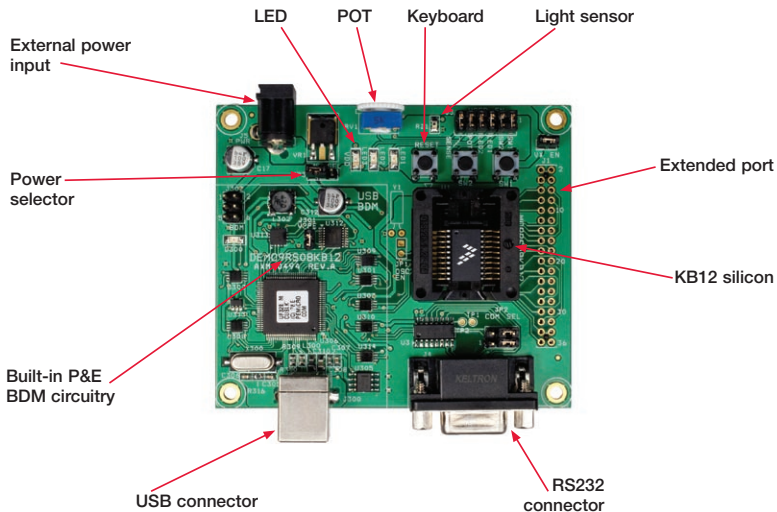


# DEMO9RS08KB12

A cost-effective solution for  
entry-level applications



## Get to Know the DEMO9RS08KB12 Board



## Introduction

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The 8-bit DEMO9RS08KB12 soldered with 20SOIC KB12 is a low-cost kit targeting quick MC9RS08KB12 evaluation and demonstration. This quick start guide is designed to help you jumpstart the development of your next cost-effective application using the MC9RS08KB12.

# Step-by-Step Installation Instructions

## **Install Software and Tools**

CodeWarrior Development Studio for Microcontrollers is a one-time required step before connecting the board to your computer.

- Insert the DVD into your computer
- Double click on “Install CodeWarrior Development Studio for Microcontrollers v6.3” option
- Follow the on-screen instructions until installation is completed

Once the installation is completed, 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.

## **Connect Board to Computer**

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

- Remove DEMO9RS08KB12 demo board from anti-static bags.
- Connect the A to B gray USB cable from a free USB port in your computer to the USB connector in the board.
- 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.
- Follow on-screen instructions until all USB drivers installation are completed. Ensure D300 and VDD LEDs are both ON.

You’ve now completed the initial setup.

### STEP 3

## Run the Preloaded Demo Code

The DEMO9RS08KB12 comes with a demonstration program preloaded in its on-chip flash memory. The demonstration program converts analog reading from the POT RV1 and Light Sensor RZ1 to control the LED1 and LED2 display. The LED1 and LED2 display format is LED2:LED1. The status “ON” means binary 1 and “OFF” means 0. Rotate the pot fully in both directions. LED1 and LED2 combine to display the pot position. Press SW1 to enable and disable the light sensor RZ1. LED1 and LED2 combine to display the ambient light incident on the sensor.

### STEP 4

## Load and Debug Demo Code on Board

Follow instructions that show steps to load and debug the demo code. The same demo code preloaded in DEMO9RS08KB12 board is used as an example here:

- Copy “DEMO9RS08KB12 Demo Code” from the provided DVD and save it in your PC folder. This demo is the application preloaded in the on-chip flash memory.
- Start CodeWarrior from the Windows Start menu.
- From the CodeWarrior main menu, choose “File > Open” and select the “DEMO9RS08KB12\KB12\_Demo.mcp” from the folder where you saved the DEMO9RS08KB12 Demo code. Click “Open”. The Project window will open.

- The C code of this example is contained in the “main.c” file. Double-click on the file to open it.
- From the main 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. From the main 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.
- Please do not change the default setting of “P&E Multilink/Cyclone Pro.”

- A new debugger environment will open. From the main menu, choose “Run > Start/Continue.” The program will be executed in real time.

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

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.

## Start Your Development

You have successfully completed this tutorial. You can continue exploring all creative possibilities you have with CodeWarrior user interface for your applications. For an in-depth guide of all CodeWarrior Development Studio features, select “Help > CodeWarrior Help” in the main menu.

To learn more about the DEMO9RS08KB12 and the RS08KB family,  
please visit **[www.freescale.com/RS08KB](http://www.freescale.com/RS08KB)**.

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