A Note on Using C Compilers
M3T-NC308WA and M3T-NC30WA

Please take note of the following problem in using the M3T-NC308WA and M3T-NC30WA C compilers (with an assembler and integrated development environment):

- On displaying the values of arguments passed to a function

1. **Products and Versions Concerned**

   M3T-NC308WA V.5.10 Release 1
   - for the M32C/80 and M16C/80 series MCUs
   M3T-NC30WA V.5.10 Release 1
   - for the M16C/60, M16C/30, M16C/20, and M16C/10 series MCUs

2. **Description**

   The values of arguments passed to a function through a register may not correctly be displayed in the emulator debugger or simulator debugger. However, codes are created correctly.

3. **Conditions**

   The conditions under which this problem occurs are as follows:

   In the M3T-NC308WA
   - The type of the first argument of a function is _Bool, char, int, or near pointer. (The arguments of these types are all passed to functions through registers.)

   In the M3T-NC30WA
   - The type of the first argument of a function is _Bool, char, int, or near pointer; or that of the second argument is int or near pointer. (The arguments of these types are all passed to functions through registers.)
4. **Example**
   In the program shown below, the value of argument i cannot correctly be displayed in the debugger.

   ----------------------------------------
   void func(int i, char c) // 1st argument is of type int
   {
     :
   }
   ----------------------------------------

5. **Workaround**
   This problem can be circumvented by performing the following steps:

   (1) Add storage class "register" to the argument displayed incorrectly.
   (2) Select the -fER/-fenable_register option at compilation.

   ----------------------------------------
   void func(register int i, char c)
   {
     :
   }
   ----------------------------------------

6. **Schedule of fixing the Problem**
   We plan to fix this problem in our next release of the products.

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