[Notes]

e² studio Smart Configurator Plug-in,

Smart Configurator for RX

Outline

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

1. Notes on using Real Time Clock component

2. Notes on using Clocks tab

1. Notes on using Real Time Clock component

1.1 Applicable Products

- From e² studio 2021-07 (Smart Configurator Plug-in V2.10.0) to e² studio 2025-07 (Smart Configurator Plug-in V2.26.0)

- From Smart Configurator for RX V2.10.0 to Smart Configurator for RX V2.26.0

1.2 Applicable Devices

RX family: RX671

1.3 Details

Incorrect code is generated in R_Config_RTC_Create() function when the conditions specified in section 1.4 are met.

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1.4 Conditions

The issue occurs when a Smart Configurator project is configured with the following conditions:

- Create an RX671 project
- Add Real Time Clock component
- Select EXCIN as clock source for RTC at Clocks tab (note: sub-clock is not used)
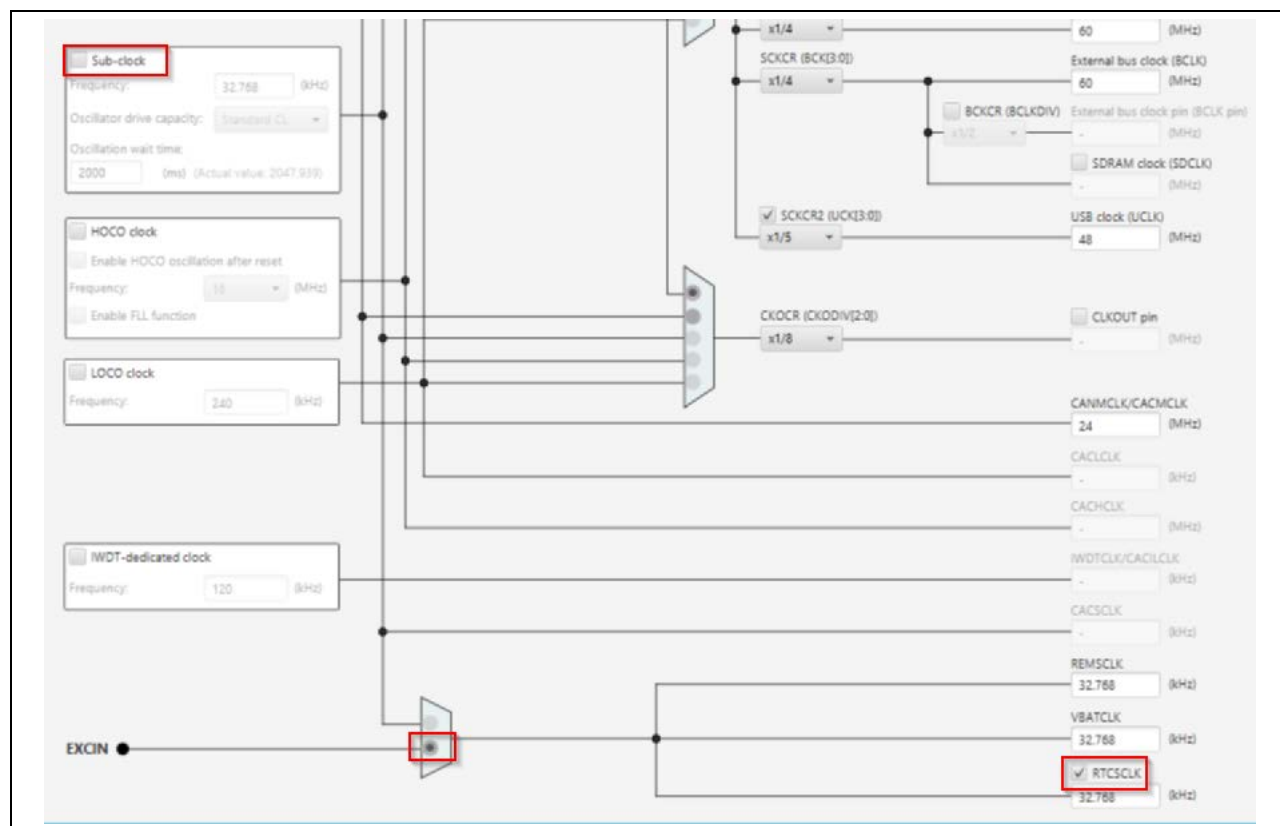- Generate Code

Figure 1. Select EXCIN as clock source for RTC at Clocks tab

```
void R_Config_RTC_Create(void)
{
    uint16_t w_count;
    uint32_t rw_count;
    volatile uint32_t dummy;

    /* Disable ALM, PRD and CUP interrupts */
    IEN(RTC, ALM) = 0U;
    IEN(RTC, PRD) = 0U;

    if (RTC.RCR1.BIT.AIE == 1U)
    {
        /* Clear IR flag of ICU ALARM interrupt */
        IR(RTC, ALM) = 0U;
    }

    /* RTC cold start with sub-clock source */
    if(0 == SYSTEM.RSTSR1.BIT.CWSF)
    {
        /* Set RTC clock source */
        RTC.RCR4.BYTE = _00_RTC_SOURCE_SELECT_SUB;

        /* Set sub-clock oscillator */
        /* WAIT_LOOP */
        while (1U != RTC.RCR3.BIT.RTCEN)
        {
            RTC.RCR3.BIT.RTCEN = 1U;
        }

        /* Wait for 6 sub-clock cycles */
        /* WAIT_LOOP */
```

Figure 2.   Incorrected code of R_Config_RTC_Create() function

1.5   Workaround

When using EXCIN with RTC component, open Config_RTC.c file, go to R_Config_RTC_Create() function, comment out the code setting RTCEN bit as follows.

```
        /* Set RTC clock source */
        RTC.RCR4.BYTE = _00_RTC_SOURCE_SELECT_SUB;
/* Start user code */
#if 0 // using EXCIN
/* End user code */
        /* Set sub-clock oscillator */
        /* WAIT_LOOP */
        while (1U != RTC.RCR3.BIT.RTCEN)
        {
            RTC.RCR3.BIT.RTCEN = 1U;
        }
/* Start user code */
#endif
/* End user code */
        /* Wait for 6 sub-clock cycles */
        /* WAIT_LOOP */
        for (w_count = 0U; w_count < _112B_RTC_SUB_6_CYCLE_WAIT; w_count++)
        {
            nop();
        }
```

Figure 3.   Modification for R_Config_RTC_Create() function

1.6   Schedule for Fixing the Problem

This problem will be fixed in the following product versions, scheduled for release in Oct. 2025.

- e[2] studio 2025-10 (Smart Configurator Plug-in V2.27.0)
- Smart Configurator for RX V2.27.0

2. Notes on using Clocks tab

2.1 Applicable Products

- From e² studio 2021-10 (Smart Configurator Plug-in V2.11.0) to e² studio 2025-07 (Smart Configurator Plug-in V2.26.0)

- From Smart Configurator for RX V2.11.0 to Smart Configurator for RX V2.26.0

2.2 Applicable Devices

RX family: RX140, RX260, RX261

2.3 Details

HOCO frequency is changed when reopening the Smart Configurator project under the conditions specified in section 2.4.

2.4 Conditions

The issue occurs when a Smart Configurator project is configured with the following conditions:

- Create an RX140 or RX260 or RX261 project
- Go to Clocks tab
- Select "HOCO clock"
- Change Frequency value
- Select "Enable HOCO oscillation after reset"
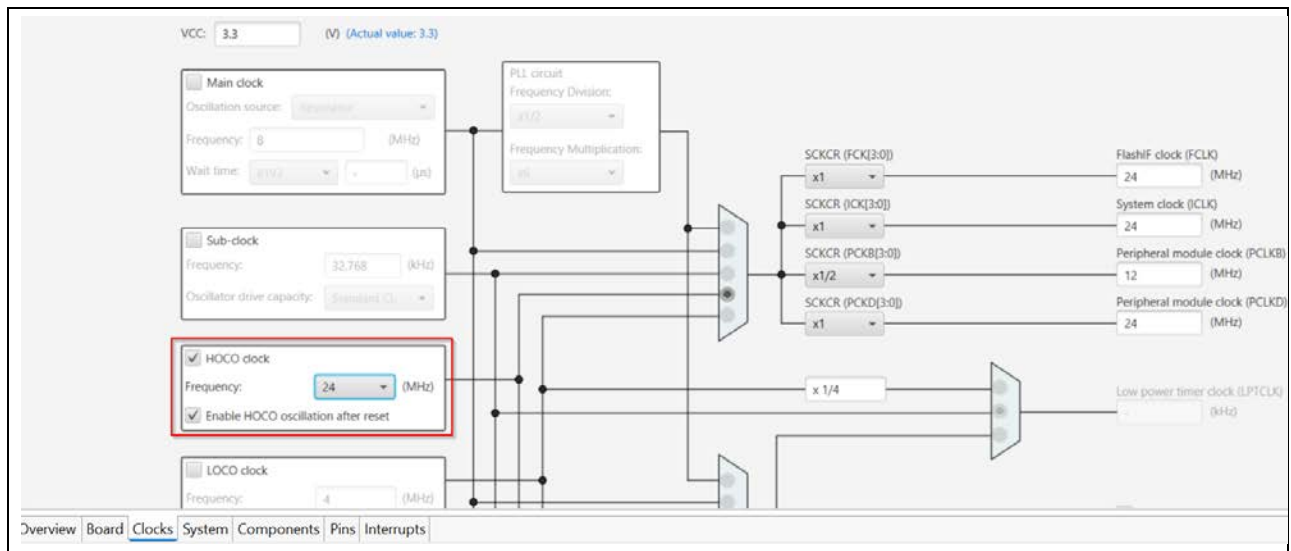- Save and close project
- Reopen Smart Configurator project

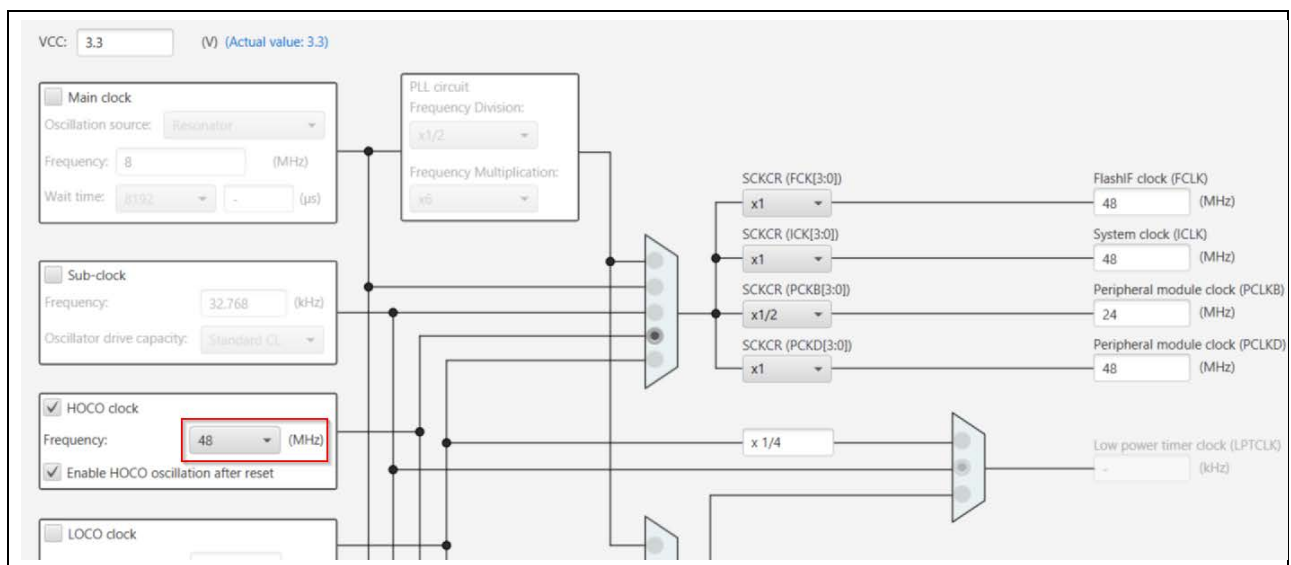**Figure 4.   Change HOCO frequency and select "Enable HOCO oscillation after reset" and**

Figure 5.   HOCO frequency is changed when reopening the project

2.5   Workaround

When reopening the Smart Configurator project under the conditions specified in section 2.4, set HOCO frequency again if it has changed.

2.6   Schedule for Fixing the Problem

This problem will be fixed in the following product versions, scheduled for release in Oct. 2025.

- e^2 studio 2025-10 (Smart Configurator Plug-in V2.27.0)

- Smart Configurator for RX V2.27.0

Revision History

Rev.	Date	Description	
		Page	**Summary**
1.00	Sep.05.25	-	First edition issued

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