To our customers,

Old Company Name in Catalogs and Other Documents

   On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

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RENESAS TECHNICAL UPD

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Product Category	User Development Environment		Document No.	TN-CSX-A088A/E	Rev.	1.0
Title	H8S, H8/300 Series C/C++ compiler package V.6.00 Release 03 Updates		Information Category	Technical Notification		
Applicable Product	PS008CAS6-MWR, R0C40008XSW06R PS008CAS6-SLR, R0C40008XSS06R PS008CAS6-H7R, R0C40008XSH06R	Lot No.	Reference Document	H8S, H8/300 Series C/C++ Compiler, Assembler, Optimizing Linkage Editor User's Manual (REJ10B0058-0100H Rev.1.00)		
		All				

H8S, H8/300 Series C/C++ compiler package is updated in V.6.00 Release 03.

See the notes below if you have the compiler package listed in the following table.

Part No.	Package version	Compiler version
PS008CAS6-MWR	6.0.00 6.0.01	6.0.00 6.0.01
R0C40008XSW06R	6.00 Release 01 6.00 Release 02	6.0.01 6.00.02
PS008CAS6-SLR	6.0.00 6.0.01	6.0.00 6.0.01
R0C40008XSS06R	6.00 Release 01 6.00 Release 02	6.0.01 6.00.02
PS008CAS6-H7R	6.0.00 6.0.01	6.0.00 6.0.01
R0C40008XSH06R	6.00 Release 01 6.00 Release 02	6.0.01 6.00.02

If you have the compiler package of the Windows® version, download the update program from the following URL:

http://www.renesas.com/eng/products/mpumcu/tool/index.html

If you have the compiler package of the UNIX version, request the update program to an authorized product distributor.

1. Descriptions

1.1 Functions Improved and Introduced

(1) In the Windows version of the integrated development environment HEW, directory information on include files

has hitherto been output to a Make file using relative path expressions if the nesting level of include files is ten or less.

In this revision, the maximum value of the nesting level of include files expressed in relative paths is extended from

10 to 50. (If a nesting level is larger than 50, the include files are expressed in absolute paths.)

(2) In the optimizing linkage editor introduced the Data_stuff option:

This option reduces unused areas within the same section that have been brought at each compilation by adjusting

the section's boundaries, which minimizes the size of the data area.

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1.2 Problems Fixed

   The following problems have been fixed:

1.2.1 In the Windows version of the HEW

   (1) When memory maps displayed:

      * The Map command is not provided in the Memory menu.

      * The memory map of "Linker section setting" does not appear in the Map window.

   (2) On the virtual desktop when a starting address for displaying a Memory window is specified in the window

      configuration, the display of the window is started from an incorrect address.

   (3) If a project that contains source files written in assembly language is opened with the navigation function activated,

      the automatic analyses of the navigation function will not terminate.

   (4) If the last label in ASCII order is searched for using the search function* in the Label window, the error message

      "LABEL NOT FOUND" appears.

      * This function becomes available by following these steps:

        Right-click an unoccupied area in the Label window. You see a pop-up menu appears.

        Then select the Search command in this menu.

   (5) If multiple-step execution is discontinued and then the program is executed in the usual way, the STOP button

      on the toolbar for manually stopping the program stays not illuminated, which may disable the manual stopping

      of the program.

      At the same time, such operations of the HEW may not be managed as closing the workspace by selecting the

      File -> Close Workspace command or ending the application by selecting the File -> Exit command.

   (6) Using the Open Workspace command in the interface of the HEW's server function may cause an application

      error to arise.

   (7) If load modules written in the ELF/DWARF2 format are downloaded and the source file containing them is displayed

      in the Source window, the addresses of the source lines in which no program statements are written may incorrectly

      be provided.

   (8) Context-sensitive help menus may be unavailable when the following tabs are selected in their respective

      dialog boxes:

      (a) The Build and Editor tabs in the Options dialog box

      (b) The Toolbars, Placeholders, Debugger, Log, and Help tabs in the Customize dialog box

      (c) The Options tab in the Debug Settings dialog box

1.2.2 In Compilers

   (1) When members of a bit field are assigned to or referenced by addresses, they may be interpreted as illegal objects.

1.2.3 In Assemblers

   (1) If a structured assembly directive in which no size is specified exists in the program, error

      "(E) 300 ILLEGAL MNEMONIC" arises.

   (2) If any instruction other than the one-word instructions is used as an instruction for a delay slot, error

      "(E) 150 INVALID DELAY SLOT INSTRUCTION" is not provided.

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1.2.4 In the Optimizing Linkage Editor

(1) By optimization at linking, debug information (line information) is incorrectly edited and displayed in the debugger.

This problem may occur if the following conditions are all satisfied:

1. The "debug" and "goptimize" options are selected as compiler options.

2. Some types of optimization at linking are effective.

3. By these optimizations, lines of debug information are output at regular intervals of 255.

(2) In an object file generated by the assembler, illegal optimization is performed for sections not to be optimized.

This problem may occur if the following conditions are all satisfied:

1. In the source file is used a PC index relative instruction (BRA Rn.B/W/L or BSR Rn.B/W/L).

2. At assembling the source file in 1, the assembler's goptimize option is used.

3. A relocatable file is generated by linking the object file obtained in 2.

4. At linking the relocatable file in 3, optimization is enabled.

(3) If an absolute file generated by using the "optimization with the same-code unification"option is input to the

"helfcnv" file formatting converter, the G2003 error arises.

This problem may occur if the following conditions are all satisfied:

1. The "debug" and "goptimize" option are selected as compiler options.

2. The "optimization with the same-code unification" (optimize=same_code) is enabled.

3. Optlnk V.8.00.03 or later is used.