RENESAS Tool News

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Note on Using Integrated Development Environment CubeSuite+ for RL78 Family, 78K0R, and 78K0 MCUs

When using the CubeSuite+ for the RL78 Family, 78K0R, and 78K0 MCUs, take note of the following problems:

- With rewriting the data flash memory (target: RL78 family)
- With Step Over execution (targets: RL78 family, 78K0R, and 78K0)

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1. Problem with Rewriting the Data Flash Memory

1.1 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 V2.01.00 is used together with E1 or E20.

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

1.2 MCUs Involved

RL78 family except for RL78/G10

1.3 Description

When the data flash memory is rewritten via the Memory panel or Watch panel during a break, sometimes CubeSuite+ does not operate normally.

1.4 Conditions

This problem arises if the following conditions are all met:

(1) User is set for Monitor clock in the Connect Settings tab of the Property panel.

(2) A clock frequency in which flash memory cannot be rewritten has been set.

(3) A break is in progress.

1.5 Workaround

To rewrite the data flash memory during a break, set System for Monitor clock in the Connect Settings tab of the Property panel.

1.6 Schedule for Fixing the Problem

Fixing this problem is under consideration.

2. Problem with Step Over Execution

2.1 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 V2.01.00 is used together with IECUBE, MINICUBE2, simulator, E1, or E20. (NOTE)

NOTE: The usable debugging tools differ depending on the MCUs.

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

2.2 MCUs Involved

RL78 Family, 78K0R and 78K0 MCUs

2.3 Description

When performing Step Over execution from the location where the function is called in the Editor panel, Step In execution may be performed instead of Step Over execution.

2.4 Conditions

This problem occurs when the combination of the function's call location and call destination is any of the following:

(1) Function call location: Function in the C-language source code
Function call destination: Function which is created in the assembler source code and has debugging information (NOTE 1)

(2) Function call location: CALL instruction in the assembler source code
Function call destination: Function which is created in the assembler source code and has debugging information (NOTE 1)

(3) Function call location: CALL instruction in the assembler source code

Function call destination: Function which is created in
the C-language source code or
assembler source code and does not have
debugging information (NOTE 2)

NOTE 1: Service calls of the real-time OS RI78V4 are included.
NOTE 2: Library functions for flash self-programming are included.

2.5 Workarounds

To avoid this problem, use either of the following methods described below:

(1) Before performing Step Over execution of the relevant function call process in the Editor panel, switch to the Disassemble panel and then perform Step Over execution.

(2) Before performing Step Over execution of the relevant function call process in the Editor panel, right-click on the source line of the return destination and select Go to Here.

2.6 Schedule for Fixing the Problem

This problem will be fixed in the CubeSuite+ V2.02.00
(to be published on March 24, 2014).
