COM_ISP8

User Manual

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1. Introduction

ISP is the acronym of In-System Programming, and makes it possible that the user can alter the application code under the software control without removing the mounted MCU chip from the actual end product.

To do ISP, the loader program (called “ISP code”) should be pre-programmed into the target MCU’s ISP-memory before mounting the MCU chip to the PCB. When powered on, the MCU boots from the ISP-memory and runs the loader program for checking if the user wants to do ISP. If the ISP is not requested, the MCU will re-boot from the AP-memory by triggering the software reset to run the user’s application code.

COM_ISP8 is megawin’s PC-site AP corresponding to standard ISP code, which supports megawin 8051 series 8-bit MCUs via PC COM port or megawin's USB to UART bridge product. In addition to updating the MCU through the ISP, users can also read the Info area in the MCU through ISP (the default is 0x300 ~ 0x3FF). With this function, users can learn the AP-memory information under the MCU lock condition.

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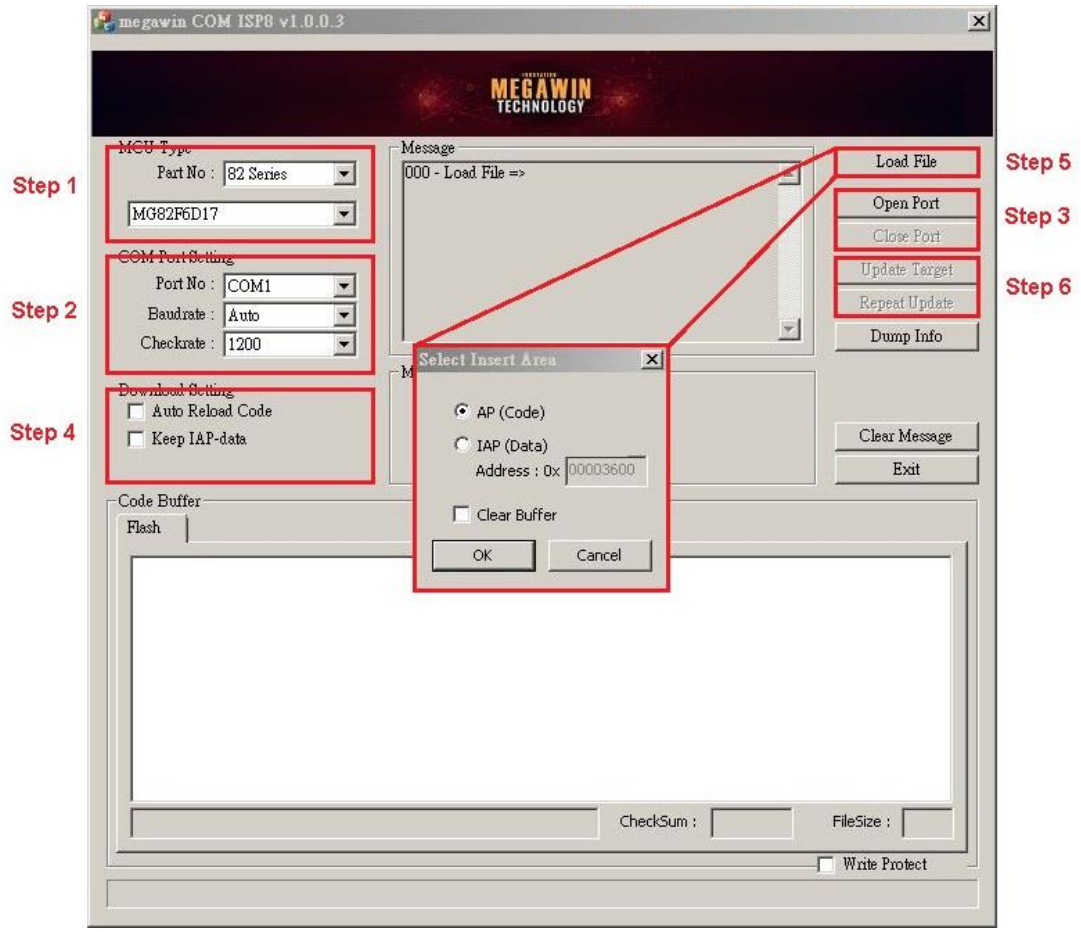
2. Update Target & Repeat Update



Step 1. Select Part No

Select a MCU Part No. to be updated. If it is found to be incorrect, ID fail will be raised. After selecting a different Part No., the Code Buffer will be cleared automatically.

Step 2. Select used COM Port & Open Port

Choose which channel to be updated. The AP will list the channels that are currently available. Users may also choose to use megawin's USB to UART Bridge (ex. MA111). Then Open the serial port.

Step 3. Connect Device and serial port

After the serial port is opened, connect the chip device to the serial port.

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Step 4. Check Download Setting

Check update options. The description of the options is as follows:

Auto Reload Code : Please refer to 4.4 Auto Reload Code.

Keep IAP-data : If selecting “Keep IAP-data”, COM_ISP8 will erase the MCU based on the file size read during the update. If it is not checked, both AP and IAP memory will be all Erased.

Step 5. Load File

Load Bin or Hex file to buffer, after clicking “OK”, users need to choose whether to place it in the AP area (read into the buffer at 0x00) or IAP (users can define any location to read into the buffer). Clicking “OK” to see update results in Code Buffer. Users can Load File repeatedly and overlay files on each other. If users execute Load File repeatedly, the overlapping file will be overwritten by the last file read. If there is a blank between the read position of the previous and last files, 0xFF will be filled in.

Check “Clear Buffer” in the “Select Insert Area” dialog. After clicking “OK”, all the Code Buffer will be cleared and then read into the File.

Step 6. Update

After clicking “Update Target”/“Repeat Update”, the Message will prompt “Please repower on DUT.” Please power on or repower on the target board. COM_ISP8 will update the program after detecting the ISP code in the MCU. After finishing the update procedure, Message will display the result.

If clicking “Repeat Update”, after the update is successful, it will automatically enter the ISP code to detect the MCU, and Message will prompt that. Users only need to repeatedly replace and repower on the MCU. The update can be repeated until users click “Stop” or the update fail occurred.

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3. Dump Info

Step 1. Select Part No

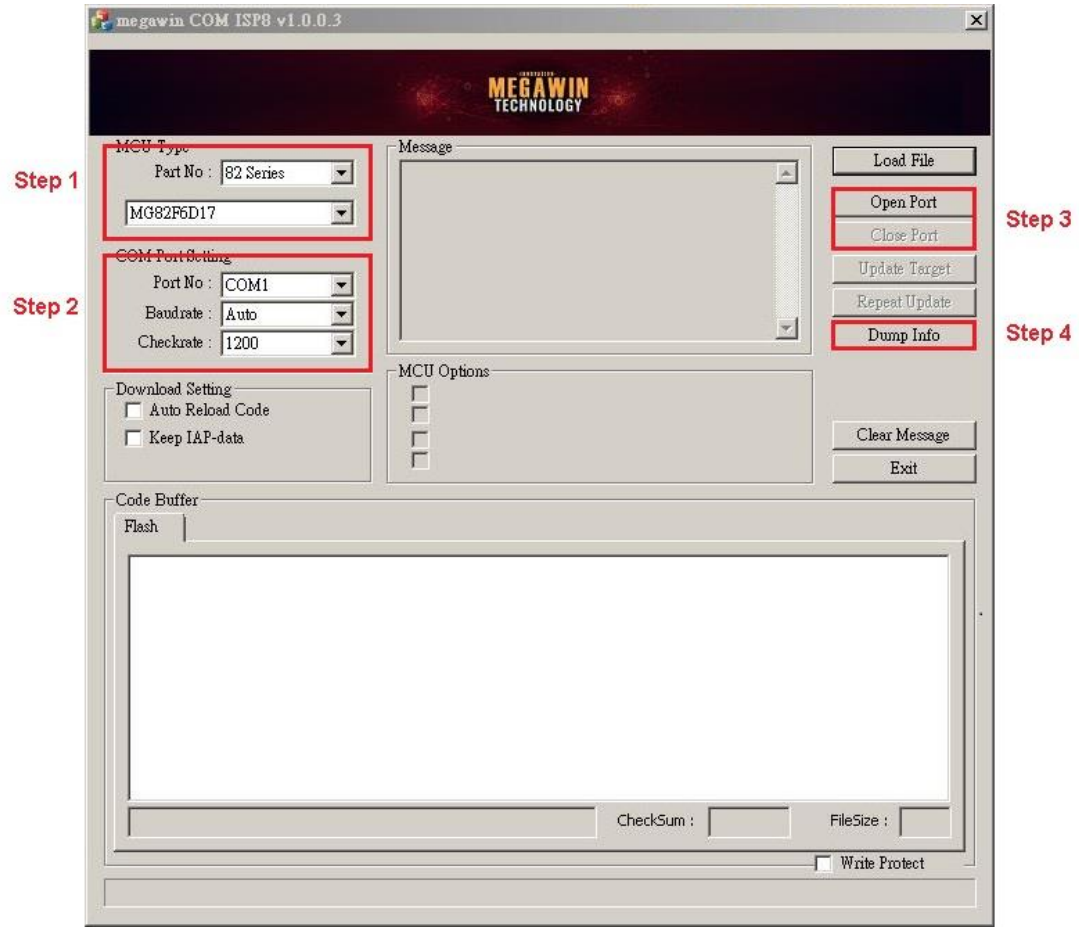
Step 2. Select used COM Port & Open port

Step 3. Connect Device and serial port

After the serial port is opened, connect the chip device to the serial port.

Step 4. Dump Info

After clicking “Dump Info”, Message will prompt “Please repower on DUT.” Please power on or repower on the target board. After COM_ISP8 detects the MCU's ISP code, it will read the information in the Info area and display it in the Code Buffer.



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4. Other

4.1. Language

Click Logo in the upper left corner of the UI to select the language from “Language.”

4.2. Check new AP

By clicking Logo in the upper left corner of the UI, users can open the interface from “Update COM ISP8 AP.” Or they may click “Check” to check if there is a new version on the official website. If there is a new version, users can directly click “Download” to download.

Check “Show update message when start”, users can set to automatically detect if there is a new version when the AP start on.

4.3. Clear Message

Click “Clear Message” button to clear all information in Message.

4.4. Auto Reload Code

Check “Auto Reload Code” to set the Code Buffer in the UI to be updated automatically. After Load File, if the file is changed, it will be reloaded into the Code Buffer automatically. This function is limited to Load 1 file only. If two or more files are superimposed, this function cannot be used.

4.5. Write Protect

In the lower right corner of the Code Buffer, users can check “Write Protect.” After checking it, the data in the Code Buffer cannot be modified manually, and the background color of the Code Buffer will turn gray.

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5. Revision History

Revision	Description	Date
v1.0.0.3	Initial version	2021/04/16
v1.0.0.4	1. Modify string “Keep IAP-data” to “Erase by file size” 2. Modify string “Write Protect” to “Not Modify Buffer”	2021/08/13
v1.2.0.0	1. Support MG82F5Bxx 2. Support MG82F6B08/001/104	2022/05/30

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