

Note on Using Real-Time OSes RI850V4 and RX850V4 for V850 Family

When using the real-time OSes for the V850 family of MCUs RI850V4 and RX850V4, take note of the following problem:

- With inconsistency in task states due to operations not being correctly synchronized while the `ref_tsk` service call is processed
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1. Products and Versions Concerned

- (1) RI850V4 V1.00.00 through V1.00.02
(supported by CubeSuite+ integrated development environment or MULTI integrated development environment from Green Hills Software, Inc.)
- (2) RX850V4 V4.22 through V4.43
(supported by PM+ integrated development environment or MULTI integrated development environment from Green Hills Software, Inc.)

2. Description

Although the `ref_tsk` service call should acquire the READY state or the SUSPENDED state, it acquires the DORMANT state.

3. Conditions

This problem arises if the following conditions are all met:

- (1) The `ref_tsk` service call is issued for a task which has entered the WAITING state due to the service calls waiting for timeout.
- (2) That task is timed out due to a timer interrupt being generated during processing of the service call in item (1) above.
- (3) The task is released from the waiting state.

4. Workaround

Prohibit interrupts (place the controller in the DI state) before issuing the `ref_tsk` service call.

Also note that you will need to return the state to that where interrupts are allowed (the EI state) after issuing the ref_tsk service call.

5. Schedule for Fixing the Problem

There is no plan to fix this problem.

Use the method described in Section 4 to avoid this problem.

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