RENESAS Tool News

A Note on Using the C Compiler Package for the M16C MCU Series V.5.43 Release 00

Please take note of the following problem in using the C compiler package M3T-NC30WA V.5.43 Release 00, which is used for the M16C series of MCUs:*

- With creating projects for the MCUs with 48-KB ROM in the R8C/2D group

*The M16C series is the generic name of the M16C/60, /30, /20, /10, /Tiny and R8C/Tiny series of MCUs.

1. Description
When you create projects for any of the MCUs with 48-KB ROM in the R8C/2D group, R8C/Tiny series using the compiler together with High-performance Embedded Workshop, an incorrect linker option -ORDER (Specifies section allocation sequence) may be generated, and a link error arise if build is performed.

2. Conditions
This problem occurs if the following conditions are all satisfied:
(1) In the New Project Workspace dialog box, "C source startup Application" is selected from the Project Types list.
(2) In the New Project-1/5-Select Target CPU Toolchain version dialog box, "R8C/Tiny" and "2D" are selected from the CPU Series list and the CPU Group list respectively.
(3) In the New Project-3/6-Setting the Contents of Files to be Generated dialog box, "48K Bytes" is selected in the ROM size pull-down list and "E8" in the Use OnChip Debugging Emulator pull-down list.

3. Workaround
Perform the following procedure to avoid this problem:
(1) Click the Project tab in the Workspace window and select "firm.c"

out of the Project tree. Next, to delete the file, execute
the Remove files command in the pop-up menu that appears by
right-clicking on a file name of the Project tree.
Also delete "firm_ram.c" the same way.

(2) Open the Build menu and select the Renesas M16C Standard Toolchain
command. The Renesas M16C Standard Toolchain dialog box appears.

(3) Click the Link tab.

(4) Edit the -ORDER option in the Linker options text box at the bottom
of the tab as follows (copy and paste available):

Replace:
  -ORDER SectionOrder2x¥R8C2c_2d_4K.dat=00
With:
  -ORDER data_SE=400,bss_SE,data_SO,bss_SO,data_NE,bss_NE,
data_NO,bss_NO,stack,istack,heap_NE,rom_NE=04000,rom_NO,data_SEI,data_SOI,
data_NEI,data_NOI,switch_table,program,interrupt,vector=0fedc

(5) Click the OK button.

4. Schedule of Fixing the Problem
We plan to fix this problem in the next release of the product.