A Note on Using C-Compiler Packages
M3T-NC308WA and M3T-NC30WA
--On Calling a Function Declared to Be typedef and Returning a Structure--

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

- On calling a function declared to be typedef and returning a structure

1. Versions Concerned
   M3T-NC308WA V.5.00 Release 1 through V.5.20 Release 1
   (for the M32C/90, M32C/80, and M16C/80 series)

   M3T-NC30WA V.5.00 Release 1 through V.5.30 Release 1
   (for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny, and R8C/Tiny series)

2. Description
   Declaring a function or a pointer to a function that returns a structure to be typedef and then calling this function result in incorrect code being generated.

2.1 Conditions
   This problem occurs if the following conditions are all satisfied:
   (1) A function or a pointer to a function that returns a structure is declared to be typedef.
   (2) Then the function in (1) is called.

2.2 Example:

   -----------------------------------------------
   struct S{
int i;
};

typedef struct S (FUNC)(char);
typedef FUNC* FP;
FP obj1;
-----------------------------------------------------------

3. **Workaround**
Don’t declare a function or a pointer to a function that returns a structure to be typedef.

Example:
-----------------------------------------------------------

struct S{
    int i;
};

struct S (*obj1)(char );
-----------------------------------------------------------

4. **Schedule of Fixing the Problem**
This problem has already been fixed in the M3T-NC30WA V.5.30 Release 02 and later.

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