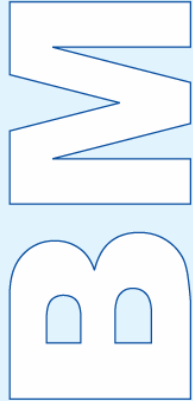




GenICE52-II

BM-GenICE52II-V1.1



Brief Manual of GenICE52-II

V1.1

July 2006

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PART I : GenICE52-II H/W Equipment

- ◆ Introduction
- ◆ Configuration

1. Introduction

◆ Host Interface

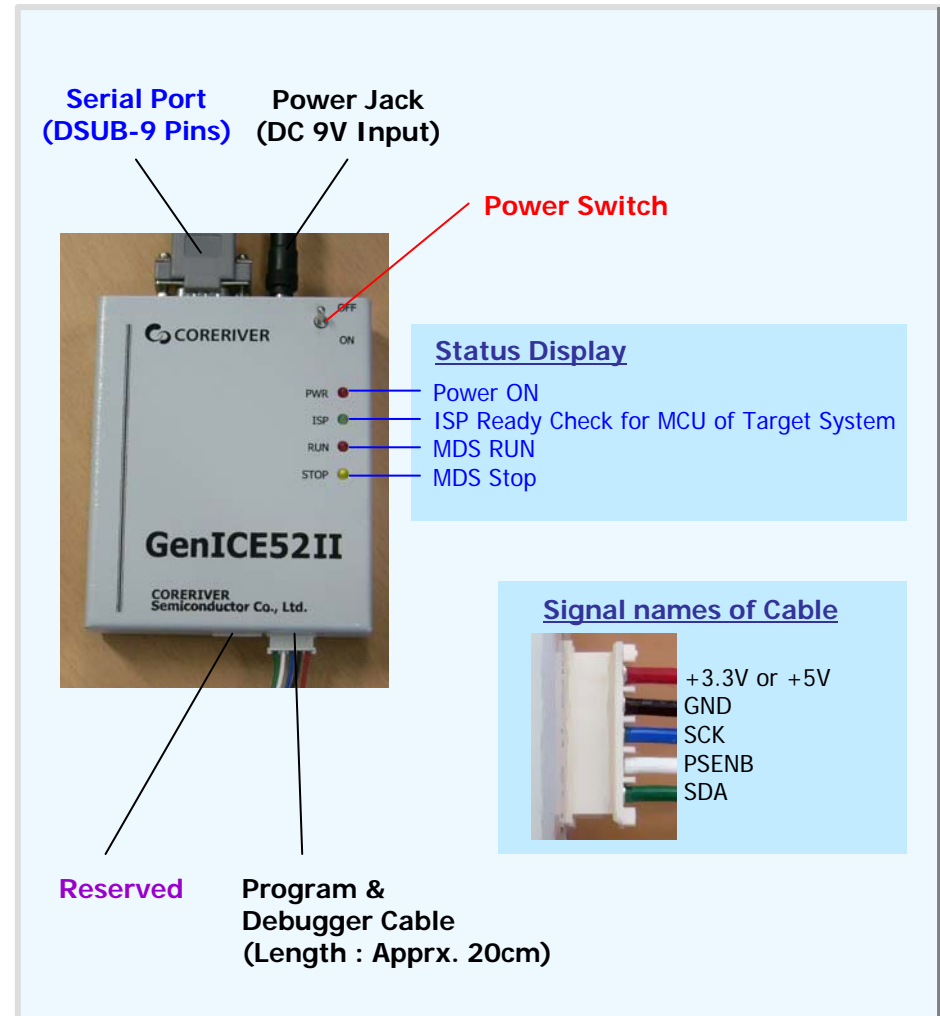
- ✓ Serial Port : COM1 ~ COM4

◆ Target Voltage : 3.3V, 5V

◆ Download : EJTAG Cable

◆ Supported Device

	ISP	Debugger
MiDAS1.1	X	O
MiDAS2.0	O	X
MiDAS2.1	O	O
AFCore1.0	O	O
RoboCore1.0	O	O
TPMS1.0	O	O

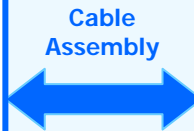


2. Configuration

◆ Configuration for ISP Programming Environment



[ROM Writer Program on PC Host]



[GenICE52-II System]

- ◆ GenICE52-II System supports both of debugger and ROM Downloader.

◆ Accessories

Serial Cable
(1.5 meter)



ISP connector



Power Adaptor
(SMPS, 9V, 3Ah)



EVA board

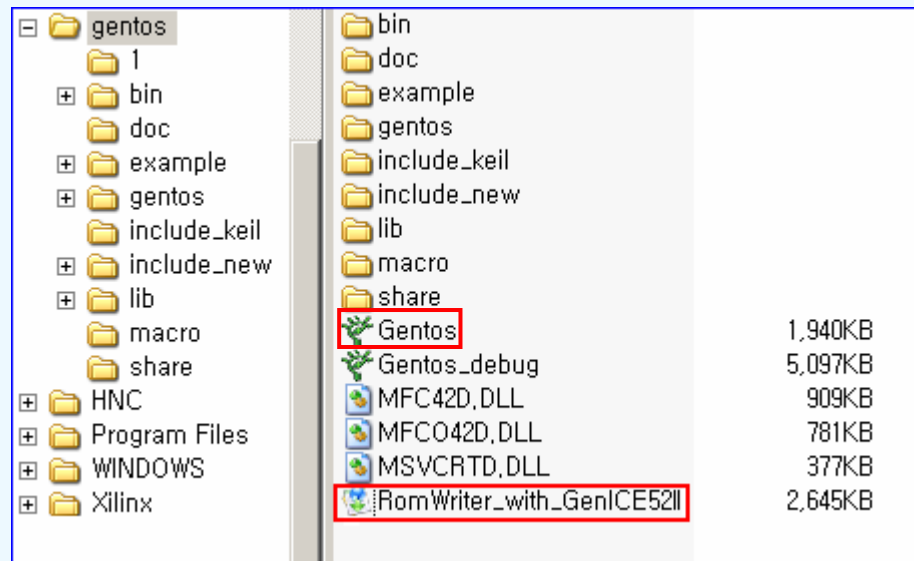


PART II : ROM Writer S/W

- ◆ 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 "RomWriter_with_GenICE52II" form the "Product Line/Supporting Tools/GenICE52 II" of CORERIVER Homepage (www.coreriver.com).



Note : ROM Writer Program for MiDAS2.0 is appended to GENTOS V2.5 (or upper version).

1. How to Download the Program

4. ROM Writer S/W using GenICE52-II system supports MiDAS 2.0 Family.

- ✓ 44-PLCC & TQFP : GC89C591A0-PL44C / TQ44C
- ✓ 64-SPIDP & LQFP : GC89C591A0-SP64C / LQ64C
- ✓ 80-TQFP : GC89C591A0-TQ80C
- ✓ 100-TQFP : GC89C591A0-TQ100C

5. ROM Writer S/W using GenICE52-II system supports MiDAS 2.1 Family.

- ✓ 32-LQFP : GC89C520A0-LQ32I

6. ROM Writer S/W using GenICE52-II system supports AFCore 1.0

- ✓ 32-MLF : AFCore1.0-MLF

7. ROM Writer S/W using GenICE52-II 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 RomWriter for GenICE52 software interface. The window title is "RomWriter for GenICE52". The interface includes a file menu with "New" and "Open" buttons, a serial port selection dropdown set to "COM1" with a baud rate of "57600", a device selection dropdown set to "MIDAS2.1", and VDD selection radio buttons for "3.3v" (selected) and "5v". A "select" section has radio buttons for "code" (selected) and "eeprom". A "function" toolbar contains buttons for "Erase", "Blank check", "Write", "Verify", "Read", "Lock", "Auto", "Run app", "Stop", "Setting", and "Update". A central data display area shows a hex dump of memory addresses from 00000000 to 000000C0, with all values currently set to "FF FF FF FF". A status bar at the bottom is highlighted in green.

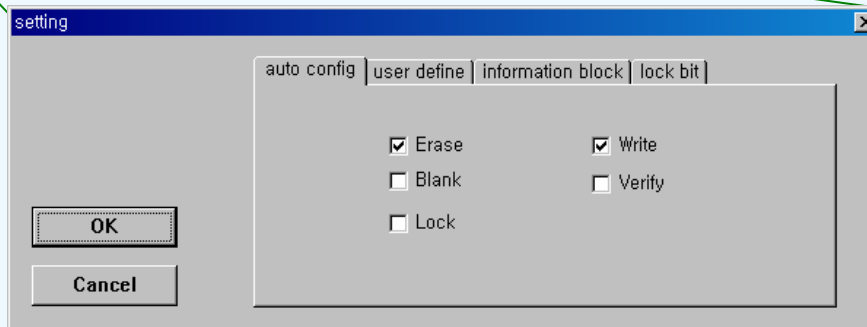
Annotations with arrows pointing to specific parts of the interface:

- Title : Version information
- Initialize the buffer
- Load the HEX file(*.ihex; *.hex) to the buffer
- Serial port setting
- Set Device
- Set VDD
- Select Mode : Refer to next Slide 11.
- Function : Refer to next Slide 10.
- See the status for checking the progression.
- Check or modify the buffer's data of MCU ROM



[Function]

- Erase** : Erase the buffer's data (all 64KB ROM)
- Blank** : Check if the MCU ROM is blank status
- Write** : Program the MCU ROM using HEX code in the Buffer
- Verify** : Verify between the MCU ROM and HEX Code in the Buffer
- Read** : Read HEX code from MCU ROM to the buffer
- Lock**
- Auto** : Auto burning according to below "Setting/Auto Config"
- Run(or Stop) Application** : Execution or stop Target board
- Stop** : Stop the current progressing function
- Setting** : Set the "Auto Config" Option, "User Define", and "Information Block"



- ◆ 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" (62KB; 0000h ~ F7FFh)

EEPROM : Change the "Buffer Mode" to "EEPROM Buffer" (2KB; F800h ~ FFFFh)

```

0000F800 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F810 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F820 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F830 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F840 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F850 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F860 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F870 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F880 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F890 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F8A0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F8B0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F8C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0000F8D0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
    
```

- ◆ 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 (64KB; Code & EEPROM Buffer).**

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

- ◆ Procedure

1. Set up the GenICE52-II system, target system board and PC.
 - 1) ROM Writer Program on PC Host



[ROM Writer Program on PC Host]



[GenICE52-II System]



[Target board]

2. Set up Accessories

- 1) Serial cable
- 2) ISP connector
- 3) Power adaptor (9V, 3A)

Serial Cable



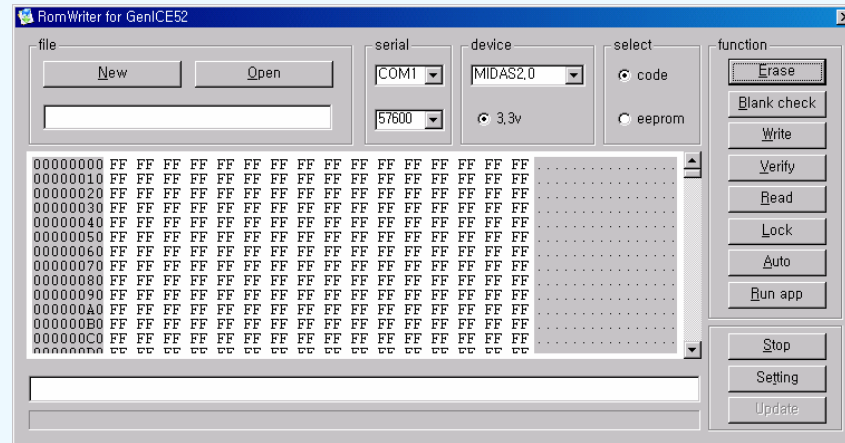
ISP connector



Power Adaptor (SMPS, 9V, 3Ah)



3. Run the ROM Writer (RomWriter_with_GenICE52II.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



[\[In MiDAS2.0\]](#)



[\[In MiDAS1.1/MiDAS2.1/AFCore1.0/RoboCore1.0\]](#)

5. Connect the GenICE52-II system to host PC with serial cable
 - 1) Check that Power Switches of the GenICE52-II systems are **OFF**.
6. Connect the cable of GenICE52-II system to ISP connector for MCU of target system.
 - 1) Check that Power Switches of two systems are **OFF**.
 - 2) Connect the 5 Signals : **VDD**, **GND**, **SCK**, **PSENB** and **SDA**

Target System Board GenICE52-II

PSENB of MCU connected to GND for Programming



Program & Debugger Cable

[\[ISP Pin Configuration In GenICE52/MiDAS2.0\]](#)

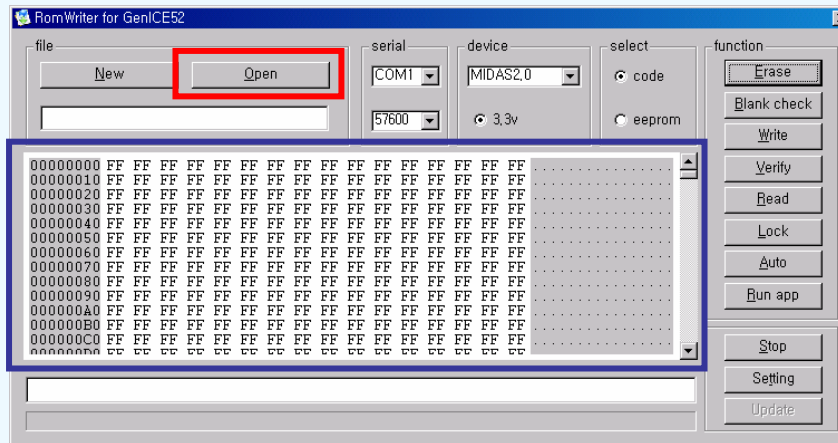
- V_{DD} (+3.3V)
- V_{SS} (GND)
- SCK (P0.2)**
- PSEN (P1.2)**
- SDA (P2.1)**

[\[ISP Pin Configuration In MiDAS2.1/AFCore1.0/RoboCore1.0\]](#)

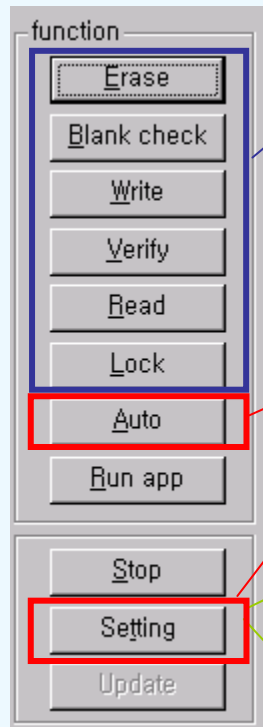
- V_{DD} (+3.3V or +5V)
- V_{SS} (GND)
- MDS_SCL (P0.2)**
- RESETB (P1.2)**
- MDS_SDA (P2.1)**

- In MiDAS2.1/AFCore1.0/RoboCore1.0 Ensure connect PSEN to RESETB pin.

7. Power on the GenICE52-II system.
8. Load the HEX File using tool button “Open”.
9. Select the buffer mode for Commands (Blank, Write, Verify, Read, Lock, and Auto)
 - ✓ Code (62K : 0000h ~ F7FFh)
 - ✓ EEPROM (2K : F800h ~ FFFFh)
10. User can modify the HEX code.



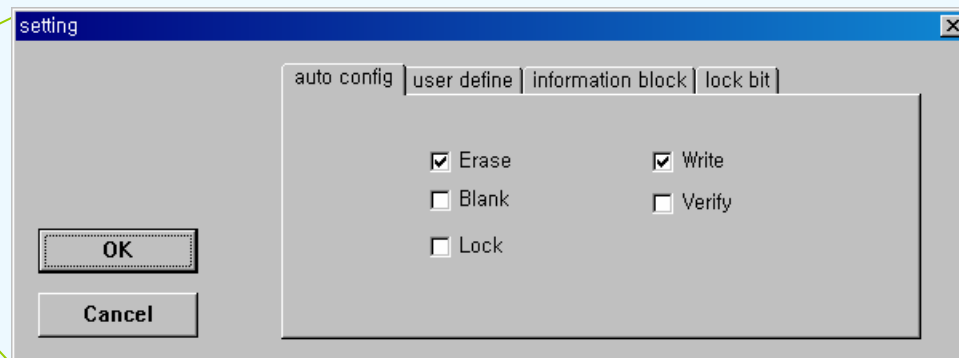
11. How to Program the MCU Device : Total 2 Methods

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

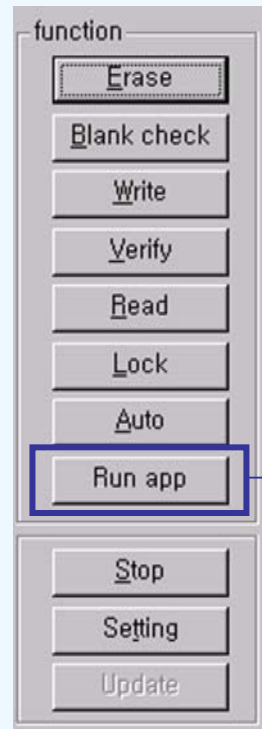
- 1) Press the button "Erase", and check the result.
(User Must execute "Erase" Command before "Write" Command.)
- 2) Press the button "Blank", and check the result.
- 3) Press the button "Write", and check the result.
- 4) Press the button "Verify", and check the result.
- 5) Press the button "Lock",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

[Method 2] using "Auto Burning"

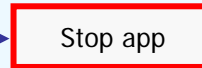
- 1) Set the "Auto" burning options using tool button "Setting/Auto Config".
- 2) Press the button "Auto", and check the result.



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".

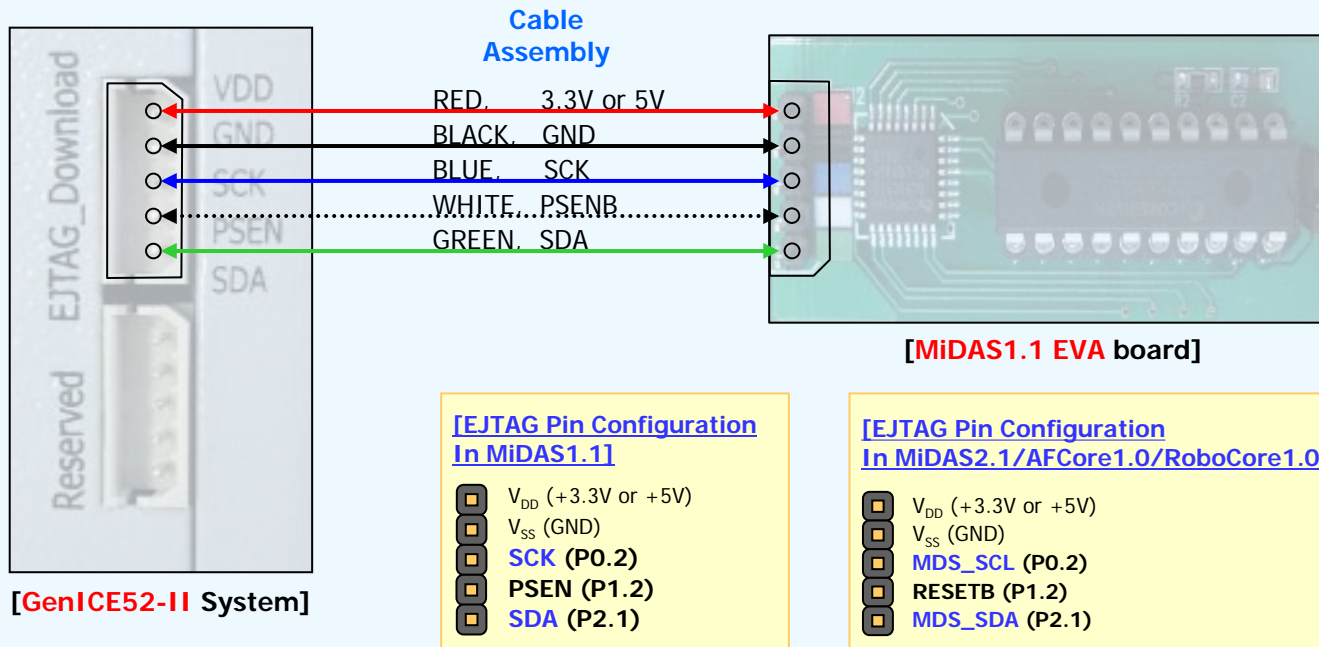


13. Stop Application

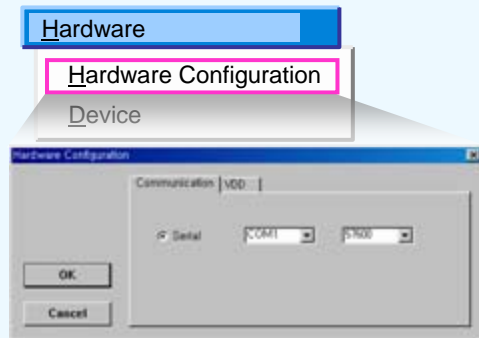
PART IV : How to Debug (with Gentos)

- ◆ Procedure

1. Connect the GenICE52-II system to host PC with serial cable
 - 1) Check that Power Switches of the GenICE52-II systems are **OFF**.
2. Connect the cable of GenICE52-II system to ISP connector for MCU of target system.
 - 1) Check that Power Switches of the target system are **OFF**.
 - 2-1) **MiDAS 1.1 Family** : Connect the 5 Signals **VDD**, **GND**, **SCK**, **PSENB** and **SDA**
 - ※ If you want debug MiDAS 1.1 Family with GenICE52-II, target's **RESETB** must be pull-up state.
 - 2-2) **MiDAS 2.1 / AFCore 1.0 / RoboCore1.0** : Connect the 5 Signals **VDD**, **GND**, **MDS_SCL**, **RESETB** and **MDS_SDA**

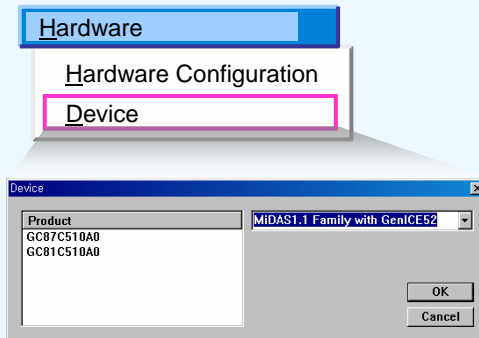


3. Run Gentos
4. 'File' menu -> 'Open Workspace' or 'New Workspace'
5. 'Hardware' menu -> 'Hardware Configuration'



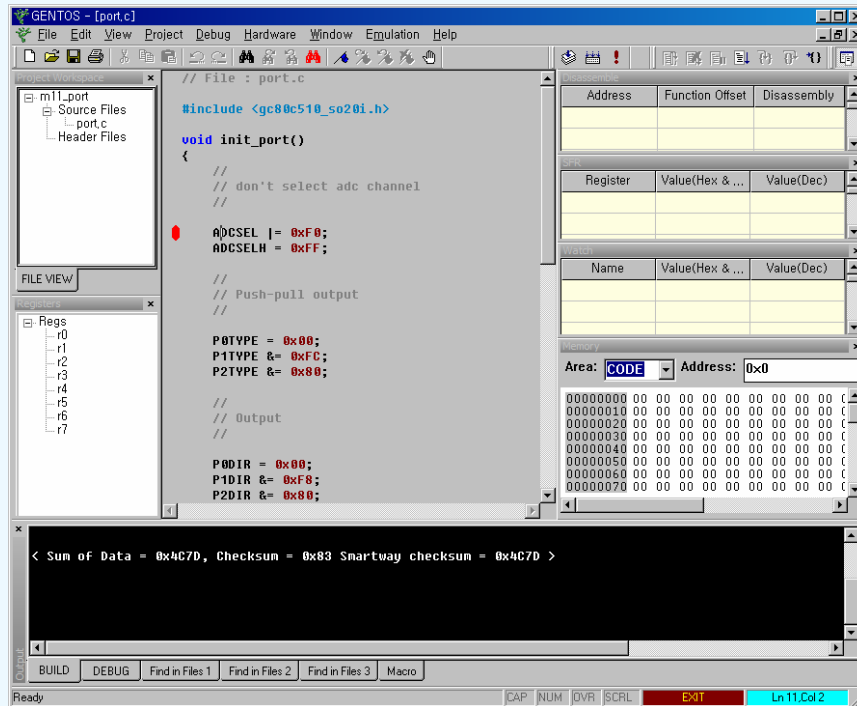
- ◆ Communication
 - ✓ Serial : COM1(Default), 57600 (Default)
- ◆ VDD : Select target system VDD
 - ✓ 3.3V
 - ✓ 5V

6. 'Hardware' menu -> 'Device' and Choose Device



- ◆ Debug Supported MCU
 - ✓ MiDAS1.1 Family with GenICE52
 - ✓ TPMS Family
 - ✓ AFCORE1.0 Family
 - ✓ ROBOCORE1.0 Family

7. Build & Debug



- ✓ **Compile (Ctrl+F6)**
 - compile with gcc or genasm
- ✓ **Build (Ctrl+F7)**
 - compile with gcc or genasm
 - link with gcc or aslinmk
- ✓ **Build & Run (F7)**
 - Build, write & Run
- ✓ **Go (F5) at Menu**
 - Run, or Continue when stop
- ✓ **Go at Tool button**
 - Write & Run, or Continue when stop
- ✓ **“Write” means “Download the User Program into MCU Flash”.**

* Refer to 'GENTOS' manual