RENESAS Tool News

RENESAS TOOL NEWS on May 16, 2011: 110516/tn3

The C/C++ Compiler Package for the RX Family of MCUs Revised to V.1.01 Release 00

We have revised the C/C++ compiler package for the RX family of MCUs from V.1.00 Release 02 to V.1.01 Release 00.

1. Descriptions of Revision

1.1 Functions Introduced in the Compiler

(1) The RX200 series of MCUs supported

The -cpu=rx200 option has been added. By using this, instruction code for the RX200 series of MCUs can be generated.

(2) The PIC and PID functions supported (See NOTE below.)

The -pic, -pid, and -nouse_pid_register options have been introduced.

By using these, relocatable programs and data items can be generated.

NOTE:

PIC : Position-Independent Code

PID : Position-Independent Data

(3) Compatibility check of the programs for the SuperH family supported

The -check=shc option has been added. When you re-use source files coded for the C/C++ compiler for the SuperH family as those for the RX family, the options and descriptions in the source files that affect the compatibility can be checked by using this option.

(4) Alignment in branch destinations supported

The -instalign4, -instalign8, and -noinstalign options have been added. When -instalign4 is used, the number of alignment in the code section can be changed from 1 to 4, and -instalign8 used, from 1 to 8.

1.2 Functions Introduced in the Assembler

(1) The RX200 series of MCUs supported

The -cpu=rx200 option has been added. By using this, relocatable

files for the RX200 series of MCUs can be generated.

(2) The PIC and PID functions supported

The -pic, -pid, and -nouse_pid_register options have been introduced.

By using these, the relocatable objects of relocatable programs and data items can be generated.

1.3 Functions Introduced in the Optimizing Linker

(1) Outputs in the relocatable format supported

The -FOrm=Relocate option has been supported. By using this, load modules in the relocatable format can be generated.

(2) The PIC and PID functions supported

The -JUMP_ENTRIES_FOR_PIC option has been added. By using this, any jump table used for branching to functions within a specified section can be generated in the assembly-language source file format.

(3) Optimizing options supported

The -OPtimize=SAMe_code and =SHort_format options have been supported.

By using these, optimization for creating a subroutine for the same instruction sequence and replacing an instruction having an addressing mode with a smaller-size instruction can be performed respectively.

(4) Alignment supported

The -ALIGNED_SECTION option has been added. By using this, the number of alignment for a specified section can be changed to 16 bytes link by link.

(5) The other

The -FSymbol option has been added. By using this, the definition file of externally defined symbol addresses can be generated.

1.4 Extended Functions Increased

Preprocessor directives #pragma instalign4, #pragma instalign8, and #pragma noinstalign have been added. When #pragma instalign4 is used, the number of alignment in the code section can be changed from 1 to 4, and #pragma instalign8 used, from 1 to 8.

1.5 Built-in Functions Increased

The following built-in functions have been added:

(1) The emul() and emulu() functions for multiply instructions EMUL and EMULU (the number of effective digits: 64 bits).

(2) The macl(), macw1(), and macw2() functions that use three instructions of the DSP function for product-sum operations

(3) The setpsw_i() and clrpsw_i() functions that set the interrupt enable bit to 1 and clear it to 0 respectively

1.6 High-performance Embedded Workshop Updated

The High-performance Embedded Workshop included in the package has been updated from V.4.08.00 to V.4.09.00. For details of the revision, see:
http://tool-support.renesas.com/eng/toolnews/110316/tn1.htm

1.7 Simulator Debugger Updated

The simulator debugger included in the package has been updated from V.1.01.00 to V.1.02.00. For details of the revision, see:
http://tool-support.renesas.com/eng/toolnews/110516/tn6.htm
This Web page will be published on May 20.

1.8 Known Problems Fixed

The following four problems described in RENESAS TOOL NEWS Document No. 110516/tn2 have been fixed:

- With the return value of a function that is of a 1- or 2-byte integral type with #pragma option issued (RXC#012)
- With handling local variables of type union by using string-handling functions (RXC#013)
- With using the value of an array-type member of an array-type structure or union for dynamic initialization (RXC#014)
- With using the pointer to an array-type member of a structure or union (RXC#015)

To see RENESAS TOOL NEWS Document No. 110516/tn2, go to:
http://tool-support.renesas.com/eng/toolnews/110516/tn2.htm
This Web page will be published on May 20.

2. With compatibility with previous versions

When you update yours, see section 15.4 "Compatibility with an Older Version or Older Revision" in the user's manual of the V.1.01 Release 00.

3. How to Update Your Product and Order the Revised One

3.1 Updating

Online update is available free of charge. Update yours in either of the following ways:

(1) Use AutoUpdate Utility. This service will be available on and after May 20.
(2) Download the update program of the product from:
http://www.renesas.com/rx_c_download

Then execute it. The update program will be published on the Web site on May 20.
The above URL is one of our global sites.

3.2 First Ordering

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

Product type: The C/C++ compiler package for the RX family
Host OS: Windows(R) 7, Windows Vista(R), or Windows(R) XP

NOTICE: The 64-bit editions of Windows Vista(R) and Windows(R) XP are excluded.

For the price of the product, contact the above sales office or distributor.
