

Digital Signal Controllers

# MC56F8006DEMO

Small cost. Low power. Big performance.



# Get to Know the MC56F8006DEMO Board

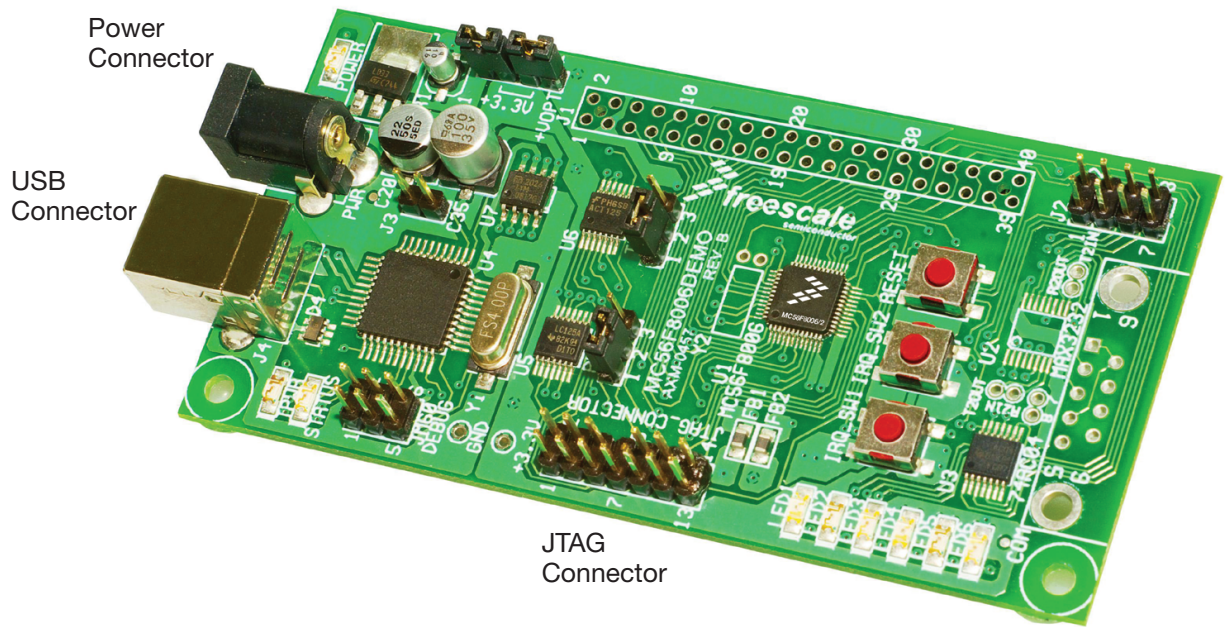


Figure 1. MC56F8006DEMO

# Introduction

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MC56F8006DEMO is a cost-effective board targeting quick digital signal controller (DSC) evaluation, demonstration and debugging of the Freescale MC56F8006VLF DSC.

It also includes an MC9S08JM60 for USB and voltage regulation for the DSC. A CodeWarrior USB TAP<sup>®</sup> is needed, and it is not provided in the kit.

This quick start guide is designed to get you ready to develop your application on the 56F8006 with in minutes.

# Step-by-Step Installation Instructions

In this quick start guide, you will learn how to set up the board and run the default LED flashing demonstration.

Additional labs are available:

- USB Serial Lab
- freeMASTER Lab
- Finite Impulse Response Filter (FIR) Lab

Please take a look at the MC56F8006DEMO labs document included in the Training section of the DVD to learn more about the key benefits the 56F8006/2 gives your application.



## Install CodeWarrior™ for Digital Signal Controllers Version 8.2.3

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. Click on Software tab to install CodeWarrior Development Studio for DSC.
2. One installation supports all DSC products.
3. Follow the on-screen instructions until installation is complete.

**STEP  
2**

## Copy demo board materials

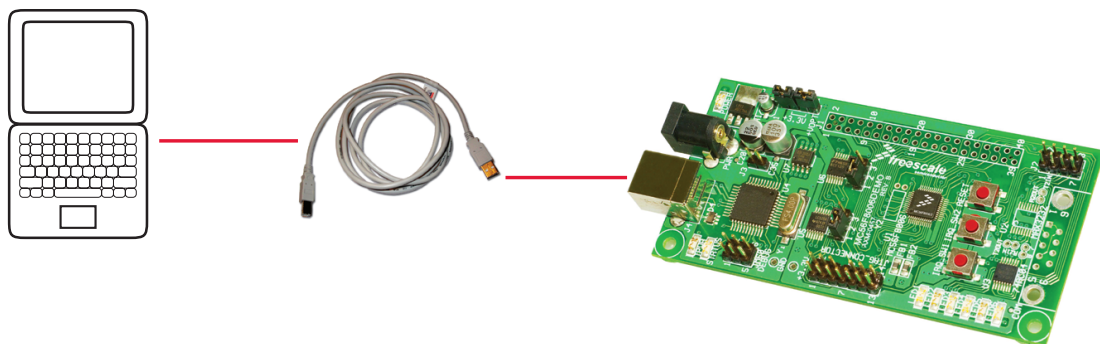
The Getting Started DVD included with the demo board kit contains a zipped folder with demo board materials. This zipped folder should be copied on to the computer for use in the next steps.

Load this DVD. The DVD will autorun. Select "Training." Select "MC56F8006 Labs." On the File Download pop-up, select "Save." Save MC56F8006DEMO\_labs.zip. Unzip this and open the MC56F8006DEMO\_labs directory.

**STEP  
3**

## Connect board to computer

Connect the card to the computer with a standard USB cable as shown below. Cancel any pop-up about a USB device driver at this point. Connect a CodeWarrior USB TAP® (Freescale part number CWH-UTP-ONCE-HE) to the JTAG\_CONNECTOR. Open the MC56F8006DEMO\_LED\_LAB directory.





## Run and debug LED lab example code on board

1. Start CodeWarrior by selecting it in the Windows Start menu.
2. From the CodeWarrior main menu, choose "File > Open" and choose the "MC56F8006DEMO\_labs\MC56F8006\_LED\_lab\MC56F8006DEMO\_LED\_LAB.mcp" file. This is the board example you copied from the Getting Started DVD included with the demo board kit.
3. Click "Open." The Project window will open.
4. The user-written C code of this example is contained in the "MC56F8006DEMO\_LED\_LAB.c" file. Double click on it to open it. There is also some user-written code in the Events.c file. These files are in the Code directory. The other files are generated by Processor Expert.
5. From the main menu, choose "Project > Debug." This will compile the source code, generate an executable file and download it to the demo board.
6. From the main menu, choose "Run > Start/Continue." The program will be executed in real time.
7. From the main menu, choose "Run > Halt." The program execution will stop. The next instruction to be executed is highlighted in the Source window.
8. 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.
9. From the main menu, choose "Run > Start/Continue." The application will restart from where it was previously stopped.





**Learn More:** For more information about Freescale products, please visit [www.freescale.com/DSC](http://www.freescale.com/DSC).

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