

[Notes]

R20TS0245EJ0100

Rev.1.00

Dec. 16, 2017

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. When the LCD controller/driver and I/O ports, PB3 and PB5 are set

1. When the LCD Controller/Driver and I/O Ports, PB3 and PB5 are Set

1.1 Applicable Products

- V1.03.00 and later versions of CS+ Code Generator for RX
- V3.1.0.024 of e² studio (V1.1.2 of the Code Generator plug-in) and later versions
- V1.03.00 and later versions of the AP4 coding assistance tool for RX

1.2 Applicable MCUs

- RX Family: RX113 Group

1.3 Details

When the LCD controller/driver and I/O ports, PB3 and PB5 are set at the same time, an error occurs in conflict checking. When the LCD controller/driver is used and SEG13, which is the shared pin of I/O port PB5, is configured, I/O port PB3, which avoids pin conflict, cannot be configured.

1.4 Workaround

Follow the steps below to manually initialize the LCD controller/driver.

- (1) Clear the I/O port settings (PB3 and PB5).
- (2) Select the [Used] check box to complete all the LCD settings.
- (3) Generate code.
- (4) Select the [Unused] check box.
- (5) Specify the I/O port settings (PB3 and PB5).
- (6) Generate code.
- (7) Make the following modifications (7-1) and (7-2) to the `R_Systeminit()` function in `r_cg_hardware_setup.c`^(Note).
 - (7-1) Add `R_LCD_Create ();` to the line immediately after `R_CGC_Create ();`.
 - (7-2) Add `#include "r_cg_lcd.h"`.
- (8) Manually register `r_cg_lcd.c` and `r_cg_lcd_user.c` in the project folder in the project tree^(Note).

Note: Steps (7) and (8) are required every time code is generated.

The following is an example of the modification to r_cg_hardware_setup.c in step (7). Add the processing in red.

Modification example of r_cg_hardware_setup.c

Before modification:

```

/*****
Includes
*****/
#include "r_cg_macrodriver.h"
#include "r_cg_cgc.h"
#include "r_cg_port.h"
/* Start user code for include. Do not edit comment generated here */
/* End user code. Do not edit comment generated here */
#include "r_cg_userdefine.h"

    Omitted
void R_Systeminit(void)
{
    /* Enable writing to registers related to operating modes, LPC, CGC and
software reset */
    SYSTEM.PRCR.WORD = 0xA50FU;

    /* Enable writing to MPC pin function control registers */
    MPC.PWPR.BIT.BOWI = 0U;
    MPC.PWPR.BIT.PFSWE = 1U;

    /* Initialize non-existent pins */
    PORT0.PDR.BYTE = 0x6BU;
    PORT3.PDR.BYTE = 0xD8U;
    PORT4.PDR.BYTE = 0xA0U;
    PORT5.PDR.BYTE = 0x80U;
    PORT9.PDR.BYTE = 0xF8U;
    PORTD.PDR.BYTE = 0xE0U;
    PORTF.PDR.BYTE = 0x3FU;
    PORTJ.PDR.BYTE = 0x32U;

    /* Set peripheral settings */
    R_PORT_Create();
    R_CGC_Create();

    /* Disable writing to MPC pin function control registers */
    MPC.PWPR.BIT.PFSWE = 0U;
    MPC.PWPR.BIT.BOWI = 1U;

    /* Enable protection */
    SYSTEM.PRCR.WORD = 0xA500U;
}

```

After modification:

```

/*****
Includes
*****/
#include "r_cg_macrodriver.h"
#include "r_cg_cgc.h"
#include "r_cg_port.h"
/* Start user code for include. Do not edit comment generated here */
#include "r_cg_lcd.h"
/* End user code. Do not edit comment generated here */
#include "r_cg_userdefine.h"

    Omitted
void R_Systeminit(void)
{
    /* Enable writing to registers related to operating modes, LPC, CGC and
software reset */
    SYSTEM.PRCR.WORD = 0xA50FU;

    /* Enable writing to MPC pin function control registers */
    MPC.PWPR.BIT.BOWI = 0U;
    MPC.PWPR.BIT.PFSWE = 1U;

    /* Initialize non-existent pins */
    PORT0.PDR.BYTE = 0x6BU;
    PORT3.PDR.BYTE = 0xD8U;
    PORT4.PDR.BYTE = 0xA0U;
    PORT5.PDR.BYTE = 0x80U;
    PORT9.PDR.BYTE = 0xF8U;
    PORTD.PDR.BYTE = 0xE0U;
    PORTF.PDR.BYTE = 0x3FU;
    PORTJ.PDR.BYTE = 0x32U;

    /* Set peripheral settings */
    R_PORT_Create();
    R_CGC_Create();
    R_LCD_Create();

    /* Disable writing to MPC pin function control registers */
    MPC.PWPR.BIT.PFSWE = 0U;
    MPC.PWPR.BIT.BOWI = 1U;

    /* Enable protection */
    SYSTEM.PRCR.WORD = 0xA500U;
}

```

1.5 Schedule for Fixing the Problem

This problem will be fixed in the next version.
The next version will be available in July 2018.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Dec. 16, 2017	-	First edition issued

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