RENESAS Tool News

RENESAS TOOL NEWS on April 1, 2013: 130401/tn3

Note on Using Renesas Peripheral Driver Libraries for RX210/RX630 Groups of MCUs and Peripheral Driver Generator --With Dividing BCLK Pin Output Clock--

When using Renesas Peripheral Driver Libraries for the RX210 and RX630 groups of MCUs and Peripheral Driver Generator, take note of the following problem:

- With dividing "BCLK pin output" clock

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1. Products and Versions Concerned

- RX210 Group Renesas Peripheral Driver Library V.1.01
- RX630 Group Renesas Peripheral Driver Library V.1.00
- Peripheral Driver Generator V.2.03 and later

2. Description

In each of the following two cases, the "BCLK pin output" clock cannot correctly be divided.

2.1 In Renesas Peripheral Driver Library

If the clock source specified by the SCKCR3 register is the same as the system-clock source (specified by the first argument of the R_CGC_Set function) then options "PDL_CGC_BCLK_DIV_1" or "PDL_CGC_BCLK_DIV_2", (passed in the second argument to the function) will not affect the clock frequency division.

2.2 In Peripheral Driver Generator V.2.03 and later

In RX210 or RX630 Group, if the clock source specified by the SCKCR3 register is the same as the clock source selected from the Internal clock source drop-down list of Peripheral Driver Generator, the selection made in the BCLK pin output drop-down list will not affect the clock frequency division when a call is made to the R_PG_Clock_Set function.

3. Workarounds

3.1 In RX210 Group Renesas Peripheral Driver Library

Do not make the clock source specified by the SCKCR3 register the same as the system-clock source specified by the first argument of the R_CGC_Set function.
Instead, after changing the current clock source once by using the R_CGC_Set and R_CGC_Control functions, re-specify the division of the frequency outputted from the BCLK pin and the system clock source by using the above functions.

3.2 In RX630 Group Renesas Peripheral Driver Library

This problem has already been fixed in RX630 Group Renesas Peripheral Driver Library V.1.10. So use this product.

V.1.10 has been released on April 1, 2013.
The revised sample program will be published in the Web page on April 5.
For details, see RENESAS TOOL NEWS Document No. 130401/tn7.
You can also see this news on the Web page at:

https://www.renesas.com/search/keyword-search.html#genre=document&q=130401tn7

This page will be opened on April 8.

3.3 In Peripheral Driver Generator

Change the status of the SCKCR.PSTOP1 and BCKCR.BCLKDIV bits directly in the user program after making a call to the R_PG_Clock_Set function.

4. Schedule of Fixing Problem

In RX630 Group Renesas Peripheral Driver Library V.1.10, we have already fixed this problem as described above.
As to the other products, RX210 Group Renesas Peripheral Driver Library and Peripheral Driver Generator, we plan to fix this problem in their later versions.
