

Quick-Start guide firmware flashing to C5 Hardware and OpenXC Firmware

Windows:

1. Download OpenXC installation package [here](#).
2. Create a folder on your computer and extract the package.
3. Put the hex file that you want to flash in this new folder as well. You can [build your own](#) firmware or obtain one for [supported vehicles](#).
4. Copy "libusb0.dll" to c:\Windows\SysWOW64 for 64-bit Windows, or c:\Windows\system32 for 32-bit Windows
5. Copy "libusb0.sys" to c:\Windows\system32\drivers
6. Connect the C5 to your computer via USB cable, the USB bootloader will run for about 5 seconds (blinking red and solid blue lights).
7. While the USB bootloader is running (first 5 seconds after power-up), use Device Manager to manually install the provided driver file "stk500v2.inf" (note that Windows 8 will indicate the file has not been signed – ignore this message).
8. Open a command prompt window and navigate to the folder that you created in step number 2.
9. Disconnect and re-connect the OpenXC device.
10. Within 5 seconds of connecting the device, run avrdude using "**avrdude.exe -U flash:w:<HEX> -c stk500 -p 32MX795F512L -C avrdude.conf -P COM<n>**", where <HEX> is the name of your firmware file (that you copied into the folder) and <n> is the com port number for the OpenXC device (you can use Device Manager to check this).
11. After flashing is complete, power cycle the device and initialize the [RTC](#) via the Python command (\$ **openxc-control set --time 1461545558**), but using the [current UNIX time](#).
12. Enjoy!

MAC / Linux:

1. Download OpenXC installation package [here](#).
2. Create a folder on your computer and extract the package.
3. Put the hex file that you want to flash in this new folder as well. You can [build your own](#) firmware or obtain one for [supported vehicles](#).
4. Install avrdude – the command line tool to flash firmware onto the OpenXC device. To install avrdude:
 - a. Navigate to the **avrdude-5.10** folder in installation package directory.
 - b. From within the **avrdude-5.10** folder, run the following commands:
 - i. \$ **./configure**
 - ii. \$ **make**
 - iii. \$ **sudo make install**
 - c. avrdude version 5.10 should be installed
5. Connect the C5 to your computer via USB cable, the USB bootloader will run for about 5 seconds (blinking red and solid blue lights).
6. Open a command line window and identify which device is plugged in by searching through the output of "\$ **ls /dev/tty.usb***". The device should appear as something similar to **/dev/tty.usbmodem1421**.



7. Disconnect and re-connect the OpenXC device.
8. Within 5 seconds of connecting the device, run avrdude using "**avrdude -U flash:w:<HEX> -c stk500 -p 32MX795F512L -C avrdude.conf -P <id>**", where <HEX> is the name of your firmware file (that you copied into the folder) and <id> is the OpenXC device such as **"/dev/tty.usbmodem1421"**.
9. After flashing is complete, power cycle the device and initialize the [RTC](#) via the Python command (\$ **openxc-control set --time 1461545558**), but using the [current UNIX time](#).
10. Enjoy!