Writer32_U1Plus

User Manual

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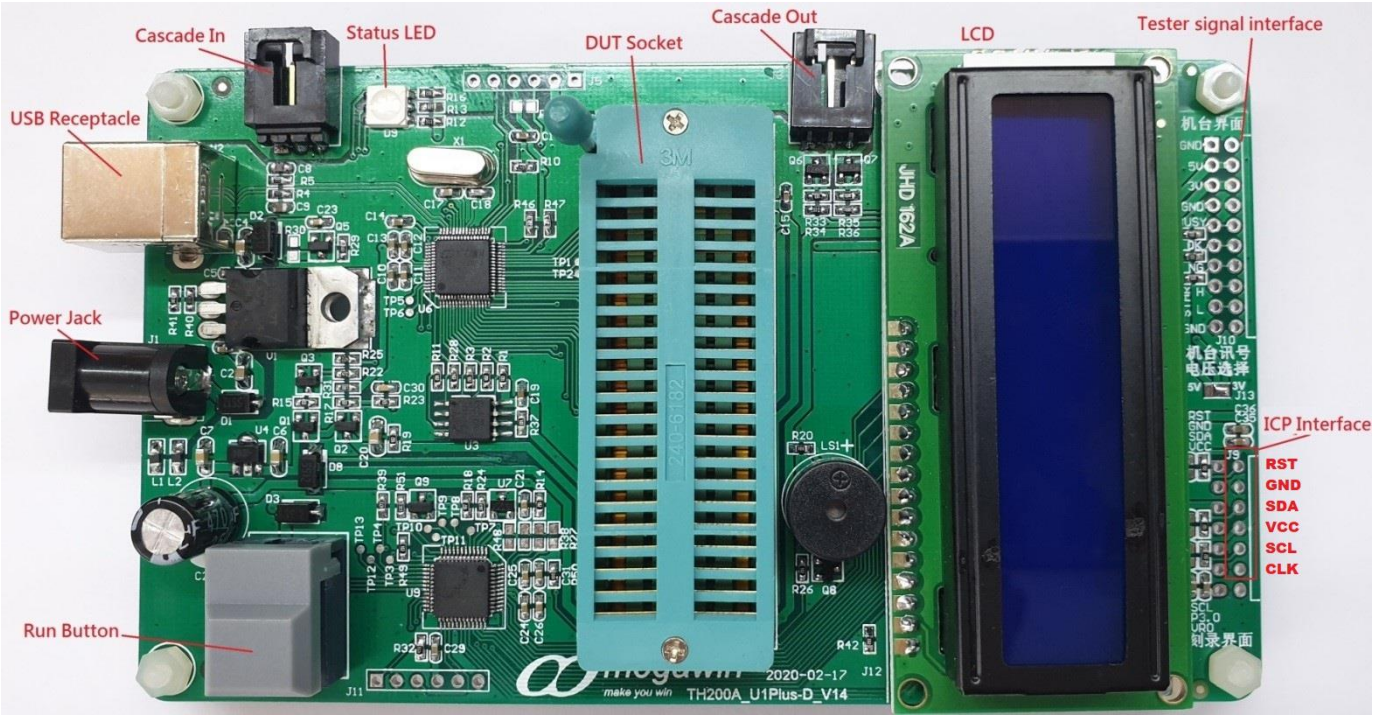
1. Introduction

Writer32_U1Plus is AP of megawin's writers(U1Plus). The PC-Site AP corresponding to U1Plus supports megawin's CMx series 32-bit MCUs. In addition to writing the entire flash area in On-Line mode, Writer32_U1Plus can also write MCU H/W Options. Moreover, Writer32_U1Plus provides megawin's standard ISP code and Off-Line mode functions as well. This AP can also generate MPJ generation tools for customers.



megawin's writers (U1Plus-D or U1Plus)

If only user connect U1Plus-D and DUT's board through J9 connector(ICP Interface), U1Plus-D can program DUT on board.

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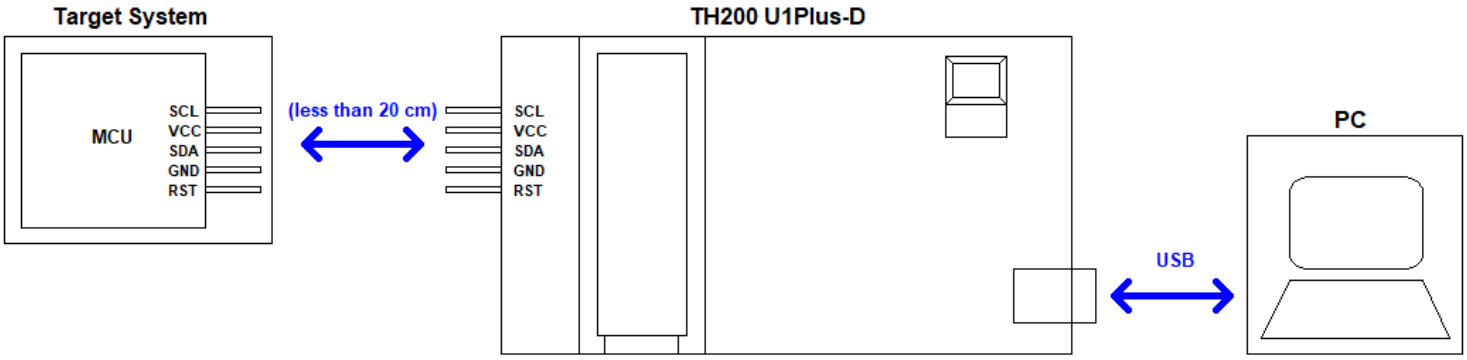
2. Hardware Setup

J9 of U1Plus-D contains the same ICP interface as M-Link, with 6 signals: RST, GND, SDA, VCC, SCL, and P30.

VR0 in the J9 is reserved for Pre-programming house, general users do not need to use it.

General users need to use 5 pins: RST, GND, SDA, VCC, and SCL.

Please connect according to the diagram below.



Hardware Connection Diagram 1

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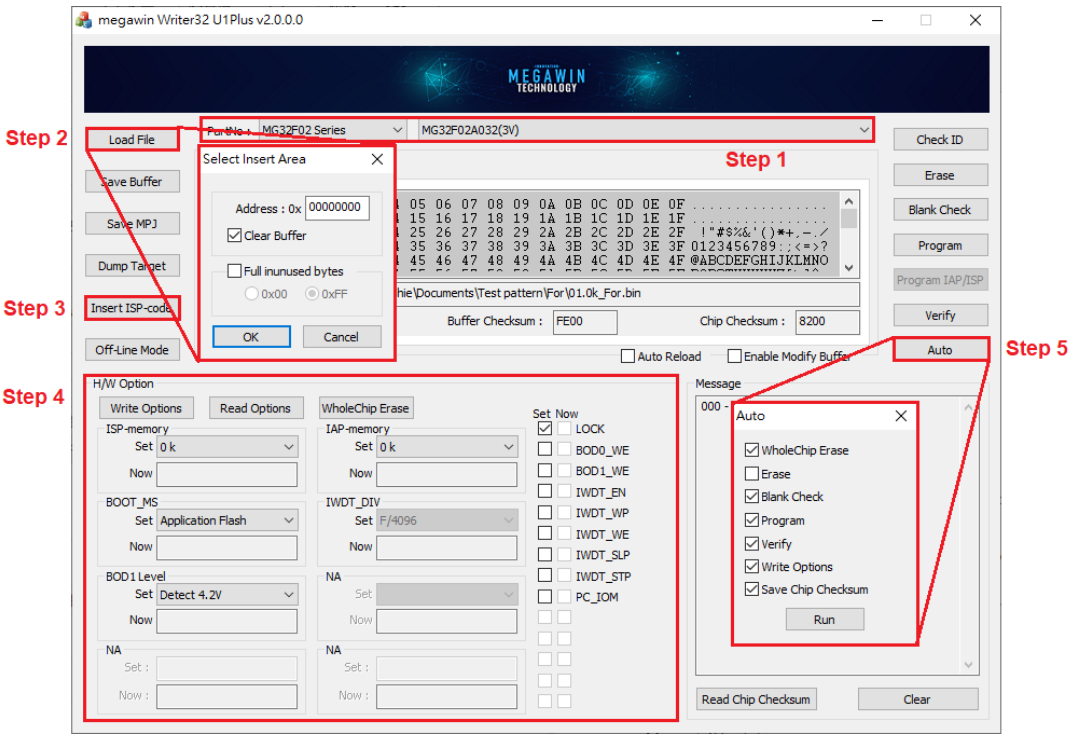
3. On-Line Mode Update



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. 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.

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Step 3. Insert ISP-code

If users need to use ISP function, please click “Insert ISP-code” to insert megawin's standard ISP code, or choose their own developed ISP code. After clicking “OK”, the AP will automatically place the ISP code in the address corresponding to the Code Buffer and set the necessary H/W Options setting concurrently.

Step 4. H/W Options

Customers can set OR setting by themselves. For the description of the setting value, please refer to the “User Guide: **8. Hardware Option**”.

Step 5. Auto

Click “Auto” to set execution options. The preset execution options are: “WholeChip Erase”, “Blank Check”, “Program”, “Verify”, and “Write Options.” Users can modify the execution options by themselves.

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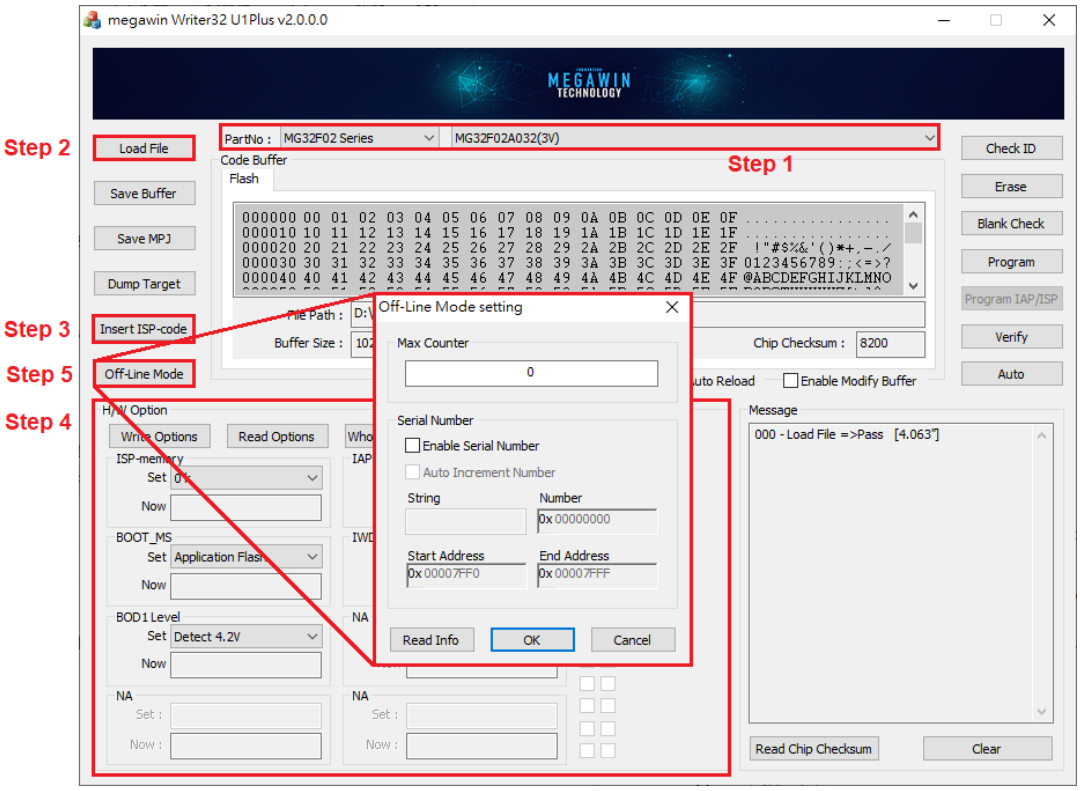
4. Off-Line Mode Update

Step 1. Select Part No

Step 2. Load File

Step 3. Insert ISP-code

Step 4. H/W Options



Step 5. Off-Line Mode

Click "Off-Line Mode" to download setting (flash & H/W options setting) to U1Plus H/W. Furthermore, users can also set Max Counter and Serial Number. Max Counter can control the number of times that U1Plus can perform off-line programming. Its default value is 0 (meaning unlimited). After Serial Number Enable, 12 strings and 8 numbers can be set and be placed in any position of the Code Buffer. The Serial Number function can even be implemented by Auto Increment Number.

Click "Read Info" to read the current Off-Line setting in U1Plus H/W.

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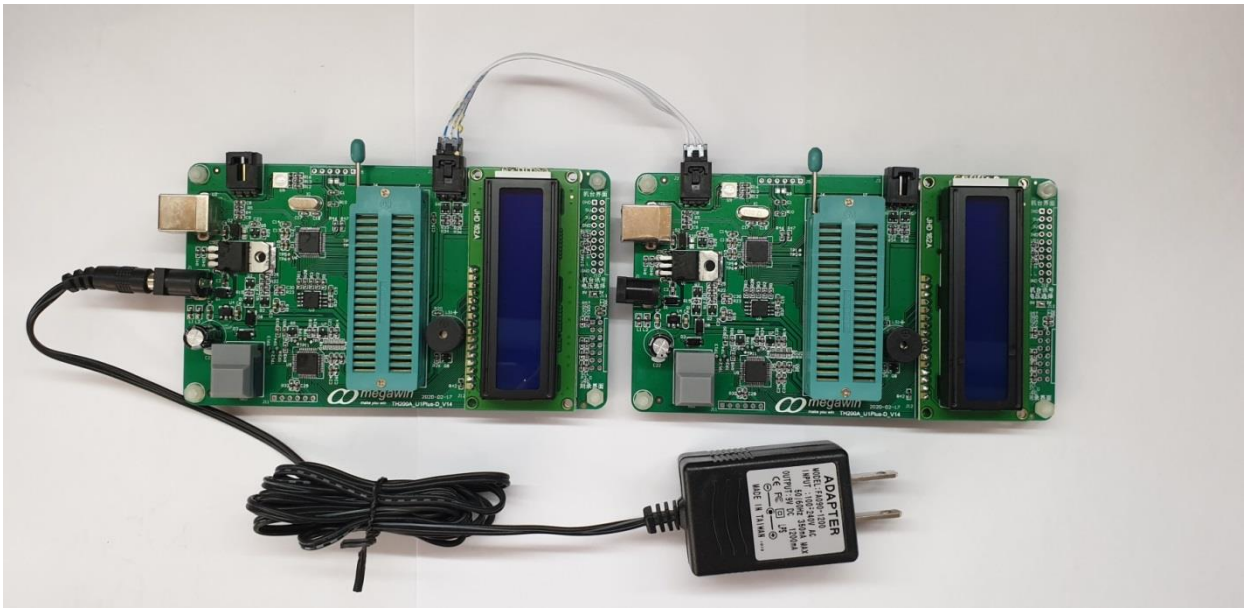
Step 6. Setup another U1Plus-D

Plug out the writer from PC, repeat “Off-line Mode Update” for another U1Plus-D. User connect the two writers as shown on the following figure.Press the RUN button to process the Off-line Copying operation, and then the LEDs will indicate the programming status:

Blue - the DUT is under programming.

Green - the operation is completed and passed.

Red - the operation is failed.



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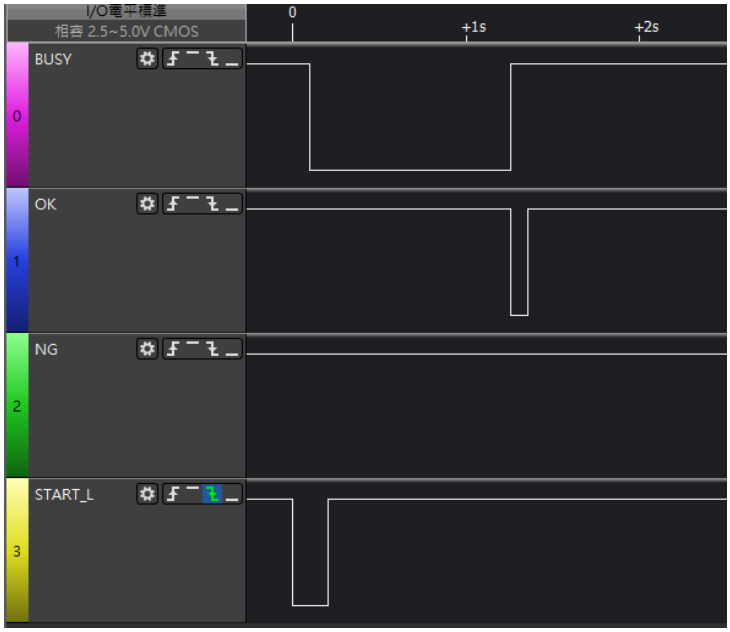
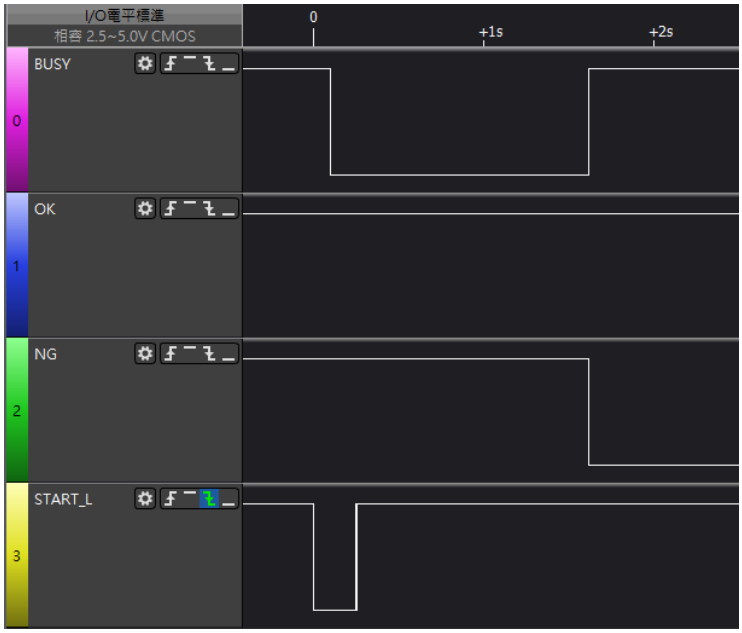
5. PS Tester signal interface

GND: Ground.
5V: source 5V power.
3V: source 3V power.
GND: Ground.
BUSY: the DUT is under programming, normal High, active Low.
OK: the operation is completed and passed, normal high, active Low 100ms pulse.
NG: the operation is failed, active Low.
Start_H: Tester triggers Run Button, active high and de-bounce 100ms..
Start_L: Tester triggers Run Button, active low and de-bounce 100ms.
GND: Ground.

U1plus-D is successful signal timing diagram for tester interface as below:



U1plus-D is fail signal timing diagram for tester interface as below:



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6. Function Button

6.1 Save Buffer

Click “Save Buffer” can save data in BIN file from Code Buffer.

6.2 Save MPJ

Click “Save MPJ” can save MPJ file. The MPJ file records the contents of the Code Buffer and the current setting of the H/W Option. Users can read the MPJ file through “Load File” and read back all settings. The MPJ file is also necessary information provided by users before megawin burns codes for customers. After users generate the MPJ file that needs to be burned, the AP will also generate an “MPJ Request Form” as a confirmation between megawin and users.

6.3 Dump Target

Click “Dump Target” to load flash data from MCU.

6.4 Check ID

Click “Check ID” to confirm if MCU ID is the same as PartNo.

6.5 Erase

Click “Erase” to erase all flash from MCU.

6.6 Blank Check

Click “Blank Check” to check flash is 0xFF from MCU.

6.7 Program

Click “Program” to download Code Buffer data to MCU flash.

6.8 Verify

Click “Verify” to check whether Code Buffer data is consistent with MCU flash.

6.9 Save Chip Checksum

“Save Chip Checksum” can write Chip Checksum to MCU.

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6.10 Read Chip Checksum

Click “Read Chip Checksum” to read Chip Checksum from MCU.

6.11 Write Options

Click “Write Options” to write H/W Options to MCU.

6.12 Read Options

Click “Read Options” to read H/W Options from MCU.

6.13 WholeChip Erase

Click “WholeChip Erase” to erase flash and H/W Options. This function can unlock ID Lock.

6.14 Clear

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

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7 Other

7.1 Language

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

7.2 Check new AP

By clicking Logo in the upper left corner of the UI, users can open the interface from “Update Writer32 U1Plus” 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.

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8 Revision History

Revision	Description	Date
v1.0.0.13	Initial version	2020/03/10
v1.0.0.14	1. Remove SWD_PIN, EXRST_PIN for H/W Options 2. Modify AutoProcess(Can keep) 3. Modify MPJ(Can't be shared with MPJ before v1.0.0.13	2020/05/13
v1.0.0.15	1. Modify "Clear Buffer" is default when "Load File"	2020/07/10
v1.0.0.16	1. Update HW picture and instruction. 2. Update ISP Code for MG32F02A132/072/032 3. Update Sub-MCU FW for v1.02	2021/04/15
v1.1.0.0	1. Add MG32F02U128/064 2. Update ISP Code for MG32F02A	2021/05/25
v1.2.0.0	1. Add MG32F02A128/064	2021/07/05
v1.2.0.1	1. Open BOD1_Level for H/W Options 2. Debug：Sometimes Off-line can't work normally	2021/07/30
v1.2.0.2	1. Debug：BlankCheck Error	2021/08/05
v1.2.0.3	1. Update MG32F02Uxxx ISP code (DFU cod)	2021/10/06
v1.2.0.4	1. Modify MG32F02A(U)064/128 Default OR	2022/06/27
v1.2.0.5	1. Add PS Tester signal interface description.	2022/09/14
v1.2.0.6	1. Modify MG32F02A064/128 Default ISP code	2023/02/15
v1.3.0.0	1. Add MG32F02V032 (Only 3V)	2023/03/29
v1.3.0.1	1. Update MG32F02A132/072、MG32F02A032 ISP v1.05 2. Debug：IAP set list error when Insert ISP	2023/05/08
v1.4.0.0	1. Update FW 80.08.0.0	2024/09/12
v1.4.0.1	1. Debug : buffer is empty when load MPJ 2. Off-Line info init	2024/09/12
v1.4.0.2	1. Typo fix 2. Add MG32F04A0/04P	2024/09/12
v1.4.0.3	1. Off SaveMPJ for MG32F04A/04P	2024/11/01
v1.4.0.4	1. Add Save/Read Checksum 2. Modify Hex2Bin function 3. Add "Chip Checksum" 4. Add "Fill unused bytes" 5. Debug: READ_SUB_DATA result	2025/09/30

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v1.4.0.5	1. Debug:ConvertOptionToOR funcion buffer error for OR[0].nUSER	2025/10/15
v1.5.0.0	1. Support MG32F02K/MG32F02N 2. Update FW 80.12.0.0 3. Add Buffer sheet 4. Support SC for options tip	2025/11/06
v1.5.0.1	1. Add "Hardware Setup"	2025/11/07
v2.0.0.0	1. Support MG32F103, MG32F104, MG32F157 and MG32L003	2026/02/11
v2.0.0.1	1. Init downloadinfo.flash/eep on 建構子 2. Modify resource Language:英文(美國)	2026/07/22
V2.1.0.0	1. Support MG32F02D032 2. Support MG32F04A064 3. Update FW 80.14.0.2 4. Remove MG32F02K064/128, MG32F02N064	2026/10/12

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