AN205394

F²MC-8FX Family 8-Bit Microcontroller Batch Files for EEPROM Read

Associated Part Family: MB95F260 & MB95F310 Series

This application note describes the usage of the batch files.

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1 Introduction

1.1 EEPROM Library Outline

MB95F260 & 310 MCU has dual flash structure. The lower flash bank could be used to store data just as EEPROM. Cypress provides the EEPROM library to support this virtual EEPROM function.

1.2 Batch File Outline

Batch file is a specified command procedure file. It can be executed in Command Window in SOFTUNE.

Cypress provides batch files to read and display the data from the virtual EEPROM.

This application note describes the usage of the batch files.

2 EEPROM Read Batch Files Specification

This section describes the usage of EEPROM read batch files.

2.1 Outline

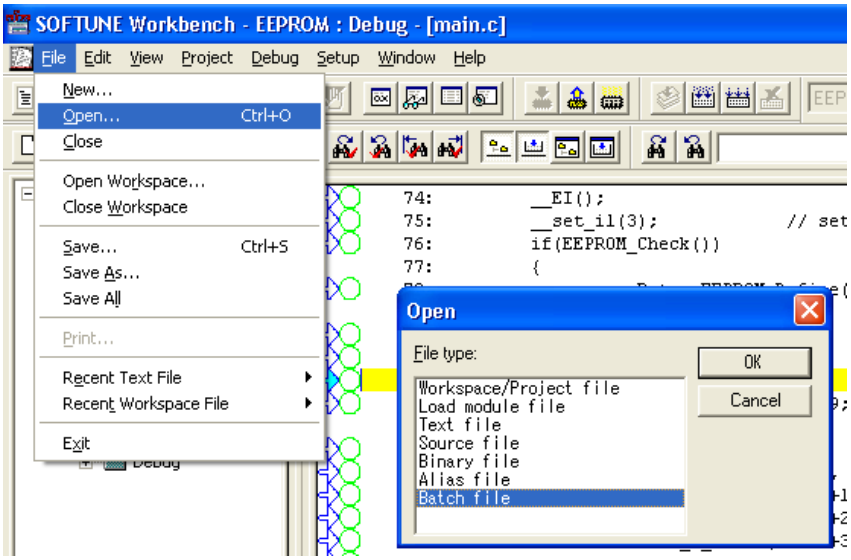
There are 2 files for EEPROM read: “eepromread_A.prc” and “read_A.prc” for 20 KB flash product (such as MB95F260 series); “eepromread_B.prc” and “read_B.prc” for 60 KB flash product (such as MB95F310 series). They must be located in the same folder.

2.2 How to Execute Batch File in SOFTUNE

There are two methods to execute the batch file. But firstly, SOFTUNE shall enter the debug mode.

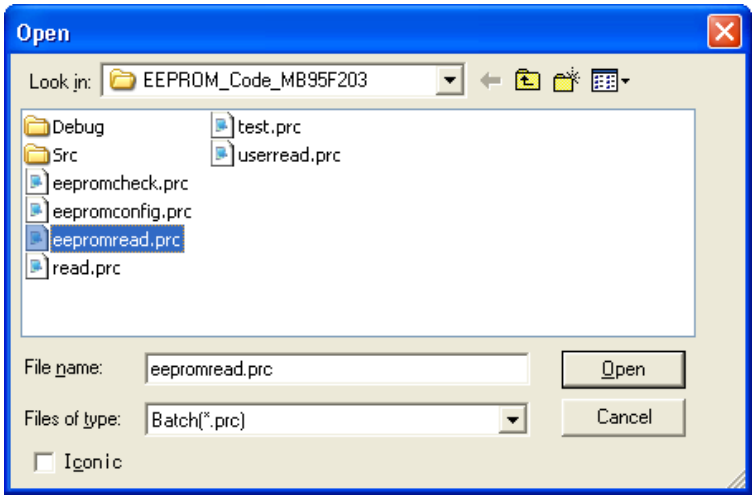
1. Select **Open** from **File** Menu. Then, select **Batch file** and click **OK**. (See Figure 1)

Figure 1. Open Batch File in Windows



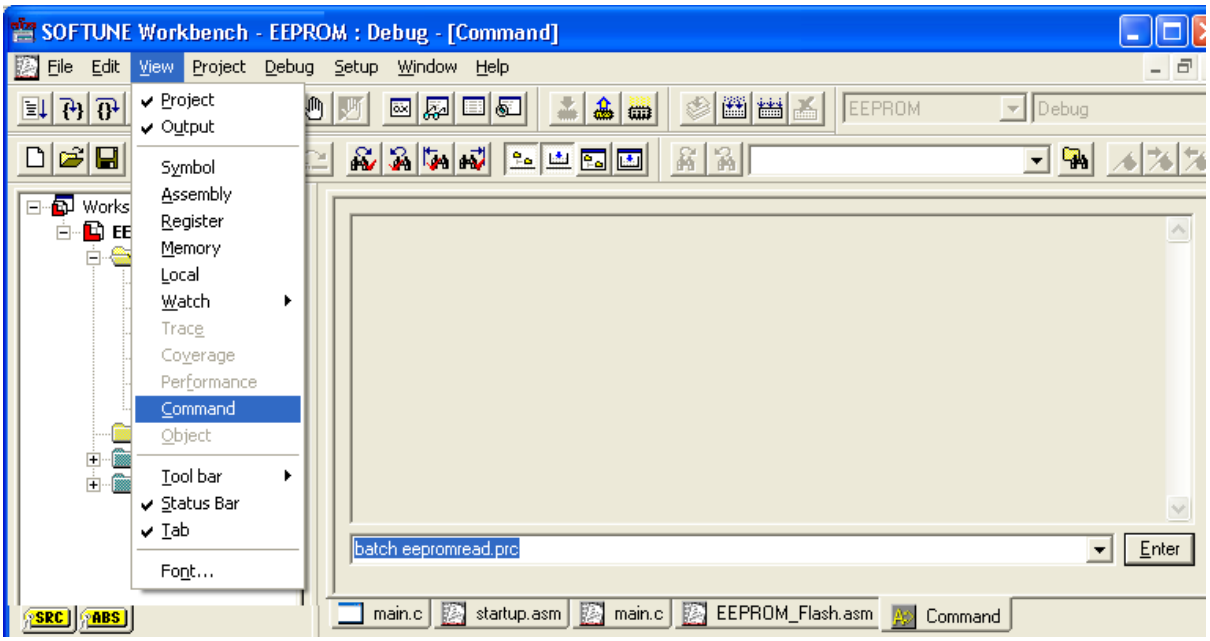
Select the batch file and click **Open**. Please see Figure 2.

Figure 2. Select Batch File



2. Select **Command** from **View** menu to open the **Command** window. Please see Figure 3. Then input command “batch *.prc” in command line and click **OK**.

Figure 3. Open Batch File in Command Window



Notes:

Only file “eepromread_*.prc” can be opened by users. File “read_*.prc” is provided for “eepromread.prc” using.

Opening batch file in windows has the same meaning as inputting command “batch *.prc”.

“Batch *.prc” command will locate the prc file from the root folder of the project which contains file “*.wsp”. It is recommended to copy these two prc files in the root folder of the project. Then, using “batch C:/…/eepromread_*.prc” can also open the batch file as you wish.

2.3 How to Read EEPROM Data by Executing Batch Files

File “eepromread_*.prc” supports 2 actual parameters to specify read start address and read length. The range of start address is from “H’0000” to “EEPROM size – 1”. And “start address + read length” should be equal to or smaller than the size of EEPROM. The following examples show how to read EEPROM data.

Batch eepromread_*.prc, 0000, 0010;	read 10H bytes data from address 0000H
Batch eepromread_*.prc, H’0000, H’0010;	read 10H bytes data from address 0000H
Batch eepromread_*.prc, 23, 12;	read 12H bytes data from address 0023H
Batch eepromread_*.prc, H’0023, H’120;	read 120H bytes data from address 0023H
Batch eepromread_*.prc, 0023, 0120, 80;	read 120H bytes data from address 0023H

(In this command, the third actual parameter will be ignored.)

And if there is no actual parameter inputted, all EEPROM data will be read out as the following sample.

Batch eepromread_*.prc	read all EEPROM data from address 0000H

But the following examples will get wrong result:

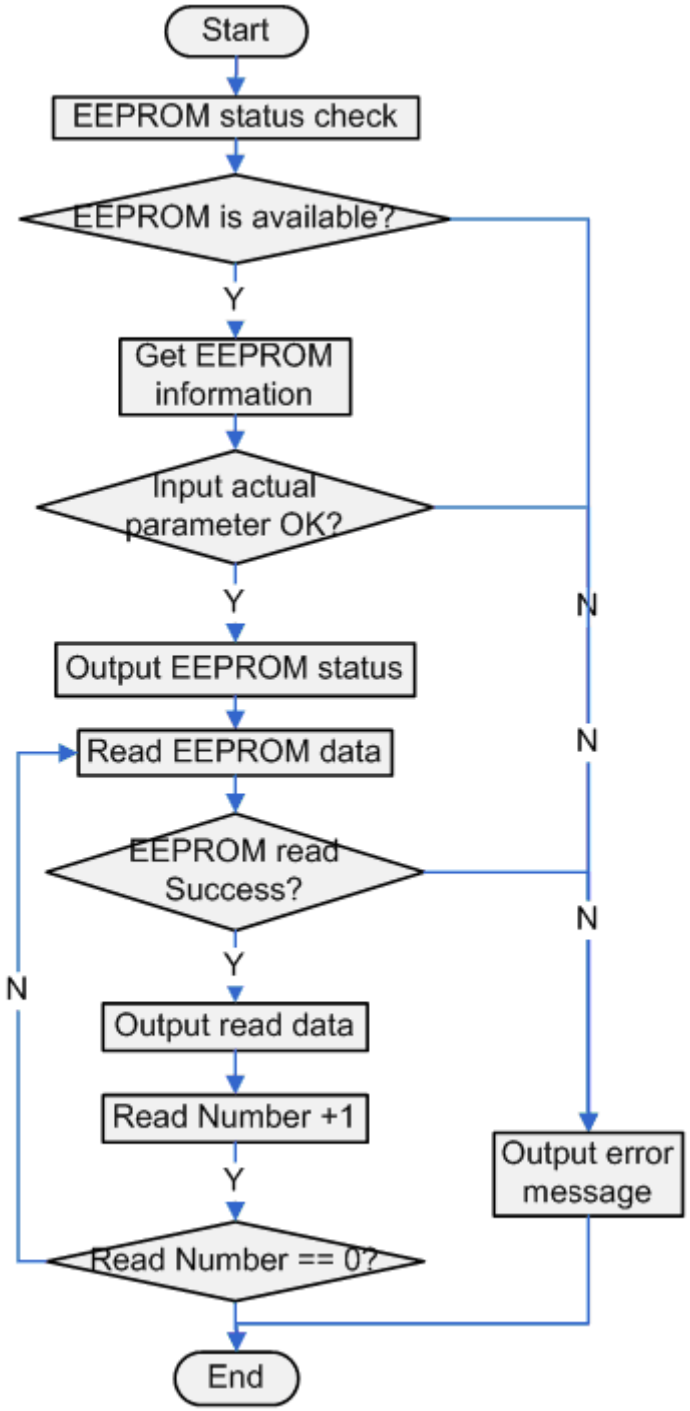
Batch eepromread.prc_*, 0000;	actual parameter 2 could not be found
Batch eepromread.prc_*, H’0000, H’0210;	read length exceeds the EEPROM size

File “read_*.prc” can only be called by “eepromread_*.prc”, and users should not open this file.

2.4 EEPROM Read Flowchart

Figure 4 shows EEPROM read flowchart.

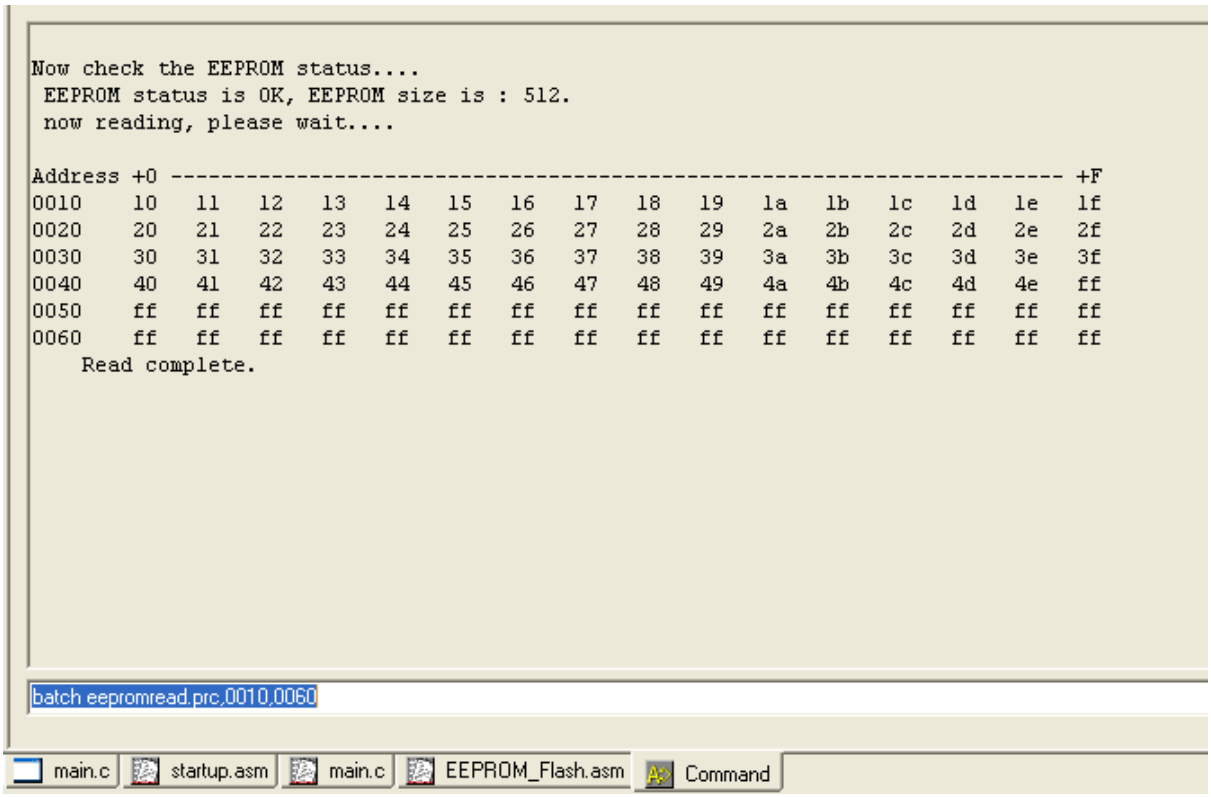
Figure 4. EEPROM Read Flowchart



2.5 Output Window of EEPROM Read

The result is displayed in Command Window after the execution of the batch file. Please see Figure 5.

Figure 5. EEPROM Read Output Result Window



The output window will show current EEPROM status, EEPROM size and the readout data.

3 Error Message of EEPROM Read

This section is the error list of EEPROM read.

3.1 EEPROM Read Error

3.1.1 EEPROM is Unavailable

Error information: EEPROM is unavailable or not initialized

Explanation: Error happens in the process of EEPROM status check. It means that EEPROM definition error occurs or EEPROM is not defined.

3.1.2 Input Command Format Error

Error information: ***Error*** Invalid input command

Explanation: Invalid actual parameters inputted.

3.1.3 Read Length Overflow

Error information: ***Error*** Requested read number overflow

Explanation: Invalid start address or read number. It means “Start address > EEPROM size” or “Start address + read number > EEPROM size”.

3.1.4 Update Flag Error

Error information: ***Error*** Read process encountered an error. Invalid update flag format

Explanation: It encounters an invalid update flag during read.

3.1.5 EEPROM Data not Found

Error information: ***Error*** Read process encountered an error. Data not found in cell

Explanation: It cannot find the specified data in the cell.

3.2 Other Error

3.2.1 Batch File not Found

Error information: *** E4203S: File open error.

Explanation: The specified batch file location is not correct or “read.prc” cannot be found.

3.2.2 Fatal Error in Debugging

Error information: *** FxxxxS …

Explanation: The debug status encountered hardware error. Please refer to “SOFTUNE” → “Help”.

3.2.3 Communication Error in Debugging

Error information: *** ExxxxS …

Explanation: The USB communication encountered error. Please refer to “SOFTUNE” → “Help”.

4 Product Table

PN	Product Description	Flash Size	Lower Bank SA	Upper Bank SA	EEPROM
MB95F200	20/16/8 pin S-flash	4/8/16 KB	--	C/E/F000$_H$	NA
MB95F260	20/16/8 pin D-flash	8/12/20 KB	B000$_H$	C/E/F000$_H$	TypeA
MB95F350L	24 pin I^2C 3 V	8/12/20 KB	B000$_H$	C/E/F000$_H$	TypeA
MB95F330	32 pin Motor 5 V	8/12/20 KB	B000$_H$	C/E/F000$_H$	TypeA
MB95F430	32 pin IH 5 V	8/12/20 KB	B000$_H$	C/E/F000$_H$	TypeA
MB95F390	48 pin Motor 5 V	20/36/60 KB	1000$_H$	2/8/C000$_H$	TypeB
MB95F370E	64 pin LCD 3 V	20/36/60 KB	1000$_H$	2/8/C000$_H$	TypeB
MB95F470	64 pin 8COM 5 V	20/36/60 KB	1000$_H$	2/8/C000$_H$	TypeB
MB95F310E	80 pin LCD 3 V	20/36/60 KB	1000$_H$	2/8/C000$_H$	TypeB
MB95F410H	80 pin 8COM 5 V	20/36/60 KB	1000$_H$	2/8/C000$_H$	TypeB

Document History

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Revision	ECN	Orig. of Change	Submission Date	Description of Change
**	-	HUAL	09/08/2008	New
			03/24/2009	Document description update
			03/05/2010	Update for MB95F310 series
			03/23/2010	Add product table for Type A&B library
*A	5264336	HUAL	05/09/2016	Migrated Spansion Application Note MCU-AN-500021-E-13 to Cypress format.

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