

## The Real-Time OS--RI600/4--for the RX Family of MCUs Revised to V.1.01 Release 00

We have revised the real-time OS, RI600/4, for the RX family of MCUs from V.1.00 Release 02 to V.1.01 Release 00.

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### 1. Descriptions of Revision

#### 1.1 Definition of Fixed Vectors Improved

Specifications of "interrupt\_fvector[]" in the .cfg file have been extended as follows:

(1) Defining numerical values for entry\_address

Though functions only can be defined for entry\_address in the previous versions, numerical values can also be defined in the revised version. As a result, the settings of registers located in the fixed vector area (addresses 0xFFFFFFFF80 to 0xFFFFFFFFFF) can be made much easier.

(2) Modifying interpretations of omitted vector-definitions

a. Vector 0

In some MCUs, Vector 0 (address 0xFFFFFFFF80) is assigned to the endian select register. If the definition of interrupt\_fvector[0] has been omitted, the endian select register is automatically set in accordance with the endian option selected in the compiler.

b. Vectors 1 through 15

If the definitions of these vectors have been omitted, the content of the vectors in the previous versions is the beginning address of the kernel's undefined interrupt-handling program; in the revised version, it has been changed to address 0xFFFFFFFF.

#### 1.2 ACC Register Guaranteed by Interrupt Handler

The following definitions can be given by

"interrupt\_vector[].pragma\_switch" (for variable vectors) and

"interrupt\_fvector[].pragma\_switch" (for fixed vectors) in the .cfg file:

- ACC (The ACC register is saved at the beginning of an interrupt handler.)
- NOACC (The ACC register is not saved at the beginning of an interrupt handler.)

Note that to make this guarantee function effective, you must use the C/C++ compiler package for the RX family V.1.01 Release 00 or later.

### **1.3 Timer Template Files Increased**

The following timer template files have newly been introduced:

- rx62n.tpl (for RX62N group, RX600 series)
- rx62t.tpl (for RX62T group, RX600 series)
- rx630.tpl (for RX630 group, RX600 series)
- rx210.tpl (for RX210 group, RX200 series)

### **1.4 Specification of isus\_tsk Service Call Modified**

When isus\_tsk is issued to the task in RUNNING state in the dispatching-disable state, not E\_OK but the E\_OBJ error is returned.

### **1.5 Two Real-time OS Aware Debugging Functions Supported**

Among the Real-time OS aware debugging functions in High-performance Embedded Workshop, OS Tracing and OS Analyzing can be used.

For details of the Real-time OS aware debugging functions, visit the Web site at:

<http://www.renesas.com/ecxos>

### **1.6 Problems Fixed**

The following problems, of which we informed you in RENESAS TOOL NEWS Document No. 111101/tn9, have been fixed:

- (1) With the loc\_mtx, tloc\_mtx, or chg\_pri service call with the mutex function being used
- (2) With fixed-sized memory pools
- (3) With the dispatching-disable state
- (4) With the GUI configurator

For details, see the above RENESAS TOOL NEWS on the Web page at:

<http://tool-support.renesas.com/eng/toolnews/111101/tn9.htm>

This page will be opened on November 21, 2011.

### **1.7 Compatibility with Host OSes Modified**

The revised product has become compatible with the following OSes:

- 32-bit and 64-bit editions of Windows Vista
- 32-bit and 64-bit editions of Windows 7

Instead, the compatibility with Windows 2000 has been lost.

## 2. Note

In the RI600/4 V.1.01 Release 00 Release Notes, an error is found in Section 4.3, Supported Tools.

Release Notes Concerned:

RI600/4 V.1.01 Release 00 release notes (Rev.1.00)

Document No. R20UT0797EJ0100

Rectify the version of the C/C++ compiler package for RX family in body of the table in this section as follows:

For:

V.1.00 Release 00 or later

Read:

V.1.01 Release 00 or later

## 3. Updating Your Product and Ordering Revised One

### 3.1 Updating

To update yours, use either of the following methods:

(1) Updating of RI600/4 V.1.00 Release 02

Online update is available free of charge. Download the installer of the revised product from the Web site at:

[http://www.renesas.com/ri600\\_4\\_download](http://www.renesas.com/ri600_4_download)

Then execute it. The installer will be published on this site.

The above URL is one of our global sites.

(2) Updating of RI600/4 V.1.00 Release 00 and V.1.00 Release 01

Online update is unavailable; please contact your local Renesas Electronics marketing office or distributor.

### 3.2 Ordering

When you place an order for the product, supply the following items of information to your local Renesas Electronics marketing office or distributor:

Product type: RI600/4

Type name: R0R5RX00TRW01w

Version No.: V.1.01

Release No.: Release 00

Host OS: Windows XP, Windows Vista, and Windows 7

NOTICE: The 64-bit editions of Windows XP are excluded.

For the price of the product, contact the above marketing office or distributor.

**NOTE:**

Letter w denotes a type of license. It shall be replaced with any one of the following numeral and letters:

1: Evaluation license; the real-time OS can be installed on only one host computer.

A: Evaluation license; the real-time OS can be installed on an unlimited number of host computers.

K: Mass-production license; the real-time OS can be embedded in up to 3,000 products with the source code closed.

U: Mass-production license; the real-time OS can be embedded in an unlimited number of products with the source code closed.

Z: Mass-production license; the real-time OS can be embedded in an unlimited number of products with the source code disclosed.

**Example:**

In mass-production license for manufacturing an unlimited number of products with the source code closed, the type name is R0R5RX00TRW01U.

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