

8-bit Microcontroller

DEMO9RS08LE4

Ultra-Low-Cost LCD microcontroller

- [Quick Start Guide](#)
- [Lab Tutorials](#)
- [CodeWarrior™ Manual](#)
- [Getting Started DVD](#)

Get to Know the DEMO9RS08LE4 Board

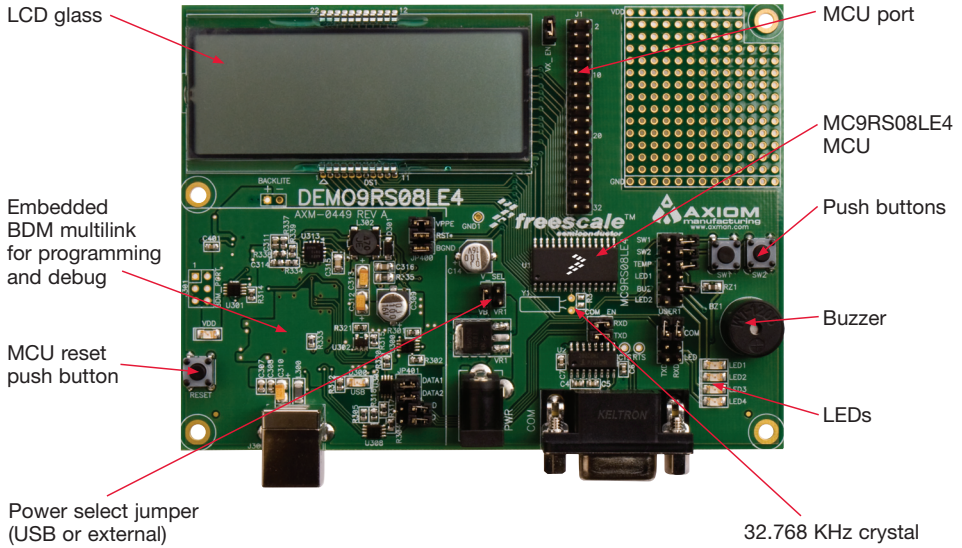


Figure 1. DEMO9RS08LE4

Introduction

DEMO9RS08LE4 is a cost-effective board targeting quick MC9RS08LE4 microcontroller evaluation. There is a 112-segment LCD glass on the board, which can be used to evaluate the LCD driver module, a key feature on the MC9RS08LE4.

This quick start guide is designed to get you ready to develop your next application on the MC9RS08LE4 within minutes.

Step-by-Step Installation Instructions

Please take a look at the DEMO9RS08LE4 Labs document (DEMO9RS08LE4LAB) included in the “Training” section of the DVD to learn more about the key benefits that MC9RS08LE4 gives your application.



Install CodeWarrior™ for Microcontrollers and MC9RS08LE4 Service Pack

CodeWarrior is a powerful tool designed to help you speed your time to market. CodeWarrior installation is a one-time required step before connecting the board to your computer. After installing the MC9RS08LE4 Service Pack for CodeWarrior Development Studio 6.2, it can support LE4 application development.

1. Insert provided DVD into your computer and a menu will appear.
2. Click on “Install CodeWarrior.”
3. Follow the on-screen instructions until installation is complete.
4. Return to DVD menu and with the DEMO9RS08LE4 board highlighted on the left, click on “Install LE4 Service Pack” which is under the software menu.
5. Follow the on-screen instructions until installation is complete.

Once installation is complete, 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 via the “Programs > Freescale CodeWarrior > CW for Microcontroller V6.2 > CodeWarrior IDE.exe” path, click “Run Getting Started Tutorial” from the startup dialog, select a tutorial and follow the on-screen instructions.

STEP
2

Install DEMOLE4 Documentation

The Getting Started DVD included with the demo board kit contains a folder with demo board materials. This folder should be copied onto your computer for use in the next steps. This installation is a one-time required step.

1. Insert provided DVD into your computer and a menu will appear.
2. Click on the item “DEMOLE4 Documentation,” which is under the Documentation menu, to start download of the DEMOLE4 document.
3. Follow the on-screen instructions to complete installation.

For your reference, the documentation contains:

- CodeWarrior project files
- Demo board schematics
- Demo board LCD glass specifications
- Demo board user’s manual

STEP
3

Connect Board to Computer and Launch the Demo Program

USB driver installation is a one-time required step that requires CodeWarrior installation first.

1. Remove board from anti-static pouch.
2. Make sure the jumpers are in the default positions. Please refer to the LAB Tutorial to have the default jumpers positions.
3. Connect provided USB cable from a free USB port on your computer to the USB connector on the board.
4. The operating system will recognize your board as new hardware and will prompt you to install the USB drivers. Choose recommended option to install the software automatically. USB drivers for your board were pre-loaded via CodeWarrior Development Studio 6.2 installation.
5. Follow on-screen instructions until all USB driver installation are completed. The on-board green USB LED should illuminate.

STEP
4

Test Board by Running Quick Start Application

Now that you have successfully completed the software and hardware setup, test your board by running the Quick Start Application. Please follow Step 2–Step 7 to program the LE4 MCU with the LE4_DEMO application. Usually the application has been pre-loaded in the microcontroller’s on-chip flash memory, please skip Step 2–Step 7.

1. Use the jumper V_SEL on the DEMO9RS08LE4 board to select your power source - jumper VR1 for external power or jumper VB for power through USB. Once connected, the green VDD LED will begin to illuminate.
2. Open CodeWarrior for Microcontrollers. From Windows start menu, you can locate it using the “Programs >Freescale CodeWarrior > CW for Microcontroller V6.2 > CodeWarrior IDE. exe” path.
3. Click on File->Open and open the LE4_DEMO.mcp file from the DEMOLE4 Toolkit directory.
4. Compile and program the MC9RS08LE4 microcontroller by clicking on “Debug” button, launching Debugger.
5. Connect the LE4 MCU by clicking on the button “Connect (Reset)” from the Connection Manager menu.
6. From Erase and Program Flash menu, click on “Yes” to allow the debugger to mass erase the microcontroller’s on-chip flash memory and program it with the new application.
7. Click on the “Start/Continue (F5)” button in debugger to run application.
8. Once the application has run, the LCD will display the Freescale logo and scroll the message “LE4DEM”.
9. Now that your board is functional, try out the labs in the DEMO9RS08LE4 Labs tutorial to learn more about the MC9RS08LE4 microcontroller and the features included with your board.



Learn More: For more information about Freescale products, please visit www.freescale.com/lcd.

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