

Brief Manual of GenICE3000

V1.2

November 2009

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PART I : GenICE3000 H/W Equipment

- ◆ Introduction
- ◆ Configuration

1. Introduction

◆ Host Interface

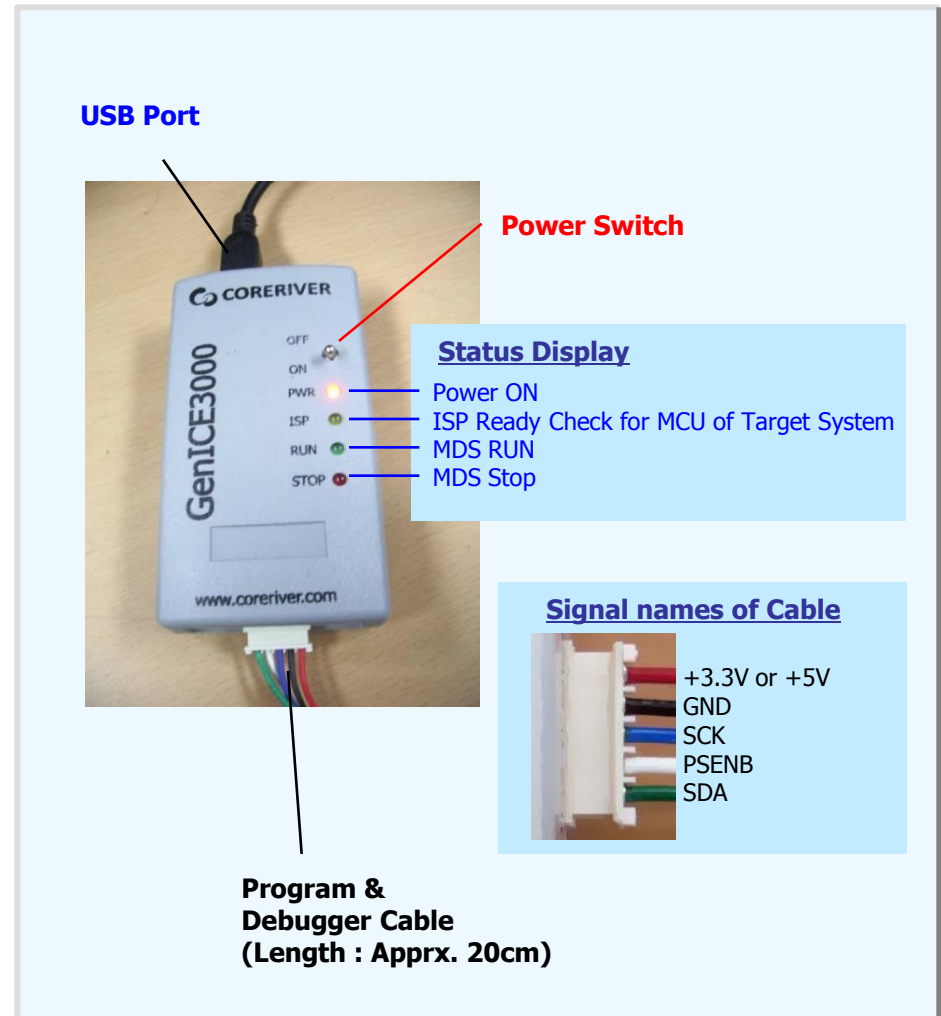
- ✓ Serial Port : COM1 ~ COM20

◆ Target Voltage : 3.3V, 5V

◆ Download : EJTAG Cable

◆ Supported Device

| | ISP | Debugger |
|--------------|-----|----------|
| MiDAS1.1 | X | O |
| MiDAS2.0 | O | X |
| MiDAS2.1 | O | O |
| MiDAS2.2 | O | Not yet |
| MiDAS3.0 | O | O |
| ATOM1.0 | O | O |
| TouchCore1.0 | O | Not yet |
| RoboCore1.0 | O | O |
| TouchCore2.X | O | O |
| TouchCore3.X | O | O |
| MiDAS1.0b | O | O |

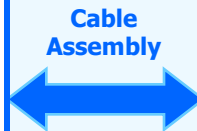


2. Configuration

◆ Configuration for ISP Programming Environment



[ROM Writer Program on PC Host]



[GenICE3000 System]

- ◆ GenICE3000 System supports both of debugger and ROM Downloader.

◆ Accessories

ISP connector



M11 EVA board



M30 Bridge board



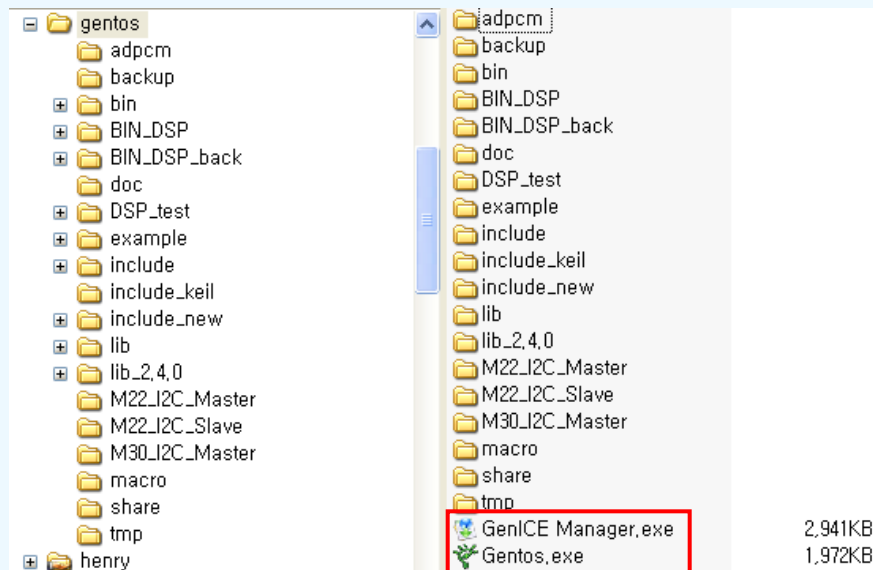


PART II : GenICE Manager S/W

- ◆ How to Download the Program
- ◆ Introduction : Program & Toolbar

1. How to Download the Program

1. Download the program "GENTOS" from the "Product Line/Supporting Tools/GENTOS" of CORERIVER Homepage (www.coreriver.com).
2. Install the program "GENTOS". (Default Directory : C:\gentos).
3. Download the program "GenICE Manager" from the "Product Line/Supporting Tools/GenICE3000" of CORERIVER Homepage (www.coreriver.com).



1. How to Download the Program

4. ROM Writer S/W using GenICE3000 system supports MiDAS 2.0 Family.

- ✓ 44-PLCC & TQFP : GC89C591A0-PL44C / TQ44C
- ✓ 64-SPDIP & LQFP : GC89C591A0-SP64C / LQ64C
- ✓ 100-TQFP : GC89C591A0-TQ100C

5. ROM Writer S/W using GenICE3000 system supports MiDAS 2.1 Family.

- ✓ 32-LQFP : GC89C520A0-LQ32I

6. ROM Writer S/W using GenICE3000 system supports MiDAS 2.2 Family.

- ✓ 20-SOIC : GC89C510A0-20SOIC
- ✓ 20-SPDIP : GC89C510A0-20SPDIP
- ✓ 20-QFN : GC89C510A0-20QFN
- ✓ 16-SOIC : GC89C510A0-16SOIC
- ✓ 16-SPDIP : GC89C510A0-16SPDIP
- ✓ 8-SOIC : GC89C510A0-8SOIC
- ✓ 8-SPDIP : GC89C510A0-8SPDIP

7. ROM Writer S/W using GenICE3000 system supports MiDAS3.0

- ✓ 32-MLF : GC89L591A0-MLF32I
- ✓ 44-MQFP : GC89L591A0-MQ44IP

1. How to Download the Program

8. ROM Writer S/W using GenICE3000 system supports ATOM 1.0 Family.
 - ✓ 24-SOIC : GC49C501G0-24SOIC
 - ✓ 20-SOIC : GC49C501G0-20SOIC
 - ✓ 8-SOIC : GC49C501G0-8SOIC
 - ✓ 8-SPDIP : GC49C501G0-8SPDIP

9. ROM Writer S/W using GenICE3000 system supports TouchCore 1.0 Family.
 - ✓ 20-SOIC : TouchCore10-20SOIC
 - ✓ 20-QFN : TouchCore10-20QFN
 - ✓ 8-SOIC : TouchCore10-8SOIC

10. ROM Writer S/W using GenICE3000 system supports TouchCore 2.0 Family.
 - ✓ 44-PQFP : TouchCore20- 44PQFP
 - ✓ 40-QFN : TouchCore20- 40QFN
 - ✓ 32-LQFP : TouchCore20-32LQFP
 - ✓ 32-QFN : TouchCore20-32QFN

11. ROM Writer S/W using GenICE3000 system supports TouchCore 2.1 Family.
 - ✓ 32-LQFP : TouchCore21- 32LQFP
 - ✓ 32-TQFN : TouchCore22- 32TQFN

1. How to Download the Program

12. ROM Writer S/W using GenICE3000 system supports TouchCore 2.3 Family.

- ✓ 20-MLF : TouchCore23- 20MFL
- ✓ 20-SOIC : TouchCore23- 20SOIC

13. ROM Writer S/W using GenICE3000 system supports TouchCore 3.0 Family.

- ✓ 32-MLF : TouchCore30- 32MLF
- ✓ 24-MLF : TouchCore30- 24MLF

14. ROM Writer S/W using GenICE3000 system supports TouchCore 3.1 Family.

- ✓ 32-MLF : TouchCore31- 32MLF

15. ROM Writer S/W using GenICE3000 system supports TouchCore 3.2 Family.

- ✓ 32-MLF : TouchCore32- 32MLF
- ✓ 24-MLF : TouchCore32- 24MLF

16. ROM Writer S/W using GenICE3000 system supports TouchCore 3.3 Family.

- ✓ 32-MLF : TouchCore33- 32MLF
- ✓ 24-MLF : TouchCore33- 24MLF

17. ROM Writer S/W using GenICE3000 system supports TouchCore 3.4 Family.

- ✓ 32-MLF : TouchCore34- 32MLF

1. How to Download the Program

18. ROM Writer S/W using GenICE3000 system supports RoboCore1.0

- ✓ 32-LQFP : RoboCore1.0-LQ32I
- ✓ 32-MLF : RoboCore1.0-MLF32I

2. Introduction : Program & Toolbar (1 of 3)

The screenshot shows the GENICE MANAGER [VER. Nov 27 2009] window. The interface includes a menu bar (file, serial, device, select), a toolbar with buttons (New, Open, Save), a central data table, and a function panel on the right. Annotations with arrows point to various components:

- Title : Version information** points to the window title bar.
- Initialize the buffer** points to the 'New' button.
- Load the HEX file(*.ihex; *.hex) to the buffer** points to the 'Open' button.
- Serial port setting** points to the 'serial' dropdown menu.
- Set Device** points to the 'device' dropdown menu.
- Set VDD** points to the '3.3v' radio button.
- Select Mode : Refer to next Slide 12.** points to the 'select' dropdown menu.
- Function : Refer to next Slide 11.** points to the 'function' panel.
- Check or modify the buffer's data of MCU ROM** points to the central data table.
- See the status for checking the progression.** points to the status bar at the bottom.

The central data table displays memory addresses and data:

| Address | Data |
|----------|--|
| 00000000 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000010 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000020 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000030 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000040 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000050 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000060 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000070 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000080 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000090 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000A0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000B0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000C0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000D0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000E0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 000000F0 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |
| 00000100 | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF |

The function panel on the right includes buttons: Erase, Blank check, Write, Lock, Auto, Run Target, Verify, Read, 0000, FFFF, Stop, Setting, GI2 UpGrade, and GI3 UpGrade.

2. Introduction : Program & Toolbar (2 of 3)

[Function]

| | | |
|-------------|---|--|
| Erase | ← | Erase : Erase the buffer's data (all 64KB ROM) |
| Blank check | ← | Blank : Check if the MCU ROM is blank status |
| Write | ← | Write : Program the MCU ROM using HEX code in the Buffer |
| Lock | ← | Lock |
| Auto | ← | Auto : Auto burning according to below "Setting/Auto Config" |
| Run Target | ← | Run(or Stop) Application : Execution or stop Target board |
| Verify | ← | Verify : Verify between the MCU ROM and HEX Code in the Buffer |
| Read | ← | Read : Read HEX code from MCU ROM to the buffer |
| 0000 FFFF | ← | Selecr Addr : Select start & end Address |
| Stop | ← | Stop : Stop the current progressing function |
| Setting | ← | Setting : Set the "Auto Config" Option, "User Define", and "Information Block" |
| GI2 UpGrade | ← | Upgrade : Upgrade for GenICE2000 |
| GI3 UpGrade | ← | Upgrade : Upgrade for GenICE3000 |

setting

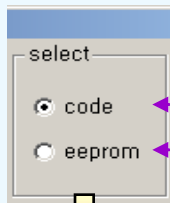
auto config | user define | information block | lock bit

☒ Erase ☒ Write
☐ Blank ☐ Verify
☐ Lock

OK
Cancel

- ◆ User can set the wanted option for MCU
- ◆ Don't change the default setting of "User Define" and "Information Block" of tab menus.

[Select]



Code : Change the "Buffer Mode" to "Code Buffer"

EEPROM : Change the "Buffer Mode" to "EEPROM Buffer"



- ◆ After select the buffer mode, display the selected buffer.
- ◆ User can modify the buffer's data.

[Function with Buffer Mode]

- ◆ **The below commands only run with selected buffer mode (Code or EEPROM Buffer).**
 - Commands : Blank, Write, Verify, Read, Lock, and Auto
 - If you select the **"Code buffer"** and run the "write" command, ROM Writer Program writes the data from **"Code Buffer"** to **FLASH** of MCU.
 - If you select the **"EEPROM buffer"** and run the "write" command, ROM Writer Programs write the data from **"EEPROM Buffer"** to **EEPROM** of MCU.
- ◆ **The Erase command runs over all the program buffer (Code & EEPROM Buffer).**



PART III : How to Use ISP (In-System Programming)

- ◆ Procedure

1. Procedure

(1 of 6)

1. Set up the GenICE3000 system, target system board and PC.
 - 1) ROM Writer Program on PC Host



[ROM Writer Program on PC Host]



[GenICE3000 System]



[Target board]

2. Set up Accessories

- 1) USB cable
- 2) ISP connector

ISP connector



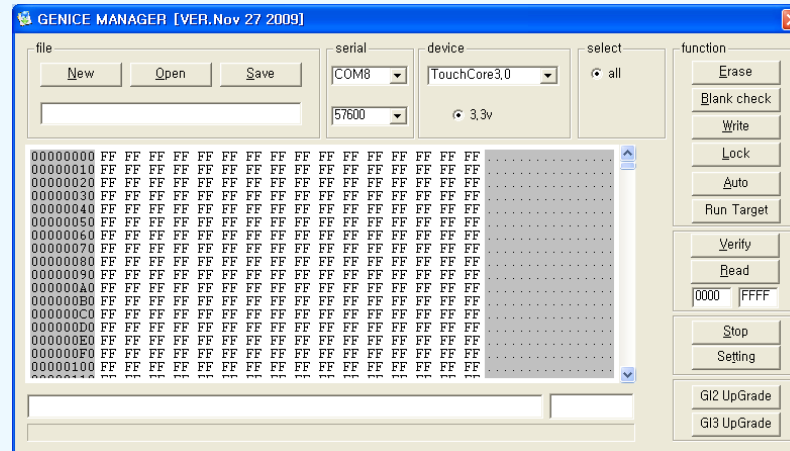
M30 Bridge board



1. Procedure

(2 of 6)

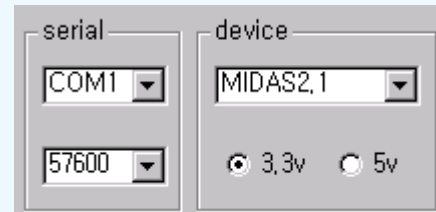
3. Run the GenICE3000 Manager (**GenICE_Manager.EXE**).



4. set serial baud rate like below, and select which device you want to use.
serial = COM1, 57600 (default) device = what you want and select target VDD



[In MiDAS2.0/MiDAS3.0]

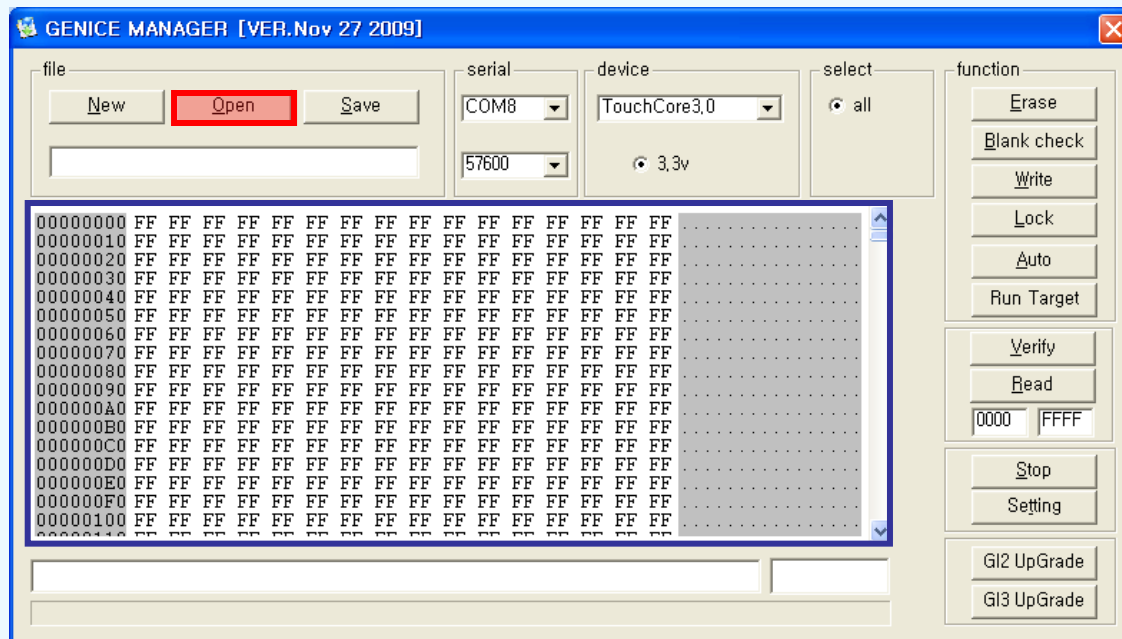


[In Other Device]

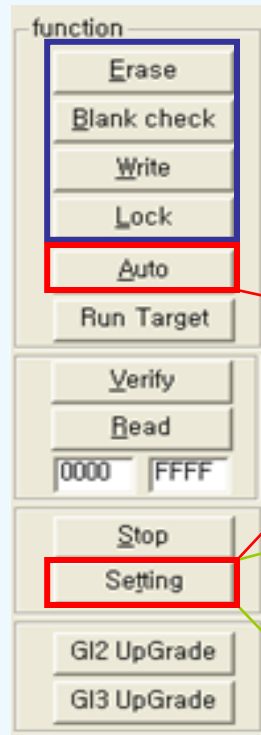
1. Procedure

(3 of 6)

5. Power on the GenICE3000 system.
6. Load the HEX File using tool button “Open”.
7. Select the buffer mode for Commands (Blank, Write, Verify, Read, Lock, and Auto)
8. User can modify the HEX code.



11. How to Program the MCU Device : Total 2 Methods

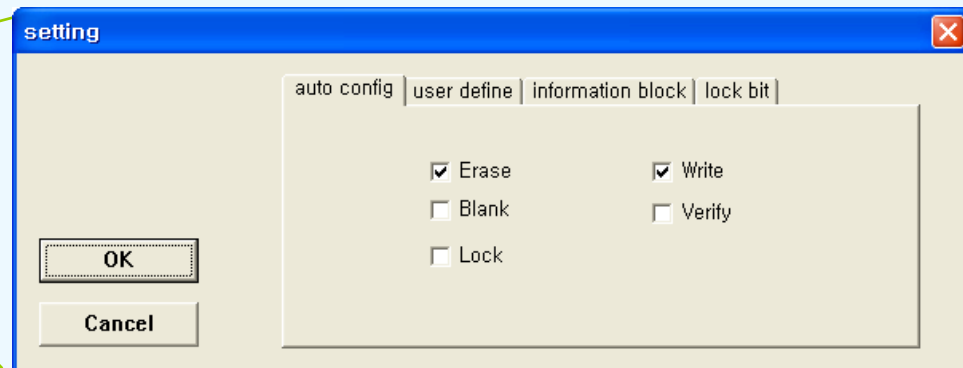


[Method 1] step by step using "Tool Buttons"

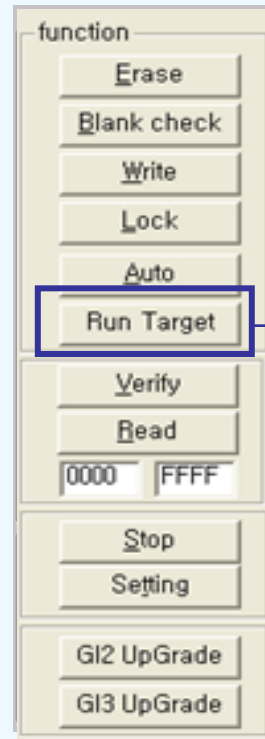
- 1) Press the button "Erase", and check the result.
(User Must execute "Erase" Command before "Write" Command.)
- 2) Press the button "Blank", and check the result.
- 3) Press the button "Write", and check the result.
- 4) Press the button "Lock", and check the result.

[Method 2] using "Auto Burning"

- 1) Set the "Auto" burning options using tool button "Setting/Auto Config".
- 2) Press the button "Auto", and check the result.



12. Run Application the MCU Device



If you click the button "Run app", the target board will operate and it will change to the button "Stop app".

Stop app

13. Stop Application

14. Upgrade for GenICE 2000/3000

15. Upgrade Start

16. Upgrade Running

17. Finish Upgrade

18. Power Off

The screenshot displays the GenICE Manager software interface. On the left is a vertical toolbar with various function buttons: Erase, Blank check, Write, Lock, Auto, Run Target, Verify, Read, a range selector (0000 to FFFF), Stop, and Setting. At the bottom of the toolbar, 'GI2 UpGrade' and 'GI3 UpGrade' are highlighted with a blue box. An arrow points from this box to a red-bordered box labeled 'Upgrade'. To the right of the toolbar, the steps 15 through 18 are listed. Step 15 is accompanied by a 'GenICE_Manager' dialog box with a yellow warning icon and the text 'GenICE3000 Upgrade Start!' and a '확인' (Confirm) button. Step 16 is accompanied by a progress bar labeled 'Update - Address[0x0520]' with a small blue progress indicator. Step 17 is accompanied by another 'GenICE_Manager' dialog box with a yellow warning icon and the text 'Power Off Please!! min[1]sec[31]' and a '확인' (Confirm) button. Step 18 is listed without a corresponding dialog box.

Appendix C : Update History

- ◆ V1.0
 - ✓ First Release.
- ◆ V1.1
 - ✓ Add 'How to Download the Program'
- ◆ V1.2
 - ✓ Add Select Address read, Upgrade function