A Note on Using C Compiler Packages
M3T-NC308WA, M3T-NC30WA, M3T-NC79WA and M3T-NC77WA

Please take note of the following problem in using the M3T-NC308WA, M3T-NC30WA, M3T-NC79WA, and M3T-NC77WA C-compiler packages:

- On converting integer constants

1. **Products and Versions Concerned**
   M3T-NC308WA V.1.00 Release 1 through V.3.10 Release 3
   for the M32C/80 and M16C/80 series MCUs
   M3T-NC30WA V.1.00 Release 1 through V.4.00 Release 2
   for the M16C/60, M16C/30, M16C/Tiny, M16C/20, M16C/10, and
   R8C/Tiny series MCUs
   M3T-NC79WA V.2.00 Release 1 through V.4.10 Release 1C
   for the 79xx series MCUs
   M3T-NC77WA V.3.00 Release 1 through V.5.20 Release 4B
   for the 77xx series MCUs

2. **Description**
   Extending any integer constant in hexadecimal notation that is 16 bits wide to a 32-bit signed integer constant may generate an incorrect code at compilation.

2.1 Conditions
   This problem occurs if the following four conditions are satisfied:
   (1) An integer constant is expressed in hexadecimal notation.
   (2) The integer constant in (1) is in a range of 0x8000 to 0xFFFF.
   (3) The integer constant in (1) is followed by no suffix.
   (4) The integer constant in (1) is converted to type signed long.
2.2 Example

```c
#define AAA (int)0xFFFF    /* Conditions (1),(2), and (3) */

void func(void)
{
    long l;

    l = (long)AAA;    /* Condition (4) */
}                        /* 0x0000FFFF assigned */
```

3. **Workaround**

Change the integer constant to that of 32 bits wide in hexadecimal notation, or express it in decimal notation.

An example of a 32-bit integer constant in hexadecimal notation

```c
#define AAA (int)0xFFFFFFFFL

void func(void)
{
    long l;

    l = (long)AAA;    /* Condition (4) */
}                        /* 0x0000FFFF assigned */
```

An example in decimal notation

```c
#define AAA (int)-1

void func(void)
{
    long l;

    l = (long)AAA;
}                        /* 0x0000FFFF assigned */
```
4. **Schedule of Fixing the Problem**

This problem has been fixed in the M3T-NC308WA and M3T-NC30WA whose versions are V.5.00 Release 1 and later, so please upgrade your product to the latest one by visiting Tools Download.

For the M3T-NC79WA and M3T-NC77WA, we plan to fix this problem in our next release of them.

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