RENESAS Tool News

Notes on Using Real-Time OS M3T-MR100/4 V.1.00 Release 00

Please take note of the following problems in using the real-time OS-- M3T-MR100/4 V.1.00 Release 00--for the R32C series, M16C family of MCUs:

- With issuing the pol_sem and ipol_sem service calls
- With using the cyclic and alarm handlers

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1. Problem with Issuing the pol_sem and ipol_sem Service Calls

1.1 Description

If the pol_sem or ipol_sem service call is issued to a semaphore with a semaphore count of 0, E_OK may be returned as a return value instead of E_TMOUT. At this time, the semaphore count, which is to be 0, takes a value of 65535.

1.2 Conditions

This problem occurs if the following conditions are both satisfied:

(1) The pol_sem or ipol_sem service call is issued to a semaphore with a semaphore count of 0.

(2) The semaphore whose ID number is next to that of the semaphore in (1) takes a semaphore count other than 0.

1.3 Workarounds

Avoid the problem in either of the following ways:

(1) Issue the ipol_sem service call to any semaphore after checking to make sure that it takes a semaphore count of 0 using the iref_sem service call.

Example:

```
-------------------------------------------------------------
void inh1(void)
```

```
  {
    T_RSEM pk_rsem;
  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
    iref_sem(sem_ID1,&pk_rsem);
    if ( pk_rsem.semcnt != 0){
      ipol_sem(sem_ID1);
    }
  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  }
  --------------------------------------------------------------
  NOTE: In this example, it is assumed that the status of the semaphore
        is not affected by multiple interrupts during execution of the
        above code.
```

(2) Issue the twai_sem service call after selecting TMO_POL
as a timeout value.

Example:
```
--------------------------------------------------------------
void task1(VP_INT exinf)
    {
  . . . . . . . . . . . . . . . . . . . . . . . . . . . .
    twai_sem(sem_ID1,TMO_POL);
  . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  }
--------------------------------------------------------------
```

1.4 Schedule of Fixing the Problem
We plan to fix this problem in the next release of the product.

2. Problem with Using the Cyclic and Alarm Handlers
2.1 Description
If you define 128 or more cyclic or alarm handlers, an assemble error
will arise during build of the application program.

2.2 Solution
Define the number of cyclic or alarm handlers as the one equal to or
less than 127.

2.3 Schedule of Fixing the Problem
We plan to fix this problem in the next release of the product.