RENESAS Tool News

A Note on Using the C Compiler Packages M3T-NC308WA and M3T-NC30WA

Please take note of the following problem in using the C compiler packages M3T-NC308WA and M3T-NC30WA, which are used for the M16C MCU family:

- On using the "-JOPT" option at linking

1. **Products and Versions Concerned**
   M3T-NC308WA V.5.20 Release 1 and V.5.20 Release 02
   (for the M32C/90, M32C/80, and M16C/80 series)

   M3T-NC30WA V.5.30 Release 1 and V.5.30 Release 02
   (for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny, and R8C/Tiny series)

2. **Description**
   If the "-JOPT" option is used at linking, either of the following warning messages may be displayed, which tells duplication of a directive command ".ID," ".PROTECT," or ".OFSREG" even though the directive command is not duplicated.

   In M3T-NC308WA
     Warning (ln308): Directive command '.ID' is duplicated
     Warning (ln308): Directive command '.PROTECT' is duplicated

   In M3T-NC30WA
     Warning (ln30): Directive command '.ID' is duplicated
     Warning (ln30): Directive command '.PROTECT' or '.OFSREG' is duplicated

3. **Conditions**
   This problem occurs if the following conditions are all satisfied:
   (1)   Assembler directive command, ".ID," ".PROTECT," or
         ".OFSREG," is used.

(2)   In the program exists a jump instruction that can optimize the jump distance at linking

(3)   The "-Oglb_jmp [-OGJ]" option of the compiler or the "-JOPT" of the assembler is selected.

(4)   The "-JOPT" option is selected in the linker.

Example:
```
-----------------------------------------------------------------------
_asm(" .protect 0FFH");  /* Condition (1) */
extern void func2(void);

void func1(void)
{
   func2();           /* Condition (2); Code jsr _func2 generated */
}
-----------------------------------------------------------------------
```

4. **Workaround**

This problem can be circumvented either of the following ways:

(1)   Use load module converter option "-ID," "-protectx," or "-ofsregx" instead of assembler directive command ".ID," ".PROTECT," or".OFSREG" respectively.

(2)   When ".ID," ".PROTECT," or ".OFSREG" is selected, don't use link option "-JOPT."

5. **Schedule of Fixing the Problem**

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