[Upgrade to revision]

# C Compiler Package for RL78 Family V1.07.00

## Outline

We revised the CC-RL C compiler package for the RL78 family from V1.06.00 to V1.07.00.

In V1.07.00, a function for dividing the vector table section by address was added and #pragma address and #pragma section features were expanded. This enables efficient use of areas where no code or data has been allocated.

## 1.    Products and Versions to Be Updated

CC-RL V1.00.00 to V1.06.00

## 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 URLs below.

These documents will be released on July 20.

CS+ RL78 Compiler CC-RL V1.07.00 Release Note
https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4315

RL78 Compiler CC-RL V1.07.00 Release Note

https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4325

## 2.1    C99 Standard Library Functions

The following C99 standard library functions are now supported: In addition, the C99 standard features have been added to the existing functions.

| Newly supported C99 standard library functions | Functions to which the C99 standard features have been added |
|---|---|
| atoll | printf |
| imaxabs | printf_tiny |
| imaxdiv | sprintf |
| isblank | sprintf_tiny |
| llabs | strtod |
| lldiv | strtof |
| strtoimax | vprintf |
| strtoumax | vsprintf |
| snprintf | |
| strtold | |
| strtoll | |
| strtoull | |
| vsnprintf | |

## 2.2　Expansion of the Hex File and Binary File Output Function

The functions for hex files and binary files have been expanded as follows:

(1) The -crc option is now available when the -form=binary option is specified. This allows CRC operations to be performed for binary files.

(2) The -CHECK_OUTPUT_ROM_AREA option for checking whether the address of output data of a hex file is outside the available range for internal ROM or data flash has been added. This enables detection of a program allocated beyond the available range for internal ROM, and prevents malfunction of programs.

(3) A function for changing the first load address of an Intel expanded hex file or Motorola S type file being output has been added. This allows output of the code of the specified address that is different from the address used for linking.

## 2.3　Addition of a Function for Generating a Vector Table Section for Each Vector Table Address

The -SPLIT_VECT option for generating a vector table section divided by vector table address has been added. This allows unused vector table areas to be used for other purposes.

## 2.4　Expansion of #pragma address

It is now possible to specify #pragma address for a variable declared with __saddr.

## 2.5　Expansion of #pragma section

In CC-RL V1.06.00 or earlier, it was not possible to change the default section name of string literal, branch table of a switch statement, or initial value of aggregate-type automatic variable. In CC-RL V1.07.00, section names can be changed by using #pragma section.

## 2.6　Expansion of the Function to Detect Illegal Indirect Function Calls [Professional edition]

The function to detect indirect function calls to illegal addresses (supported in CC-RL V1.06.00) has been expanded so that a library file (*.lib) can be removed from the function list used for illegal indirect function calls.

## 2.7　Improved Optimization

Optimization has been improved for long-type zero equality comparison codes, such as improving generation codes.

## 2.8　Problem Fixed

The following problems have been fixed.

- RENESAS TOOL NEWS, Document No. R20TS0331EJ0100

1. Point for caution regarding the static variable declaration of an array, structure, or union that has an initializer (CCRL#019)

For details about the problem, refer to the URL below.
https://www.renesas.com/search/keyword-search.html#genre=document&q= r20ts0331

## 2.9　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 July 20.

When you use floating licenses, you also need to download V2.02.00 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 July 20.
https://www.renesas.com/rl78_c_download

Also download V2.02.00 of License Manager from the URL above to install the program.

When you use floating licenses, you also need to download V2.02.00 of Floating License Management Software from the URL above 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 | Jul. 16, 2018 | - | First edition issued |
| | | | |

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