Arduino WiFi shield firmware

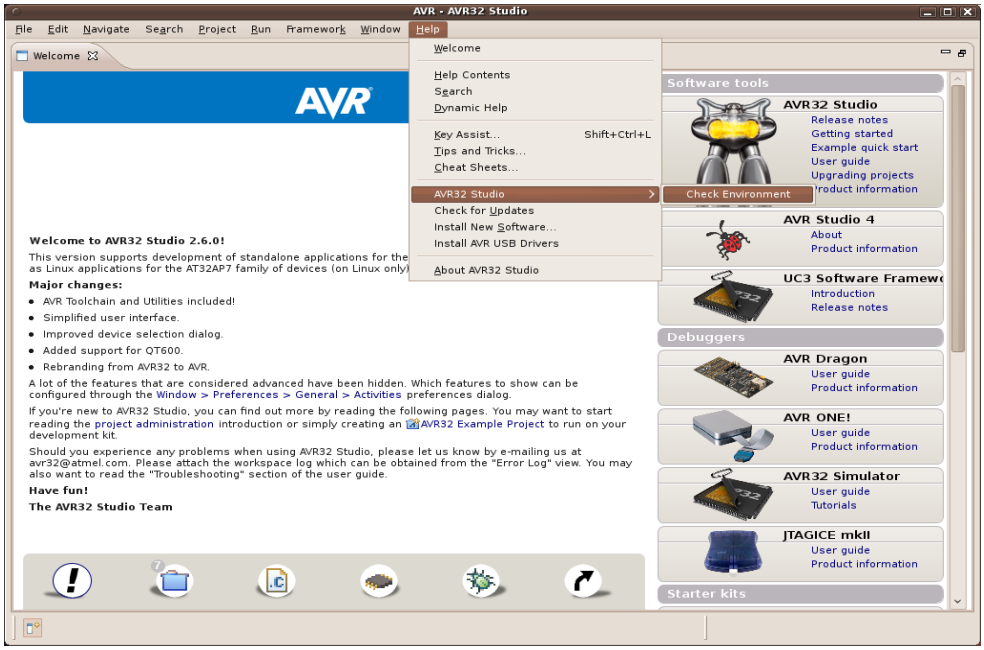
AvrStudio32 configration

Prerequisities

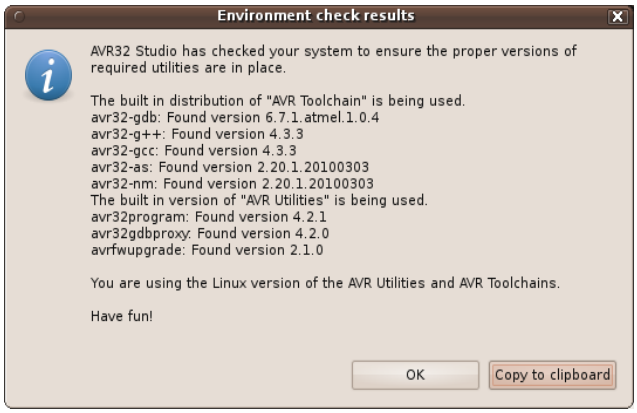
- Avr32Studio installed
- Avr32 toolchain installed

Check the proper toolchain installation.

Help → AVR32 Studio → Check Environment



All the toolchain is installed with compatible version.

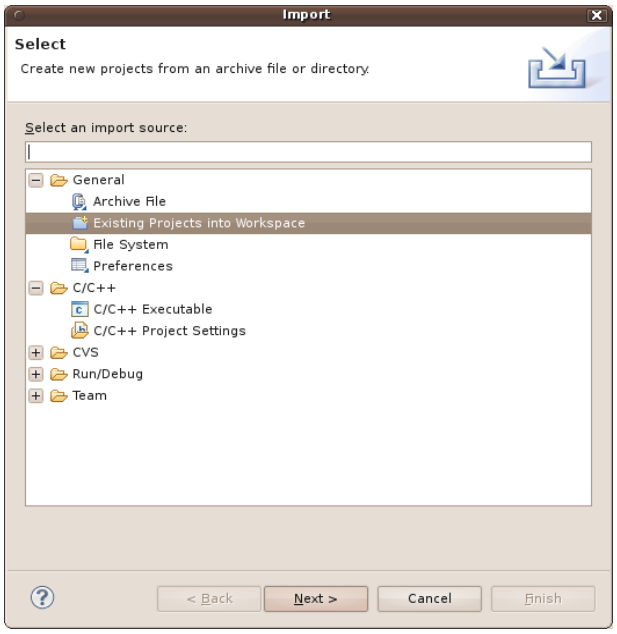


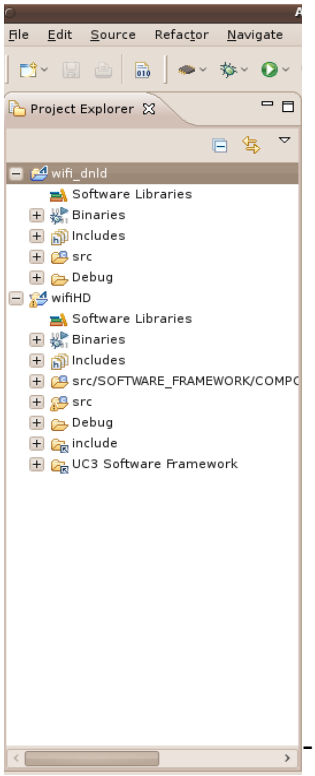
Starting from scratch, importing project on Avr32Studio

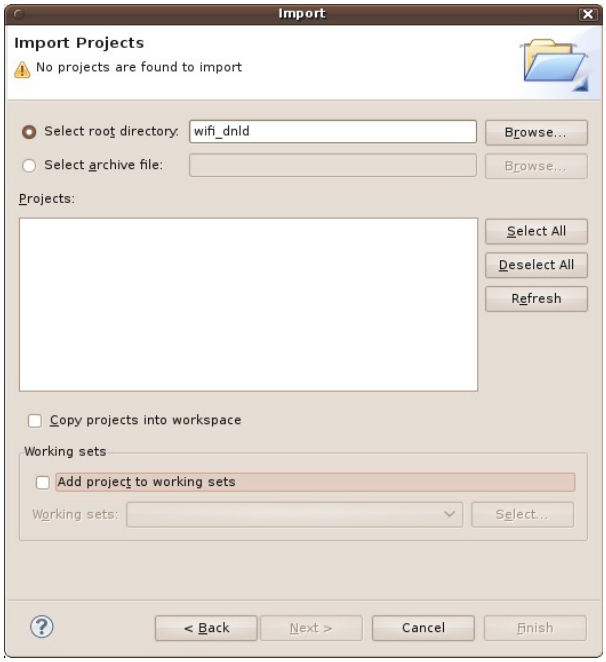
- Pull the source code from git repository in a directory for example C:\Arduino

  git clone git@github.com:arduino/wifishield.git

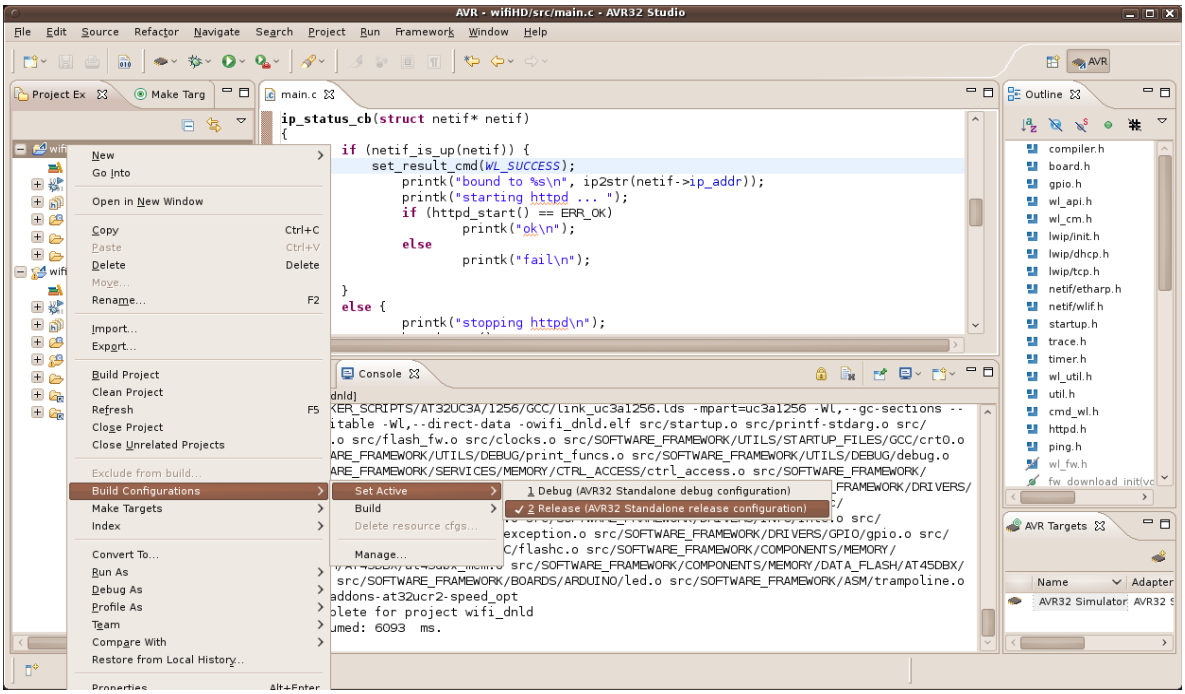
- Swtich the workspace on the source code driectory (C:\Arduino) or at Avr32Studio startup specify that directory as workspace directory
- Import a project from the filesystem: File → Import
- Specifiy the name of the first project: wifi_dnld
- Repeat the import project also for the project wifiHD
- The projects name must be the same reported in this document in order to match with the directory name
- The Project Explorer will appear with all the file imported in the workspace.







- select the Release configuration for both project
- build both projects in order to obtain the binary files



- wifi_dnld.elf is necessary to download the wifi Firmware on the dataflash present on the shield. This is necessarythe first time in production in order to store the HD firmware.
- wifiHD is the real application that run on the shield and manage the wifi Chip and the communication with Arduino board.

Aggiornamento software

The firmware generated by avr32studio are:
- wifi_dnld.elf: is used to download the H&D firmware on the DATAFLASH. The application run on UC3 and download the firmware on the dataflash.
- wifiHD.elf: It is the application for the WiFi shield.

Starting from scratch we need to download both, next we'll update only the wifiHD.elf for bug-fix (eventually both if H&D provide new firmware)

Prerequisities

- Flip installed on your machine Linux or Windows. The software is provided by Atmel at the follwing address: Flip
- FTDI cable to connect wifi shield serial port to your PC with a terminal
- connect with usb cable the shield

HD firmware download

1. Put the jumper J3
2. Power up the shield
3. start batchisp3 to download wifi_dnld.elf, using the following command:

   /batchisp3.sh -device AT32UC3A1256 -hardware usb -operation erase f memory flash blankcheck loadbuffer /Arduino/wifi_dnld/Release/wifi_dnld.elf program verify start reset 0
4. Power off shield
5. remove jumper J3.
6. Power on shield
7. On the terminal will appear the confirmation tha the firmware will be installed on dataflash

WiFI shield firmware download

1. Put the jumper J3
2. Power up the shield
3. start batchisp3 to download wifiHD.elf, using the following command:

   ./batchisp3.sh -device AT32UC3A1256 -hardware usb -operation erase f memory flash blankcheck loadbuffer /Arduino/wifiHD/Release/wifiHD.elf program verify start reset 0
4. Power off shield
5. remove jumper J3.

6. Power on shield
7. On the terminall Will appear the startup message of the WifiShield