RENESAS Tool News

Notes on Using RX E1/E20 Emulator Debuggers

When using RX E1/E20 Emulator Debuggers, take note of the following problems:

- With loading data onto data flash ROM area
- With executing program for manipulating protect register

1. Products and Versions Concerned
   - RX E1/E20 Emulator Debugger included in CubeSuite+ V1.01.00--V1.03.00
   - RX E1/E20 Emulator Debugger V.1.02.00 and V.1.03.00 managed by the
     integrated development environment High-performance Embedded Workshop

2. Problem with Loading Data onto Data Flash ROM Area

2.1 Description
   If you load data onto the data flash ROM area, it may not be written
   correctly.

2.2 Conditions
   This problem arises if the following conditions are both satisfied:
   (1) The system to debug is designed with an MCU belonging to any of
       the following MCU groups:
       - RX610, RX621, RX62N, RX62T, and RX62G

   (2) When data is overwritten to the data flash ROM area, either of
       the following actions is taken:
       - In RX E1/E20 Emulator Debugger included in CubeSuite+,
         you click the Download File Settings tab on the Property panel;
         then select "No" at the right of "Erase data flash ROM before
         download."
       - In RX E1/E20 Emulator Debugger managed by High-performance
         Embedded Workshop, you specify the data flash ROM area to
         be overwritten on the Internal flash memory overwrite page of
         the Configuration Properties dialog box.

2.3 Workarounds

To avoid this problem, do not overwrite data into the data flash ROM area, and take either of the following actions:

- In RX E1/E20 Emulator Debugger included in CubeSuite+, click the Download File Settings tab on the Property panel; then select "Yes" at the right of "Erase data flash ROM before download."
- In RX E1/E20 Emulator Debugger for High-performance Embedded Workshop, do not specify the data flash ROM area on the Internal flash memory overwrite page of the Configuration Properties dialog box.

3. Problem with Executing Program for Manipulating Protect Register

3.1 Description

Even if you set bit 2 (PRC2) of the protect register PRCR to 1 (Protect disabled) in the user program, this program is executed after the emulator debugger clears bit 2 to 0 (Protect enabled).

3.2 Conditions

This problem arises if the following conditions are both satisfied:
(1) The system to debug is designed with any MCU of the RX210 group.
(2) You set bit 2 of the protect register to 1 before the user program is executed.

The involved program is:
- any of the following in RX E1/E20 Emulator Debugger included in CubeSuite+:

Go, Ignore break and go, Step In, Step Over, Return Out, and Go to Here
- any of the following in RX E1/E20 Emulator Debugger managed by High-performance Embedded Workshop:

Go, Free Go, Step In, Step Over, Step Out, and Go to Cursor

3.3 Workaround

After you sets bit 2 of the protect register to 1 in the user program, do not break it until the user program clears this bit to 0.

4. Schedule of Fixing Problems

We plan to fix these programs in the release of RX E1/E20 Emulator Debugger included in CubeSuite+ V2.00.00. As to RX E1/E20 Emulator Debugger managed by High-performance Embedded Workshop, we plan to offer you the update program.
The schedule of releasing it is under consideration.