MCF5329/73 LogicLoader Procedures
Application Note 317

Logic Product Development
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REVISION HISTORY

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A	Eric Nelson	Initial Release; Clarified Section 1.1	AJS	3/16/06
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1   Introduction

This application note describes three different methods to restore or update the software on your kit:

- ■   Logic Product Development's LogicLoader™   Section 2.1
- ■   Freescale's CF Flasher   Section 2.2
- ■   Freescale's dBUG (only used for updating LogicLoader)   Section 2.3

Important Note: *If the software on your board has been completely erased, you must access Freescale's website and download the 'CF Flasher' tool as described in Section 2.2, "Flash Programming for ColdFire Evaluation Boards."*

The directions herein assume that you are familiar with the *Zoom ColdFire SDK QuickStart Guide* document and with using LogicLoader.

1.1   Instructions and Background Information

ColdFire Development Kits are shipped with dBUG starting at 0x00000000 in boot flash and LogicLoader starting at 0x00040000. Please use the procedures outlined in this application note to update or restore the software on your kit should those files get damaged or erased.

The latest version of LogicLoader is available from Logic's website in .zip format (https://www.logicpd.com/auth/). In order to download from the website, you must first register your kit. Within the downloaded .zip file is a group of S-record files and a Release_Notes.txt. Please consult the Release_Notes.txt for specific information and instructions regarding the S-record files.

2   MCF5329/73 Restore and Update Procedures

2.1   Using S-Record Files with LogicLoader

This section describes how to use LogicLoader to restore or update the software on your kit. You may use LogicLoader with any S-record file. In addition to S-record files, there are other file formats (.elf, .raw, .bin) supported by the 'load' command in LogicLoader. For a more detailed description of the 'load' command, please consult the *LogicLoader User's Manual*.

Note on Baud Rates: LogicLoader always uses a baud rate of 115200. However, the dBUG software defaults to a baud rate of 19200. Therefore, you will need to adjust your terminal emulator's settings when switching between the two pieces of software. You may change dBUG's baud rate using its "set baud" command.

1. At the dBUG> prompt type 'go_lolo' ('go_lolo' is essentially the same as, 'go 0x00040000'). This will launch the LogicLoader software.

2. You may be prompted to adjust the terminal emulator's baud rate setting. If prompted, first confirm the change, and then adjust the terminal baud rate setting.

3. Once LogicLoader has booted up at the losh> prompt, type 'load srec' (see Figure 2.1, below).
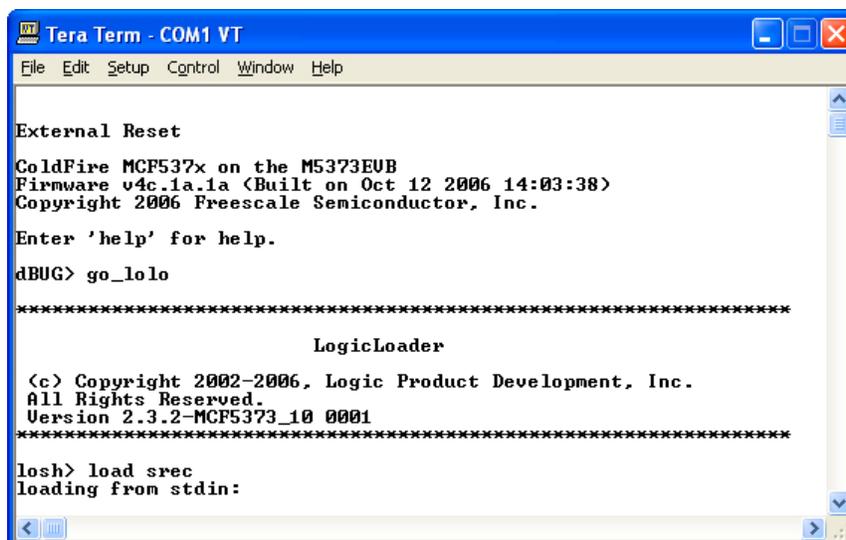
Note: LogicLoader version and platform may differ from those presented in this example image.

***Figure 2.1: Launching LogicLoader from dBUG,
then loading an S-record file using LogicLoader***

4. With the 'send file' function of TeraTerm, download an S-record file using LogicLoader. *Use Binary mode to download.* (Make sure the binary box is **checked**.)
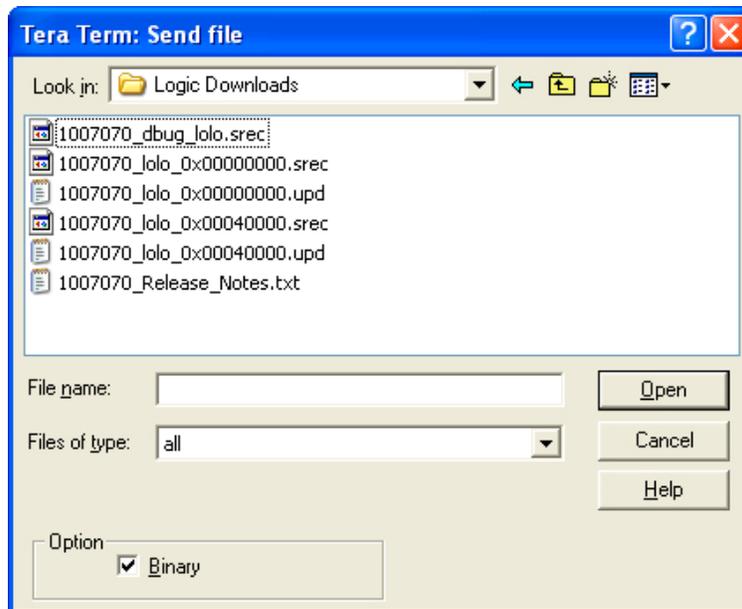
Figure 2.2: Selecting a file to send from TeraTerm using the Binary option

5. Select the S-record you want to download.

6. After the file has finished downloading, type 'burn'. If you are overwriting block 0, LogicLoader will insist that you answer 'y', then type 'confirm'.

7. The S-record file that you selected is now burned into flash.

2.2 Flash Programming for ColdFire Evaluation Boards: Getting Started

This section describes how to locate and install Freescale's 'CF Flasher' tool, a free flash programming utility created by Freescale for ColdFire evaluation boards.

1. Access Freescale's website at: www.freescale.com, and then search keyword 'CFflasher' to locate the 'CF Flasher' utility.

2. Run the setup.exe application and follow the instructions to correctly install the application.

3. Connect the BDM cable to your computer and your kit. If you have not previously used the BDM cable, consult the *Zoom ColdFire SDK QuickStart Guide* for instructions.

4. Now run the 'CF Flasher' utility by selecting the icon on your desktop or select: 'Start | Programs | CF Flasher' on your menu.

Next steps: Refer to Freescale documentation or click the CF Flasher 'Help' button to access the most current information corresponding to your kit and the S-record files that you want to burn to flash.

Logic strives to provide the most up-to-date information. However, the 'CF Flasher' utility features presented in this document are partial and subject to change. If you need software support on demand, please contact Logic Sales at: product.sales@logicpd.com.

*Figure 2.3: The 'CF Flasher' user interface*

2.3   Using the 'lolo_xxx.srec' File with dBUG

This section describes how to use Freescale's dBUG to restore or update software on your kit. These instructions show you how to restore or update LogicLoader using the dBUG program. Documentation for the dBUG program is available from Freescale.

Note on downloading with dBUG: When downloading to dBUG with the 'dl' command, the baud rate cannot be set at 115200 or download errors will occur. When downloading S-records to dBUG, set the serial port baud rate to 19200 for proper operation.

The offset portion of the command in step one is added to the image start address in order to avoid dBUG and place the image in a safe location in RAM.

1. At the dBUG> prompt type 'dl 0x40800000'.

2. With the 'send file' function of TeraTerm download the S-record file using dBUG. *Use ASCII mode to download.* (Make sure the Binary box is **unchecked.**)
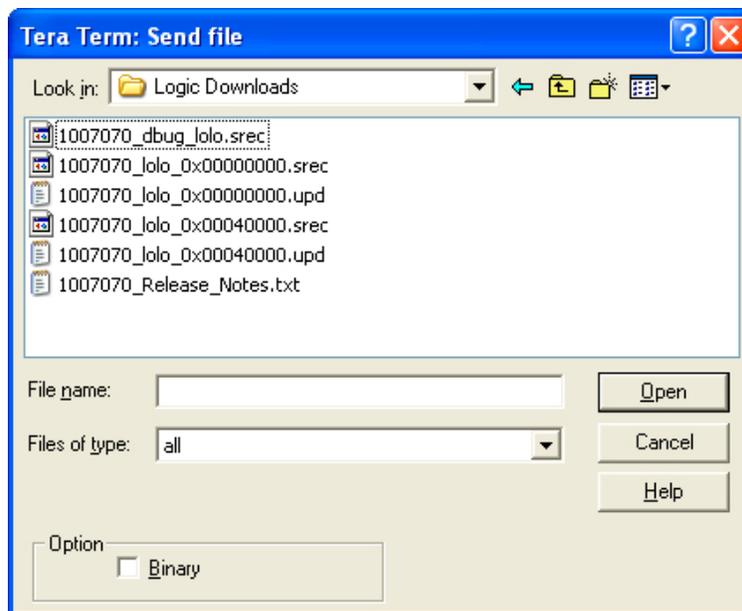
Note: Filenames may differ from those presented in this example image.

Figure 2.4: Selecting a file to send from TeraTerm in ASCII mode

3. Burn the image to flash. The length field is the size of the image in bytes. This can be found by identifying the file length of the equivalent .raw file. Or, if the image has a readme.txt file associated with it, then the size may be indicated there. At the dBUG prompt, type:
   'fl w 0x00040000 0x40840000 [length in hex]'.

   Note: To derive the numbers provided in step 3, right-click on the .srec file and open it with a text editor (S-record files are in ASCII).

4. When prompted to continue, type 'y'.

5. To jump to LogicLoader type 'go_lolo' (see Figure 2.5, below). If your terminal program displays gibberish, you may need to adjust the serial port settings. Please refer to the *Zoom ColdFire SDK QuickStart Guide* for more information.

Note: The lolo_xxx.srec is the only file in this set that is intended to be used from within dBUG.
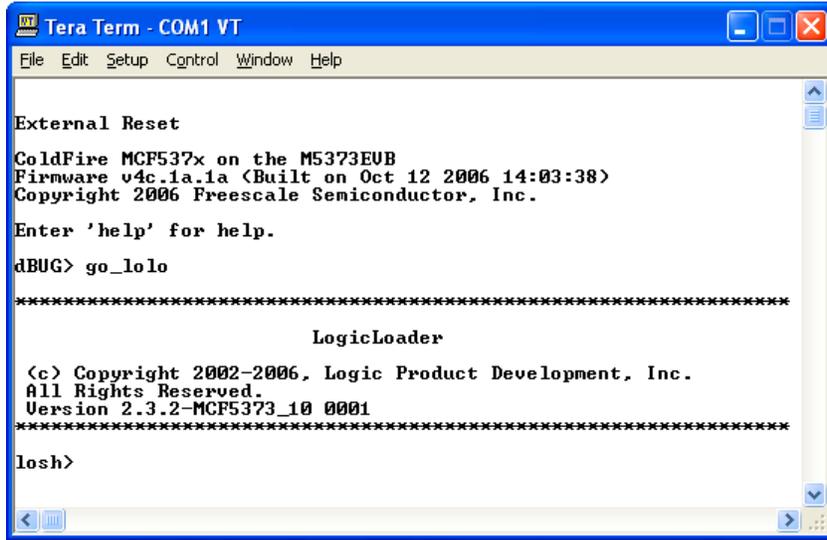
Figure 2.5: Launching LogicLoader from the dBUG prompt

3   Summary

This Application Note has described three different ways to accomplish a software update or restoration on a Freescale ColdFire SDK development kit. The first two methods, LogicLoader and the 'CF Flasher', will work with any S-record file. The third option, dBUG, may be used to update or restore LogicLoader.