To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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Rev. 2.00
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REJ10J1673-0200

Be sure to read this Note

M3T-MR100/4 V.1.01 Release 00 Release Note

RENESAS SOLUTIONS CORPORATION

May 21, 2009

Abstract

Welcome to M3T-MR100/4. This document contains supplementary descriptions to Manual. When you read certain items in the Manual, please read this document as well.

Also, this document contains a License Agreement in the last. Please read it before using. By using the software, you are accepting and agreeing to such term.

Contents

1. Components of the Product

M3T-MR100/4 is comprises the following. If any of the above is missing, contact either Renesas Technology Corporation's office or its distributor from which you purchased the product.

1. Software (CD-R)

   The CD-R contains the software product and electronic manual necessary for program development.

2. M3T-MR100/4 V.1.01 Release 00 Release note

   This is the latest version of the M3T-MR100/4.

3. License ID Certificate

   A license ID is required when you install this product in your computer. The License ID Certificate certifies that you are an official user of the product. Please keep this certificate in a safe place because it will be needed when the product is upgraded in the future.

2. Versions of Crosstool compatible with M3T-MR100/4 V.1.01 Release 00

You can use M3T-MR100/4 V.1.01 Release 00 in combination either with R32C/100 C compiler package V.1.01 Release 00 or later version.

3. What are updated from M3T-MR100/4 V.1.00 Release 00

3.1. New Feature

3.1.1. Mutex and Messagebuffer functions are supported.

It is able to call the service call concerning the mutex and the message buffer.

3.1.2. The parameter checking functions are supported

E_ID, E_PAR, and E_CTX are supported as a return value of the service call, and the error detecting function of the kernel has improved.

3.1.3. The system-down routine calling function is supported

The function to call system-down routine when the error that was not able to be evaded in the user program occurred is added.

3.1.4. The OS awareness debugging functions are improved

It is possible to use the following OS debugging function with E30A emulator debugger V.1.01 Release 00.

- MR trace function
- MR analyze function
- Service call issuing function

3.2. Problems Fixed

3.2.1. With issuing the pol_sem and ipol_sem service calls

For details, see
http://tool-support.renesas.com/eng/toolnews/080901/tn4.htm

3.2.2. With using the cyclic and alarm handlers

For details, see
http://tool-support.renesas.com/eng/toolnews/080901/tn4.htm

3.2.3. Corrections to the Manuals

For details, see
http://tool-support.renesas.com/eng/toolnews/081116/tn1.htm

3.2.4. Use of time-out function

For details, see
http://tool-support.renesas.com/eng/toolnews/090516/tn2.htm

3.2.5. Allocation of fixed-size memory pool area

For details, see
http://tool-support.renesas.com/eng/toolnews/090516/tn2.htm

4. Installing

Before installing M3T-MR100/4 in your computer, please read the "License Agreement" and "Release Note" included with the product. You need to select the same directory in installing as installing R32C/100 C compiler package.

1. Starting up the installer

- Start up the installer and follow the messages displayed on the screen as you install M3T-MR100/4.
- You need to input a license ID in the middle of installation. Before you start installing M3T-MR100/4, check your license ID.
- The data you input in the middle of installation is necessary to create a file for user registration.
- The installer programs included with the product are listed below.

Supported Host	Supported OS	Product Name	Installer Name
PC	Windows 2000 Windows XP Windows Vista	M3T-MR100K/4	Setup.exe

5. Using electronic manuals

The electronic manuals of this product are offered in PDF(Portable Document Format) files. To see these electronic manuals, use a PDF file display program such as the Adobe Reader.

- Opening electronic manual file

  Electronic manuals are installed in the following directory by the installer.

Directory	PDF file	Content
manual	rej10j1672_mr100ue.pdf	M3T-MR100/4 User's Manual in English

When you double-click on the PDF file of the electronic manual you want to see, Adobe Reader reads in the data of that manual and bring it up the display. Or after staring up Adobe Reader you can use the menus [File-Open...] to specify the electronic manual.

6. Technical Support

If what occurred in your environment doesn't replicate in our environment, we may ask a favor of you to solve the problem (there can be an instance in which we borrow your equipment). We appreciate your in-advance approval.

7. How to make M3T-MR100/4 Library

The kernel library sources and the C language I/F library sources are included in the product as follows.

Products	C Language Interface Library Source	Kernel Library Source
M3T-MR100K/4	Included(src100\c100mr)	Not included
M3T-MR100S/4 (W/O Source)	Included(src100\c100mr)	Not included
M3T-MR100S/4	Included(src100\c100mr)	Included(src100\mr100)

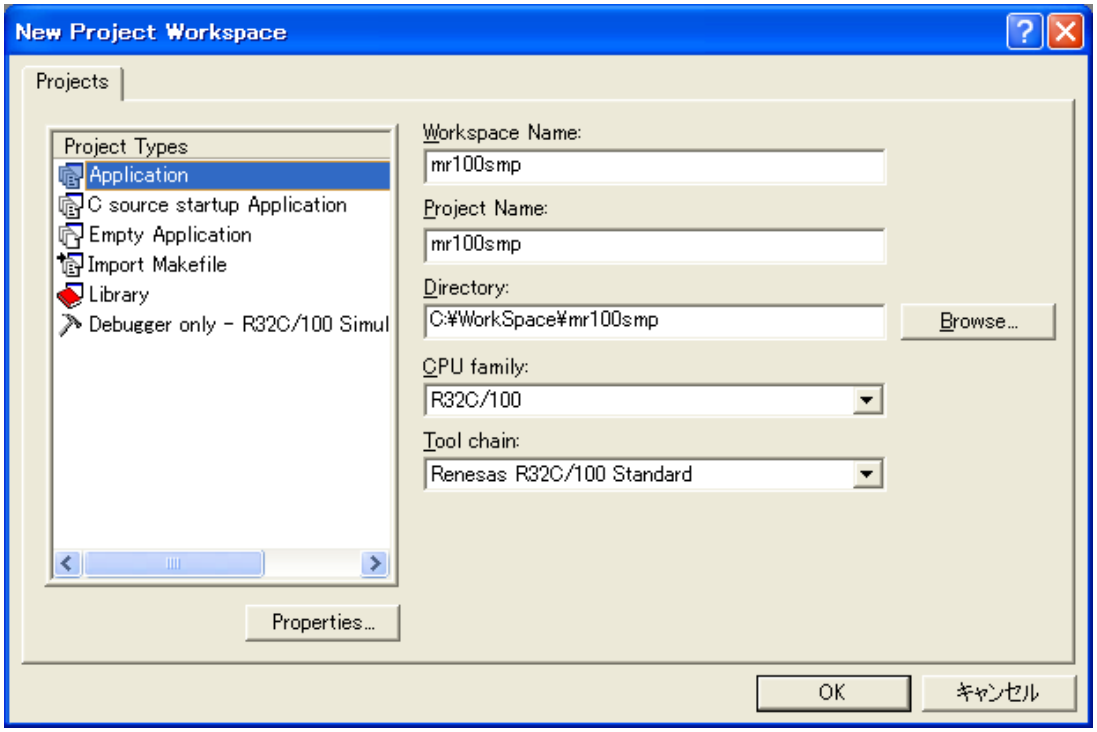
These libraries can be created by executing the command shown below in the directory with these source files.

make –f makefile.dos

8. Generation of application using M3T-MR100/4 in High-performance Embedded Workshop 4

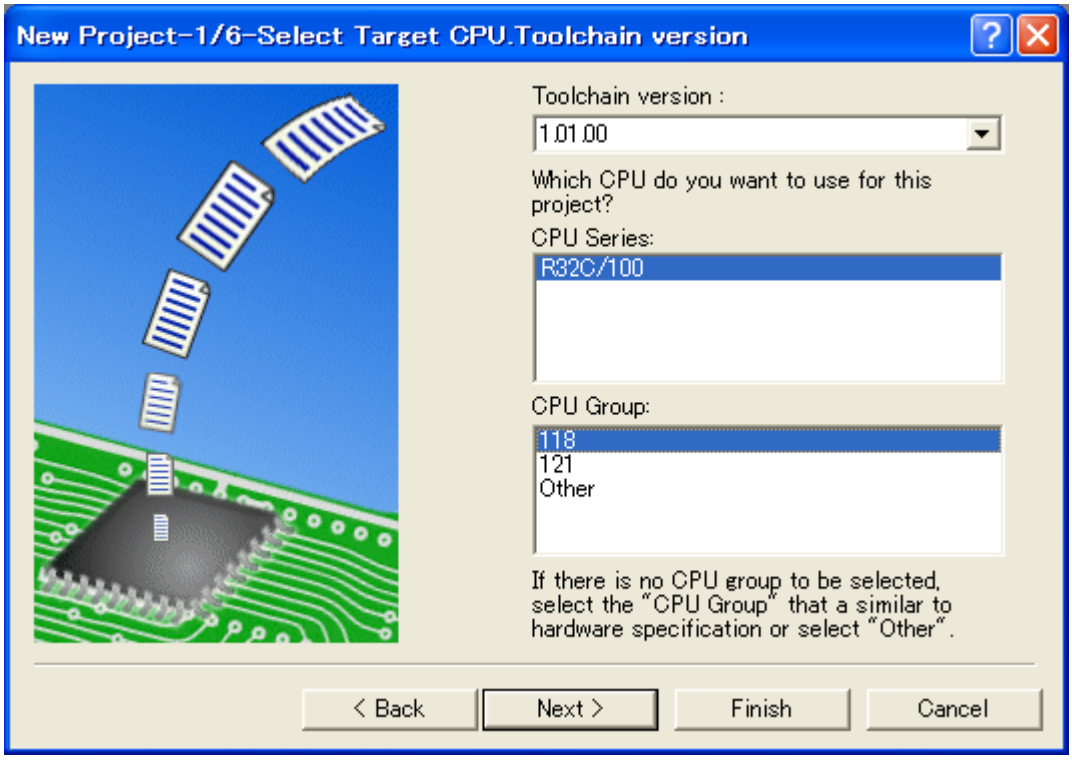
An explanation is given here of the method for creating an application using the M3T-MR100/4 at the High-performance Embedded Workshop 4. The procedure is explained, taking the sample program attached to the M3T-MR100/4 as an example.

1. Generation of new project work space
   As illustrated below, create a work space as an application project.



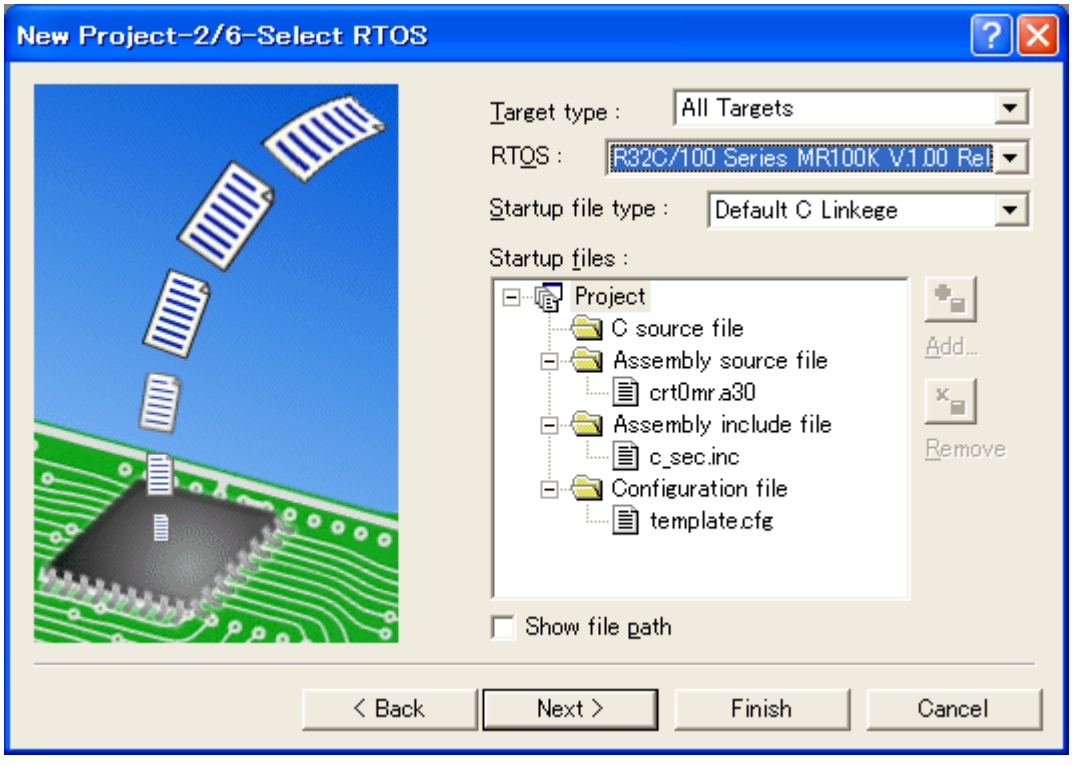
2. Tool Chain Setting

According to the operating environment, set up CPU series, CPU type and the toolchain version.



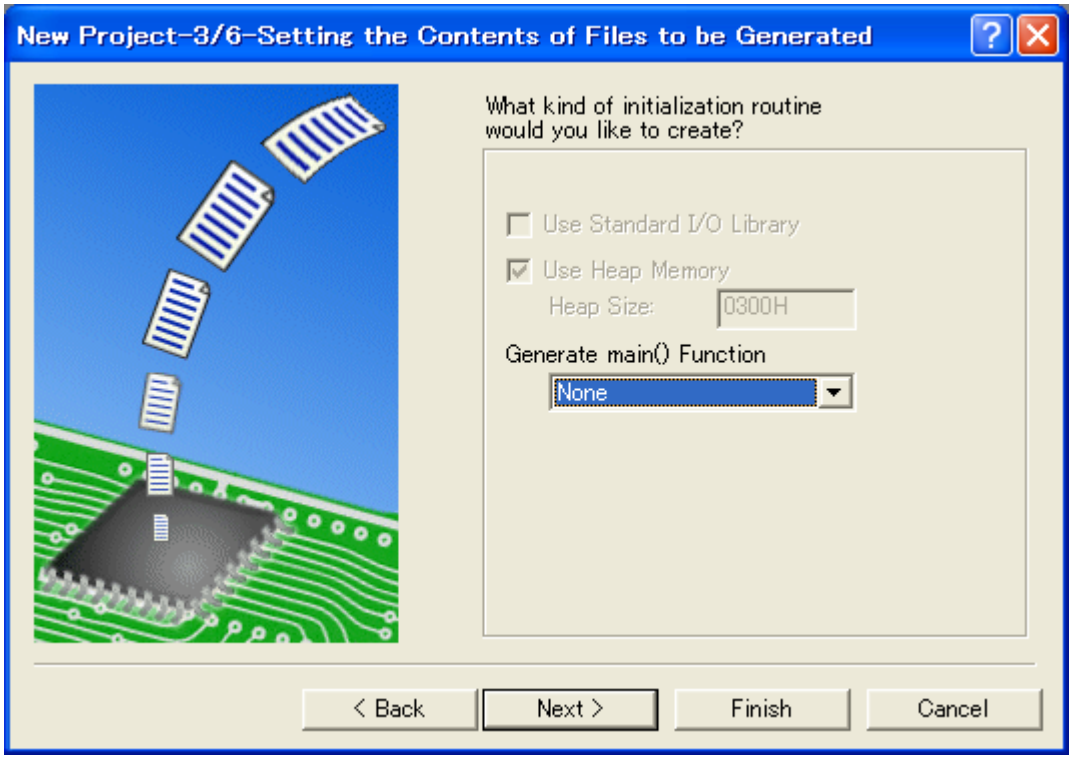
3. Selection of RTOS

In the dialog on New Project-2/6-Select RTOS, select “MR100” from the RTOS item. For the startup file type, select “Default C Linkage”.



4. Generated File Setting

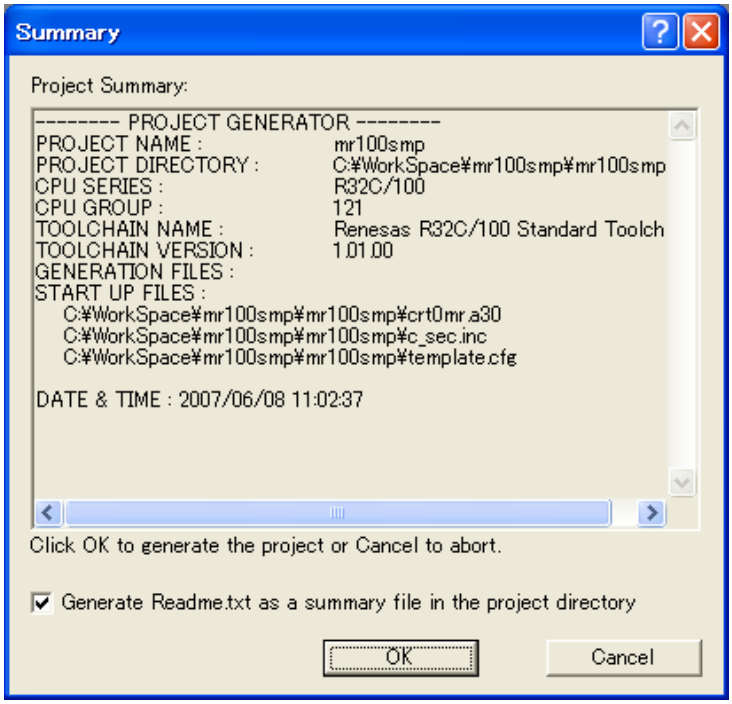
Select “None” in “Generate main ( ) Function”.



5. Completion of Project Generation

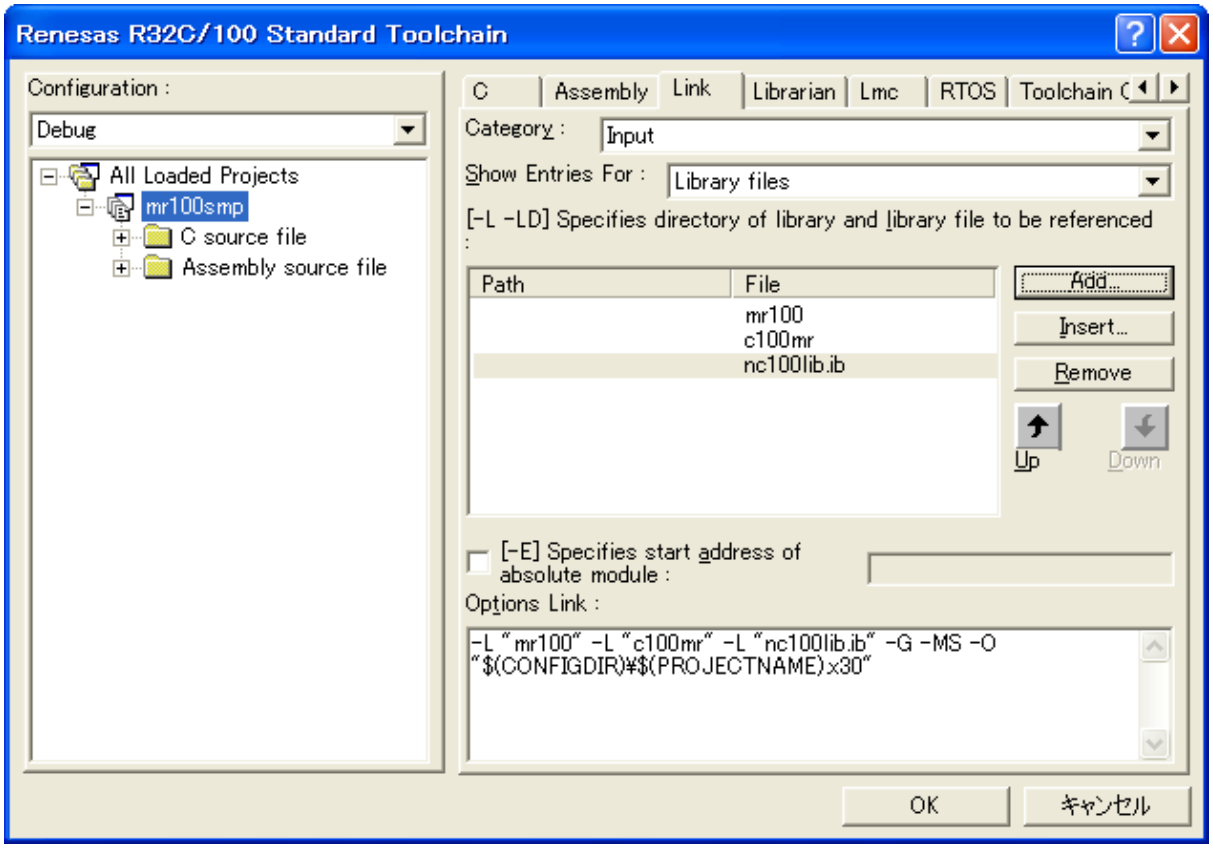
When a sample program is built, no subsequent selection is required; therefore, press the “Finish” button.

Since the project summary is displayed as shown below, press the “OK” button located in the lowermost part to generate the project.



6. Link Option Setting

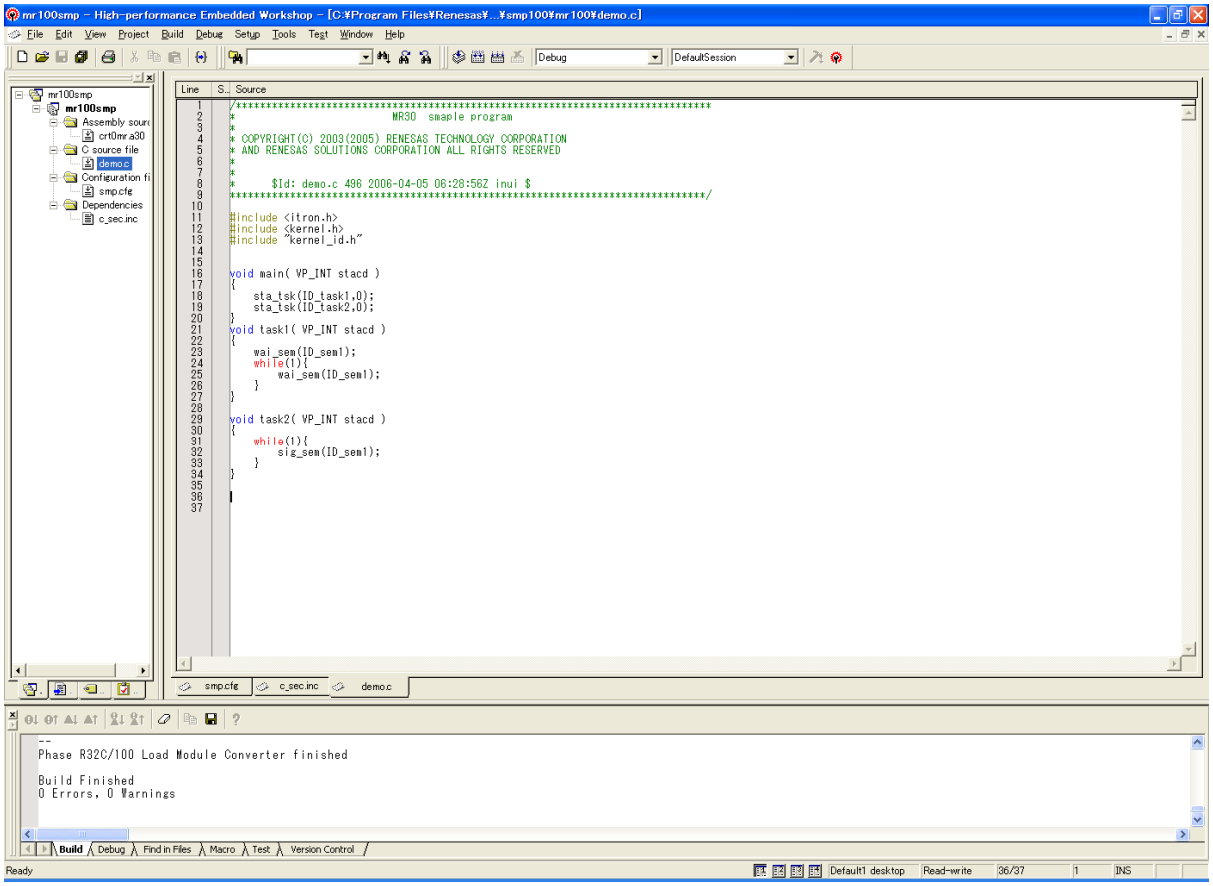
In the case that the standard library is used, specify “nc100lib.lib” as well.



7. Adding Sample Program File to Project

Add “demo.c” and “smp.cfg” provided in the sample program to the project. Delete the sample configuration file “template.cfg” already registered from the project, and add “smp.cfg” to the project.

In cases where the cfg file was generated with the GUI configurator, register the cfg file thus generated in the project.



8. Execution of “Build”

Select “Build ” -> “Build All” to execute Build.

9. Use of GUI Configurator

1. Execution of GUI Configurator

   From the Start menu, select [MR100 GUI Configurator] from the [Renesas] -> [M3T-MR100K (or S) V.1.01 Release 00] to start up the configurator.

   Also, when “Guiconfig_mr100.exe” in the “bin” directory under the MR100/4 install directory is executed, the GUI configurator starts up.

2. GUI Configurator Manual

   For the GUI configurator, the user’s manual is prepared in the Help format. From the GUI screen of GUI configurator or by selecting [MR100 GUI Configurator HELP] from [Renesas] -> [MR100K (or S) V.1.01 Release 00], the Help can be referenced.

10. Cautions

10.1. About extern declaration or prototype declaration of service call

Don't describe extern declaration or prototype declaration if service call is issued from your program.

10.2. About compatibility information for Windows Vista

When the M3T-MR100/4 is installed in a system folder such as "Program Files", the kernel cannot be compiled. So, copy the folder which includes kernel program source files to a rewritable folder; not a system folder.

10.3. About configuration of mutex

There are the following limitations for the setting of the maximum priority of task and the ceiling priority of mutex in the GUI configurator and cfg100.

- When "Auto setting" is selected as the maximum priority of the task in the GUI configurator, and the cfg file is output, the maximum value is always output as the maximum task priority among the priority of the task regardless of the maximum value of ceiling priority of the mutex.
- Even if the maximum value of the ceiling priority of the mutex is larger than the maximum task priority set to the cfg file, the error is not detected by cfg100.

11. Corrections to the User's Manuals

The user's manual (The document number: REJ10J1672-0100) is corrected as follows.

- Correction of "Table 7.2 Parameters Passed to the System Down Routine" (page 243)

Original:

No.	Parameter	Register	Description
1	type	R7	Type of error (1) Error in ret_int: -1 (2) Error in ext_tsk: -2 (3) Invocation of vsys_dwn, ivsys_dwn: Be sure to use a positive value.
2	ercd	R2	Error code (1) Error in ret_int: E_CTX (2) Error in ext_tsk: E_CTX (3) Invocation of vsys_dwn, ivsys_dwn: Any user-specified value

The above should be:

No.	Parameter	Register	Description
1	type	R7R5	Type of error (1) Error in ret_int: -1 (2) Error in ext_tsk: -2 (3) Invocation of vsys_dwn, ivsys_dwn: Be sure to use a positive value.
2	ercd	R0	Error code (1) Error in ret_int: E_CTX (2) Error in ext_tsk: E_CTX (3) Invocation of vsys_dwn, ivsys_dwn: Any user-specified value

- Correction of "C language API Return Parameters" of vsys_dwn,ivsys_dwn (page 202)

Original:

None

The above should be:

Not return from this service call

- Correction of "Assembly language API Parameters" of vsys_dwn,ivsys_dwn (page 202)

Original:

Register name	The value must be set before vsys_dwn(ivsys_dwn) is called
R7	Kind of error

The above should be:

Register name	The value must be set before vsys_dwn(ivsys_dwn) is called
R7R5	Kind of error

- Correction of “Assembly language API Resgister contents after service call is issued ” of vsys_dwn, ivsys_dwn (page 202)

Original:

Register name	Content after service call is issued
R7	Kind of error
R0	Error code
R3R1	System error information 1
R6R4	System error information 2

The above should be:

Not return from this service call

- Correction of “Example statement in assembly language ” of vsys_dwn, ivsys_dwn (page 203)

Original:

```
task:
     :
    MOV.W #1,R7
    MOV.W #1,R0
```

The above should be:

```
task:
     :
    MOV.L #1,R7R5
    MOV.W #1,R0
```

- Correction of vsys_dwn, ivsys_dwn of “Assembly Language Interface” (page 313)

Original:

ServiceCall	INTNo.	Parameter		ReturnParameter	
		FuncCode A0	R3	R0	R2
vsys_dwn	248	-	-	-	-
ivsys_dwn	248	-	-	-	-

The above should be:

Service-Call	INTNo.	Parameter					Return Parame-ter
		FuncCode A0	R0	R3R1	R7R5	R6R4	R0
vsys_dwn	248	-	ercd	inf1	type	inf2	-
ivsys_dwn	248	-	ercd	inf1	type	inf2	-