

[Notes]

R20TS0770ES0100

Rev.1.00

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e² 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 port pins' driving ability as high drive output

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1.1 Applicable Products

- e² studio 5.3 (Smart Configurator Plug-in V1.1.0) or later
- Smart Configurator for RX V1.1.0 or later

1.2 Applicable Devices

- RX family: RX651/N

1.3 Details

When using PORT component and configuring some port pins' driving ability as high drive output, the corresponding bit for DSCR register is not set to 1. These port pins only support 2 following driving abilities switching:

- (a) High drive output
- (b) High-speed interface high drive output

1.4 Condition

Below are the steps to reproduce the issue:

- (1) Creating Smart configurator project on the affected device (e.g. R5F5651CDxBG)
- (2) Add PORT component from the software component page
- (3) Configure the port pins (e.g. P17) which only support the two driving abilities switching mentioned above and set the driving ability to high drive output (see **Figure 1.1**)
- (4) Click the "Generate Code" button to generate the initialization codes for PORT component, observe the DSCR register setting in the initialization API, the bit 7 is not set to 1 (see **Figure 1.2**)

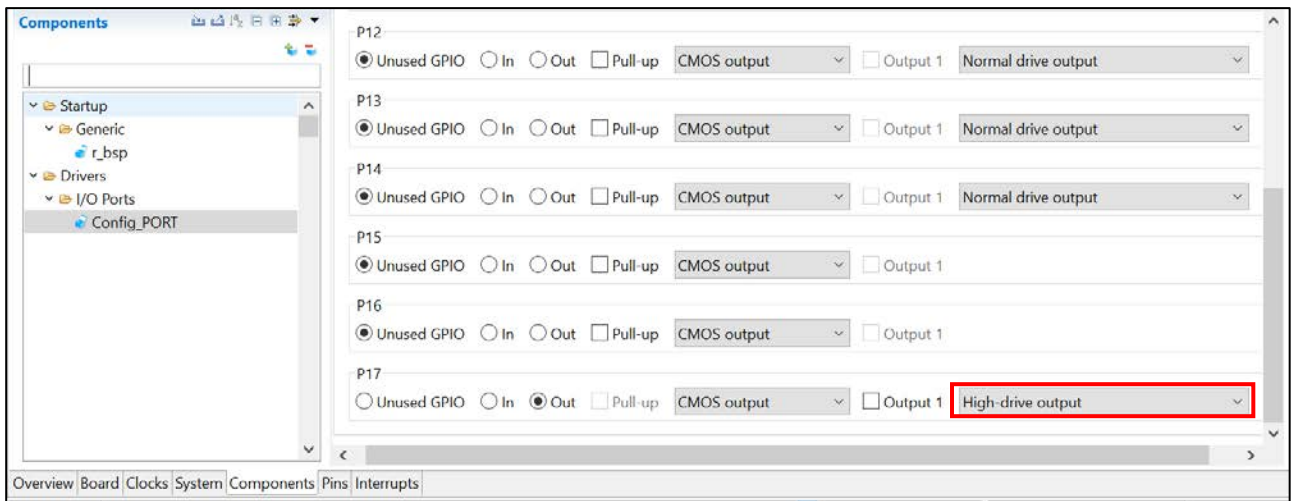


Figure 1.1: Configuring the port pin’s driving ability to high drive output

```

void R_Config_PORT_Create(void)
{
    /* Set PORT1 registers */
    PORT1.PODR.BYTE = _00_Pm7_OUTPUT_0;
    PORT1.ODR0.BYTE = _00_Pm0_CMOS_OUTPUT | _00_Pm1_CMOS_OUTPUT | _00_Pm2_CMOS_OUTPUT | _00_Pm3_CMOS_OUTPUT;
    PORT1.ODR1.BYTE = _00_Pm4_CMOS_OUTPUT | _00_Pm5_CMOS_OUTPUT | _00_Pm6_CMOS_OUTPUT | _00_Pm7_CMOS_OUTPUT;
    PORT1.DSCR.BYTE = _00_Pm2_HIDRV_OFF | _00_Pm3_HIDRV_OFF | _00_Pm4_HIDRV_OFF;
    PORT1.DSCR2.BYTE = _02_Pm1_HISPEED_ON | _00_Pm2_HISPEED_OFF | _00_Pm3_HISPEED_OFF | _00_Pm4_HISPEED_OFF |
        _00_Pm7_HISPEED_OFF;
    PORT1.PMR.BYTE = _00_Pm7_PIN_GPIO;
    PORT1.PDR.BYTE = _80_Pm7_MODE_OUTPUT;

    R_Config_PORT_Create_UserInit();
}
    
```

Missing “_80_Pm7_HIDRV_ON” for DSCR setting

Figure 1.2: Generated codes for DSCR register setting when P17 is set to high drive output

1.5 Workaround

User needs to add the missing initialization code for DSCR register bit manually in the generated codes when he configured the port pins to high drive output; these port pins only support “high drive output” and “high-speed interface high drive output” driving capacities.

1.6 Schedule for Fixing the Problem

This problem will be fixed in the following versions.

- e² studio 2022-01
- Smart Configurator for RX V2.12.0 (Jan 2022)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Nov.16. 21	-	First edition issued

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