[Notes]

CS+ Code Generator for RX,

e² studio Code Generator Plug-in,

AP4 Coding Assistance Tool for RX

Outline

When using the products in the title, note the following point.

1. Port direction register (PDR) settings

1. Port Direction Register (PDR) Settings

1.1 Applicable Products

➢ V1.08.00 and later versions of the CS+ Code Generator for RX

➢ V3.0.1.9 and later versions of e² studio (V2.0.2 and later versions of the Code Generator plug-in)

➢ V1.07.00 and later versions of the AP4 coding assistance tool for RX

1.2 Applicable MCUs

➢ RX family: RX230 and RX231 groups

1.3 Details

If the port direction register (PDR) contains control bits* for "nonexistent ports", those control bits must be set to "1" (output port), but code is not generated correctly.

*: The PDR might have been assigned control bits for "nonexistent ports" due to the MCU specifications.

This setting is required for reading the PIDR register. If the PIDR register will not be read, processing is not affected by the setting described in this note.

1.4 Workaround

See the user's manual for the applicable MCU, and then add the initial values of the port direction register (PDR) to the following function. This modification is required every time code is generated.

- void R_PORT_Create(void) in the source file r_cg_port.c

https://www.renesas.com/search/keyword-search.html#genre=document&q=r01uh0496
RX230 Group, RX231 Group User's Manual: Hardware
  21.4 Initialization of the Port Direction Register (PDR)

The following is an example of the required modification.

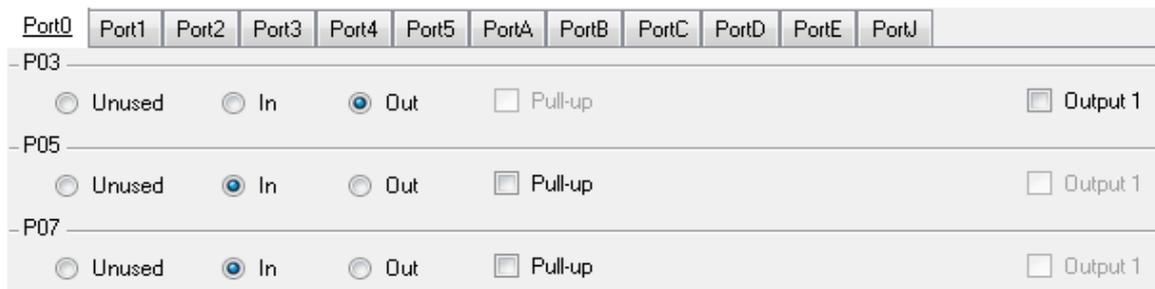➢ Modification for changing the PORT0 setting in the RX231 group R5F52315AxFP (100-pin)

Figure 1 Example of Display when PORT0 is Set in R5F52315AxFP (100-pin)

P00, P01, P02, P04, and P06 are nonexistent ports.

Add the processing in red.

Before modification:

```
/************************************************************
* Function Name: R_PORT_Create
* Description  : This function initializes the Port I/O.
* Arguments    : None
* Return Value : None
************************************************************/
void R_PORT_Create(void)
{
    PORT0.PDR.BYTE = _08_Pm3_MODE_OUTPUT;
}
```

After modification:

```
/************************************************************
* Function Name: R_PORT_Create
* Description  : This function initializes the Port I/O.
* Arguments    : None
* Return Value : None
************************************************************/
void R_PORT_Create(void)
{
    PORT0.PDR.BYTE = _08_Pm3_MODE_OUTPUT | 0x57;
}
```

Reference: Excerpt from RX230 Group, RX231 Group User's Manual: Hardware
21.4 Initialization of the Port Direction Register (PDR)

Table 21.3   PDR Register Settings in 100-Pin Packages

Port Symbol	PDR Register							
	b7	b6	b5	b4	b3	b2	b1	b0
PORT0		1		1		1	1	1
PORT1							1	1
PORT2								
PORT3			0					
PORT4								
PORT5	1	1						
PORTA								
PORTB								
PORTC								
PORTD								
PORTE								
PORTH*1	1	1	1	1				
PORTJ	1	1	1	1		1	1	1

0x57

Note 1.   This setting is required only for the products of the RX230 group, but not for the products of the RX230 group.

1.5   Schedule for Fixing the Problem

This problem will be fixed in a later version.

Revision History

Rev.	Date	Description	
		Page	**Summary**
1.00	Mar. 1, 2017	-	First edition issued

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■Inquiry

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