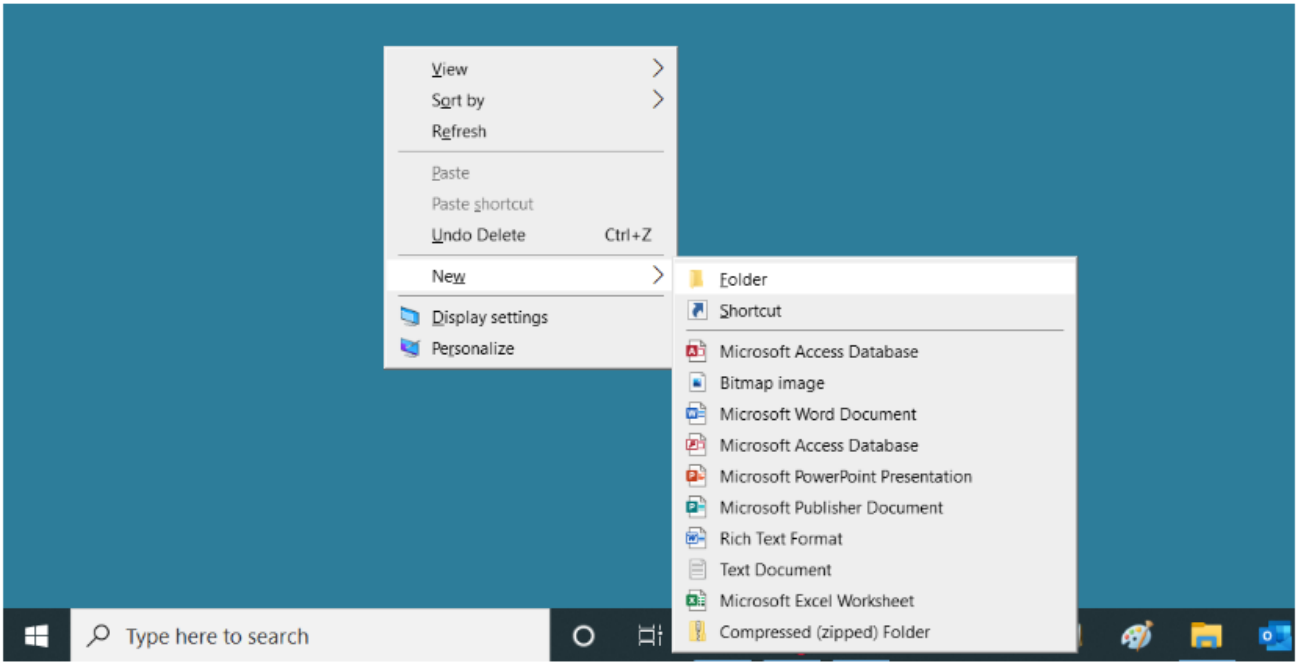
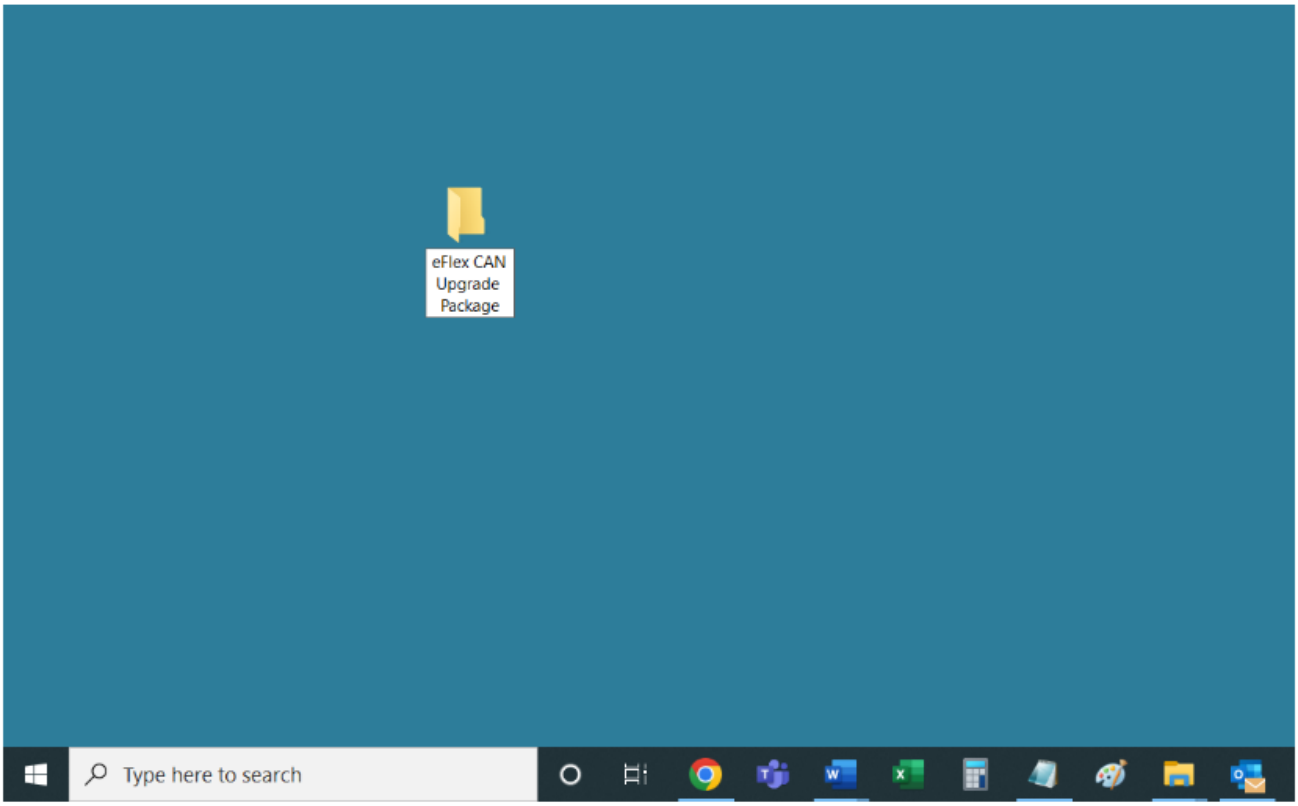
eVault Max Firmware Update Instructions

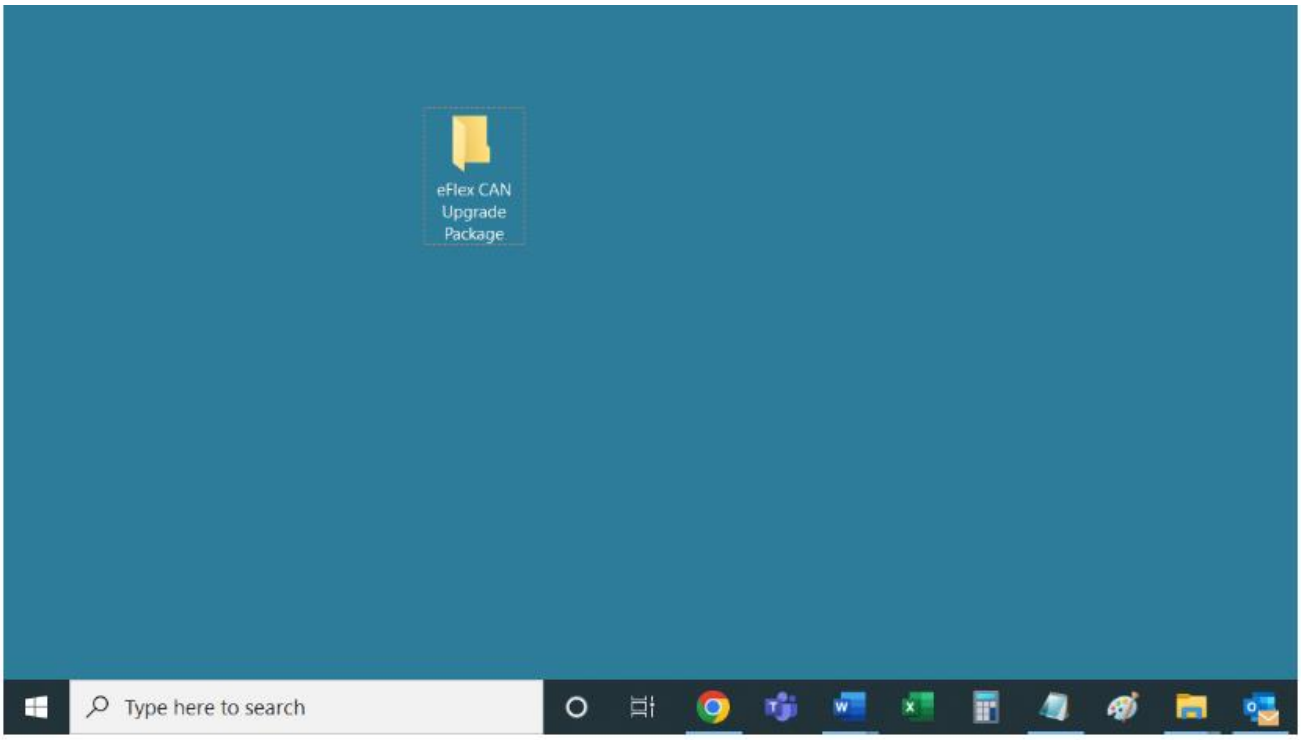
(Rev.2)

Obtaining and Organizing the Required Files

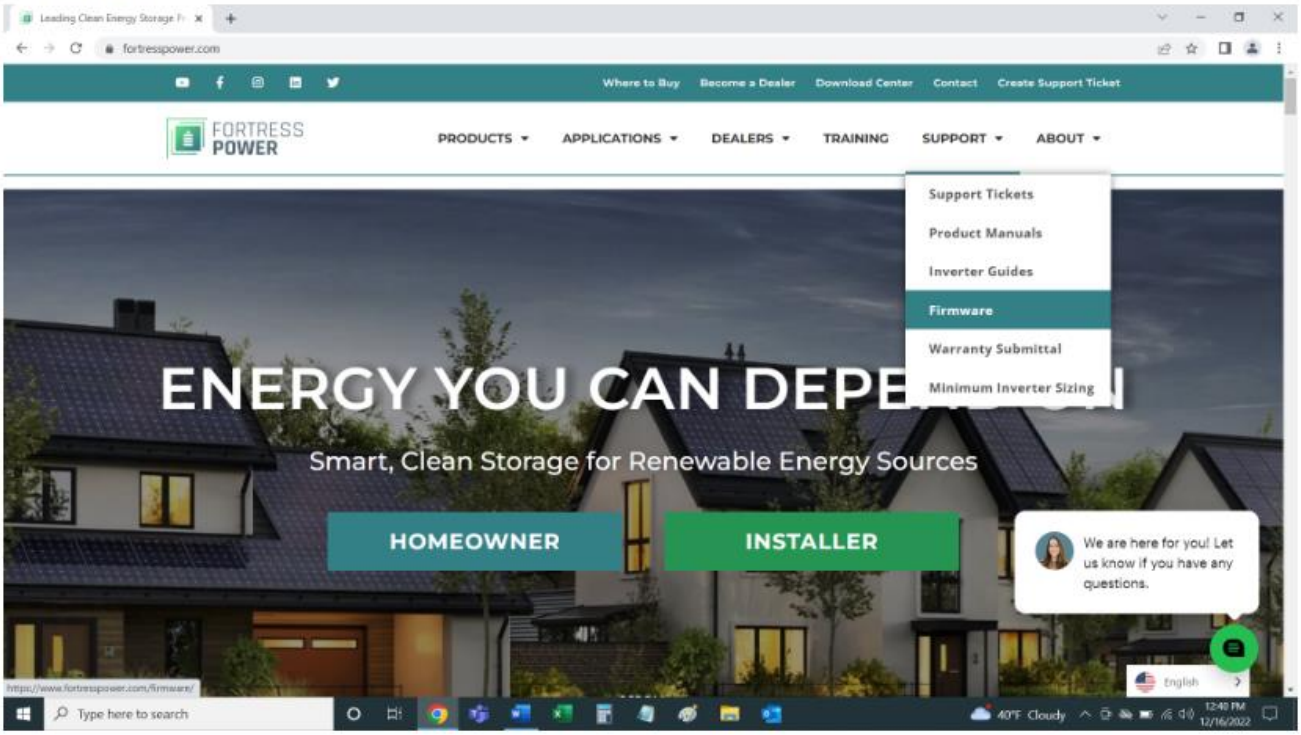
1. Right-click on the desktop and in the drop down, hover your mouse pointer to "New" and then click on "Folder" and create a title for it. In this guide the folder will be named "eFlex CAN Upgrade Package" and it is suggested for you to use the same title. Once the title is typed in either double click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



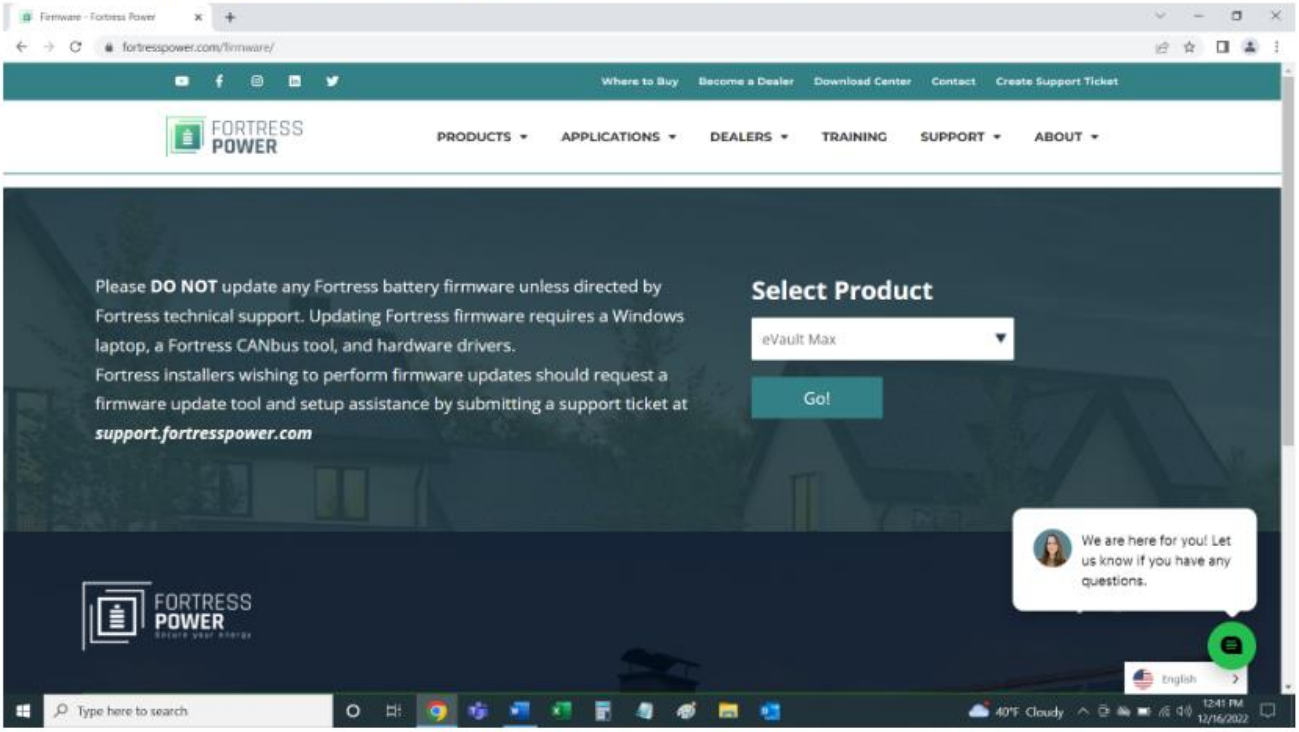




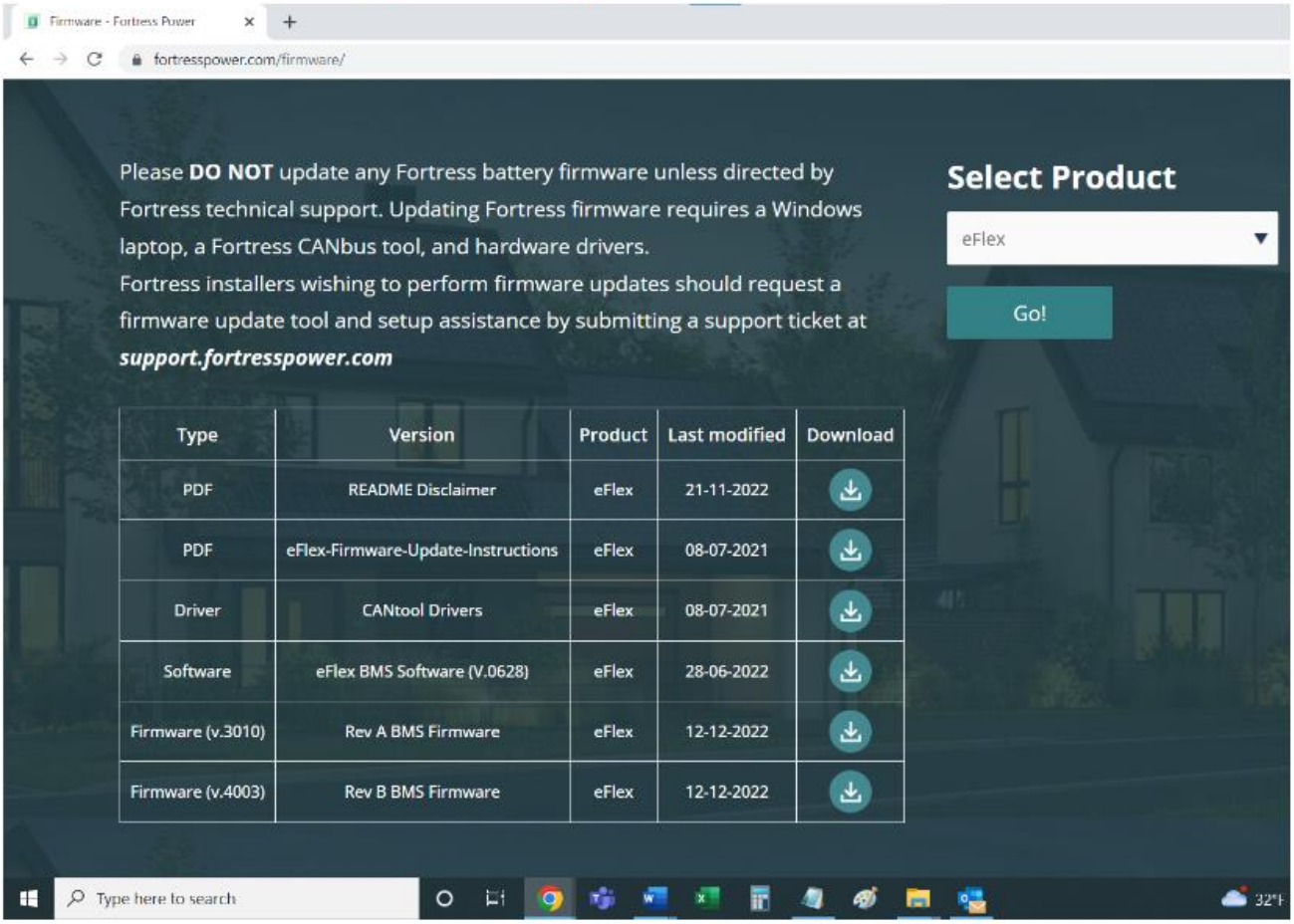
2. Go to website "fortresspower.com", hover your mouse pointer to the "SUPPORT" tab on the website and click on "Firmware".



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

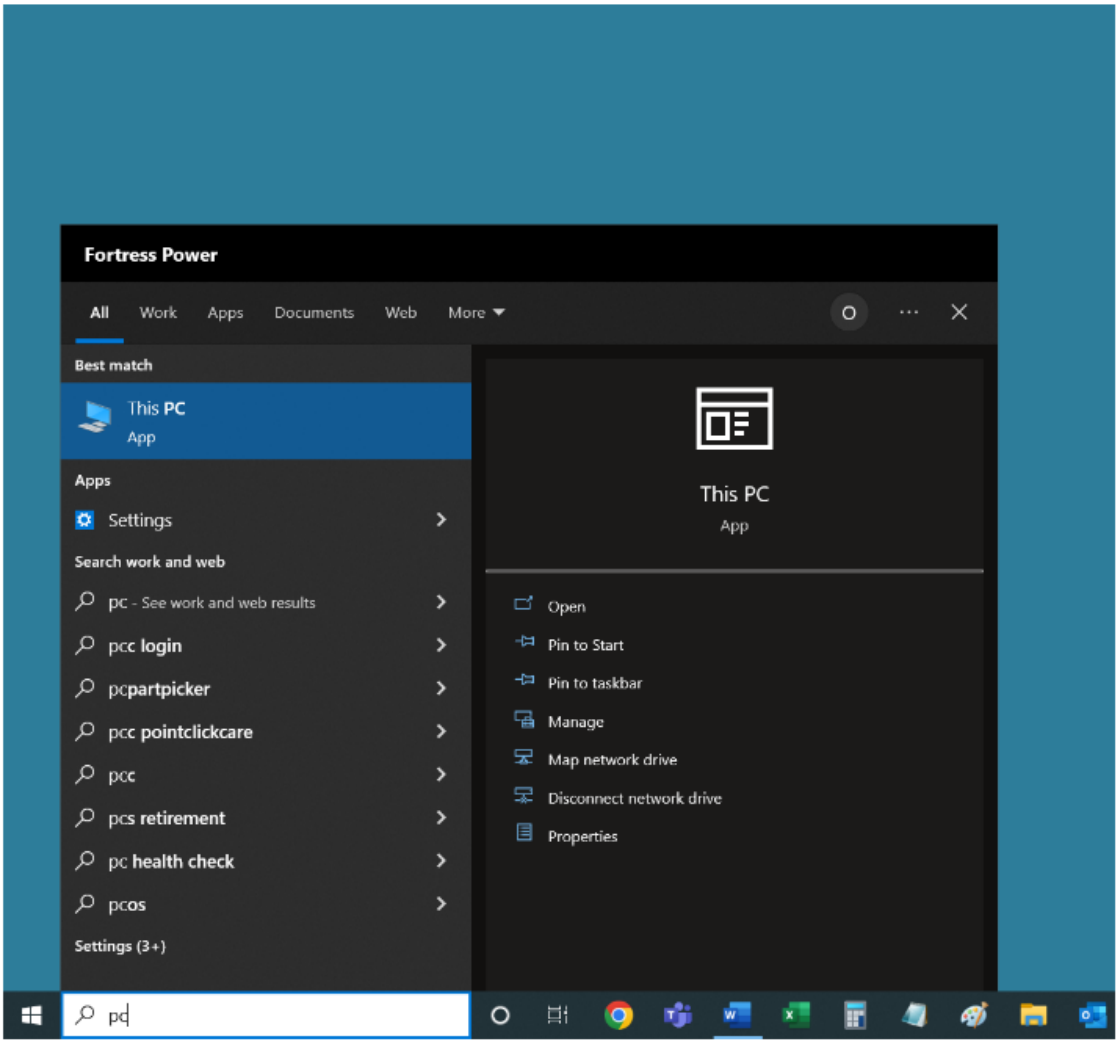


4. Below, a table will appear. You need to download software, both firmwares, and driver. Click on download icons for the corresponding rows (last four download icons).
   Note: the version numbers will change in the future. If the versions that you see on your screen don't coincide with the ones in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

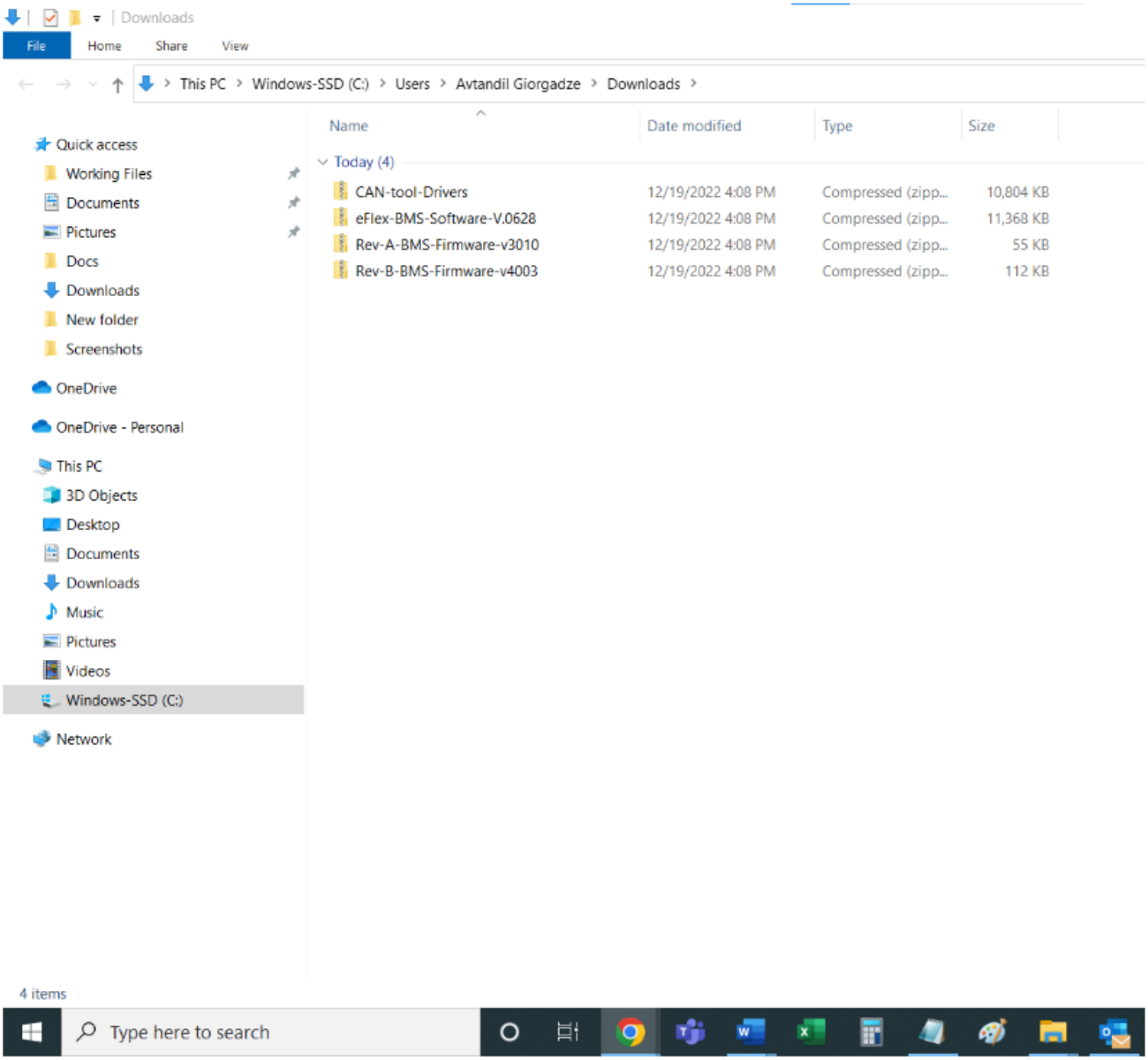


Type	Version	Product	Last modified	Download
PDF	README Disclaimer	eFlex	21-11-2022	
PDF	eFlex-Firmware-Update-Instructions	eFlex	08-07-2021	
Driver	CANtool Drivers	eFlex	08-07-2021	
Software	eFlex BMS Software (V.0628)	eFlex	28-06-2022	
Firmware (v.3010)	Rev A BMS Firmware	eFlex	12-12-2022	
Firmware (v.4003)	Rev B BMS Firmware	eFlex	12-12-2022	

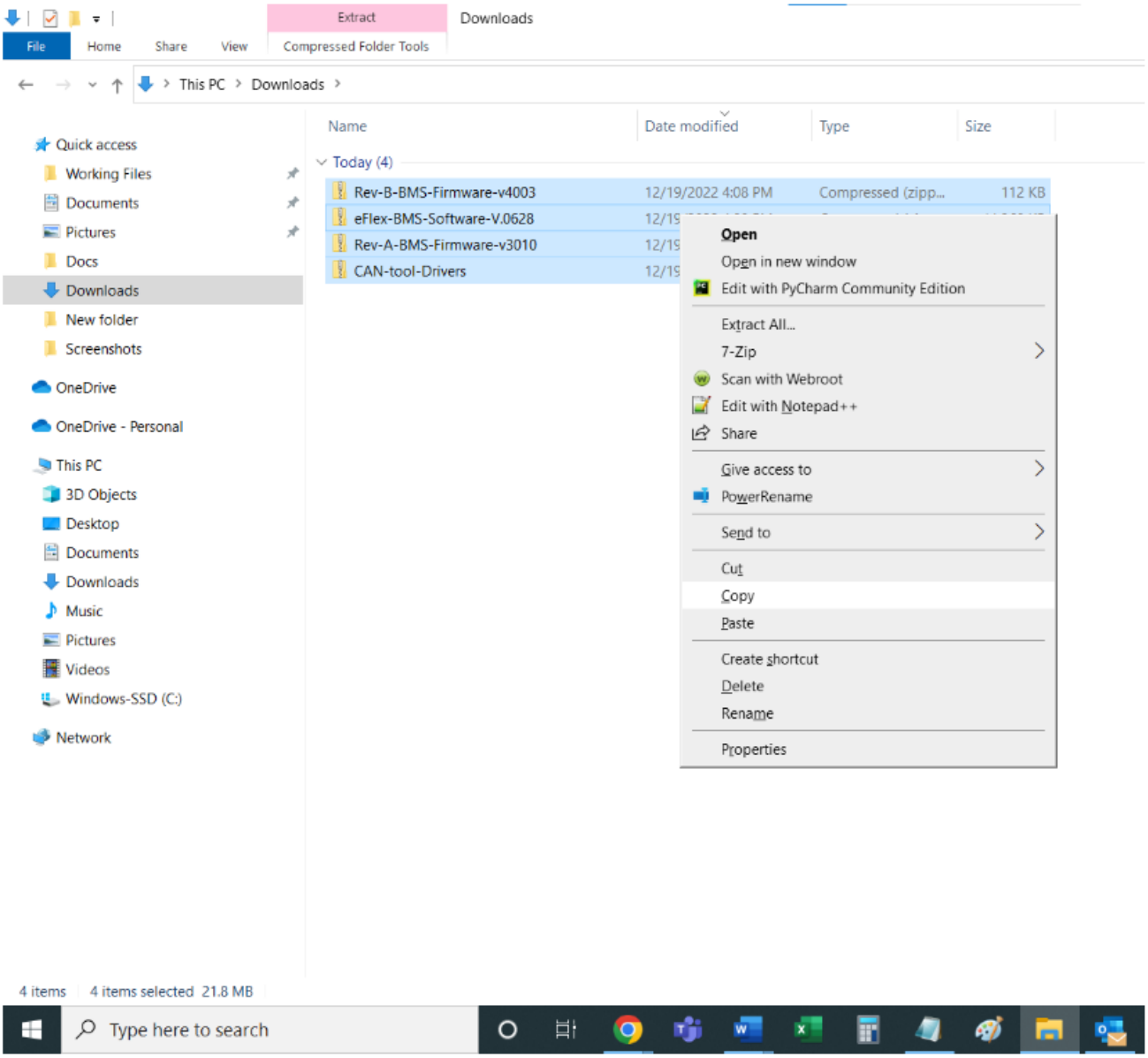
5. Once the downloads are completed, navigate to the "Downloads" folder (or wherever you saved the files from the website). Close the browser, click on the start (looks like a Windows icon) and type in "pc". Then, click on "This PC".



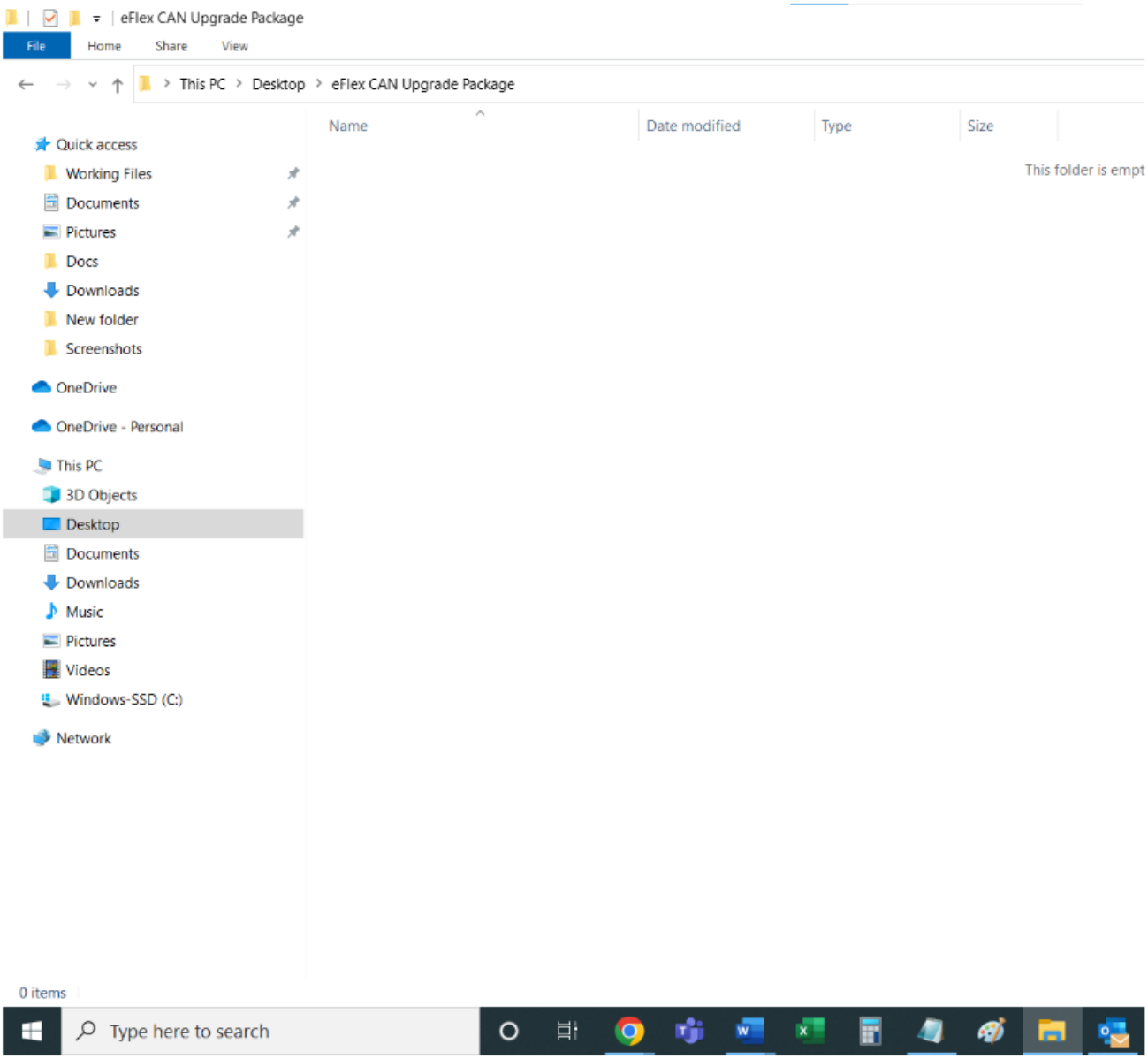
6. Then, go to the "Downloads" folder (or wherever you saved the files from the website) where you'll see the downloaded folder.

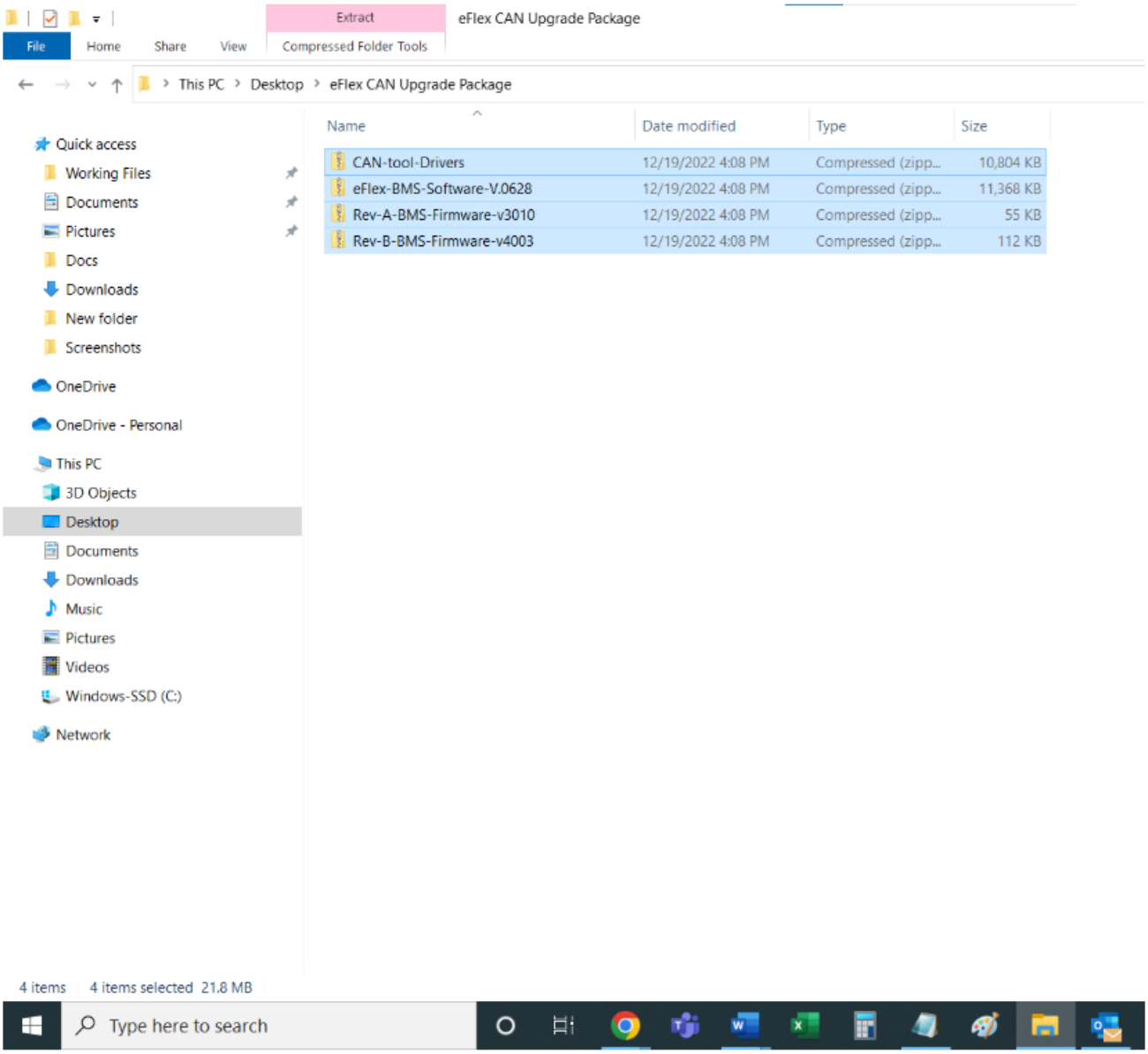


7. Select these four files, right-click on the selection and click on "Copy" to copy these files.

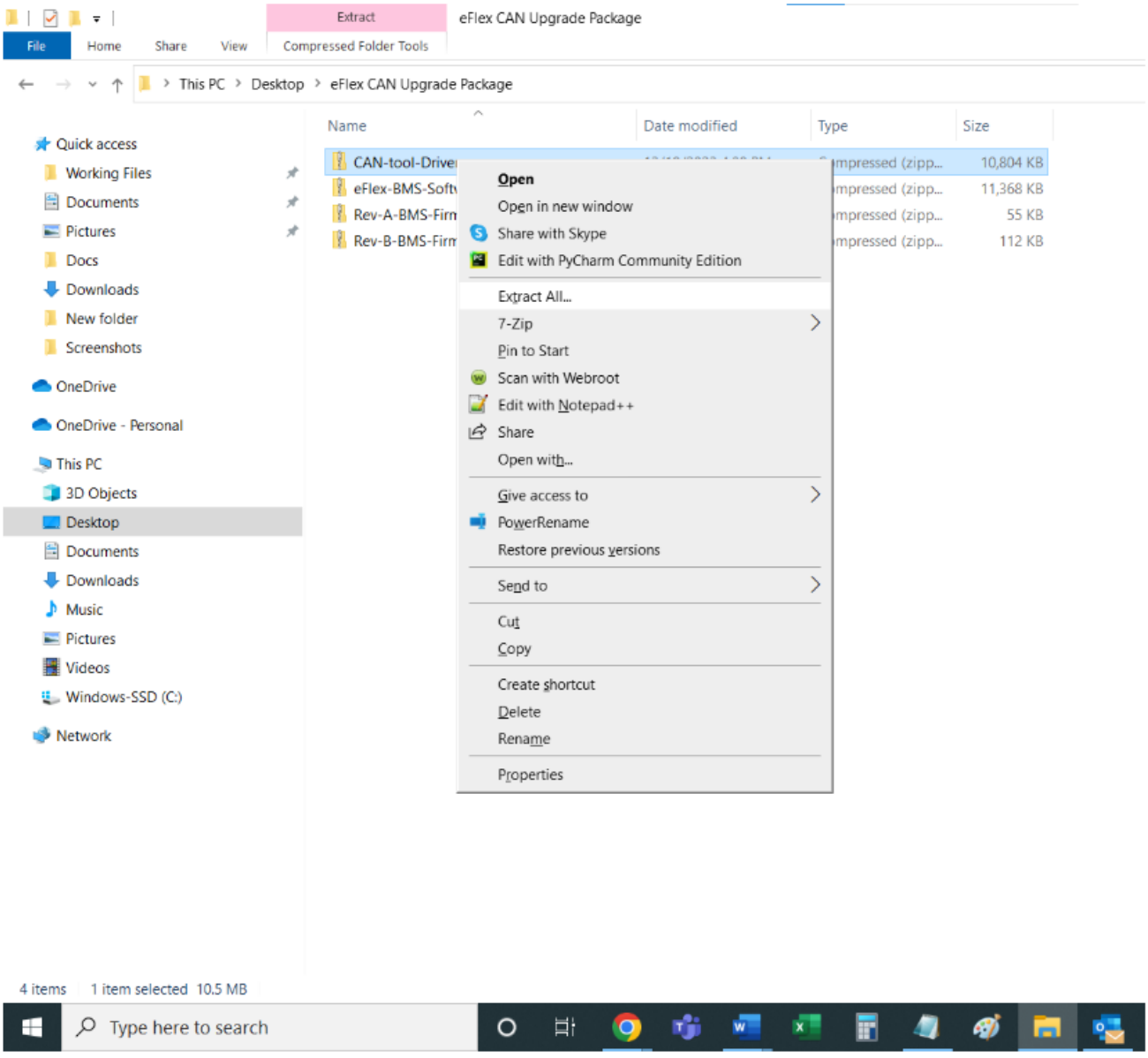


8. Navigate to the "eFlex CAN Upgrade Package" right-click somewhere in the folder and paste the copied files.

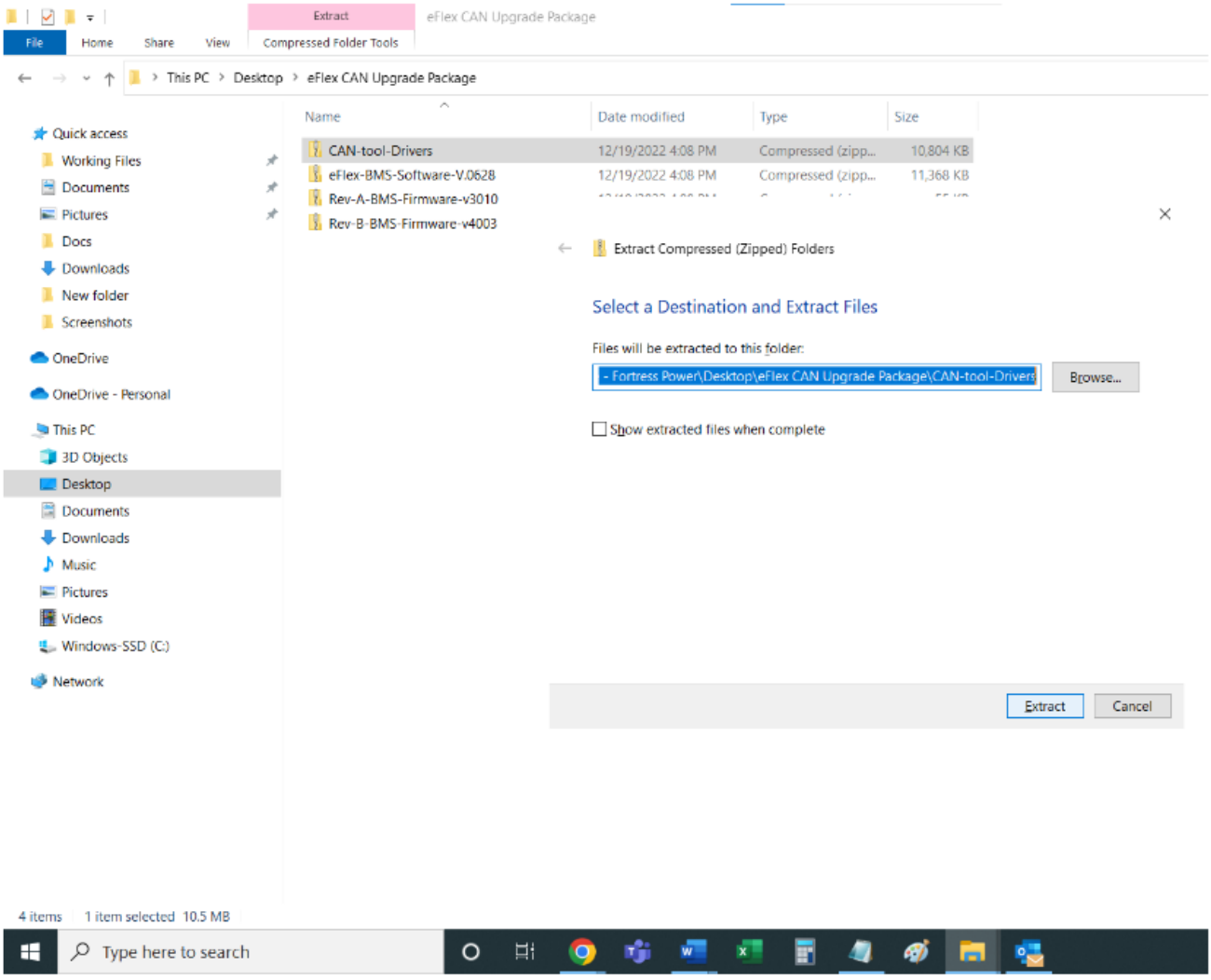



Extract
eFlex CAN Upgrade Package
File
Home
Share
View
Compressed Folder Tools
This PC › Desktop › eFlex CAN Upgrade Package
Name
Date modified
Type
Size
CAN-tool-Drivers 12/19/2022 4:08 PM Compressed (zipp... 10,804 KB
eFlex-BMS-Software-V.0628 12/19/2022 4:08 PM Compressed (zipp... 11,368 KB
Rev-A-BMS-Firmware-v3010 12/19/2022 4:08 PM Compressed (zipp... 55 KB
Rev-B-BMS-Firmware-v4003 12/19/2022 4:08 PM Compressed (zipp... 112 KB
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
4 items
4 items selected 21.8 MB
Type here to search

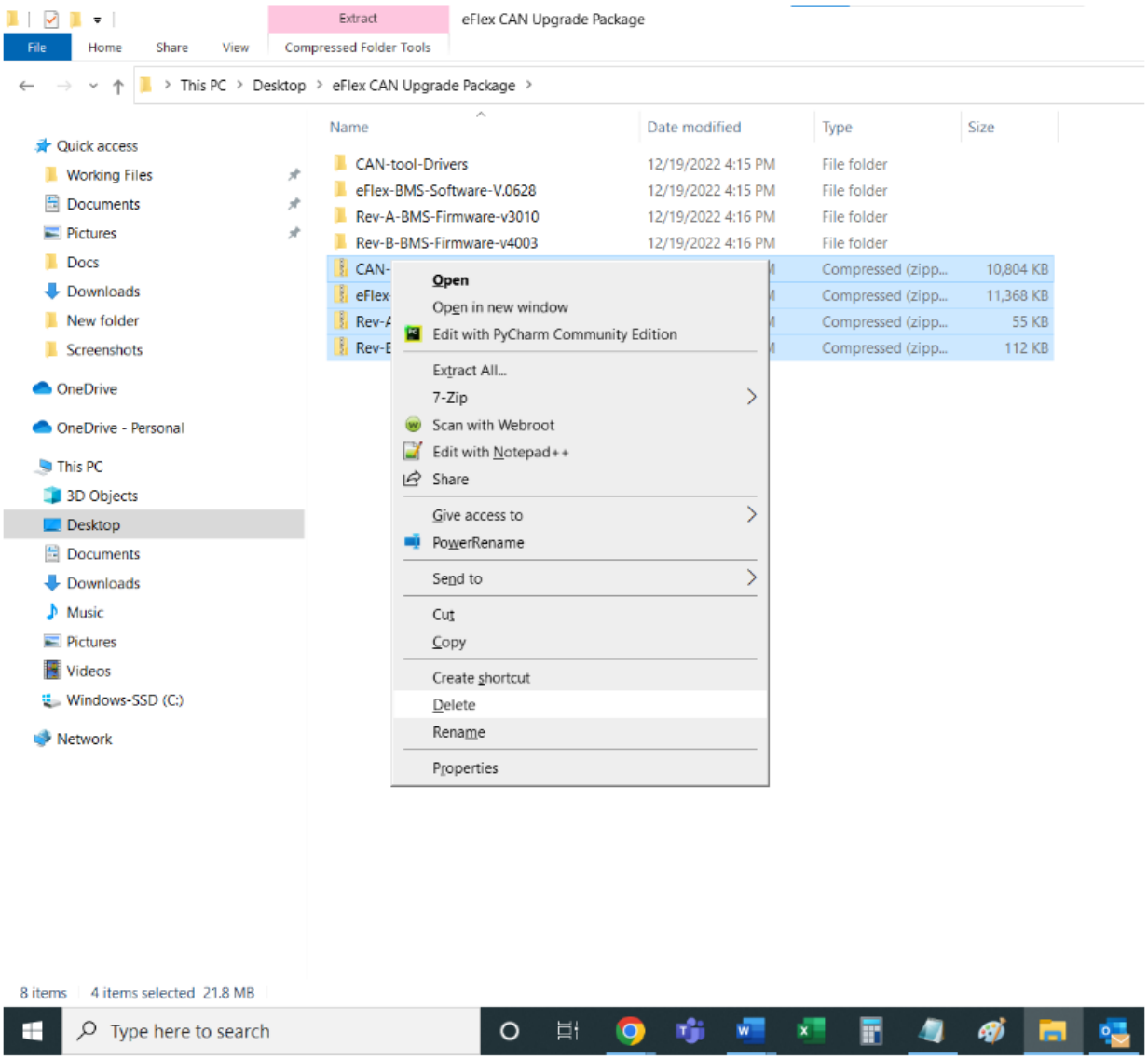
9. Click somewhere in the folder to remove the blue highlight from the files. Then, right-click on one of the files and from the dropdown click on "Extract All...".



10. Afterwards, click on "Extract".



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

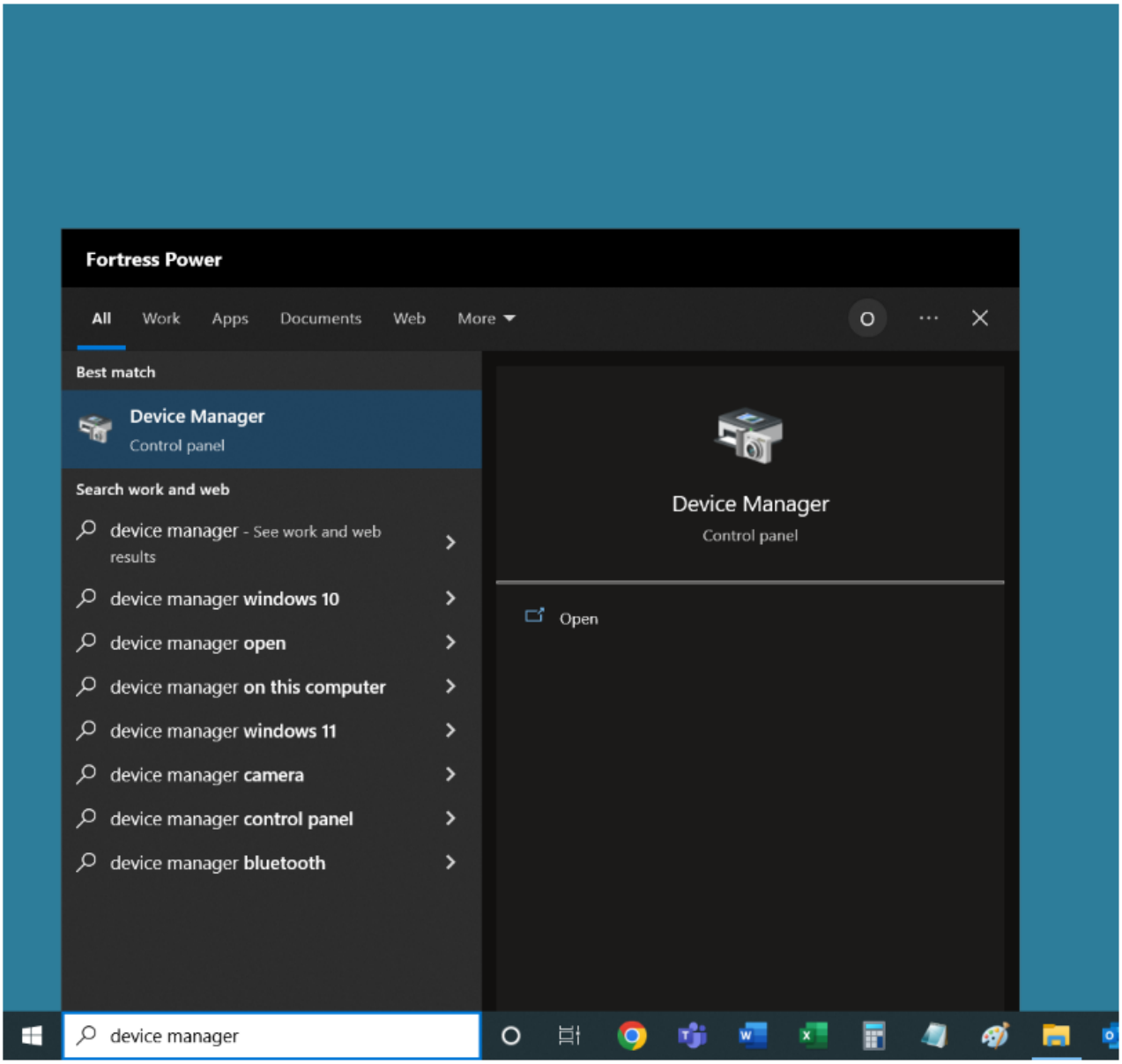


Now the drivers for the CAN tool (USBCAN) need to be installed

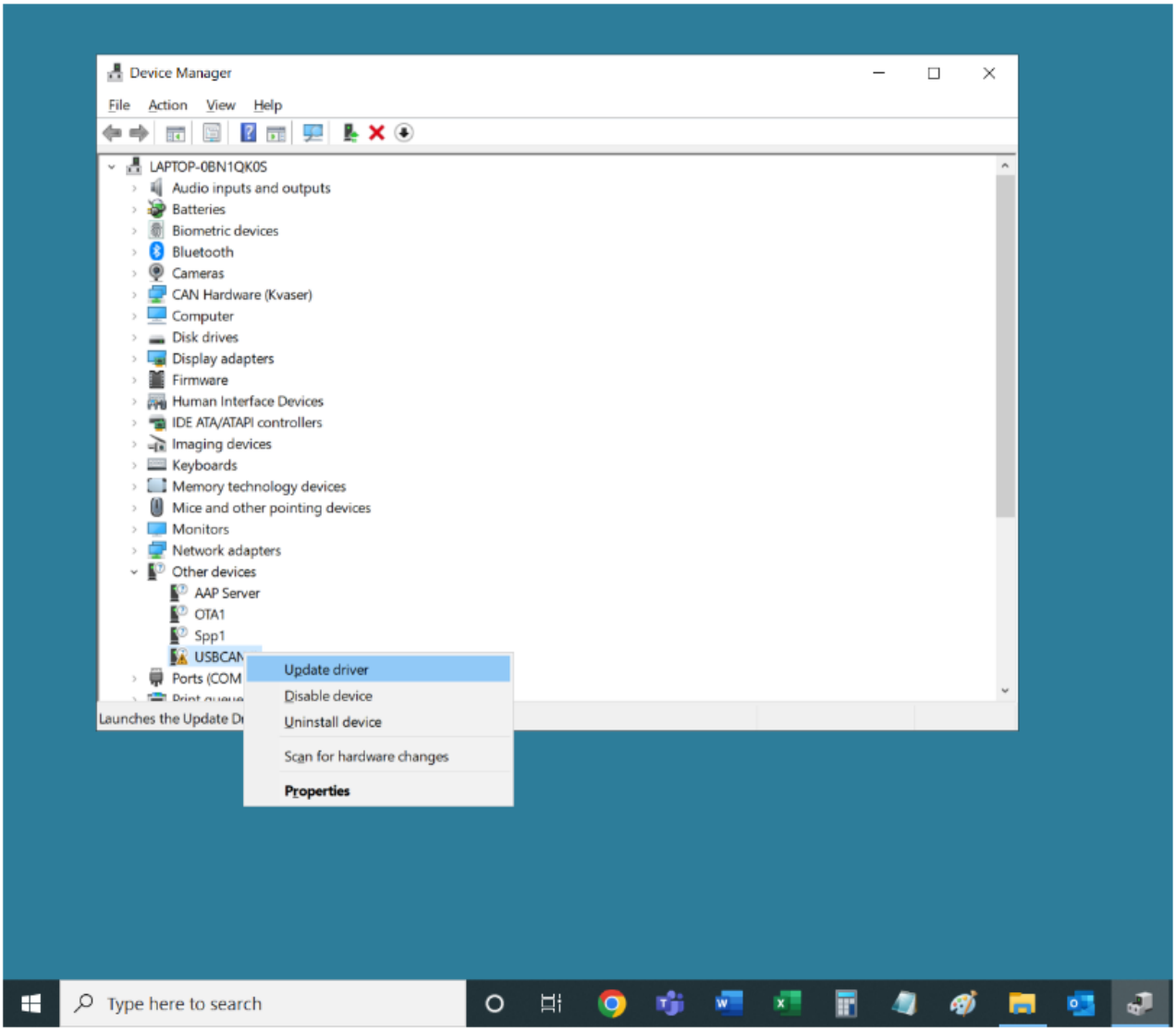
Installing the Drivers for the CANtool (USBCAN)

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

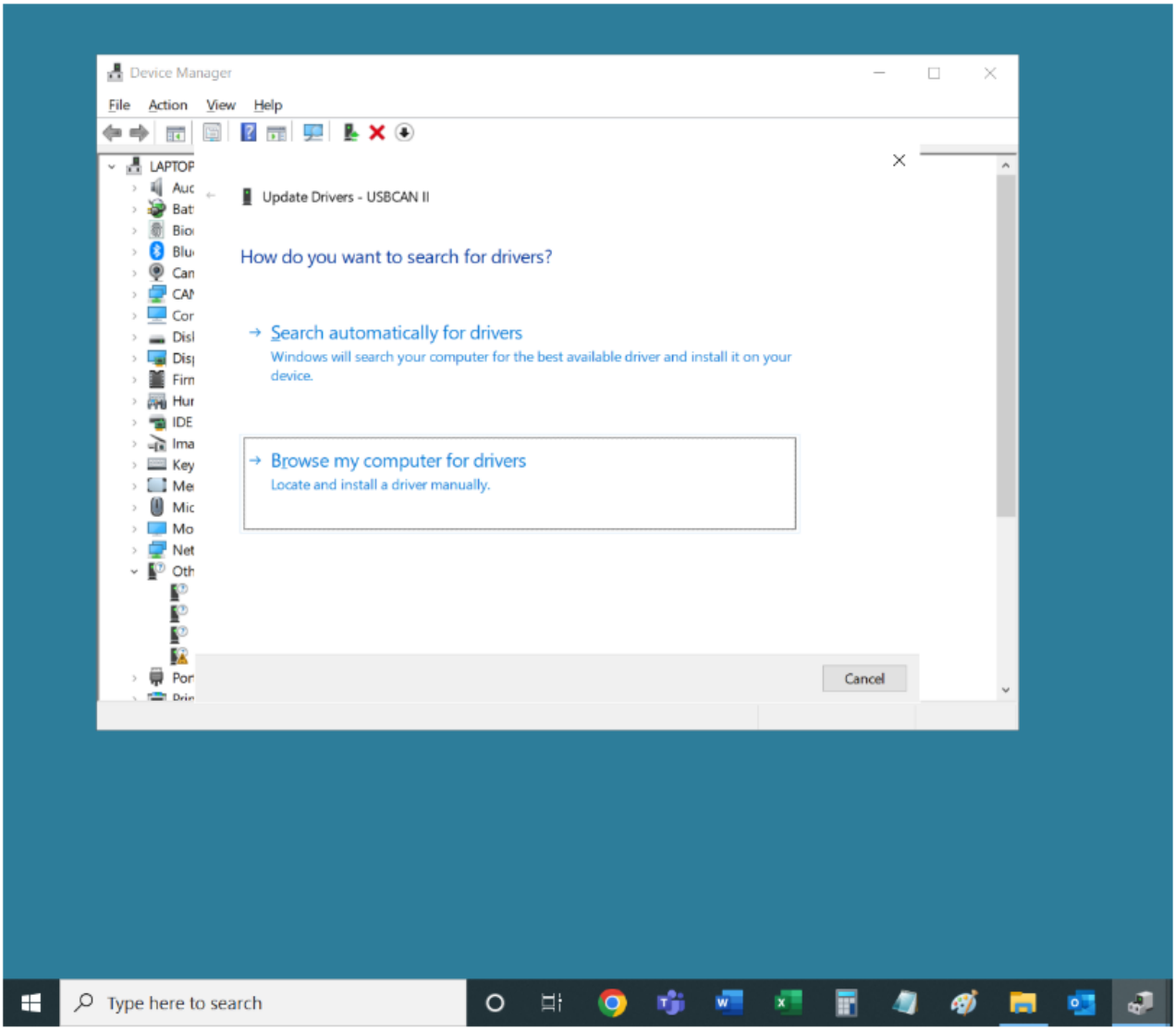
2. Click on the "Start" icon (looks like a Windows logo) and type in "device manager". Above the search-bar, click on "Device Manager".



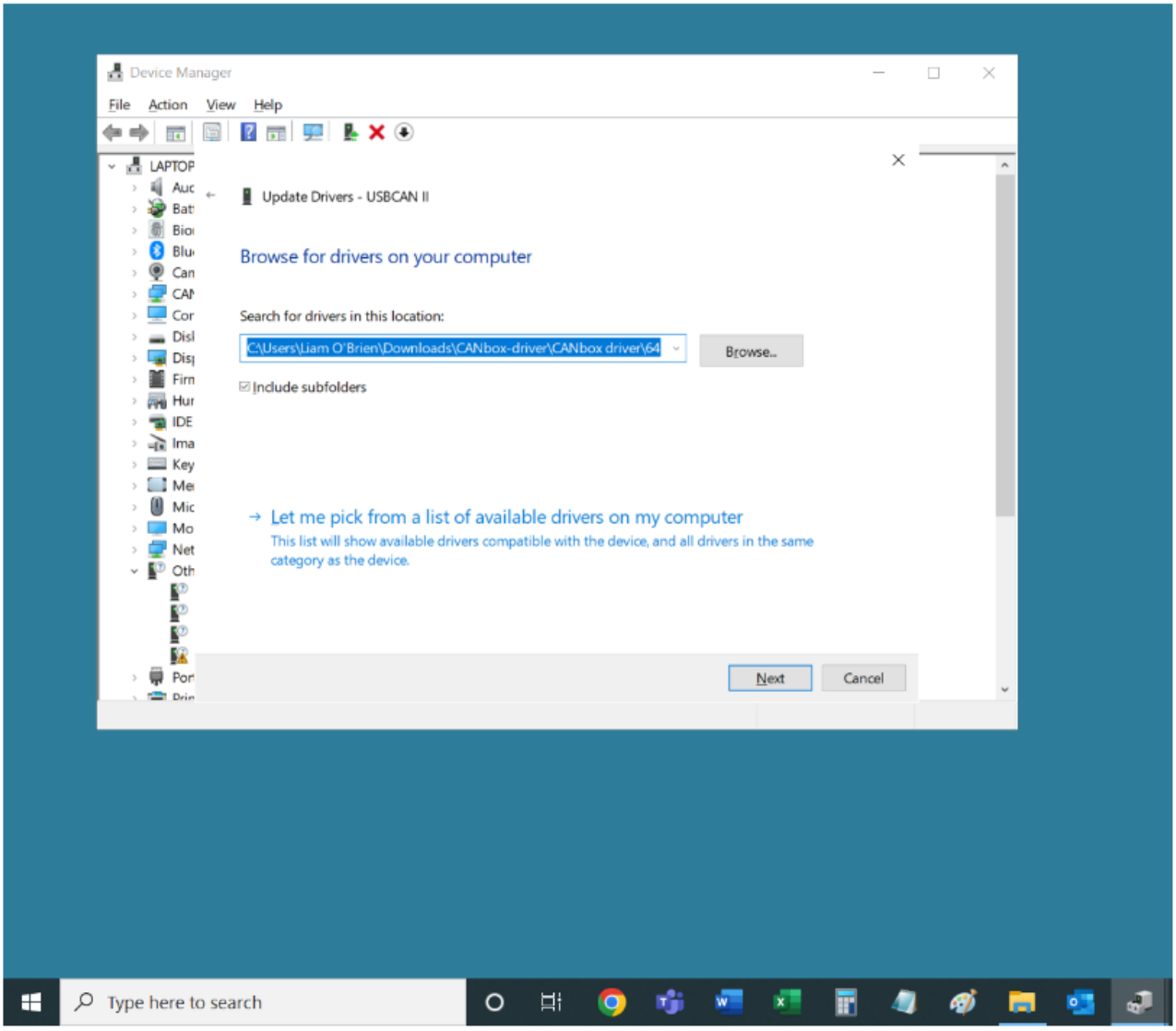
3. A window similar to the one shown below will open and one of the items of the list will be "USBCAN II" with an indent on the left. Right-click on this "USBCAN II" and from the drop-down click on "Update driver".



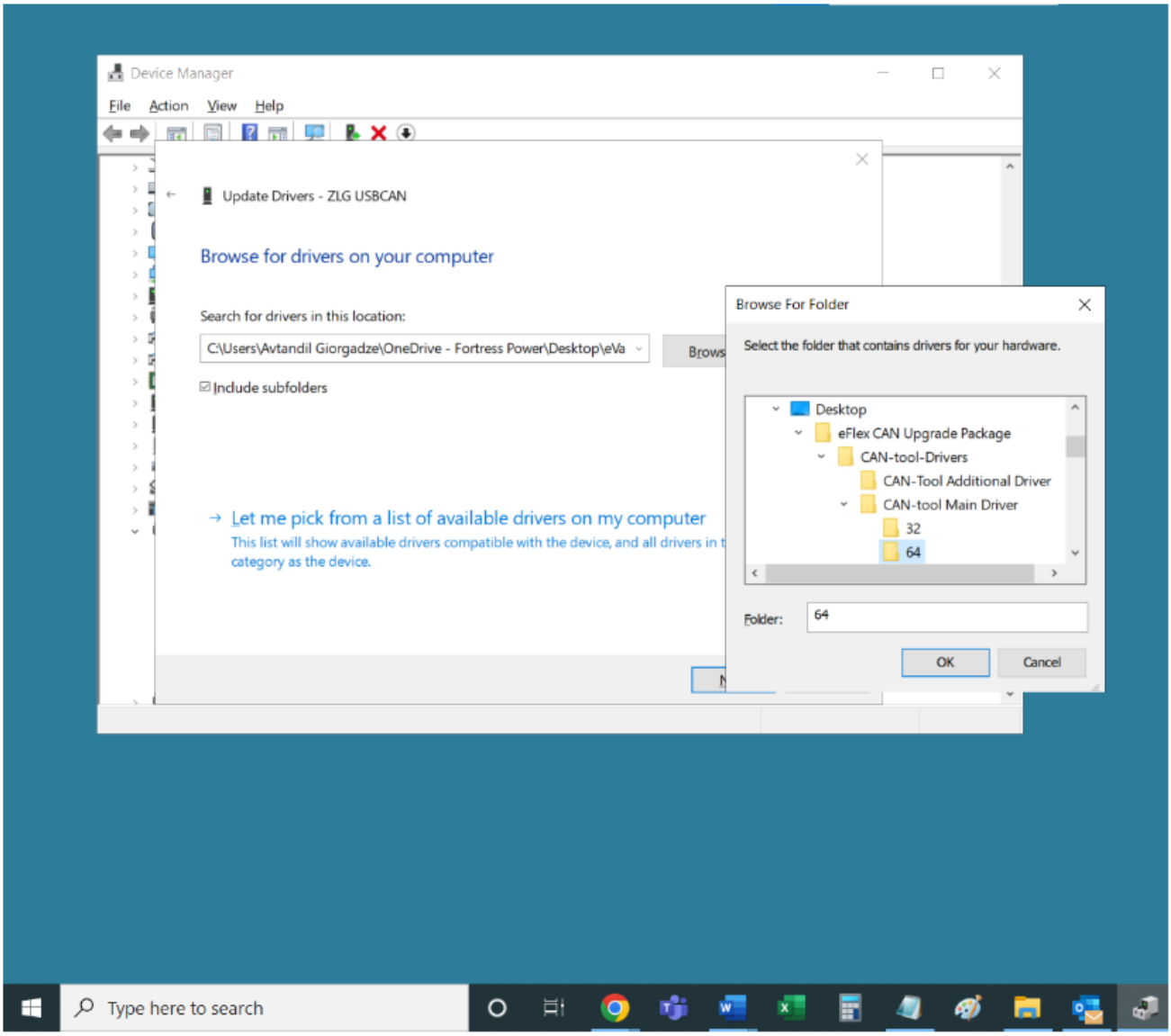
4. Next, click on "Browse my computer for drivers".



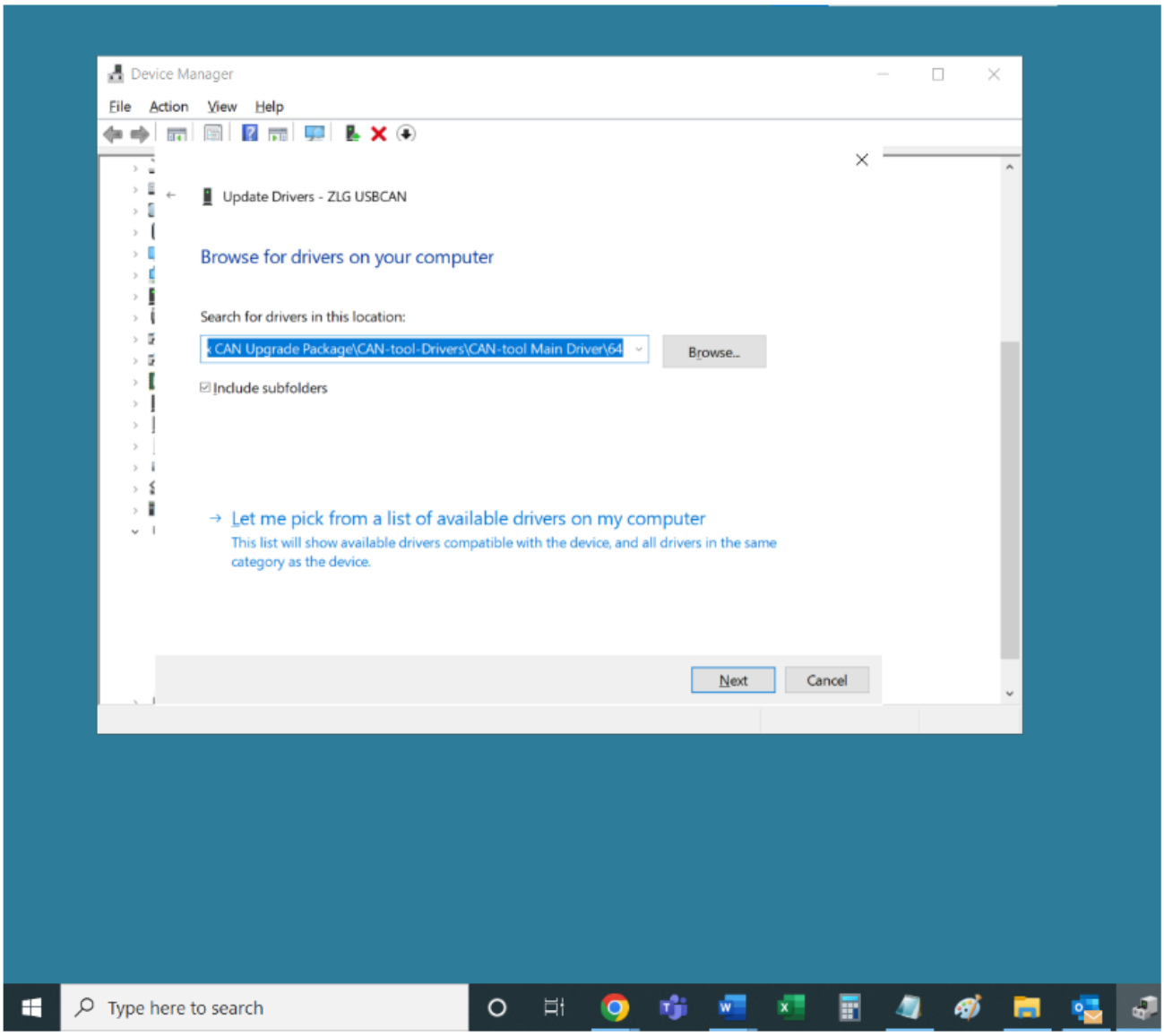
5. Now, click on "Browse..."



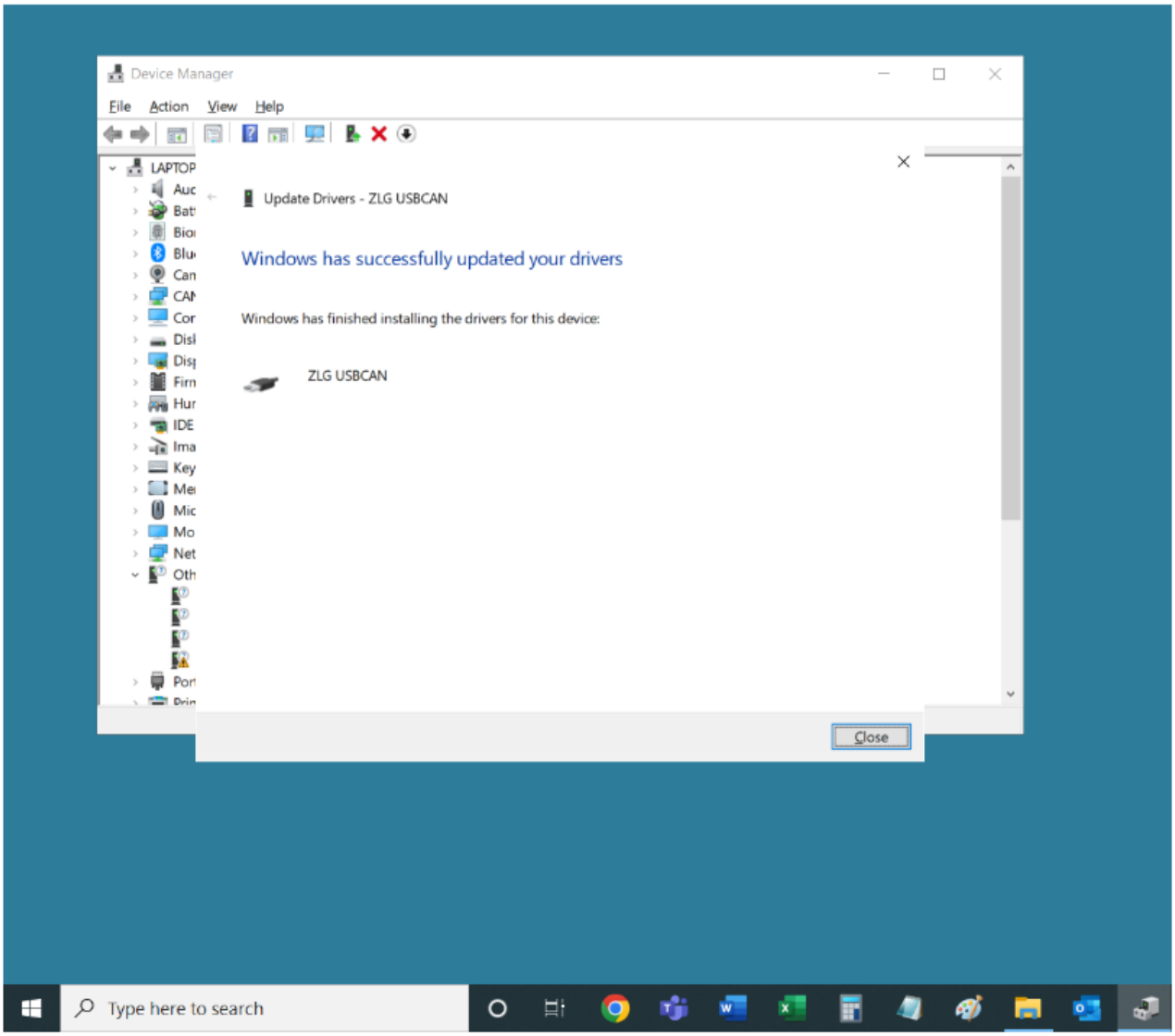
6. Then, navigate to the "eFlex CAN Upgrade Package" and from there navigate as follows: "eFlex CAN Upgrade Package" >>> "CAN-tool Drivers" >>> "CAN-tool Main Driver" >>> "64". Once "64" is selected, click "OK".



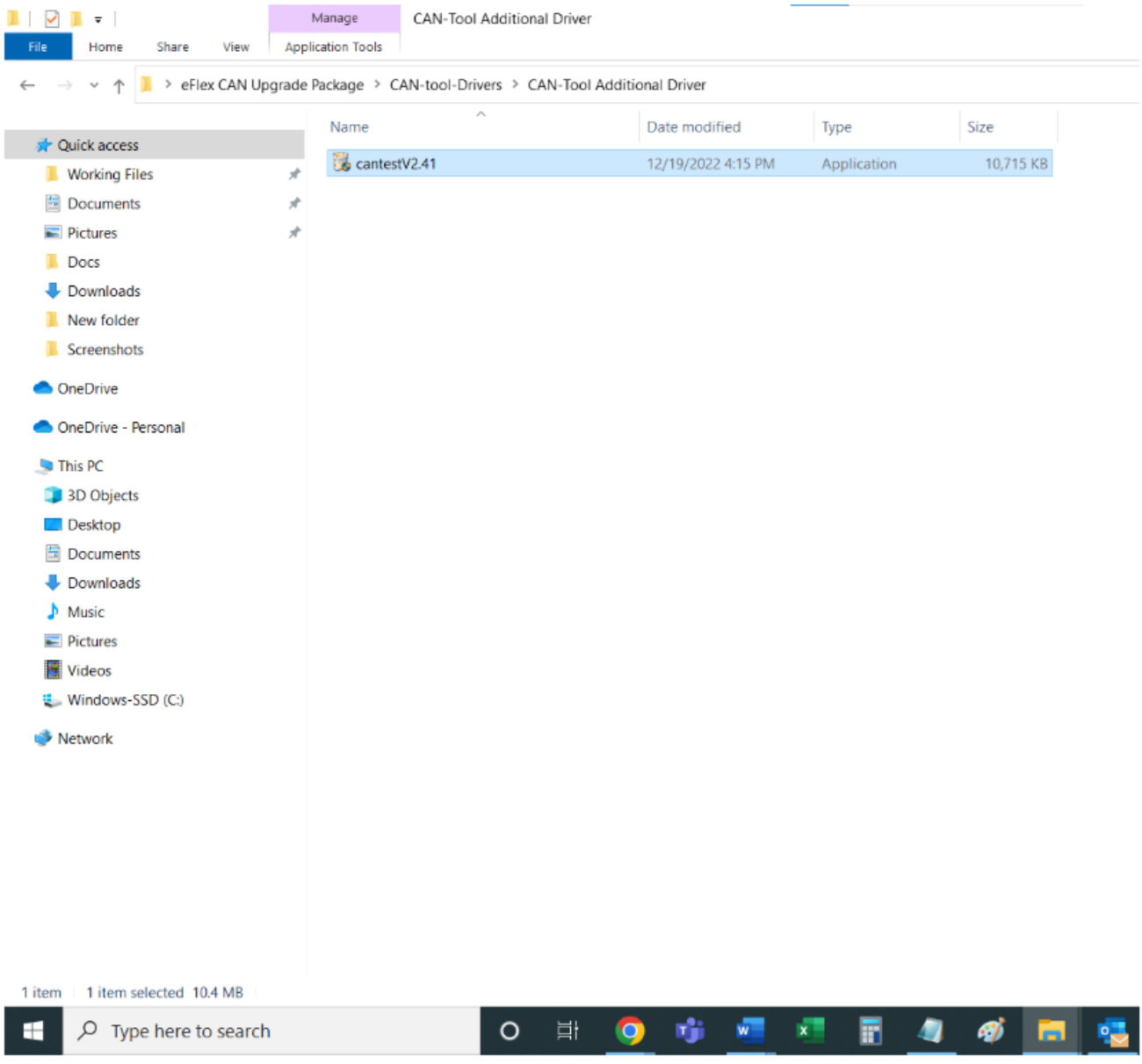
7. Then, click "Next".



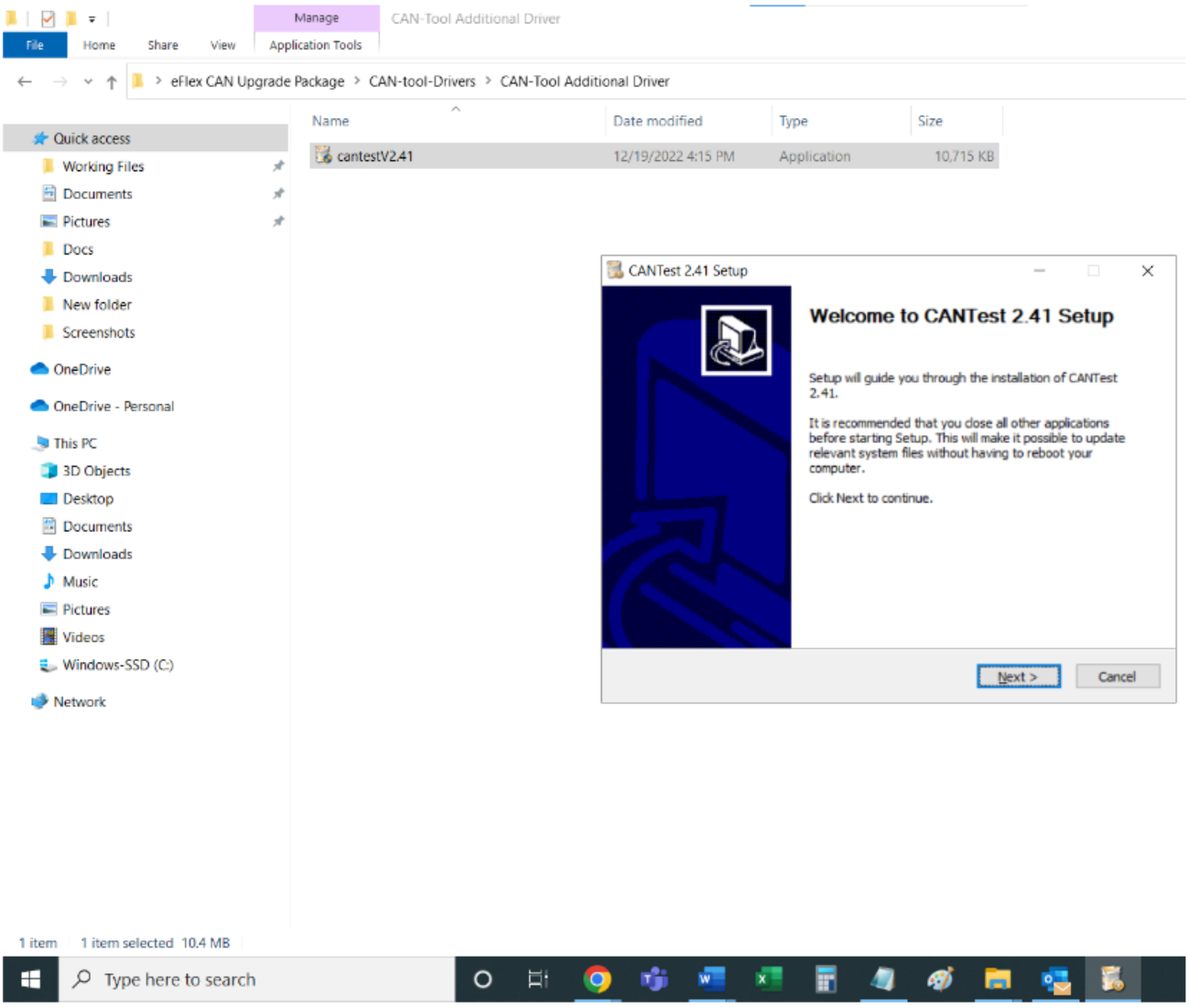
8. You will see the success message as shown below. Click "Close" and close the "Device Manager" window.



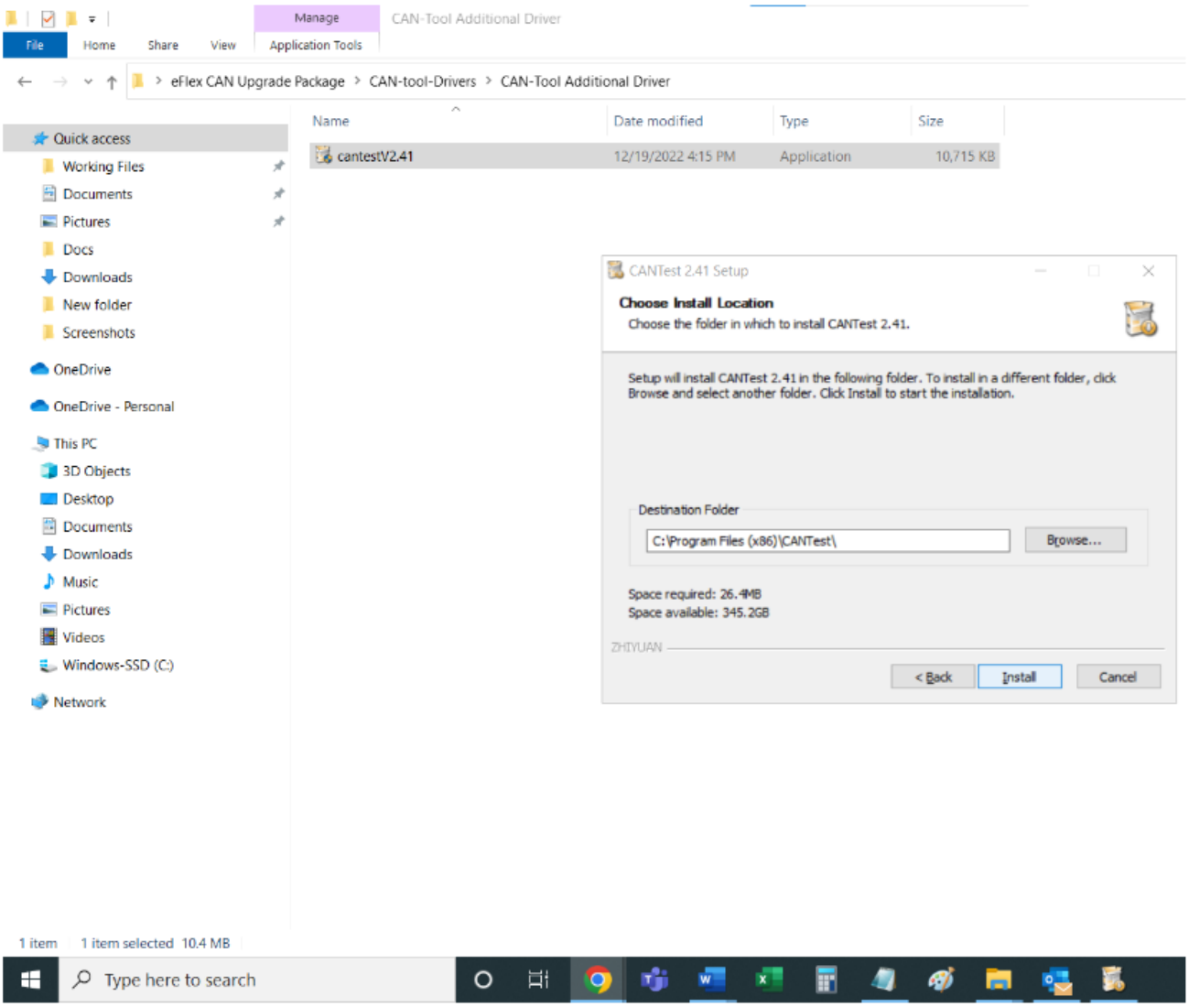
9. It's time to install an additional document. To do so, first open "eFlex CAN Upgrade Package" folder. Then, open the "CAN-tool Drivers" folder and afterwards open the "CAN-tool Additional Driver" folder. Now you can see a file titled "cantestV2.41".



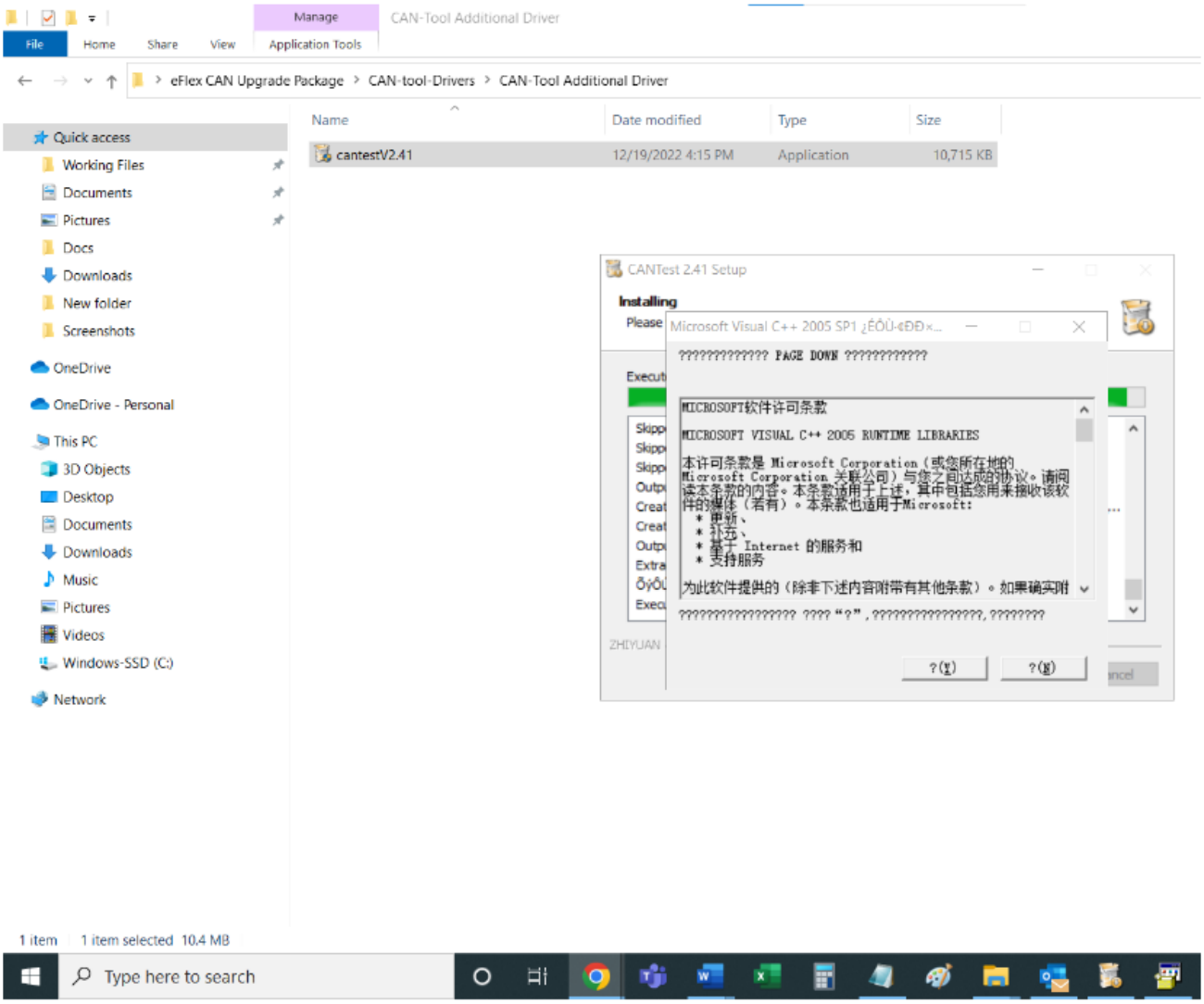
10. Double-click "cantestV2.41".



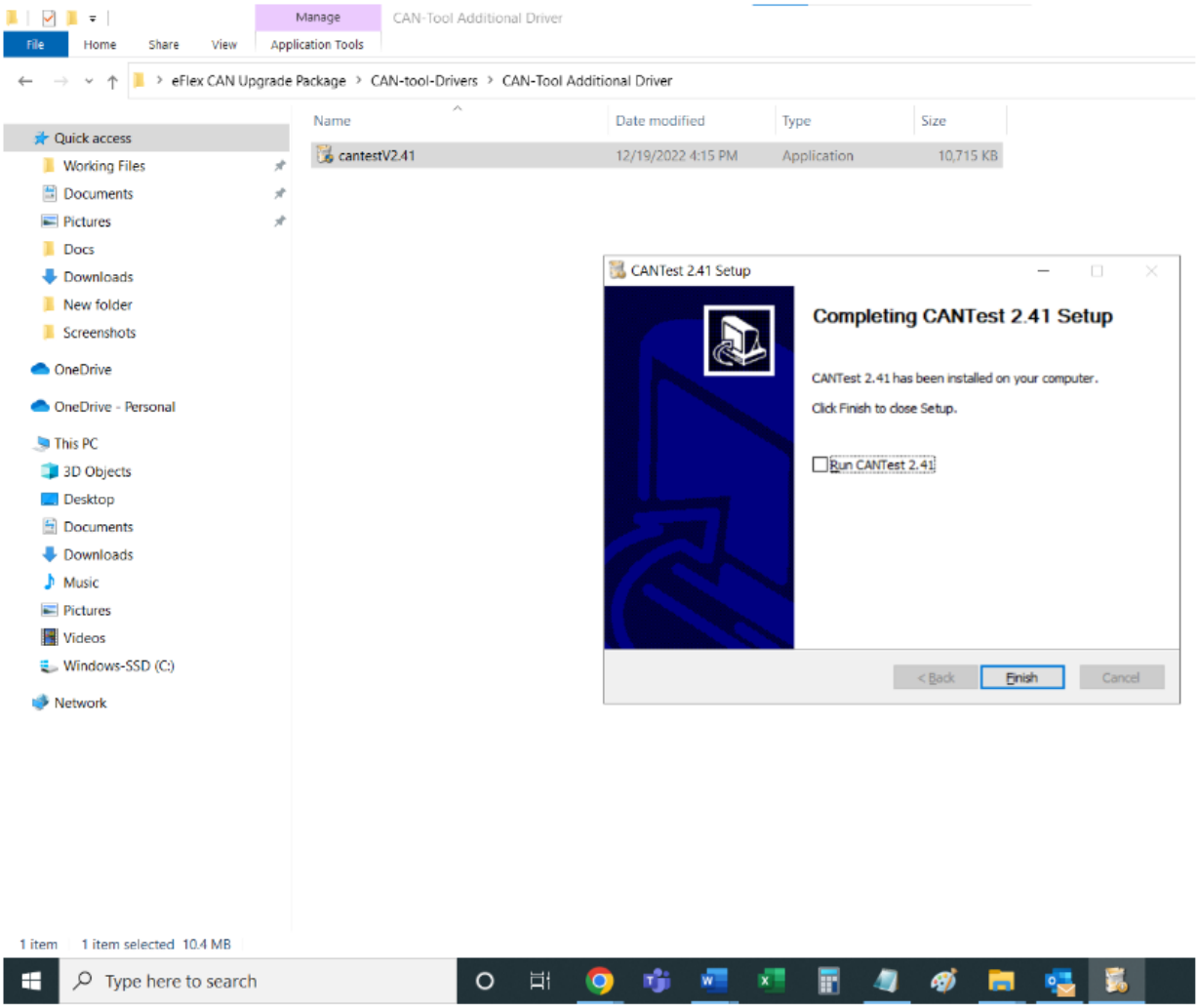
11. Then click "Install" and the installation process will start.



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.

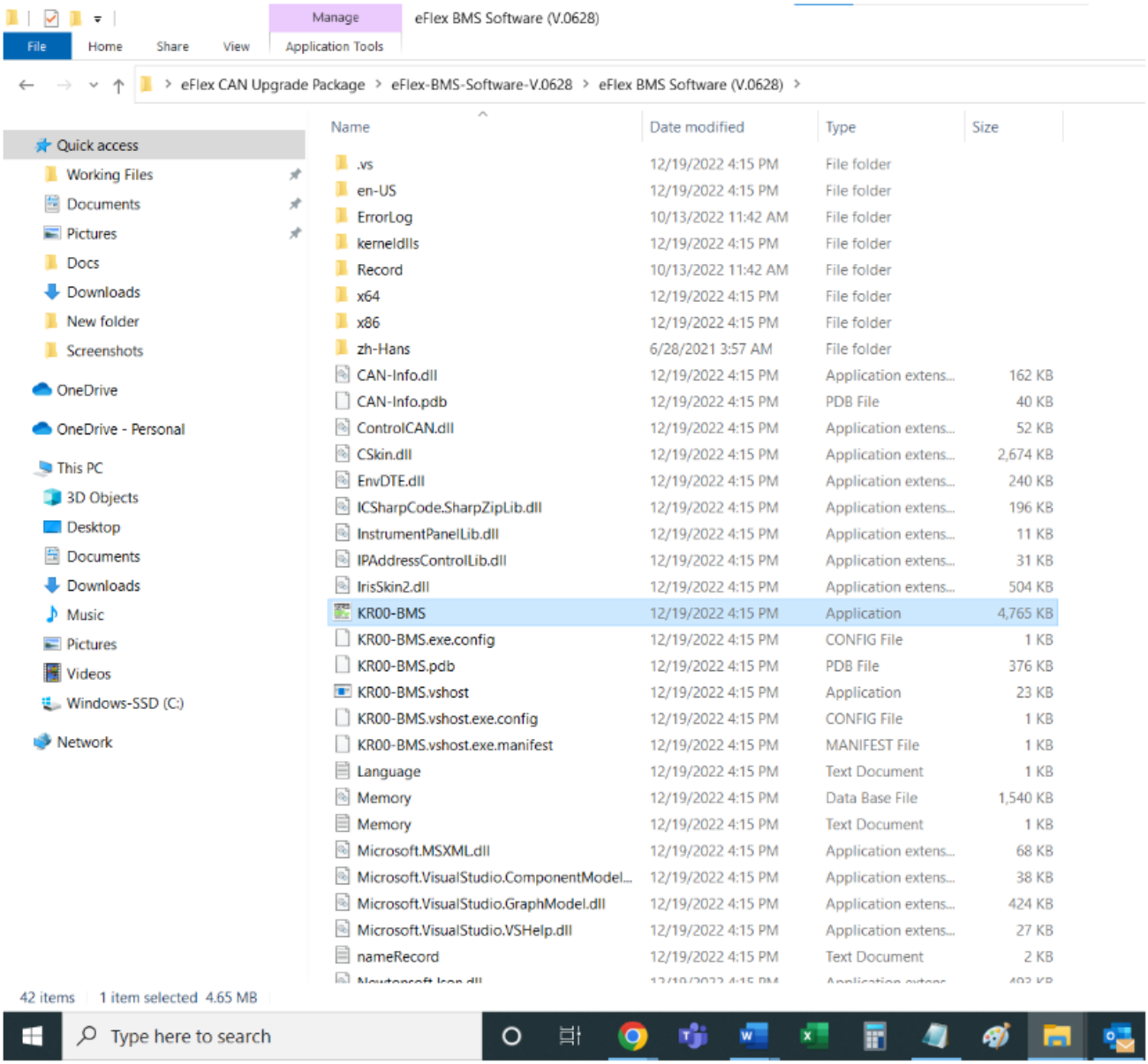
Obtaining and Organizing the Required Files

Important!

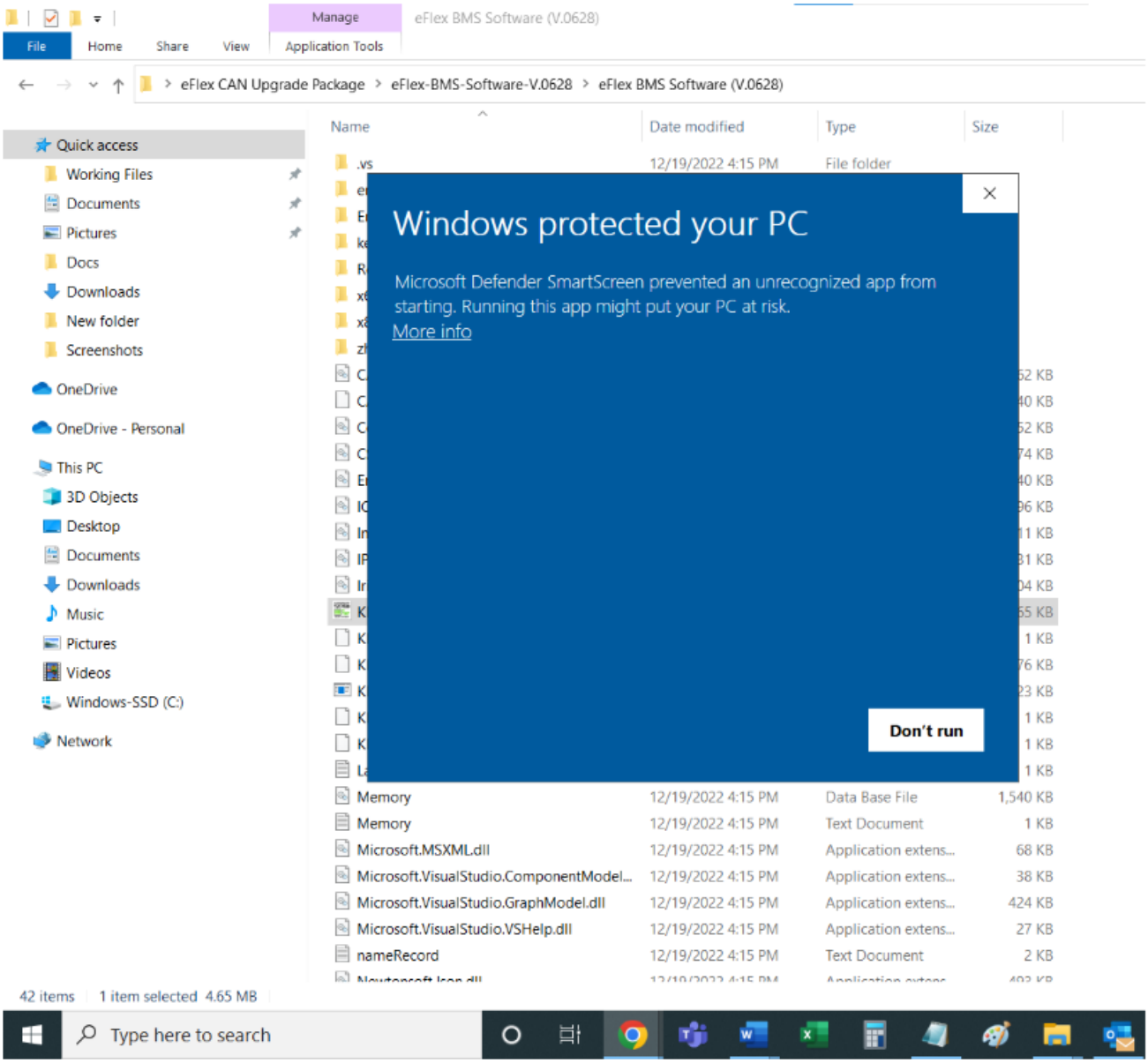
There must be no current flow to or from any battery in the system during the firmware update process. It is a good idea to have the battery breakers on all Sol-Arks in the system in the 'OFF' position.
Firmware must be updated on one battery at a time. During the firmware update, the battery must be 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.

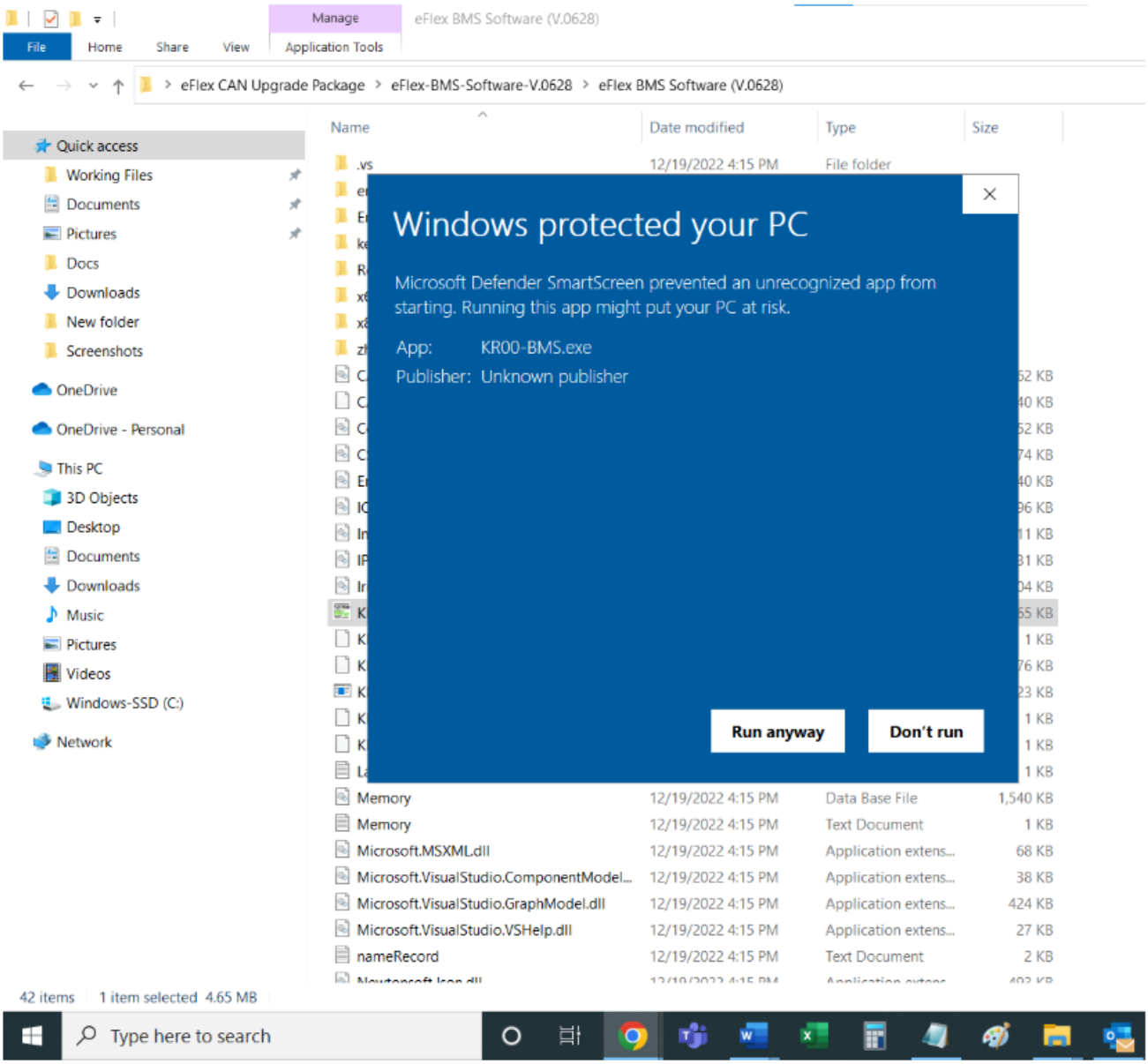
1. Open "eFlex CAN Upgrade Package" folder, then open "eFlex-BMS-Software-V...." folder and double click on the subfolder with the same folder name, "eFlex-BMS-Software-V....". Afterwards, Find a file named KR00-BMS. Open this file by double-clicking on it.



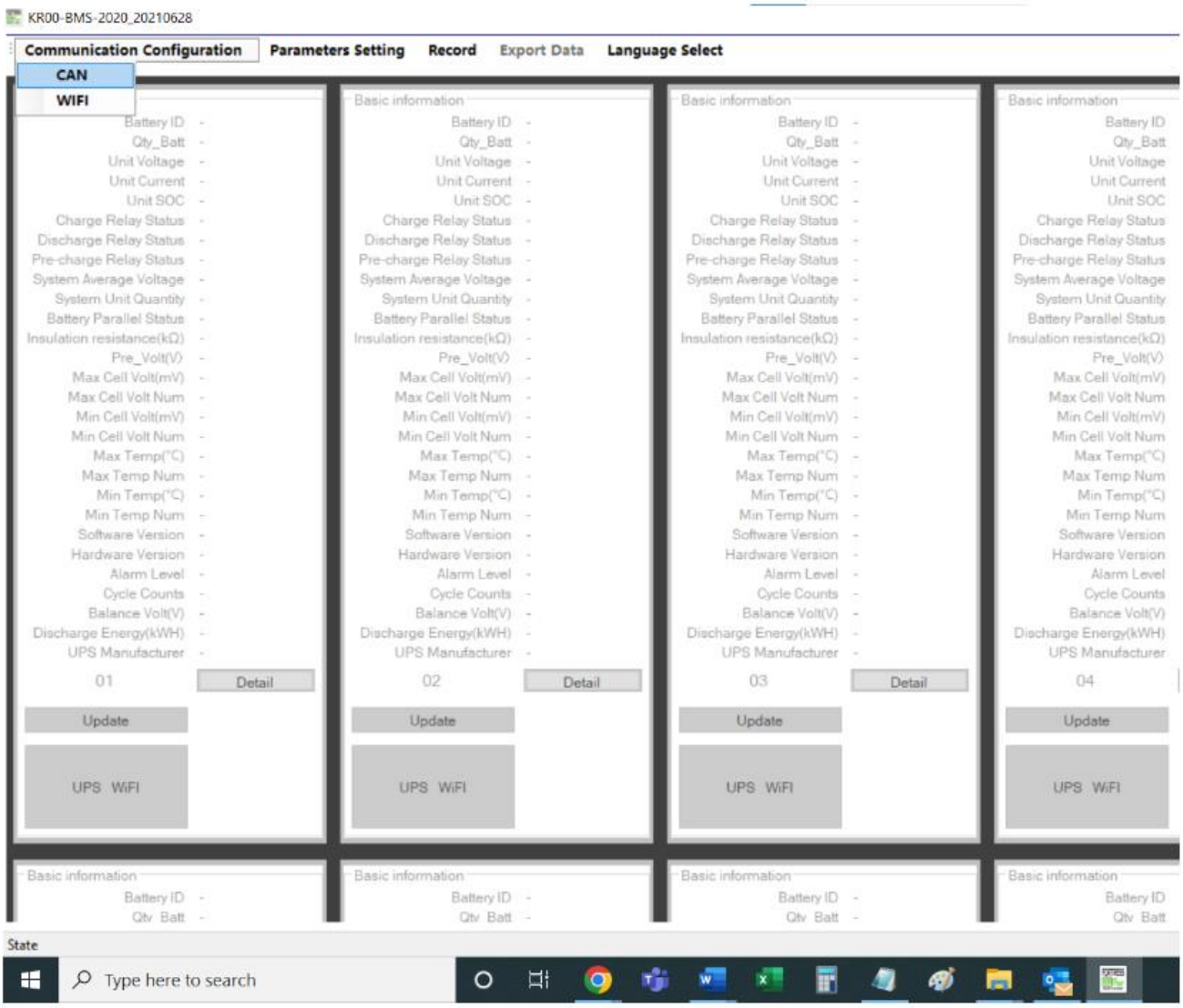
2. You might see something similar to the one shown below. If so, click on "More info" in the blue window.



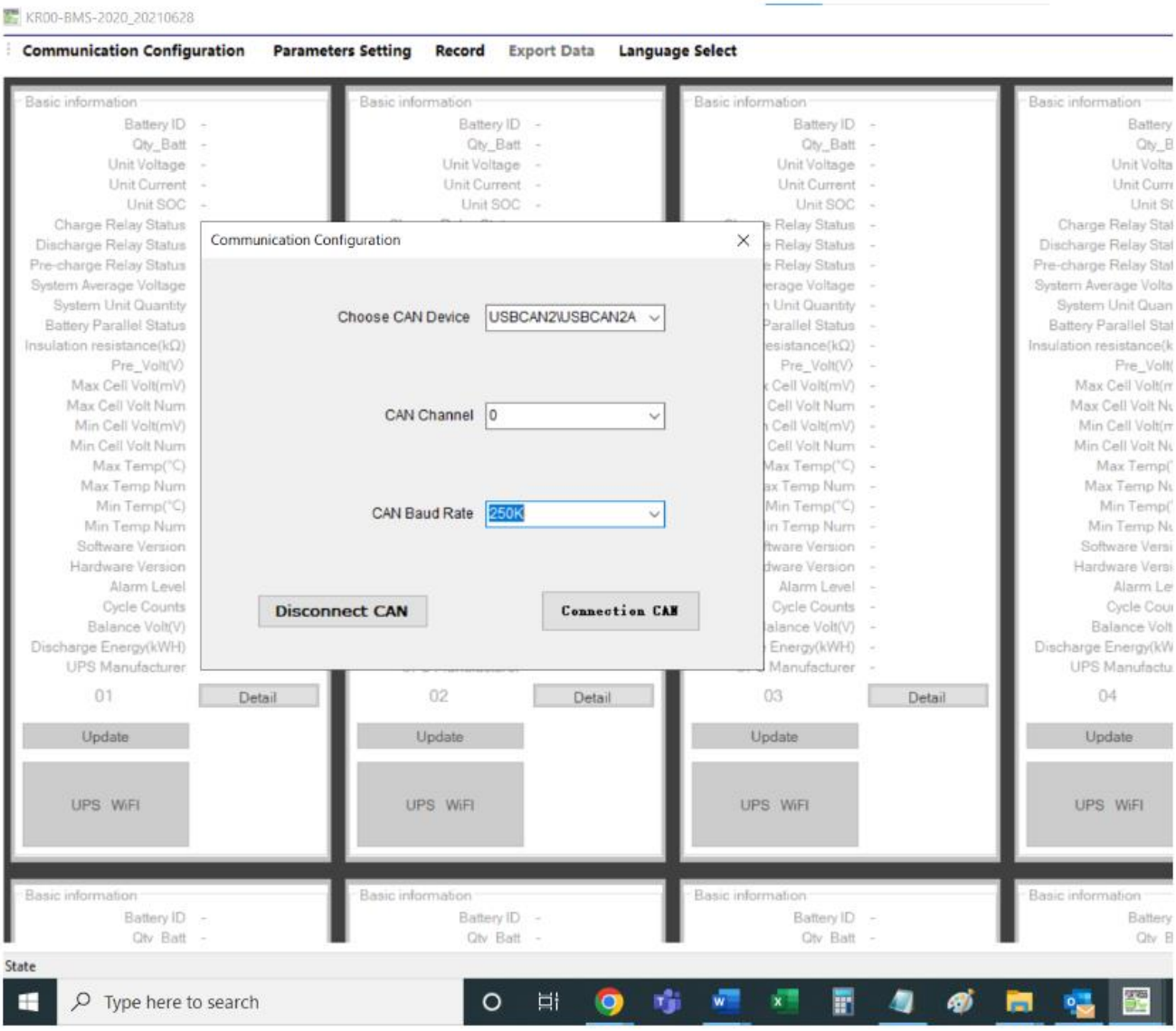
3. Next, click on "Run anyway".



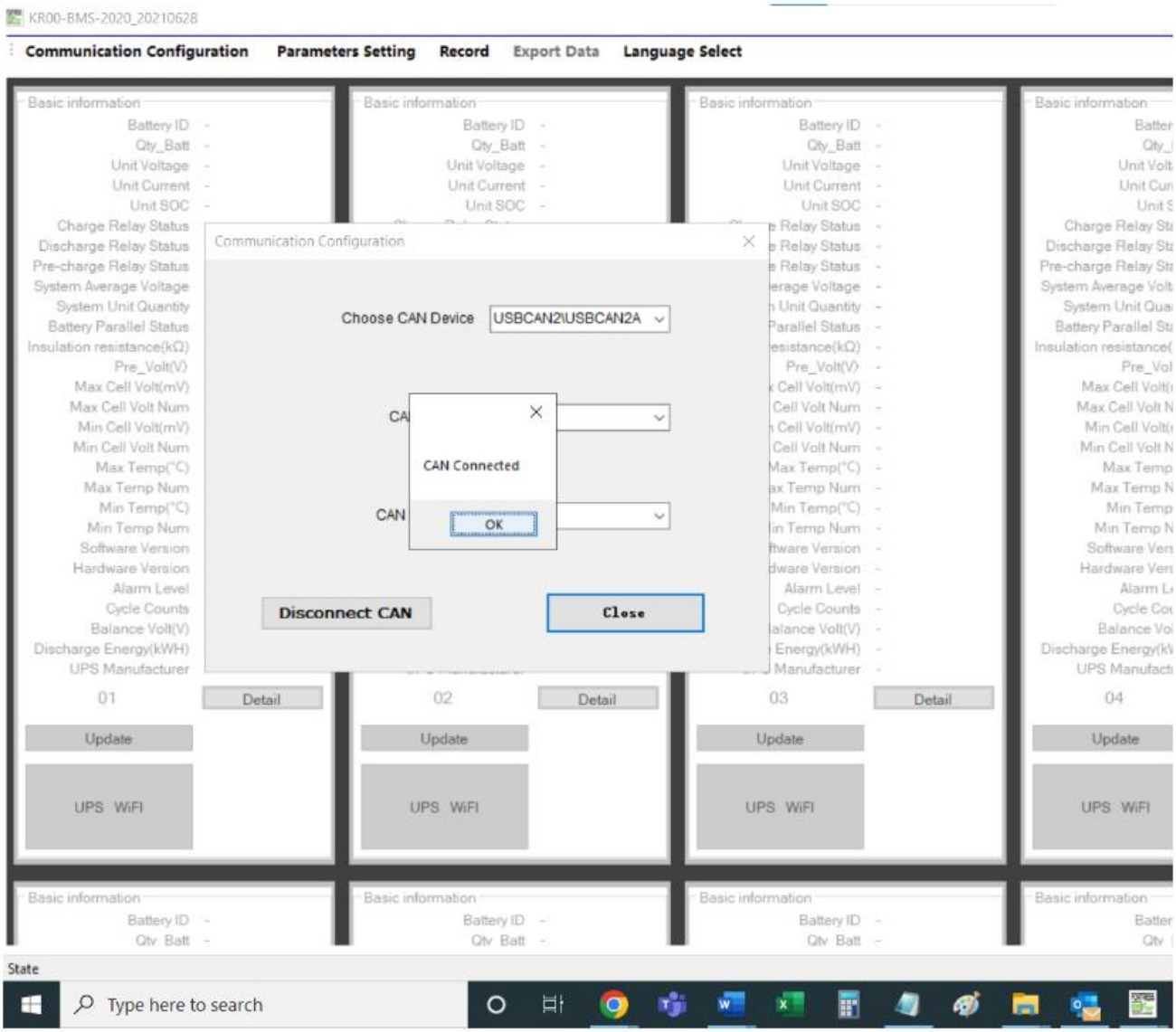
4. Now the BMS software is open. In the top left corner of the software click on "Communication Configuration" and in the dropdown of it click on "CAN".



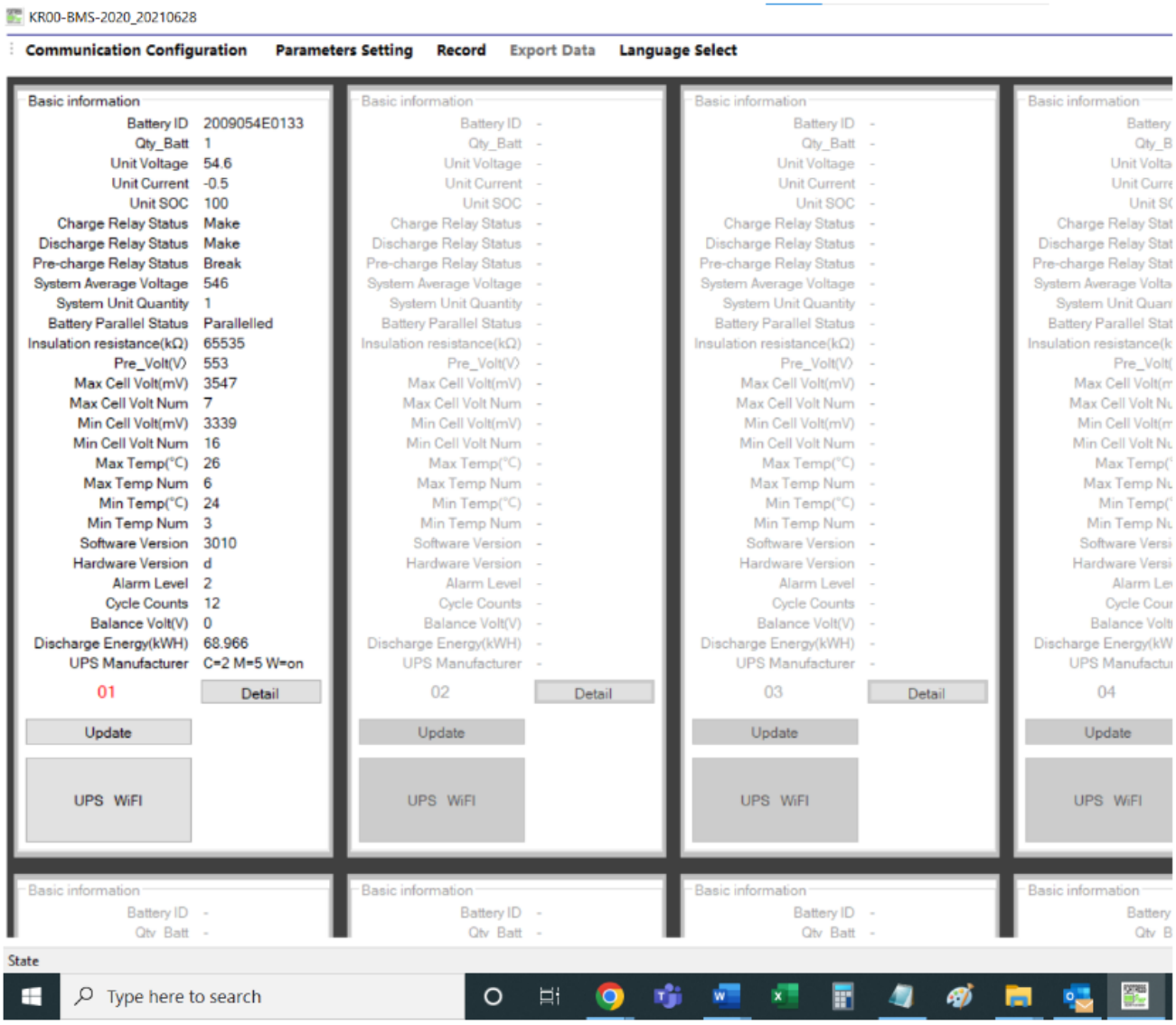
5. In the window that opens next, click on "Connection CAN" without changing any parameters.



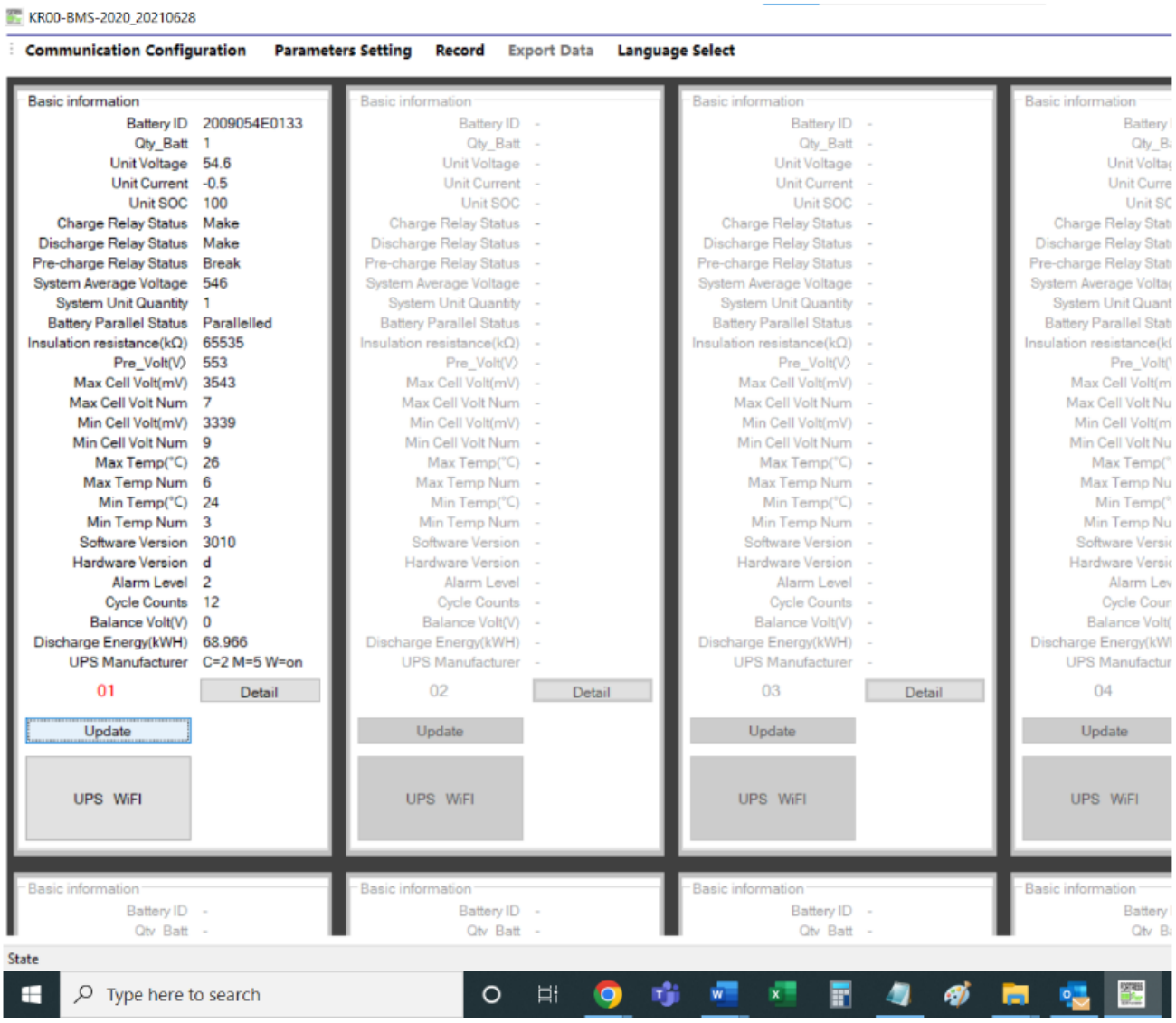
6. If everything so far was done correctly, you'll see "CAN Connected", click "OK" in the success window.



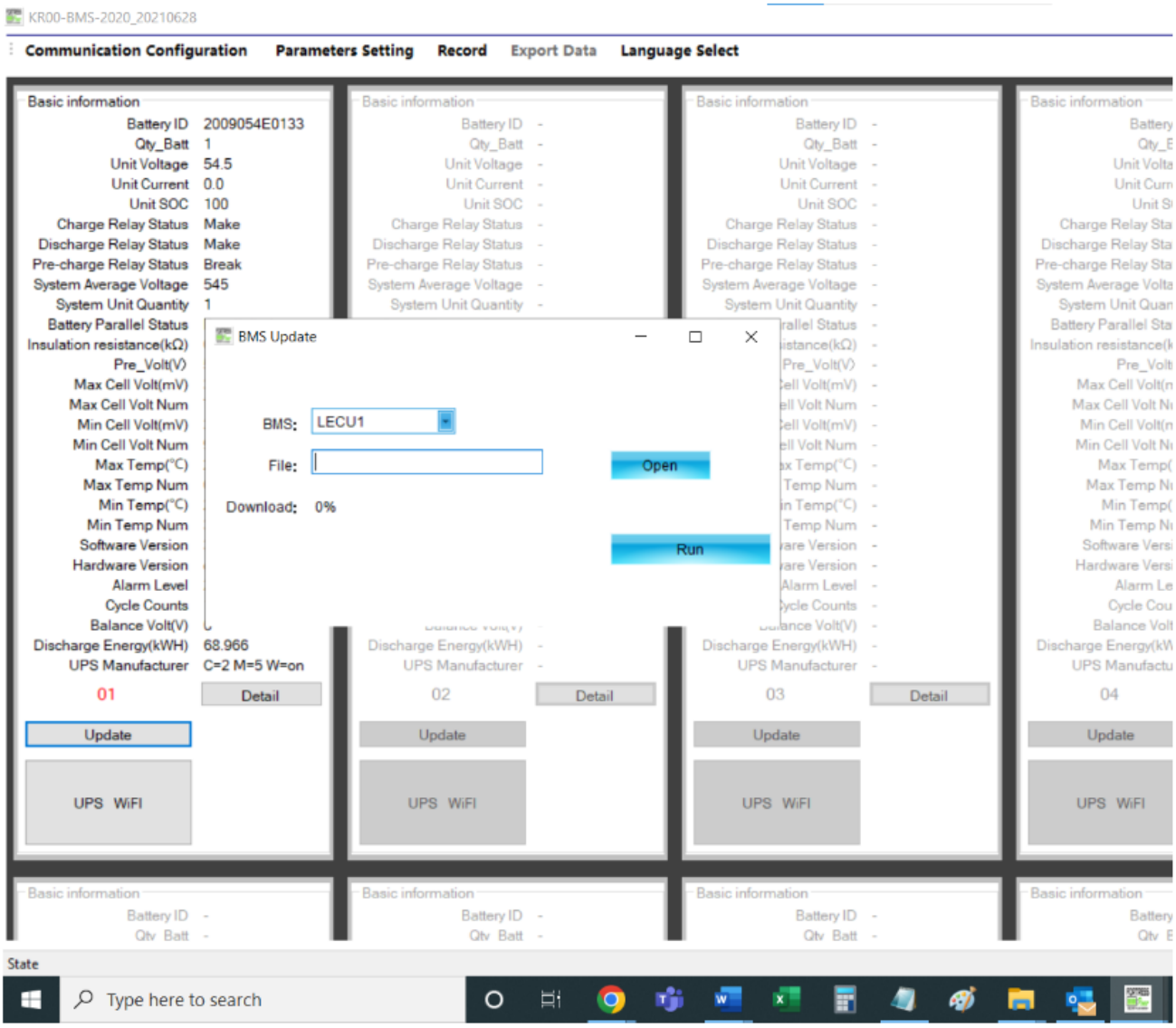
7. Once the communication between a computer and a battery is established, the lines are populated as seen below.



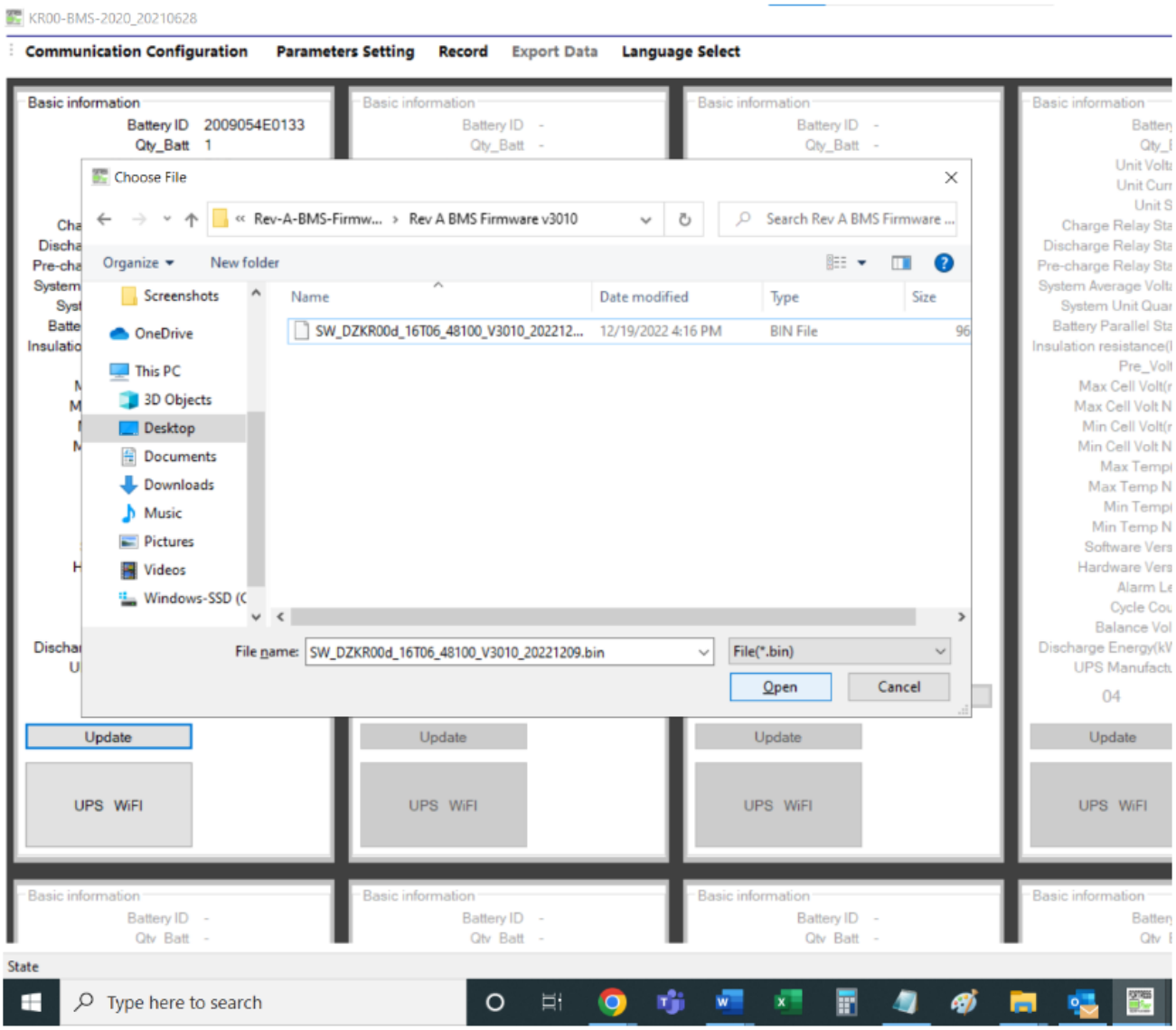
8. It's time to select a firmware file to be used. **In the list of the information, you will see "Software Version", which shows the firmware version that the battery runs on.**
   If the first digit of this number is either "2" or "3", use the firmware which is in the folder "Rev-A-BMS-Firmware-v...".
   If the first digit of this number is either "4", use the firmware which is in the folder "Rev-B-BMS-Firmware-v..."
   To continue the process by selecting the appropriate firmware version, click on "Update".



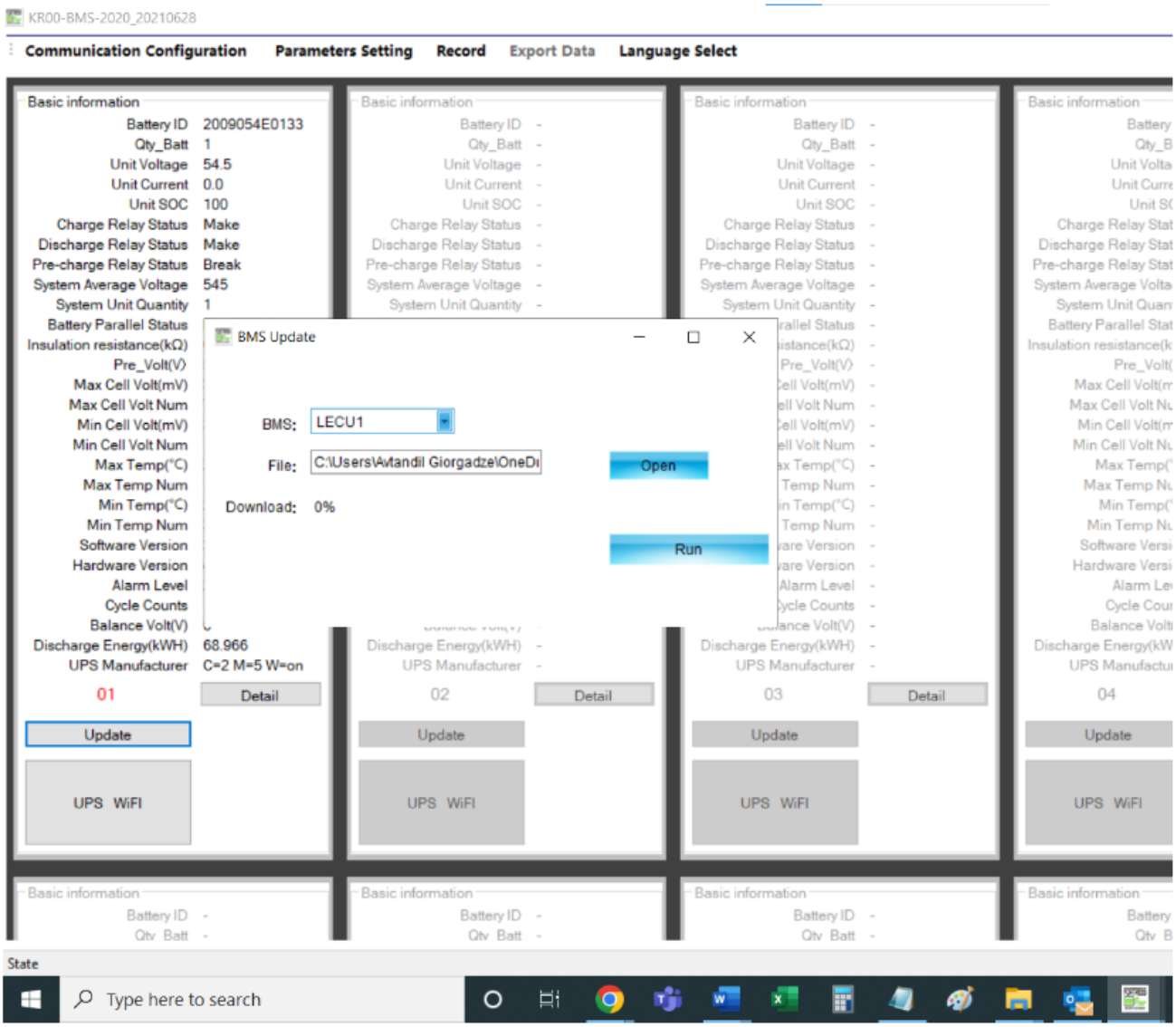
9. Click "Open".


KR00-BMS-2020_20210628
Communication Configuration
Parameters Setting
Record
Export Data
Language Select
Basic information
Battery ID 2009054E0133
Qty_Batt 1
Unit Voltage 54.5
Unit Current 0.0
Unit SOC 100
Charge Relay Status Make
Discharge Relay Status Make
Pre-charge Relay Status Break
System Average Voltage 545
System Unit Quantity 1
Battery Parallel Status
Insulation resistance(kΩ)
Pre_Volt(V)
Max Cell Volt(mV)
Max Cell Volt Num
Min Cell Volt(mV)
Min Cell Volt Num
Max Temp(℃)
Max Temp Num
Min Temp(℃)
Min Temp Num
Software Version
Hardware Version
Alarm Level
Cycle Counts
Balance Volt(V)
Discharge Energy(kWH) 68.966
UPS Manufacturer C=2 M=5 W=on
01
Detail
Update
UPS WiFI
BMS Update
BMS: LECU1
File:
Open
Download: 0%
Run
02
03
04
State
Type here to search

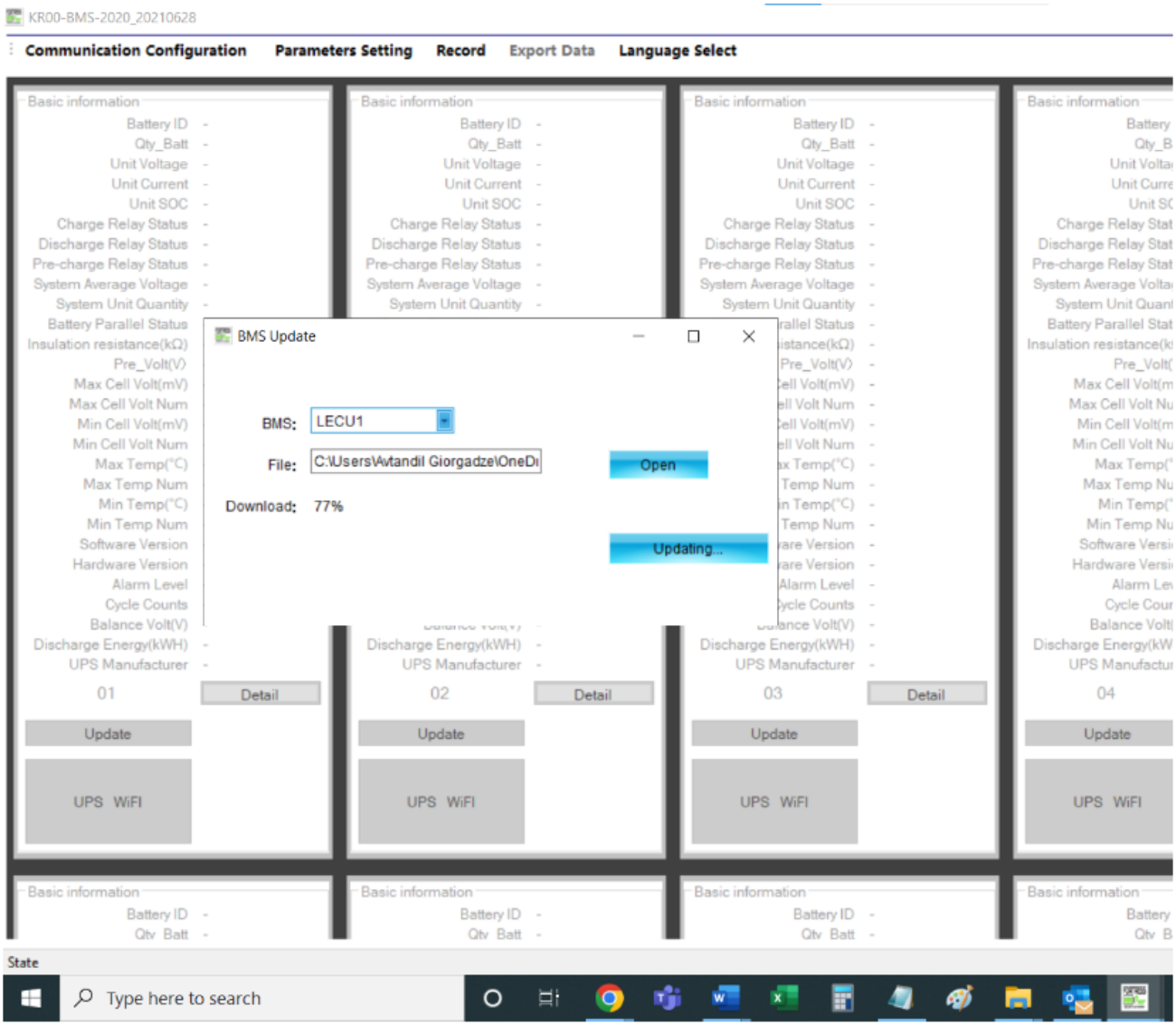
10. Navigate to the "eFlex CAN Upgrade Package" in this pop-up window, double-click on "eFlex CAN Upgrade Package" and then double click on "eFlex Firmware" and double-click on the single file that this folder contains. Afterwards, click "Open".



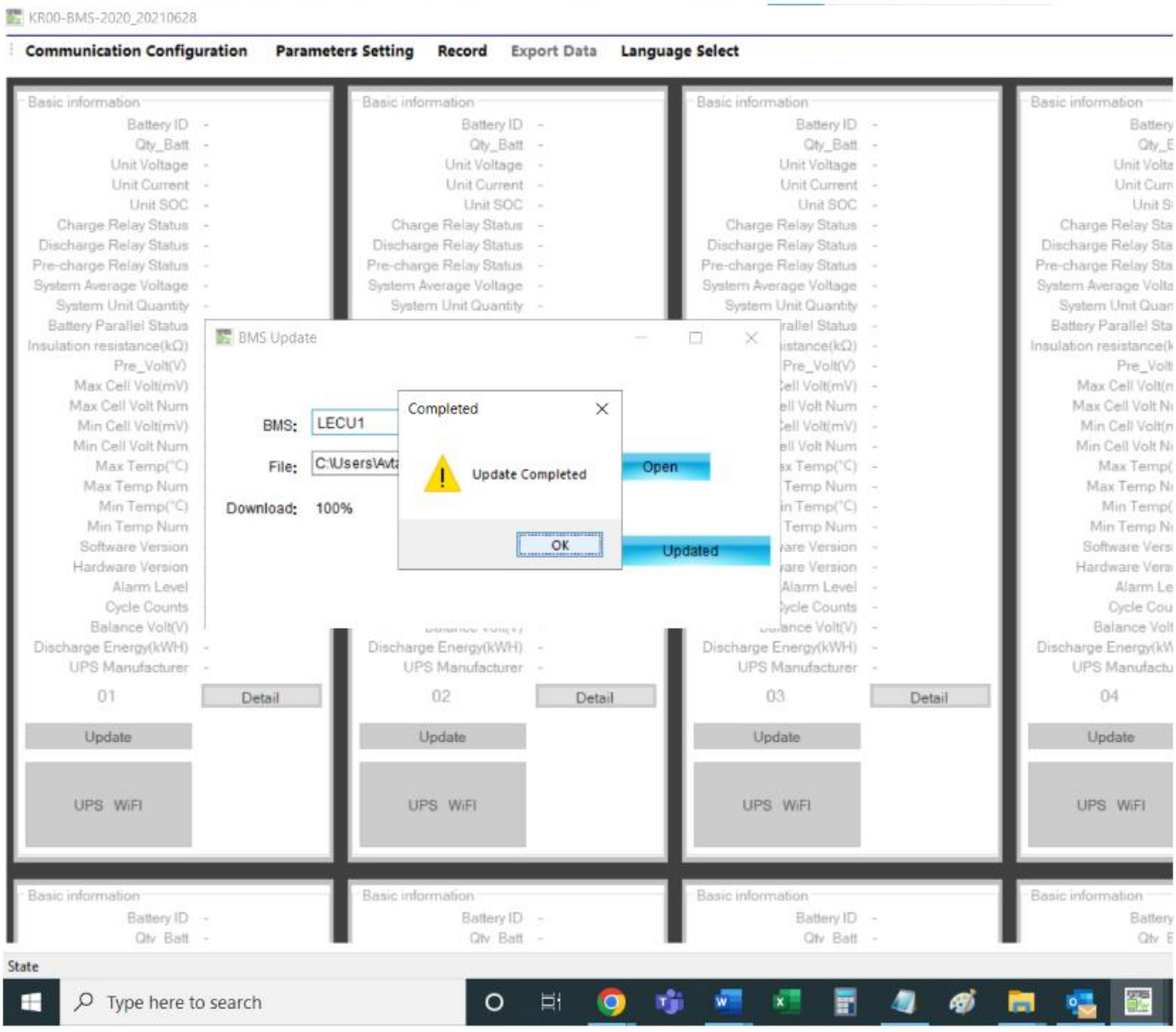
11. Initiate the firmware update by clicking "Run".



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.

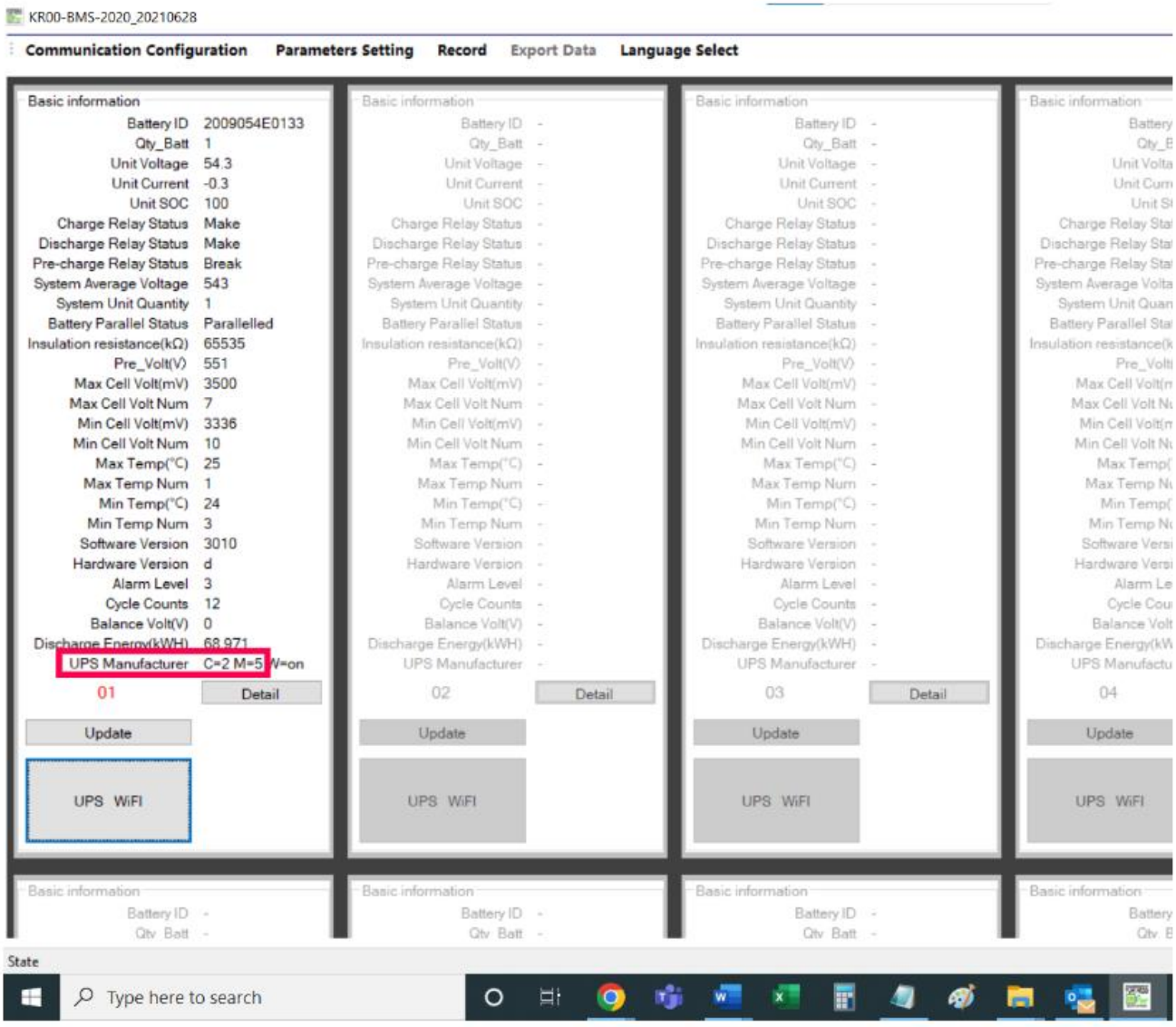


The firmware is now updated!

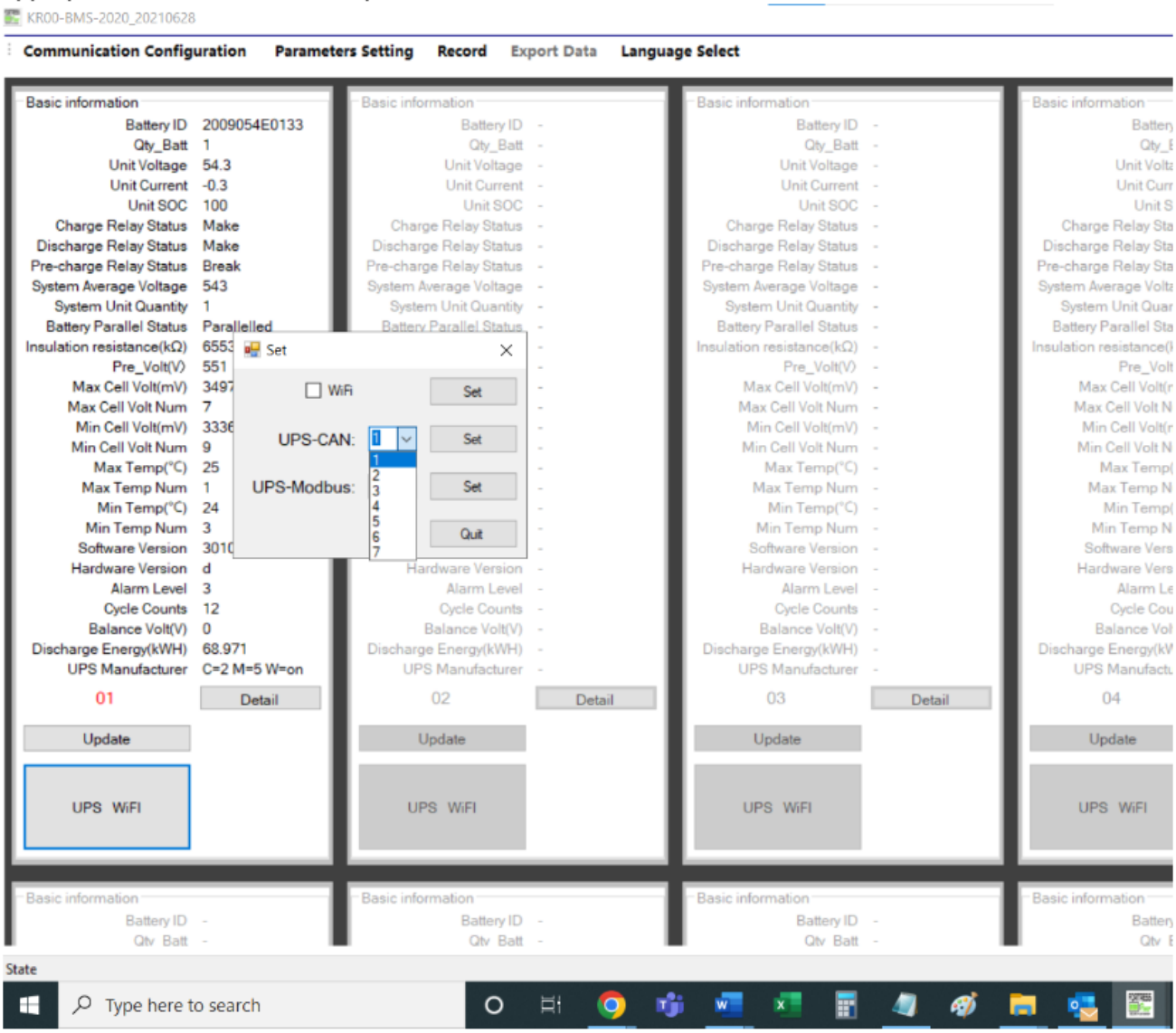
Selecting CAN Protocol ID

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.

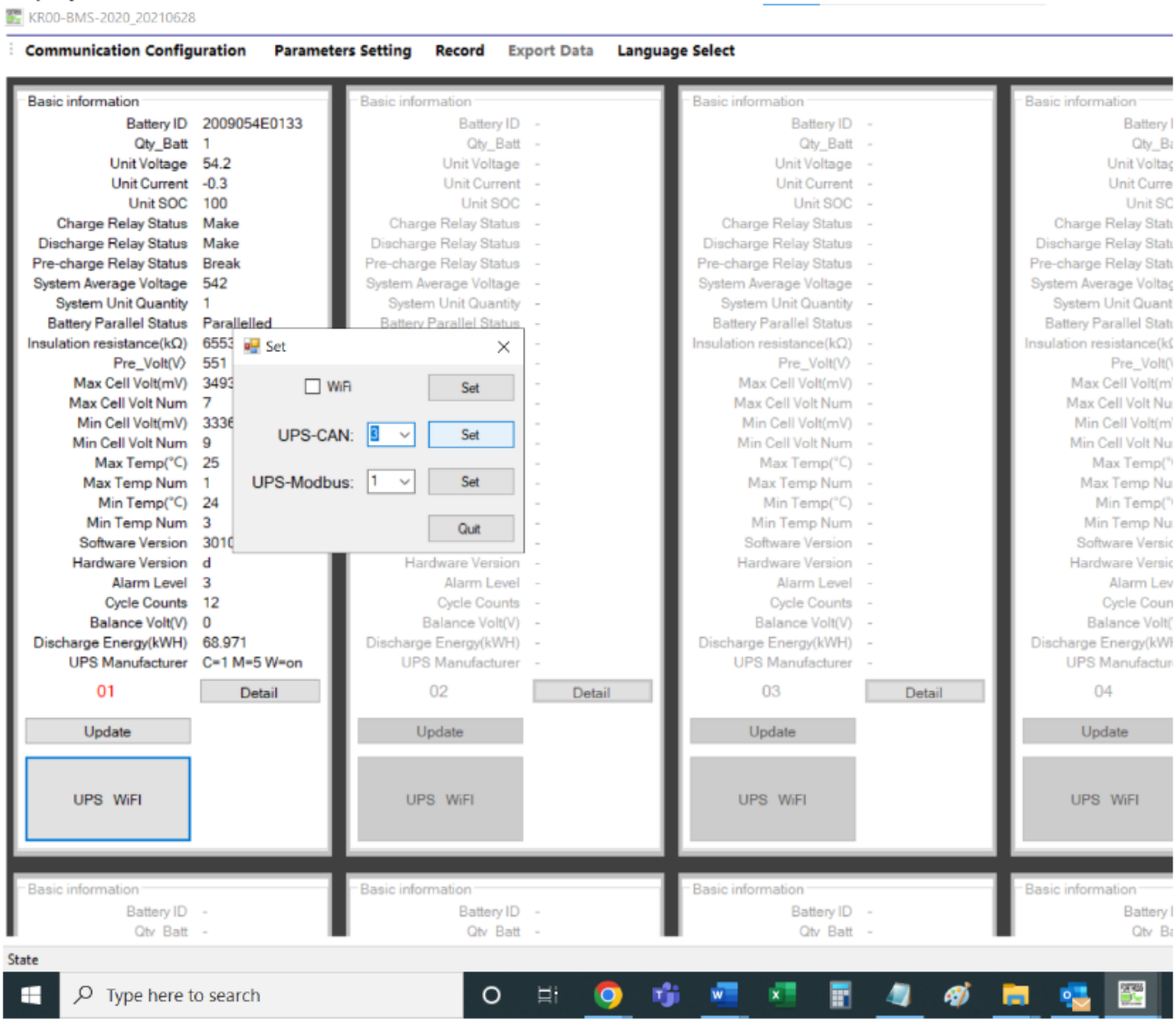
CAN ("C") Protocol IDs	
Sol-ark	2
SMA	2
Victron	3



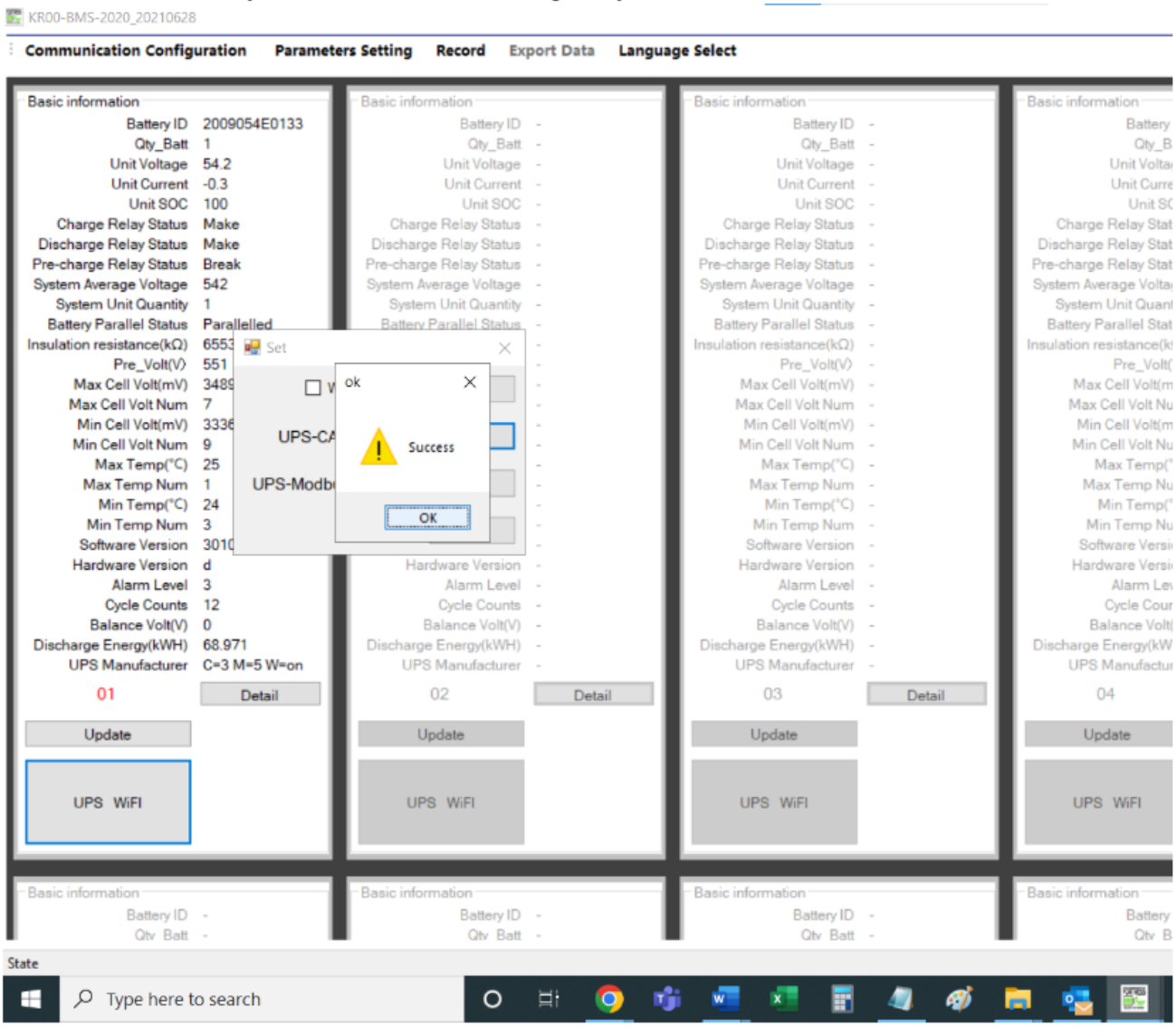
2. Click on "UPS WiFi" and Click on the downward arrow next to the number next to "UPS-CAN:", afterwards click on the appropriate number from the dropdown list of the numbers.



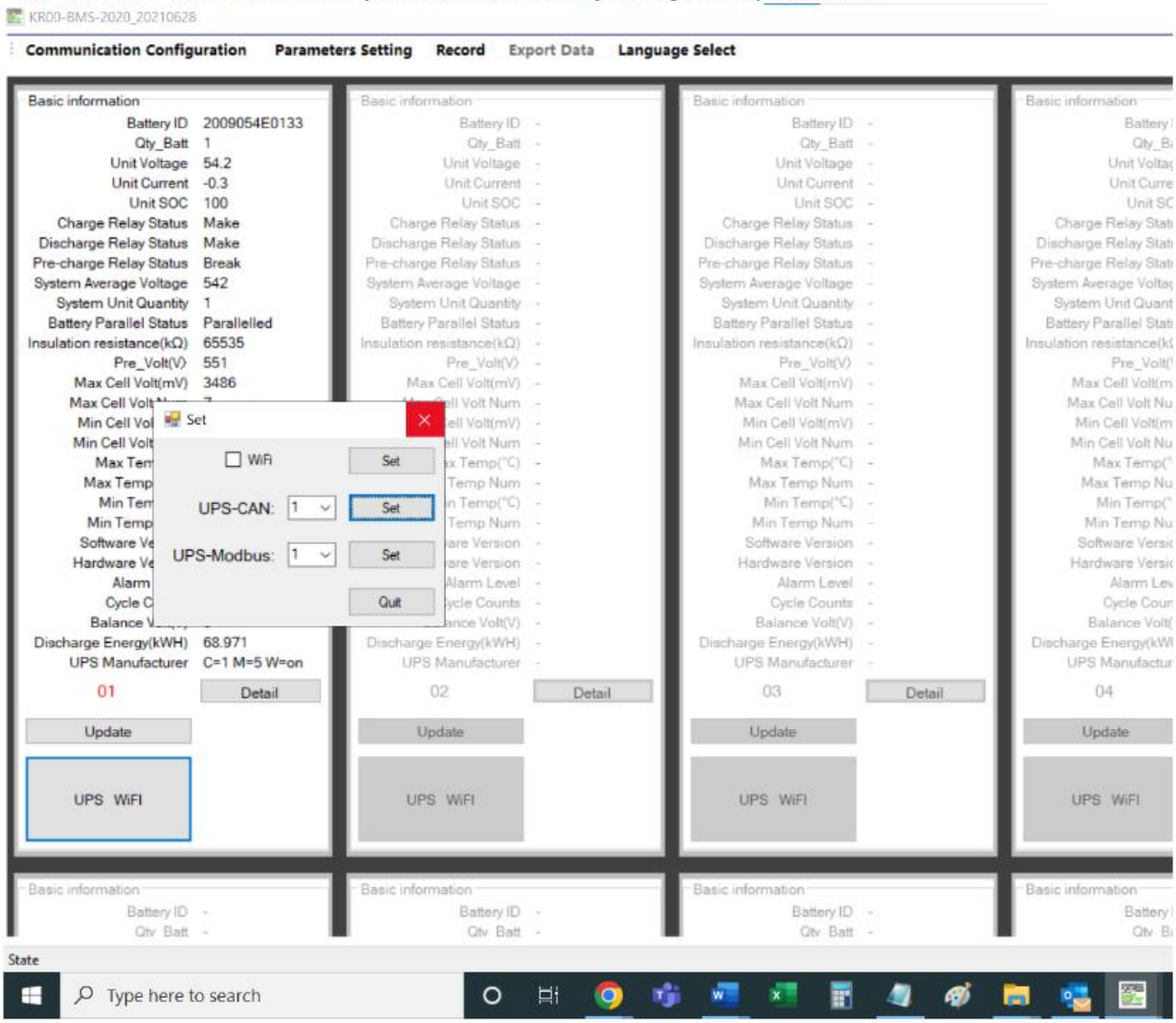
3. You'll see that after clicking the number, the dropdown list will disappear and the number that you've selected will be displayed in the box. Next, click "Set".



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

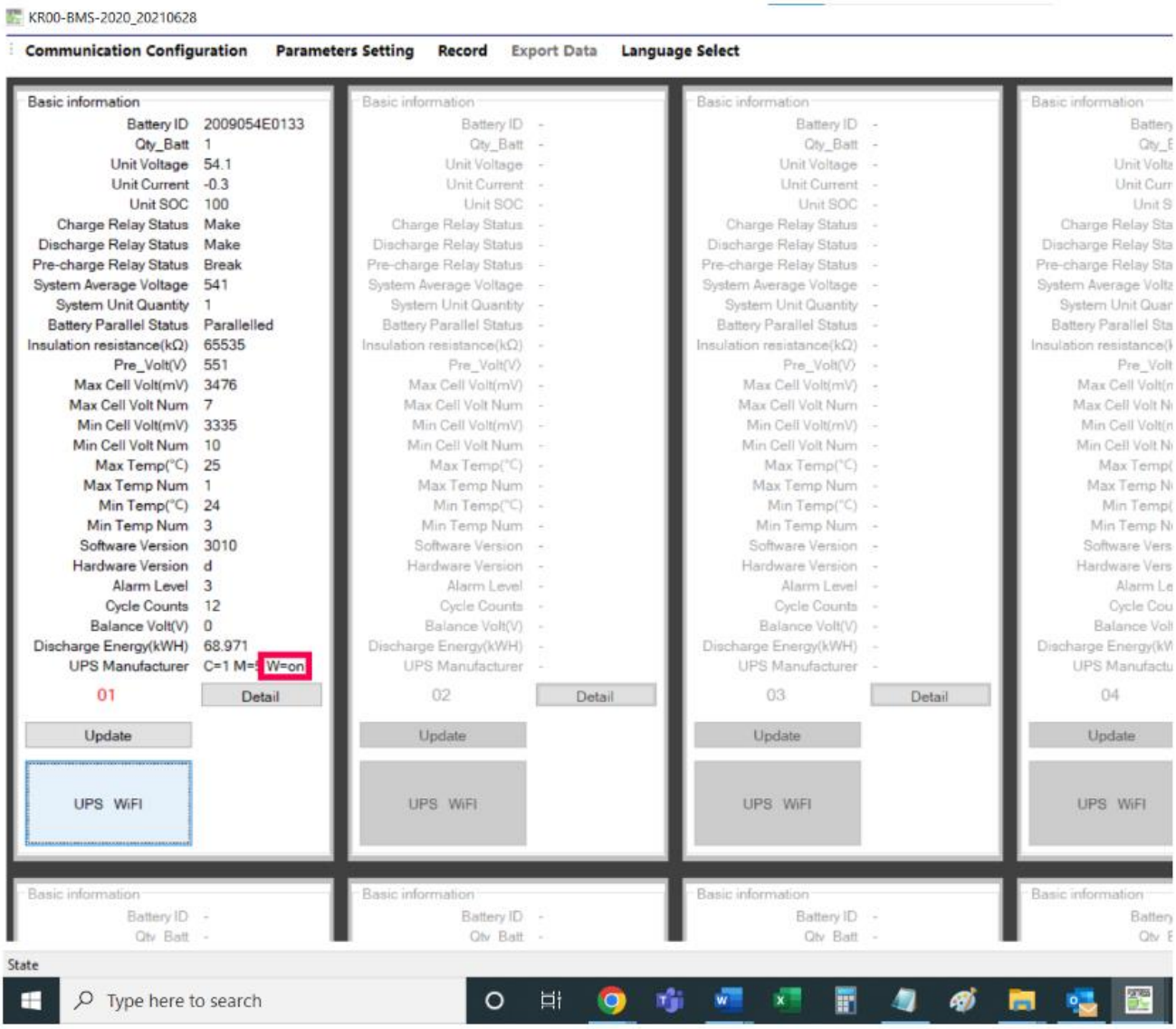


5. And close the "Set window. Now you have successfully changed the protocol ID.

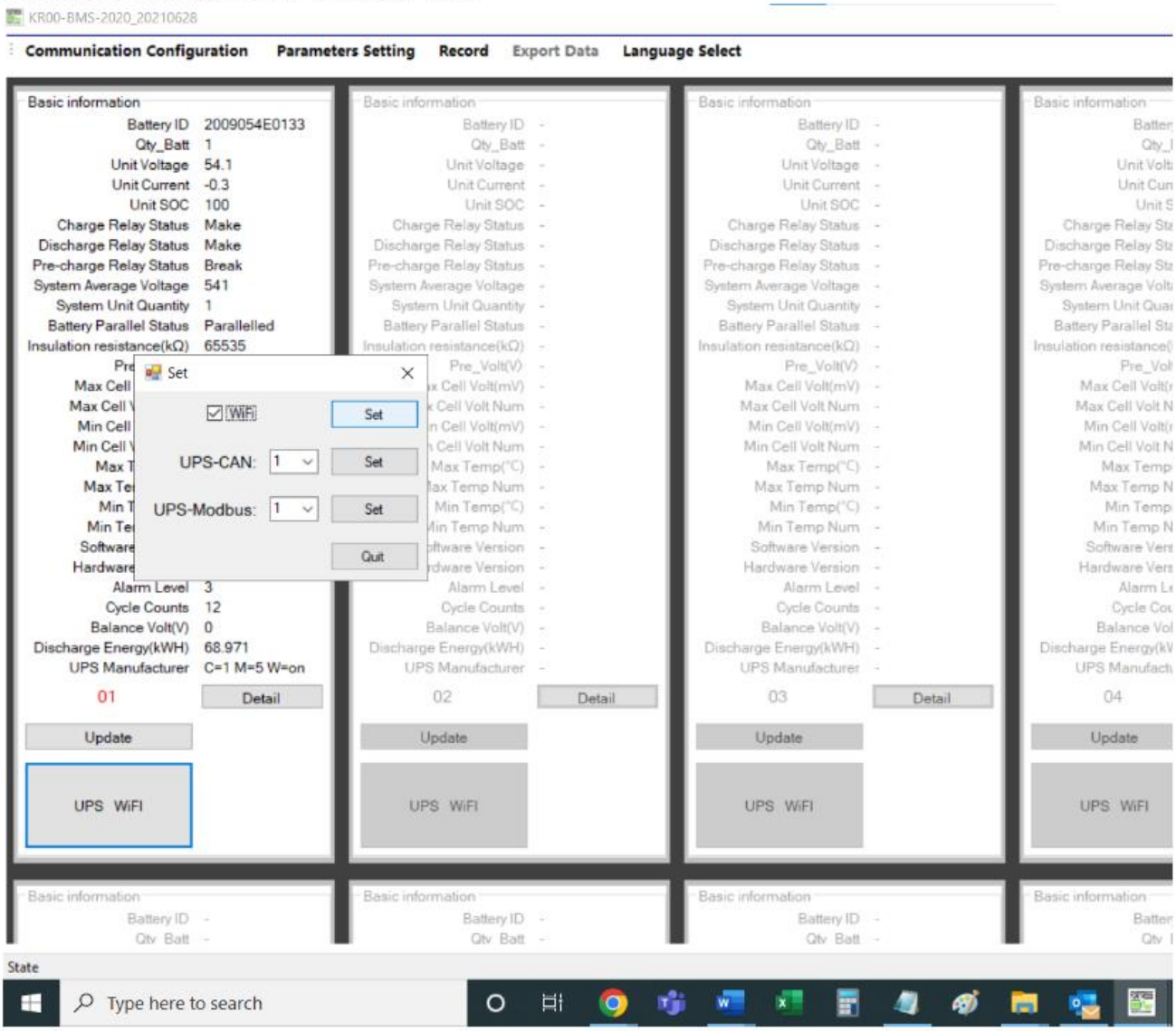


Disabling Wi-Fi

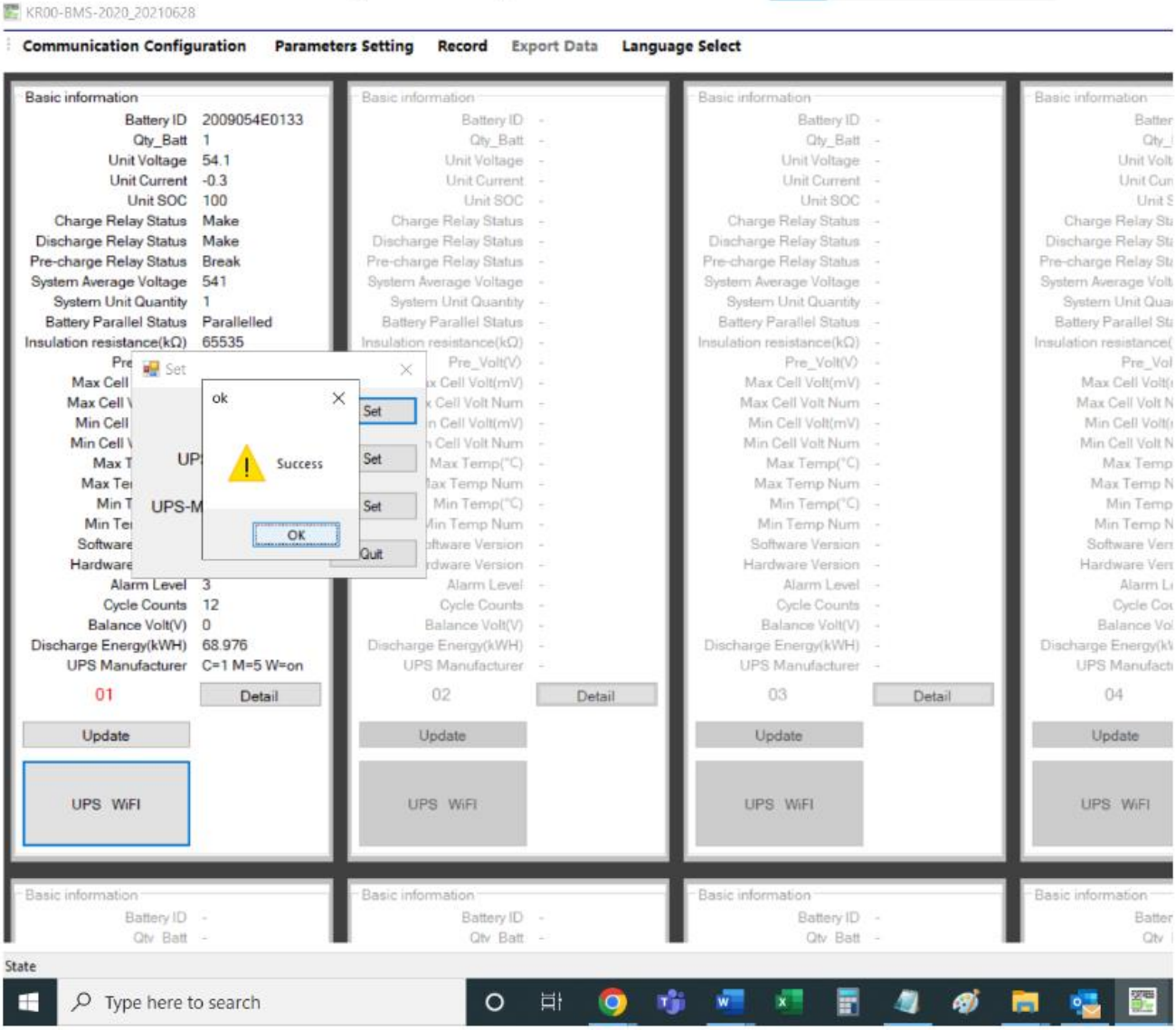
1. To disable Wi-Fi on an eFlex unit, please follow the steps given in this article. "UPS Manufacturer line has "W=" and then either "on" or "off". This indicates whether the wifi is on or off on the battery. To turn off the Wi-Fi, open the eFlex BMS software and click on UPS WiFi.



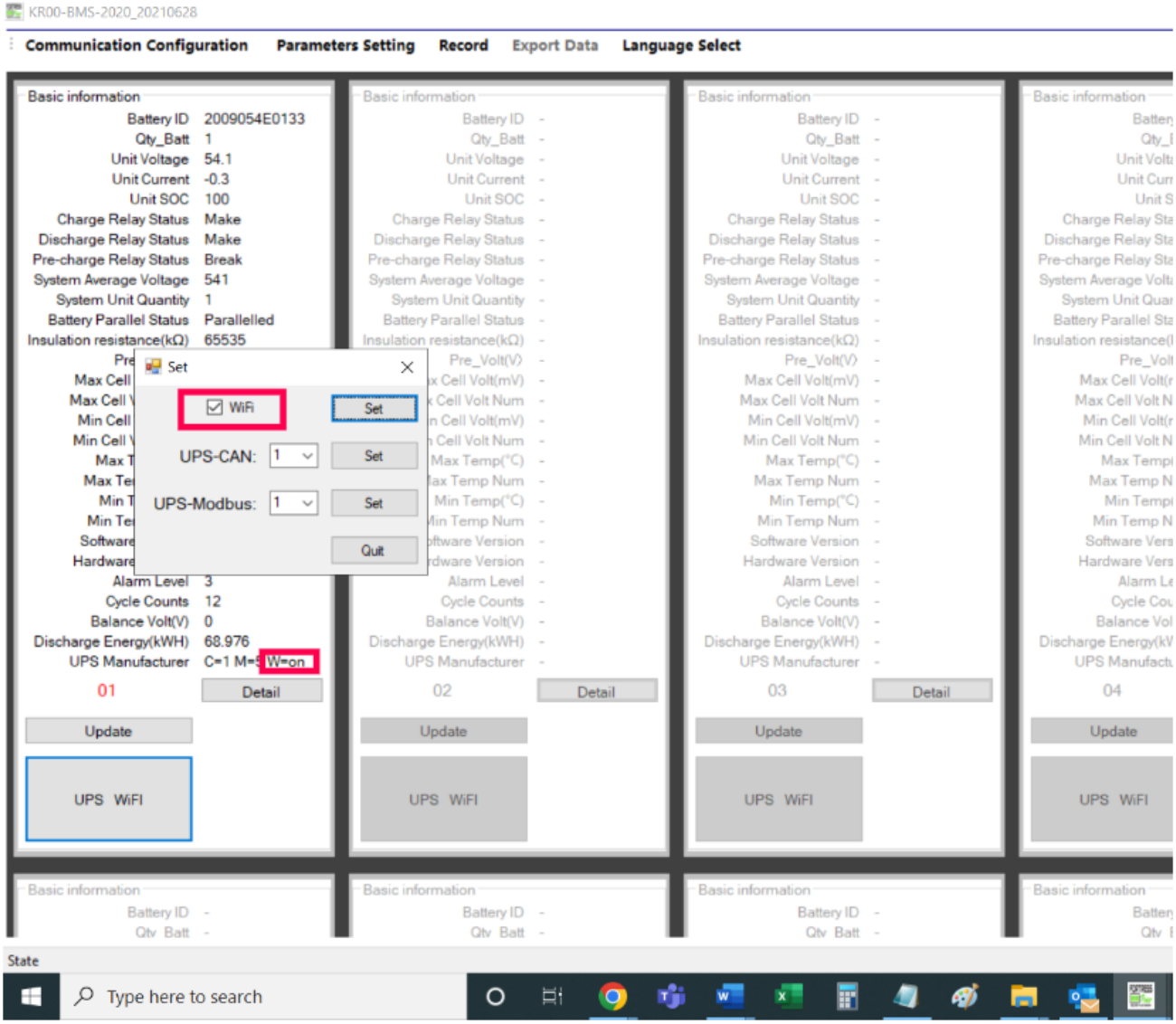
2. Next, check mark the "WiFi" and click "Set".



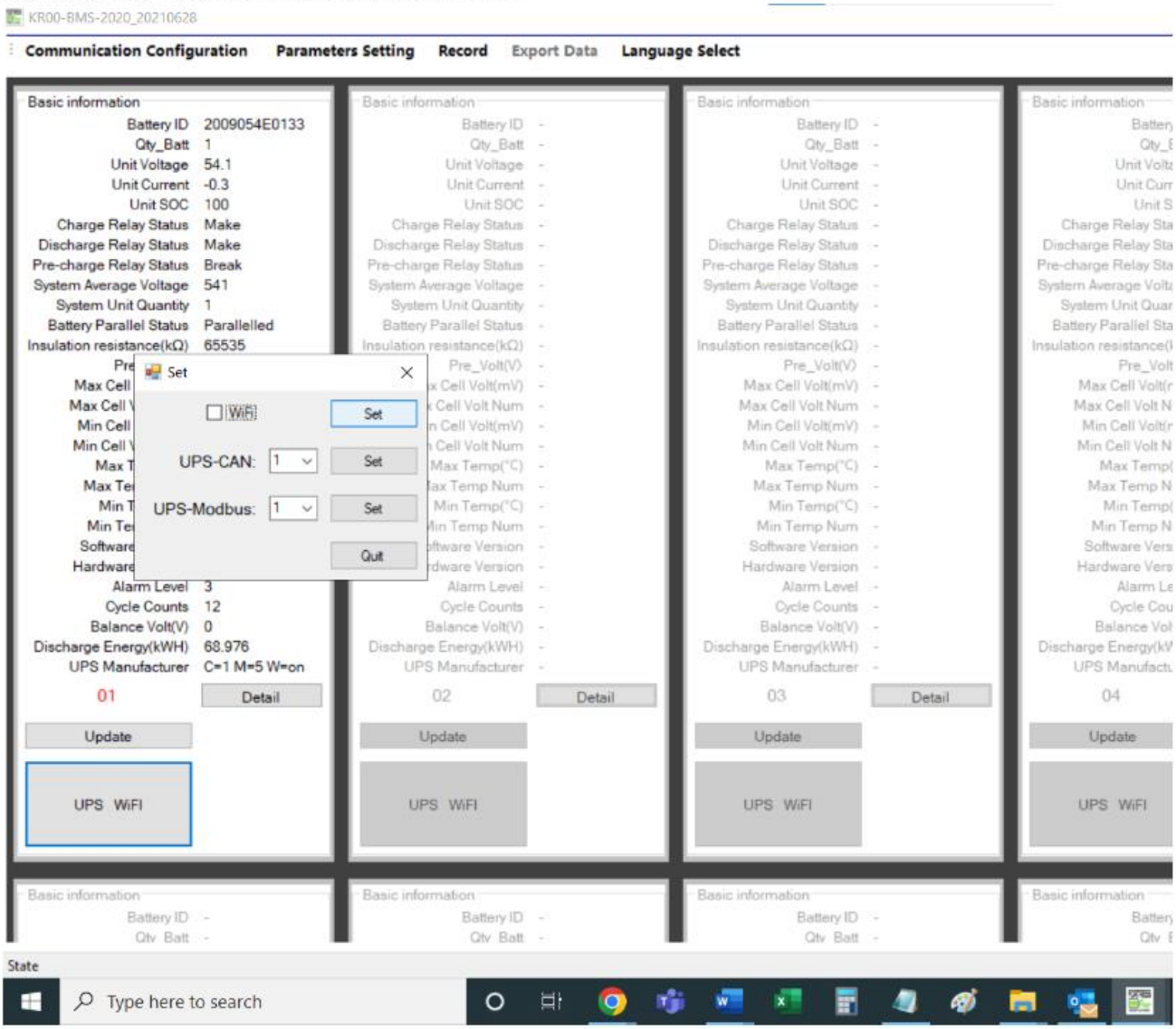
3. You will see the success message. Click "OK", but don't close the window with a "WiFi" check-mark.



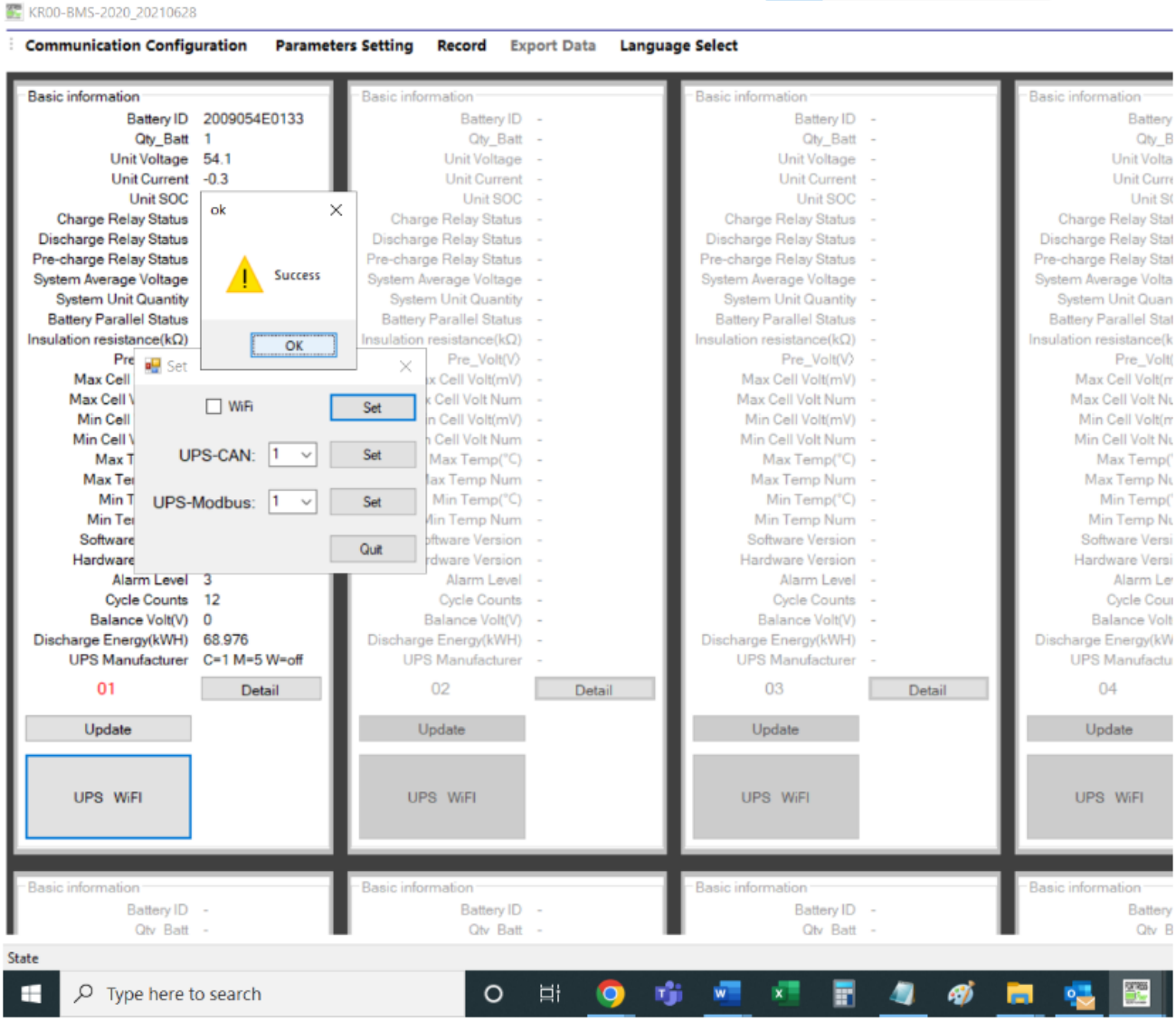
4. You'll notice that the check-mark that you set for "WiFi" is retained, but the Wi-Fi status is still "on".



5. Now, uncheck-mark the WiFi and click on "Set".



6. You'll see a success message window. Click "OK".



7. Now, the check-mark on "WiFi" is removed, but more importantly, the Wi-Fi is turned off.