[Notes]
e² studio Code Generator Plug-in, Applilet3 Coding Assistance Tool for RL78, AP4 Coding Assistance Tool for RL78

R20TS1170EC0100
Rev.1.00
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Outline

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

1. Notes when using LLVM compiler

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1.1 Applicable Products

- e² studio Code Generator Plug-in V2.24.0 (e² studio 2024-07) or later
- Applilet3 for RL78 V1.24.00 or later
- AP4 for RL78 V1.22.00 or later

1.2 Applicable Devices

RL78 family:

- RL78/L13
- RL78/G12 (30pin)

1.3 Details

When using the peripherals below, incorrect code will be generated and interrupts can't generate correctly.

- RL78/L13

  TAU01 (using INTTM01), TAU02, TAU03 (using INTTM03), TAU04, TAU05, TAU06, TAU07, AD, RTC, 12-bit interval timer, KEY, UART3, TMKB20, INTP6, INTP7, Comparator0, Comparator1, DMA2, DMA3

- RL78/G12 (30pin)

  12-bit interval timer, TAU04, TAU05, TAU06, TAU07

1.4 Conditions

This issue occurs when the user enables the interrupt.

Example: For TAU07

When the user enables "End of timer channel 7 count, generate an interrupt (INTTM07)", the interrupt function can't enter always.

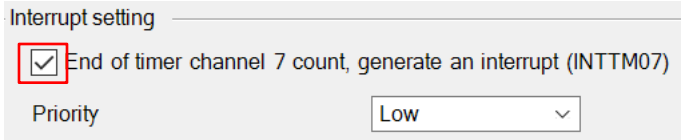

Figure 1-1 Enable the interrupt

```
* Function Name: r_tau0_channel7_interrupt
void r_tau0_channel7_interrupt(void)
{
    /* Start user code. Do not edit comment generated here */
    /* End user code. Do not edit comment generated here */
}
```

Figure 1-2 Interrupt function

1.5 Workaround

After the driver code is generated, please modify the driver code of r_cg_vector_table.c shown in the red box below.

- RL78/L13

Before modification

```
const void *Vectors[] VECT_SECT  = {
    ...
    /*
     * INT_RTIT (0x2E)
     */
    INT_RTIT,
    /*
     * INT_TM01 (0x32)
     */
    INT_TM01,
    ...
    /*
     * INT_TM07 (0x56)
     */
    INT_TM07,
    /*
     * INT_SRE3 (0x5C)
     */
    INT_SRE3,

    /*
     * INT_MD (0x5E)
     */
    INT_MD,
    /*
     * INT_FL (0x62)
     */
    INT_FL,
    ...
    /*
     * INT_DMA3 (0x66)
     */
    INT_DMA3,
    /*
     * INT_BRK_I (0x7E)
     */
    INT_BRK_I,
};
```

After modification

```
const void *Vectors[] VECT_SECT  = {
    ...
    /*
     * INT_RTIT (0x2E)
     */
    INT_RTIT,

    /*
     * Padding for reserved interrupt source (0x30)
     */
    (void*)0xFFFF,

    /*
     * INT_TM01 (0x32)
     */
    INT_TM01,
    ...
    /*
     * INT_TM07 (0x56)
     */
    INT_TM07,

    /*
     * Padding for reserved interrupt source (0x58)
     */
    (void*)0xFFFF,

    /*
     * Padding for reserved interrupt source (0x5A)
     */
    (void*)0xFFFF,

    /*
     * INT_SRE3 (0x5C)
     */
    INT_SRE3,

    /*
     * INT_MD (0x5E)
     */
    INT_MD,

    /*
     * Padding for reserved interrupt source (0x60)
     */
    (void*)0xFFFF,

    /*
     * INT_FL (0x62)
     */
    INT_FL,
    ...
    /*
     * INT_DMA3 (0x66)
     */
    INT_DMA3,

    /*
     * Padding for reserved interrupt source (0x68)
     */
    (void*)0xFFFF,
    ...
    /*
     * Padding for reserved interrupt source (0x7C)
     */
    (void*)0xFFFF,

    /*
     * INT_BRK_I (0x7E)
     */
    INT_BRK_I,
};
```

➢ RL78/G12 (30pin)

Before modification

```
const void *Vectors[] VECT_SECT  = {
    ...
    /*
     * INT_AD (0x34)
     */
    INT_AD,

    /*
     * INT_IT (0x38)
     */
    INT_IT,
    ...
};
```

After modification

```
const void *Vectors[] VECT_SECT  = {
    ...
    /*
     * INT_AD (0x34)
     */
    INT_AD,

    /*
     * Padding for reserved interrupt source (0x7C)
     */
    (void*)0xFFFF,

    /*
     * INT_IT (0x38)
     */
    INT_IT,
    ...
};
```

Note: When the driver code is generated again, the generated code returns to the state before correction. Therefore, please correct the driver code each time the user generates code.

1.6 Schedule for Fixing the Problem

This problem will be fixed in the next version. (Scheduled to be released in Dec 2025.)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Sep.20.25	-	First edition issued

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