RENESAS Tool News

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Note on Using Real-Time OS--RI78V4 V1.00.00-- for RL78 Family and 78K0R MCUs

When using Real-time OS RI78V4 V1.00.00, take note of the following problem:

- With a task in the waiting state for an eventflag (the OR waiting condition)

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1. Description

When a task is in the waiting state for an eventflag (the OR waiting condition), the WAITING state may not be cleared if the event has been established.

2. Conditions

This problem arises if the following conditions are all satisfied:
(1) A task issues any of the following service calls with timeout that specifies the timeout period:
tslp_tsk, dly_tsk, twai_sem, twai_flg, tget_mpf, and trcv_mbx
(2) The WAITING state of the task in (1) is cleared before its timeout occurs.
(3) Before the timeout period specified for the service call in (1) has been elapsed, the task in (1) issues either of the following service calls:
- In the twai_flg service call, TMO_FEVR(=-1) is used as the fifth argument (specifying the timeout period)
and TWF_ORW(=0x01) as the third argument (specifying the waiting mode).
- In the wai_flg service call, TWF_ORW(=0x01) is used as the second argument (specifying the waiting mode).

Note, however, that even if the above conditions are all satisfied, this problem may not arise depending on when interrupts are requested

or how interrupts are handled within the OS.

3. Workaround

To avoid this problem in the task using any of the service calls with timeout listed in Condition (1), Section 2, use either of the following methods:

(1) Use neither of the service calls listed in Condition (3).

(2) If you need to use TWF_ORW(=0x01) in twai_flg to specify the waiting state for an eventflag, use twai_flg with a timeout. In addition, do not use TMO_FEVR(=-1) as the fifth argument, tmout, but specify the timeout period. The period can be set to any value within the following range:
0x00000001--0x7FFFFFFF

4. Schedule of Fixing Problem

This problem has already been fixed in RI78V4 V1.00.01. For information about the V1.00.01 product, see RENESAS TOOL NEWS Document No. 111213/tn3.
http://tool-support.renesas.com/eng/toolnews/111213/tn3.htm
