

Note on Using Renesas Peripheral Driver Libraries and Peripheral Driver Generator --Problem with Setting Programmable Pulse Generators (PPGs)--

When using Renesas Peripheral Driver Libraries and Peripheral Driver Generator, take note of the following problem:

- With setting programmable pulse generators (PPGs)

1. Products and Versions Concerned

- RX62N Group Renesas Peripheral Driver Library V.1.02
- RX630 Group Renesas Peripheral Driver Library V.1.00
- RX63N Group Renesas Peripheral Driver Library V.1.01
- Peripheral Driver Generator V.2.01 and later

2. Description

If you make the settings of the programmable pulse generators (PPGs) in order of even groups and odd groups by using the R_PPG_Create function, incorrect values are set to the Next Data register H (NDRH), and incorrect states may be detected on pins of PPGs.

This is a limitation imposed on Renesas Peripheral Driver Libraries, but has not been explained in their user's manuals.

3. Conditions

This problem arises under the following conditions:

(1) In Renesas Peripheral Driver Libraries

The settings of the PPGs are made in order of even groups and odd groups by using the R_PPG_Create function.

Example:

```
R_PPG_Create(  
    PDL_PPG_PO0_PIN_P20,      /* Group 0 set */  
    PDL_PPG_TRIGGER_MTU0 | PDL_PPG_NORMAL | PDL_PPG_DIRECT, 0x00);
```

```
R_PPG_Create(  
    PDL_PPG_PO4_PIN_P24,      /* Group 1 set */  
    PDL_PPG_TRIGGER_MTU0 | PDL_PPG_NORMAL | PDL_PPG_DIRECT, 0x10);
```

(2) In Peripheral Driver Generator

Any MCU of the RX62N, RX630, RX63N, or RX631 group is used, and the settings of the PPGs are made in order of even groups and odd groups by using the R_PG_PPG_StartOutput_Um_G* function.

Example:

```
R_PG_PPG_StartOutput_U1_G0();  
R_PG_PPG_StartOutput_U1_G1();
```

4. Workarounds

To make the settings of the PPGs in Renesas Peripheral Driver Libraries and Peripheral Driver Generator, start the settings from an odd group.

(1) In Renesas Peripheral Driver Libraries

Example:

```
R_PPG_Create(  
    PDL_PPG_PO4_PIN_P24,      /* Group 1 set */  
    PDL_PPG_TRIGGER_MTU0 | PDL_PPG_NORMAL | PDL_PPG_DIRECT, 0x10);
```

```
R_PPG_Create(  
    PDL_PPG_PO0_PIN_P20,      /* Group 0 set */  
    PDL_PPG_TRIGGER_MTU0 | PDL_PPG_NORMAL | PDL_PPG_DIRECT, 0x00);
```

(2) In Peripheral Driver Generator

Example:

```
R_PG_PPG_StartOutput_U1_G1();  
R_PG_PPG_StartOutput_U1_G0();
```

5. Schedule of Fixing Problem

We are describing this limitation in the user's manuals included in the

newly published versions of the above products.

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