SOFTWARE INTEGRATION GUIDE (SWIG)

Ultra-Reliable MCUs for Industrial and Automotive Applications

SECURE CONNECTIONS
FOR A SMARTER WORLD

Overview

- We will review how to install and create an application in CodeWarrior5.1 using Processor Expert to do the initialization of the modules.

- Will be used the DevKit-S12G128 for explanation purpose

Contents

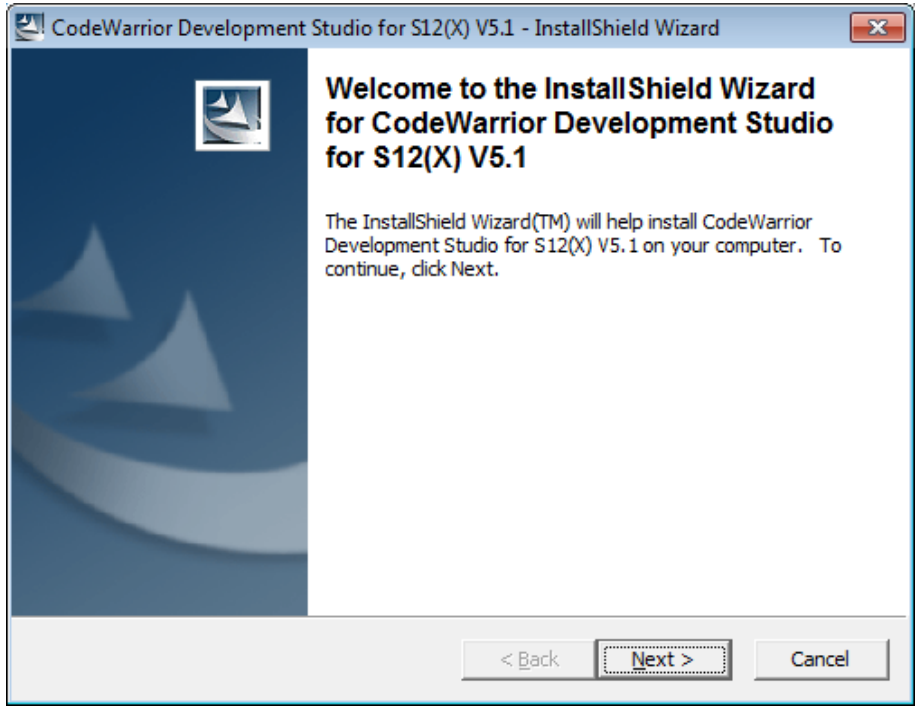
- Installing CodeWarrior v5.1 IDE
  - Download and Install the IDE

- Getting started with a New Project
  - Create, build and debug the new project

INSTALLING CODEWARRIOR V5.1 IDE

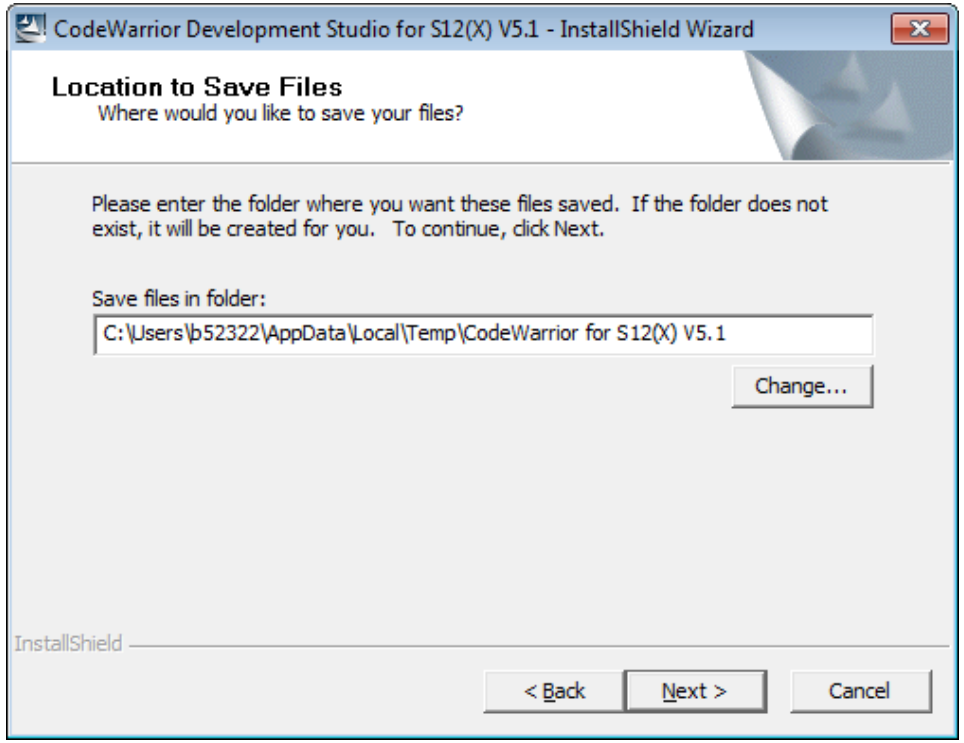
Step-1

- Go to www.nxp.com/codewarrior and download the Codewarriorv5.1 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.

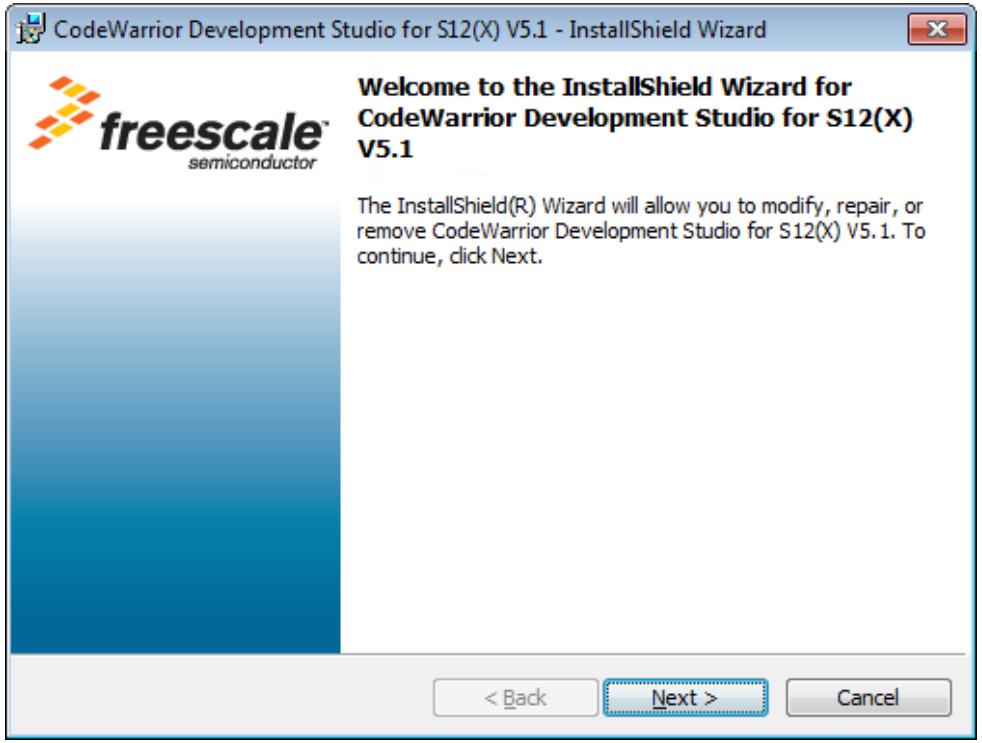


Step-2

- The “Location to Save Files” window will be displayed, select the folder where you like to save your files and click next.

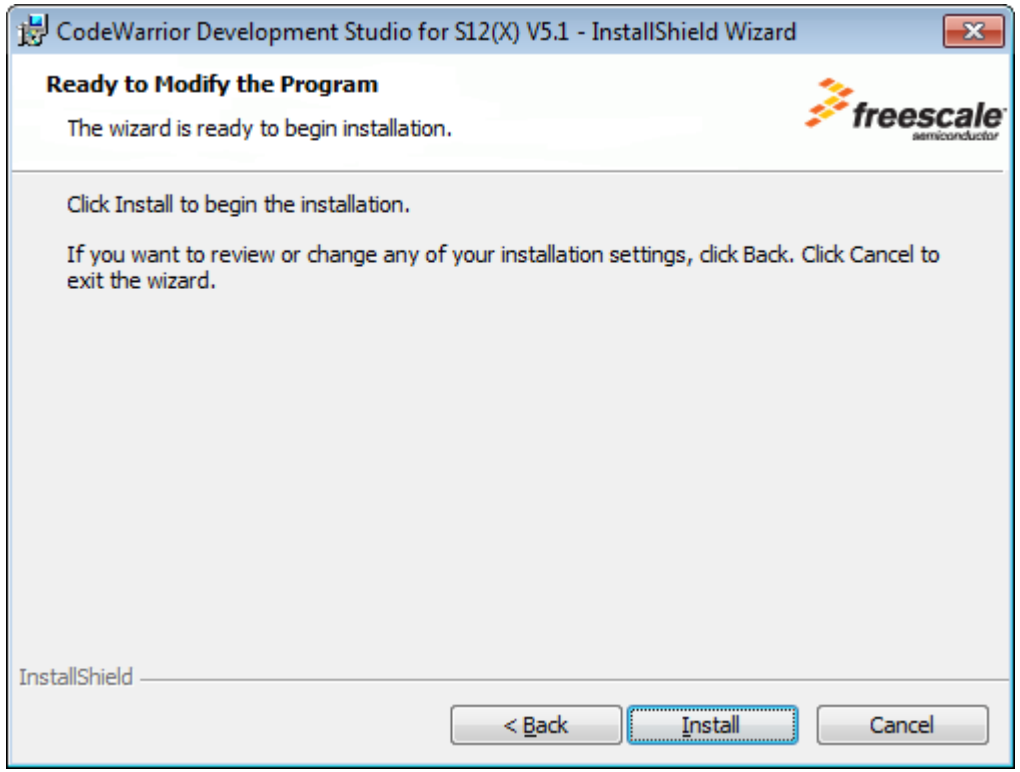


- The installer window will appear, click next to continue.

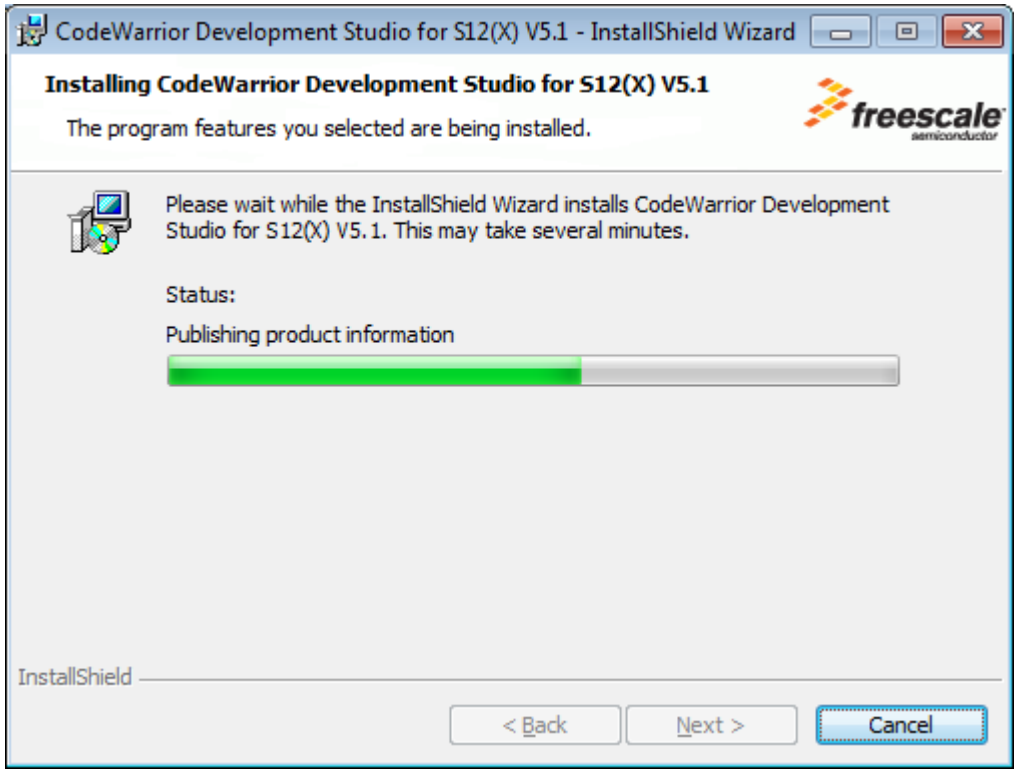


Step-3

- Click next until you see the next window and click Install

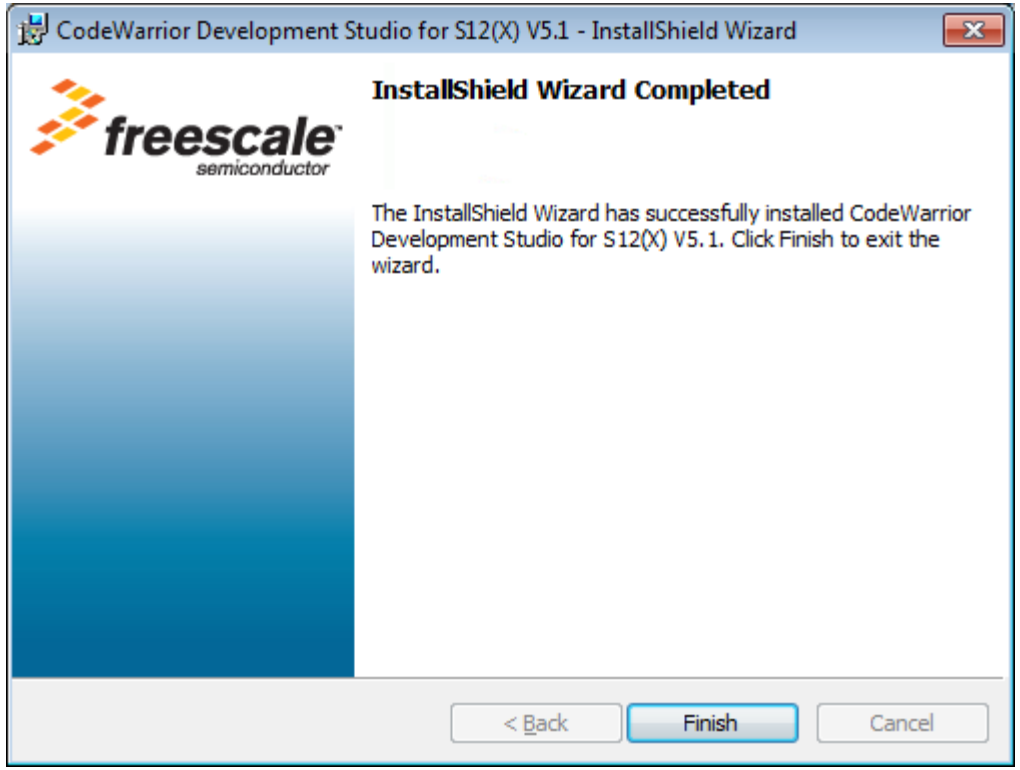


- The next window will appear. Wait until the Codewarrior is been installed



Step-4

- Once Codewarrior was installed, click Finish.

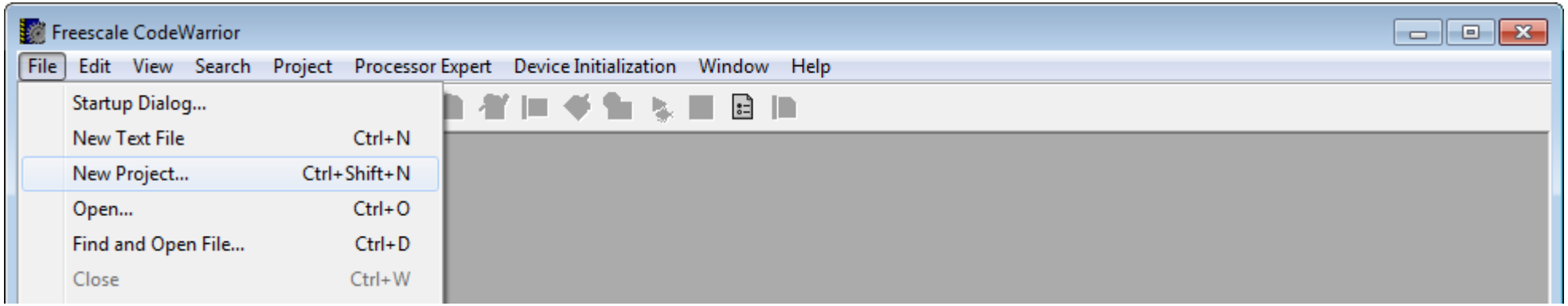


GETTING STARTED WITH A NEW PROJECT

Create a new project

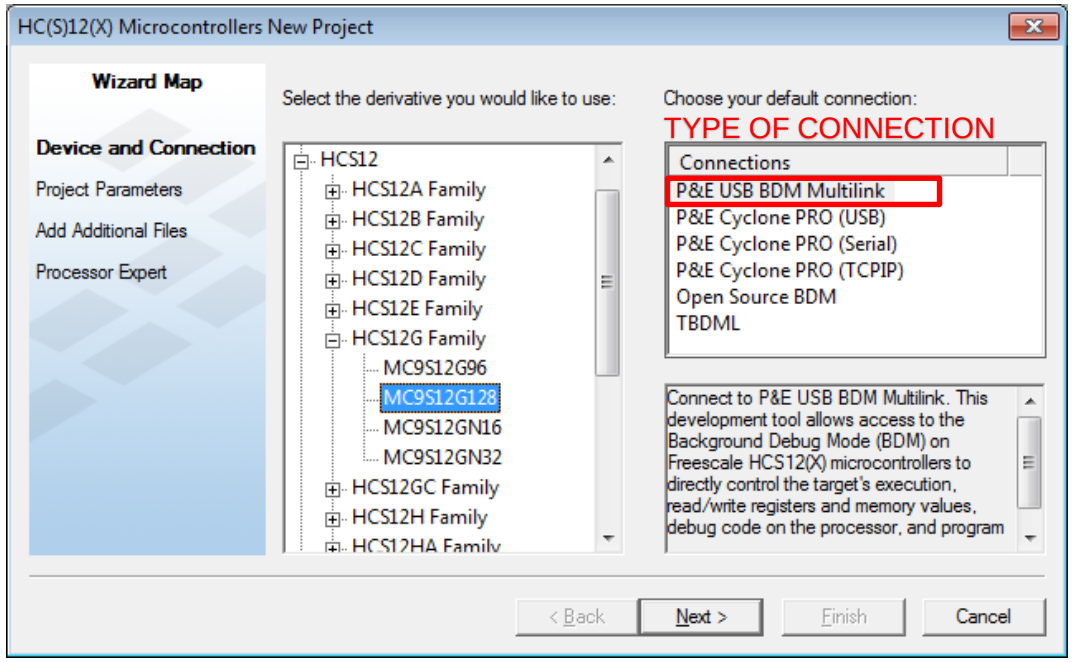
- Start program: Click on “CodeWarrior IDE” icon

- Go to: File – New Project

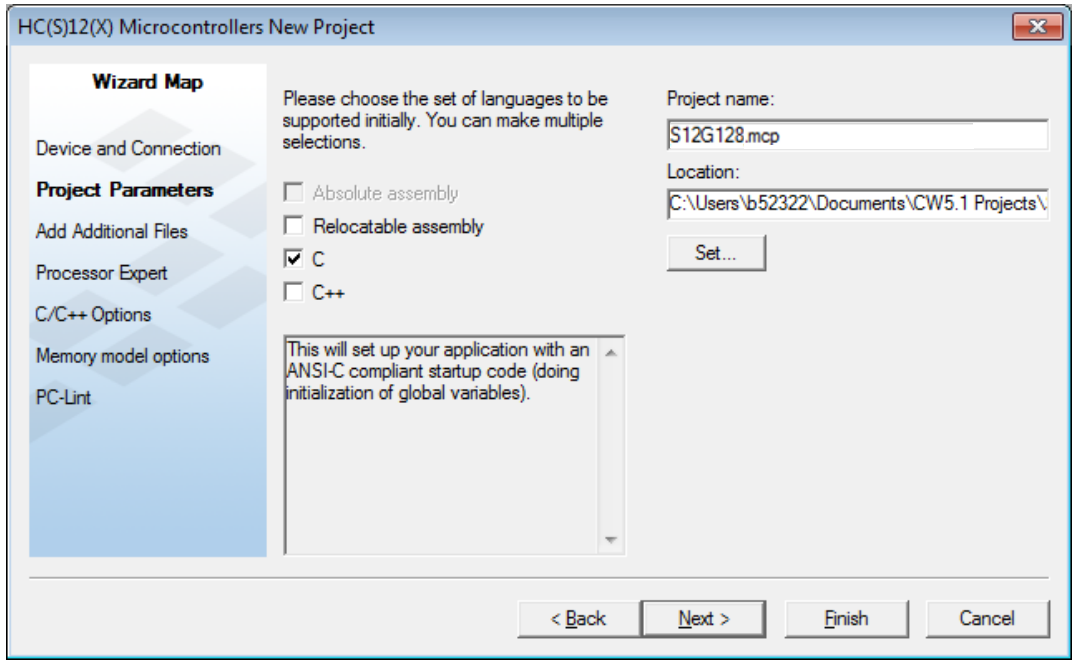


Create a new project

- Select your device and the type of connection and click Next

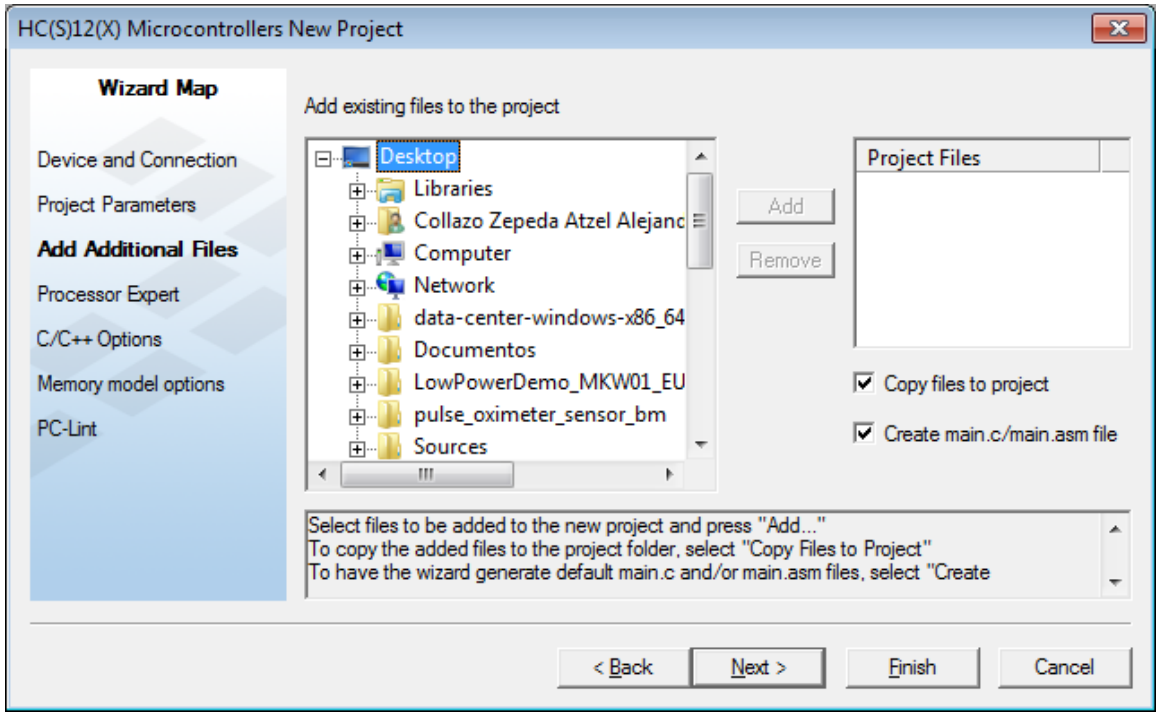


- Select the name of your project and click Next

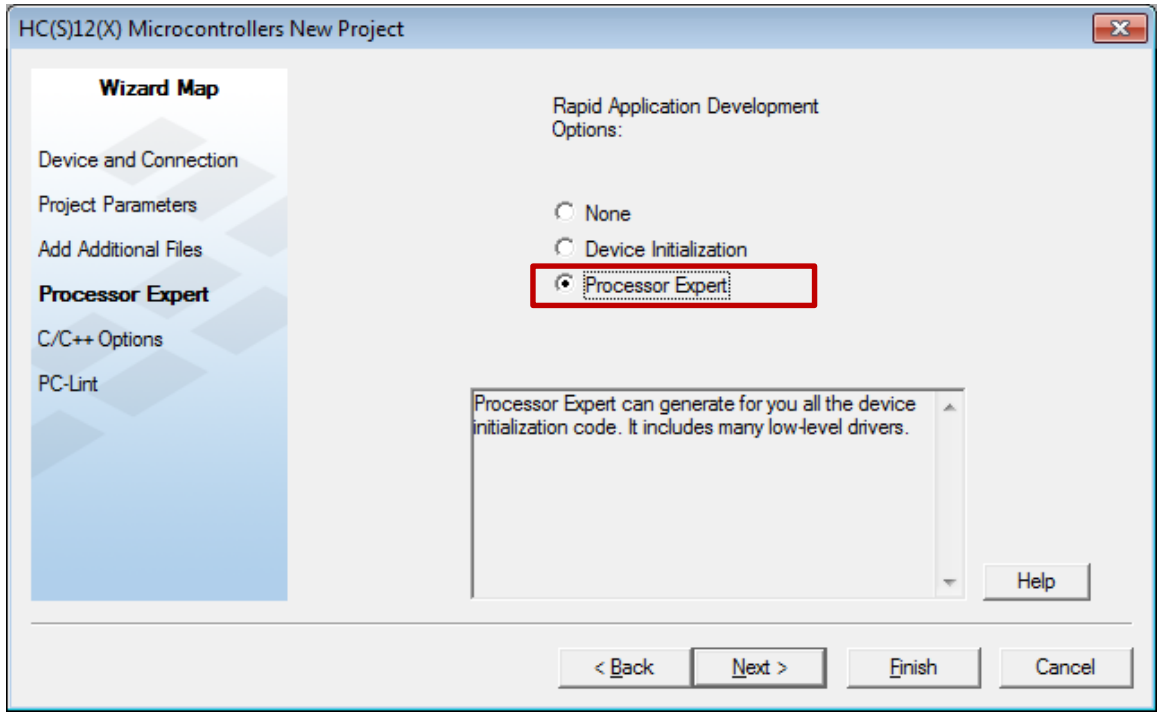


Create a new project

- Click Next



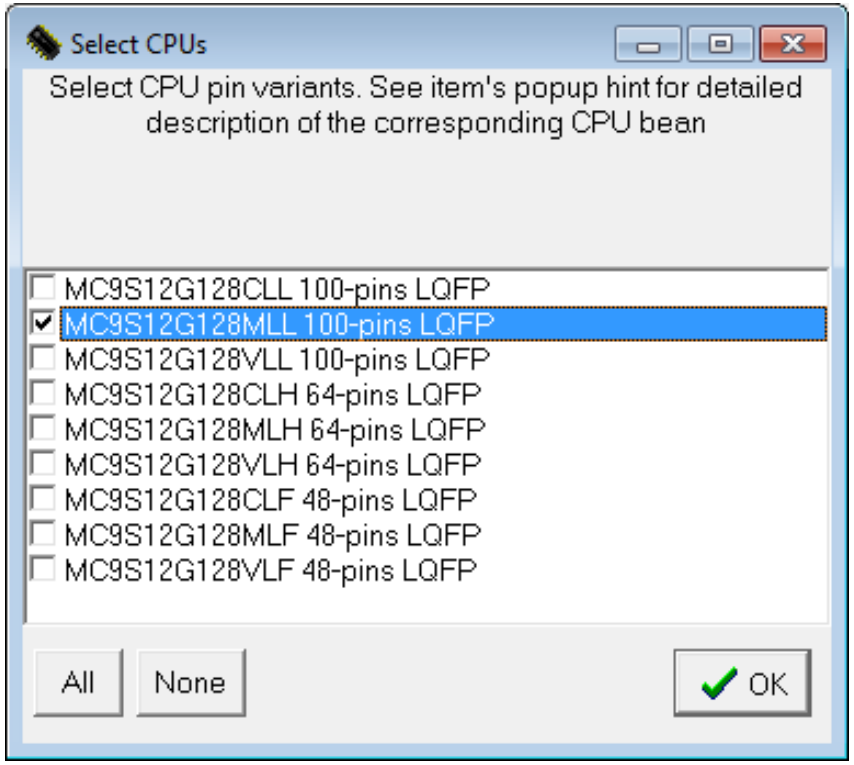
- In this part you can select if you want to use Processor Expert tool or not.



Create a new project

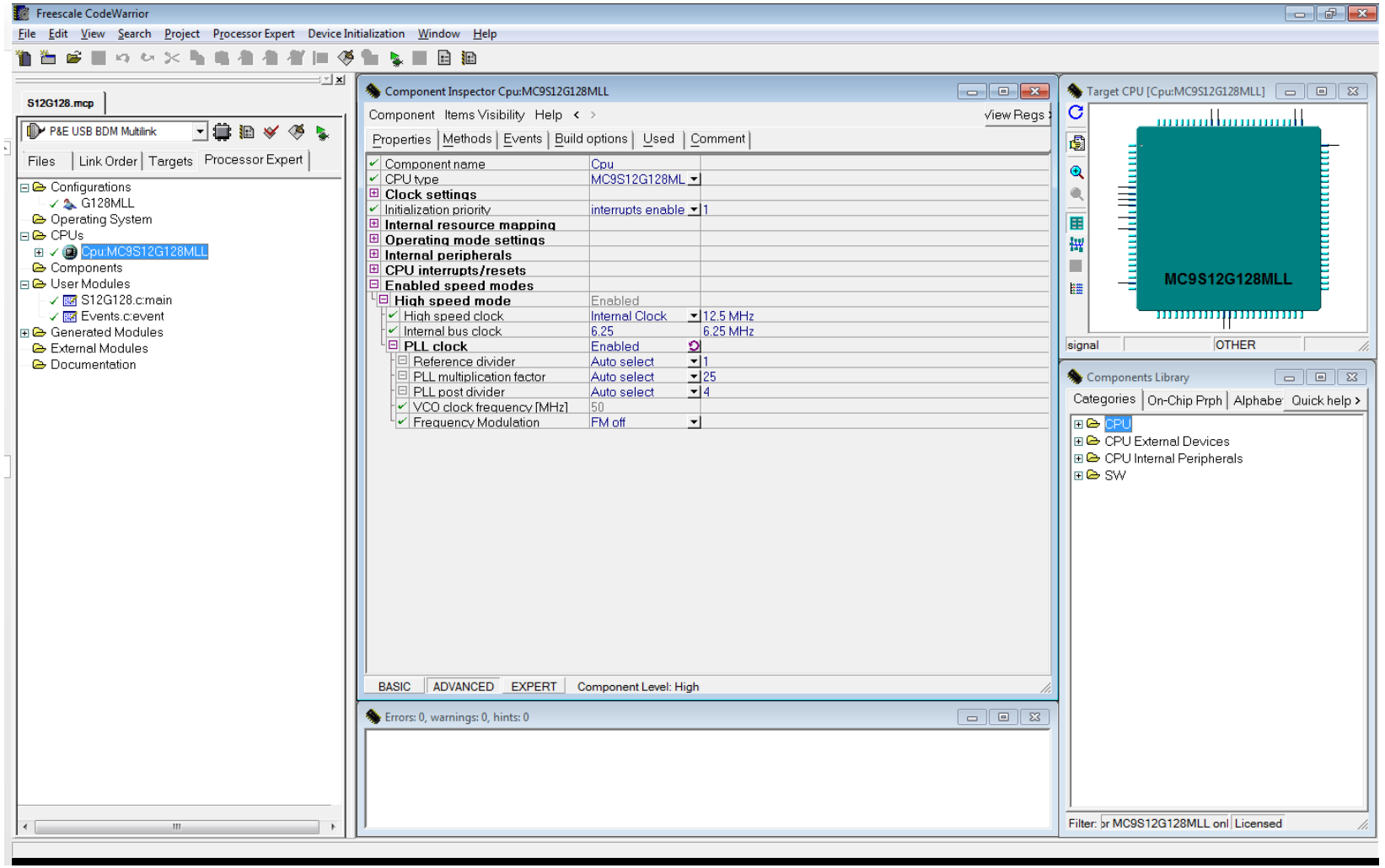
- In this window you can select between the CPU pin variants.

- Select your CPU and click Ok



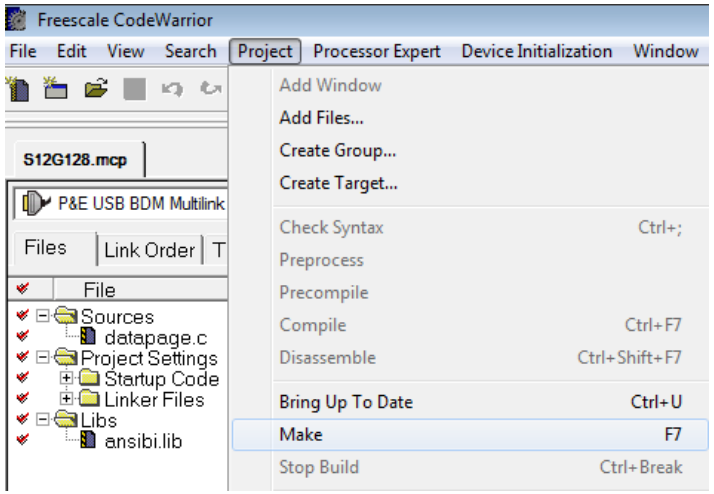
Create a new project

- In this window you are ready to start to coding.
- In the Components Library window you can select which module you want to configure.
- In the Files tab you can find the .c and .h files



Build a Project

- To build a project follow one of the methods below:
  1. Project – Make



  2.  - Click on this symbol to build the project

- You can see if your project is built successfully in the Console window

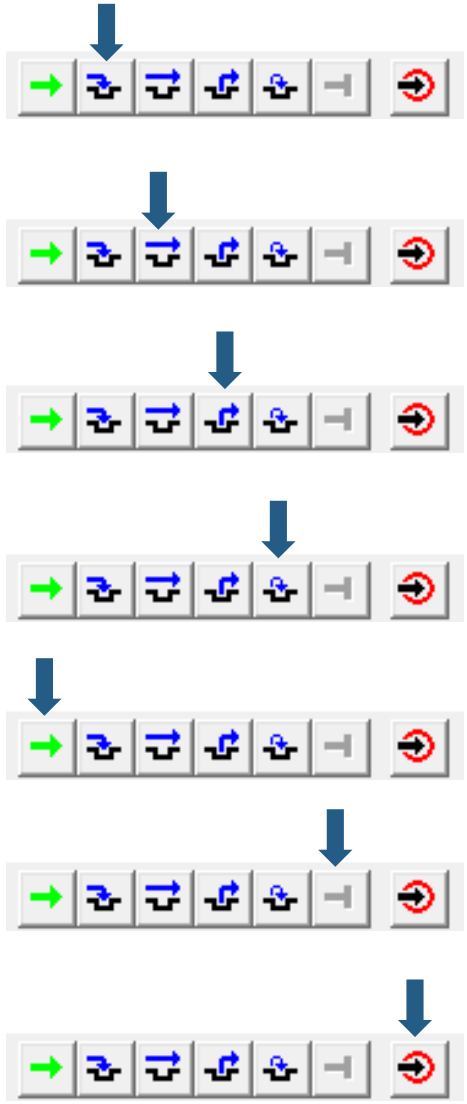
Debug a Project

- Connect the board to the PC
  - For DEVKIT's is used USB or BDM.

- Click on the  icon to start debugging.

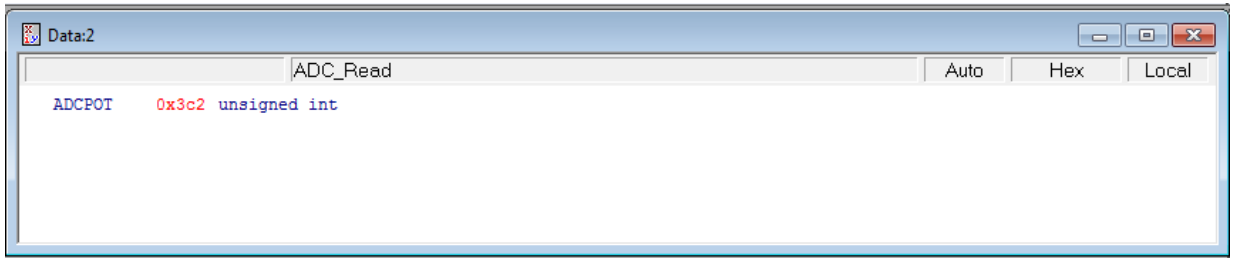
Debug Basics: Step, Start, Halt, Reset

- Single Step (F11)
- Step Over (F10)
- Step Out (Shift+F11)
- Assembly Step (Ctrl + F11)
- Start/Continue (F5)
- Halt (F6)
- Reset (Ctrl + R)

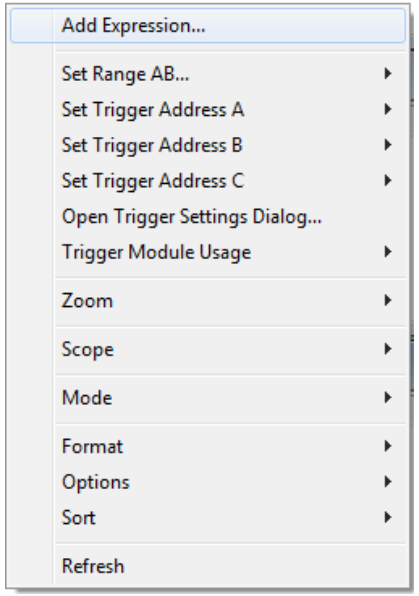


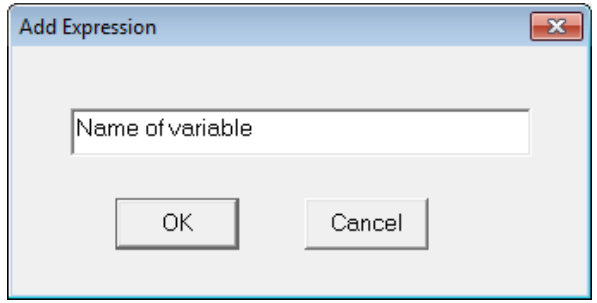
Debug Basics: View & Alter Variables

- View variables in “Data:2” tab.
- Click on a value to allow typing in a different value.



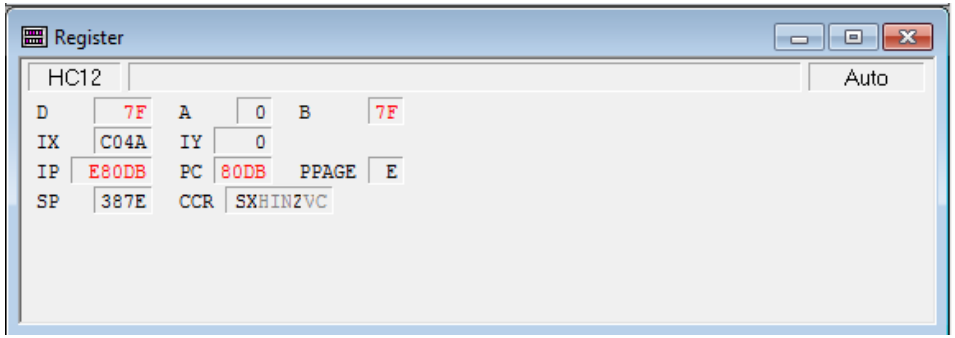
- To add a variable just right click and select “Add expression” and write the name of the variable.



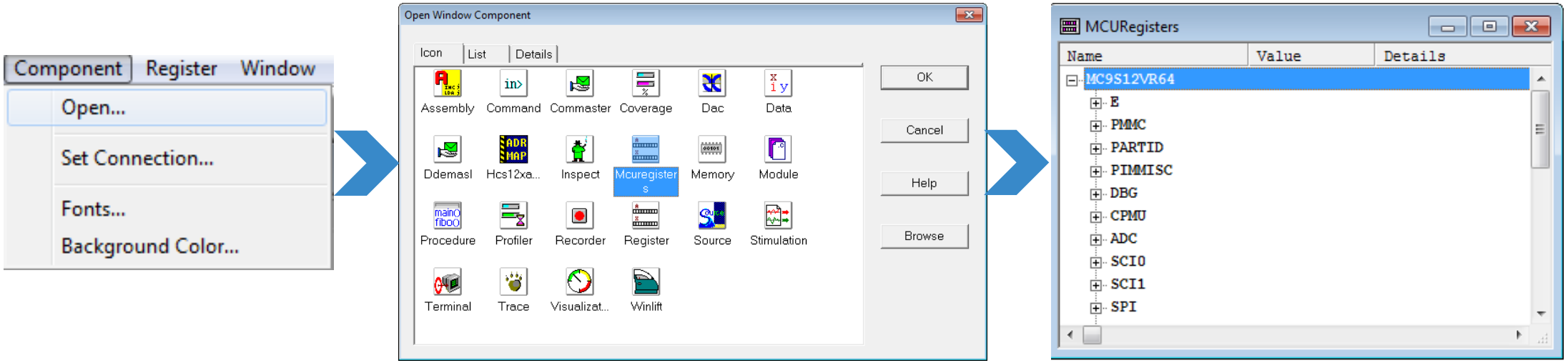


Debug Basics: View & Alter Registers

- View CPU registers in the “Register” tab

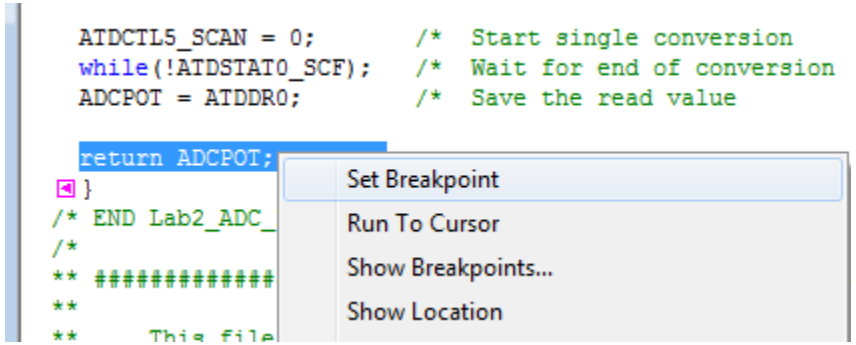


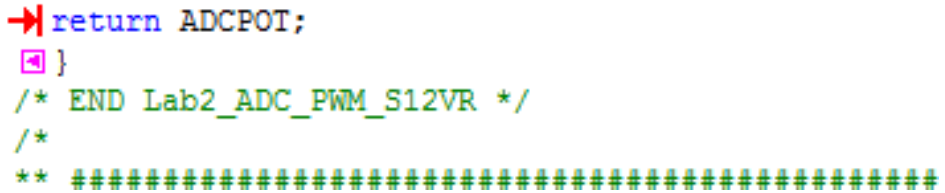
- View peripheral registers go to Component > Open and select “Mcuregisters”



Debug Basics: Breakpoints

- Add Breakpoint: Right click on the line where you want to set the breakpoint and select “Set Breakpint”
  - An arrow red will pop up that represents debugger breakpoint





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