RENESAS Tool News

Notes on Using the Real-Time OSes M3T-MR308/4 and M3T-MR30/4

Please take note of the following problems in using the real-time OSes
M3T-MR308/4 (for the M32C/80 and M16C/80 series) and M3T-MR30/4
(for the M16C/60, /30, /20, /10, /Tiny series):

- On defining the interrupt handler
- On modifying the values concerning a fixed-size memory pool

1. **Problem on Defining the Interrupt Handler**

    1.1   Products and Versions Concerned
    - The M3T-MR308/4 V.4.00 Release 00 and Release 01
    - The M3T-MR30/4 V.4.00 Release 00

    1.2   Description
    If a configuration file is created using the GUI configurator included in the products concerned, information on the definitions of the interrupt handler that uses the fixed vector table cannot be output to the configuration file.

    1.3   Conditions
    This problem assuredly occurs if the interrupt handler using the fixed vector table is defined.

    1.4   Workaround
    Edit the configuration file to add to it the definitions of the interrupt handler that uses the fixed vector table.

    Example of adding definitions
    ----
    interrupt_vector[252] {
        os_int = NO;

```
        entry_address = Watchdog_hdr();
    };
    ---------------------------------
```

For how to define the interrupt handler, see the following sections in the manuals of the products:
- For the M3T-MR30/4
  Section 8.1.2 Configuration File Definition Items
  Interrupt vector definition
- For the M3T-MR308/4
  Section 6.1.2 Configuration File Definition Items
  Interrupt vector definition

1.5 Schedule of Fixing the Problem
We plan to fix this problem in the next release of the products.

2. Problem on Modifying Information on a Fixed-size Memory Pool

2.1 Products and Versions Concerned
The same as those in Section 1.1.

2.2 Description
The GUI configurator included in the products concerned is provided with the Creation of Fixed-size memory pool dialog box. If a fixed-size memory pool is created by modifying the values for specifying Block Number and Size of a memory block in this dialog box, no message boxes that display error messages may be closed when errors arise.
Should this be the case, the GUI configurator must be closed forcibly.

2.3 Conditions
This problem occurs if the following procedures are performed in this order (note that Block Number and Size can be replaced with each other):

(1)   The value of Block Number is modified to a smaller one than the original. (Assume that the original value is A, and the modified is B, for example.)

(2)   The value of Size is modified so that the product of the modified one and B might not exceed the restricted value*, and the product of it and A exceed it.

(3)   The value of Block Number is re-modified to the one the product of which and the value of Size exceeds the restricted value.

* The restricted value is specified as follows for each of the products:
- 0xFFFFFF for the M3T-MR308/4
- 0xFFFF for the M3T-MR30/4

An example in the M3T-MR30/4 (the restricted value: 0xFFFF)

A fixed-size memory pool is created with Block Number being 1024 and Size 0x10, and then these values are modified in the following order in the Creation of Fixed-size memory pool dialog box of the GUI configurator:

(1) Value 1 entered in the Block Number text box (Condition 1)

(2) Value 0xFFFF entered in the Size text box (Condition 2)

(3) Value 10 entered in the Block Number text box (Condition 3)

2.4 Workarounds
This problem can be circumvented either of the following ways:

(1) Make the product of the values Block Number and Size less than the restricted value in your product.

(2) If you have modified one of the values Block Number and Size to a smaller one than the original, press the Create button to create a fixed-size memory pool, and then modify the other.

2.5 Schedule of Fixing the Problem
We plan to fix this problem in the next release of the products.