[Upgrade to revision]

C Compiler Package for RL78 Family V1.08.00

Outline

We have updated the C Compiler Package for RL78 Family CC-RL from V1.07.00 to V1.08.00.

V1.08.00 has expanded functionalities including addition of C99 standard library functions, and MISRA-C:2012 rules.

1.   Products and Versions to be Updated

CC-RL V1.00.00 to V1.07.00

2.   Main Features of Update

The 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 following URLs.

(Scheduled to be released on January 21.)

CS+ RL78 Compiler CC-RL V1.08.00 Release Note
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4424

RL78 Compiler CC-RL V1.08.00 Release Note
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4425

2.1   C99 Standard Library Functions

Functionality for compliance with the C99 standard have been added to existing standard library functions as listed below. Support for standard library functions of the C99 language has newly been added.

2.1.1   Existing Functions with Additional Functionality According to C99 Standard

scanf	sscanf

2.1.2   Newly Supported C99 Standard Library Functions

fpclassify	isfinite	isinf	isnan	isnormal
signbit	acosl	asinl	atanl	atan2l
cosl	sinl	tanl	acosh	acoshf
acoshl	asinh	asinhf	asinhl	atanh
atanhf	atanhl	coshl	sinhl	tanhl
expl	frexpl	ldexpl	logl	log10l
log1p	log1pf	log1pl	modfl	fabsl
powl	sqrtl	ceill	floorl	fmodl
vscanf	vsscanf			

RENESAS

2.2 Addition of Checking Source Code Across Multiple Files Against the 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.

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.

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.

2.3 Extensions to the Checking of Source Code Against the 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.

2.4 Addition of a Feature for Changing a Section Name When a Library File is Input

The -lib_rename linkage option has been added. 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.

2.5 Initialization of Stack Areas in Startup Routine

The startup routine has been updated to add the initializing processing of the stack areas. Note that no change has been made to the startup routine for the RL78-S1 core.

2.6 Enhancement of Optimization

The performance of generated code has been improved by proceeding with optimization for reducing the type sizes of variables according to the ranges through which variables are updated within loops.

2.7 Items Revised

The following points for caution have been corrected.

-RENESAS TOOLNEWS, Document No. R20TS0373EJ0100

1. Point for caution when a 1-bit signed bit field is written in the control expression of a switch statement (CCRL#020)
2. Point for caution when a structure or union having a member that is a far pointer is packed and allocated to the far area (CCRL#021)

For details about the problems, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q= r20ts0373

-RENESAS TOOLNEWS, Document No. R20TS0377EJ0100

1. Point for caution when the initial value of an integer-type member of a structure or union is an address constant. (CCRL#022)

For details about the problems, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q= r20ts0377

-RENESAS TOOLNEWS, Document No. R20TS0394EJ0100

1. Point for caution when the -misra2012 option is specified. (CCRL#023)

For details about the problems, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q= r20ts0394

2.8   Other Changes and Improvements

-Change to the operation in case the features of the professional edition are not available

Formerly, in the case of attempts to use the standard library for the professional edition when only a license for the standard library had been registered, a linkage restricting error may have been generated.

This has been corrected and changed so that the E0562600 message indicating the reason for the error is produced.

-Correction of internal errors

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 V2.02.00 from the following URL for an installation.
https://www.renesas.com/rl78_c_download

3.2   Download Installer from the Web

Download the installer from the following URL for an installation. (Scheduled to be released on January 21.)
https://www.renesas.com/rl78_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 V2.02.00 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/rl78_c

Revision History

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

All trademarks and registered trademarks are the property of their respective owners.