Thursday, October 29, 2020

Flashing GW firmware for SoRTES 2020 Project

For Mac:

1. Open Arduino IDE
2. Top left on taskbar: Arduino -> Preferences
3. Check the box next to "Show verbose output during: upload".
4. Sketch > Upload
5. After the upload finishes, examine the contents of the black console window at the bottom of the Arduino IDE window. There, you will find the command the Arduino IDE used to flash the compiled binary file. You can copy that command, as shown in Figure 1.
6. Note that you need to modify the command to specify to the right path where your .hex file is stored. In my case, the modified command was: /Applications/Arduino.app/Contents/Java/hardware/tools/avr/bin/avrdude -C/Applications/Arduino.app/Contents/Java/hardware/tools/avr/etc/avrdude.conf -v -patmega32u4 -cavr109 -P/dev/cu.usbmodem141201 -b57600 -D -Uflash:w:/Users/stefanos/Downloads/SorTeS_GW07.hex:i

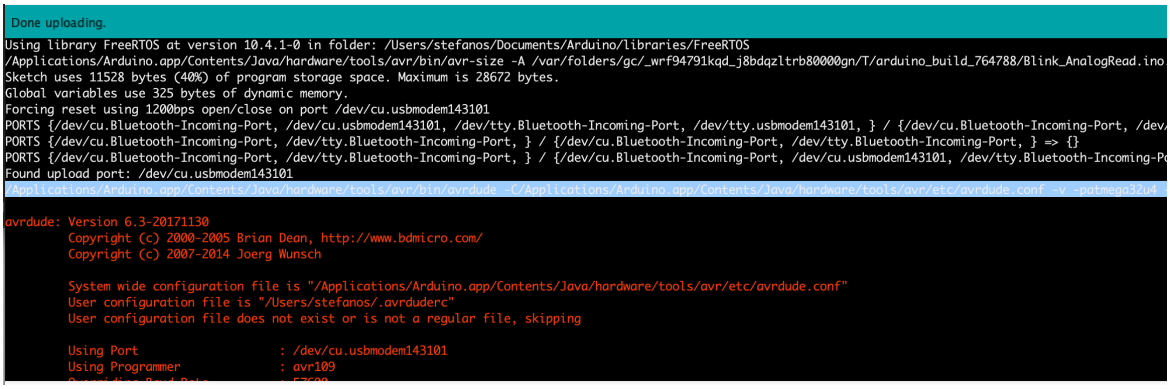


Figure 1: The command you need to copy from Arduino IDE output for Mac.

7. Open up a Terminal, copy paste your modified command and hit Enter. Do note that you need to be clicking the “reset” button on the device as your command is being executed in the terminal, in order for the upload to be successful. The terminal output for a successful .hex upload can be seen in Figure 2.

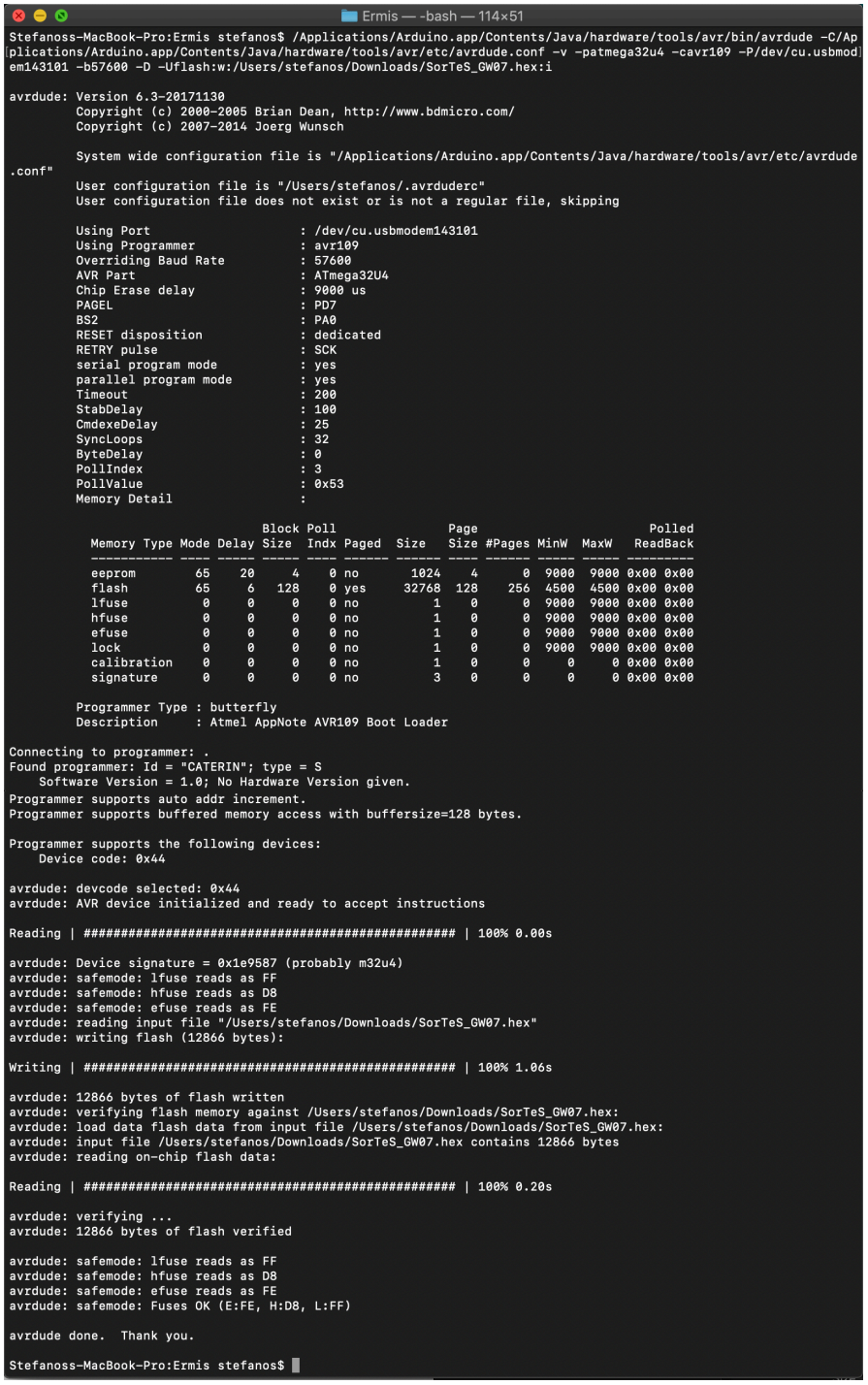


Figure 2: Terminal output for a succesful upload.

For Windows:

To upload image to the gateway:

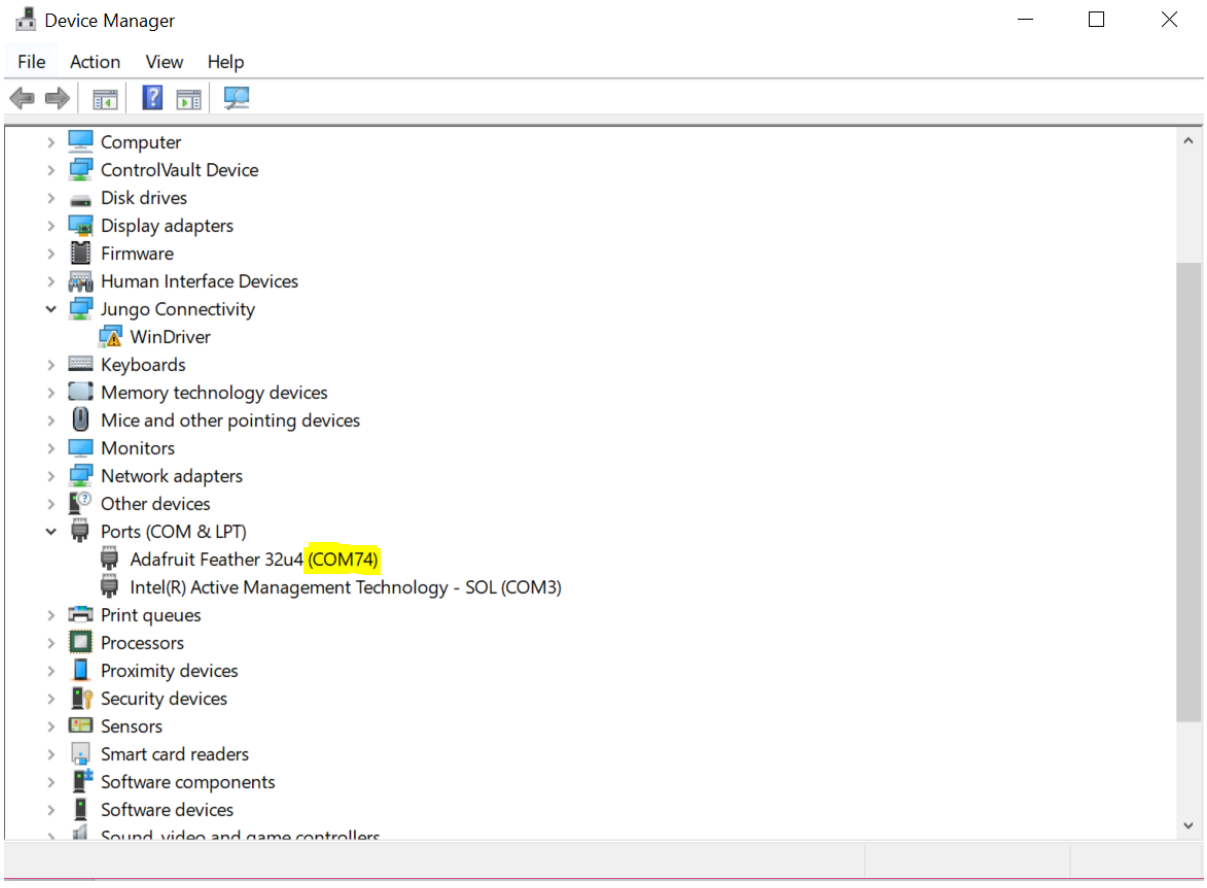
1) You can use the Arduino sketch uploader. The binary is included in the package, alternatively you can download the command line binary from: https://github.com/twinearthsoftware/ArduinoSketchUploader

2) Unzip the package and copy the gateway image into the folder

3) Open a command line terminal and go to the folder where you have copied the Arduino sketch uploader

4) The board model to use is “Leonardo”

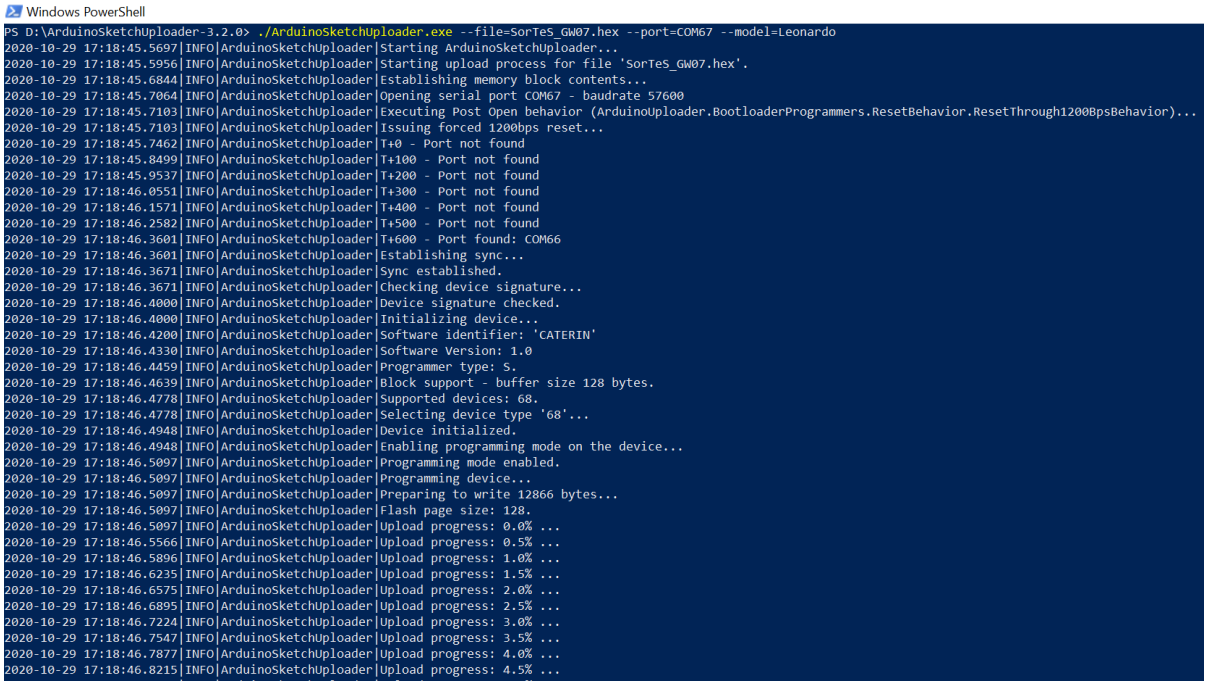
5) Connect your board and find the com port it is connected to, from device manager:



6) The command to upload the .hex file is:

ArduinoSketchUploader.exe --file= SorTeS_GW07.hex --port=COM74 --model=Leonardo

7) You will see the upload status after issuing the command:



8) Wait until the upload is complete, and the firmware is flashed: