RENESAS Tool News

A Note on Using the Simulator Debugger for the SuperH MCU Family

When you use the simulator debugger for the SuperH MCU family, take note of the following problem.
The simulator debugger is included in the C/C++ compiler package for the SuperH RISC engine family of MCUs.

- With using the simulator debugger for the SH-4A with extended functions

1. Product and Versions Concerned

The simulator debugger for the SuperH MCU family
  V.9.08.00 through V.9.10.00

To check for the version number of your simulator debugger, follow these steps:
(1) In the High-performance Embedded Workshop, open the Tools menu and select the Administration command. The Administration dialog box appears.
(2) Out of the Registered Components list in the Administration dialog box, select the simulator debugger you are using; then click the Properties button. The Properties dialog box opens.
(3) In this dialog box, click the Information tab, and the version number of yours will be shown.

2. Description

The product concerned includes in it the simulator debugger for the SH-4A with extended functions (whose debugger target name is SH-4A(SH-X2) Simulator). By default, the simulator debugger for the SH-4A with extended functions cannot access the URAM area.

Here, a SH-4A with extended functions is an SH-4A CPU core in which the value of the VER bit of the processor version register (PVR) is H'30 or greater. Note, however, that the simulator debugger for

the SH-4A with extended functions does not support any SH-4A CPU core
in which the value of VER bit is H'40 or greater.

3. Workaround

If you use the simulator debugger for the SH-4A with extended
Functions to simulate and debug systems that are designed with for
the SH-4A with extended functions and equipped with URAM, set bit 16
of the On-Chip Memory Control register (RAMCR) to 1 by using any
command to operate memory or on the Memory window.

NOTICE:
Because RAMCR is initialized to H'00000000 at reset, set bit 16 of
RAMCR to 1 after reset.
For the address of RAMCR, see the hardware manual.