ColdFire® Embedded Controllers

M52259DEMOKIT

One-stop-shop connectivity MCU with USB, Ethernet and CAN, featuring Freescale MQX software solutions

- **Quick Start Guide**
- **Lab Tutorials**
- **CodeWarrior™ Manual**
- **Getting Started DVD**

freescale™
semiconductor

Get to Know the M52259DEMOKIT Board

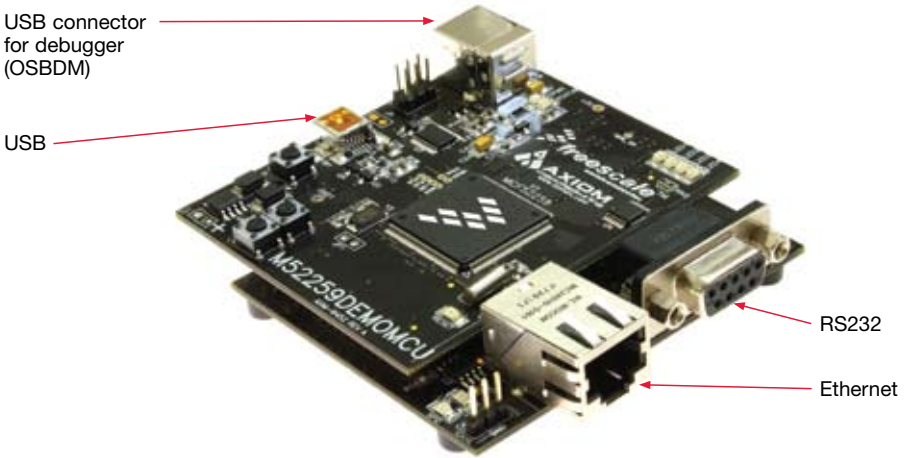USB connector for debugger (OSBDM)

USB

RS232

Ethernet

Figure 1. M52259DEMOKIT

Step-by-Step Installation Instructions

In this Quick Start Guide, you will learn how to set up the board and run the default web server demo.

Additional labs are available on the following software:

- Freescale MQX
- ColdFire® Lite TCP/IP stack by InterNiche
- USB-LITE stack by CMX
- USB Bootloader

STEP 1

Install CodeWarrior™ for ColdFire Architectures Version 7.1 or later

Install CodeWarrior 7.1.1 or later patch for MCF5225x

Installing CodeWarrior provides the driver files for the built in debug support.

Install Freescale MQX software package 3.0.0

STEP 2

Connect the USB cable between the PC and the USB debugger connector

STEP 3

Establish communication to the integrated debugger in order to power the board

This step is only required for the open source bdm firmware version that accompanies CodeWarrior update 7.1.1 or earlier.

Open CodeWarrior
Select File > Open

c:\Program Files\Freescale MQX 3.0\demo\web_hvac\codewarrior\web_hvac_m52259demo.mcp

Click **Make**

Click **Run**

When CodeWarrior makes the connection, the integrated debugger circuit provides power to the microprocessor, thus enabling the application to run.

NOTE: The board comes pre-programmed with the web_hvac demo application, therefore programming the flash is not initially required.

STEP 4

Connect the RS232 cable between the PC and the board

STEP 5

Open Hyper-Terminal on the PC

STEP 6

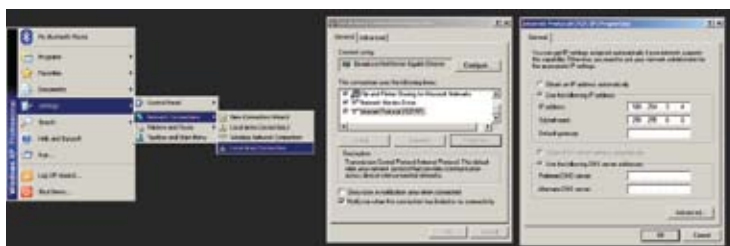**Open Configure Hyper-Terminal for 115200, 8 bits, no flow control, 1 stop bit**

STEP 7

Connect an Ethernet crossover cable between the PC and the board

Reset the board by pressing the reset button.

If necessary, manually set up TCP/IP on the PC

The default IP address of the board is 169.254.3.3. Typically, when you connect your computer directly to the board, the computer will default to an auto IP address on the same subnet as the board (169.254.x.x), therefore requiring

no setup. Note: The PC may take a few minutes to default to the auto IP address and make the connection.

However, if you have trouble connecting, you may configure the IP address of the computer manually. Select Start–Settings-Network Connections–Local Area Connection. Note your original TCP/IP settings, and then set your IP address to 169.254.3.4 and your subnet mask to 255.255.0.0.

Open a Web browser and go to 169.254.3.3 to view Web pages that reside in the MCF5225x internal flash memory.

The pages are served by the MQX HTTP Web server from MQX Lab 4, Web-enabled HVAC System. Use the HVAC links to control a mock thermostat. See MQX Training Lab 4 for more information.

Insert the included USB mass storage device into the board using the mini USB-B adaptor plug found in the USB cable kit.

Hit F5 to refresh the Web page. A new link will appear on the left hand side to allow you to browse the Web pages stored on the USB mass storage device.

STEP 10

continued…
See image below.

STEP 11

To learn more about MCF5225X and MQX, read the release note and continue on to the MQX training labs.

- **Lab 1:** HVAC Controller, Freescale MQX RTOS
- **Lab 2:** USB Functionality, Freescale MQX USB and MFS
- **Lab 3:** Telnet and FTP Operation, Freescale MQX RTCS
- **Lab 4:** Web-Enabled HVAC System, Freescale MQX RTCS (Default project that is shipped on the board)
- **Lab 5:** Finding an Error Using Task Aware Debugging (TAD) in CodeWarrior
- **Lab 6:** Ethernet to Serial Bridge, Freescale MQX RTCS

Also available are simple MQX projects located in the directories labeled "examples". They can be found under the mfs, mqx, rtcs, and usb directories in the MQX installation directory.

STEP 12

## Additional Labs Available

Choose an appropriate lab document to continue with more instructions:

- MCF5225x ColdFire TCP/IP Lite Stack by InterNIche Lab
- MCF5225x ColdFire USB Lite Stack by CMX Lab
- MCF5225x USB Bootloader Lab

Working with OSBDM

OSBDM = Open Source Background Debug Mode

Ensure your CodeWarrior projects are setup correctly for the on board OSBDM debugger circuit. Type Alt+F7 to open the Project Settings window. Click Remote Debugging and select ColdFire v2-v4 JM60 OSBDM. If this option is not available, check that CodeWarrior 7.1 is installed correctly.
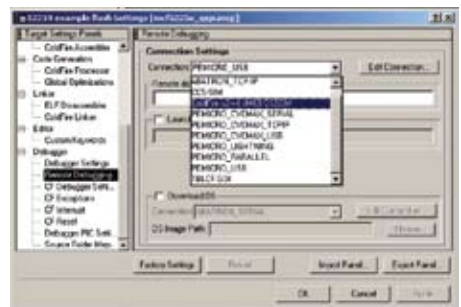
Doc Number: M52259DEMOKITQSG / REV 2
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