Flashing Arduino MEGA2560 for OpenTX

Archive MEGA2560_bootloader.rar content :

Arduino_Drivers	Windows USB driver for M2560 with Atmega A8U or A16U2
avrdude.conf	Configuration file of avrdude
avrdude.exe	Flashing executable
avrdude_tutorial.url	Describes what you can do with avrdude
ch341ser.exe	Windows USB driver for M2560 with CH340G
mega2560-dfu-usbserial-16u2.hex	Firmware for A16U2
mega2560-dfu-usbserial_a8u.hex	Firmware for A8U
mega2560_stk500boot_v2.hex	Bootloader for M2560
mega2560_usbasp_flash_bootloader.bat	Write bootloard on M2560
mega2560_usbasp_flash_firmware_A16U2.bat	Write firmware on A16U2
mega2560_usbasp_flash_firmware_A8U.bat	Write firmware on A8U
mega2560_usbasp_flash_fuses.bat	Write fuses on M2560

Board connectivity :
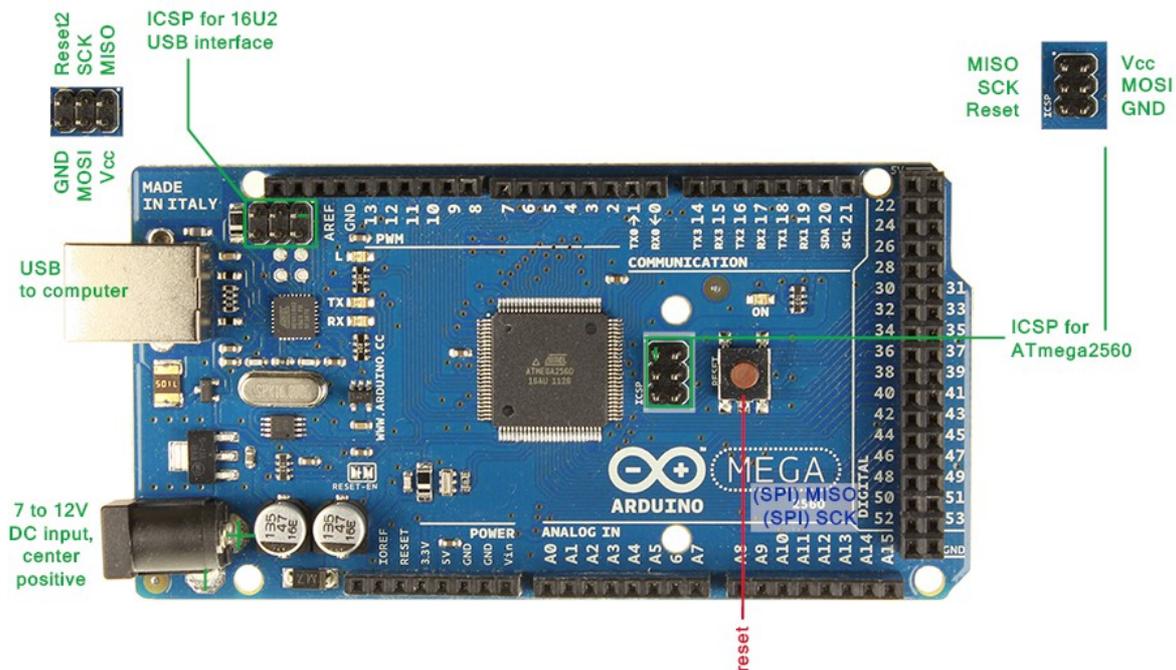
Step 1 : preparing board (require usbasp AVR programmer adapter)

- install usbasp driver and connect usbasp adapter to usb port
- connect usbasp adapter on M2560 ICSP port
- write fuses (with mega2560...fuses.bat)
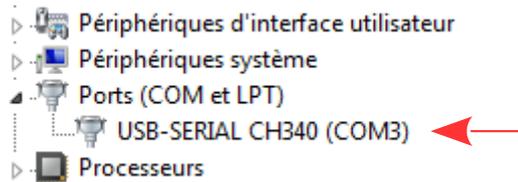- write bootloader (with mega2560...bootloader,bat)

Nota :
- no need to connect the M2560 to a power supply
- firmware of A8U or A16U2 should not be flashed onless necessary (can resolve a non-detection of board by PC if CPU is frozen or reseted)

Step 2 : connecting board to USB

CH340G board	A8U or A16U2 board
• execute « ch341ser.exe » to install driver • connect M2560 on one USB port • Windows should automatically configure driver	• connect M2560 on one USB port • Windows opens an installation panel • choose manually the driver « arduino.inf » in the folder « Arduino_Drivers » provided

– verify on Windows device management (direct access : devmgmt.msc) if device works, and witch com is used (com1, com2, etc.)

    ▷ 📇 Périphériques d'interface utilisateur
    ▷ 💻 Périphériques système
    ▲ 🖳 Ports (COM et LPT)
        🖳 USB-SERIAL CH340 (COM3) ⬅
    ▷ 🖿 Processeurs

Step 3 : setting Companion communication

– launch OpenTX Companion 2.1
– open the « Configure communications » menu
 – set the following parameters (with the right com) :
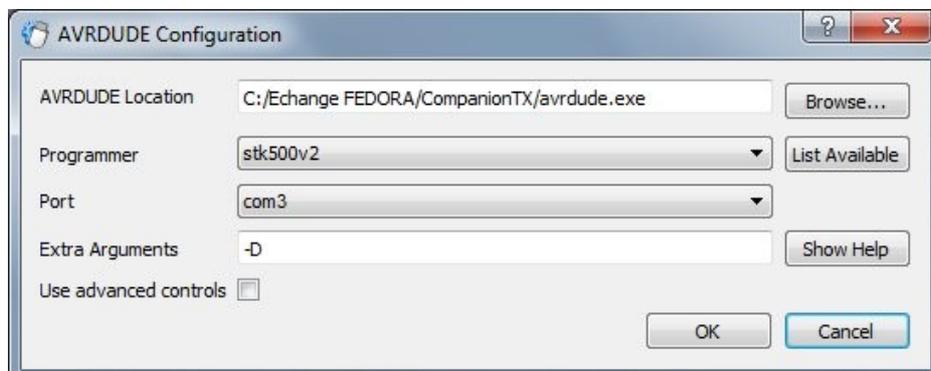
  – A8U or A16U2 board : for each firmware or eeprom access (read or flash), M2560 must be reset just before (press reset button is board is already connected, or simply plug the board on USB)
  – CH340G board : USB communication remains open after startup, no need to reset

Step 3 : setting Companion Radio Profile and and Application Settings

– go to the « Settings » menu, click « Settings »
  – select « Radio Profile » tab
 – check LCD, language and options needed :
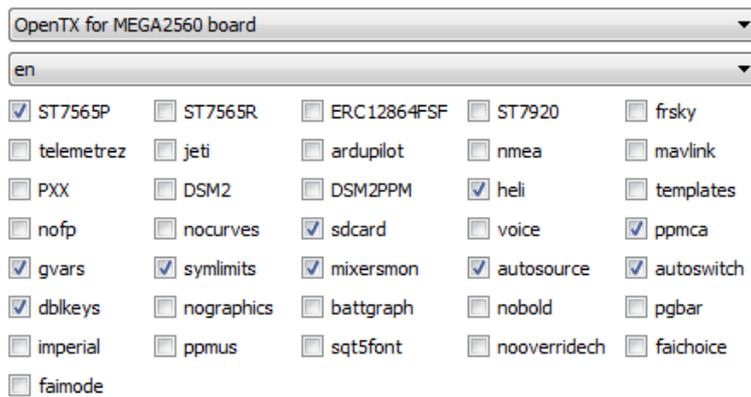
- select « Application Settings » tab
- open a folder for eeprom backup (don't check « Enable auto... » for the moment)
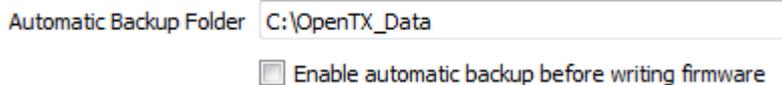
Step 4 : first flash with Companion

- go to « File » menu, click « Download »
- download firmware
- go to « Read/Write » menu, click « Write Firmware to Radio »
- load the downloaded firmware
- uncheck (for the moment) « Backup and restore Models ans Settings »
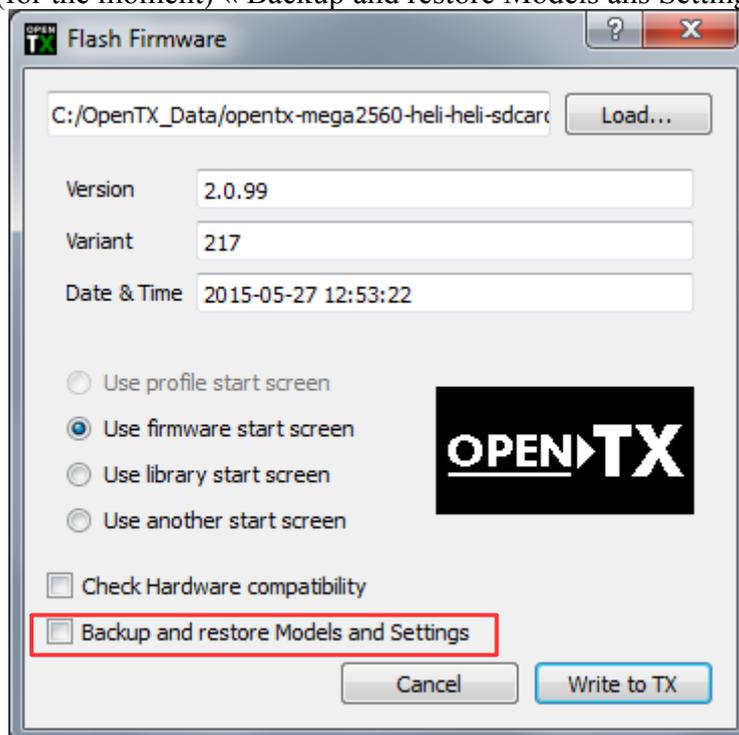
- write to TX...
- unplug the radio form USB port
- run the radio or plug it to usb port
- OpenTX should start and launch the init sequence (formatting eeprom then calibrate the sticks)
- enjoy... :)