

Part 1. Identify your device

USB-TTL Interfaces

Earlier and more recent VisiCan devices come with two different generations of USB-TTL connection interfaces. To differentiate between them, you can check the white 6-pin connector:

- If 5 of the 6 pins are connected, your interface is first-generation.
- If 3 of the 6 pins are connected, your interface is second generation.



First Generation:

- The first generation can power up and enter the boot mode just by connecting to your PC.
- The first generation interfaces must only be used while programming and cannot be used for data logging as they will block the normal running mode of VisiCan. VisiCan will enter the boot mode when the first generation interface is connected.
- First generation may come with 2 different chips with the same functionality:
 - Prolific PL2303 Chip. Only used in units shipped between April 2022 and August 2022.
 - CP2102 Chip. Used in units shipped after August 2022.

Second Generation:

- The second generation can only be used while another source powers your VisiCan, such as your car.
- They will NOT block usage of VisiCan while connected. You can leave the second generation USB TTL connectors while using VisiCan, which can then be used for data logging purposes.
- To enter the boot mode for firmware updates, you have to press and hold Button #1 while powering up your VisiCan device. In other words, you must press and hold Button #1 while turning on your ignition or plugging in the OBD connector.
- Second generation USB TTL interfaces only come with a CP2102 chip.

Firmware

There are four different generations of VisiCan units produced until today. The first three generations use the same CPU with some design differences in their design. Starting from the fourth generation including the Vent-Mount models, VisiCan units use a newer CPU. They also come in three different screen sizes and four different screen resolutions and layouts.

Firmware files are named as the following:

- Generation:
 - No tag or “V3” means third generation
 - “V4” means the fourth generation
- Engine: A tag specifying the engine such as 2.0TFSi, 2.0 TSi, V8 FSi, etc.
- Screen Resolution:
 - “480320” for the 3.5” 480 x 320-pixel screens
 - “320240” for the 2.8” and 2.0” 320 x 240-pixel screens
 - “240320” for the 2.8” 240 x 320 portrait screens
- Screen Rotation:
 - Rotation0: LHD applications
 - Rotation180: RHD applications
- Revision Date: Firmware last updated date in DDMMYY format (“030223” means firmware prepared on 03 February 2023)

Make sure that you are using the latest firmware for the best VisiCan experience and the newest features.

Download

You can download the necessary drivers, programs, and firmware files from our Google Drive folder:

https://drive.google.com/drive/u/0/folders/1k9VQEf4tF2RcNEEp1py705W_alHkmz12



Part 2: Install drivers for the USB-TTL interface

Step 2.1 Instead of the drivers that Windows installs automatically, please use the ones we provide:

- PL2303 chip: PL2303 is an older chip and no longer supported by the manufacturer. Because of that, the installation is a little bit more involved. Please read below carefully and contact us if you have any questions.

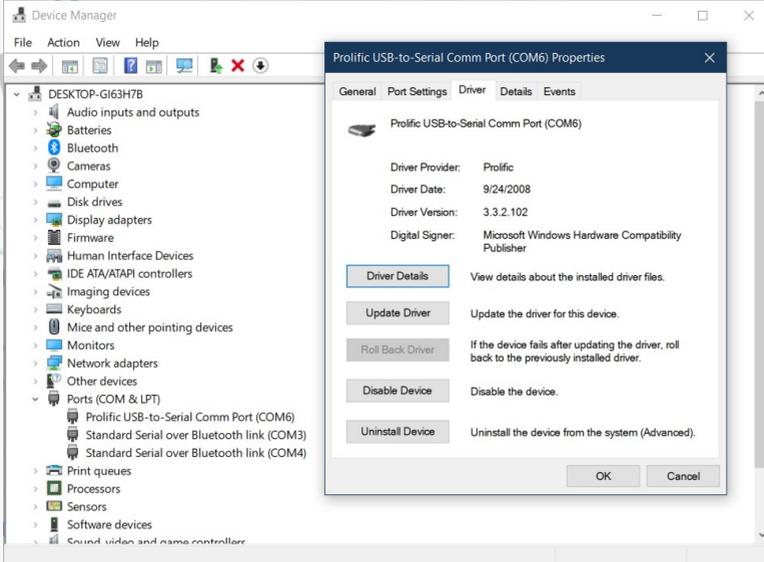
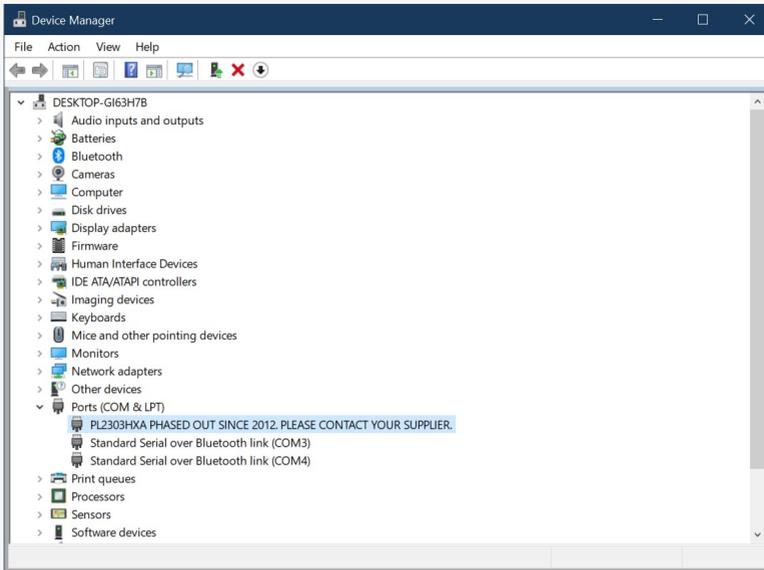
Before you plug in the USB-TTL interface for the first time, please disconnect your computer from the internet. If disconnected, Windows will not automatically install its version of the drivers when the interface is plugged in. This way you can continue driver installation from Step 2.2 using the "**Profilic_Win8_x64_x86.zip**".

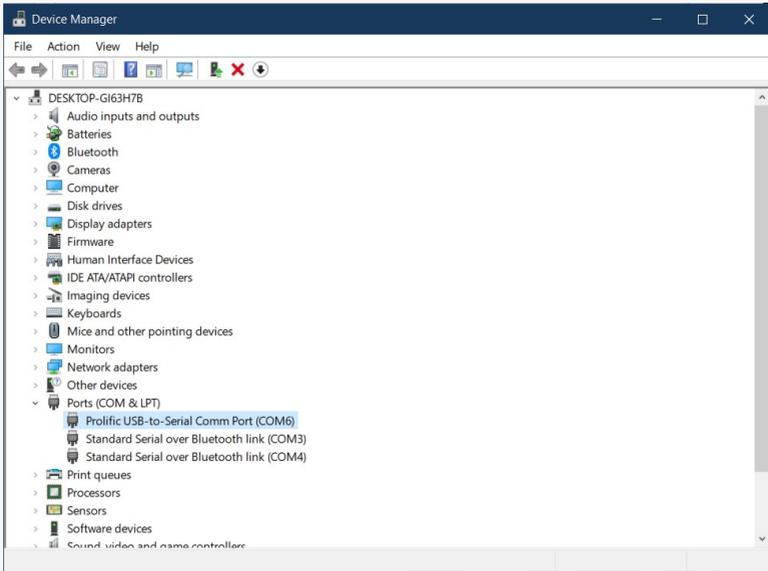
If you see a message such as the one shown below about drivers being expired, check for the driver's date under the Driver Properties, Drivers tab. The correct date should be September 24, 2008.

If the date is newer, you can try clicking "Roll Back Driver" under Properties/Driver tab to switch back to the older and working driver. If the "Roll Back Driver" option is not active, please disconnect from the internet, uninstall the driver from Device Manager (also check the box to delete the driver software when asked), and proceed with the driver installation from Step 2.2 using the Prolific driver.

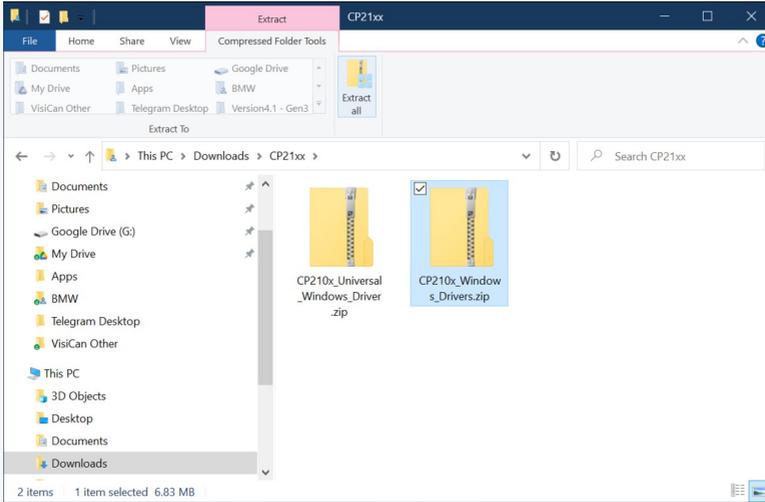
If you see "Prolific USB-to-Serial Comm Port" in the Device Manager, your PL2303 driver chip is successfully installed. Please note the COM number and skip to Step 3.

- CP2102 chip: Please proceed to Step 2.2 by using the following drivers.
 - Use **CP210x_Windows_Drivers.zip** for Windows 10/11.
 - Use **CP210x_Universal_Windows_Drivers.zip** for Windows 7/8.

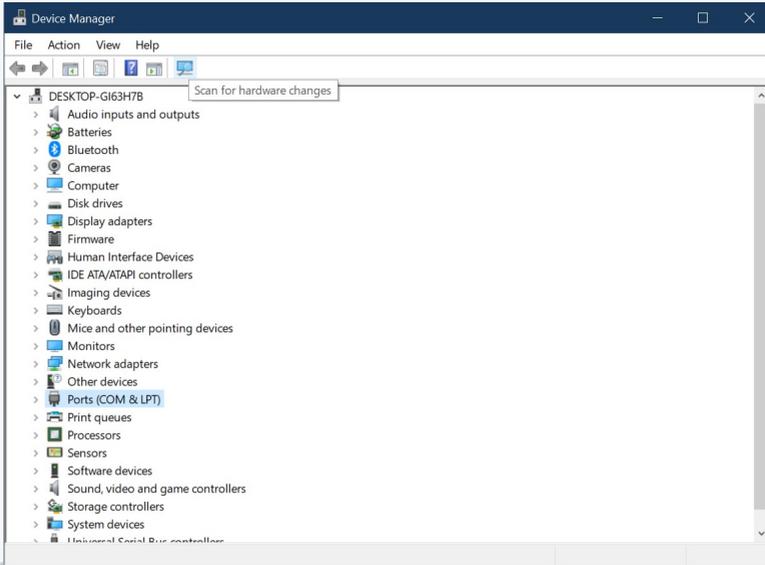




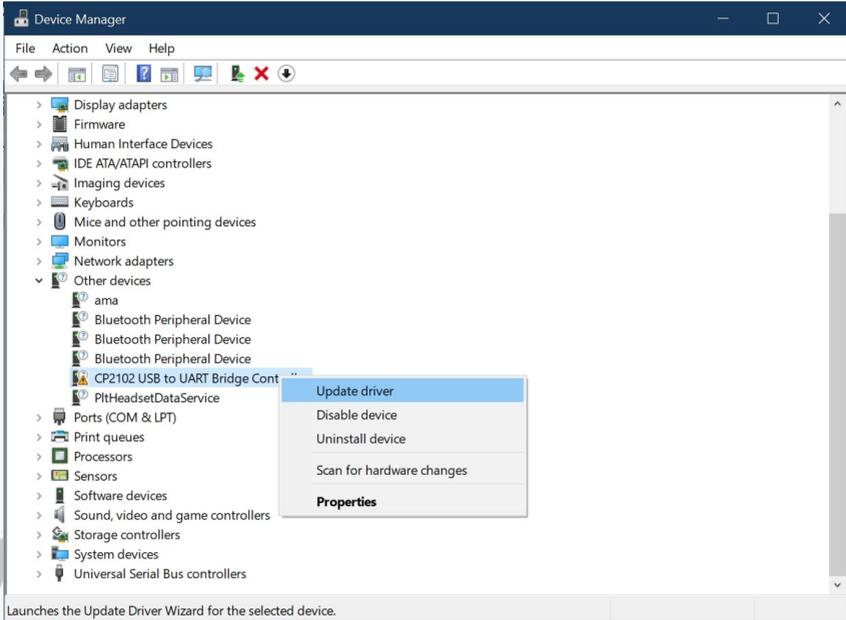
Step 2.2 Download drivers and extract files to the Downloads folder using the “Extract All” option or your favorite archive software such as WinZip or WinRAR.



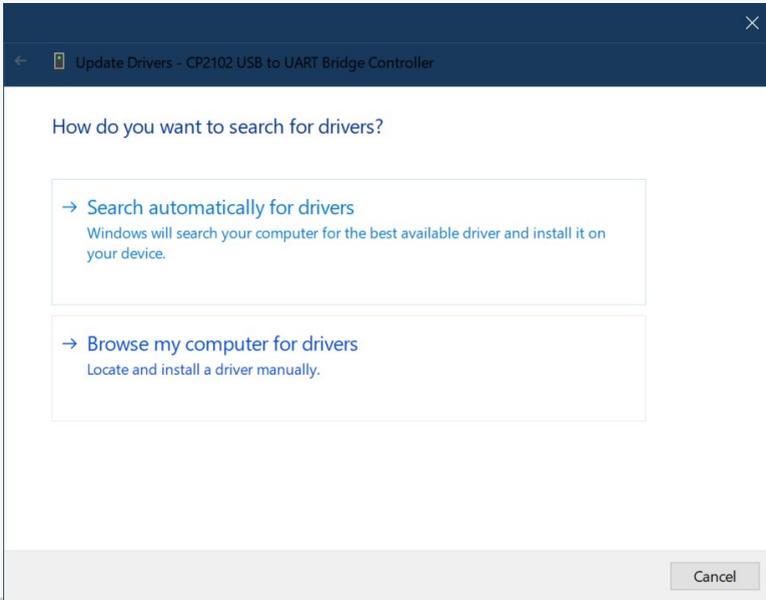
Step 2.3 Plug in the USB-TTL interface to your computer, and “Scan for hardware changes” in the Device Manager.



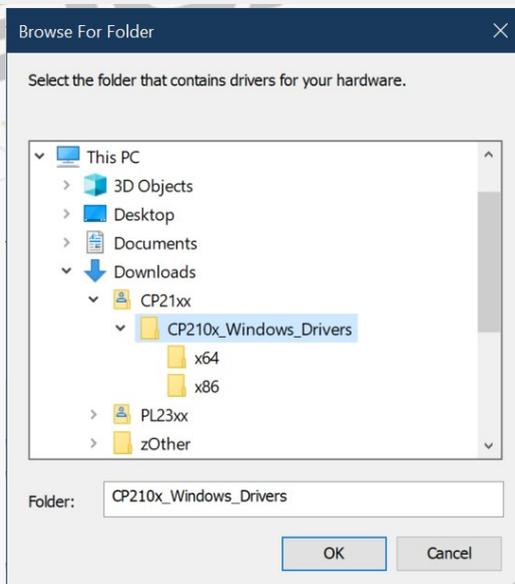
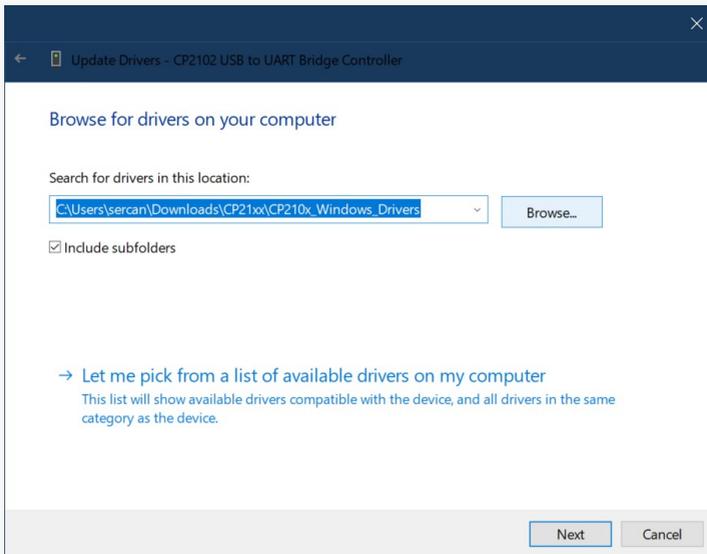
Step 2.4 Right-click on the device “CP2102 USB to UART Bridge Controller” under “Other Devices” and click on “Update Driver”. If you are using an interface with the Prolific chip, the device will appear under a different name.



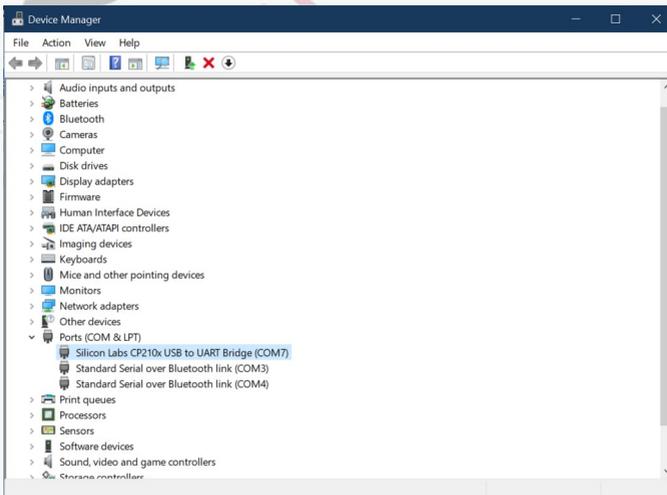
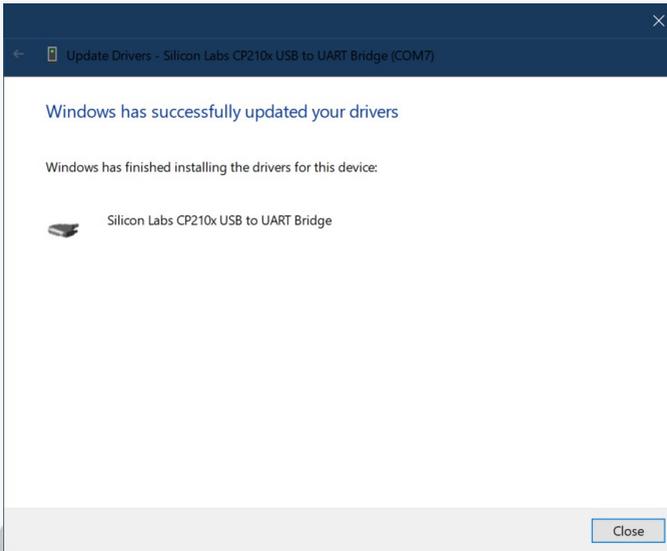
Step 2.5 Select “Browse my computer for drivers”.



Step 2.6 Click “Browse” and select the folder in Downloads that you saved and extracted drivers to in the beginning. Then, click Next.



Step 2.7 You should that Windows successfully updated the driver. Close this window. You can now see the USB-TTL interface under “Ports (COM&LPT)” section with the COM port number within parenthesis.



Part 3 : Upload Firmware

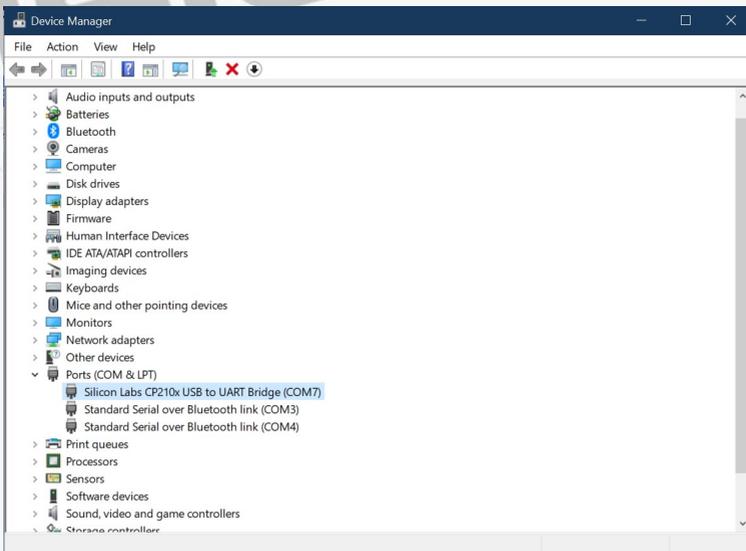
Step 3.1 To identify the COM Port name, open the Device Manager while the USB-TTL interface is disconnected.

If you have a first generation VisiCan, disconnect the OBD cable to cut VisiCan's power supply. First generation VisiCan's automatically enter the boot mode when USB-TTL interface is plugged in.

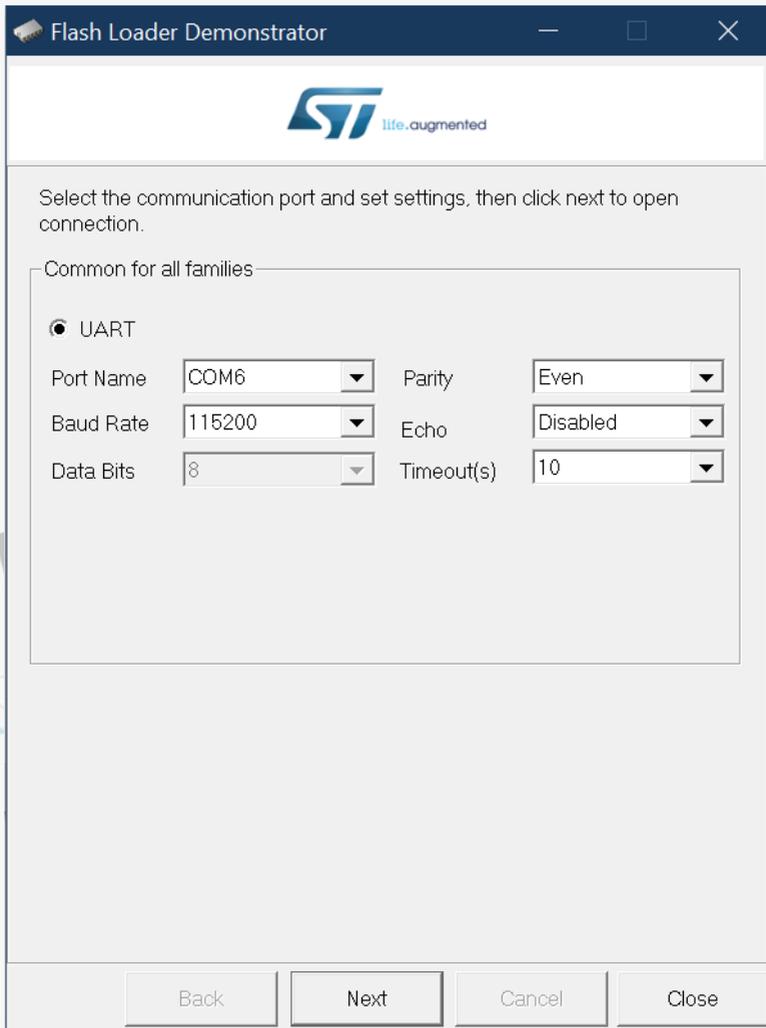
If you have a second generation VisiCan, press and hold Button #1 while powering up the unit to enter the boot mode. Second generation Visicans need an external power supply during the boot mode, so keep your OBD cable connected.

Plug in the USB-TTL interface and check "Ports (COM & LPT)" section for the USB-TTL interface. You should see either a "Silicon Labs CP210x" or "Prolific USB-to-Serial" device listed.

Note the COM port name written at the end of the device name, e.g. COM3, COM4 etc.. You will need this during the firmware update.



Step 3.2 Open the “Flash Loader Demonstrator” application, and select the COM Port name that you noted previously. Leave other options unchanged and click Next.



Flash Loader Demonstrator

ST life.augmented

Select the communication port and set settings, then click next to open connection.

Common for all families

UART

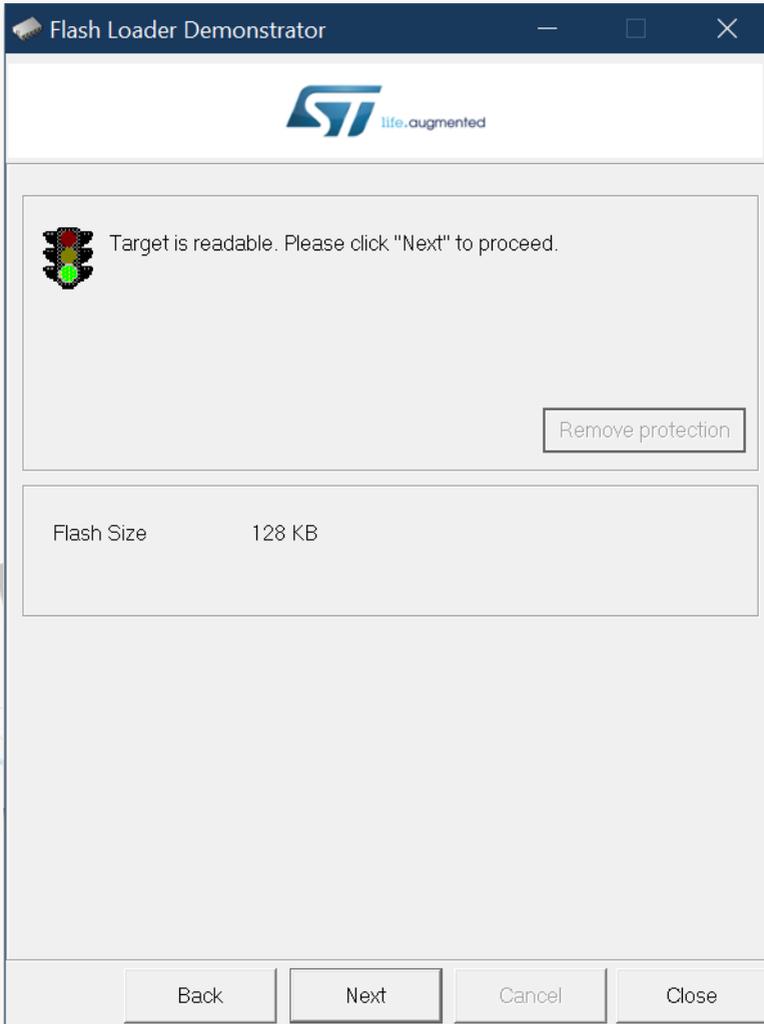
Port Name: COM6 Parity: Even

Baud Rate: 115200 Echo: Disabled

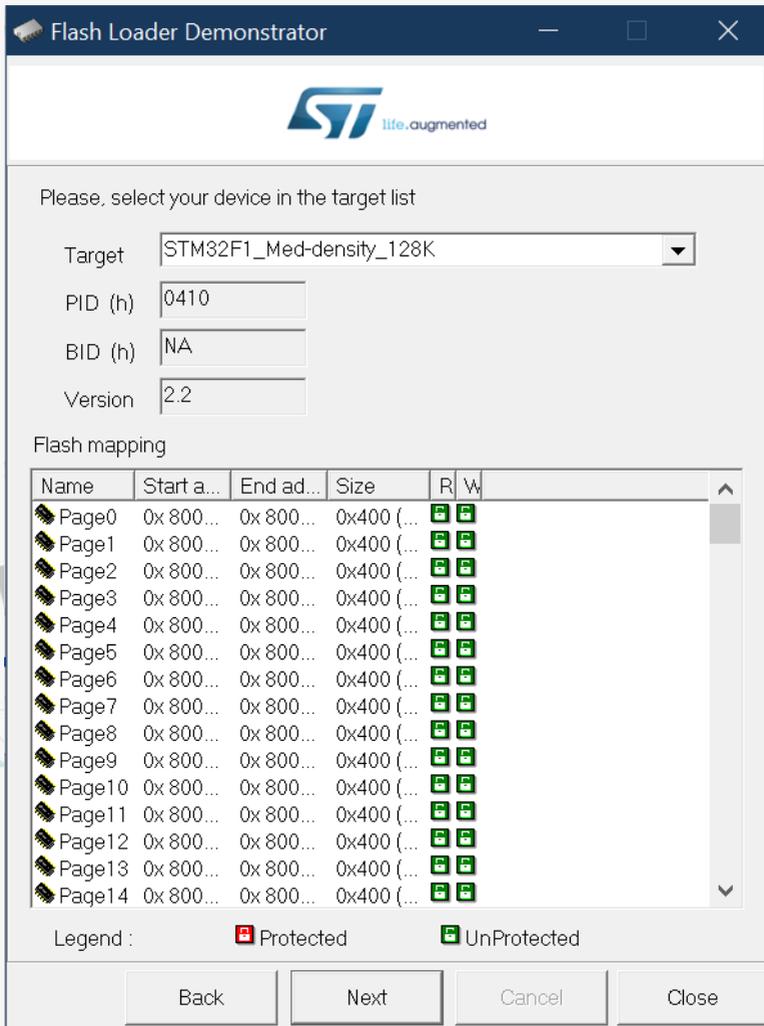
Data Bits: 8 Timeout(s): 10

Back Next Cancel Close

Step 3.3 If connection and COM port name is selected correctly, you should see the green light sign, and “Target is readable” note. Click Next.



Step 3.4 You will see details about your VisiCan's CPU here, don't change anything. Click Next.



Flash Loader Demonstrator

ST life.augmented

Please, select your device in the target list

Target: STM32F1_Med-density_128K

PID (h): 0410

BID (h): NA

Version: 2.2

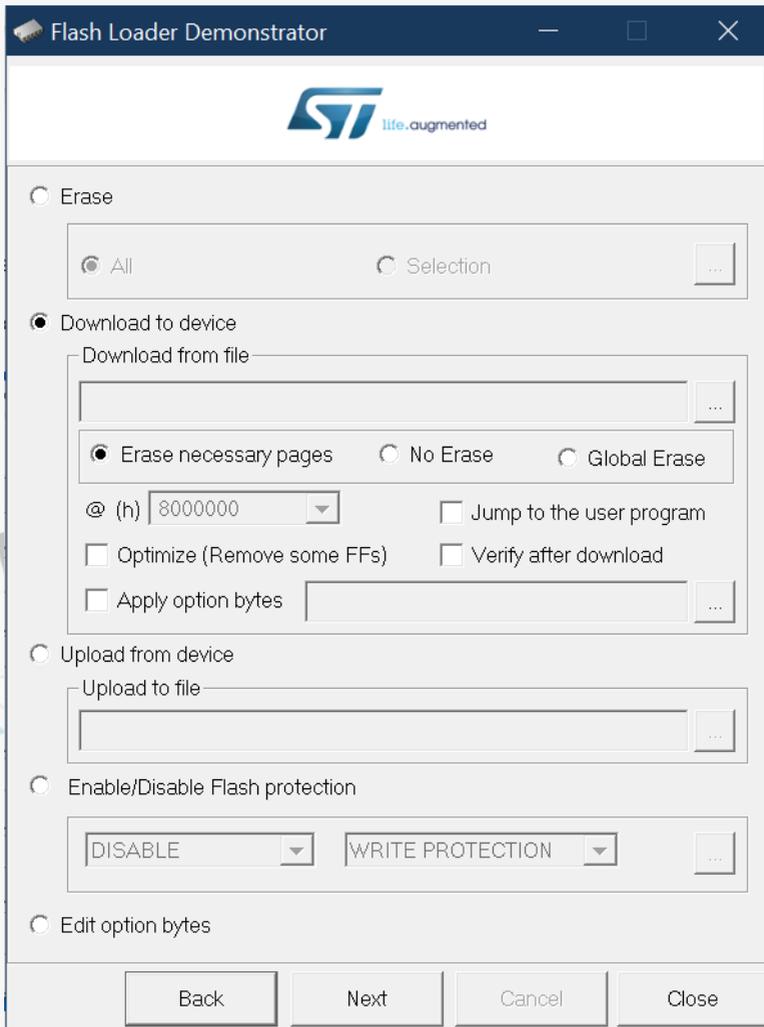
Flash mapping

Name	Start a...	End ad...	Size	R	W
Page0	0x 800...	0x 800...	0x400 (...)		
Page1	0x 800...	0x 800...	0x400 (...)		
Page2	0x 800...	0x 800...	0x400 (...)		
Page3	0x 800...	0x 800...	0x400 (...)		
Page4	0x 800...	0x 800...	0x400 (...)		
Page5	0x 800...	0x 800...	0x400 (...)		
Page6	0x 800...	0x 800...	0x400 (...)		
Page7	0x 800...	0x 800...	0x400 (...)		
Page8	0x 800...	0x 800...	0x400 (...)		
Page9	0x 800...	0x 800...	0x400 (...)		
Page10	0x 800...	0x 800...	0x400 (...)		
Page11	0x 800...	0x 800...	0x400 (...)		
Page12	0x 800...	0x 800...	0x400 (...)		
Page13	0x 800...	0x 800...	0x400 (...)		
Page14	0x 800...	0x 800...	0x400 (...)		

Legend : Protected UnProtected

Buttons: Back, Next, Cancel, Close

Step 3.5 Select “Download to device” and “Erase necessary pages” buttons. Click “...” button next to Download from file to choose the firmware file for your VisiCan unit.



Flash Loader Demonstrator

ST life.augmented

Erase

All Selection ...

Download to device

Download from file

...

Erase necessary pages No Erase Global Erase

@ (h) 8000000 Jump to the user program

Optimize (Remove some FFs) Verify after download

Apply option bytes ...

Upload from device

Upload to file

...

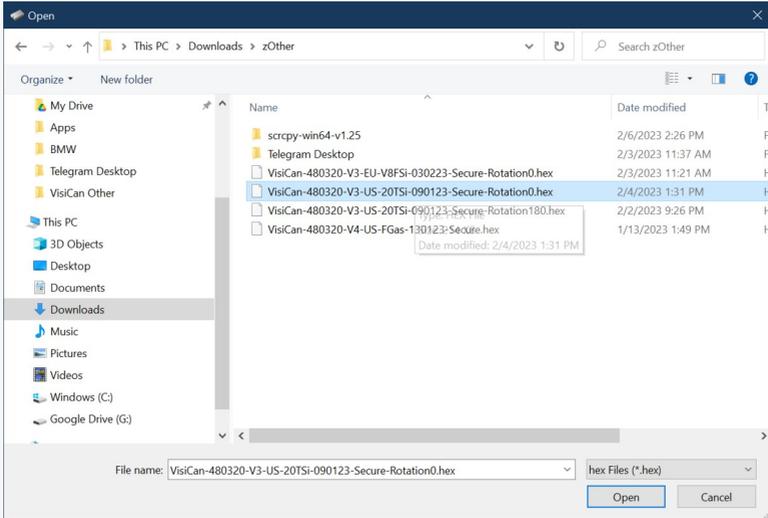
Enable/Disable Flash protection

DISABLE WRITE PROTECTION ...

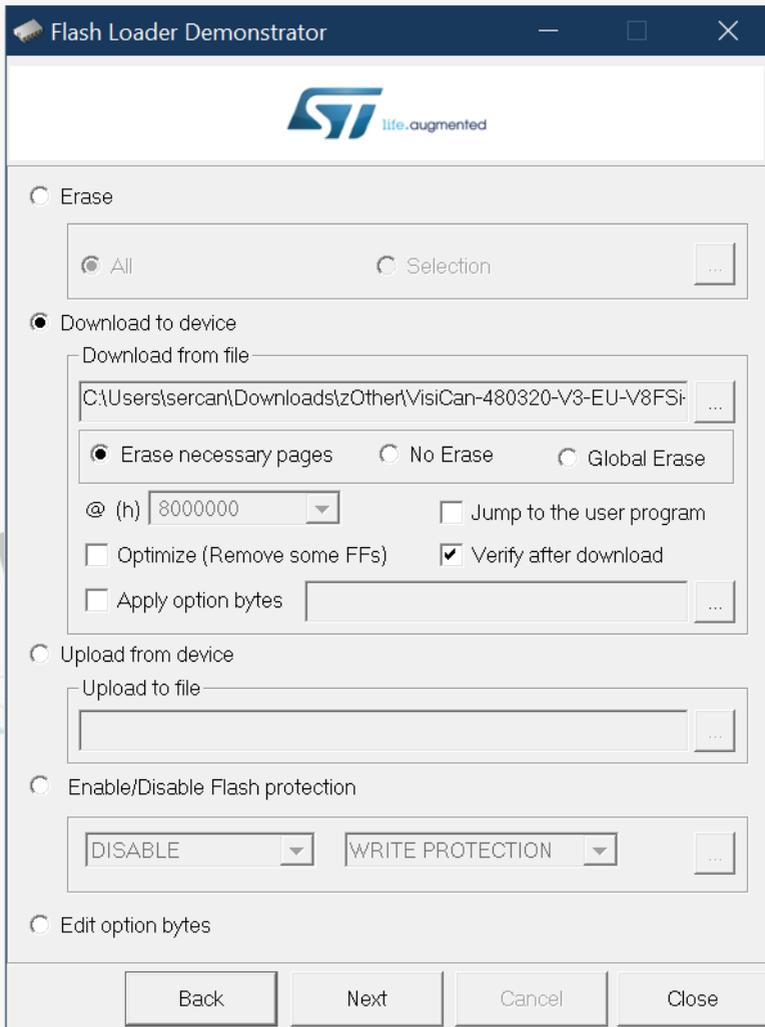
Edit option bytes

Back Next Cancel Close

Step 3.6 In the right bottom corner of the newly opened window, change the file type to “hex Files (*.hex)”. Then, navigate to the folder where you saved the firmware file and select the file to upload to your VisiCan, click Open.



Step 3.7 After you selected the firmware file to upload, you will return to the previous page at Step 3.5. Please verify that the options are similar to the one shown below and click Next to start the firmware update.



Flash Loader Demonstrator

ST life.augmented

Erase

Download to device

Upload from device

Enable/Disable Flash protection

Edit option bytes

Download from file

C:\Users\sercan\Downloads\zOther\VisiCan-480320-V3-EU-V8FSI...

Erase necessary pages No Erase Global Erase

@ (h) 8000000 Jump to the user program

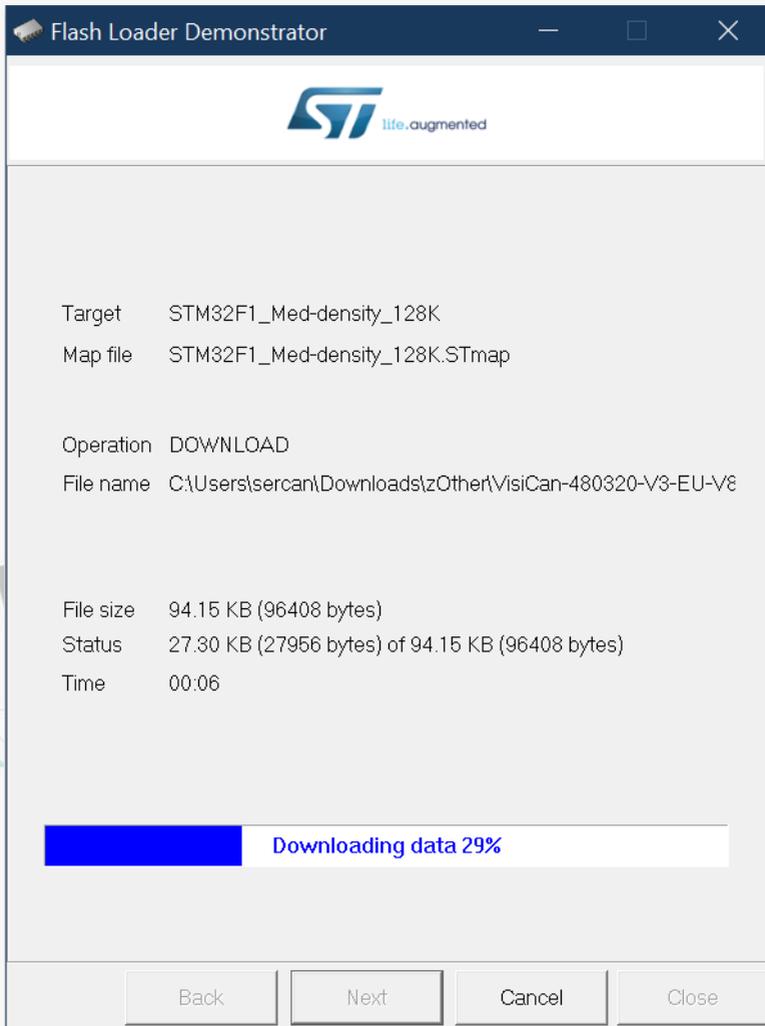
Optimize (Remove some FFs) Verify after download

Apply option bytes

DISABLE WRITE PROTECTION

Back Next Cancel Close

Step 3.8 You will see a screen showing the progress of the update. Please wait until this progress completes and do not disconnect your VisiCan.



Step 3.9 : After the firmware update is successfully completed and verified, you should see the “Download operation finished successfully” message in the green colored progress bar. Your unit is ready to run with the new firmware. Please disconnect the USB-TTL interface from your computer, and reset the power for your VisiCan unit (restart your car or reconnect the OBD cable).

