**A Note on Using the C Compiler Package**

**M3T-NC30WA V.5.40 Release 00A**

Please take note of the following problem in using the C compiler package M3T-NC30WA V.5.40 Release 00A, which is used for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny, and R8C/Tiny series of MCUs:

- On compiling source code for the R8C/20, /21, /22, /23, /24, or /25 MCU group

1. **Description**
   
   When a project for a member of the R8C/20, /21, /22, /23, /24, or /25 MCU group is created and built using the High-performance Embedded Workshop, the following warning message may appear at linking:

   Warning (ln30) :16-bits signed value is out of range -32768 -- 32767.

   If you neglect the warning to execute the program, it will run away. Note, however, that it is no problem unless the warning is displayed.

2. **Conditions**
   
   This problem occurs if the following settings are made in the New Project Workspace dialog box to create a project using the High-performance Embedded Workshop:

   - R8C/Tiny is selected in the CPU Series list box.
   - Any one of the groups "20", "21", "22", "23", "24", and "25" is selected in the CPU Group list box.
     
     Note that these groups are 48-KB ROM versions; if "20 (ROM64K)" or "24 (ROM32K)" is selected, the problem does not occur because they are not 48-KB ROM versions.

3. **Workaround**
   
   This problem can be circumvented by placing const-qualified variables within the near area. To do so, perform the following procedures:

   1. In the High-performance Embedded Workshop, open the
Build menu and select the Renesas M16C Standard Toolchain command. You see the Renesas M16C Standard Toolchain dialog box opens.

(2) In this dialog box, click the CPU tab; then select Generates code for R8C/Tiny (R8C/2X) series in the CPU Type list box.

(3) Click the C tab and select Code Modification in the Category list box. Next, check the -fNROM check box in the Miscellaneous options section.

(4) Press the OK button to close the window.

4. **Schedule of Fixing the Problem**

   We plan to fix this problem in the next release of the product.

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