

A Note on Using Real-Time OSes HI7000/4, HI7700/4, and HI7750/4

Please take note of the following problem in using real-time OSes HI7000/4, HI7700/4, and HI7750/4, which are used for the SuperH MCU family:

- With using the TA_COP0, TA_COP1, and TA_COP2 attributes in tasks

1. Products and Versions Concerned

(1) HI7000/4 (for the SH-1-, SH-2-, SH2-DSP-, SH-2A-, and SH2A-FPU-cored MCUs)

V1.00r1 through V.2.02 Release 05

(2) HI7700/4 (for the SH-3-, SH3-DSP-, and SH4AL-DSP-cored MCUs)

V1.00r1 through V.2.03 Release 03

(3) HI7750/4 (for the SH-4- and SH-4A-cored MCUs)

V1.00r1 through V.2.02 Release 05

2. Description

When you use the TA_COP0, TA_COP1, or TA_COP2 attribute in a task, values in the registers listed in the table below may be rewritten to other values.

Real-time OS	Attribute	Register
HI7000/4	TA_COP0	DSP
	TA_COP1	FPU
HI7700/4	TA_COP0	DSP
HI7750/4	TA_COP1	FPU in Register bank 0

	TA_COP2	FPU in Register bank 1
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3. Conditions

This problem may arise if the conditions (1), (2), and (3) or the conditions (1), (2), and (4) below are satisfied.

- (1) At least any one of the three attributes TA_COP0, TA_COP1, and TA_COP2 is used in a task.
- (2) The task in (1) ends by calling the ext_tsk service call or returning from the task's starting function.
- (3) The activation request count for requesting the task in (1) is greater than 1.
- (4) The interrupt handler or the time-event handler invokes the task in (1) by issuing the iact_tsk or ista_tsk service call.

4. Solution

This problem has been solved in the following versions of the products, which were released on October 1, 2009:

- (1) HI7000/4 V.2.02 Release 06
- (2) HI7700/4 V.2.03 Release 04
- (3) HI7750/4 V.2.02 Release 06

For how to update your products to those, see RENESAS TOOL NEWS Document No. 091001/tn7, published on October 1, 2009.

This Web page will be opened from October 5.

Note, however, that each of the three product types HI7000/4, HI7700/4, and HI7750/4 cannot be updated from any of its V.1 products to the latest version.

If you are using V.1 products of the above product types, consider whether to replace them with their latest versions.

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