

## A Note on Using C Compiler Package M3T-NC308WA

Please take note of the following problem in using the M3T-NC308WA C-compiler package with an assembler and integrated development environment:

- On a multiplication between variables of type long long
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### 1. Versions Concerned

M3T-NC308WA V.5.00 Release 1 through V.5.20 Release 1

### 2. Description

A multiplication between variables of type long long may cause System Error to arise.

#### 2.1 Conditions

This problem occurs if the following conditions are all satisfied:

- (1) A multiplication between variables of type signed long long or those of unsigned long long is performed.
- (2) Both the multiplier and multiplicand in (1) are originally of type unsigned char, unsigned short, unsigned int, or unsigned long and are converted to of type signed long long or unsigned long long by zero extension.

#### 2.2 Example

```
-----  
long long ll;  
unsigned long l,m;  
  
void func( void )  
{  
    ll = (long long)l * (long long)m; /* Conditions (1) and (2) */  
}
```

}

---

### 3. Workaround

Assign either the multiplier or the multiplicand to a temporary variable, and then perform the multiplication using this temporary variable.

---

```
long long ll;
unsigned long l,m;

void func( void )
{
    long long tmp;

    tmp = (long long)l;
    ll = tmp * (long long)m;
}
```

---

### 4. Schedule of Fixing the Problem

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

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