

# 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 CodeWarrior5.1 using Processor Expert to do the initialization of the modules.
- Will be used the DevKit-S12G128 for explanation purpose

# Contents

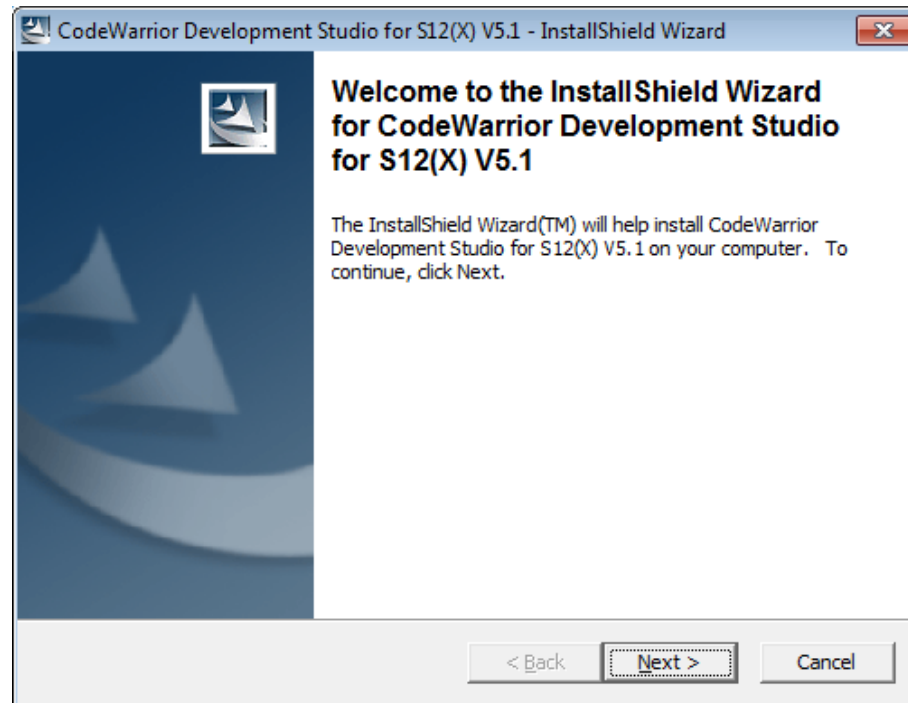
- Installing CodeWarrior v5.1 IDE
  - Download and Install the IDE
- Getting started with a New Project
  - Create, build and debug the new project

# INSTALLING CODEWARRIOR V5.1 IDE



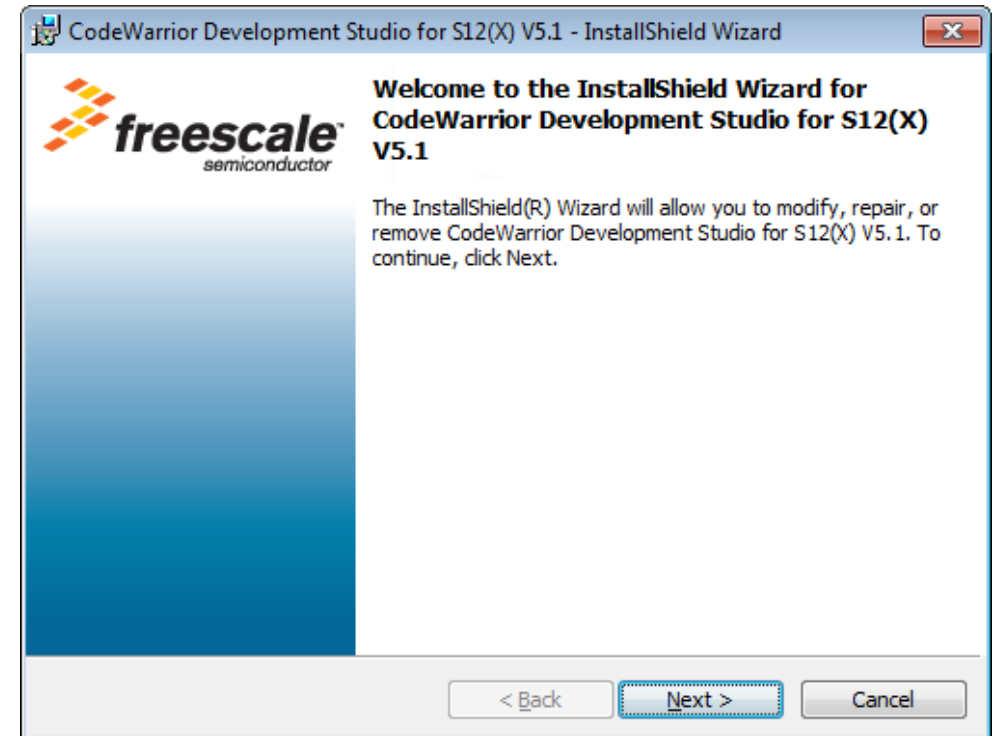
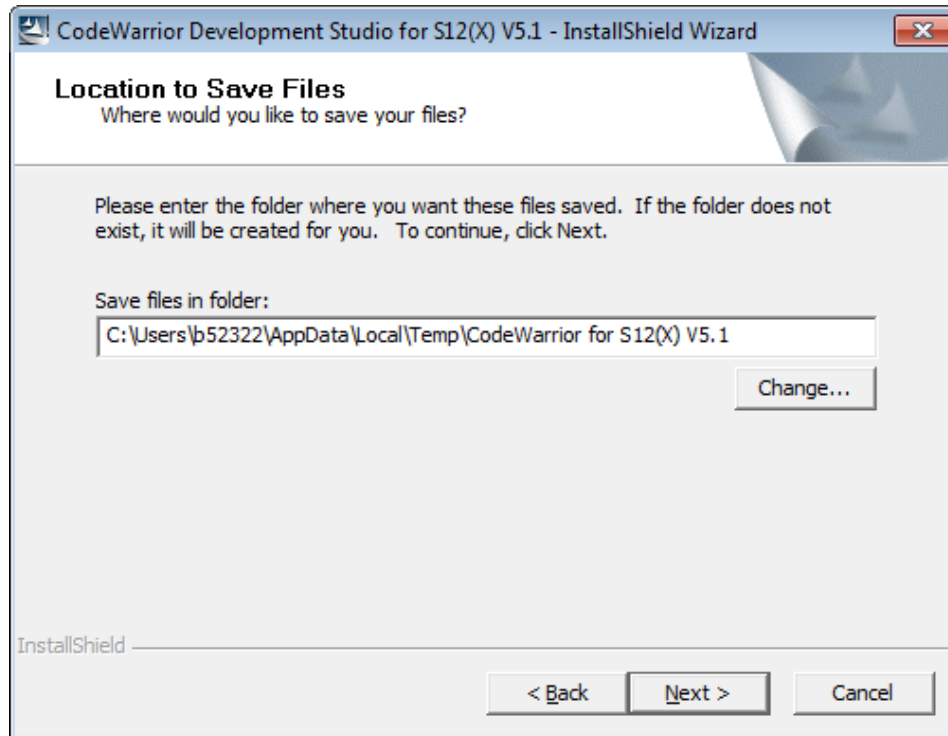
# Step-1

- Go to [www.nxp.com/codewarrior](http://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.



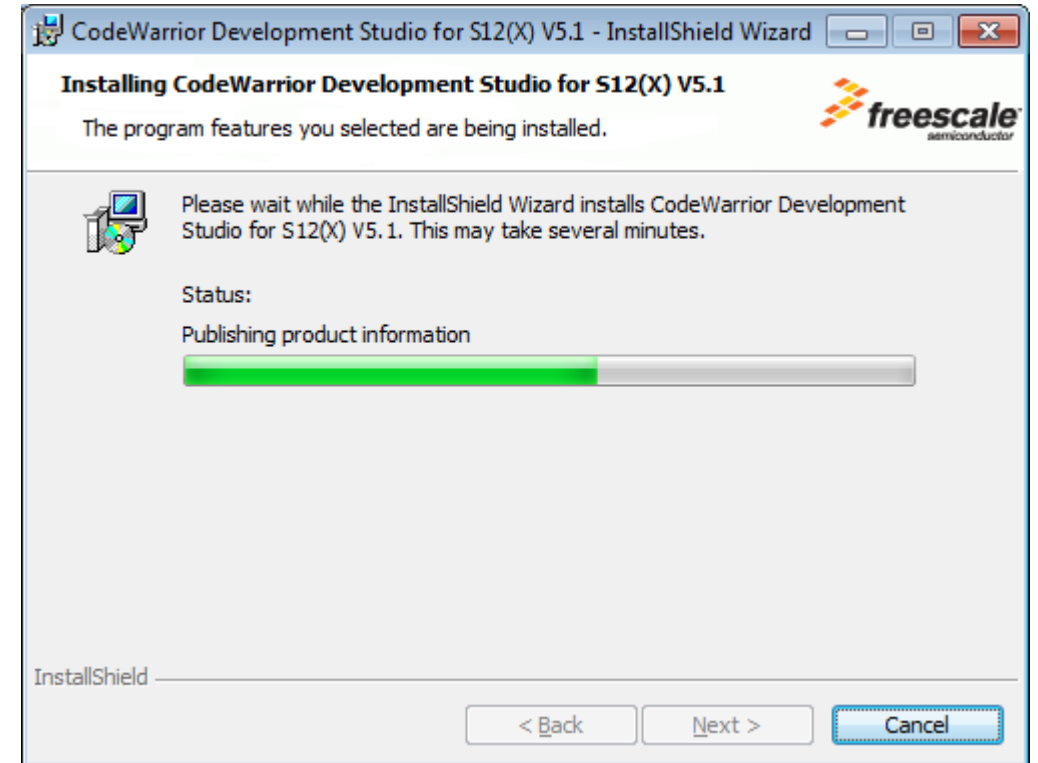
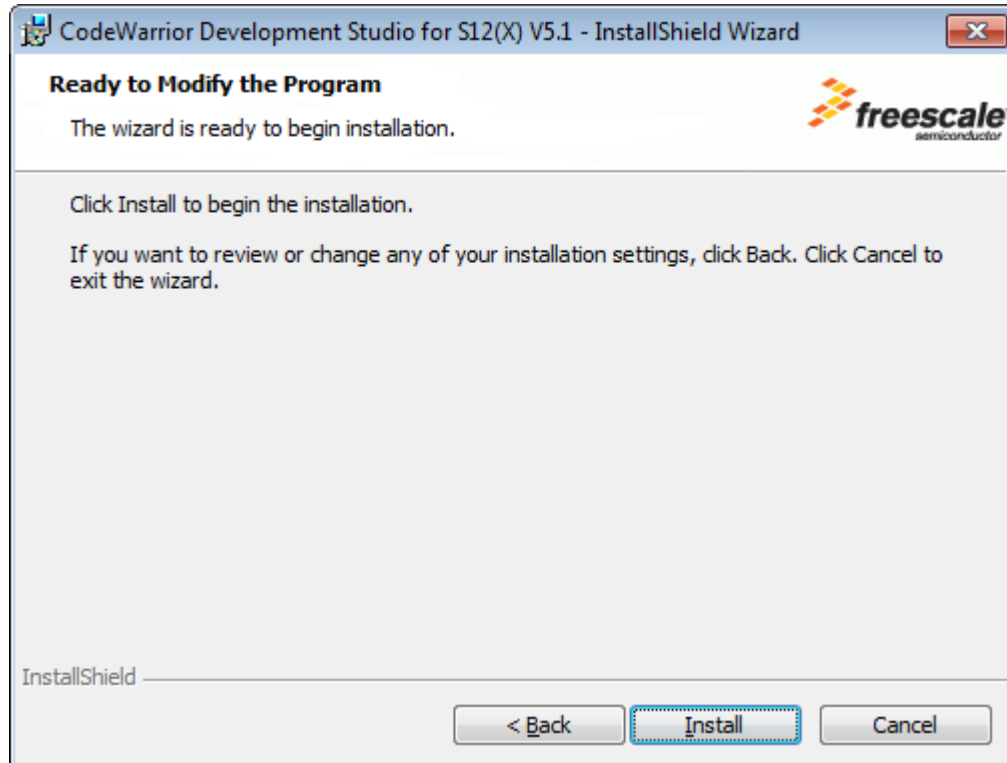
## Step-2

- 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.



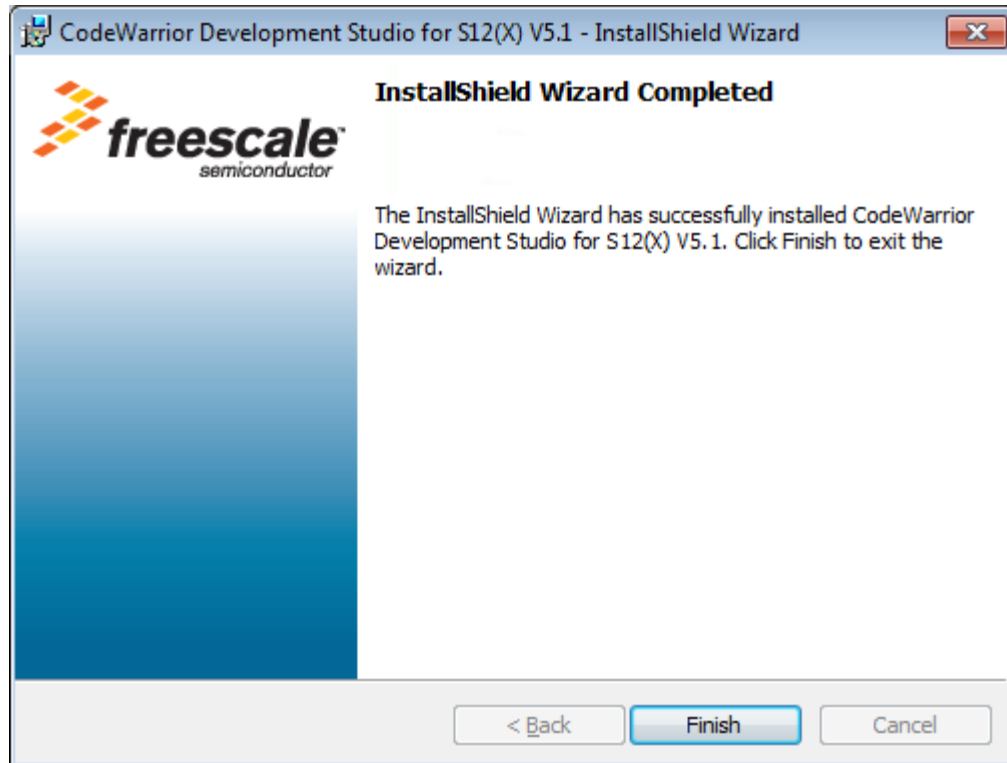
# Step-3

- 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.



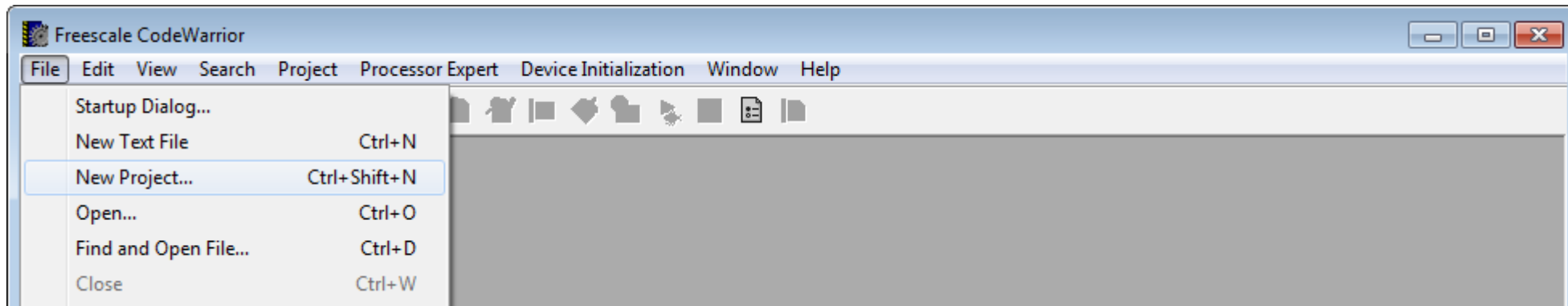
# GETTING STARTED WITH A NEW PROJECT



# Create a new project

1 of 5

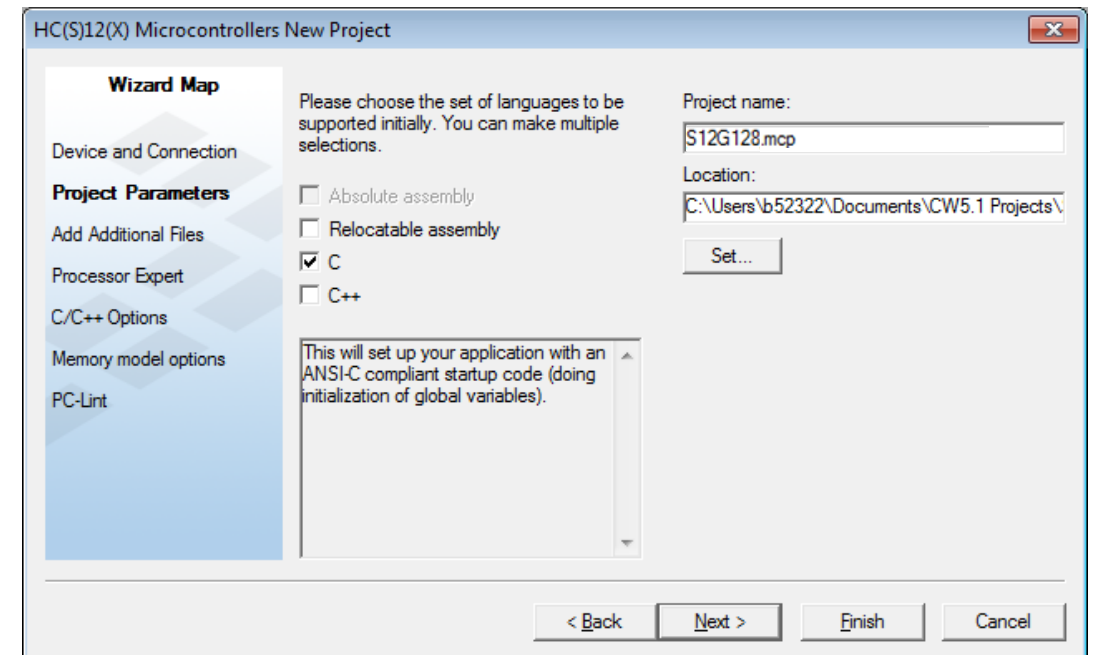
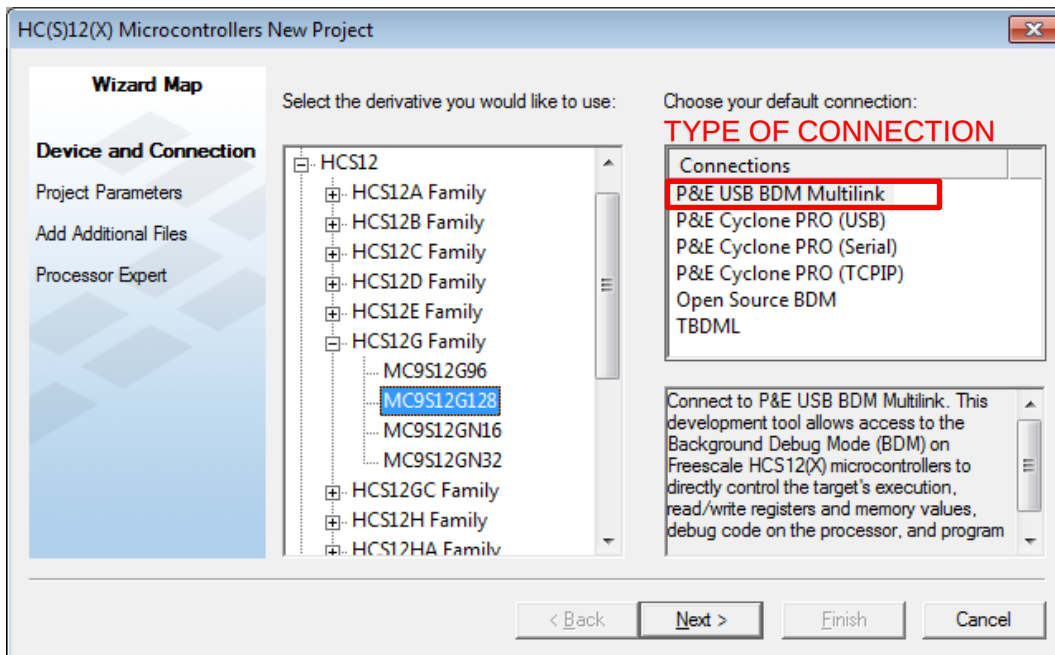
- Start program: Click on “CodeWarrior IDE” icon
- Go to: File – New Project



# Create a new project

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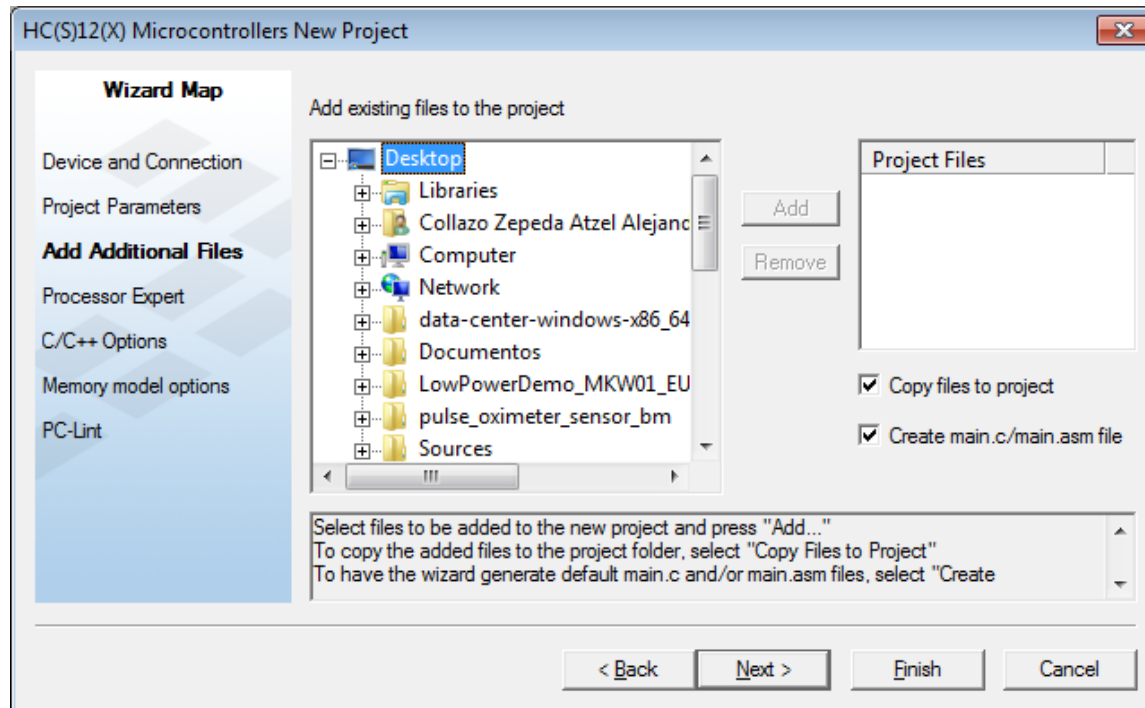
- Select your device and the type of connection and click Next
- Select the name of your project and click Next



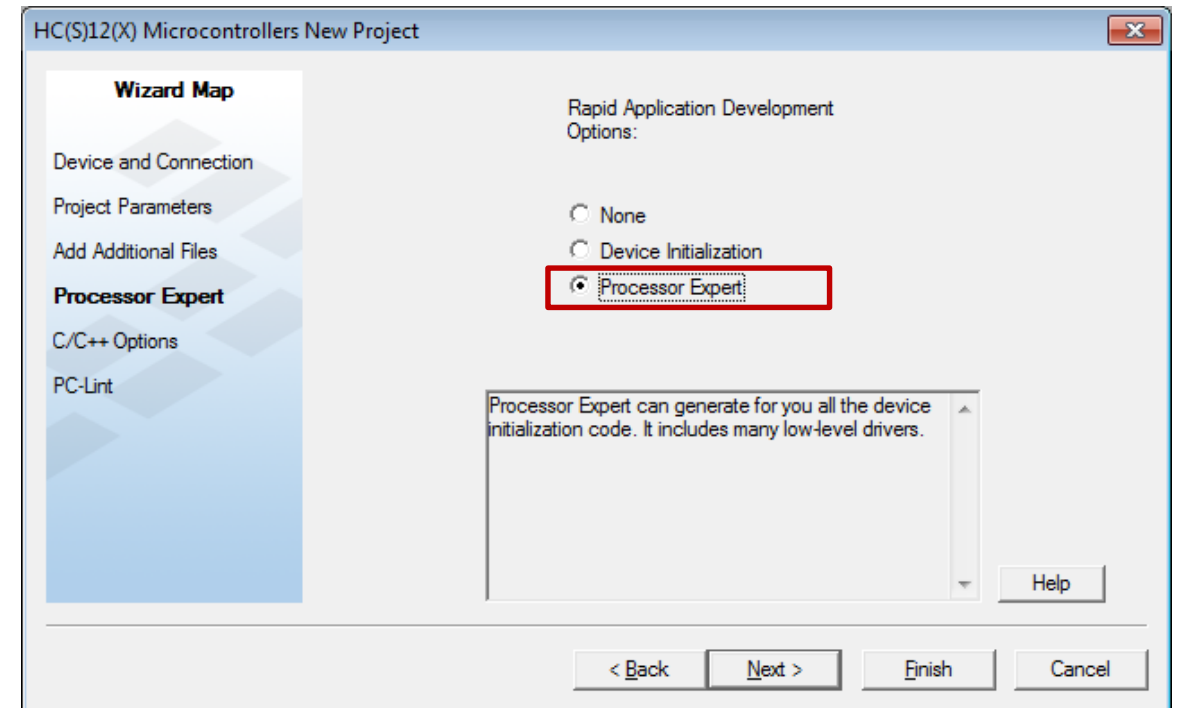
# Create a new project

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- Click Next



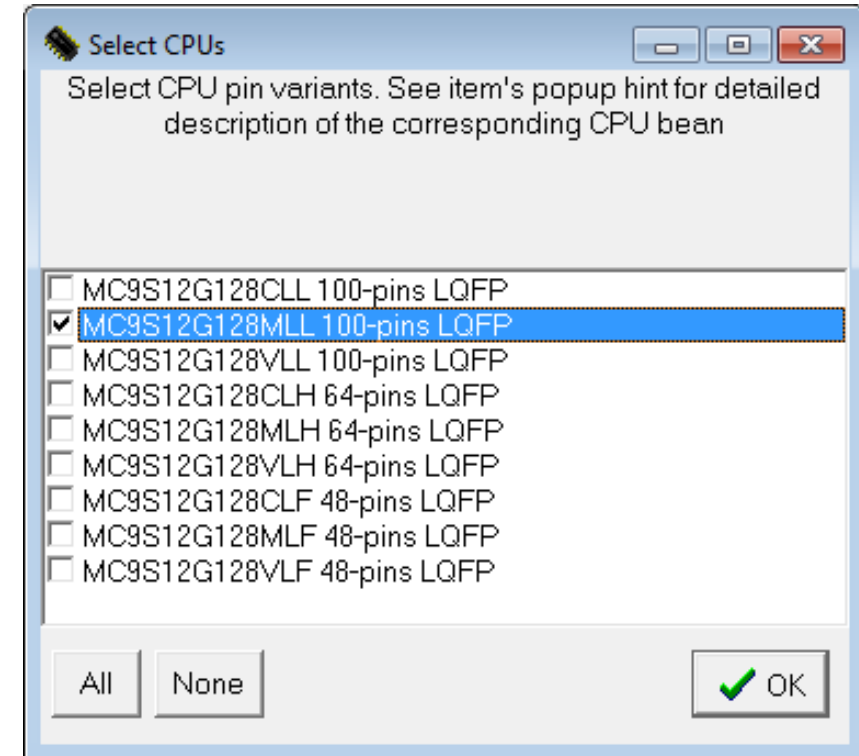
- In this part you can select if you want to use Processor Expert tool or not.



# Create a new project

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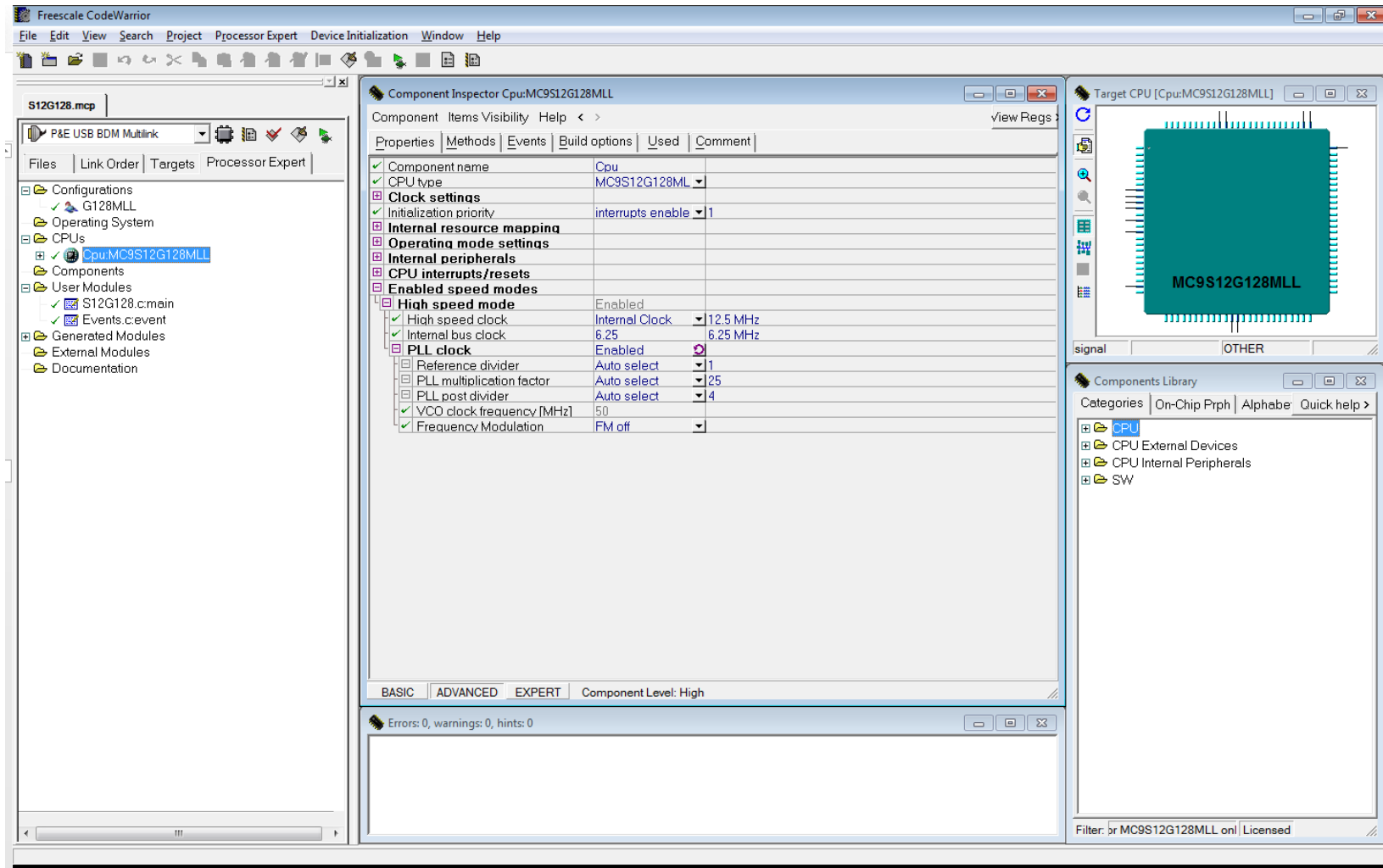
- In this window you can select between the CPU pin variants.
- Select your CPU and click Ok



# Create a new project

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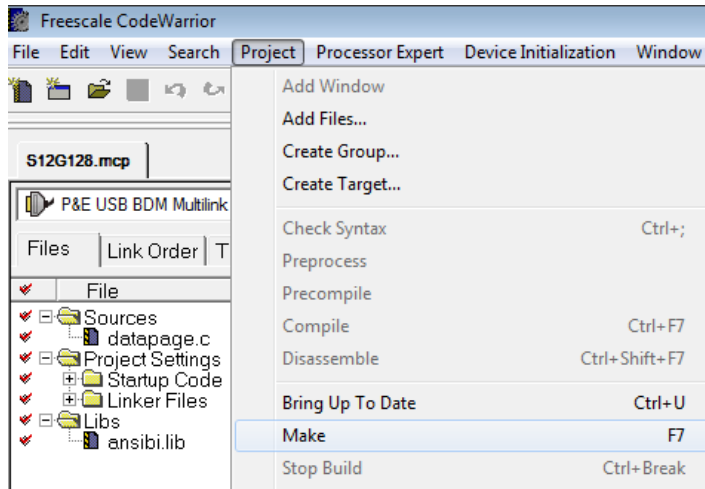
- In this window you are ready to start to coding.
- In the Components Library window you can select which module you want to configure.
- In the Files tab you can find the .c and .h files



# Build a Project

- To build a project follow one of the methods below:
- You can see if your project is built successfully in the Console window

## 1. Project – Make

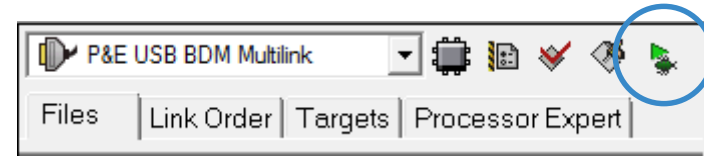


## 2. - Click on this symbol to build the project

# Debug a Project

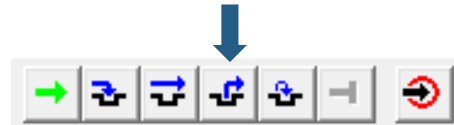
1 of 2

- 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

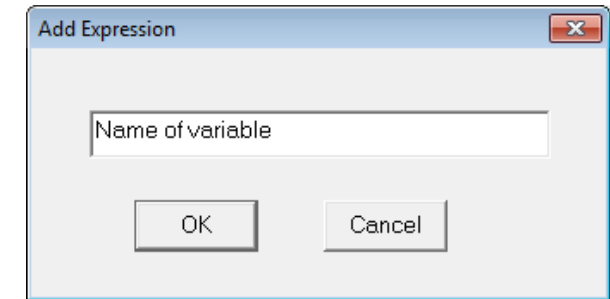
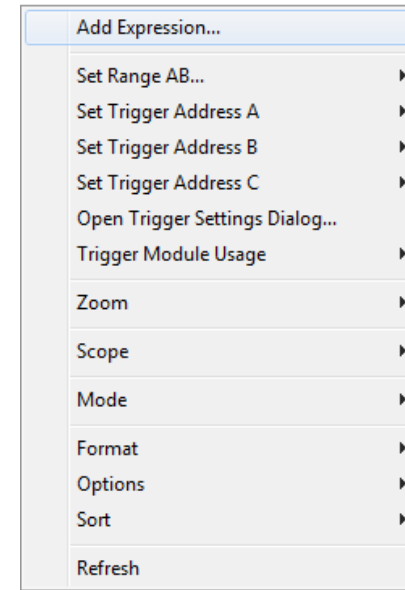
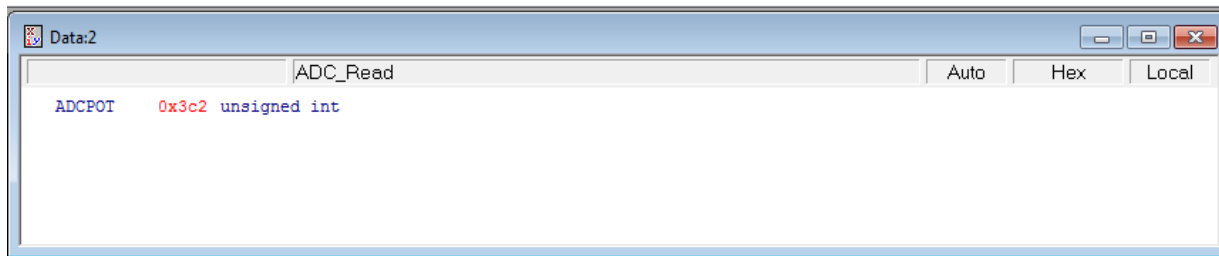
- Single Step (F11)
- Step Over (F10)
- Step Out (Shift+F11)
- Assembly Step (Ctrl + F11)
- Start/Continue (F5)
- Halt (F6)
- Reset (Ctrl + R)



# Debug Basics: View & Alter Variables

1 of 2

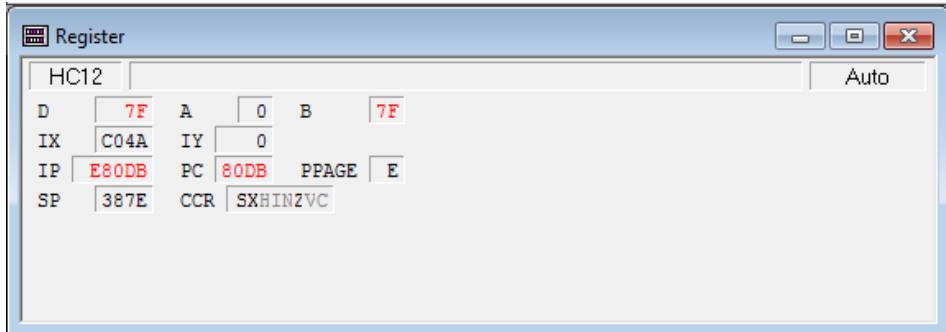
- View variables in “Data:2” tab.
- Click on a value to allow typing in a different value.
- To add a variable just right click and select “Add expression” and write the name of the variable.



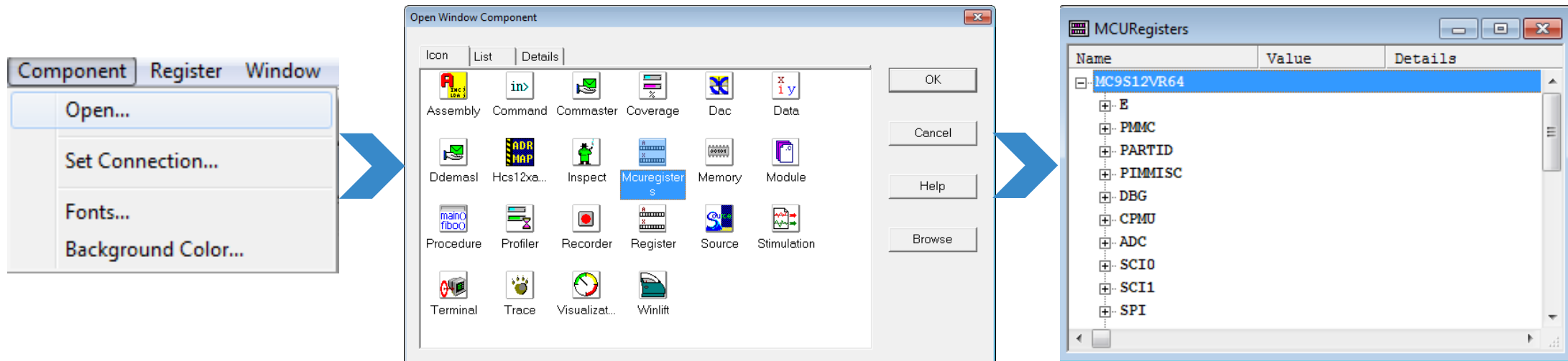
# Debug Basics: View & Alter Registers

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- View CPU registers in the “Register” tab



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

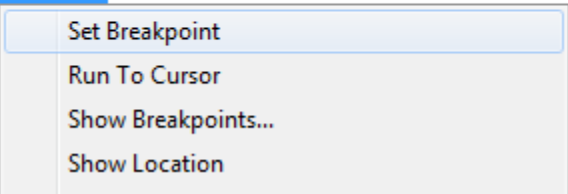


# Debug Basics: Breakpoints

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

```
ATDCTL5_SCAN = 0;      /* Start single conversion
while(!ATDSTAT0_SCF); /* Wait for end of conversion
ADCPOT = ATDDR0;       /* Save the read value

return ADCPOT;
}
/* END Lab2_ADC_
/*
** #####
**
** This file
```



```
→ return ADCPOT;
}
/* END Lab2_ADC_PWM_S12VR */
/*
** #####
```



SECURE CONNECTIONS  
FOR A SMARTER WORLD