



ide for DEMO9S08SF4

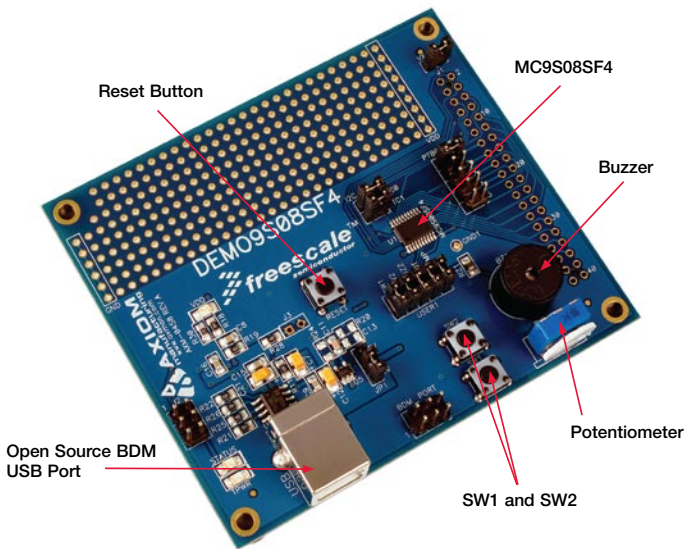


DEMO9S08SF4
8-bit microcontrollers





Get to Know the DEMO9S08SF4 Board





Introduction

DEMO9S08SF4 is a cost-effective kit targeting quick MC9S08SF4 evaluation. It can be used to demonstrate the features of the MC9S08SF4 devices. This quick start guide is designed to get you ready to develop your next cost-effective application using the MC9S08SF4 within minutes.



Install CodeWarrior™ Development Studio for Microcontrollers

CodeWarrior is a powerful tool designed to help you minimize your time to market. CodeWarrior installation is a one-time required step before connecting the board to your computer.

1. Insert the provided DVD into your computer.
2. Double click **Install CodeWarrior Development Studio for Microcontrollers 6.2.**
3. Follow the on-screen instructions until installation is complete.

Once the installation is complete, you can take advantage of several CodeWarrior tutorials that will walk you through various development tool features, such as **C Programming, Assembly Programming, Using Processor Expert™** and more. Simply open CodeWarrior using the path **Programs > Freescale CodeWarrior > CW for Microcontroller V6.x > CodeWarrior IDE.exe.**

Click **Run Getting Started Tutorial** from the startup dialog, select a tutorial and follow the on-screen instructions.



Install CodeWarrior for Microcontrollers 6.2.2 Patch

You must install the CodeWarrior 6.2.2 patch so CodeWarrior can create and compile the MC9S08SF4 project. The CodeWarrior patch 6.2.2 includes MC9S08SF4 service pack and provides open source BDM (OSBDM) support. This installation is a one-time required step before connecting the board to your computer.

1. Insert the provided DVD into your computer.
2. Double click **Install CodeWarrior Development Studio for Microcontroller 6.2.2 patch.**
3. Follow the on-screen instructions until installation is complete.

After the CodeWarrior 6.2.2 patch is installed, you can select MC9S08SF4 silicon when you create an application.

**STEP
3**

Connect Board to Computer

USB driver installation is a one-time required step, to be completed after CodeWarrior installation.

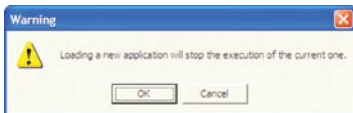
1. Remove DEMO9S08SF4 demo board from anti-static bags.
2. Connect the provided A to B USB cable from a free USB port on your computer to the USB connector on the board.
3. The operating system will recognize your board as new hardware and will prompt you to install the USB drivers. Choose the recommended option to install the software automatically. USB drivers for your board were pre-loaded in the CodeWarrior installation.
4. Follow on-screen instructions until all USB driver installations are complete. The green USB LED on the board should illuminate.

**STEP
4**

Run and Debug Example Code on Board

1. Copy **DEMO9S08SF4 Demo code** from the provided DVD and save to your PC folder
2. Start CodeWarrior from Windows Start menu.
3. From the CodeWarrior main menu, choose **File > Open and choose the DEMO9S08SF4\SF4_Demo.mcp** file from the folder where you saved the DEMO9S08SF4 Demo code. Click **Open**. The Project window will open.
4. The C code of this example is contained in the **main.c** file. Double click on the file to open it.
5. From the main menu, choose **Project > Change MCU/Connection**. When the **Device and Connection** dialog box appears, select **HCS08 FSL Open Source BDM** from top right window in the dialog and click the **Finish** button. The operation allows you to select different debug tools for the targets. In DEMO9S08SF4, FSL OSBDM is applied and must be selected as the tool before debug.

in menu, choose **Project > Debug**. This will compile the source code, generate an executable file and download it to the demo board. When the **Loader Warning** dialog appears, click **OK** to proceed.



7. A new debugger environment will open. From the main menu, choose **Run > Start/Continue**. The program will be executed in real time.
8. Press the SW1 key and the buzzer on the demo board will work with the preset frequency. Press the SW1 key continuously to change the frequency of the sound. The duty will be changed when the potentiometer is adjusted.
9. Press the SW2 key on the demo board to stop the buzzer. The buzzer will stop automatically after several seconds.

10. From the main menu, choose **Run > Halt**. The program execution will stop. The next instruction to be executed is highlighted in the Source window.

11. From the main menu, choose **Run > Single Step**. The instruction highlighted in the Source window will be executed, and the program execution will be stopped immediately after.

12. From the main menu, choose **Run > Start/Continue**. The application will restart from where it was previously stopped.

Start Your Development

Congratulations, you have successfully completed this tutorial! We encourage you to continue experimenting with the CodeWarrior user interface. For an in-depth guide of all of the user interface features, select **Help > CodeWarrior Help** from CodeWarrior Development Studio's main menu.





Learn more at www.freescale.com/8bit.

Freescale and the Freescale logo are trademarks or registered trademarks of Freescale Semiconductor, Inc. in the U.S. and other countries. All other product or service names are the property of their respective owners. © Freescale Semiconductor, Inc. 2009.

Doc Number: DEMO9S08SF4QSG / REV 0
Agile Number: 926-26145 / REV A

