

SOFTWARE INTEGRATION GUIDE (SWIG)

Ultra-Reliable MCUs for Industrial and Automotive Applications



EXTERNAL USE



SECURE CONNECTIONS
FOR A SMARTER WORLD

Overview

- We will review how to install and create an application in CodeWarrior10.6 or the latest version using Processor Expert to do the initialization of the modules.
- Will be used the DEVKIT-S12ZVL for explanation purpose.

Contents

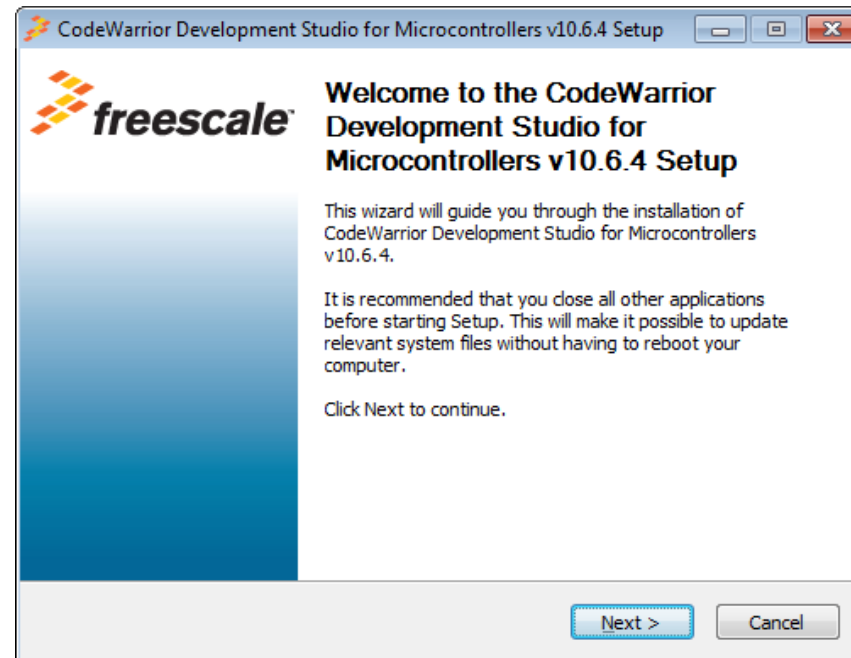
- Installing CodeWarrior v10.6 or latest version IDE
 - Download and Install the IDE
- Getting started with a New Project
 - Create, build and debug the new project

INSTALLING CODEWARRIOR V10.6 IDE



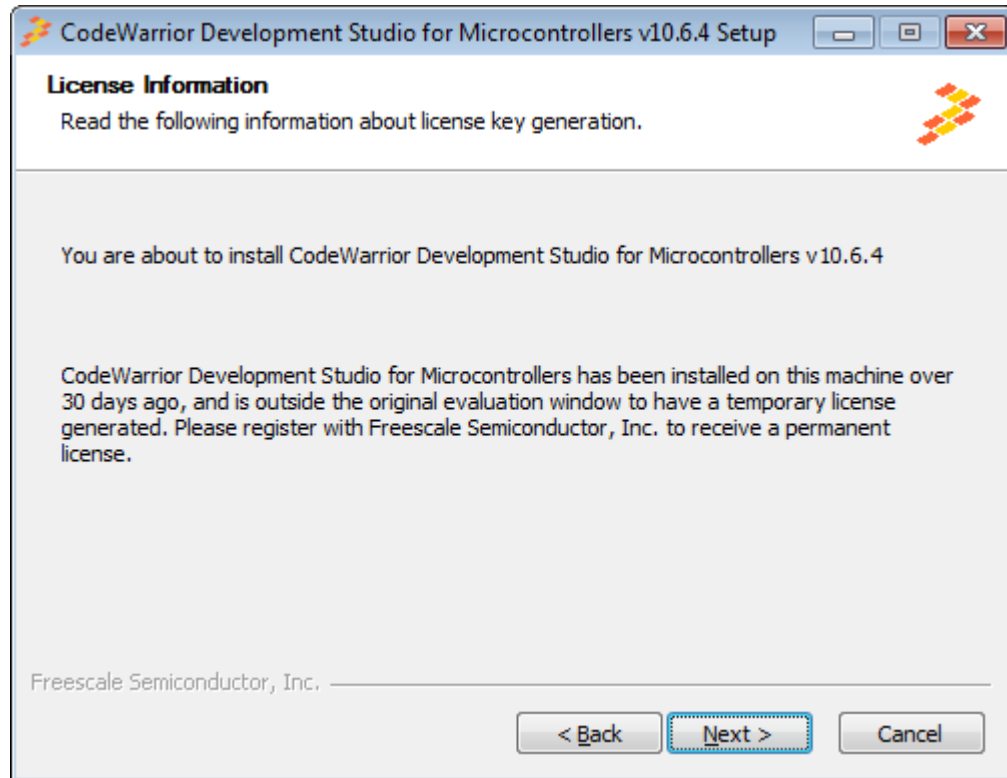
Step-1

- Go to www.nxp.com/codewarrior to download latest version
- From Downloads folder, run the installation file
- Click on **Run** if any administrative privilege issues results from unknown software publisher
- The next window will appear, click next to continue.

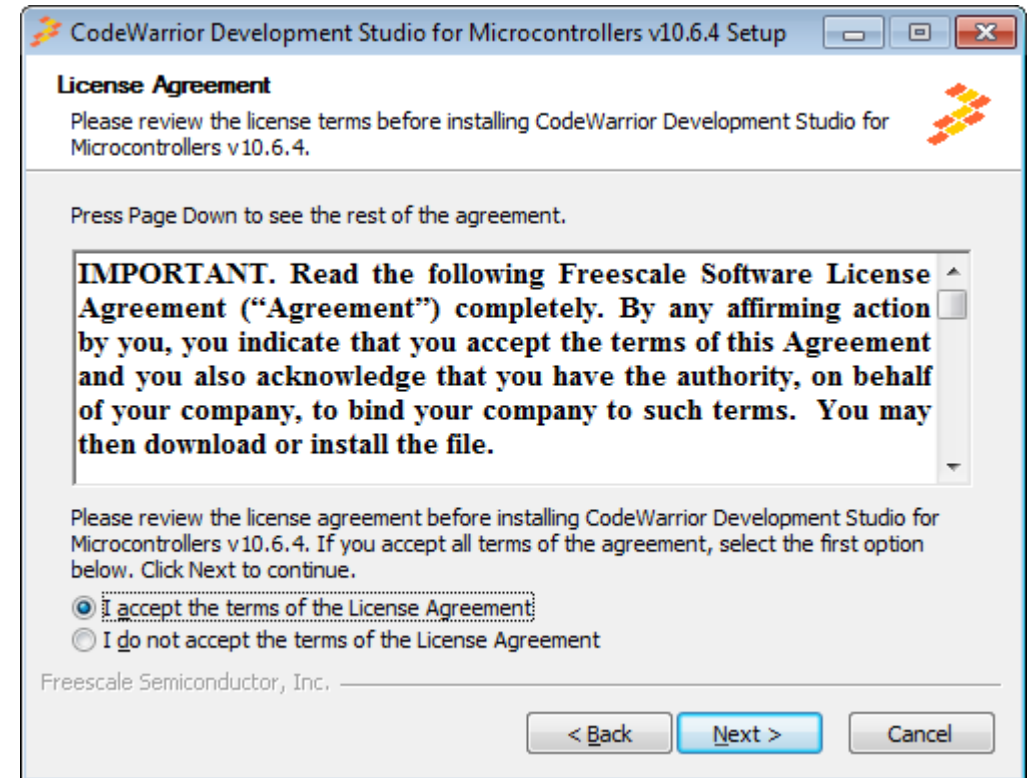


Step-2

- Click Next.

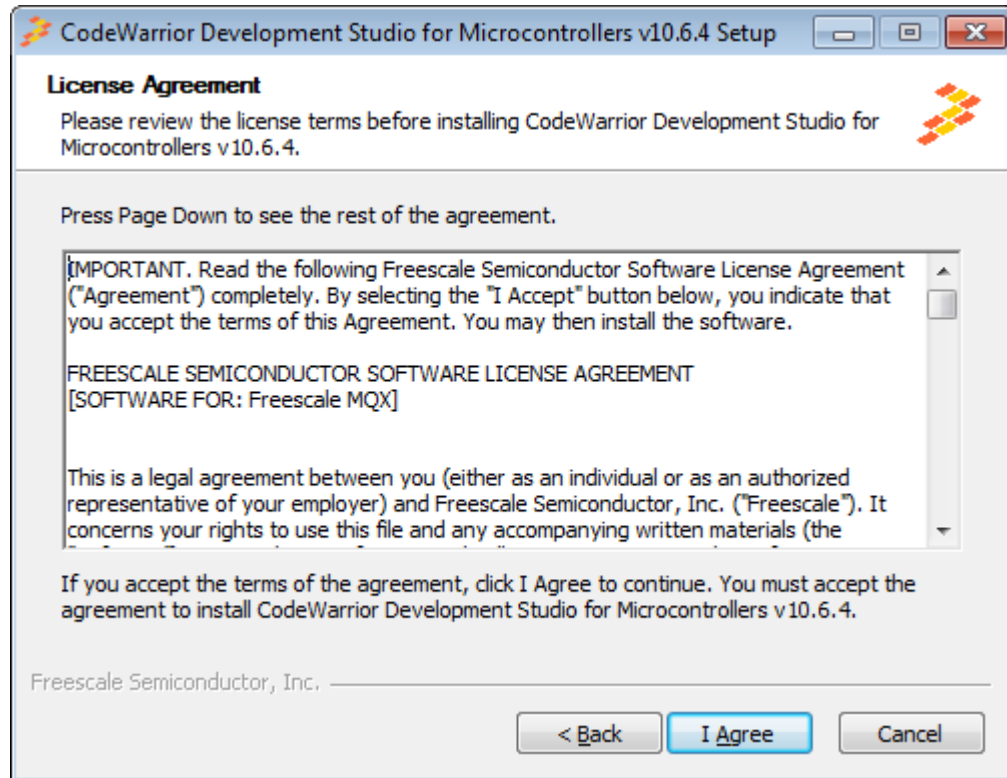


- Accept the terms onf the License and click Next

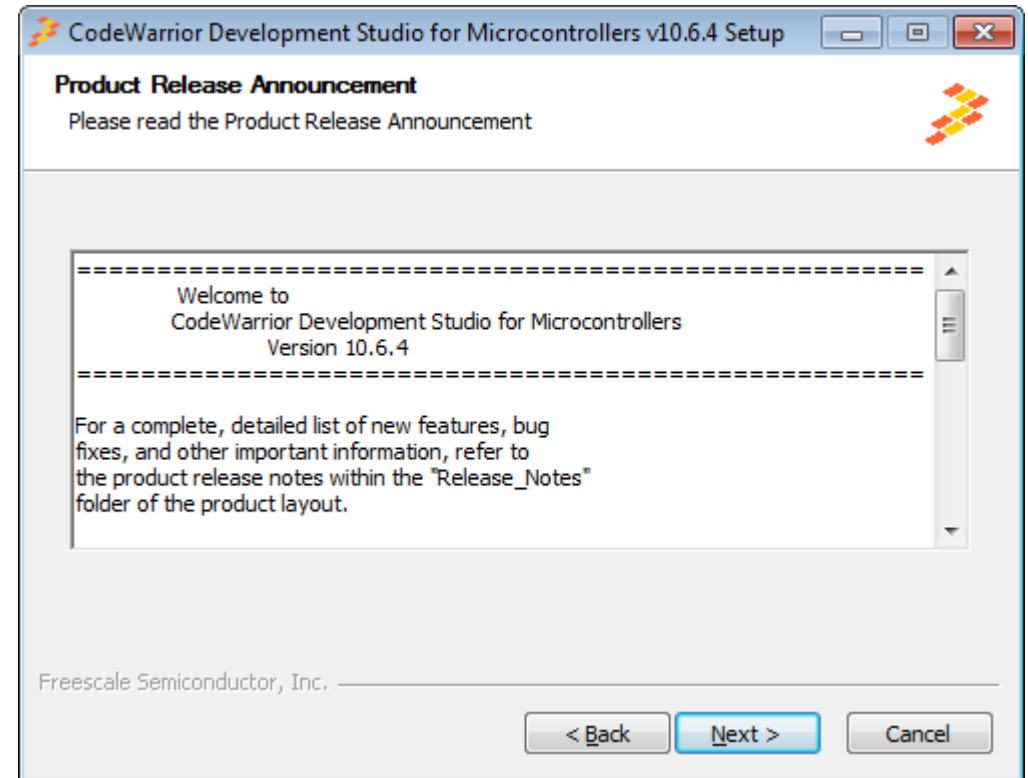


Step-3

- Click on “I Agree”

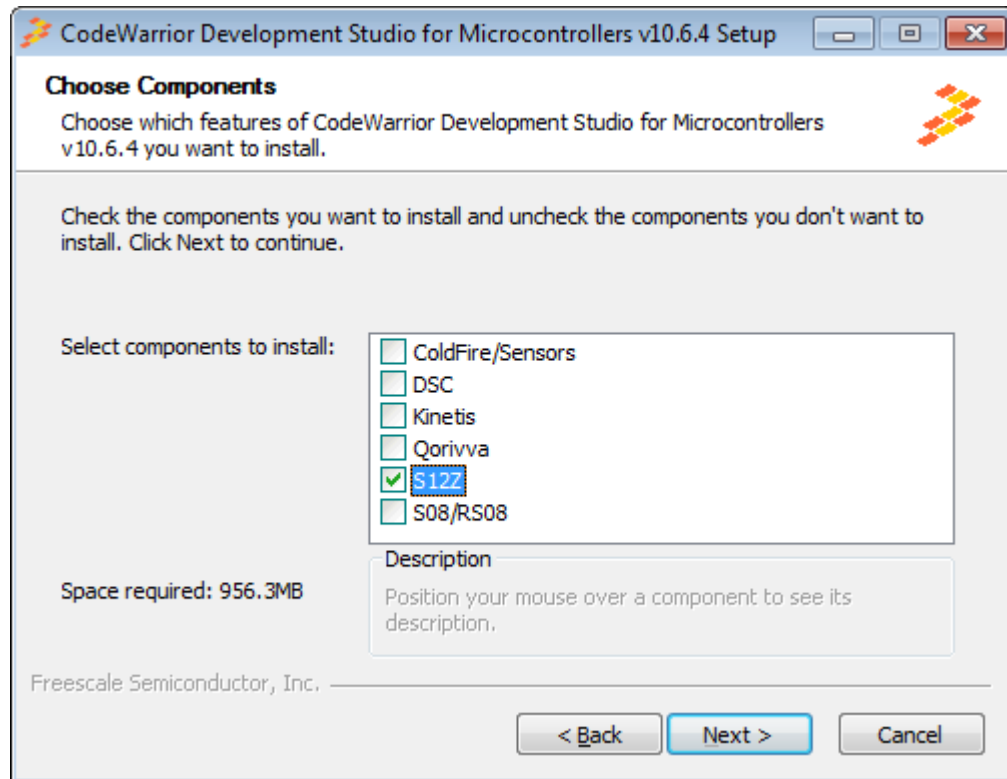


- Click Next

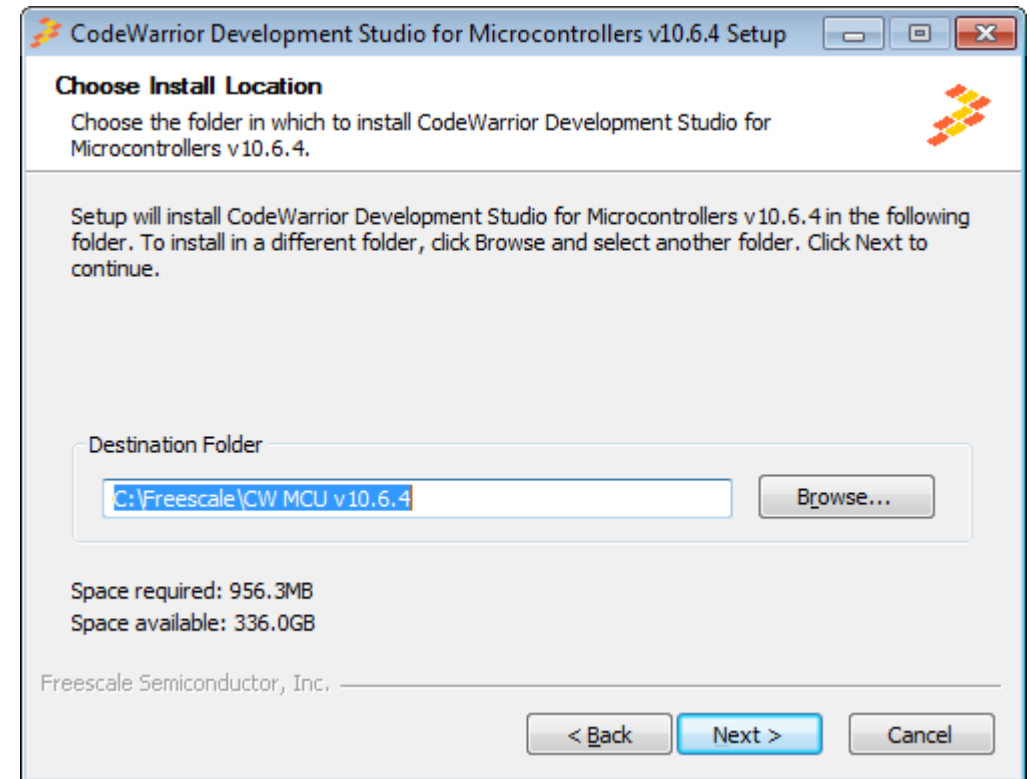


Step-4

- Select the S12Z and click Next

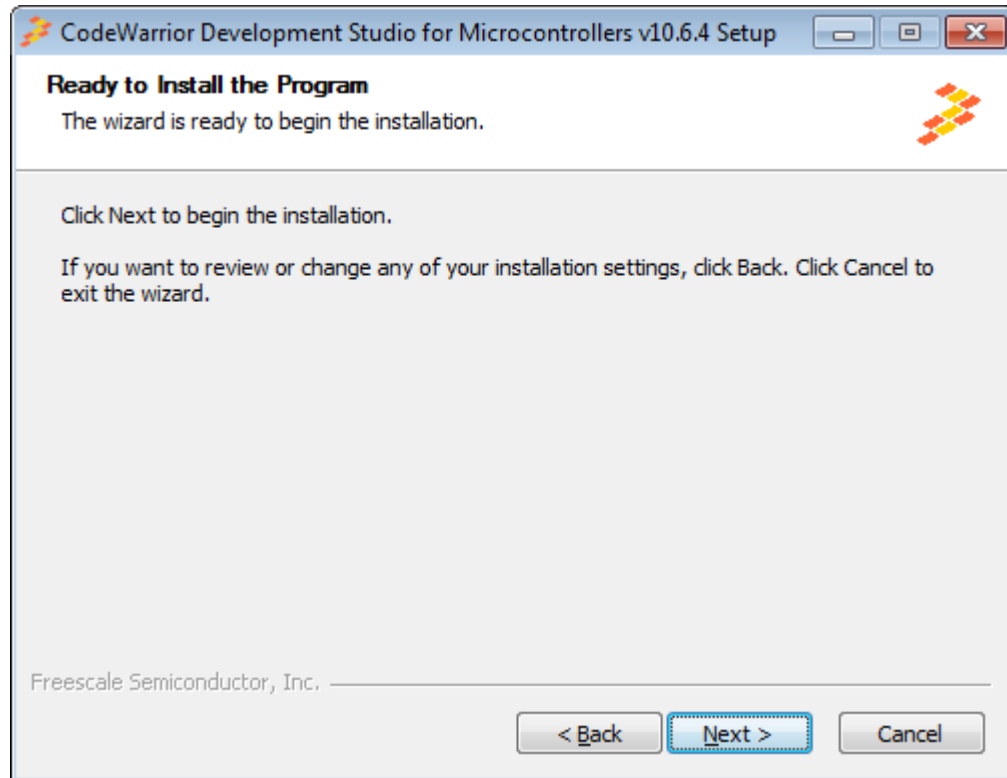


- Select your destination folder. It is recommended use the default destination.

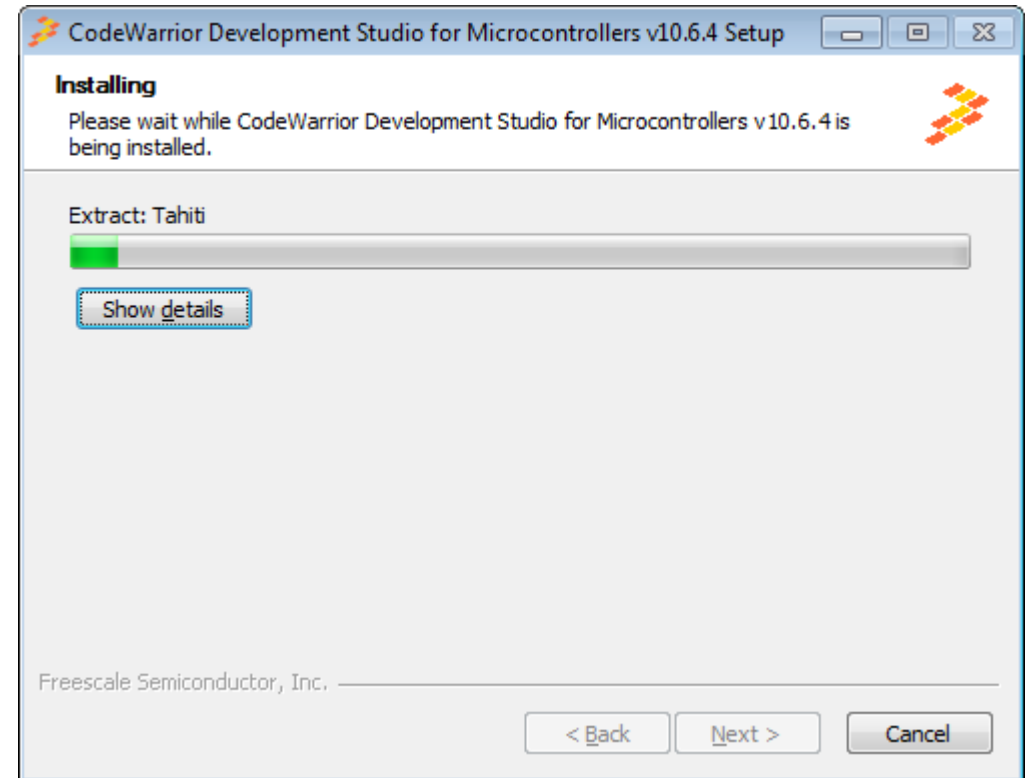


Step-5

- Click Next



- The next window will appear. Wait until the CodeWarrior is been installed.




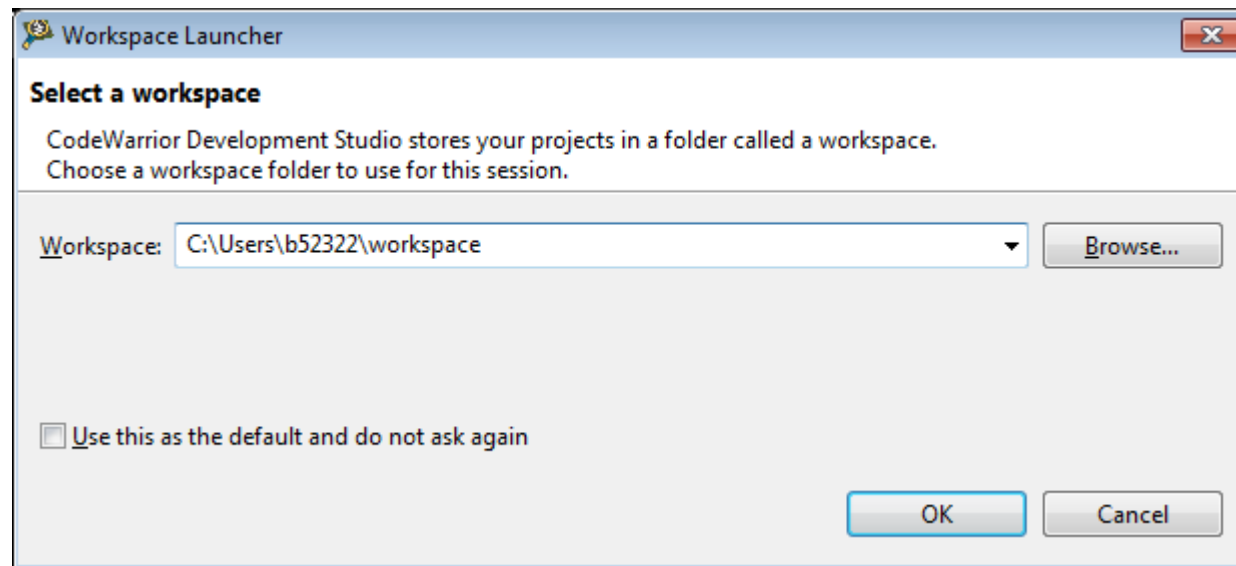
GETTING STARTED WITH A NEW PROJECT



Create a new project

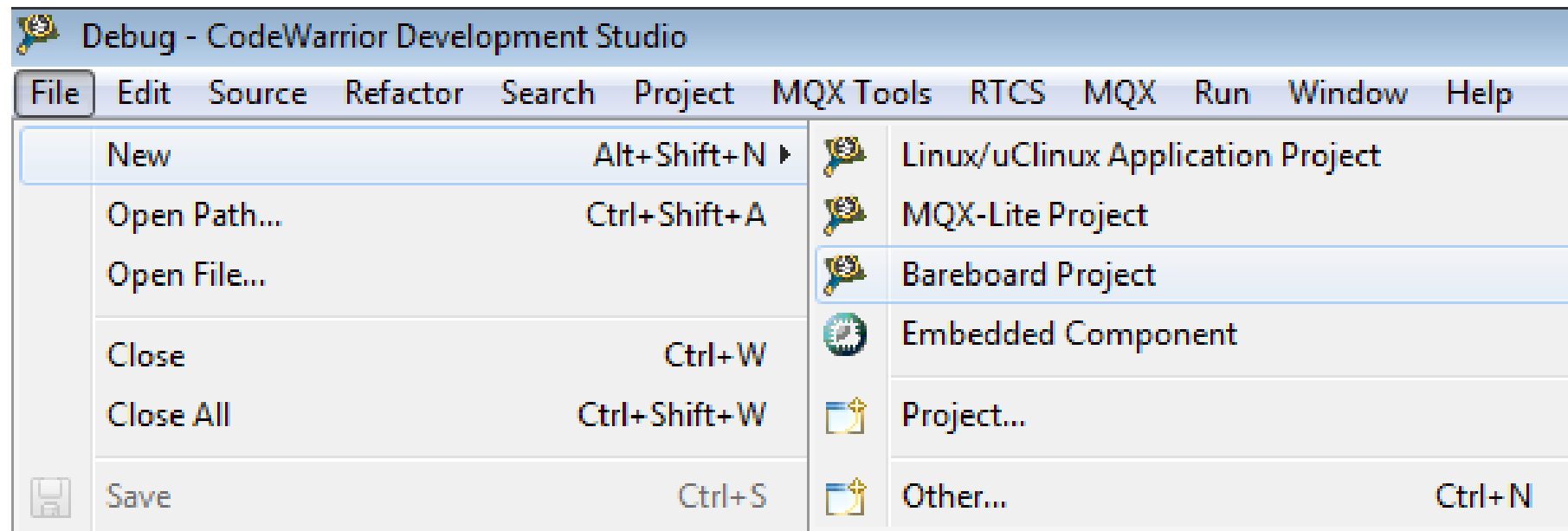
1 of 6

- Start program: Click on “CodeWarrior ”  icon
- Select workspace:
 - Choose default or specify new one
 - Suggestion: Uncheck the box “Use this as the default and do not ask again”
 - Click **OK**



Create a new project

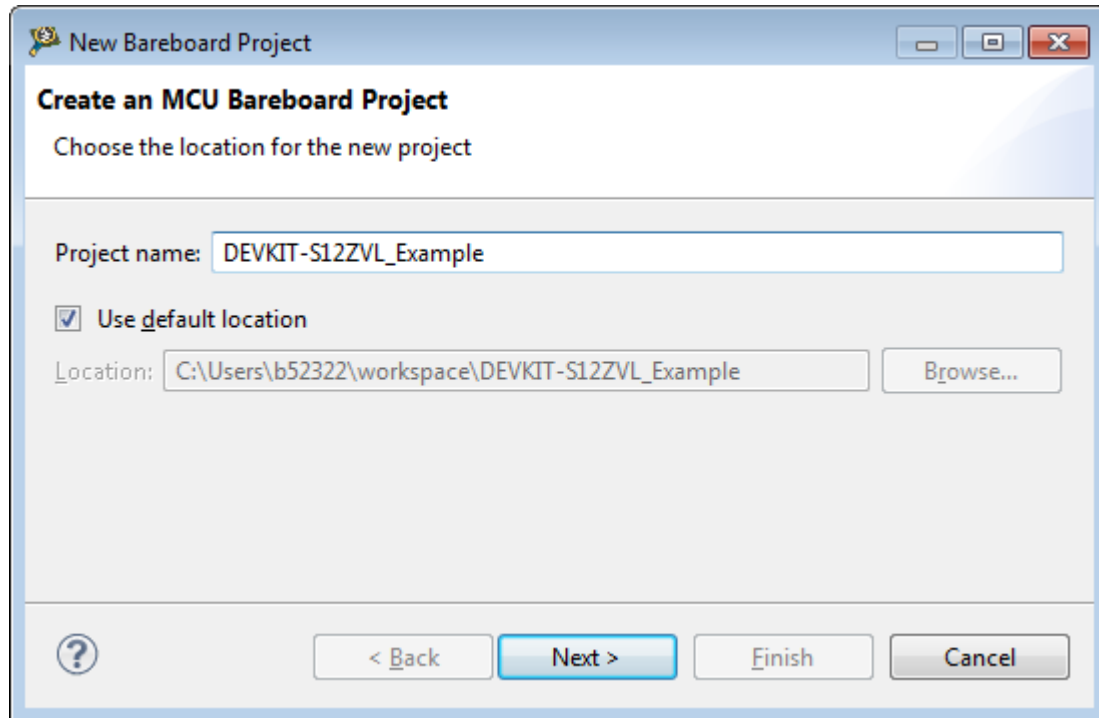
- Go to: File – New – Bareboard Project



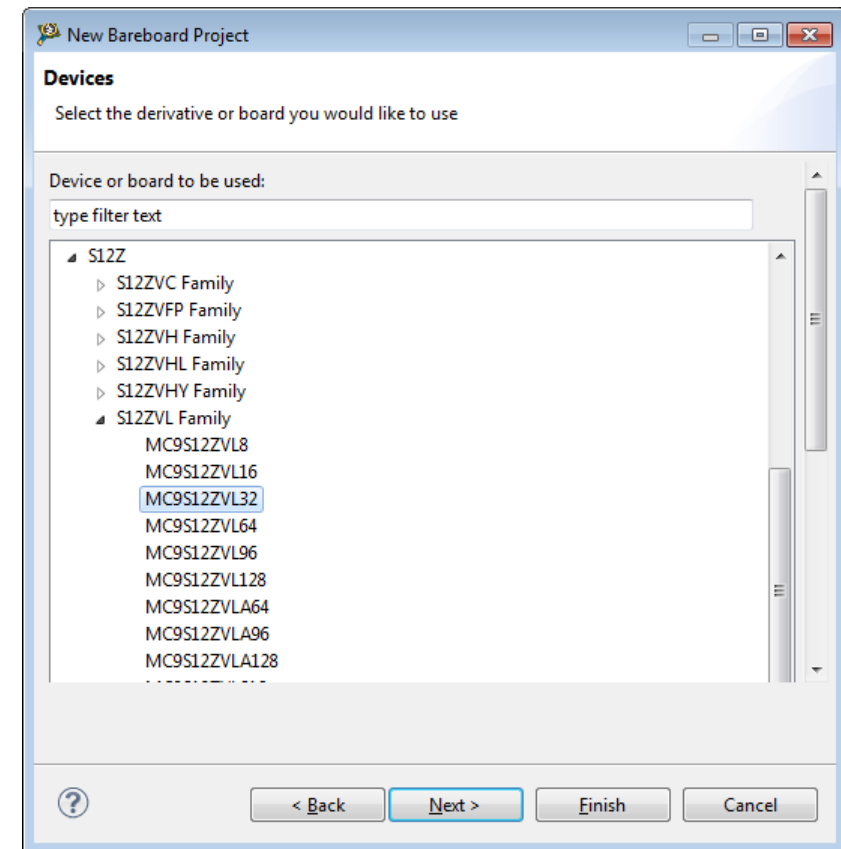
Create a new project

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- Select the name of your Project and click Next



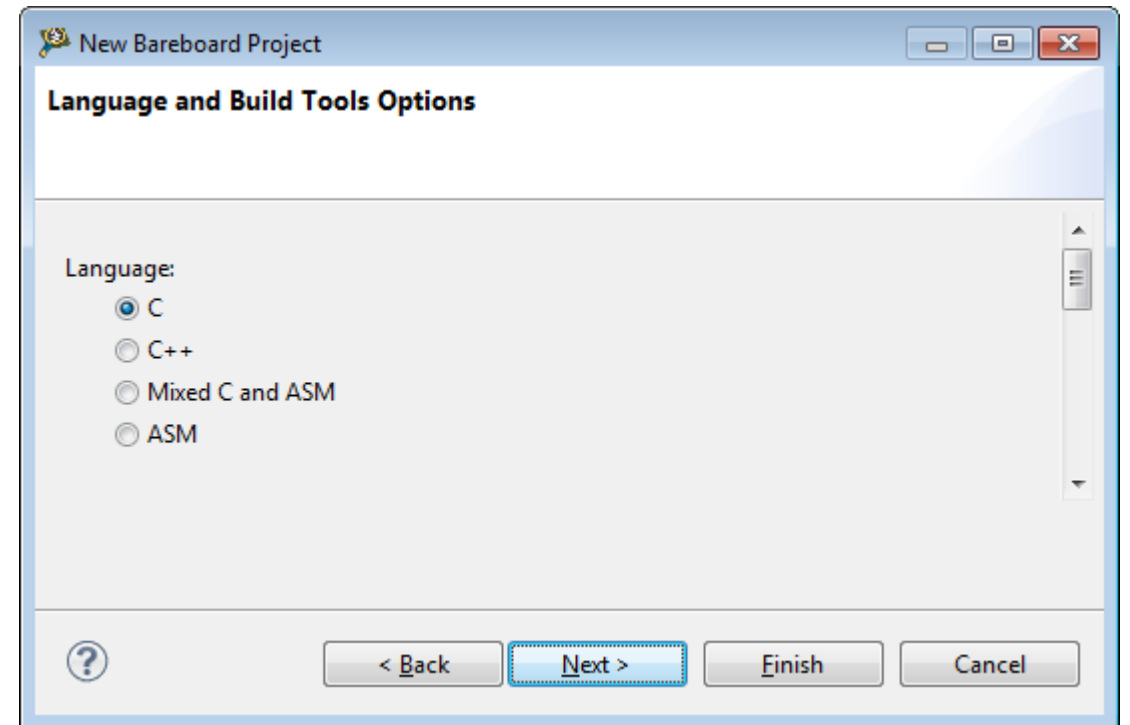
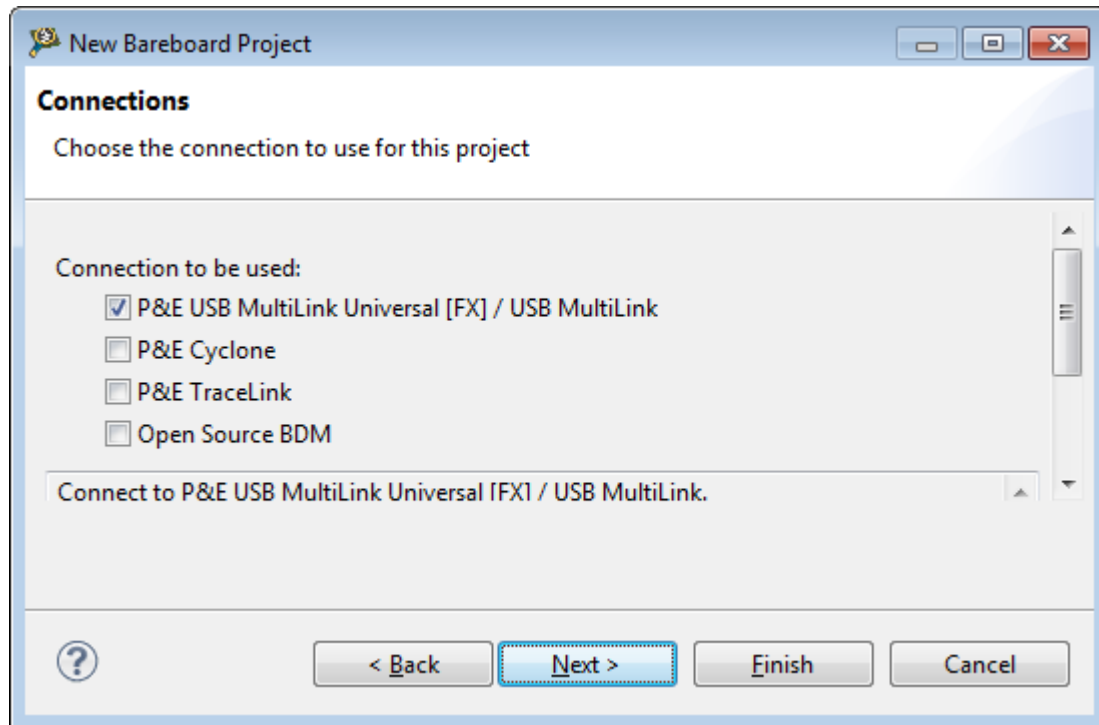
- Select your device and click Next



Create a new project

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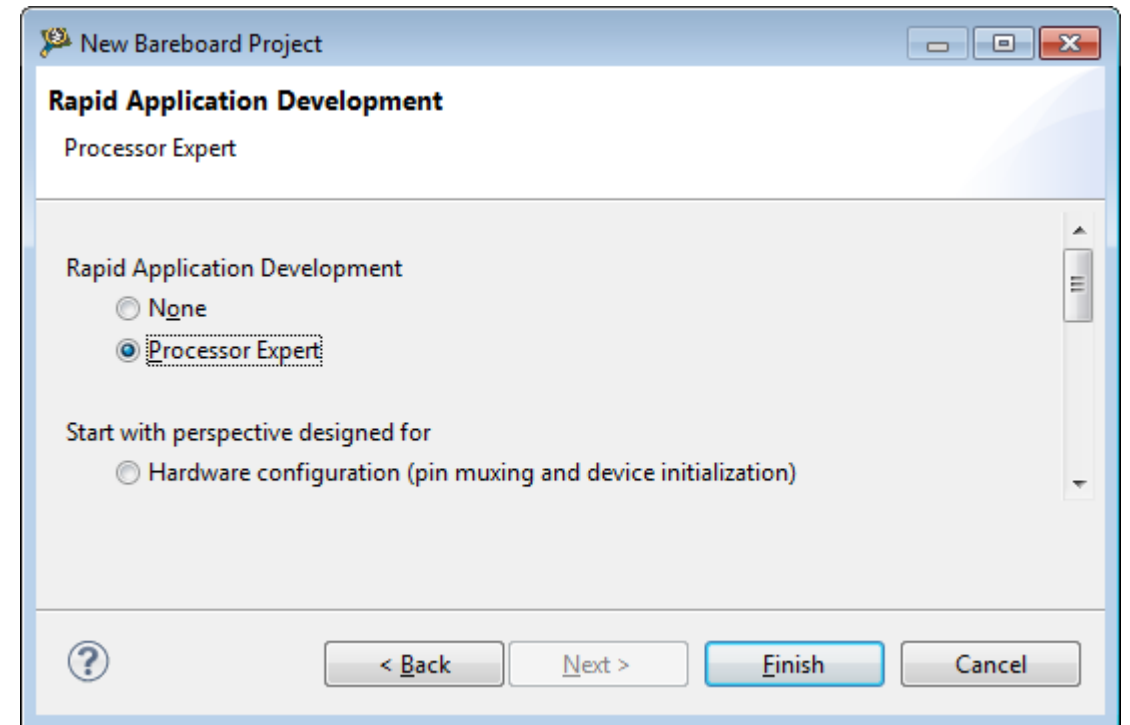
- Select the connection to be used and click Next.
- Click Next



Create a new project

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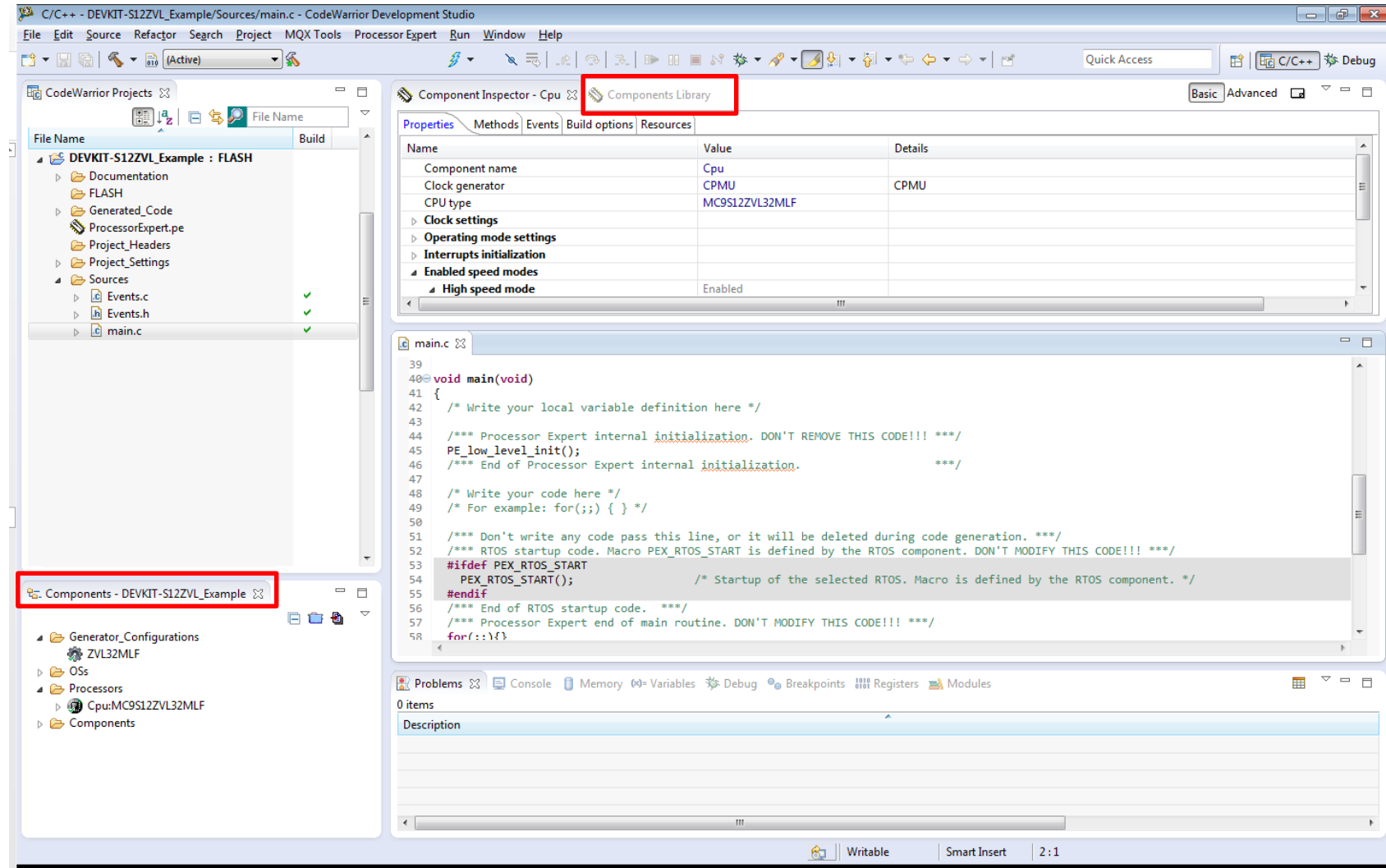
- In this part you can select if you want to use Processor Expert tool or not. Click on Finish.



Create a new project

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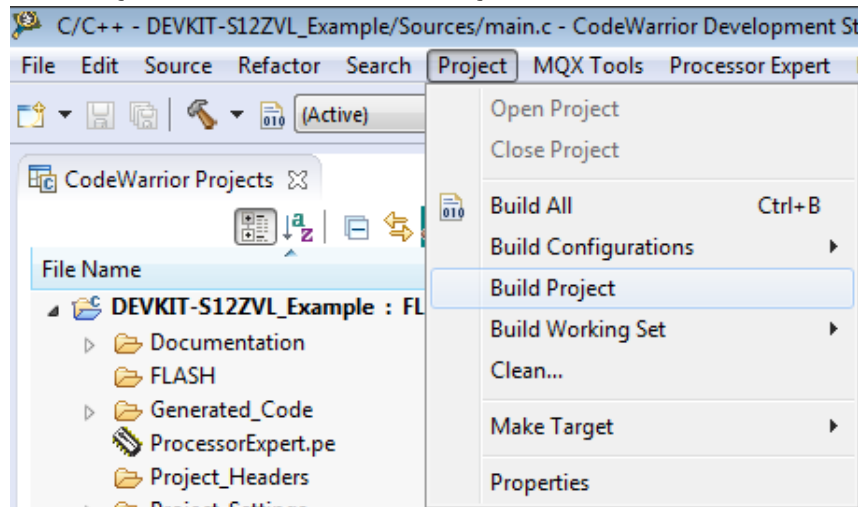
- In this window you are ready to start coding.
- In the “Components Library” tab you can select which module you want to configure.
- In the “Components” tab you can find the modules selected




Build a Project

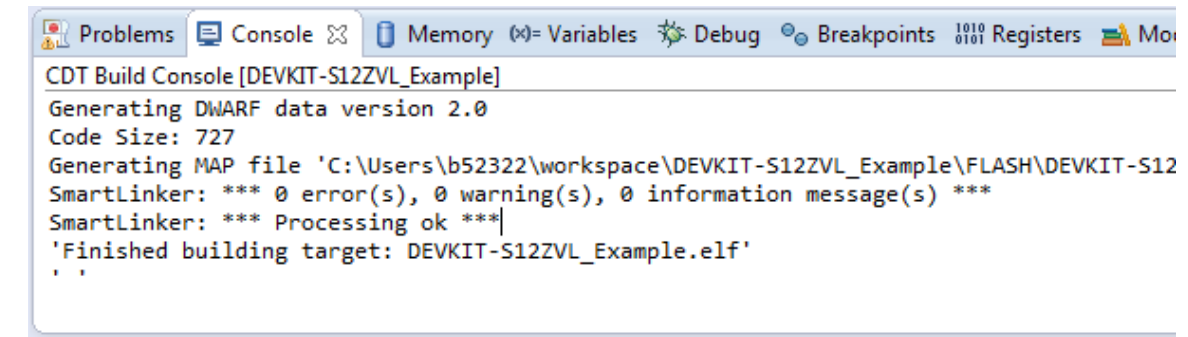
- To build a project follow one of the methods below:
- If project is built successfully, following message will be displayed on the Console

1. Project – Build Project




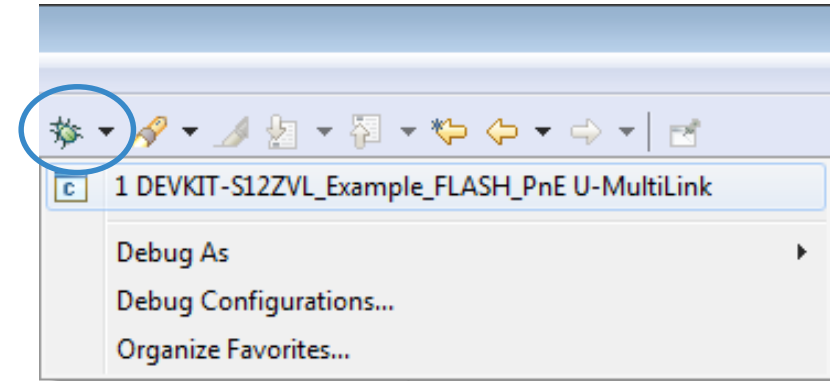
2.  Click on hammer symbol to build that project

 - Click on page symbol to build all projects



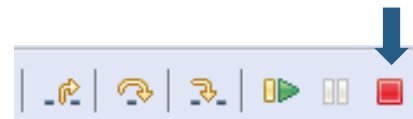
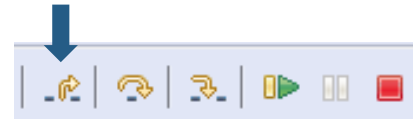
Debug a Project

- Connect a debugger to the board and the PC
- Click on the  icon



Debug Basics: Step, Run, Suspend, Resume

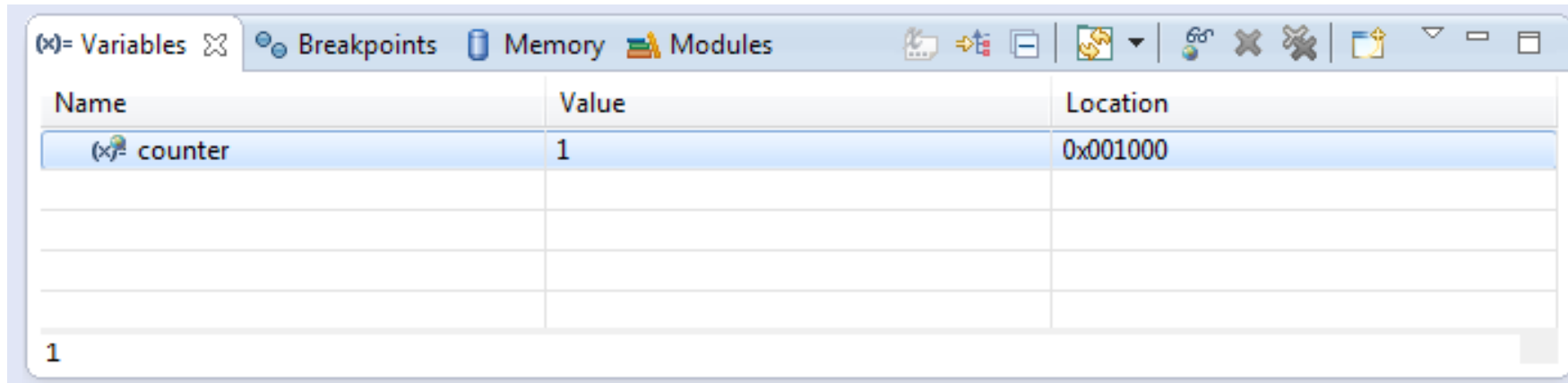
- Step Into (F5)
- Step Over (F6)
- Step Return (F7)
- Suspend
- Resume (F8)
- Terminate (Ctrl+F2)



Debug Basics: View & Alter Variables

1 of 2

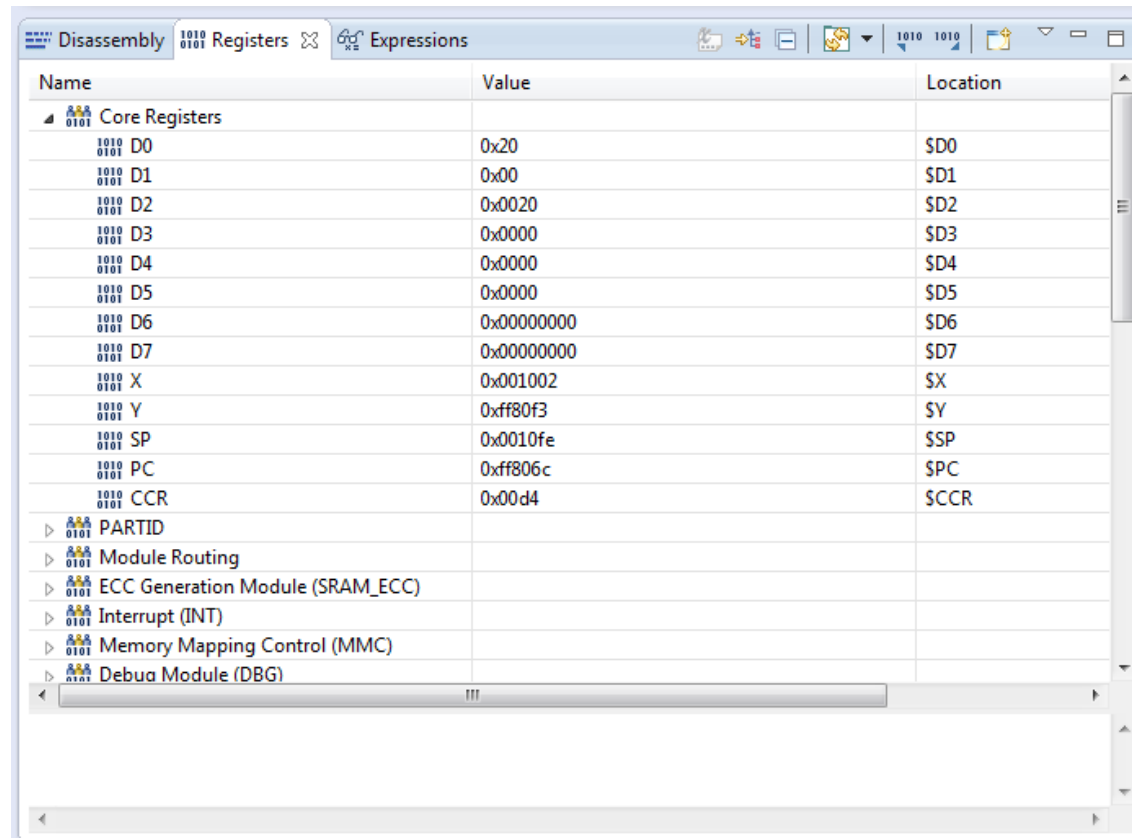
- View variables in “Variables” tab.
- Click on a value to allow typing in a different value.



Debug Basics: View & Alter Registers

2 of 2

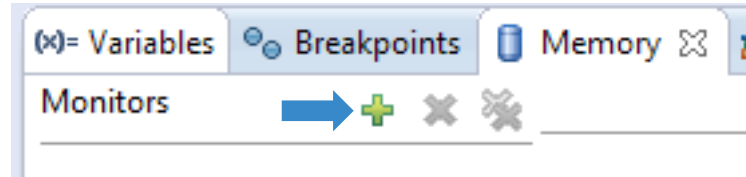
- View CPU registers in the “Registers” tab
- Click on a value to allow typing in a different value



Debug Basics: View Memory

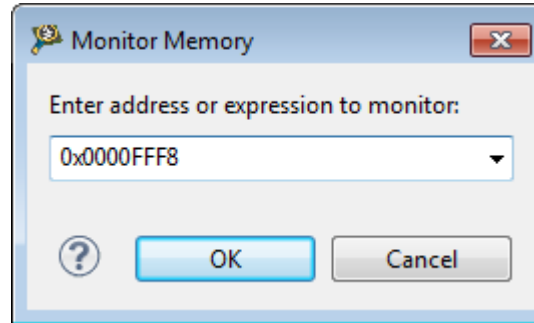
- Add Memory Monitor

- Click on  icon

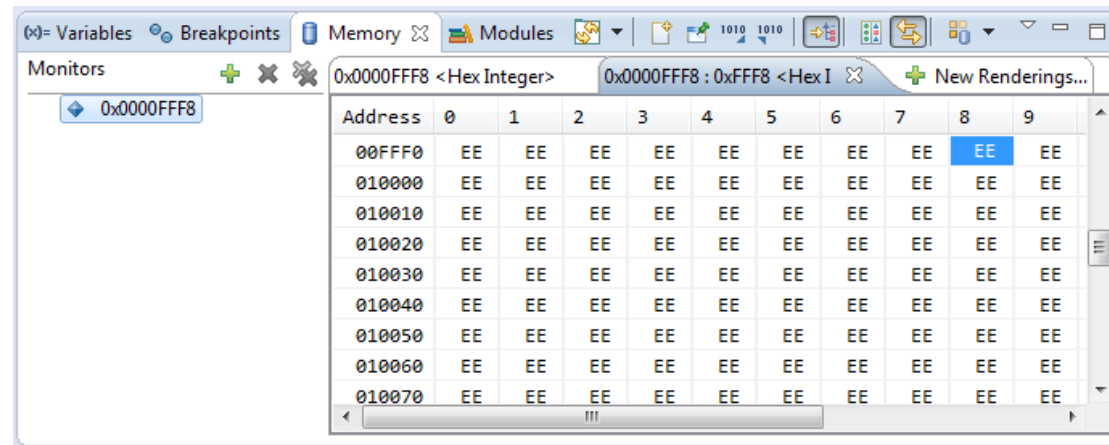


- Select Base Address

Example : 0x0000fff8

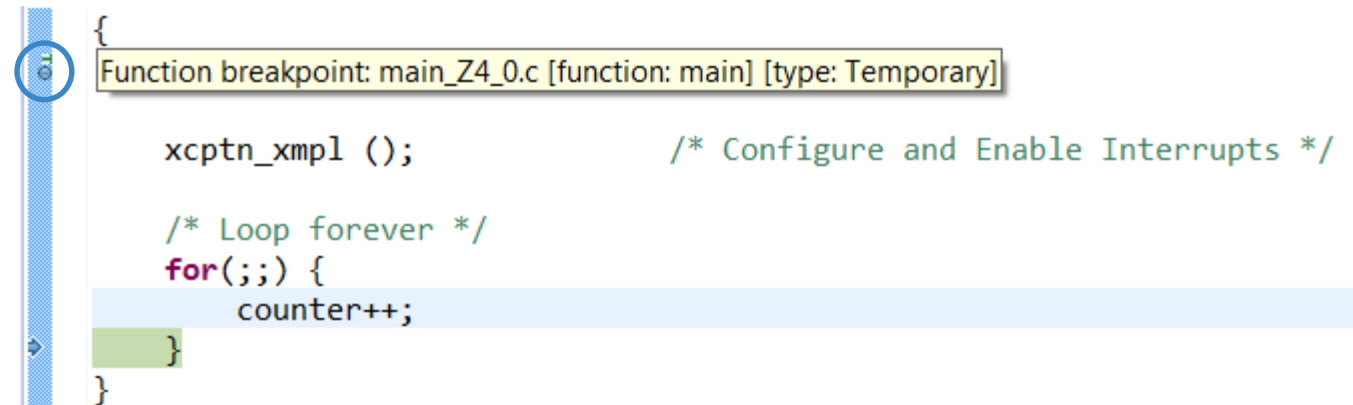


- View Memory



Debug Basics: Breakpoints

- Add Breakpoint: Point mouse pointer at circled area and Double Click there
 - Light blue dot will pop up that represents debugger breakpoint



```
{
Function breakpoint: main_Z4_0.c [function: main] [type: Temporary]

xcptn_xmp1 ();          /* Configure and Enable Interrupts */

/* Loop forever */
for(;;) {
    counter++;
}
}
```



SECURE CONNECTIONS
FOR A SMARTER WORLD