

[Notes]

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e² studio Smart Configurator Plug-in,
Smart Configurator for RX

Outline

When using the e² studio Smart Configurator Plug-in and Smart Configurator for RX, note the following point.

1. When using the I²C bus interface in master mode

1. When Using the I²C Bus Interface in Master Mode

1.1 Applicable Products

- e² studio V6.0.0 (Smart Configurator Plug-in V1.2.0) or later
- Smart Configurator for RX V1.2.0 or later

1.2 Applicable Devices

- RX family:
RX110, RX111, RX113, RX130, RX230, RX231, RX23T, RX24T, RX24U, RX64M,
RX651, RX65N, and RX71M groups

1.3 Details

When the I²C bus interface is used in master mode, communication may not be performed correctly because the SCL synchronous circuit enable bit (SCLE) of the I²C bus function enable register (ICFER) is set to "0" in the code generated by the applicable products.

Error location:

```

/*****
* Function Name: R_Config_RIIC0_Create
* Description  : This function initializes the RIIC0 channel
* Arguments   : None
* Return Value: None
*****/
void R_Config_RIIC0_Create(void)
{
    ...
    * Set ICFER */
    RIIC0.ICFER.BYTE = _00_IIC_TIMEOUT_FUNCTION_DISABLE |
                      _02_IIC_MASTER_ARBITRATION_ENABLE |
                      _00_IIC_NACK_ARBITRATION_DISABLE |
                      _10_IIC_NACK_SUSPENSION_ENABLE |
                      _20_IIC_NOISE_FILTER_USED |
                      _00_IIC_FASTPLUS_MODE_DISABLE;
    ...
}

```

1.4 Conditions

This problem occurs when a component of I²C master mode of Code Generator type is used.

1.5 Workaround

Add the code that sets the SCL synchronous circuit enable bit (SCLE) of the I²C bus function enable register (ICFER) to "1" in the function in the following source file. The code that is added in the user code area will be protected. You will not need to add this code after each code generation.

- Source file: "<I²C-master-configuration-name>_user.c"
- Function: "void R_<I²C-master-configuration-name>_Create_UserInit(void)"

The <I²C-master-configuration-name> varies depending on the selected component of I²C master mode.

The following is an example of modified code when the <I²C-slave-configuration-name> is Config_RIIC0 (initial value) for RX64M. Modification is shown in red.

Before modification:

```

/*****
* Function Name: R_Config_RIIC0_Create_UserInit
* Description  : This function adds user code after initializing
*               the RIIC0 bus interface
* Arguments   : None
* Return Value: None
*****/
void R_Config_RIIC0_Create_UserInit(void)
{
    /* Start user code for user init. Do not edit comment generated here */
    /* End user code. Do not edit comment generated here */
}

```

After modification:

```

/*****
* Function Name: R_Config_RIIC0_Create_UserInit
* Description  : This function adds user code after initializing
*               the RIIC0 bus interface
* Arguments   : None
* Return Value: None
*****/
void R_Config_RIIC0_Create_UserInit(void)
{
    /* Start user code for user init. Do not edit comment generated here */
    RIIC0.ICFER.BIT.SCLE = 1U;
    /* End user code. Do not edit comment generated here */
}

```

1.6 Schedule for Fixing the Problem

This problem will be fixed in the next version. (Scheduled to be released in July 2019.)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Apr.16.19	-	First edition issued

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Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu, Koto-ku, Tokyo 135-0061 Japan
www.renesas.com

Contact information

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