

Note on Using Integrated Development Environment CubeSuite+ for RL78 Family

When using the CubeSuite+ for the RL78 Family, take note of the following problem:

- With debugging using CPU stack pointer monitor function in RL78/F13 and RL78/F14 groups of MCUs
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1. Products Concerned

- C Compiler and IDE for RL78/78K Family
- Evaluation edition of CubeSuite+

This problem applies when either of the above products with CubeSuite+ common program V1.00.00 to V2.02.00 is used together with the E1 or E20 emulator.

To check to see your version number, refer to the following URL:
https://www.renesas.com/cs+_ver

2. MCUs Involved

RL78/F13 and RL78/F14 groups of MCUs (RL78 family)

3. Description

During debugging with the CPU stack pointer monitor function enabled, an INTSPM interrupt that does not occur in normal operation may occur incorrectly.

4. Conditions

An incorrect INTSPM interrupt occurs if a program is executed when all of the conditions listed below are met:

- (1) Either of the following values is specified:
 - SP underflow address setting register (SPUFR): greater than 0xFE20
 - SP overflow address setting register (SPOFR): smaller than 0xFE20
- (2) Bit 7 (SPMEN) in the SPM control register (SPMCTRL) is set to "1" (stack pointer monitoring enabled).

(3) Bit 6 (SPMMK) in the interrupt mask flag register (MK0L) is set to "0" (interrupt servicing enabled).

5. Workaround

Use either the SP underflow detection function or the SP overflow detection function by setting the SPUFR and SPOFR as follows:

(1) To enable the SP underflow detection function:

- Set SPUFR to a value smaller than 0xFE20.
- Set SPOFR to 0xFFFE (default value).

(2) To enable the SP overflow detection function:

- Set SPUFR to 0x0000 (default value).
- Set SPOFR to a value greater than 0xFE20.

6. Schedule for Fixing the Problem

This problem will be fixed in a later version of the CubeSuite+ common program.

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