[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. 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:

```c
#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"

void R_SystemInit(void)
{
    SYSTEM.PRCR.WORD = 0xA50FU;
    MPC.PWPR.BIT.B0WI = 0U;
    MPC.PWPR.BIT.PFSWE = 1U;
    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.B0WI = 1U;

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

Omitted
After modification:

```c
#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"

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.B0WI = 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.B0WI = 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

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