[Upgrade to revision]
C/C++ Compiler Package for RX Family V3.01.00

R20TS0391EJ0100
Rev.1.00
Jan. 16, 2019

Outline

We have updated the C/C++ Compiler Package for RX Family CC-RX from V3.00.00 to V3.01.00.

A V3 license is required to use the V3.00.00 or later versions. Note that the V3 license is different from the V1 and V2 licenses for V1.00.00 to V1.02.01 and V2.00.00 to V2.08.00.

1. Products and Versions to be Updated

CC-RX V3.00.00

2. Main Features of Update

Main features of the update are described in the following sections. The features that are only available to users holding a registered license for the professional edition are indicated by [Professional edition]. For details, refer to the release notes from the URL below.

(Scheduled to be released on January 21.)

CS+ RX Compiler CC-RX V3.01.00 Release Note
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4454

RX Compiler CC-RX V3.01.00 Release Note
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2.1 Support for double-precision floating-point processing instructions

Code that takes advantage of the double-precision floating-point processing instructions that have been included in the RXv3 instruction set architecture is generated for devices with this core. This improves the performance and code size of programs in which the double and long double types are used. When generating code, the new -dpfpu option must be specified as compiler and assembler options.

2.2 Support for the register bank save function

The register bank save function that is included in the RXv3 instruction set architecture is now usable. Writing bank =<bank number> with #pragma interrupt causes the saving of register values at the start of the interrupt handler and restoring them at the end of the interrupt handler, both at high speed. To take advantage of this feature, -bank must be specified as an assembler option.

2.3 Addition of checking source code across multiple files against MISRA-C:2012 rules [Professional edition]

The -misra_intermodule option has been added to check source code across multiple files against MISRA-C:2012 rules. Although source code had previously only been checked within the individual files, specifying this option now enables the checking of source code across multiple files.

MISRA-C is a set of software development guidelines whose purpose is to maintain the safety, portability and reliability of embedded systems programmed in the C language.

2.4 Extensions to the checking of source code against MISRA-C:2012 rules [Professional edition]

The rule numbers 8.5 and 8.6 have been added as arguments of the -misra2012 option for checking source code against MISRA-C:2012 rules.

2.5 Addition of the -truncated_address_initializer compiler option

The -truncated_address_initializer compiler option has been added. With this option specified, the E0520069 error code is not output in response to code for using addresses to initialize the values of 1- or 2-byte external variables or static variables. Instead, the W0520069 warning message is output.

2.6 Addition of a feature for changing a section name when a library file is input

The -lib_rename option has been added as an optimizing linkage editor (rlink) option. With this option, section names or symbol names in a file within a library that is input at the time of linkage can be changed and linked, allowing them to be allocated to the addresses where users can easily manage.

2.7 Enhancement of Optimization

The code size and speed of execution have been improved by enhancement of optimization on the following points.

(1) Enhanced use of the MAX, MIN, and BFMOV instructions

The usage of MAX, MIX, and BFMOV instructions in the generated code has been enhanced.

(2) Improvement of instruction scheduling

Feature for rearranging memory access instructions has been enhanced to improve efficiency of pipeline operation.

(3) Enhanced processing for deleting redundant comparison instructions

Processing for deleting redundant comparison instructions has been enhanced.

2.8 Items Revised

The following points for caution have been corrected.

-RENESAS TOOLNEWS, Document No. R20TS0390EJ0100

1. Point for caution when the -misra2012 option is specified (CCRX#050)
2. Point for caution regarding constant expressions that include type conversion from the floating-point type to the 64-bit integer type (CCRX#051)

For details about the problems, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0390

2.9 Other Improvements

Internal errors that occurred sometimes in the build process have been corrected.

3. Updating Your Product

3.1 Updating Online

On the start menu, select Programs → Renesas Electronics CS+ and start the Update Manager to update the program. (The update will be available on January 21.)

If you are using a floating license, download the Floating License Management Software V2.02.01 from the following URL for an installation.
https://www.renesas.com/rx-c-download

3.2 Download Installer from Web

Download the installer from the following URL for an installation. (Scheduled to be released on January 21.)
https://www.renesas.com/rx_c_download

Also download and install the License Manager V2.02.01 from the URL above.

When you are using a floating license, you also need to download the Floating License Management Software V2.02.01 from the above URL to install the program.

4. How to Purchase a Product

To order a product, contact your local Renesas Electronics sales office or distributor with a product name and orderable part number.
For product pricing, contact us in the same manner.

For product names and orderable part numbers, see the URL below.
https://www.renesas.com/rx_c

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan. 16, 2019	-	First edition issued

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■Inquiry

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