

RENESAS TOOL NEWS on September 1, 2009: 090901/tn3

The C/C++ Compiler Package for the H8SX, H8S, and H8 MCU Families Revised to V.7.00 Release 00

We have revised the C/C++ compiler package for the H8SX, H8S, and H8 MCU families from V.6.02 Release 01 to V.7.00 Release 00.

For details of the product, go to:

<http://www.renesas.com/h8c> (This URL is one of our global sites.)

1. Descriptions of Revision

1.1 Compatibility with Windows Vista(R)

The compiler package has been made compatible with the 32-bit edition of Windows Vista(R). On this OS, you can run the programs included in the package with your user rights.

Note that the compiler package still remains incompatible with the 64-bit edition of Windows Vista(R).

1.2 High-performance Embedded Workshop Updated

The High-performance Embedded Workshop included in the compiler package has been updated from V.4.04.01 to V.4.06.00. For details of the revision, made in three steps, see the following RENESAS TOOL NEWS items:

- Document No. 081125/tn1 for V.4.05.00 at:
<http://tool-support.renesas.com/eng/toolnews/081125/tn1.htm>
- Document No. 090201/tn3 for V.4.05.01 at:
<http://tool-support.renesas.com/eng/toolnews/090201/tn3.htm>
- Document No. 090701/tn1 for V.4.06.00 at:
<http://tool-support.renesas.com/eng/toolnews/090701/tn1.htm>

1.3 Simulator Debugger Updated

The simulator debugger included in the compiler package has been updated from V.5.06.00 to V.5.08.00. For details of the revision,

made in two steps, see the following RENESAS TOOL NEWS items:

- Document No. 081216/tn1 at:

<http://tool-support.renesas.com/eng/toolnews/081216/tn1.htm>

- Document No. 090601/tn2 at:

<http://tool-support.renesas.com/eng/toolnews/090601/tn2.htm>

1.4 Functions Introduced to Revised Compiler

(1) C99-language specifications supported

The `lang=c99` option has been introduced. By using this option, you can compile programs written in the C99 language. Note, however, that variable-length arrays cannot be compiled.

Libraries written in the C99 language, including those of the complex type, have also been supported.

(2) The stdio header file (included the low-level standard I/O header files) conforming to the C99-language specifications supported in addition to the one conforming to the C89-language specifications

If you select the `c89stdio` option in addition to `lang=c99`, you can use low-level functions contained in the standard I/O header files (`stdio.h`) written in the C89 language.

And, if you select the `c99stdio` option in addition to `lang=cpp`, you can use low-level functions contained in the standard I/O header files (`stdio.h`) written in the C99 language in C++ programs.

(3) Function introduced for suppressing default expansion of inline functions

Introduced has been the function for suppressing inline expansion of functions and member functions declared with the `inline` specifier (the default expansion of inline functions) during compilation of programs written in C++.

(4) `__naked_asm` Introduced

The `__naked_asm` directive has been introduced as an embedded assembling function in order not to automatically generate the code for saving and storing registers.

(5) UTF-8 code supported

By selecting the `outcode=utf8` and `utf8` options, you can use the UTF-8 code.

1.5 Functions Introduced to Optimizing Linkage Editor

(1) Options Introduced

The following options have been introduced:

(a) `cpu=stride`

If the size of a section is larger than the address area in which the section is to be placed in memory, the `cpu=stride` option places the section in another larger area of the same

memory type, or splits the section into two or more so that they can be placed in two or more address areas.

(b) contiguous_section

When selected with cpu=stride, the contiguous_section option places a section without splitting it in an address area of the same memory type that is large enough to accommodate the section.

(c) show=all

Sub-option "all" has been introduced to the "show" option.

It is used to output the contents of all the lists.

(2) Functions Introduced

The following functions have been introduced:

(a) Generating a linkage map even if an error has been occurred.

(b) Using binary files as input files for generating relocatable files.

1.6 Problems Fixed in Compiler

The following problems have been fixed:

(1) With volatile-qualified local variables and non-volatile-qualified global variables (H8C-0084) and with member values of structure-type or union-type variables (H8C-0085)

For details see RENESAS TOOL NEWS Document No. 090901/tn2 at:

<http://tool-support.renesas.com/eng/toolnews/090901/tn2.htm>

This Web page will be opened from September 7 on.

(2) With outputting the following internal errors during compilation:

Error Nos.: 4098, 4099, 4677, and 4711

1.7 Problems Fixed in Optimizing Linkage Editor

The following known problems have been fixed:

(1) With overlaying sections with different alignment numbers each other (LNK-0004)

(2) With using the data_stuff and nooptimize options in linking (LNK-0005)

For details of these, see RENESAS TOOL NEWS Document No. 090116/tn2 at:

<http://tool-support.renesas.com/eng/toolnews/090116/tn2.htm>

1.8 Other Problem Fixed

The following known problem has been fixed:

- With using the Scan All Dependencies function on High-performance Embedded Workshop

For details see RENESAS TOOL NEWS Document No. 090201/tn4 at:

2. Note on Using MISRA C Rule Checker (SQMlint) with Revised Compiler

When you run SQMlint in combination with the C/C++ compiler package for the H8SX, H8S, and H8 families V.7.00 or later, use SQMlint V.1.03 Release 00A or later.

SQMlint V.1.03 Release 00 and earlier have the following problem:

When SQMlint V.1.03 Release 00 is installed, the name of the C/C++ compiler package for the H8SX, H8S, and H8 families V.7.00 or later cannot be provided in the list of compilers that support SQMlint.

Note that SQMlint V.1.03 Release 00A and V.1.03 Release 00 are the same in functions.

Download the update program of V.1.03 Release 00A from

http://www.renesas.com/misrac_download

This Web site will be opened from September 7 on.

3. How to Purchase the Product

Because important improvements have been made to the product, free-of-charge online update is not available. If necessary, please 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: C/C++ compiler package for the H8SX, H8S,

and H8 families

Version No.: V.7.00

Release No.: Release 00

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)

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

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