[Notes]

e^2 studio Smart Configurator Plug-in,

Smart Configurator for RX

Outline

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

1. When using PORT component and configuring PORTC multiplexed pins as input

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1.1 Applicable Products

➢ e^2 studio 6.2 (Smart Configurator Plug-in V1.2.0) or later

➢ Smart Configurator for RX V1.2.0 or later

1.2 Applicable Devices

➢ RX family:
   RX130 (80/64/48 pins) and RX230/1 (64/48 pins) Group

1.3 Details

When using PORT component and configuring PORTC multiplexed pins as input, the generated code for PDR register is wrong, its bit 0 should be set to value 0 instead of value 1.

The affected pins are as below:

- PC0 and PC1 on RX130 (80/64 pins), RX230/1 (64 pins) which are multiplexed with PB6 and PB7
- PC0, PC1, PC2 and PC3 on RX130 (48 pins) and RX230/1 (48 pins) which are multiplexed with PB0, PB1, PB3 and PB5

1.4 Condition

Below are the steps to reproduce the issue:

(1) Creating Smart configurator project on the affected device mentioned above

(2) Add PORT component from the software component page

(3) Enable PORTC and configure the pins mentioned above as input (see **Figure 1.1**)

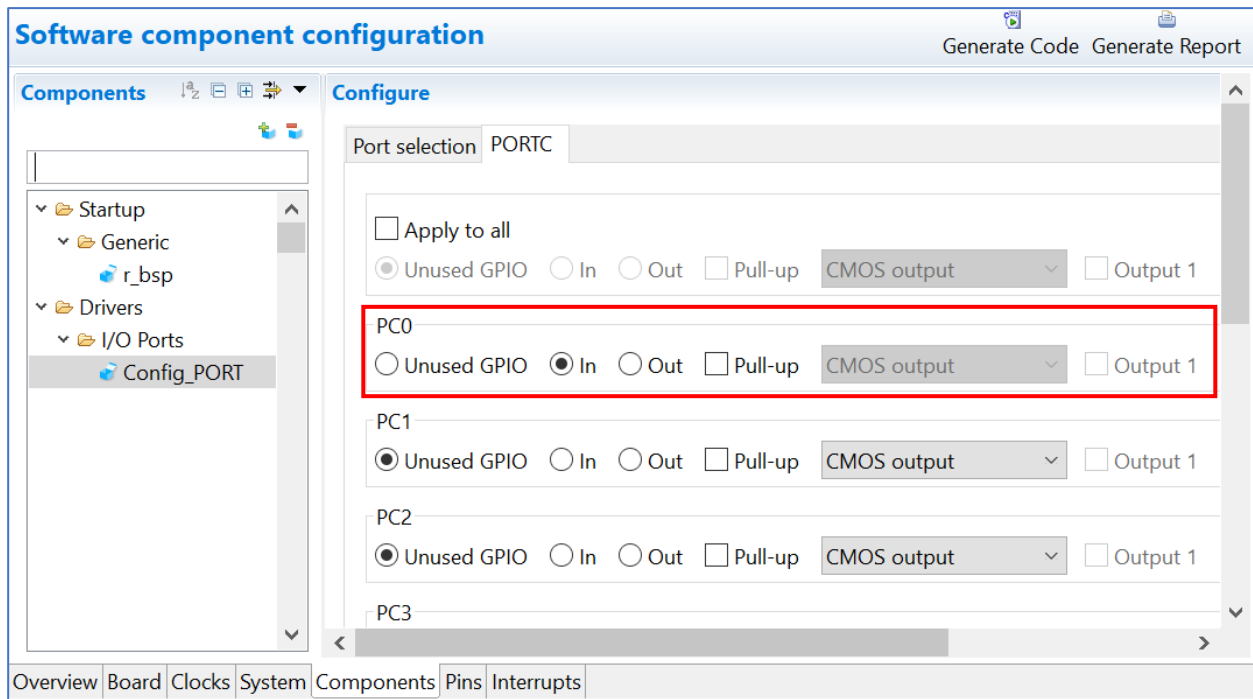(4) Click "Generate Code" and check PDR register generated code in the initialization API (see **Figure 1.2**)

Figure 1.1 Configure PC0 as input for PORT component (RX130 64 pin)

```
/*********************************************************************
* Function Name: R_Config_PORT_Create
* Description : This function initializes the PORT
* Arguments   : None
* Return Value: None
*********************************************************************/

void R_Config_PORT_Create(void)
{
    /* Set PORT3 registers */
    PORT.PSRA.BYTE = _40_PORT_PSEL6_PC0;

    ...

    PORTC.PCR.BYTE = _00_Pm0_PULLUP_OFF;
    PORTC.PMR.BYTE = _00_Pm0_PIN_GPIO;
    PORTC.PDR.BYTE = _00_Pm0_MODE_INPUT | _03_PDRC_DEFAULT;

    R_Config_PORT_Create_UserInit();
}
```

> PORTC PDR bit 0 should be value 0 when PC0 is configured as input, but it is value 1.

Figure 1.2 Incorrect generated code for PDR register in the initialization API

1.5 Workaround

Manually update corresponding bit value from 1 to 0 for this PDR register generated code, e.g. for the PC0, macro name should be updated from "_03_PDRC_DEFAULT" to "_02_PDRC_DEFAULT" and its value should also be updated from "0x03U" to "0x02U" in the "r_cg_port.h" generated file.

1.6   Schedule for Fixing the Problem

This problem will be fixed in the following versions. (Scheduled to be released in July 2021)

➢   e^2 studio 2021-07

➢   Smart Configurator for RX V2.10.0

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	May.16.20	-	First edition issued

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