
Introduction

This document describes how to install Windriver compiler in SPC5Studio development tools.

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1 How to install Windriver

1.1 Requirements

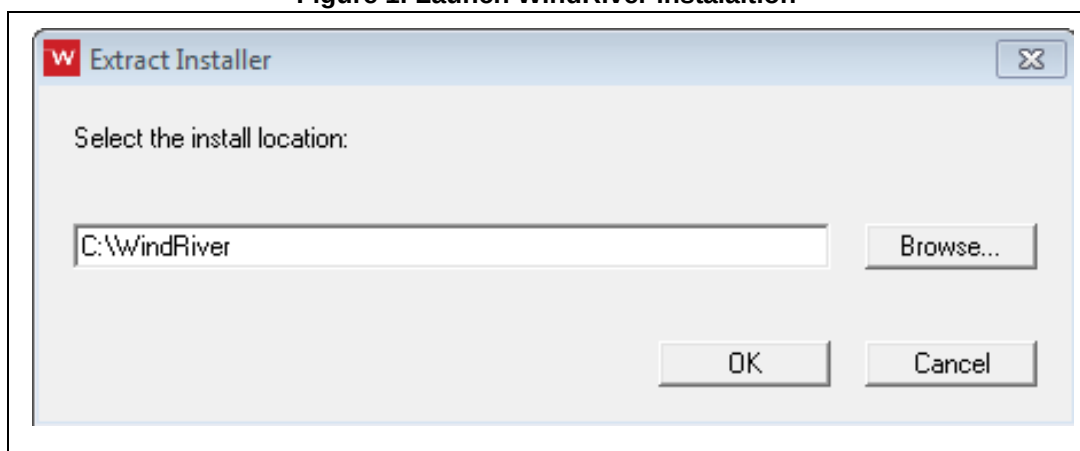
Software:

- Windows 7,8,10
- Administrator rights

1.2 Install Windriver compiler

- Launch setup.exe

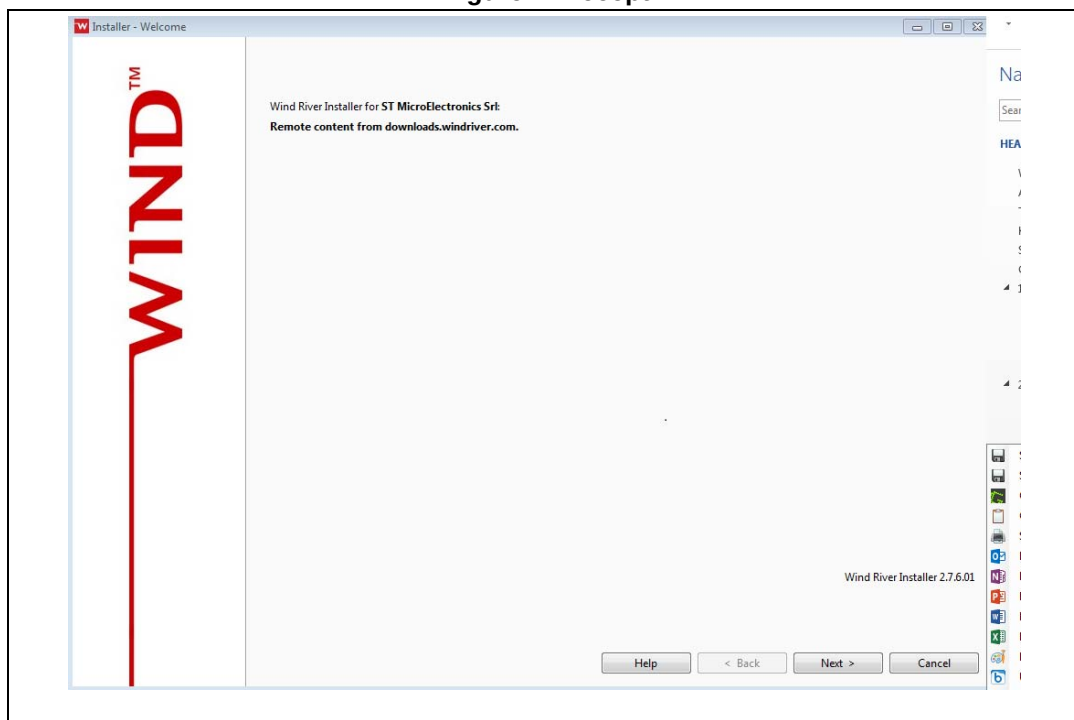
Figure 1. Launch WindRiver instalaltion



1.3 Launch WindRiver instalaltion

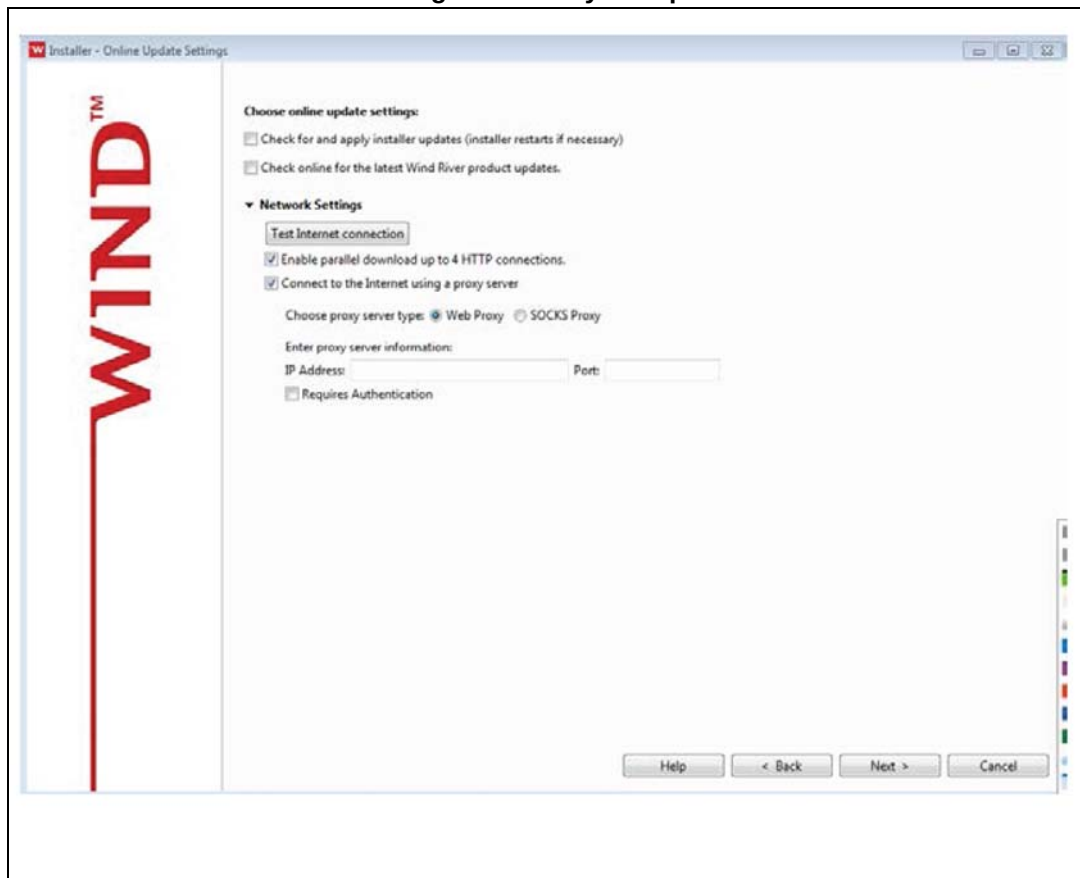
- Next
- Accept

Figure 2. Accept



- Set your proxy
- Proxy Set up

Figure 3. Proxy set up

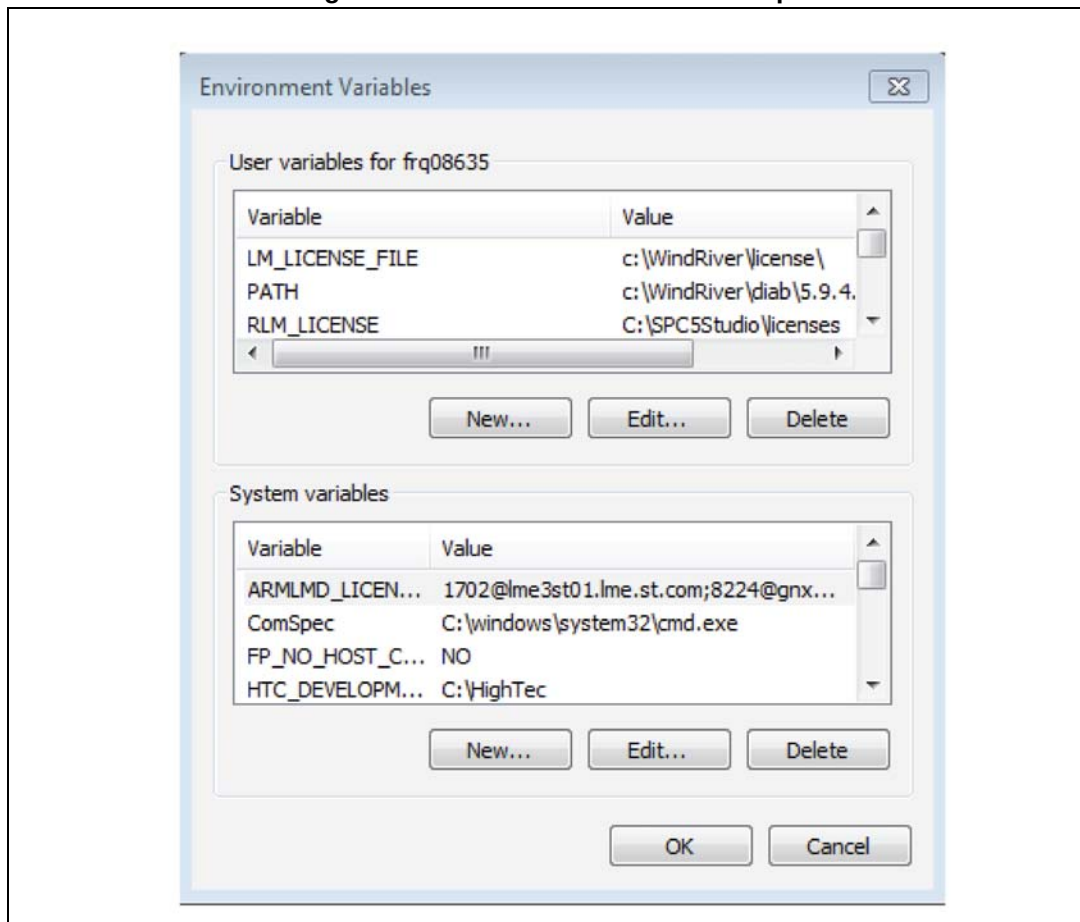


- Copy-paste your encryptedLicense_*.lic in **c:\WindRiver\license1** in order to unlock your compiler.

1.4 Windows: set your environment variables

- In Windows system properties → Environment variables

Figure 4. Environment variables set-up



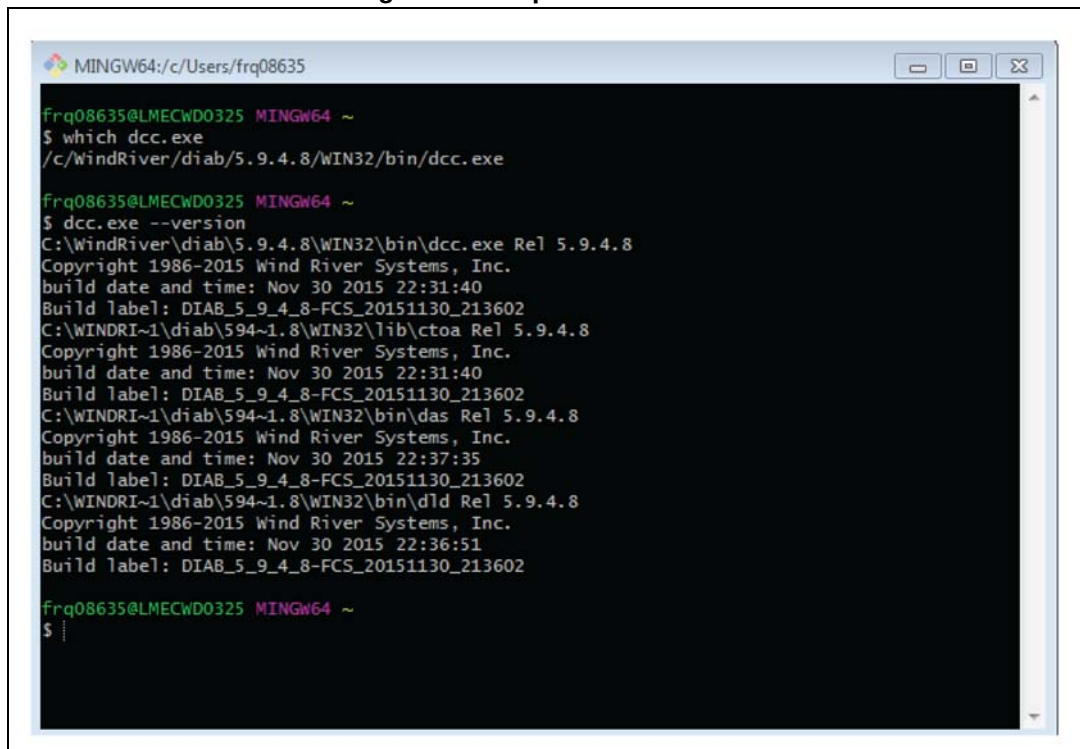
Add in the PATH **c:\WindRiver\diab\5.9.4.8\WIN32\bin**

Add the variable WRSD_LICENSE_FILE **c:\WindRiver\license**

1.5 Verify your compiler

- In cmd windows or git bash, verify your compiler calling (dcc.exe)

Figure 5. Compiler verification



```
MINGW64:/c/Users/frq08635

frq08635@LMECWD0325 MINGW64 ~
$ which dcc.exe
/c/WindRiver/diab/5.9.4.8/WIN32/bin/dcc.exe

frq08635@LMECWD0325 MINGW64 ~
$ dcc.exe --version
C:\WindRiver\diab\5.9.4.8\WIN32\bin\dcc.exe Rel 5.9.4.8
Copyright 1986-2015 Wind River Systems, Inc.
build date and time: Nov 30 2015 22:31:40
Build label: DIAB_5_9_4_8-FCS_20151130_213602
C:\WINDRI~1\diab\594~1.8\WIN32\lib\ctoa Rel 5.9.4.8
Copyright 1986-2015 Wind River Systems, Inc.
build date and time: Nov 30 2015 22:31:40
Build label: DIAB_5_9_4_8-FCS_20151130_213602
C:\WINDRI~1\diab\594~1.8\WIN32\bin\das Rel 5.9.4.8
Copyright 1986-2015 Wind River Systems, Inc.
build date and time: Nov 30 2015 22:37:35
Build label: DIAB_5_9_4_8-FCS_20151130_213602
C:\WINDRI~1\diab\594~1.8\WIN32\bin\dld Rel 5.9.4.8
Copyright 1986-2015 Wind River Systems, Inc.
build date and time: Nov 30 2015 22:36:51
Build label: DIAB_5_9_4_8-FCS_20151130_213602

frq08635@LMECWD0325 MINGW64 ~
$ |
```

2 Wind river CDT & SPC5Studio install

2.1 What is CDT

The CDT Project provides a fully functional C and C++ Integrated Development Environment based on the Eclipse platform.

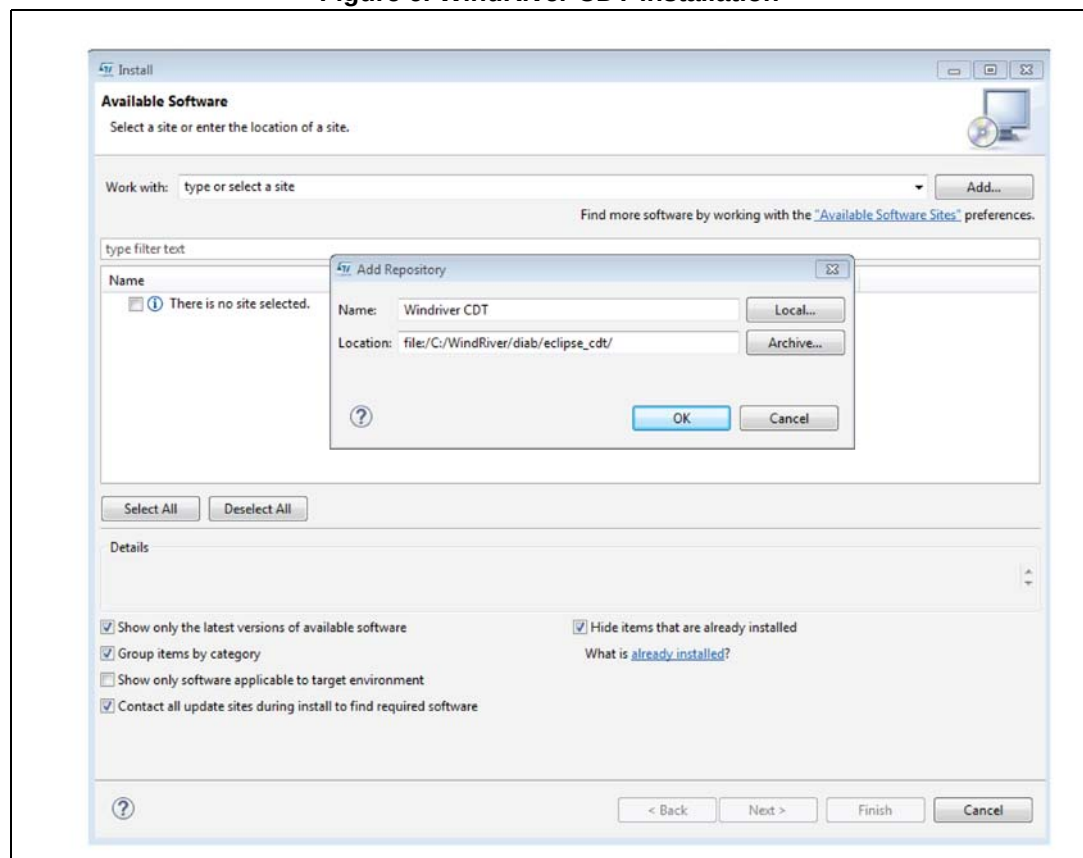
Features include: support for project creation and managed build for various toolchains, standard make build, source navigation, various source knowledge tools, such as type hierarchy, call graph, include browser, macro definition browser, code editor with syntax highlighting, folding and hyperlink navigation, source code refactoring and code generation, visual debugging tools, including memory, registers, and disassembly viewers.

2.2 Windriver CDT installation

- In the menu Help → Install new Software (Local)

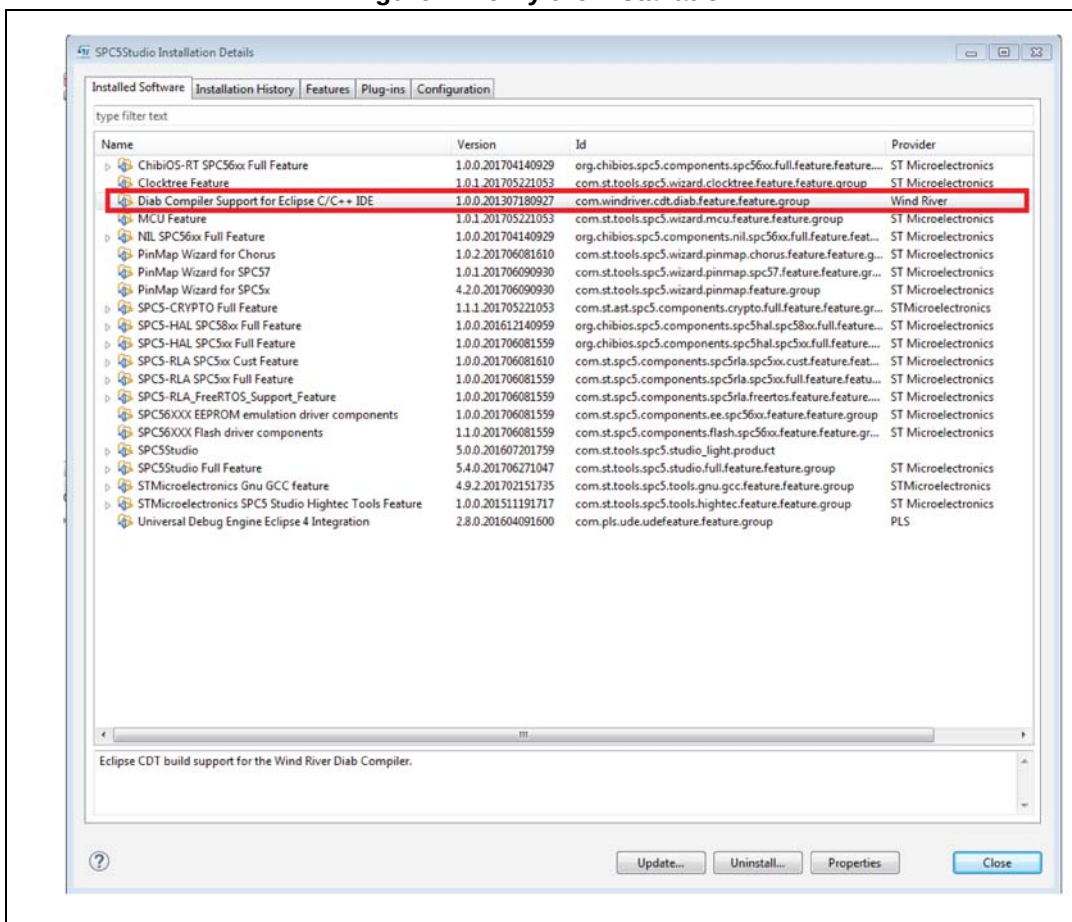
Install CDT Windriver, *c:\WindRiver\diab\eclipse_cdt*

Figure 6. WindRiver CDT installation



- Restart SPC5Studio
- In SPC5Studio Installation details verify that the feature is well present

Figure 7. Verify the installation



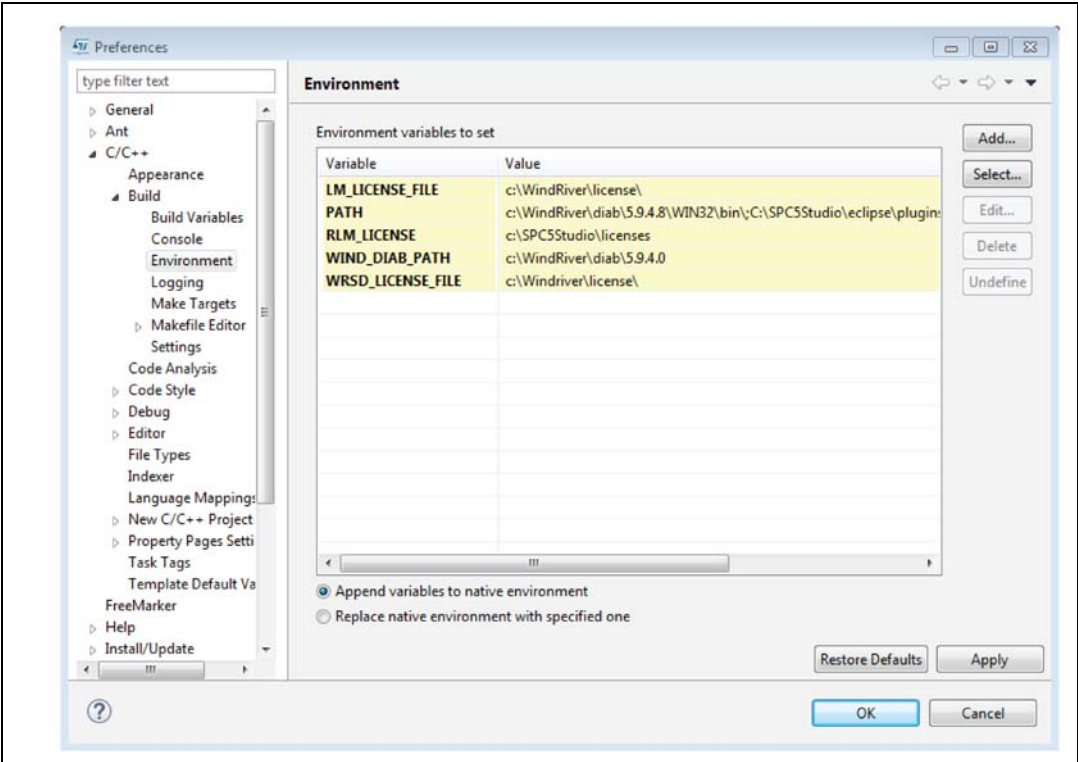
2.3 Eclipse CDT Environment settings

- In Windows , Preferences ,C/C++
 - Add in the PATH **c:\WindRiver\diab\5.9.4.8\WIN32\bin**

Warning: Do not remove GNUTOOLS path and GNU GCC path

- Add the variable WRSD_LICENSE_FILE **c:\WindRiver\license**
- Add the variable WIND_DIAB_PATH **c:\WindRiver\diab\5.9.4.8**

Figure 8. Eclipse CDT enviroment settings



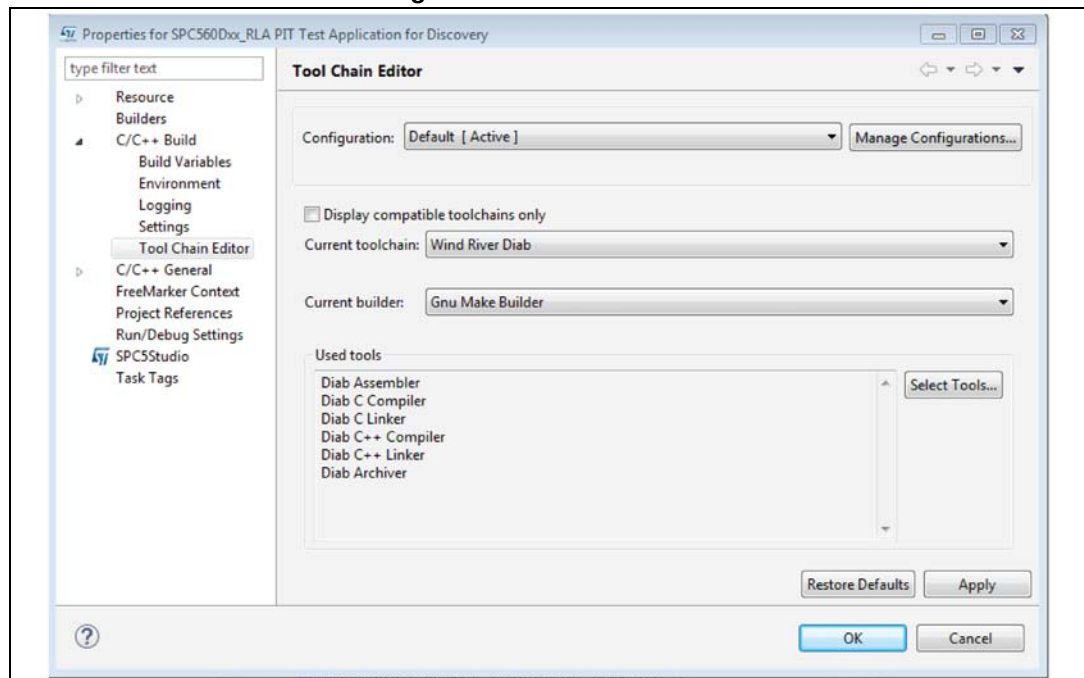
3 Test application CDT Windriver Makefile configuration

3.1 Import the toolchain editor

- After importing your application in SPC5studio, Click on generate to build components lib directories
- Go to the properties in your application, uncheck “*display compatible toolchains only*”

Choose Win river diab click on Apply and ok

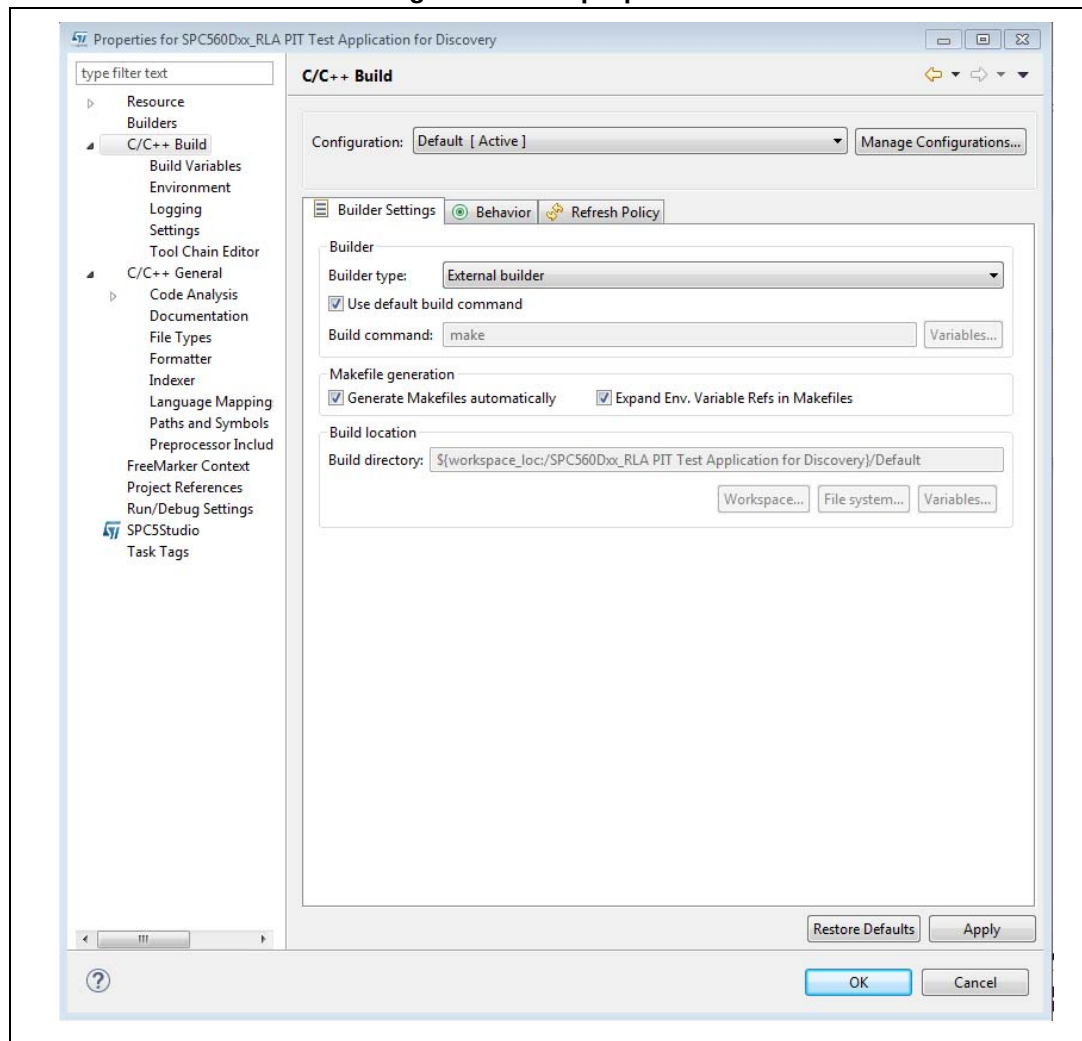
Figure 9. Toolchain editor



3.2 Set the CDT properties in external builder mode

- Go to the properties (C/C++ build) in your application, Set Builder type in *external builder*
- Click on Apply

Figure 10. CDT properties

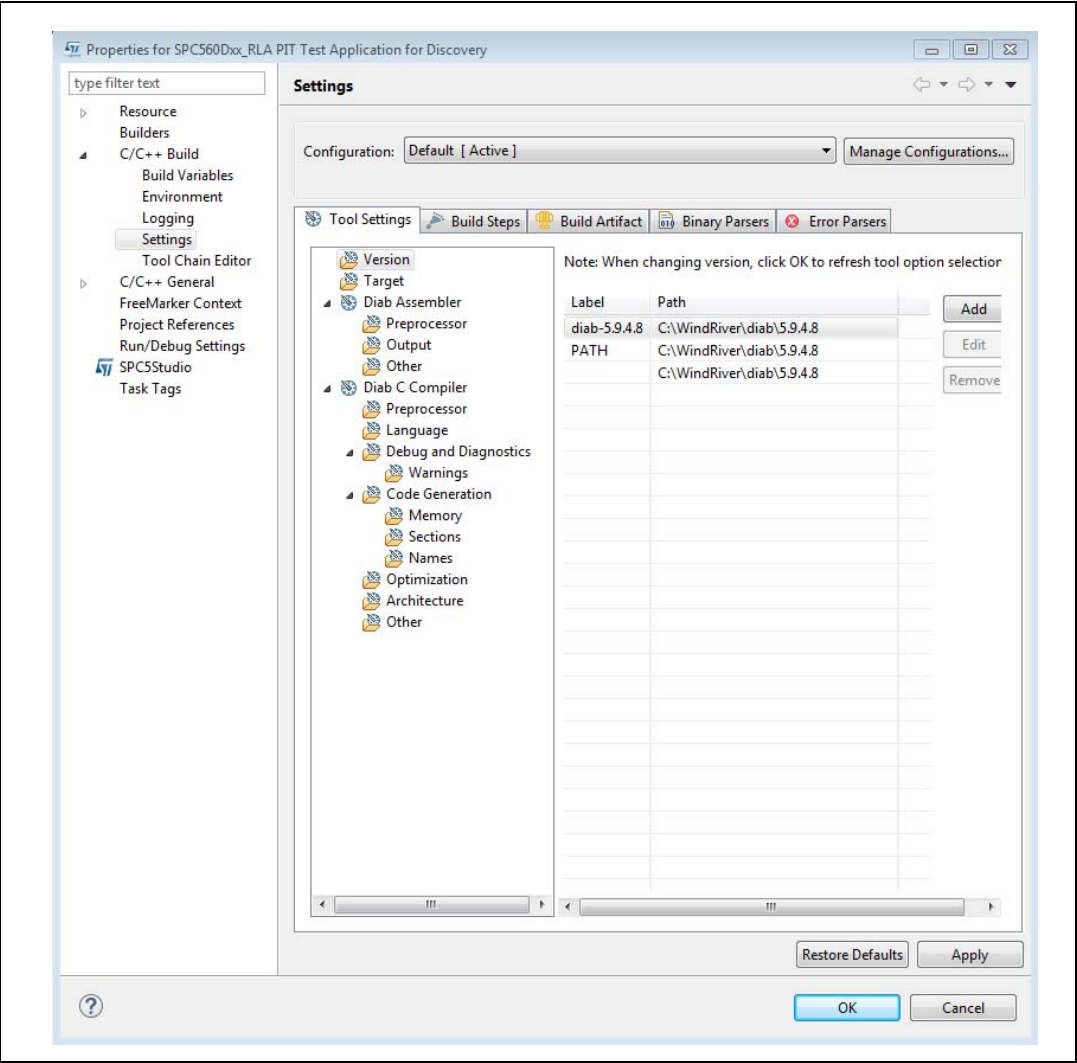


3.3 C/C++ build compiler settings

- In C/C++ Build / Settings / Tools settings (like below)

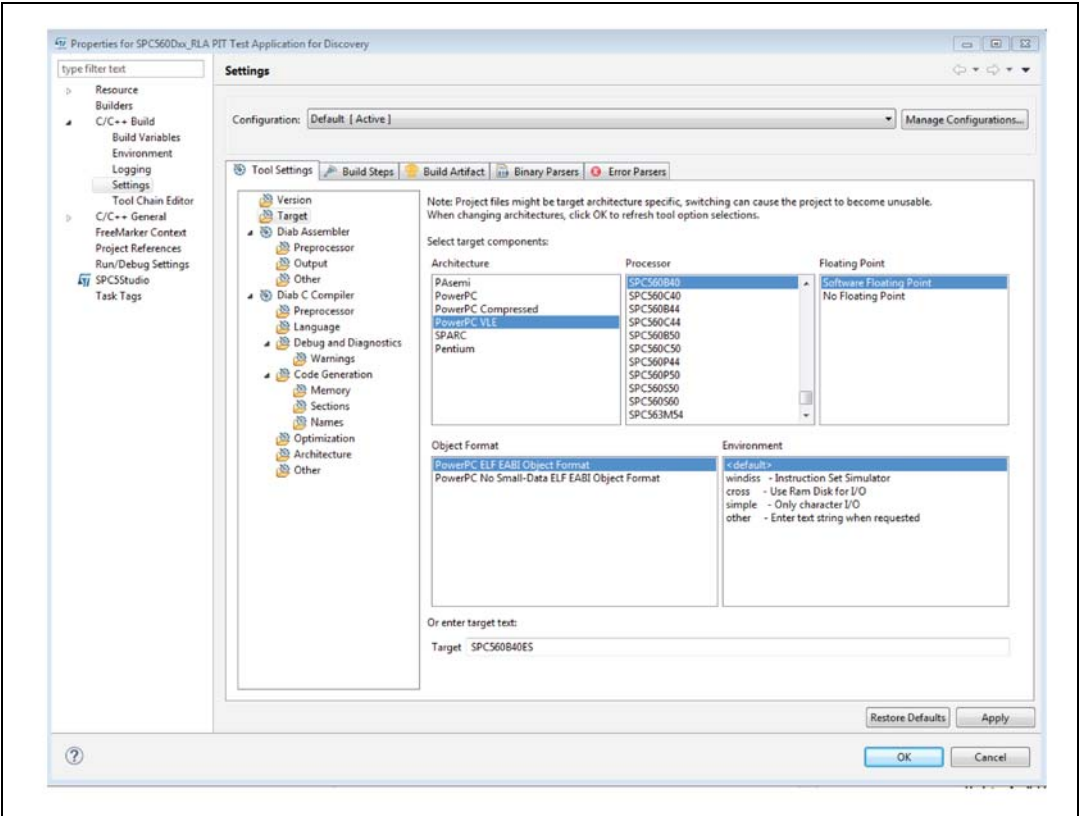
1. Version

Figure 11. CDT Version



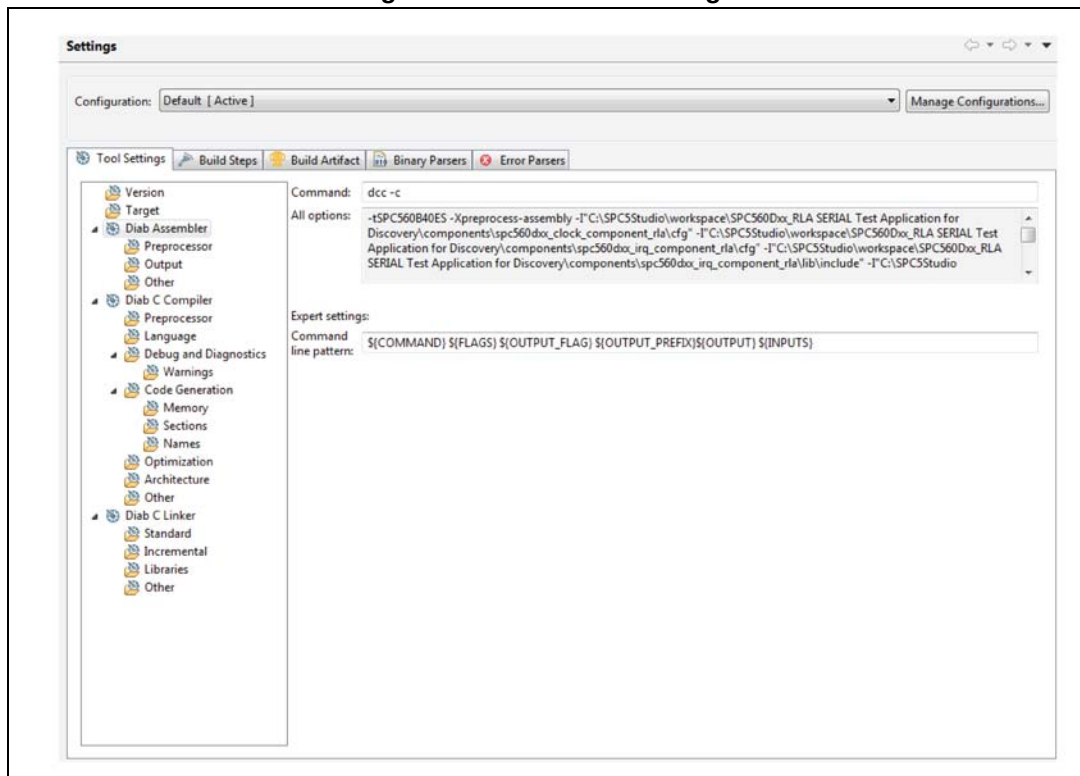
2. Target
Choose your correct CPU

Figure 12. Select target



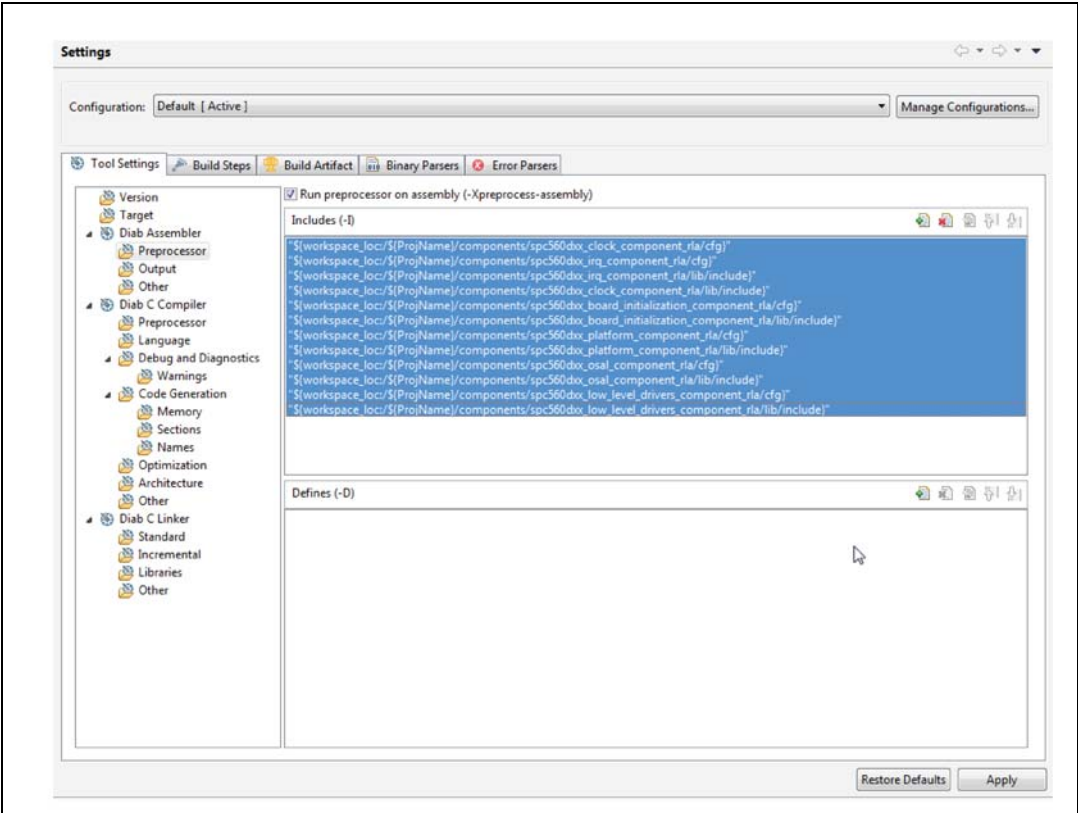
3. Diab Assembler

Figure 13. Assembler settings



4. Preprocessor (Diab assembler & Diab C Compiler)

Figure 14. Preprocessor



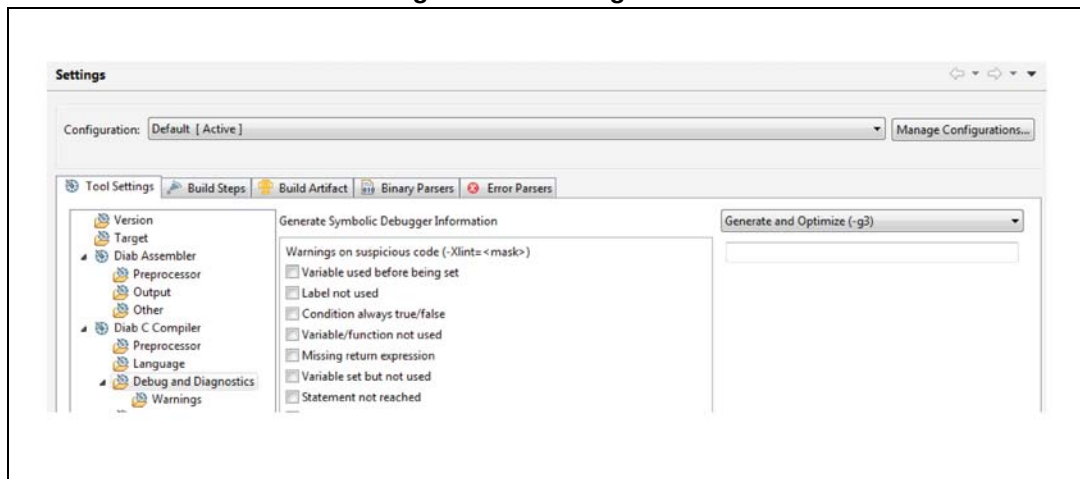
5. Output (-g for debug information)

Figure 15. Set debug info



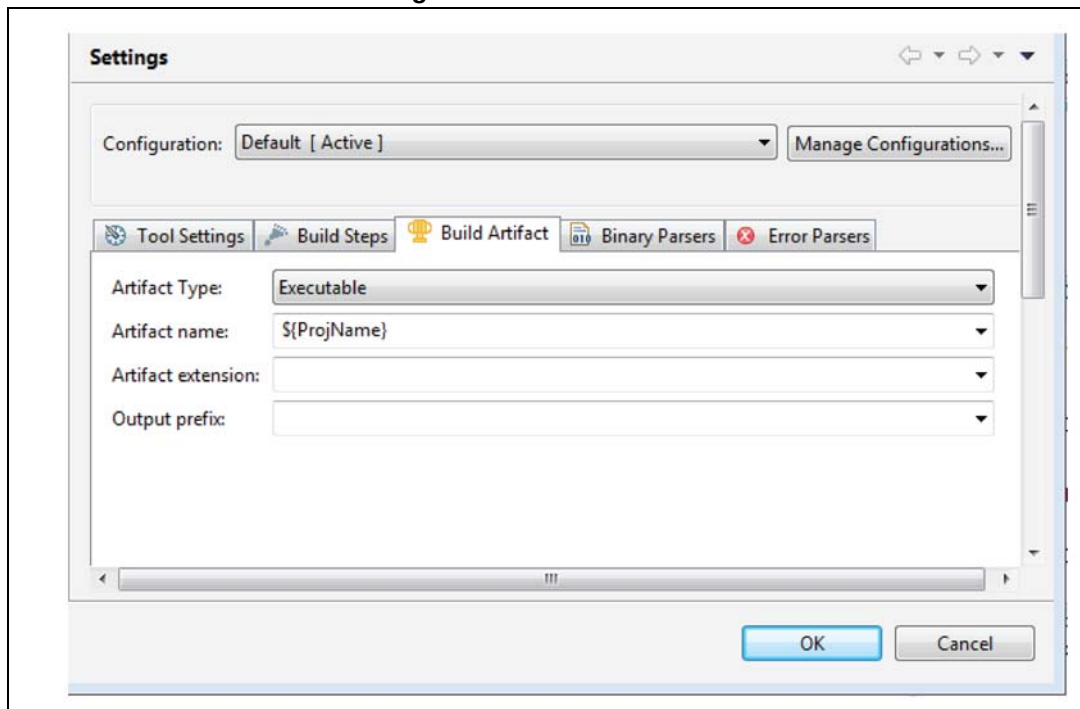
6. Debug & Diagnostics (-g3)

Figure 16. Set diagnostic



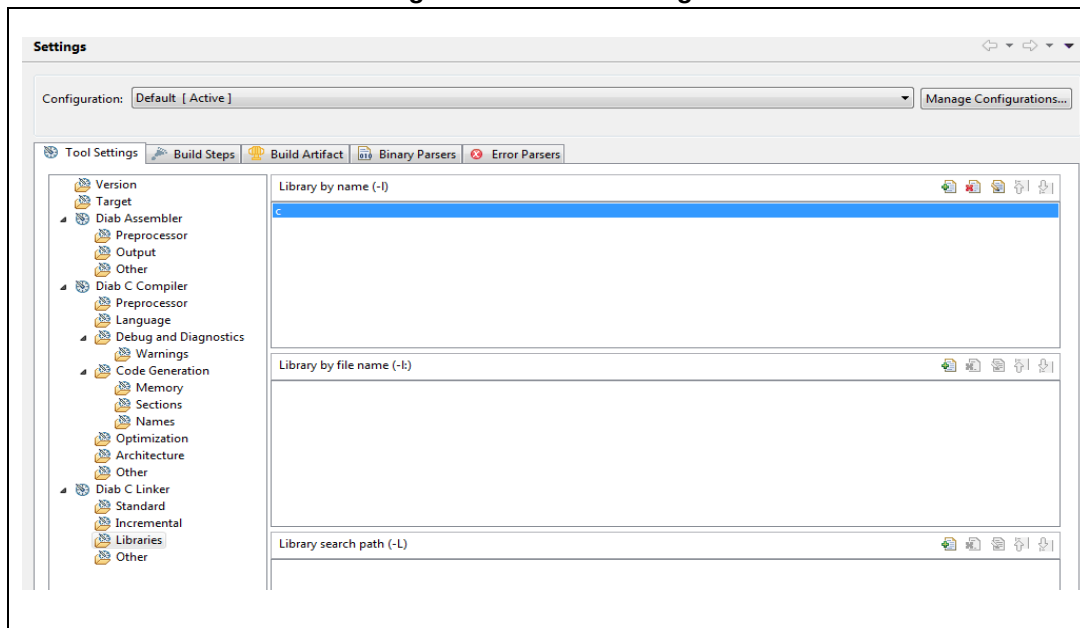
7. Enable artefact type (Executable)

Figure 17. Enable artifact



8. Diab C Linker Libraries (add libc)

Figure 18. Linker settings

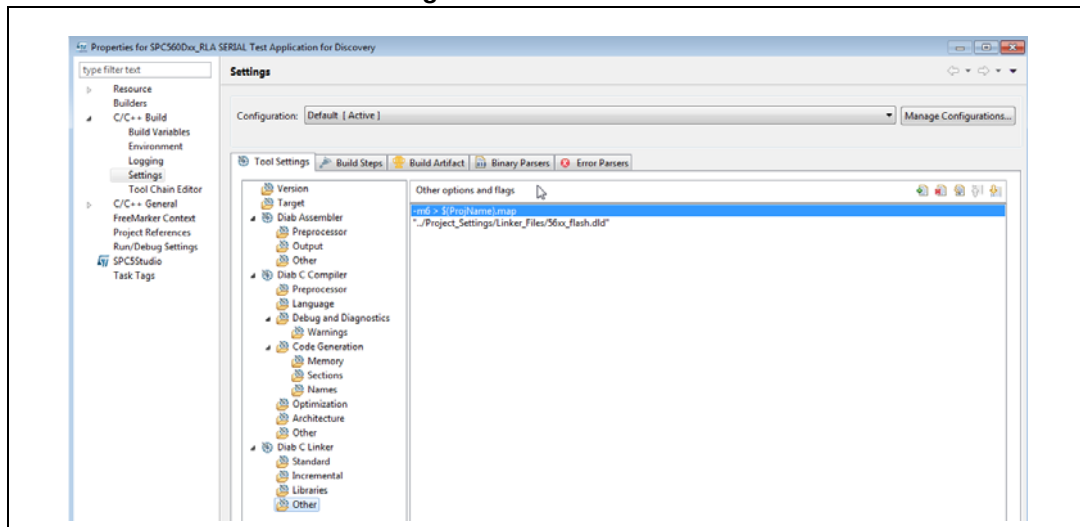


9. Diab C linker (other)

Add:

- `-m6 > ${ProjName}.map`
- `"../Project_Settings/Linker_Files/56xx_flash.dld"`

Figure 19. Diab C linker



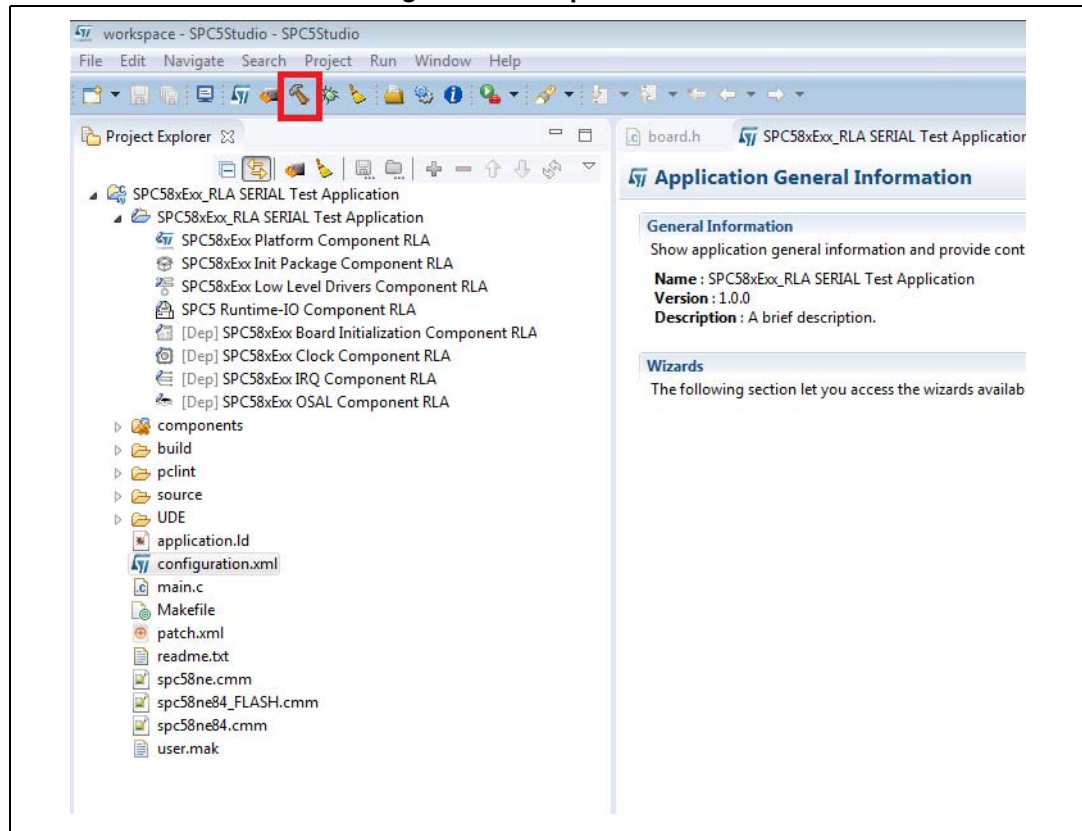
56xx_flash.dld

- Click on Apply and OK

3.4 Compilation phase

- From now, it is possible to launch Windriver compiler

Figure 20. Compiler launch



From now, assembler code should be ported (see [Section 4: Windriver Test application Example](#)).

4 Windriver Test application Example

4.1 Download example and setup environment for building

By means of the official SPC5Studio site you can request to have the Windriver example code ready to be used as reference Windriver porting source.

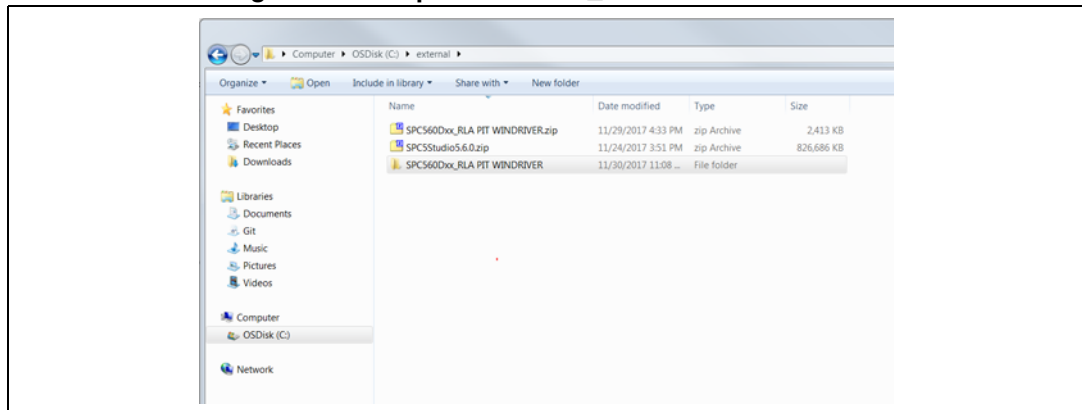
The package to request is: SPC560Dxx_RLA PIT WINDRIVER.zip



SPC560Dxx_RLA PIT WINDRIVER.zip

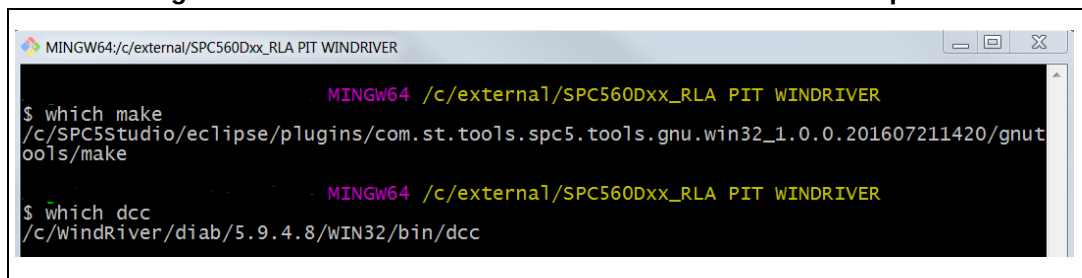
Unzip it everywhere you want then move on it using a bash shell.

Figure 21. Unzip SPC560Dxx_RLA PIT WINDRIVER



In order to build it you need to setup on “System environment variables” the PATH variable for GNU Make Tool and Diab Compiler. To test that all is ok you can do:

Figure 22. PATH variable for GNU Make Tool and Diab Compiler



Now you can build typing simple “make”.

4.2 Note on example structure.

If you list the contents of the example dir you can see:

- Makefile: you can reuse it to build another SPC5Studio Test Application
- wr.mak: the build rules for Windriver compiler
- wr.rules: the rules to build all sources
- wr.dld: the linker script for Windriver Linker.
- *.s: assembly code can be taken as reference for a new porting.

5 Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Jul-2018	1	Initial release.

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