[Upgrade to revision]
C Compiler Package for RL78 Family V1.06.00

R20TS0263EJ0101
Rev.1.01
Jan. 16, 2018

Outline

We will be revising the CC-RL C compiler package for the RL78 family from V1.05.00 to V1.06.00.

1. Products and Versions to Be Updated

CC-RL V1.00.00 to V1.05.00

2. Items Revised

The major revision point is as follows. Note that the features which are only available to users holding a registered license for the Professional edition are indicated as [Professional edition]. For details, refer to the Release Notes at the URL below.

These documents will be available from January 22.

CS+ RL78 Compiler CC-RL V1.06.00 Release Note
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4227

RL78 Compiler CC-RL V1.06.00 Release Note

https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4228

2.1 C99 Standard

The C99 standard is now supported as the language specification.

Note that V1.06.00 does not support the variable length array type, complex type, and some standard library functions of the C99 standard.

2.2 Improvements to the Feature for Checking Source Code against MISRA-C:2012 Rules [Professional edition]

The number of MISRA-C:2012 rules (against which source code can be checked) has been increased from 111 to 119 so that whether rules for the C99 standard are kept can be checked.

MISRA-C is a software design standard aimed at ensuring safety, portability and reliability in embedded systems written in C.

2.3 Function to Detect Illegal Indirect Function Calls [Professional edition]

A function to detect indirect function calls to illegal addresses is now supported. This function is useful for improving the security and quality of programs.

2.4 Support of the Hardware Interrupt Handler for Specifying Multiple Vector Table Addresses

Multiple vector table addresses can now be specified for the same function in #pragma interrupt.

2.5 Function to Access a Pointer Indirect Reference in Units of One Byte

As assistance in porting from the CA78K0R compiler, the -unaligned_pointer_for_ca78k0r option has been added. This option is to access a pointer indirect reference to a type with no volatile specification in units of one byte.

2.6 Improved Optimization

Optimization such as improvement of code generation for bit operation has been improved.

2.7 Extended Upper Limit of Memory Usage

The amount of memory on the host PC that CC-RL can use has been expanded. This expansion allows for building of projects larger than previously possible.

	V1.05.00 or earlier	V1.06.00 or later
32-bit OS	2 G bytes	3 G bytes
64-bit OS	2 G bytes	4 G bytes

2.8 Message Control Function

A compile option to change warning messages to error messages has been added. This option allows you to prevent warning messages from being overlooked.

2.9 Function to Fix the Record Length of Hex Files

A link option to match the output addresses of an Intel expanded hex file (.hex) and Motorola S type file (.mot) with the specified alignment and perform output with the fixed record length has been added. Since a hex file is always output with a constant record length, efficiency in tasks such as comparison of hex files is improved.

2.10 Addition of Messages for Linking

In V1.05.00 or earlier, when sections that have the same name and different alignment conditions are linked, warning message W0561322 was output. In V1.06.00, when sections that have the same name and different alignment conditions exist, and the section for which one of the alignment conditions is not a multiple of the other is linked, warning message W0561331 is output instead.

2.11 Problems Fixed

The following problems have been fixed.

- RENESAS TOOL NEWS, Document No. R20TS0184EJ0100

1. Relational operators in the control expressions of switch statements (CCRL#015)

For details about the problem, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0184

- RENESAS TOOL NEWS, Document No. R20TS0210EJ0100

1. Using a goto Statement to Move to a Label in a switch Statement (CCRL#016)

For details about the problem, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q= r20ts0210

- RENESAS TOOL NEWS, Document No. R20TS0240EJ0100

1. When a Function Has Multiple Arguments and Also Has Assignment or Comparison between Formal Arguments (CCRL#017)

For details about the problem, refer to the following URL:
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0240

- RENESAS TOOL NEWS, Document No. R20TS0260EJ0100

1. Loop Statements with Loop-Control Variables in Which Constants are Used as the Condition for Ending the Loop (CCRL#018)

For details about the problem, refer to the following URL:
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0260

2.12 Other Modifications

- Correction of an internal error

A problem which led to an internal error in the compiler when building has been fixed.

3. Updating Your Product

3.1 Online Updating

On the Start menu, select Programs and then Renesas Electronics CS+ to start the Update Manager.
This service will be available from January 22.

When you use floating licenses, you also need to download V2.01.00 of Floating License Management Software from the URL below to install the program.
https://www.renesas.com/rl78_c_download

3.2 Download the Installer of the Product from Our Web Site

Download the installer from the following URL and install the product.
This program will be available from January 22.
https://www.renesas.com/rl78_c_download

Also download V2.01.00 of License Manager from the URL above to install the program.

When you use floating licenses, you also need to download V2.01.00 of Floating License Management Software from the above URL to install the program.

4. How to Purchase the New Software

For product ordering, contact your local Renesas Electronics marketing office or distributor with the product name and orderable part name.

For product pricing, make inquiries in the same manner.

You can check for product names and orderable part names at the URL below.
https://www.renesas.com/rl78_c

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan. 16, 2018	-	First edition issued
1.01	Jan. 16, 2021	2	The error in “Problems Fixed” is corrected.

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