Thank you for purchasing our product. There are several precautions which need to be taken while using this product. Please also read the precautions on the High-performance Embedded Workshop described in the High-performance Embedded Workshop Release Notes.

Contents

1. MCU Unit and Target MCU ................................................................. 2
2. Descriptions of Version ............................................................... 2
2.1 Emulator Software Revised ........................................................ 2
2.2 Supported MCUs Increased ....................................................... 2
2.3 Problem Fixed ........................................................................... 3
2.4 High-performance Embedded Workshop Updated ..................... 3
3. Note ............................................................................................. 3
3.1 Installing the H8S/Tiny H8S/2400 E100 Emulator software .................. 3
3.2 Restriction on the Use of Software Breakpoints in Areas That Depend on the Settings of the RAME and EXPE*3 Bits in H8S/2400 MCUs ......................................................... 3
4. Real-Time OS Aware Debugging .................................................. 3
5. Operating Environment .............................................................. 4
1. MCU Unit and Target MCU

Table 1.1 shows the names of the MCU unit and target MCU for the H8S/Tiny H8S/2400 E100 emulator software.

<table>
<thead>
<tr>
<th>MCU Unit</th>
<th>Target MCU</th>
<th>Group</th>
<th>MCU<em>1</em>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0E420000MCU00</td>
<td>H8S/Tiny</td>
<td>H8S/20103</td>
<td>R4F20102, R4F20103</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/20115</td>
<td>R4F20114, R4F20115</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/20203</td>
<td>R4F20202, R4F20203</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/20215</td>
<td>R4F20214, R4F20215</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/20223</td>
<td>R4F20222, R4F20223</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/20235</td>
<td>R4F20234, R4F20235</td>
</tr>
<tr>
<td>R0E424270MCU00</td>
<td>H8S/2400</td>
<td>H8S/2425</td>
<td>R4F24255, R4F24256, R4F24258, R4F24259</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/2427</td>
<td>R4F24275, R4F24276, R4F24278, R4F24279</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8S/2427R</td>
<td>R4F24275R, R4F24276R, R4F24278R, R4F24279R</td>
</tr>
</tbody>
</table>

*1: This is the MCU of the H8S/Tiny series selectable from the [Device] drop-down list box in the [Device setting] dialog box.
*2: The names of the H8S/2400-series MCUs shown in the [Device] drop-down list box of the [Device setting] dialog box are in the form of “MCU name_number of pins”.

2. Descriptions of Version

2.1 Emulator Software Revised

We have revised and renamed H8S E100 Emulator Software V.1.00 Release 00 to H8S/Tiny H8S/2400 E100 Emulator Software V.2.00 Release 00.

Note that the product’s name has been changed as described above.

2.2 Supported MCUs Increased

The following MCUs have been added to the support line:

- In the H8S/2400 series
(1) R4F24255, R4F24256, R4F24258, and R4F24259 (the H8S/2425 group)
(2) R4F24275, R4F24276, R4F24278, and R4F24279 (the H8S/2427 group)
(3) R4F24275R, R4F24276R, R4F24278R, and R4F24279R (the H8S/2427R group)
2.3 Problem Fixed
The following known problem has been fixed:

   The user program breaks at indefinite places other than breakpoints.

   For details of the problem, see Renesas Tool News Document No. 100616/tn5 at:
   http://tool-support.renesas.com/eng/toolnews/100616/tn5.htm

2.4 High-performance Embedded Workshop Updated
The High-performance Embedded Workshop included in the package have been updated from V.4.06.00 to V.4.07.01.

3. Note
3.1 Installing the H8S/Tiny H8S/2400 E100 Emulator software
H8S/Tiny H8S/2400 E100 Emulator Software V.2.00 Release 00 contains High-performance Embedded Workshop V.4.07.01. When H8S/Tiny H8S/2400 E100 Emulator Software V.2.00 Release 00 is installed on the host computer where V.4.07.00 or earlier versions has been installed, the High-performance Embedded Workshop will be updated to V.4.07.01.

3.2 Restriction on the Use of Software Breakpoints in Areas That Depend on the Settings of the RAME and EXPE*3 Bits in H8S/2400 MCUs

[Restriction]
Do not set or delete software breakpoints while the user program is running. Setting or deleting software breakpoints while the user program is running may cause a break in execution at an unexpected location. When this problem occurs, the message "Unknown break cause" appears in the area where the reason for the most recent break is supposed to be displayed on the status bar.

[Solutions]
- Use hardware breakpoints while the user program is running.
- If you wish to use software breakpoints, stop the user program before setting or deleting them.

*3: Bits RAME and EXPE are allocated to the system control registers of MCUs.

4. Real-Time OS Aware Debugging
For details of the real-time OS aware debugging, refer to the following page.
http://www.renesas.com/ecxos
5. **Operating Environment**

Table 5.1  Operating Environment (Windows® XP or Windows® 2000)

<table>
<thead>
<tr>
<th>PC Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>IBM PC/AT compatible</td>
</tr>
</tbody>
</table>
| OS             | Windows® XP 32-bit editions*4  
Windows® 2000 |
| CPU            | Pentium 4 running at 1.6 GHz or more recommended |
| Interface      | USB2.0 |
| Memory         | 768 Mbytes or larger (more than 10 times the file size of the load module) recommended |
| Hard disk      | Installation of the emulator debugger requires free space of 200 Mbytes or larger. Also keep additional free space that is at least twice the memory capacity (four times or larger recommended) for use as swap space. |
| Display resolution | 1024 × 768 or higher recommended |

*4: The 64-bit editions of Windows® XP are not supported.

Table 5.2  Operating Environment (Windows Vista®)

<table>
<thead>
<tr>
<th>PC Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>IBM PC/AT compatible</td>
</tr>
<tr>
<td>OS</td>
<td>Windows Vista® 32-bit editions*5</td>
</tr>
</tbody>
</table>
| CPU            | Pentium 4 running at 3 GHz or  
Core 2 Duo running at 1 GHz or more recommended |
| Interface      | USB2.0 |
| Memory         | 1.5 Gbyte or larger (more than 10 times the file size of the load module) recommended |
| Hard disk      | Installation of the emulator debugger requires free space of 200 Mbytes or larger. Also keep additional free space that is at least twice the memory capacity (four times or larger recommended) for use as swap space. |
| Display resolution | 1024 × 768 or higher recommended |

*5: The 64-bit editions of Windows Vista® are not supported.
Notice

1. All information included in this document is current as of the date this document is issued. Such information, however, is subject to change without any prior notice. Before purchasing or using any Renesas Electronics products listed herein, please confirm the latest product information with a Renesas Electronics sales office. Also, please pay regular and careful attention to additional and different information to be disclosed by Renesas Electronics such as that disclosed through our website.

2. Renesas Electronics does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Renesas Electronics products or technical information described in this document. In no case, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.

3. You should not alter, modify, copy, or otherwise misappropriate any Renesas Electronics product, whether in whole or in part.

4. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation of these circuits, software, and information in the design of your equipment. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from the use of these circuits, software, or information.

5. When exporting the products or technology described in this document, you should comply with the applicable export control laws and regulations and follow the procedure required by such laws and regulations. You should not use Renesas Electronics products or the technology described in this document for any purpose relating to military applications or use by the military, including but not limited to the development of weapons of mass destruction. Renesas Electronics products and technology may not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations.

6. Renesas Electronics has used reasonable care in preparing the information included in this document, but Renesas Electronics does not warrant that such information is error free. Renesas Electronics assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

7. Renesas Electronics products are classified according to the following three quality grades: "Standard", "High Quality", and "Specific". The recommended applications for each Renesas Electronics product depends on the products quality grade, as indicated below. You must check the quality grade of each Renesas Electronics product before using it in a particular application. You may not use any Renesas Electronics product for any application categorized as "Specific" without the prior written consent of Renesas Electronics. Further, you may not use any Renesas Electronics product for any application for which it is not intended without the prior written consent of Renesas Electronics. Renesas Electronics shall not be in any way liable for any damages or losses incurred by you or third parties arising from the use of any Renesas Electronics product for an application categorized as "Specific" or for which the product is not intended where you have failed to obtain the prior written consent of Renesas Electronics.

The quality grade of each Renesas Electronics product is "Standard" unless otherwise expressly specified in a Renesas Electronics data sheet or data book, etc.

"Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; and industrial robots.

"High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control systems; anti-disaster systems; anti-crime systems; safety equipment; and medical equipment not specifically designed for the life support.

"Specific": Aircraft; aerospace equipment; submarine repeaters; nuclear reactor control systems; medical equipment or systems for life support (e.g. artificial life support devices or systems), surgical implants, or healthcare intervention (e.g. x-ray, etc.), and any other applications or purposes that pass a direct threat to human life.

8. You should use the Renesas Electronics products described in this document within the range specified by Renesas Electronics, especially with respect to the maximum rating, operating supply voltage range, movement power voltage range, heat radiation characteristics, installation and other product characteristics. Renesas Electronics shall have no liability for malfunctions or damages arising out of the use of Renesas Electronics products beyond such specified ranges.

9. Although Renesas Electronics endeavors to improve the quality and reliability of its products, semiconductor products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Further, Renesas Electronics products are not subject to radiation resistance design. Please be sure to implement safety measures to guard against them against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Renesas Electronics product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult, please evaluate the safety of the final products or system manufactured by you.

10. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. Please use Renesas Electronics products in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive. Renesas Electronics assumes no liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.

11. This document may not be reproduced or duplicated, in any form, in whole or in part, without prior written consent of Renesas Electronics.

12. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products, or if you have any other inquiries.

(Note 1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its majority-owned subsidiaries.

(Note 2) "Renesas Electronics products" means any product developed or manufactured by or for Renesas Electronics.

SALE OFFICES
Renesas Electronics Corporation
http://www.renesas.com

Refer to http://www.renesas.com/ for the latest and detailed information.

Renesas Electronics America Inc.
2880 Scott Boulevard
Santa Clara, CA 95050-3554, U.S.A.
Tel.: +1-408-598-6000, Fax.: +1-408-598-6130

Renesas Electronics Canada Limited
1101 Richardson Road, Mississauga, Ontario L3Y 9C3, Canada
Tel.: +1-905-888-6441, Fax.: +1-905-888-9220

Renesas Electronics (China) Co., Ltd.
7tr floor, Quantum Plaza, No.27 ZgirlinLu Haidian District, Beijing 100083, P.R.China
Tel.: +86-10-8235-1105, Fax.: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.
Unit 204, 205, AZA Center, No.1235 Lujiazui Ring Rd., Pudong District, Shanghai 200120, China
Tel.: +86-21-5877-1818, Fax.: +86-21-8887-7930

Renesas Electronics Taiwan Co., Ltd.
7F, No. 363 Fu Shing North Road Taipei, Taiwan, R.O.C.
Tel.: +886-2-8175-9660, Fax.: +886-2-8175-9670

Renesas Electronics (Singapore) Pte. Ltd.
1 Nanyang Ave., #07-01, Nanyang Polytechnic, Singapore 639797
Tel.: +65-6213-9000, Fax.: +65-6218-8001

Renesas Electronics Malaysia Sdn.Bhd.
Unit 906, Blok B, Mahara Park, Amanjaya, Trade Centre, No. 18, Jln Persiaran Barat, 46500 Pataling Jaya, Selangor Darul Ehsan, Malaysia
Tel.: +60-3-7955-9306, Fax.: +60-3-7955-9310

Renesas Electronics Korea Co., Ltd.
11F., Samik Laviad’ or Bldg., 720-2 Yongsan-Dong, Kangnam-Ku, Seoul 135-080, Korea
Tel.: +82-2-598-5141

© 2010 Renesas Electronics Corporation and Renesas Solutions Corp. All rights reserved.
Colophon 1.0