RENESAS Tool News

RENESAS TOOL NEWS on October 16, 2003: RSO-M3T-NC308WA_1-031016D

A Note on Using C Compiler M3T-NC308WA

Please take note of the following problem in using the M3T-NC308WA C compiler (with an assembler and integrated development environment) for the M32C/80 and M16C/80 series MCUs:

- On comparing a variable with another one or a constant of type signed char in a conditional expression

---

1. Versions Concerned

The M3T-NC308WA V.3.00 Release 1 through V.5.10 Release 1
for the M32C/80 and M16C/80 series MCUs

2. Description

Comparing a variable with another one or a constant of type signed char in a conditional expression may result in a system error.

2.1 Conditions

This problem occurs if the following four conditions are satisfied:

(1) A variable of type signed char is compared with another one or a constant of type signed char in the conditional expression of an if statement.

(2) The if statement in (1) is not followed by any else statement.

(3) The program statement executed when the result of comparison in (1) is TRUE is only the processing that assigns the variable/constant with the smaller value to the variable/constant with the larger one.

(4) Any of these optimizing options, -O1, -O2, -O3, -O4, -O5, -OS, and -OR, is used.

2.2 Example

```
----------------------------------------------------
```

```
signed char  func( signed char c, signed char d )
{
 if( c > d ){    /* Conditions (1) and (2) */
 c = d;          /* Condition (3) */
}
return c;
}
-------------------------------------------------
```

3. Workaround

In the if statement, place a dummy asm function immediately after the program statement that is executed when the result of comparison in the conditional expression is TRUE.

```
-------------------------------------------------
 signed char  func( signed char c, signed char d )
 {
 if( c > d ){
    c = d;
    asm();    /* A dummy asm function */
 }
 return d;
 }
-------------------------------------------------
```

4. Schedule of Fixing the Program

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

[Disclaimer]

The past news contents have been based on information at the time of publication. Now changed or invalid information may be included. The URLs in the Tool News also may be subject to change or become invalid without prior notice.