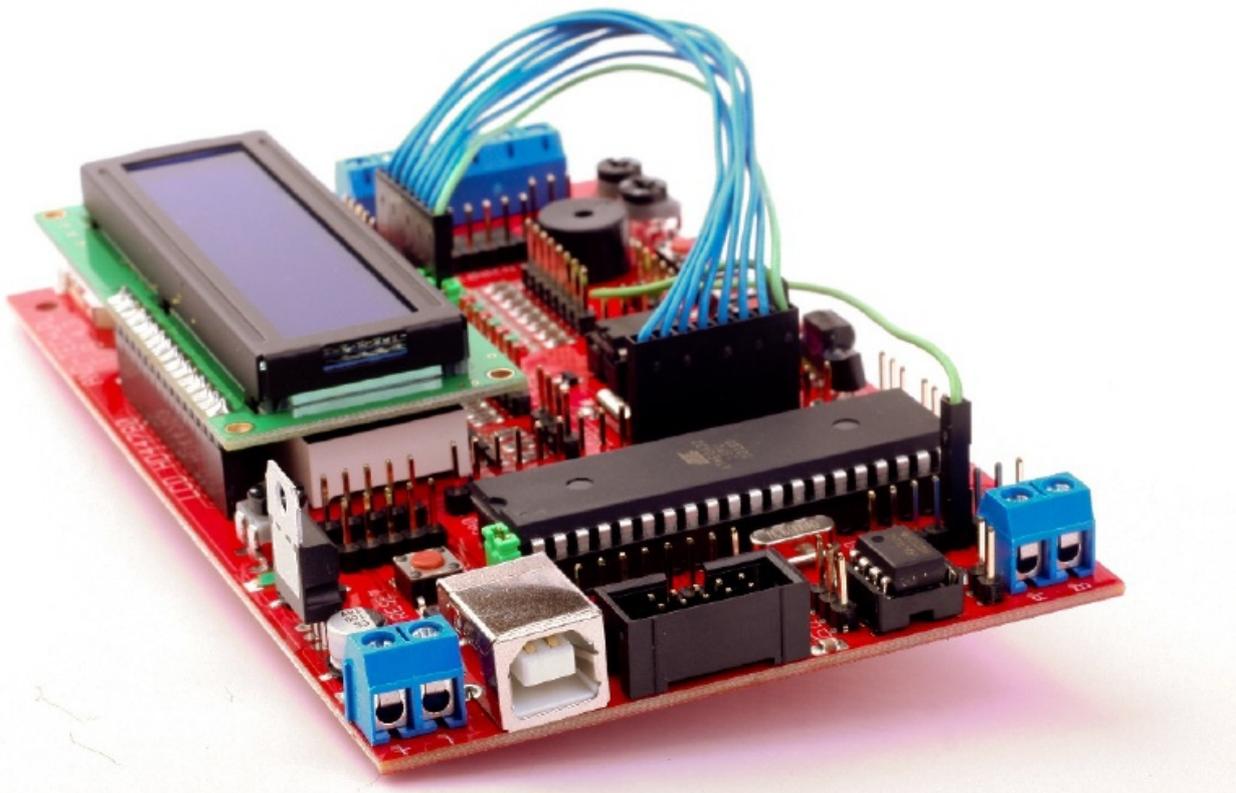


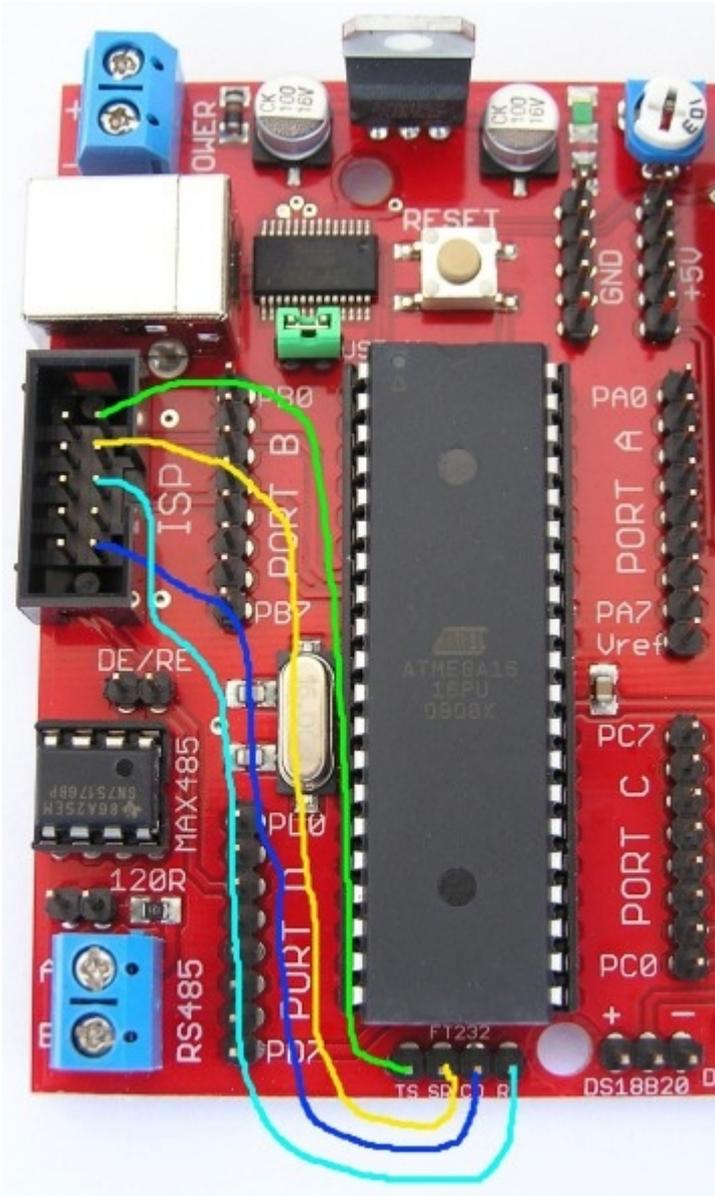
## **Upload of a Bootloader to EvB 4.3 v3 via built-in programmer**



Programs are uploaded to EvB boards via USB by Megaload/AND-Load software thanks to a tiny program i.e. Bootloader.

If your Bootloader is overwritten by other applications it is impossible to program EvB by Megaload/AND-Load. In this case please use the following instruction to re-upload a bootloader to your Board.

1. **Connect processor to ISP connector:** Please use a sample picture and table below:



Programmer	ISP port
TS	MISO
SR	SCK
CD	MOSI
RI	RESET

2. **Connect EvB 4.3 to computer** (if the board is connected the first time, system will ask for drivers, installation instruction is available in EvB 4.3 Manual )

3. **Download AVRDUDE software** with dedicated files from: [www.and-tech.pl/files/EvB-ISP.zip](http://www.and-tech.pl/files/EvB-ISP.zip)

4. **Unzip downloaded file and run avrdude-GUI.exe** (AVRDUDE needs [.NET](http://www.microsoft.com/net) version 2.0 or newer) .

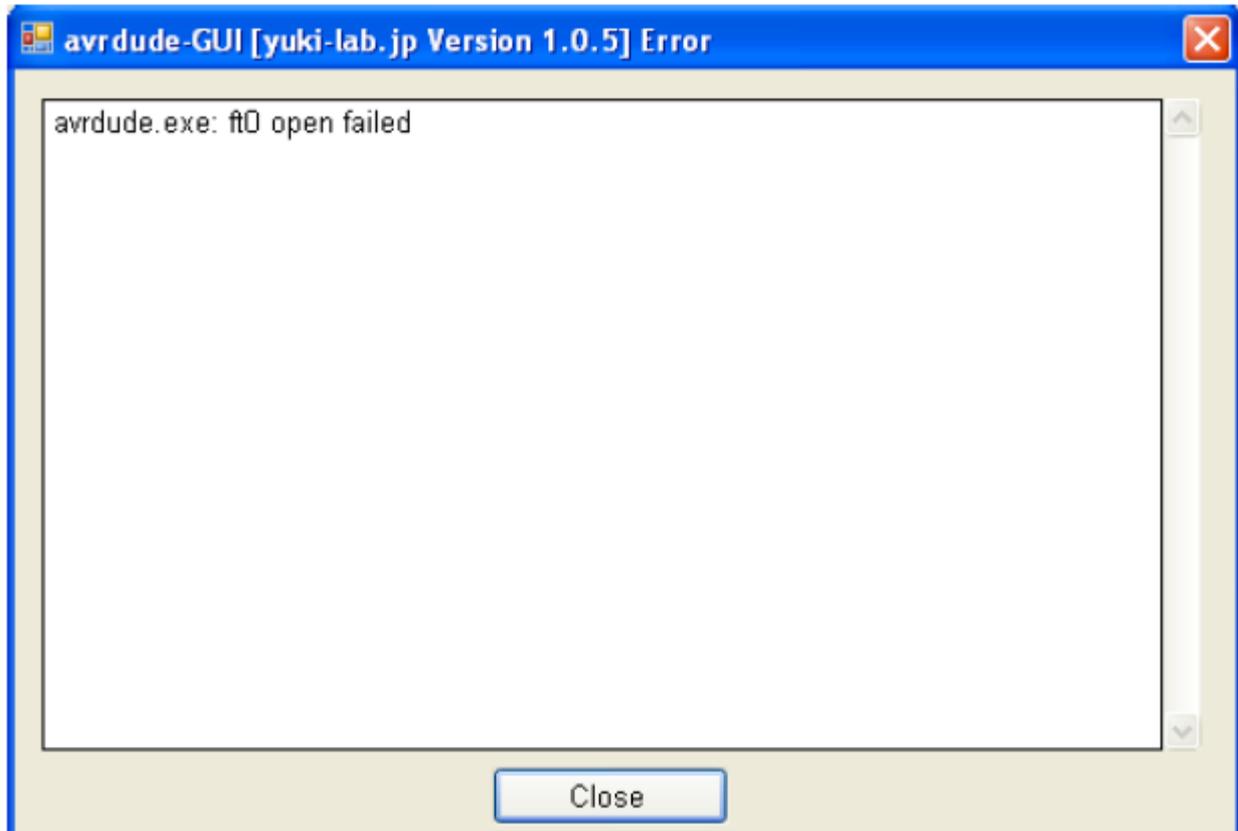
5. **Choose FT232R Synchronous BitBang (EvB) programmer.**

6. **Choose the right processor** , which you wish to program, in our case it is ATMega16

7. In „**Command line Option**” write -P ft0 -B 19200 (if you won't be able to connect write: „-P ft0 -B 9600” or „-P ft0 -B 57600”)

8. **Check connection by clicking Read in Fuse section**

9. If in windows hFuse and lFuse appear numbers it means that programmer works properly and we can program our processor. Otherwise, it means that the Board is not installed properly or we chose wrong settings.



10. Now please check if hFuse is D0 (D zero) and lFuse is EF. If yes jump to the next step. If values are different please write D0 in hFuse and EF lFuse and then click Write button which is located next to these windows.

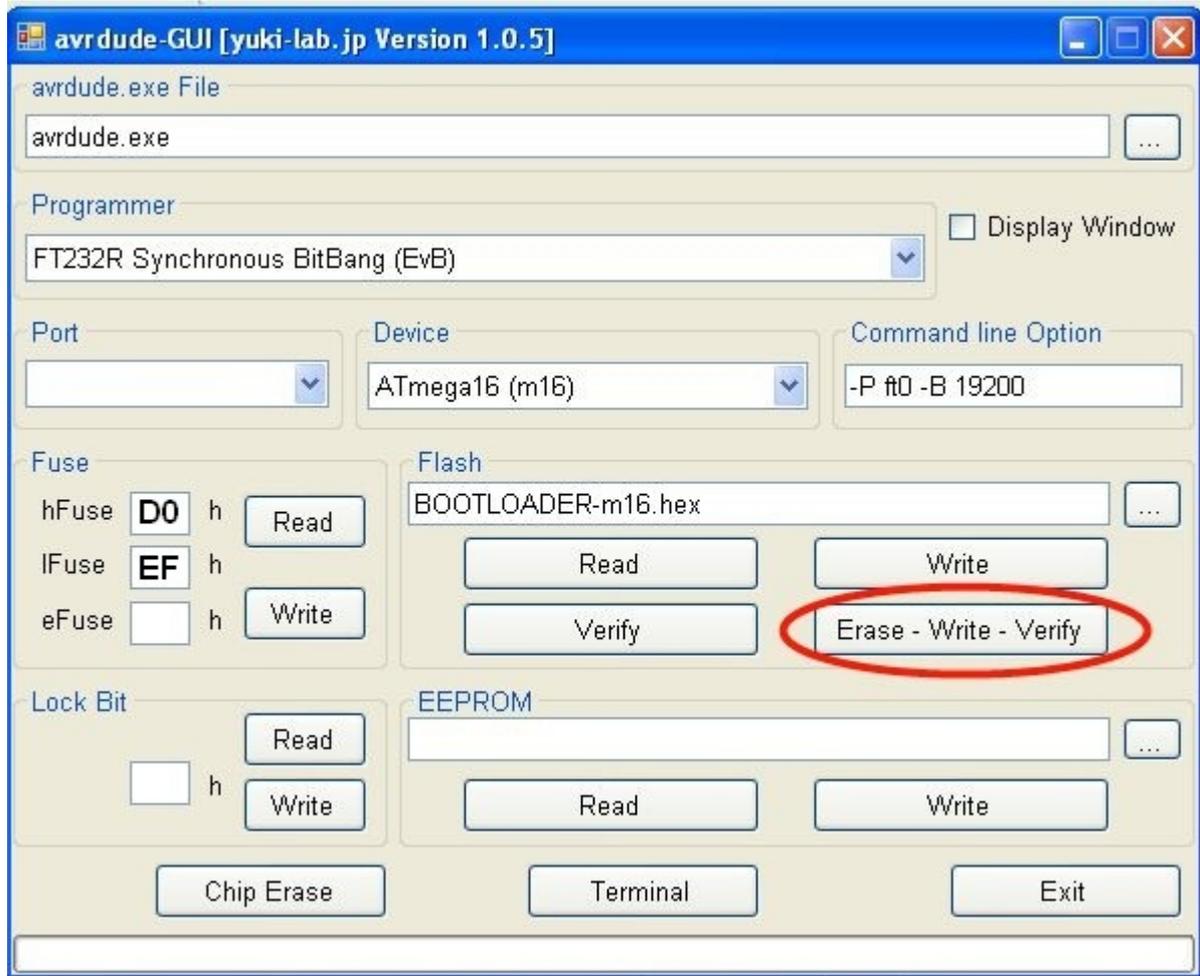
11. **Now choose bootloader files in Flash section and push Erase-Write-Verify button.** After a few seconds processor should be installed properly.

Bootloader files are available at:

ATMega16: [http://and-tech.pl/files/bootloader/bootloader\\_m16.zip](http://and-tech.pl/files/bootloader/bootloader_m16.zip)

ATMega32: [http://and-tech.pl/files/bootloader/bootloader\\_m32.zip](http://and-tech.pl/files/bootloader/bootloader_m32.zip)

ATMega644P: [http://and-tech.pl/files/bootloader/bootloader\\_m644p.zip](http://and-tech.pl/files/bootloader/bootloader_m644p.zip)



EvB 4.3 Board has properly working Bootloader and it should now work with Megaload/AND-Load programs.