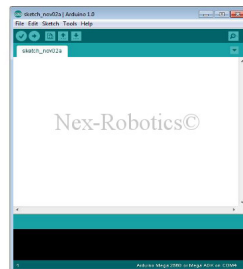


Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments. It is now possible to program the Fire Bird V 2560 robotics platform by using Arduino IDE. The steps mentioned below explain how to achieve this. We will use a simple LED blinking example to demonstrate this.

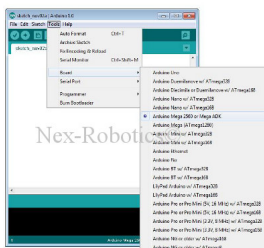
1. Open Arduino IDE.



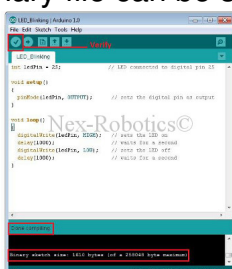
2. Write new sketch (Source code) in C/C++ for ex. LED_Blinking.



3. Click on Tool->Board and Select Arduino Mega 2560 or Mega ADK.

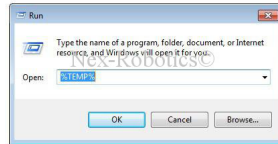


4. To compile the code, click “Verify” button shown in figure below. Make sure that verification process completes and status bar shows “Done compiling”. The size of the compiled binary file can be seen in the bottom window.



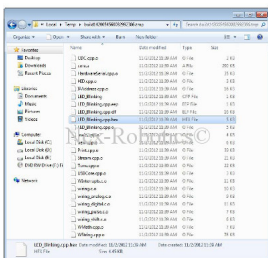
5. The verify will generate a hex file in “temp” folder. To go to “temp” folder:

- Click on start button;
- Click on Run;
- Write “%TEMP%” and press OK;

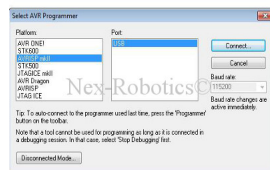


- You will find a buildXXXXXXXXXXXXX.tmp folder in “temp” directory. The build folder no. may change. The hex file generated by sketch can be found in this folder. Please note that if you close the sketch, then its hex file will also disappear from build folder.

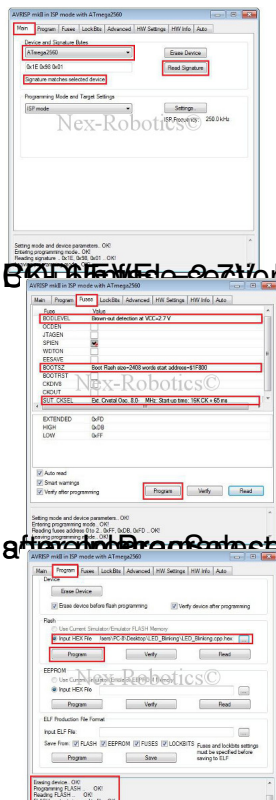
- Inside buildXXXXXXXXXXXXX.tmp folder, you will find a hex file of your sketch. This hex file can be used for programming the Fire Bird V robot with a supported programmer (Nex AVR USB ISP stk500V2 or AVRISP mkII).



- To burn your hex file on the FBV board, open AVR studio. Connect AVR ISP mkII or you can use STK500V2 programmer to program hex file on the board. Click on Connect dialog box, select programmer.



- In main section, select device as Atmega2560 and press read signature. following figure shows successful read device signature.



Before flashing, the programmer must be configured correctly. The following figure shows the configuration of the AVR Studio IDE.

After the programmer is configured, the user must select the correct device and location. The following figure shows the configuration of the AVR Studio IDE.

This figure shows the FireBird V 2560 platform. The user must select the correct device and location. The following figure shows the configuration of the AVR Studio IDE.



Arduino pin mapping on FBV 2560