

## Note on Using the Renesas Peripheral Driver Library and the Peripheral Driver Generator

When using the Renesas Peripheral Driver Library for the RX631 group and the Peripheral Driver Generator, take note of the problem regarding the following point described in this note.

- The use of ports B and C (RX631 group)
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### 1. Products Concerned

- Renesas Peripheral Driver Library for the RX631 group, V1.21 and later versions
- Peripheral Driver Generator V2.09 and later versions

### 2. MCUs Involved

RX family: RX631 group  
(MCUs in 64-pin packages and 48-pin packages)

### 3. Description

When attempting to use a pin that has multiplexed port pin functions of both ports B and C as an output port pin, use of the designated pin as an output will not be possible if the pin function is switched after the port input/output setting is made, since it will have been set as an input pin.

### 4. Conditions

- Renesas Peripheral Driver Library for the RX631 group, V1.21 and later versions  
Calling the R\_IO\_PORT\_Set function to set the pin as an output then switching the pin function by calling the R\_IO\_PORT\_Switch function.
- Peripheral Driver Generator V2.09 and later versions  
Making the port setting for the pin by calling the R\_PG\_IP\_PORT\_Set\_Px or R\_PG\_IO\_PORT\_Set\_Pxy function.

### 5. Workaround

Make the output port setting after switching the pin function if you intend to use the port function of a pin which has multiplexed port pin functions of both ports B and C.

- Renesas Peripheral Driver Library for the RX631 group, V1.21 and later versions

Modify the order of the source code generated with the Renesas Peripheral Driver Library so as to make the output setting for the port by calling R\_IO\_PORT\_Set after calling R\_IO\_PORT\_Switch to switch the pin function.

Before modification:

```
-----  
/* Make the port settings */  
R_IO_PORT_Set(  
    PDL_IO_PORT_B_6,  
    PDL_IO_PRT_OUTPUT | PDL_IO_PORT_TYPE_CMOS |  
    PDL_IO_PORT_DRIVE_NORMAL  
);  
  
/* Switch the pin between I/O ports */  
R_IO_PORT_Switch( PDL_IO_PORT_SWITCH_PC0_TO_PB6 );  
-----
```

After modification:

```
-----  
/* Switch the pin between I/O ports */  
R_IO_PORT_Switch( PDL_IO_PORT_SWITCH_PC0_TO_PB6 );  
  
/* Make the port settings */  
R_IO_PORT_Set(  
    PDL_IO_PORT_B_6,  
    PDL_IO_PRT_OUTPUT | PDL_IO_PORT_TYPE_CMOS |  
    PDL_IO_PORT_DRIVE_NORMAL  
);  
-----
```

- Peripheral Driver Generator V2.09 and later versions

Modify the source code generated with Peripheral Driver Generator as shown below.

Before modification:

```
-----  
bool R_PG_IO_PORT_Set_PB6(void)  
{
```

```

bool res;

res = R_IO_PORT_Set(
    PDL_IO_PORT_B_6,
    PDL_IO_PORT_OUTPUT | PDL_IO_PORT_TYPE_CMOS |
    PDL_IO_PORT_DRIVE_NORMAL
);

if( !res ){
    return res;
}

res = R_IO_PORT_Switch( PDL_IO_PORT_SWITCH_PC0_TO_PB6 );
return res;
}
-----

```

After modification:

```

-----
bool R_PG_IO_PORT_Set_PB6(void)
{
    bool res;

    res = R_IO_PORT_Switch( PDL_IO_PORT_SWITCH_PC0_TO_PB6 );

    if( !res ){
        return res;
    }

    res = R_IO_PORT_Set(
        PDL_IO_PORT_B_6,
        PDL_IO_PORT_OUTPUT | PDL_IO_PORT_TYPE_CMOS |
        PDL_IO_PORT_DRIVE_NORMAL
    )

    return res;
}
-----

```

## 6. Schedule for Fixing the Problem

This problem will be fixed in a later version of the product.

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