



EVB9S12XEP100

Quick Start Guide

Rev. 2.0

0. Introduction

This quick start guide will walk you through setting up your evaluation board, connecting it to the PC, and launching the provided example. For more information, please read the board user's manual.

1. Run the Factory Programmed Example (Standalone Mode)

In standalone mode, no PC connection is required. The microcontroller is factory programmed with a sample application.

To run the built-in example:

1. Ensure that all of the jumpers in the "INPUTS" and "OUTPUTS" sections are inserted.
2. Power the board. The power connector accepts 12 V DC wall plug-in power supply with a 2.1 mm pin and sleeve plug with positive in the center and sleeve as ground. The green "POWER" LED on the board should turn on.
3. Press the "PB4" push-button. The output of the light sensor will be displayed on the two dot-matrix displays, in a graphical way. The light sensor is placed on the left of the "PB7" push-button. Cover the sensor with a finger and see the effect on the displays.
4. Press the "PB5" push-button. The output of the light sensor will be displayed on the two dot-matrix displays, in a numerical (hexadecimal) way.
5. Press the "PB6" push-button. The value of the "PAD10" potentiometer will be displayed on the two dot-matrix displays, in a graphical way.
6. Press the "PB7" push-button. The value of the "PAD10" potentiometer will be displayed on the two dot-matrix displays, in a numerical (hexadecimal) way.

2. Host Mode

The same example above can be run from the host PC. To do this, the CodeWarrior Development Tools and the SofTec Microsystems Additional Components must be installed first.

Install CodeWarrior Development Studio

To install the CodeWarrior Development Studio, insert the CodeWarrior CD-ROM into your computer's CD-ROM drive. A startup window will automatically appear. Follow the on-screen instructions.


Install SofTec Microsystems Additional Components

The SofTec Microsystems Additional Components install all of the other required components to your hard drive. These components include:

- The Evaluation board's USB driver;
- The software plug-in for CodeWarrior;
- Examples;
- Evaluation board user's manual;
- Evaluation board schematic;


- Additional documentation.

To install the SofTec Microsystems Additional Components, insert the SofTec Microsystems “**System Software**” CD-ROM into your computer’s CD-ROM drive. A startup window will automatically appear. Choose “**Install Instrument Software**” from the main menu. A list of available software will appear. Click on the “**Additional Components**” option. Follow the on-screen instructions.



Note: *to install the Additional Components on Windows 2000 or Windows XP, you must log in as Administrator.*

First Connection with the PC



Note: *before to connect the board to the PC, it is important that you install the required system software as described in the previous section.*

The Evaluation Board is connected to a host PC through a USB port. Connection steps are listed below in the recommended flow order:

1. Install all the required system software as described in the previous section.
2. Power the board through the barrel connector (12 V DC). The “POWER” LED will turn on.
3. Insert one end of the USB cable into a free USB port of the PC.
4. Insert the other end of the USB cable into the USB connector on the Evaluation Board.
5. The first time the Evaluation Board is connected to the PC, Windows recognizes the instrument and starts the “**Found New Hardware Wizard**” procedure, asking you to specify the driver to use for the instrument. Follow the Wizard steps, choosing to install the software automatically when requested.
6. The Evaluation Board’s USB driver is now installed on your system.

Step-By-Step Tutorial

1. Set up the board so that it works in host mode (the “RESET ENA” and “BKGD ENA” jumpers in the “USB TO BDM INTERFACE” section must be inserted).
2. Ensure that the Evaluation Board is connected to the PC (via the USB cable) and that the board is powered on.
3. Start CodeWarrior by selecting it in the Windows Start menu.
4. From the CodeWarrior main menu, choose “**File > Open**” and choose the “**\\Program Files\Freescale\CW for HC12 V4.5\\CodeWarrior_Examples\\HCS12X\\Evaluation Board Examples\\EVB9S12XEP100\\C\\Demo\\Demo.mcp**”.
5. Click “**Open**”. The *Project Window* will open.
6. The code of this example is contained in the “**main.c**” file. Double click on it to open.
7. From the main menu, choose “**Project > Debug**”. This will compile the source code, generate an executable file and download it to the demo board.
8. A new debugger environment will open. From the main menu, choose “**Run > Start/Continue**”. The program will be executed in real-time.
9. From the main menu, choose “**Run > Halt**”. The program execution will stop. The next instruction to be executed is highlighted in the *Source* window.
10. 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.
11. From the main menu, choose “**Run > Start/Continue**”. The application will restart from where it was previously stopped.

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