



ide for DEMO9S08SV16



DEMO9S08SV16
8-bit microcontrollers

 **freescal**[™]
semiconductor



Get to know the DEMO9S08SV16 Board

Barrel Connector for
External Power

Power Select Jumper
(USB or External)

RESET Button

MC9S08SV16

Potentiometer

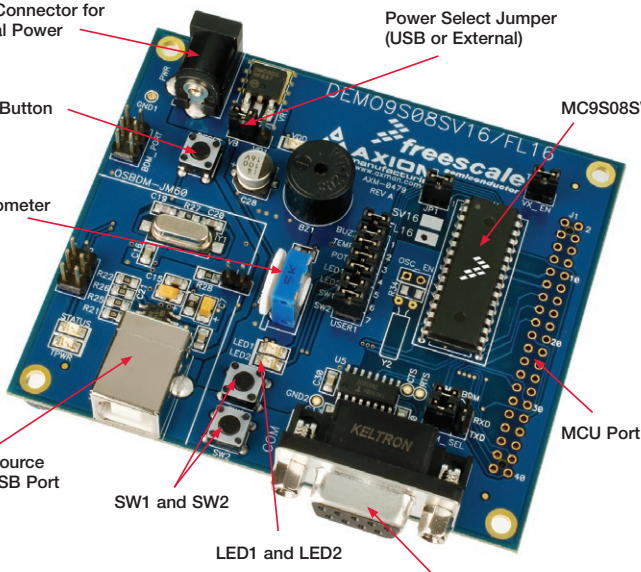
Open Source
BDM USB Port

SW1 and SW2

LED1 and LED2

DB9 RS232C
Serial Port

MCU Port





Introduction

DEMO9S08SV16 is a cost-effective kit targeting quick MC9S08SV16 evaluation. It can be used to demonstrate the features of the MC9S08SV16 devices. This quick start guide is designed to get you ready to develop your next cost-effective application using the MC9S08SV16 within minutes.



STEP
1

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.

STEP
2

Install CodeWarrior for Microcontrollers 6.2.2 Patch

You must install the CodeWarrior 6.2.2 patch so CodeWarrior can create and compile the MC9S08SV16 project. The CodeWarrior 6.2.2 patch installation is a one-time required step before connecting the board to your computer.

1. Install the provided DVD into your computer.
2. Double click **Install CodeWarrior Development Studio for Microcontrollers 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 the MC9S08SV16 silicon when creating an application and the MC9S08SV16 project can be compiled correctly.

**STEP
3****Connect Board
to Computer**

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

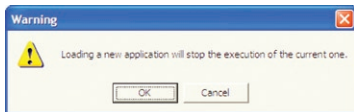
1. Remove DEMO9S08SV16 demo board from anti-static bags.
2. Connect the provided A to B gray USB cable from a free USB port on your computer to the USB connector on the board.
3. The operating system will recognize your board as new hardware and will prompt you to install the USB drivers. Choose the 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 **DEMO9S08SV16 Demo code** from the provided DVD and save to your PC folder.
2. Start CodeWarrior from the Windows Start menu.
3. From the CodeWarrior main menu, choose **File > Open** and choose the **DEMO9S08SV16/SV16_Demo.mcp** file from the folder where you saved the DEMO9S08SV16 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. This operation allows you to select different debug tools for the targets. In DEMO9S08SV16, 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 **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. From the main menu, choose **Run > Halt.** The program execution will stop. The next instruction to be executed is highlighted in the Source window.
9. 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.
10. From the main menu, choose **Run > Start/Continue.** The application will restart from where it was previously

stopped. In this demo, press the **SW1** push-button to turn the buzzer on and off. Press the **SW2** push-button to turn the LED1 and LED2 alternate blinking on and off. Rotate the potentiometer, the **LED1** and **LED2** will blink alternately with a frequency related to the potentiometer value.

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.

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