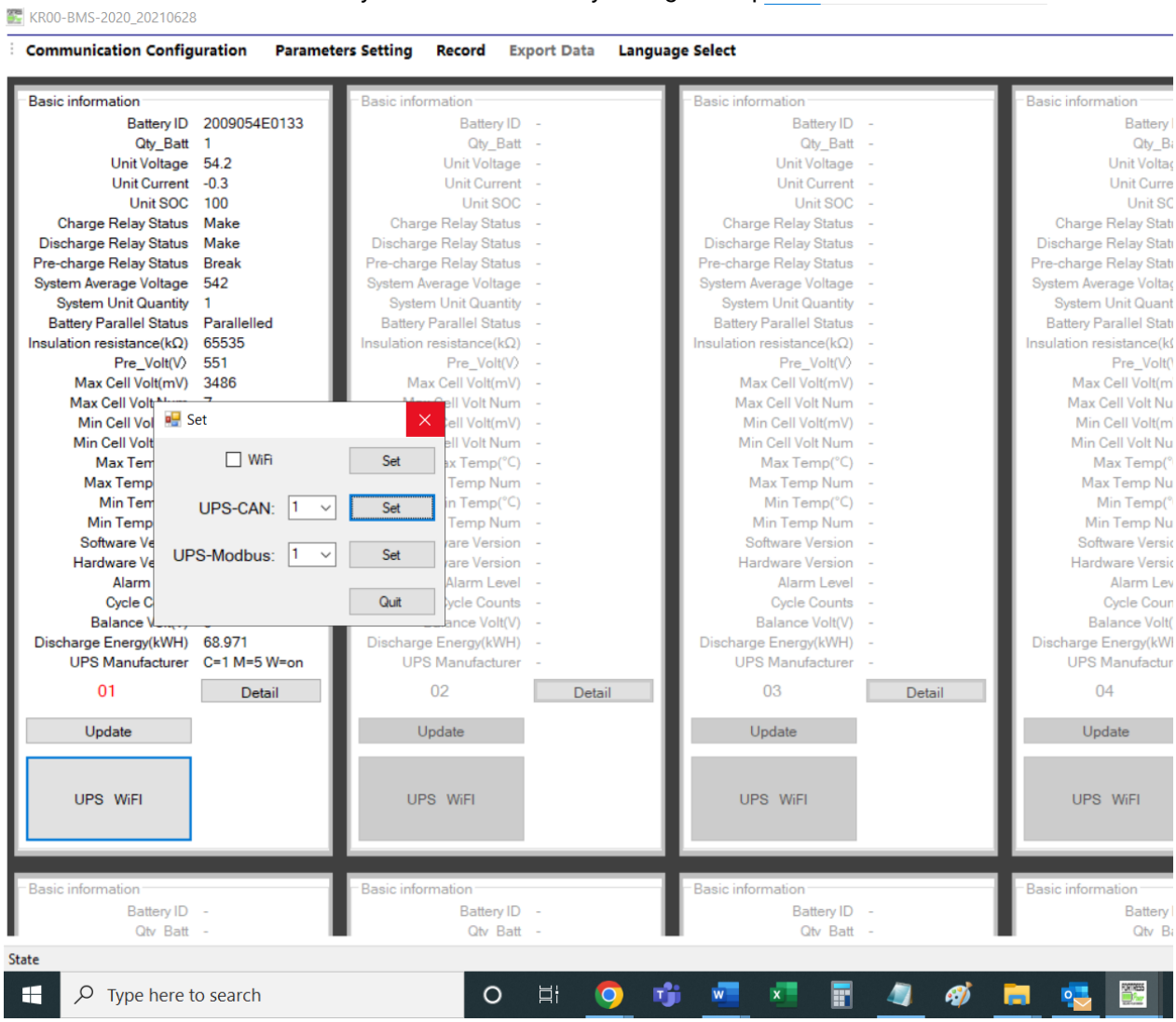
3. You'll see that after clicking the number, the dropdown list will disappear and the number that you've selected will be displayed in the box. Next, click "Set".


KR00-BMS-2020_20210628
Communication Configuration
Parameters Setting
Record
Export Data
Language Select
Basic information
Battery ID 2009054E0133
Qty_Batt 1
Unit Voltage 54.2
Unit Current -0.3
Unit SOC 100
Charge Relay Status Make
Discharge Relay Status Make
Pre-charge Relay Status Break
System Average Voltage 542
System Unit Quantity 1
Battery Parallel Status Parallelled
Insulation resistance(kΩ) 6553
Pre_Volt(V) 551
Max Cell Volt(mV) 3493
Max Cell Volt Num 7
Min Cell Volt(mV) 3336
Min Cell Volt Num 9
Max Temp(°C) 25
Max Temp Num 1
Min Temp(°C) 24
Min Temp Num 3
Software Version 3010
Hardware Version d
Alarm Level 3
Cycle Counts 12
Balance Volt(V) 0
Discharge Energy(kWH) 68.971
UPS Manufacturer C=1 M=5 W=on
01
Detail
Update
UPS WiFI
Set
WiFi
Set
UPS-CAN: 3
Set
UPS-Modbus: 1
Set
Quit
02
03
04
State
Type here to search

4. Once clicked on "Set", you'll see a Success message on your screen. Click "OK".



5. And close the "Set window. Now you have successfully changed the protocol ID.



6.