To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

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PCI Interface Board (HS6000EIC02H) for E6000 Emulator or E8000 Emulator

User's Manual

ADE-702-323

Rev. 1.0
07/08/02
Hitachi, Ltd.

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IMPORTANT INFORMATION

READ FIRST

• READ this user's manual before using this emulator product.

• KEEP the user's manual handy for future reference.

Do not attempt to use the emulator product until you fully understand its mechanism.

Emulator Product:

Throughout this document, the term "emulator product" shall be defined as the following products produced only by Hitachi, Ltd. excluding all subsidiary products.

- E6000 series emulator station or E8000 series emulator station
- PCI interface board
- User system interface cables
- SIMM memory module
- Optional boards

The user system or a host computer is not included in this definition.

Purpose of the PCI Interface Board:

This PCI interface board is for connecting an E6000 series emulator or an E8000 series emulator to a host computer, and supports software and hardware development. This PCI interface board must only be used for the above purpose.

Improvement Policy:

Hitachi, Ltd. (including its subsidiaries, hereafter collectively referred to as Hitachi) pursues a policy of continuing improvement in design, functions, performance, and safety of the emulator product. Hitachi reserves the right to change, wholly or partially, the specifications, design, user's manual, and other documentation at any time without notice.

Target User of the Emulator Product:

This emulator product should only be used by those who have carefully read and thoroughly understood the information and restrictions contained in the user's manual. Do not attempt to use the emulator product until you fully understand its mechanism.

It is highly recommended that first-time users be instructed by users that are well versed in the operation of the emulator product.

LIMITED WARRANTY

Hitachi warrants its emulator products to be manufactured in accordance with published specifications and free from defects in material and/or workmanship. Hitachi, at its option, will repair or replace any emulator products returned intact to the factory, transportation charges prepaid, which Hitachi, upon inspection, determine to be defective in material and/or workmanship. The foregoing shall constitute the sole remedy for any breach of Hitachi's warranty. See the Hitachi warranty booklet for details on the warranty period. This warranty extends only to you, the original Purchaser. It is not transferable to anyone who subsequently purchases the emulator product from you. Hitachi is not liable for any claim made by a third party or made by you for a third party.

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Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which may vary from state to state.

The Warranty is Void in the Following Cases:

Hitachi shall have no liability or legal responsibility for any problems caused by misuse, abuse, misapplication, neglect, improper handling, installation, repair or modifications of the emulator product without Hitachi's prior written consent or any problems caused by the user system.

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2. No license is granted by implication or otherwise under any patents or other rights of any third party or Hitachi.

Figures:

Some figures in this user's manual may show items different from your actual system.

Limited Anticipation of Danger:

Hitachi cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this user's manual and on the emulator product are therefore not all inclusive. Therefore, you must use the emulator product safely at your own risk.

SAFETY PAGE

READ FIRST

• READ this user's manual before using this emulator product.

• KEEP the user's manual handy for future reference.

Do not attempt to use the emulator product until you fully understand its mechanism.

DEFINITION OF SIGNAL WORDS

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION **CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE emphasizes essential information.

⚠ WARNING

Observe the precautions listed below. Failure to do so will result in a FIRE HAZARD and will damage the user system and the emulator product or will result in PERSONAL INJURY. The USER PROGRAM will be LOST.

1. **Do not repair or remodel the emulator product by yourself for electric shock prevention and quality assurance.**
2. **Always switch OFF the E6000 emulator and user system before connecting or disconnecting any CABLES or PARTS.**
3. **Always before connecting any CABLES, make sure that pin 1 on both sides are correctly aligned.**

Contents

Thank you for purchasing the PCI interface board for the E6000 emulator or the E8000 emulator. A personal computer with PCI bus specifications can be connected to the E6000 emulator or the E8000 emulator as the host computer by installing the PCI interface board in the personal computer.

Section 1 Specifications

The specifications of the PCI interface board are listed in table 1 and its environmental conditions in table 2. The board's dimensions are shown in figure 1.

Table 1 PCI Interface Board Specifications

Item	Specification
Target host computer	IBM PC conforming to a PCI slot or its compatible computer
OS	Microsoft® Windows NT®, Windows® 95, or Windows® 98 operating system
Memory requirement	16 kbytes
PCI bus specifications	Conforms to revision 2.1

Table 2 Environmental Conditions

Item	Specification
Temperature	At operation: 10 to 35°C Non-operation: –10 to 50°C
Humidity	At operation: 35 to 80%RH (no condensation) Non-operation: 35 to 80% RH (no condensation)
Vibration	At operation: 2.45 m/s^2 max Non-operation: 4.9 m/s^2 max At shipment: 14.7 m/s^2 max
Ambient gasses	No corrosive gas allowed
Voltage	5 V ± 5 %
Current consumption	500 mA max

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2. Microsoft®, Windows®, and Windows NT® are registered trademarks of Microsoft Corporation in the United States and/or in other countries.

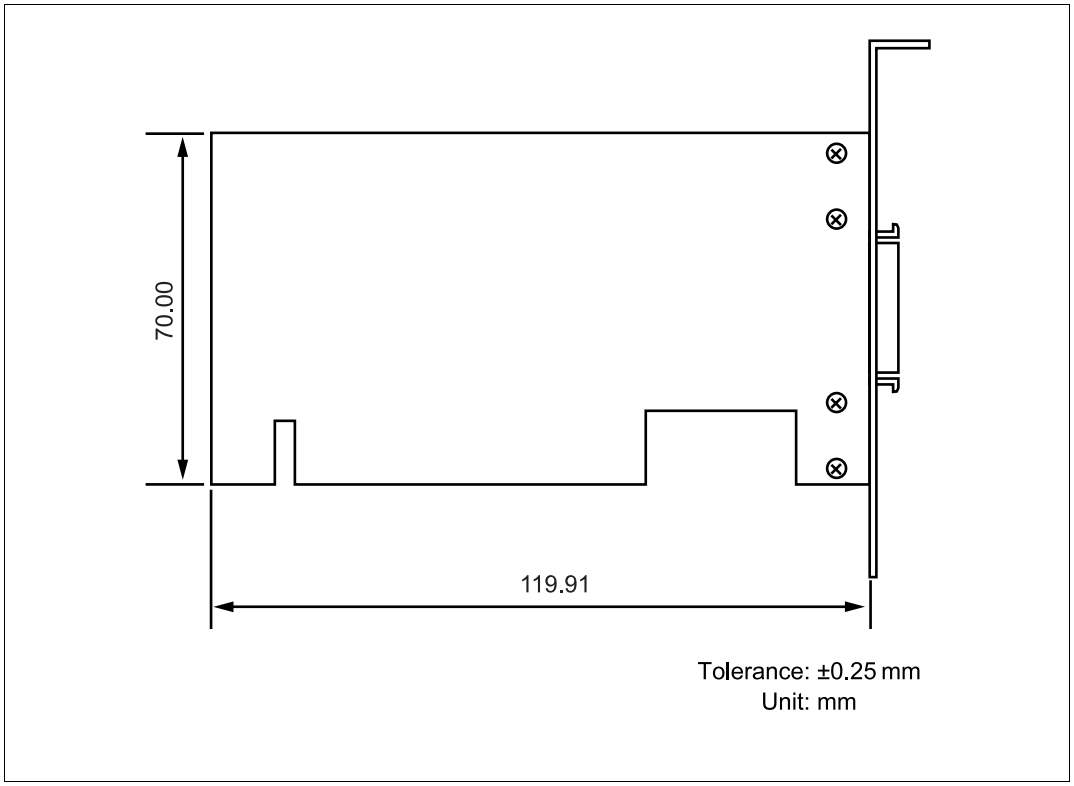
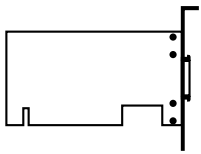
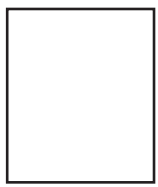


Figure 1 HS6000EIC02H Dimensions

Section 2 Components

Table 3 lists the components of the PCI interface board.

Table 3 Components

Item	Product Name	Configuration	Quantity	Remarks
Hardware	PCI interface board		1	Printed circuit board: 1
	PC interface cable		1	Cable length: 1.5 m With a ferrite core (for EMI* disturbance)
Documen-tation	Description Notes on Using PCI Interface Board (HS6000EIC02H) (This manual)		1	HS6000EIC02HE(A)

Note: EMI is an abbreviation of electrical magnetic interference.

Section 3 Preparation Before Use

3.1 Installing PCI Interface Board

⚠ WARNING

Always switch OFF the emulator product, system, and host computer before connecting or disconnecting the PCI interface board. Failure to do so will result in a FIRE HAZARD and will damage the user system, host computer, and emulator product or will result in PERSONAL INJURY.

Open the host computer cover and install the PCI interface board into an extension slot conforming to PCI bus specifications. Gently push the PCI interface board into the connector and fasten the board with the host computer screw.

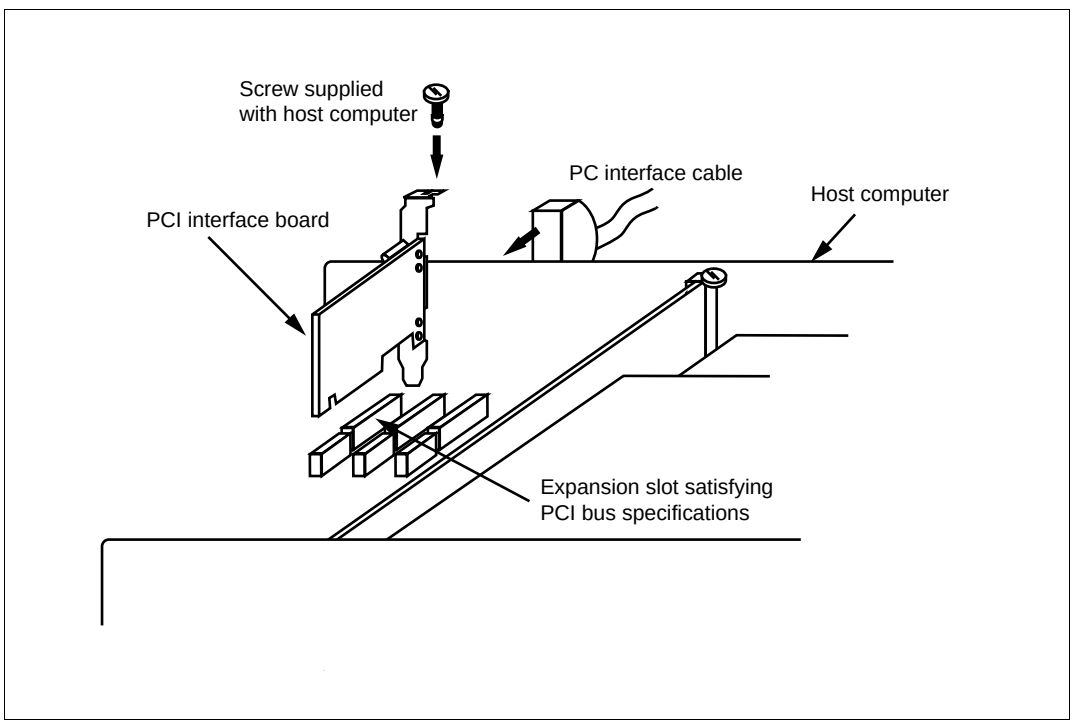


Figure 2 Installing PCI Interface Board

3.2 Connecting PCI Interface Board to E6000 Emulator

WARNING

Always switch OFF the emulator product, user and host computer before connecting or disconnecting the PC interface cable. Failure to do so will result in a FIRE HAZARD and will damage the user system, host computer, and emulator product or will result in PERSONAL INJURY.

To use the E6000 emulator, connect the PCI interface board to the E6000 emulator station via the supplied PC interface cable, as shown in figure 2. Connect the PC interface cable connector with a ferrite core to the E6000 emulator.

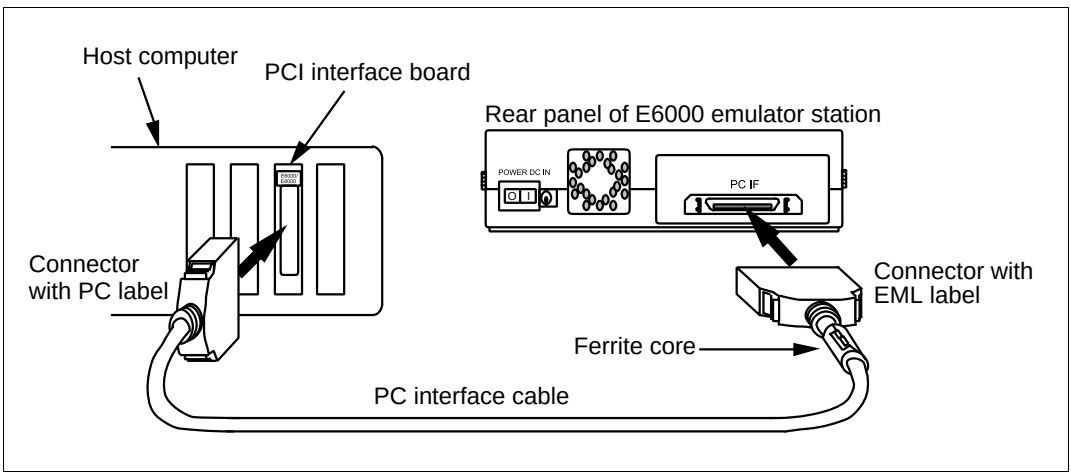


Figure 3 Connecting PCI Interface Board to E6000 Emulator

3.3 Connecting PCI Interface Board to E8000 Emulator

⚠ WARNING

Always switch OFF the emulator product, user system, and host computer before connecting or disconnecting the PC interface cable. Failure to do so will result a FIRE HAZARD and will damage the user system, host computer, and emulator product or will result in PERSONAL INJURY.

To use the E8000 emulator, connect the PCI interface board to the E8000 emulator station via the supplied PC interface cable, as shown in figure 3. Connect the PC interface cable connector with a ferrite core to the E8000 emulator.

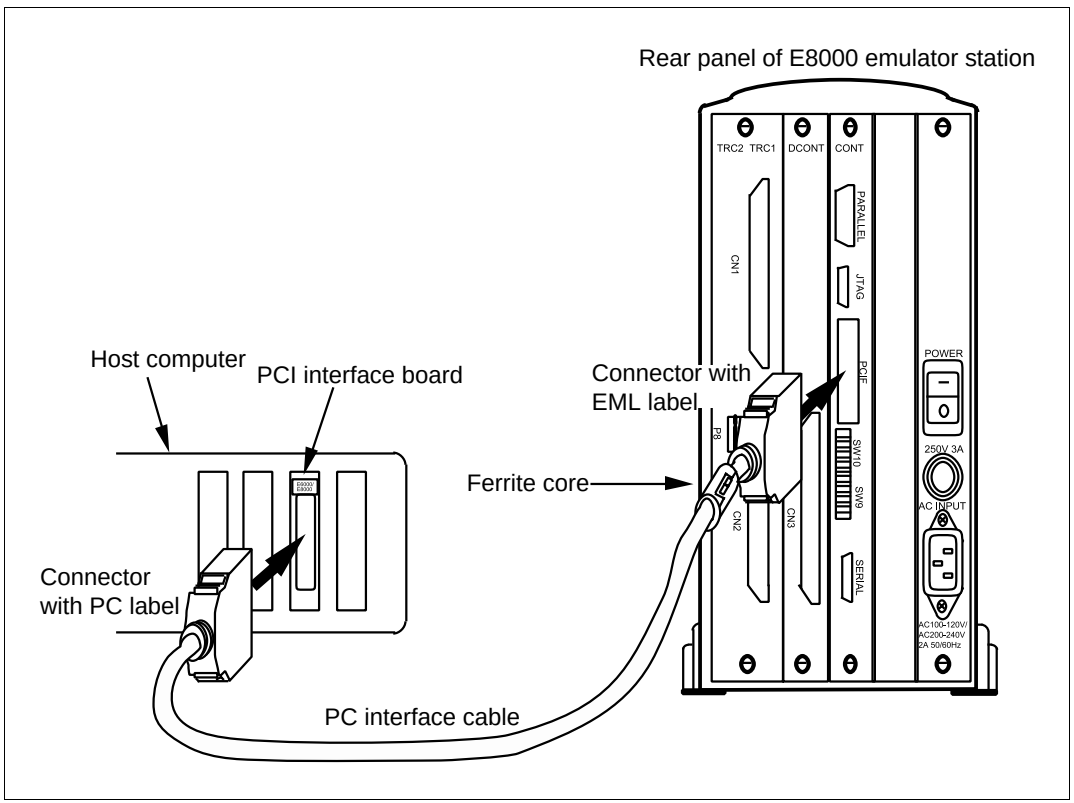


Figure 4 Connecting PCI Interface Board to E8000 Emulator

Section 4 Start Up

Start up the host computer and the emulator using the following procedure. Here, the E6000 emulator is used for an example; the E8000 emulator can also be started using the same procedure.

1. Install the Hitachi debugging interface (HDI) as the emulator control software in the host computer. Insert the HDI installation disk into the floppy disk drive of the host computer, and execute Setup.exe to install the HDI. When the Select Driver Type dialog box is displayed during installation, select PCI bus board. For details, refer to the E6000 Emulator User's Manual.
2. After the HDI installation has been completed, remove the installation disk from the host computer, and turn off the host computer.
3. Check that the host computer and emulator are turned off. Insert the PCI interface board into the host computer, and connect the emulator to the PCI interface board through the interface cable (refer to section 3, Preparation before Use).
4. Turn on the emulator and initiate the HDI.