

To our customers,

---

## Old Company Name in Catalogs and Other Documents

---

On April 1<sup>st</sup>, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

Send any inquiries to <http://www.renesas.com/inquiry>.

## 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. No license, 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 procedures 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 product’s 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 sheets or data books, 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 life support.
  - “Specific”: Aircraft; aerospace equipment; submersible repeaters; nuclear reactor control systems; medical equipment or systems for life support (e.g. artificial life support devices or systems), surgical implantations, or healthcare intervention (e.g. excision, etc.), and any other applications or purposes that pose 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 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 product(s)” means any product developed or manufactured by or for Renesas Electronics.

# Hitachi Debugging Interface for E6000 Setup Guide

The Hitachi Debugging Interface (HDI) is a Graphical User Interface intended to ease the development and debugging of applications written in C/C++ programming language and assembly-language. This guide describes the HDI setup procedures for the E6000 emulator.

## 1 Emulator Specifications

### 1.1 Operating Environment

The E6000 emulator system software is provided on a CD-R.

The following shows the operating environment.

**Table 1-1 Operating Environments**

| Item                    | Description  |
|-------------------------|--|
| Host computer           | Built-in Pentium® or higher-performance CPU (166 MHz or higher is recommended).  |
| OS                      | Windows NT®, Windows® 98, Windows® 98SE, Windows® Me, or Windows® 2000, Windows® XP  |
| Minimum memory capacity | 32 Mbytes (twice or more the load module size is recommended).   |
| Hard disk capacity      | Installation disk capacity: 10 Mbytes or more.<br>At initiation: Twice or more the memory capacity (four-times or more the memory capacity is recommended).  |
| CD-ROM drive            | To install the E6000 emulator software.  |
| Display                 | 800 x 600 or better resolution (1024 x 768 or better is recommended).  |
| Interface               | PCI bus slot, PC card (PCMCIA), ISA bus slot at 8-MHz operation <sup>*1</sup> , LAN (conforms to IEEE802.3, 10BASE-T/100BASE-TX), or USB (complied with USB Specification Rev. 1.1) <sup>*1 *2</sup> |
| Others                  | Mouse (or a pointing device such as a mouse)   |

Notes: 1. For the supported OS, refer to Table 1-2, OS and Supported Interface.  
2. The USB is not supported in some products (it will be supported in the future).

**Table 1-2 OS and Supported Interface<sup>\*1</sup>**

| OS            | Interface     |                  |               |             |                 |
|---------------|---------------|------------------|---------------|-------------|-----------------|
|               | PCI bus board | PC Card (PCMCIA) | ISA bus board | LAN adapter | USB adapter     |
| Windows NT®   | O             | O                | O             | O           | X               |
| Windows® 98   | O             | O                | O             | O           | X               |
| Windows® 98SE | O             | O                | O             | O           | O <sup>*2</sup> |
| Windows® Me   | O             | O                | X             | O           | O               |
| Windows® 2000 | O             | O                | X             | O           | O               |
| Windows® XP   | O             | O                | X             | O           | O               |

Notes: 1. 'O' means the interface is available, and 'X' means unavailable.  
2. In some host computers incorporating Windows® 98SE, note that the USB interface driver may not operate.

Notes: 1. Microsoft®, Windows®, and Windows NT® are registered trademarks of Microsoft Corporation in the United States and/or other countries.  
2. Adobe, Acrobat, and Acrobat Reader are trademarks of Adobe Systems Incorporated.  
3. Other brand and product names are registered trademarks of each company.

Abbreviation: 1. Windows NT® is an abbreviation for Microsoft® Windows NT® operating system.  
2. Windows® 98 is an abbreviation for Microsoft® Windows® 98 operating system.  
3. Windows® 98SE is an abbreviation for Microsoft® Windows® 98 Second Edition operating system.  
4. Windows® Me is an abbreviation for Microsoft® Windows® Millennium Edition operating system.  
5. Windows® 2000 is an abbreviation for Microsoft® Windows® 2000 operating system.  
6. Windows® XP is an abbreviation for Microsoft® Windows® XP operating system.

## 2 Installation

### 2.1 HDI Installation

When the CD-R (setup disk) provided on the E6000 emulator is inserted in the host computer's CD-ROM drive, the HDI installation wizard is automatically activated (holding the Shift key down while the CD-R is inserted cancels this automatic activation). To run the installation wizard when it has not been automatically activated, execute Setup.exe from the root directory of the CD-R.

Follow the cues given by the installation wizard to install the HDI.

Since hardware settings are also made during installation, the installation procedure differs according to the operating system or interface (PCI, PC Card, ISA, LAN or USB) being used. Follow the installation steps carefully according to the environment you are using.

### 2.2 Installing under Windows<sup>®</sup> 98, Windows<sup>®</sup> 98SE or Windows<sup>®</sup> Me

#### 2.2.1 When the PCI Bus Interface Board is Used

1. Install the HDI (when the component type has to be selected during installation, be sure to select [PCI Card Driver]).
2. Shut the operating system down and turn off the power to the host computer.
3. Insert the PCI bus interface board in a slot on the host computer.
4. Restart the host computer. The hardware is now recognized and the driver is automatically installed.
5. Select [Search for the best driver for your device. (Recommended)] and then [Specify a location] to select the path to be searched for drivers.
6. The location must be specified as '<Drive>:\DRIVERS\PCI\95'. (<Drive> is a drive name for the CD-ROM drive.)
7. Check that 'PCIHEI Rev 1' has been detected and complete the driver installation.

#### 2.2.2 When the PC Interface Card (PCMCIA) is Used

1. Install the HDI (when the component type has to be selected during installation, be sure to select [PC Card Driver (PCMCIA)]).
2. Insert the PC interface card (PCMCIA) in a slot on the host computer.
3. The hardware is now recognized and the driver is automatically installed.
4. Select [Search for the best driver for your device. (Recommended).] and then [Specify a location] to select the path to be searched for drivers.
5. The location must be specified as '<Drive>:\DRIVERS\PCMCIA\95'. (<Drive> is a drive name for the CD-ROM drive.)
6. Check that 'E6000 PC Card' has been detected and complete the driver installation.

#### 2.2.3 When the ISA Bus Interface Board is Used

1. Refer to section 2.2, Setting Up the PC Interface Board on Windows<sup>®</sup> 98, in the E6000 Emulator User's Manual, set the environment for the operating system, and install the ISA bus interface board.
2. Install the HDI (when the component type has to be selected during installation, be sure to select [ISA Driver]).

Note: For the supported OS, refer to Table 1-2, OS and Supported Interface.

#### 2.2.4 When the LAN Adapter is Used

1. Install the HDI (when the component type has to be selected during installation, be sure to select [E6000 LAN Driver]).
2. Connect the LAN adapter in the same network and turn on the power.
3. Start the [Start] menu -> [Programs] -> [<Program Folder>] -> [TOOLS] -> [LAN Adapter Configuration]. (<Program Folder> is a program folder name that has been specified at installation.)
4. Set the LAN adapter according to LAN Adapter Configuration.
5. After turn off the power of the LAN adapter and connect to the target network, turn on the power (the power of the LAN adapter must be turned off even if the network is not changed).

Note: When the LAN adapter that the information has already been set is used, setting for the LAN adapter is not needed. According to LAN Adapter Configuration, register the set information only to the user's host computer. For the usage of LAN Adapter Configuration, refer to the online help of LAN Adapter Configuration.

### 2.2.5 When the USB Interface is Used

1. Install the HDI (when the component type has to be selected during installation, be sure to select [E6000 USB Driver]).
2. Connect the USB adapter to the host computer.
3. The emulator is automatically recognized.

- Notes:
1. When the [New Hardware] dialog box or [Add New Hardware Wizard] is displayed, select [<Drive>:\DRIVERS\USB] for the path to be searched for drivers.  
(<Drive> is a drive name for the CD-ROM drive.)  
Check that 'E8000/E6000 USB Adapter' has been detected and complete the driver installation.
  2. For the supported OS, refer to Table 1-2, OS and Supported Interface.

## 2.3 Installing under Windows NT®

### 2.3.1 When the PCI Bus Interface Board is Used

1. Shut the operating system down and turn off the power to the host computer.
2. Insert the PCI bus interface board in a slot on the host computer.
3. Start the host computer and log-on with an administrator-level user name.
4. Install the HDI (when the component type has to be selected during installation, be sure to select [PCI Card Driver]).
5. Restart the host computer.

- Note: The driver that has been selected in the [Drivers] component starts after the host computer is initiated. Therefore, if the host computer is initiated with the PCI bus interface board disconnected or with the incorrect driver installed, the driver cannot initiate and the service control manager informs the system of an error. This, however, is not a problem.

### 2.3.2 When the PC Interface Card (PCMCIA) is Used

1. Shut the operating system down and turn off the power to the host computer.
2. Insert the PC interface card (PCMCIA) in a slot on the host computer.
3. Start the host computer and log-on with an administrator-level user name.
4. During HDI installation, the setting value should be checked beforehand because inquiries are made about the resource used by the PC interface card (PCMCIA).  
Start the [Start] menu -> [Programs] -> [Administrative Tools (Common)] -> [Windows NT Diagnostics], check the status of the IRQ, I/O port, and memory from the resource panel, and determine the setting values that do not conflict with other devices.  
(The following resources are used: IRQ: one channel, I/O port: H'F byte, and memory: H'4000 byte.)
5. Install the HDI (when the component type has to be selected during installation, be sure to select [PC Card Driver (PCMCIA)]).
6. Restart the host computer.

- Note: The driver that has been selected in the [Drivers] component starts after the host computer is initiated. Therefore, if the host computer is initiated with the PC interface card (PCMCIA) disconnected or with the incorrect driver installed, the driver cannot initiate and the service control manager informs the system of an error. This, however, is not a problem.

### 2.3.3 When the ISA Bus Interface Board is Used

1. Refer to section 2.3, Setting Up the PC Interface Board on Windows NT®, in the E6000 Emulator User's Manual, set the environment for the operating system, and install the ISA bus interface board.
2. Log-on with an administrator-level user name.
3. Install the HDI (when the component type has to be selected during installation, be sure to select [ISA Driver]).
4. Restart the host computer.

- Note: The driver that has been selected in the [Drivers] component starts after the host computer is initiated. Therefore, if the host computer is initiated with the ISA bus interface board disconnected or with the incorrect driver installed, the driver cannot initiate and the service control manager informs the system of an error. This, however, is not a problem.

### 2.3.4 When the LAN Adapter is Used

1. Log-on with an administrator-level user name.
2. Install the HDI (when the component type has to be selected during installation, be sure to select [E6000 LAN Driver]).
3. Connect the LAN adapter in the same network and turn on the power.
4. Start the [Start] menu -> [Programs] -> [<Program Folder>] -> [TOOLS] -> [LAN Adapter Configuration].  
(<Program Folder> is a program folder name that has been specified at installation.)
5. Set the LAN adapter according to LAN Adapter Configuration.
6. After turn off the power of the LAN adapter and connect to the target network, turn on the power (the power of the LAN adapter must be turned off even if the network is not changed).

Note: When the LAN adapter that the information has already been set is used, setting for the LAN adapter is not needed. According to LAN Adapter Configuration, register the set information only to the user's host computer. For the usage of LAN Adapter Configuration, refer to the online help of LAN Adapter Configuration.

## 2.4 Installing under Windows® 2000 or Windows® XP

### 2.4.1 When the PCI Bus Interface Board is Used

1. Log-on with an administrator-level user name.
2. Install the HDI (when the component type has to be selected during installation, be sure to select [PCI Card Driver]).
3. Shut the operating system down and turn off the power to the host computer.
4. Insert the PCI bus interface board in a slot on the host computer.
5. Restart the host computer and log-on with an administrator-level user name. The hardware is now recognized and the driver is automatically installed.
6. Select [Search for a suitable driver for my device (recommended)] and then [Specify a location] to select the path to be searched for drivers.
7. The location must be specified as '<Drive>:\DRIVERS\PCI\2000'.  
(<Drive> is a drive name for the CD-ROM drive.)
8. Check that 'E8000/E6000 PCI Card' has been detected and complete the driver installation.

Notes: 1. If the BIOS setting on the host computer is 'to reset the resource allocation by Plug & Play depending on the operating system', the PCI bus interface board will not be normally recognized.

In this case, change the setting so that the resource allocation is not reset depending on the operating system.

Example:

Item to be set: [Plug & Play OS]

Setting value: [No]

The item name to be set will differ depending on the host computer.

In addition, the item to be set will not exist.

For the BIOS setting, refer to the user's manual for the host computer.

2. See also section 3, Updating the PCI Interface Board Driver.

### 2.4.2 When the PC Interface Card (PCMCIA) is Used

1. Log-on with an administrator-level user name.
2. Install the HDI (when the component type has to be selected during installation, be sure to select [PC Card Driver (PCMCIA)]).
3. Insert the PC interface card (PCMCIA) in a slot on the host computer.
4. The hardware is now recognized and the driver is automatically installed.
5. Select [Search for a suitable driver for my device (recommended)] and then [Specify a location] to select the path to be searched for drivers.
6. The location must be specified as '<Drive>:\DRIVERS\PCMCIA\2000'.  
(<Drive> is a drive name for the CD-ROM drive.)
7. Check that 'E8000/E6000 PC Card' has been detected and complete the driver installation.

### 2.4.3 When the LAN Adapter is Used

1. Log-on with an administrator-level user name.
2. Install the HDI (when the component type has to be selected during installation, be sure to select [E6000 LAN Driver]).
3. Connect the LAN adapter in the same network and turn on the power.
4. Start the [Start] menu -> [Programs] -> [<Program Folder>] -> [TOOLS] -> [LAN Adapter Configuration].  
(<Program Folder> is a program folder name that has been specified at installation.)
5. Set the LAN adapter according to LAN Adapter Configuration.
6. After turn off the power of the LAN adapter and connect to the target network, turn on the power (the power of the LAN adapter must be turned off even if the network is not changed).

Note: When the LAN adapter that the information has already been set is used, setting for the LAN adapter is not needed. According to LAN Adapter Configuration, register the set information only to the user's host computer. For the usage of LAN Adapter Configuration, refer to the online help of LAN Adapter Configuration.

### 2.4.4 When the USB Interface is Used

1. Install the HDI (when the component type has to be selected during installation, be sure to select [E6000 USB Driver]).
2. Connect the USB adapter to the host computer.
3. The emulator is automatically recognized.

Notes: 1. When the [New Hardware] dialog box or [Add New Hardware Wizard] is displayed, select [<Drive>:\DRIVERS\USB] for the path to be searched for drivers.  
(<Drive> is a drive name for the CD-ROM drive.)  
Check that 'E8000/E6000 USB Adapter' has been detected and complete the driver installation.

2. When the driver is installed in Windows<sup>®</sup> XP, a warning on the Windows<sup>®</sup> Logo testing is displayed but it is not a problem. Select [Continue Anyway] to proceed driver installation.

## 2.5 System Check

Execute the HDI program to check that the installation and interface setting have been performed correctly.

1. Connect the E6000 emulator to your interface and turn on the power.
2. Start the [Start] menu -> [Programs] -> [<Program Folder>] -> [Hitachi Debugging Interface].  
(<Program Folder> is a program folder name that specified at installation.)
3. The [Select Session] dialog box is displayed.
4. Select the target platform from the [Create a new session on] combo box and click the [OK] button.
5. The E6000 emulator is initiated and 'Link up' is displayed on the status bar to show that the initiation has been correctly completed.



**Figure 2.1 Immediately After the Correct HDI Initiation**

This is the end of setting up the system.

Note: If the [E6000 Driver Details] dialog box is displayed at initiating the HDI, select the interface driver to be used.

## 2.6 Uninstalling the HDI

Follow this procedure to remove the installed HDI from the user's host computer.

1. Open [Add/Remove Programs Properties] from the control panel. Select the HDI program from the list and click the [Add/Remove...] button.
2. The setup program is executed again and the installed application can be changed, modified, or removed. When the application is to be uninstalled, select removal.

- Notes:
1. For the supported OS, refer to Table 1-2, OS and Supported Interface.  
According to the version of the operating system, the target program may not be displayed in the [Add/Remove Programs Properties] item.  
In this case, insert the CD-R provided on the E6000 emulator in the host computer's CD-ROM drive. The setup program will be automatically executed (if not, execute Setup.exe from the root directory in the CD-R).
  2. A shared file may be detected while the program is being removed. If another HDI may be using the shared file, do not remove the file. When Windows NT<sup>®</sup> is used, the removal of the registry information on the driver may be asked.  
If other HDI may use the target driver, do not remove the registry information.  
If another HDI does not start up after the removal process, re-install that HDI.

## 3 Updating the PCI Interface Board Driver

### 3.1 Environment Concerned

We have modified the PCI interface board driver because there was a problem that the E6000 emulator could not be recognized correctly when the PCI interface board (HS6000EIC01H or HS6000EIC02H) was used to connect the emulator to certain host computer, in which Windows<sup>®</sup> 2000 and Windows<sup>®</sup> XP had been installed.

If you have already used the emulator by using the PCI interface board with the host computer in which Windows<sup>®</sup> 2000 and Windows<sup>®</sup> XP has been installed, updating of the driver is required as well as an installation of the HDI by this setup disk.

The PCI interface driver may not apply to some products depending on the time when the setup disk has been created.

In this case, the driver needs not be updated.

It can be determined whether or not the driver has been incorporated in the setup disk:

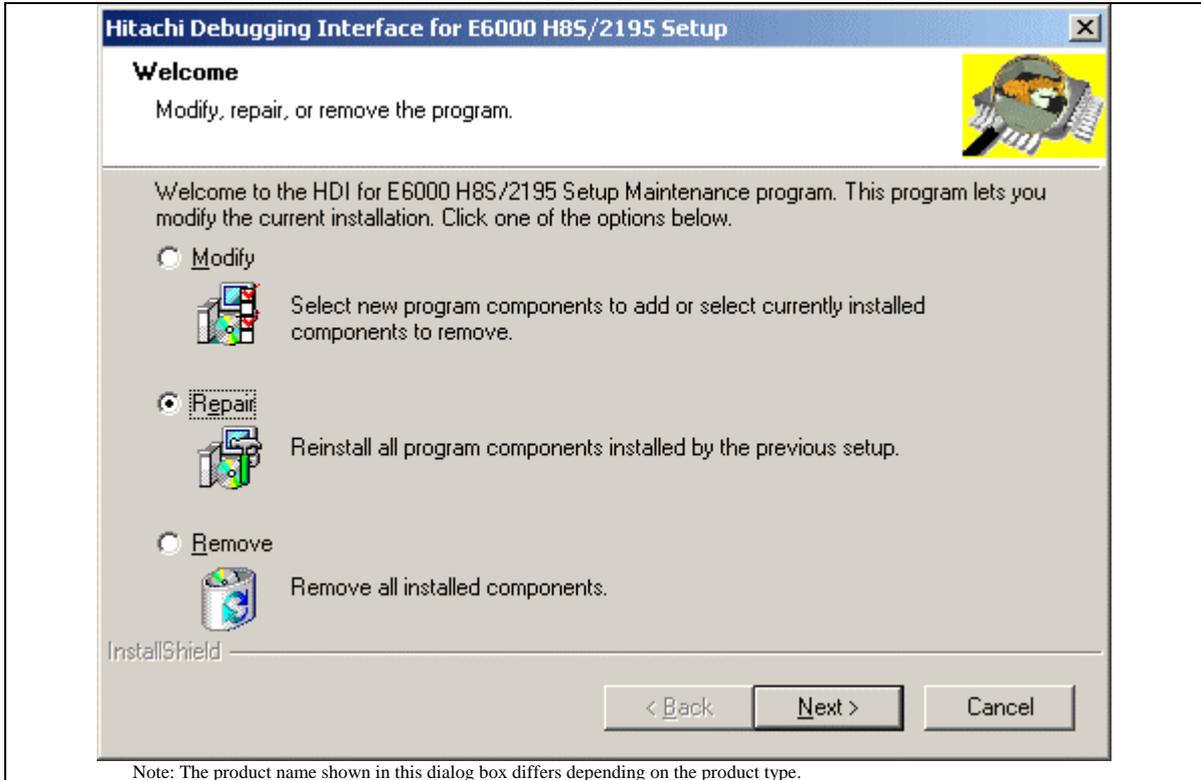
1. The version of the 'Pcidrv32.dll' file, which is stored in the folder that the HDI has been installed, is 1.2.00.000.
2. The 'Pcihei2k.sys' file is included in the 'Drivers\Pci\2000' folder in the setup disk.
3. There is a description about updating the PCI driver in the 'Major improvements' or 'History' item of the Read me file.

- Notes:
1. The 'Pcidrv32.dll' file is installed only when the [PCI Card Driver] component has been selected at installing the HDI.
  2. If the 'Drivers\Pci\2000' folder in the setup disk contains the 'Pcihei.sys' file, the PCI interface driver has not been incorporated.
  3. The Read me file of the product is included in the root directory of the setup disk. The file name is 'e\*\*\*\*rm.txt'.  
When the HDI is installed, the Read me file whose name is 'Readme-\*\*\*\*.txt' is also installed (section '\*\*\*\*' differs in some products).
  4. The updated PCI driver is supported on the products that have been created in September 2002 or later.

### 3.2 Setting Up

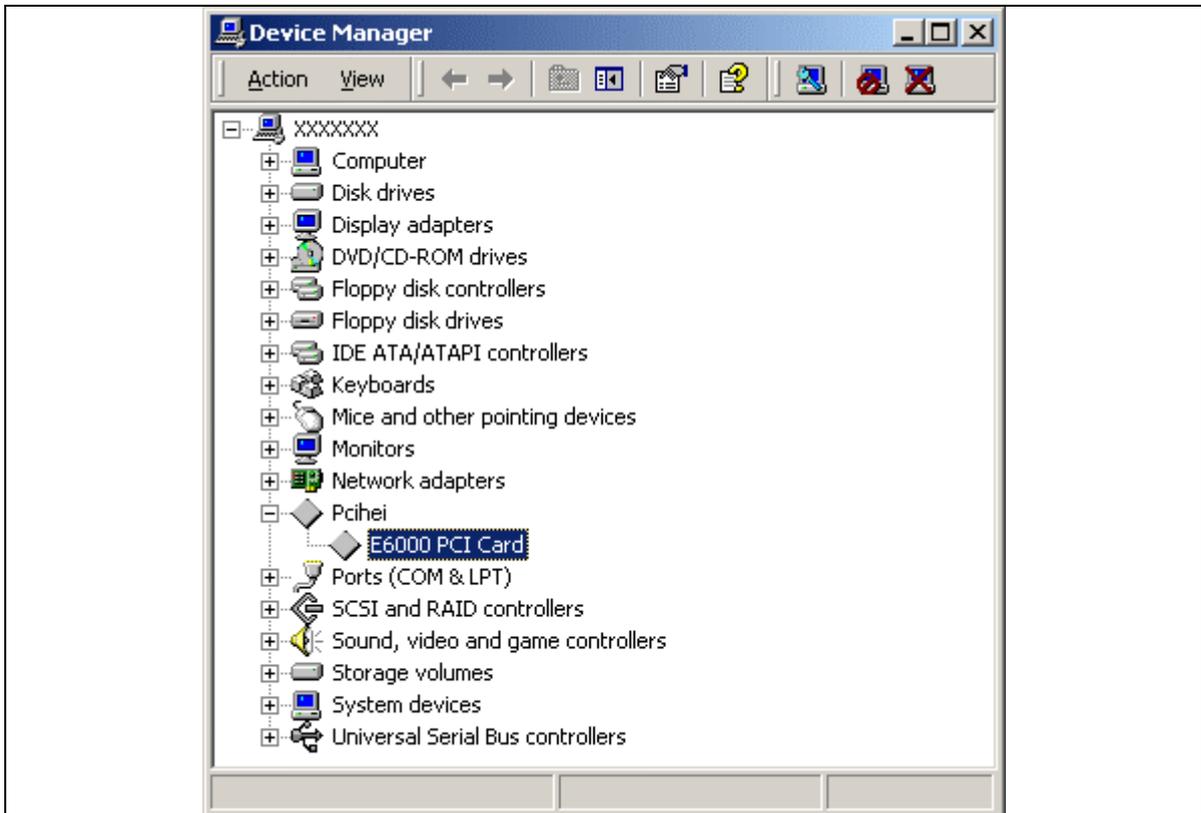
Follow the procedure listed below.

1. Use the E6000 emulator setup disk to install the HDI to your host computer.  
If the previous version of the HDI has already been installed, the setup maintenance program shown below is executed.  
Select [Repair] and start an installation.



**Figure 3.1 Setup Maintenance Program**

2. Open the device manager to update the driver.



**Figure 3.2 Device Manager**

3. Open the [E6000 PCI Card] property and then click [Update Driver...] in the [Driver] page.
4. The upgrade device driver wizard will be started.
5. Select [Search for a suitable driver for my device (recommended)] to search driver information files, and then specify the '<Windows directory>\inf' folder for the search location.
6. When a dialog box is displayed to specify the driver file, select the file '<Windows directory>\system32\drivers\pcihei2k.sys'.
7. Check that 'E8000/E6000 PCI Card' was found. This completes the upgrading of the driver.



**Figure 3.3 Upgrade Device Driver Wizard**

8. The upgrading of the driver is completed.

### 3.3 Updating the Driver DLL

Communication between the emulator and the HDI in the host computer is available via the driver DLL.

When the driver in the system is updated, a new driver DLL that corresponds to the driver is required.

The driver DLL that corresponds to the updated driver is in the installation folder of this emulator product.

Notes: 1. The name of the DLL file: 'pcidrv32.dll'

2. Version: 1.2.00.000

#### 3.3.1 Operation with Other HDIs

To use another emulator connected to the PCI interface board, the driver DLL for the updated driver is also required.

Note: This applies when another E6000 or E8000 emulator is used with the same host computer.

Copy 'pcidrv32.dll' in the installation folder of this emulator product and overwrite it into the installation folder of another HDI, which is using the PCI interface board.

Note: The required folder can easily be found by using the search function of Windows®. Specify 'pcidrv32.dll' as a file name for searching.

### 3.3.2 Diagnostic Test Program for the E6000 Emulator

The emulator and the diagnostic test program, which is included with the emulator, in the host computer communicate via the driver DLL.

When the driver in the system is updated, a new driver DLL that corresponds to the driver is also required for the diagnostic test program.

1. Check the version number of 'pcidrv32.dll' included in the test program.
2. When the version number of 'pcidrv32.dll' is earlier than 1.2.00.000, the driver DLL must be updated.
3. Copy the diagnostic test program to a hard disk or other medium that can be written to.
4. Copy 'pcidrv32.dll' in the installation folder of this emulator product and overwrite it into the folder for which the diagnostic test program has been copied. Then you can use the diagnostic test program.

Note: The 'Diag' folder in the CD-R contains the diagnostic test program.

## 4 Updating the USB Driver for the E6000/E8000 Emulator

### 4.1 Environment

We have modified the USB driver because there is a problem that the emulator does not start up correctly when the USB Adapter for E6000/E8000 Emulator (HS6000EIU01H; hereafter referred to as the USB adapter) is in use to connect the E6000 emulator to certain host computers, in which Windows® 98SE has been installed. This problem can be solved by updating the USB driver on the host computer. For downloading of the new driver version and details on this issue, access the URL below.

### 4.2 URL for Details on Updating of the USB Driver for the E6000/E8000 Emulator

<http://www.renesas.com/eng/products/mpumcu/tool/download/emulator/e6000/driver.html>

## 5 CD-R Provided on the E6000 Emulator

### 5.1 Configuration of the CD-R

The root directory of the CD-R contains a setup program for HDI installation. The folders contain the files and programs listed below.

Table 5-1 Contents of the CD-R Directories

| Directory Name | Contents                              | Description   |           |      |           |                   |             |                     |             |                                 |             |                                |
|----------------|---------------------------------------|---|-----------|------|-----------|-------------------|-------------|---------------------|-------------|---------------------------------|-------------|--------------------------------|
| Diag           | E6000 emulator test program           | A test program for diagnostic analysis.   |           |      |           |                   |             |                     |             |                                 |             |                                |
| Dlls           | Microsoft® runtime library            | A runtime library for the HDI. The version is checked at installation and this library is copied to the hard disk as part of the installation process.  |           |      |           |                   |             |                     |             |                                 |             |                                |
| Drivers        | E6000 emulator driver                 | The E6000 emulator drivers.   |           |      |           |                   |             |                     |             |                                 |             |                                |
| Help           | Online help for the E6000 emulator    | An online help file. This is copied to the hard disk as part of the installation process.   |           |      |           |                   |             |                     |             |                                 |             |                                |
| Manual         | E6000 emulator manual                 | Precautions on Using the E6000 Emulator and the user's manual.<br><br>These are provided as PDF files.<br><br>There are four main manuals below although the type of manuals differ according to products.<br><br>Section '*' in the file name shows the manual revision.   |           |      |           |                   |             |                     |             |                                 |             |                                |
|                |                                       | <table border="1"> <thead> <tr> <th>File Name</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>hdi-e.pdf</td> <td>HDI user's manual</td> </tr> <tr> <td>e****u*.pdf</td> <td>E6000 user's manual</td> </tr> <tr> <td>e****s*.pdf</td> <td>E6000 supplementary information</td> </tr> <tr> <td>e****p*.pdf</td> <td>Precautions on using the E6000</td> </tr> </tbody> </table> <p>Section '****' differs according to products.</p> | File Name | Type | hdi-e.pdf | HDI user's manual | e****u*.pdf | E6000 user's manual | e****s*.pdf | E6000 supplementary information | e****p*.pdf | Precautions on using the E6000 |
| File Name      | Type                                  |   |           |      |           |                   |             |                     |             |                                 |             |                                |
| hdi-e.pdf      | HDI user's manual                     |   |           |      |           |                   |             |                     |             |                                 |             |                                |
| e****u*.pdf    | E6000 user's manual                   |   |           |      |           |                   |             |                     |             |                                 |             |                                |
| e****s*.pdf    | E6000 supplementary information       |   |           |      |           |                   |             |                     |             |                                 |             |                                |
| e****p*.pdf    | Precautions on using the E6000        |   |           |      |           |                   |             |                     |             |                                 |             |                                |
| Pdf_read       | Adobe® Acrobat® Reader® setup program | Adobe® Acrobat® Reader® is an application for displaying, viewing, and printing PDF files.  |           |      |           |                   |             |                     |             |                                 |             |                                |

## **5.2 Precautions on Using the E6000 Emulator**

In the [Manual] folder in the CD-R, Precautions on Using the E6000 Emulator, which describes notes or limitations on the E6000 emulator, is contained.

Read this document before using the E6000 emulator.

## **6 Support**

### **6.1 Supporting Information for the E6000 Emulator**

Information on the latest version of the HDI and other supporting information for the emulator can be found on the web site. Access the following URL:

<http://www.renesas.com/eng/products/mpumcu/tool/emulator/e6000/index.html>