

The C/C++ Compiler Package for the RX Family of MCUs Published

We have published the C/C++ compiler package for the RX family of MCUs.

1. Outline

The C/C++ compiler package is used for the Renesas RX family of MCUs to make these next-generation MCUs reach their full potentials.

The Renesas RX family of MCUs are equipped with a newly designed CPU core and satisfy such the user's needs as high performance, low power-consumption, and high coding-efficiency, which are the keys to reducing production cost and strengthening competitiveness.

2. Main Features

(1) Including a compiler, an assembler, an optimizing linker, a cycle-accurate simulator, and a stack-analyzing tool.

Because these programs are managed by High-performance Embedded Workshop, you can easily accomplish the processes from coding to debugging.

(2) Conforming to ANSI C89, C99, and C++ standards. (In C99, variable-length arrays are excluded.)

(3) Supporting the creation of compactly-designed, high-speed-operating, high-performance applications by intense optimizing functions. When compared with our previous compilers for 32-bit MCUs, the new compiler provides much improved performance characteristics as follows:

- Coding efficiency: 30% or more
- Execution cycle counts: One-half
- Instruction execution rate in the RX family:
 - 165 MIPS at an operating frequency of 100 MHz

NOTE: The above measurements have been made by using a benchmark program of ours.

(4) Enabling you to easily make settings of a variety of optimizing

functions by using GUI.

You can easily make necessary settings for giving higher priority to either code size or the program execution rate. Also you can select an optimizing level among -optimize=0, 1, 2, and max.

(5) Providing many extending functions for embedded use.

(6) Supporting the porting of existing programs for MCUs such as M16C and H8S families to the RX family.

For examples, you can use options to select different language specifications to each compiler according to each CPU and check-options to select extending specifications specific to each compiler, as well as switching endians between big and little.

Also supporting functions for porting existing software resources to RX objects, which are more compact and efficient.

(7) Providing abundant debugging functions in the cycle accurate simulator

You can evaluate and debug programs precisely and efficiently by using the debugging functions of the high-precision cycle accurate simulator. Those functions include many types of breaking functions, virtual interrupting functions, and others.

For details of the product, go to:

https://www.renesas.com/rx_c

This Web site will be opened from February 5.

The above URL is one of our global sites.

The product's evaluation version is available. By using it, you can evaluate the product's functions and characteristics before purchasing the product. To download the evaluation version, go to

https://www.renesas.com/rx_c

and click Download in the left pane of the page.

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3. Host System Requirements

Host PC: IBM PC/AT or compatible

Host OS: Windows Vista(R), Windows(R) XP or Windows(R) 2000

NOTICE: The product is incompatible with the 64-bit edition of Windows Vista(R)

4. How to Purchase the Product

When you place an order for the product, supply the following items of information to your local Renesas Technology sales office or

distributor:

Product type: the C/C++ compiler package for the RX family
For the price of the product, also contact the above sales office or distributor.

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