RENESAS

V850 Real-time OS   RI850MP V1.00.01

Release Note

Contents

1. Packaged Tools

Agreement type and contents are different according to the product.

Product Name	Agreement Type	Contents
R0R085E2MCW011	Evaluation License, Limited 1 host	A
R0R085E2MCW01A	Evaluation License, Unlimited hosts	A
R0R085E2MCW01K	Mass-production License, 3000 copies	A
R0R085E2MCW01U	Mass-production License, Unlimited copies	A
R0R085E2MCW01Z	Mass-production License, Unlimited copies, With source code	B

The following tools are provided.

Contents		Name	Version
B	A	Realtime OS RI850MP Kernel Object	V1.00.01
		Command-line Configurator "CF850MP"	V1.00.03.91
		Plug-ins for CS+ for CACX	
		Realtime OS Build Tool Plug-in (Common)	V3.00.00.03
		Realtime OS Build Tool Plug-in (RI850MP)	V3.00.00.02
		Realtime OS Analysis Control Plug-in (Common)	V3.00.00.03
		Realtime OS Analysis Control Plug-in (µITRON4)	V3.00.00.02
		Realtime OS Analysis Control Plug-in (RI850MP)	V3.00.00.02
		Realtime OS Resource Information Displaying Plug-in (Common)	V3.00.00.06
		Realtime OS Resource Information Displaying Plug-in (µITRON4)	V3.00.00.06
		Realtime OS RI850MP Kernel Source Code	V1.00.01

2. User's Manual

The following user's manuals are included with this version. Please read these manuals together with this document.

Manual Name	Document Number
RI Series Real-Time Operating System User's Manual: Start	R20UT0751JJ0102
RI850MP Real-Time Operating System User's Manual: Coding	R20UT0519JJ0100
RI850MP Real-Time Operating System User's Manual: Debug	R20UT0755JJ0101
RI Series Real-Time Operating System User's Manual: Message	R20UT0756JJ0102

These PDF files are provided by this package or Renesas Electronics Home page.

3. Target Devices

The following devices are supported by the product.

- V850E2M Multicore

4. Operating Environment

Below is described the operating environment for using the product.

4.1. Hardware Environment

(1) Integrated development environment "CS+"

- Processor：At least 1 GHz (support for hyper threading/multicore CPU)
- Main memory：At least 512 MB (1 GB or higher recommended)

  (64-bit Windows® 7, Windows® 8, Windows® 8.1 requires 2 GB or more)
- Display：Resolution at least 1,204 x 768; at least 65,536 colors

(2) Integrated development environment "MULTI"

- Processor：At least 1 GHz (support for hyper threading/multicore CPU)
- Main memory：At least 512 MB (1 GB or higher recommended)
- Display：Resolution at least 1,204 x 768; at least 65,536 colors

4.2. Software Environment

The following software environments are supported.

- Windows 7（32bit, 64bit）
- Windows 8（32bit, 64bit）
- Windows 8.1（32bit, 64bit）
- Windows Vista（32bit, 64bit）
- .NET Framework 4
- Runtime library of Microsoft Visual C++ 2010 SP1
- Internet Explorer 6.0 or later

Remark: For any of these, we recommend having the latest service pack installed.

4.3. Supported Tools

The following tools are supported.

Tool Name	Manufacturer	Version
Integrated development environment CS+ for CACX	Renesas Electronics	V3.00.00 or later
C Compiler CX	Renesas Electronics	V1.31 or later
Integrated development environment MULTI	Green Hills Software, Inc.	Ver5.1.6 Rel 8.1.1 or later

5. Installation Cautions

This section provides cautions for installation and uninstallation

5.1. Cautions for Installation

5.1.1. Cautions for administrator privileges

Windows® administrator privileges are required to install the software.

5.1.2. Cautions for execution environment

The .NET Framework and the Visual C++ runtime libraries are required to run the installer.

5.1.3. Cautions for network drives

The software cannot be installed from a network drive.

It also cannot be installed to a network drive.

5.1.4. Cautions for installation folder name

The available characters for specifying the installation folder are the same as for Windows®.

The 11 characters / * : < > ? | " \ ; , cannot be used. Folder names also cannot start or end with a space.

Specify folders as absolute paths. Do not use relative paths.

Use the backspace character (\) as the path separator for the installation folder. Do not use the forward slash (/).

5.1.5. Cautions for modifying and repairing functions

To modify or repair the function of a tool that has already been installed, have the tool's installer package on hand, and run the installation program. The program maintenance program will start; select Modify or Repair.

Uninstall or change a program dialog boxes will cause an error.

5.1.6. Cautions for required files after installation

The following folder is created after installation. Do not delete it, because it contains files that are necessary for the tools to run.

- If Windows® is 32bit and the installation drive is C:
  C:\Program Files\Common Files\Renesas Electronics CS+\

- If Windows® is 64bit and the installation drive is C:
  C:\Program Files (x86)\Common Files\Renesas Electronics CS+\

5.1.7. Cautions for version of installed tools

If the newer version tool is already installed, the older version tool may not be installed.

5.1.8. Cautions for staring installer

If the installer is started on a non-Japanese version of Windows®, then if the path contains multi-byte characters it will cause an error, and the installer will not start.

5.1.9. Enable Plug-ins

Plug-ins of this product may be disabled immediately after installation of this product. Please enable Plug-ins of this product. For details, refer to "7.4 Enable Plug-ins".

5.2. Cautions for Uninstallation

5.2.1. Cautions for administrator privileges

Windows® administrator privileges are required to uninstall the software.

5.2.2. Cautions for uninstallation folder name

Depending on the order in which tools are uninstalled, the folders may not be completely deleted. If this happens, remove any remaining folders via Explorer or the like.

5.2.3. Cautions for adding/repairing via other than the installer

If you added or modified files to the folders in which tools and manuals were installed using other means than the installers, they cannot be deleted during uninstallation.

5.2.4. Key Word for Uninstallation

There are two ways to uninstall this product.

- Use the integrated uninstaller (uninstalls CS+ for CACX)
- Use separate uninstaller (uninstalls this product only)

To use the separate uninstaller, select the following from the Control Panel:

- Programs and Features

After the applet appears, delete from the following.

- CS+ Realtime OS Common Plugins
- CS+ Realtime OS RI850MP Plugins
- CS+ Realtime OS RI850MP Object Release, or CS+ Realtime OS RI850MP Source Release, or CS+ Realtime OS RI600V4 Trial

6. Changes from Previous Version

6.1. Kernel

There is no difference in the kernel.

6.2. Configurator

There is no difference in the configurator.

For the reason of 6.1 and 6.2, the package version is same as the previous version.

6.3. Realtime OS Build Tool Plug-in

(1) The "CS+ for CACX" tools are supported

    The "CS+ for CACX" tools are supported. In addition, this plug-in of this version does not operate on the "CubeSuite+".

(2) The help can be opened from [RI78V4] tab and [System Configuration File Related Information] tab

6.4. Realtime OS Analysis Control Plug-in

The "CS+ for CACX" tools are supported. In addition, this plug-in of this version does not operate on the "CubeSuite+".

6.5. Realtime OS Resource Information Displaying Plug-in

（1） The "CS+ for CACX" tools are supported

    The "CS+ for CACX" tools are supported. In addition, this plug-in of this version does not operate on the "CubeSuite+".

（2） The waiting factor which are showed by the "ID" are changed to "name"

    The waiting factor which are showed by the "ID" are changed to "name". It became intelligible the waiting factor.

（3） It became intelligible the tabs

    The tab selection area is divided into two columns, and adds the icon to each tabs.

（4） A part of messages is improved

    A part of messages, for example error message, is improved.

（5） The following restriction is canceled.

    The resource information panel does not get focus even if a display menu or a display button on toolbar is selected.

7. Cautions

7.1. Kernel

7.1.1. When using Green Hills Software, Inc. compiler

（1）   register r2

When performing development using the RI850MP with a Green Hills Software, Inc. compiler, be sure to use the compiler option *-reserve_r2*. When using the MULTI 2000 builder, click Project on the menu bar, then "CPU Options for *Selected File*", and then select "Reserve r2 for the User" in the opened window.   When using the MULTI v4.0 builder, click Edit on the menu bar, "Set Options" > "All options" > "Target", and then select "Reserve for User" for "Register r2" in the opened window.

The Green Hills Software, Inc. compiler outputs code using the r2 register by default.   However, this register is used by the RI850MP.   It is therefore required to generate codes that do not use register r2.

（2）   When using multiple TDA functions

When using multiple TDA functions, the task/handler of the RI850MP cannot be coded as "named-TDA function".   If coded as such, the operation of the RI850MP cannot be guaranteed. Code them as "no-TDA function" or "export-TDA function".

The task/handler indicates the following: a task, interrupt handler, direct activation interrupt handler, CPU exception handler, cyclic handler, idle routine, and initialization routine.

（3）   The option "-no_allocate_ep" always specify for user-own code

In the case of compiling the user-own code, the option "-no_allocate_ep" always specify.

When the option "-no_allocate_ep" is not specified, the compiler creates the code which uses ep register. As a result, the program does not run correctly.

7.1.2. sta_cyc service call

If the "sta_cyc service call" executed to a cyclic handler belongs to another PE, it returns "E_ILUSE".

7.1.3. stp_cyc service call

If the "stp_cyc service call" executed to a cyclic handler belongs to another PE, it returns "E_ILUSE".

7.1.4. ref_cyc service call

If the "ref_cyc service call" executed to a cyclic handler belongs to another PE, the getting wait time is zero.

7.1.5. ref_tsk service call

If the "ref_tsk service call" executed to task in time waiting belongs to another PE, the getting wait time is zero.

7.2. Build Tool

7.2.1. Removing configuration file deletes include path

If the output folder of the system information header file and the build tool's include path are set to the same path, then removing the system configuration file from the project will cause the build tool's include path to be deleted.

7.3. Code Generator

The Code Generator of CS+ does not support RI850MP. On the project of RI850MP, the Code Generator creates usual C-language code instead of the code for RI850MP.

7.4. Enable Plug-ins

Plug-ins of this product may be disabled immediately after installation of this product. If plug-ins are disabled, the problem of being unable to build arises.

Please enable following Plug-ins by [Additional Function] tab in [Plug-in Manager] dialog box of the CS+ for CACX

- Realtime OS Analysis Control Plug-in(Common)
- Realtime OS Build Tool Plug-in(Common)
- Realtime OS Resource Information Displaying Plug-in(common)

figure 7-1   Plug-in Manager
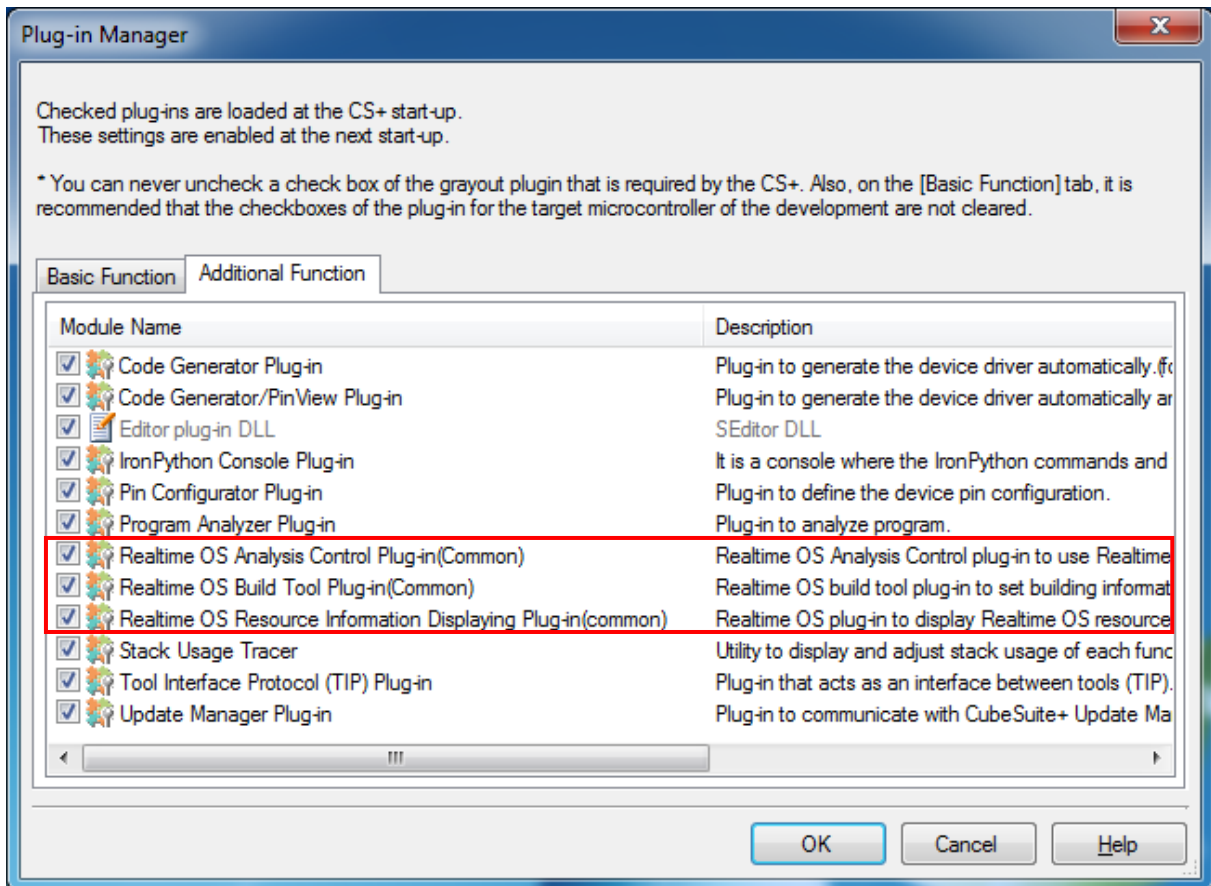
7.5. Cautions for Realtime OS Resource Information Panel

7.5.1. View after real-time OS is initialized

View the Realtime OS Resource Information Panel after the real-time OS has been initialized. Before the real-time OS has been initialized, the information in the Realtime OS Resource Information Panel is undefined.

7.5.2. Use programs with debug information generated

When using the Realtime OS Resource Information Panel, download a program for which debug information has been generated. Downloading a program without debug information and viewing it in the Realtime OS Resource Information Panel will cause an error.

To generate debug information, under Build Tool, under the Link Options properties, set "Generate debug information" to "Yes".

8.   Restrictions

8.1. Restrictions of CS+ for CACX

8.1.1. Realtime OS Build Tool Plug-in

(1)   Multiple build modes

Do not use multiple build modes for the following reasons.

- The configurator options are common to all build modes. Even if multiple build modes are used, the same configurator options are applied.

- Every time the build mode is changed, the path to the kernel_id.h file is added to [Additional include paths] of the build tool. Although the build-setting plug-in sets the correct path in [System include paths], the IDE adds the old path prior to the change of the build mode to [Additional include paths]. In the process of building, the build tool refers to the old path set by the IDE. This means that editing the configuration file to change the build mode before editing kernel_id.h, for example, will not be reflected in building.

(2)   Utilizing existing projects

If you choose to recycle as the basis of a new project an existing project that does not contain any files such as sit.s which are generated by the configurator, and you select copy processing for the files you will be reusing, the missing files such as sit.s that are supposed to be grayed out in the project tree will be deleted from the project tree.

8.1.2. Realtime OS Analysis Control Plug-in

No resutruction.

8.1.3. Realtime OS Resource Information Displaying Plug-in

(1)   Effect of resetting the display of waiting tasks (child nodes) on the display of the [Task] tabbed page

Resetting the display of waiting tasks also resets the display of other tasks in the [Task] tabbed page. However, the information being displayed will be correct.

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