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April 1st, 2010
Renesas Electronics Corporation

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Be sure to read this note.**4500 Series Emulator Debugger
M3T-PD45 V.1.31 Release 2
Release note
First Edition**Renesas Solutions Corporation
Microcomputer Tool Development Department
October 16, 2003**Abstract**

Welcome to M3T-PD45 V.1.31 Release 2 (called PD45).

This material explains the contents of this software, installation procedure, and supplements to the user's manual.

When using this software, please take a look at this release note as well as the user's manual.

Also, this material contains a License Agreement in the last. Please read it before using. By using the software, you are accepting and agreeing to such terms.

You can get the latest version of this document from our homepage: RENESAS Development Environment Home Page.
(<http://www.renesas.com/en/tools>)

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1. Components of the Product

PD45 V.1.31 Release 2 (English version) comprises the following:

■ Product disk

(1) Install Program

The following file is installed when setup.exe of PD45 is carried out.

- pd45.exe V.1.31.01
- pdbdll.dll
- pdbdll16.dll
- as4.exe V.1.00.01
- opt4p1.exe V.1.00.01
- opt4p2.exe V.1.00.10
- asm45.exe V.1.11.01C
- crf45.exe V.1.00.01C

●MCU Data File

m34501m2.dat	m34513m2.dat	m34520m6.dat	m34554ed.dat
m34501m4.dat	m34513m4.dat	m34520m8.dat	m34554m8.dat
m34502m2.dat	m34513m6.dat	m34524ed.dat	m34554mc.dat
m34502m4.dat	m34513m8.dat	m34524m8.dat	m34555m4.dat
m34506m2.dat	m34514m6.dat	m34524mc.dat	m34560m6.dat
m34506m4.dat	m34514m8.dat	m34530m6.dat	m34561m6.dat
m34507m2.dat	m34515e4.dat	m34530m8.dat	m34570m4.dat
m34507m4.dat	m34518m2.dat	m34540m8.dat	m34570m8.dat
m34510e8.dat	m34518m4.dat	m34550m4.dat	m34570md.dat
m34510m2.dat	m34518m6.dat	m34550m6.dat	m34580m2.dat
m34510m4.dat	m34518m8.dat	m34550m8.dat	m34580m4.dat
m34512m2.dat	m34519m6.dat	m34551e8.dat	m34583md.dat
m34512m4.dat	m34519m8.dat	m34551m4.dat	m34584md.dat

●pd45.hlp

(2) Electronic File¹

PD45 V.1.00 User's Manual	pd45ue.pdf
ASM45 V.1.11 User's Manual	Asm45ue.pdf
PD45 V.1.31 Release 2 Release note	Asm45ue.pdf

(3) Acrobat Reader

This software is the software to read a PDF file.

■ PD45 V.1.31 Release 2 Release note (This note)

This note contains "Software User License Agreement".

■ License ID Certificate/User Registration Sheet

- If any of the above is missing, contact either Mitsubishi Electric Corporation's office or its distributor from which you purchased the product.
- Please read a License Agreement before using. By using the software, you are accepting and agreeing to such terms.

¹ You need Acrobat Reader (Adobe Systems Incorporated products) to read PDF file.

2. Operating Environment

PD45 runs on the host machine environments given below.

Host Machine	IBM PC/AT compatibles
Operating System	Windows 95 Windows 98 Windows NT 4.0 Windows 2000 Windows XP
CPU	Pentium III 600MHz or higher CPU is recommended.
Memory	128M bytes or more system memory is recommended.

Table 1 Host machine environments

3. Installation

3.1 To install PD45

1. Start of installer

Please execute "Setup.exe", which is in the ¥PD45¥WIN95E folder of the product CD-ROM, from Explorer or any other launcher program.

2. Input of License ID

In the "License Selection" dialog box, Please input the license ID. The License ID(XXXX-XXXX-XXXX-XXXX-XXXX) is described in license ID Certificate. (attached to the product package)

3. Input of user information

In "Customer Information" dialog box, please input your information (License User, Belong To, Your Addresses,and PC types).

4. Selection of component

In "Select Components" dialog box, please select the components to install. You can change the directory to install in this dialog box.

5. End of the installer

The installation of PD30 is complete, when the dialog box which indicates "Setup is complete".

3.2 User Registration

The text file for the user registration is created to the start menu. Please input a necessary matter to the text file and send it to the registration desk (regist_tool@renesas.com) in our company by e-mail. To open the text file for the user registration, please select the following menu:

Windows Menu [Start]->[Program]->[RENESAS-TOOLS]
->[PD45 V.1.31 Release 2]->[User Registration Sheet]

If you would like to register your information by FAX, please fill in the contents of the License ID certificate and send it to the registration desk (81-6-6398-6191).

3.3 To install Acrobat Reader

The manual of PD30 is offered as an electronic manual. Acrobat Reader is necessary to refer to an electronic manual. Acrobat Reader is appended below "acrobat" folder of this product disk. Please install Acrobat Reader if necessary. Acrobat Reader can be downloaded from the home page of the Adobe Systems incorporated products.

URL for Adobe Systems Incorporated: <http://www.adobe.co.jp/>

4. Technical Support

4.1 Technical support by E-mail

The text file for the technical support is created to the start menu. Please fill in it and send it to our office nearest from you, or its distributor by E-mail. To open the text file for technical support, please select the following menu:

Windows Menu [Start]->[Program]->[RENESAS-TOOLS]
->[PD45 V.1.31 Release 1]->[Technical Support Sheet]

[Notes for technical support]

We appoint the types of host machines (IBM PC/AT and compatibles, for example) as an operation environment for using our software tools. This does not guarantee operation on all the types of the host machines or in any environment of them (device drivers, peripheral units, etc.), but merely for indicating an operation environment we assume (to be put to our support). If a trouble should occur in using the software tools in the operation environment we appointed, we offer a technical support to solve the trouble (correct the defective condition, inform a way of avoiding the trouble, and so forth).

If a trouble that occurred in your environment cannot be reproduced in our operation environment, we may ask a favor of you to solve the trouble (we may borrow your equipment with your approval). We would like to obtain your prior approval.

4.2 Technical support by Homepage

Our homepage in the following URL provides datasheets, toolnews, FAQ and the other information of our products. Renesas Development Environment Home Page: <http://www.renesas.com/en/tools>

Another access is:

Windows Menu [Start]->[Program]->[RENESAS-TOOLS]
[(Link Page for) RENESAS Tools HomePage]

5. Supplements to the User's Manual

5.1 Switching Over Communication Baud Rate

PD45 supports two baud rates (9600 bps and 19200 bps) for communication with the PC4504 emulator. (PD45's default baud rate is 9600 bps.)

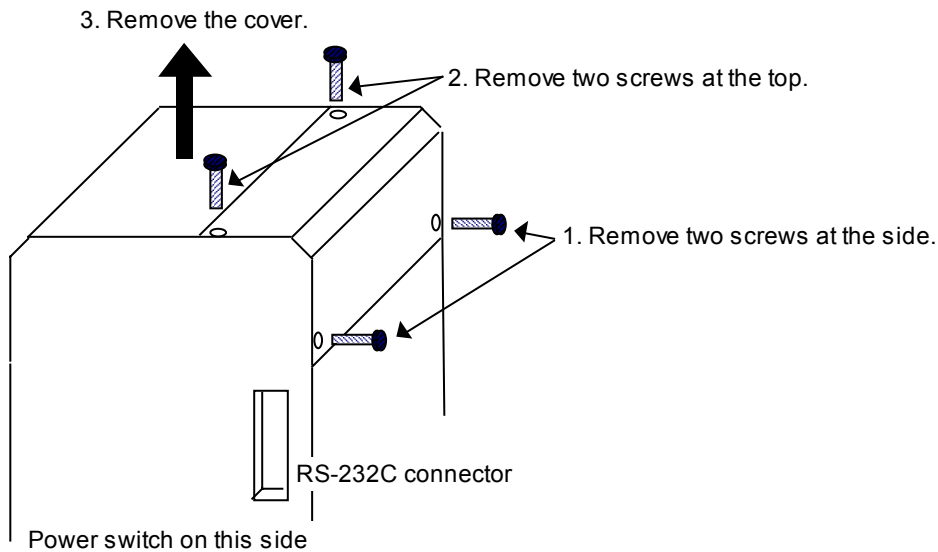
To switch over this communication baud rate, you need to change settings of the PC4504 emulator.

Follow the procedure described below to change the communication baud rate of the PC4504 emulator.

(Make sure the PC4504's power switch is turned off.)

Step 1. Remove board insertion cover

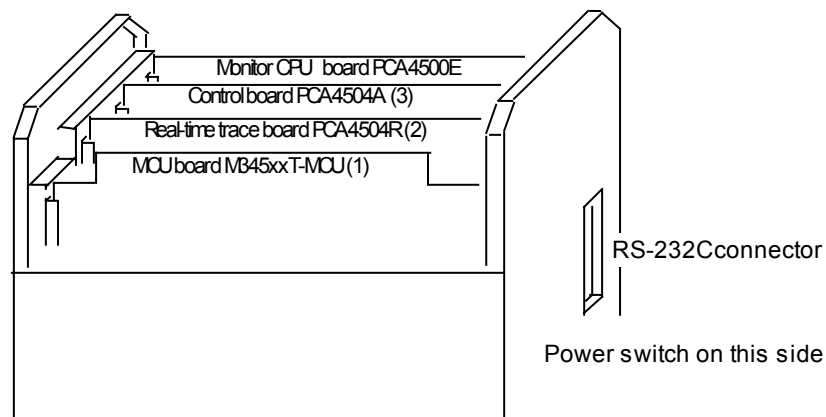
The top panel of the PC4504 emulator's cabinet serves as a board insertion cover. Remove four screws fixing this board insertion cover.



Step 2. Remove internal boards

Remove the boards inserted into the slots of the PC4504 cabinet sequentially in order of the following:

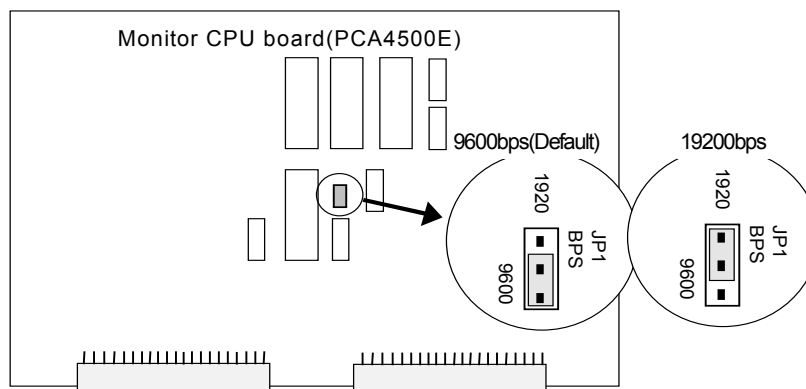
- (1) MCU board (M345xxT-MCU)
- (2) Real-time trace board (PCA4504R)
- (3) Control board (PC4504A)



As a result, only the monitor CPU board (PCA4500E) is left in the PC4504 cabinet. This board is fixed to the PC4504 cabinet.

Step 3. Switch over communication baud rate

Find the baud rate select jumper switch located at the center of the monitor CPU board (PCA4500E). Set this jumper switch to either 9600 or 19200 according to your desired baud rate.

**Step 4. Replace internal boards**

Insert each board back into the PC4504 cabinet following step 2 in reverse. When replacing these boards, check the surface and reverse sides of each board and insert them in the correct order.

Step 5. Check operation of PC4504

Verify that each board is inserted correctly in place. For this purpose, turn on the power switch of the PC4504 emulator with all of its boards inserted. The PC4504 emulator checks each system function to see if they are set correctly. If an ERROR lamp on the PC4504 front panel flashes, it suggests that some of the PC4504 boards is not inserted correctly. After checking each board, power on the PC4504 and check its operation again. For details about this check, refer to the PC4504 User's Manual.

5.2 Reload the Target Program**5.2.1 To reload a file**

When downloading a previously downloaded file again, PD45 allows you to download it without having to specify its file name. To reload a file, choose the PD45 window menus.

[File] -> [Reload]

The file is reloaded when these menus are selected.

5.3 About branch instruction optimization program AS4

AS4 is an assemble driver for the microcomputer 4500 series of Mitsubishi 4-bits. AS4 generates object file from the assembly language source file for 4500 series. Moreover, AS4 optimizes the branch instruction when there is an optimization description of the branch instruction in the source file.

5.3.1 Overview

1. Composition

AS4 is composed of four following execution files.

File Name	Contents
AS4.EXE	Assemble Driver
OPT4P1.EXE	Optimization processing 1
OPT4P2.EXE	Optimization processing 2
ASM45.EXE	Assembler

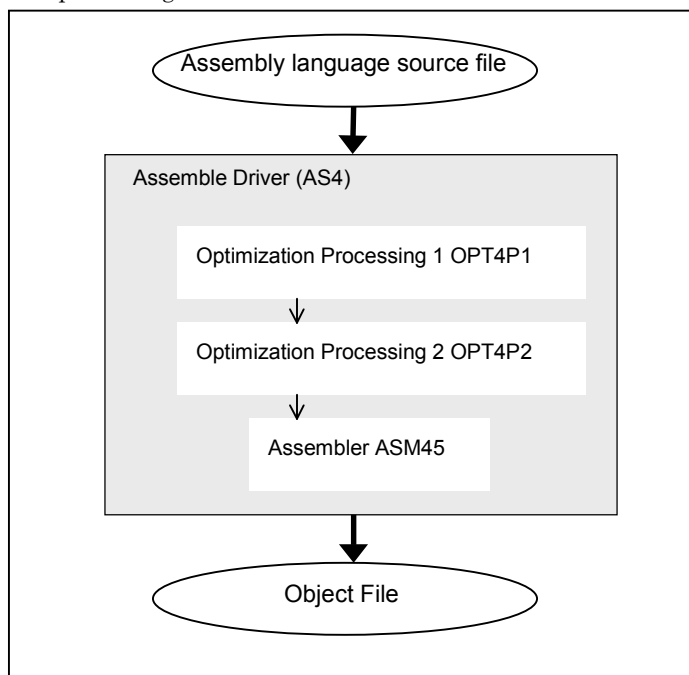
2. Generation File

AS4 reads the assembly language source file and generates the following files. (For "Sample.asm" the name of the assembly language source file)

File Name	Contents
sample.hex	File which stores machine language information
sample.sym	File which stores debugging information(When S option is specified)
sample.map	File which stored use memory information on each page (When A option is specified)
sample.prn	File which showed source file, the arrangement address, and the generation data to be processed(When L option is specified)
sample.tag	File which stored error message and warning message (When E option is specified)
sample.op1	File which optimization processing 1(OPT4P1) generated
sample.op2	File which optimization processing 2(OPT4P2) generated

3. Processing Procedure

The processing flow of AS4 is shown below.



5.3.2 Operation Method

It is necessary to input the following parameters to start AS4.

1. Source File(Indispensable item)

- The source file name to be assembled is specified. The number of source files which can be specified is one.
- When the file attribute ".ASM" is omitted, the attribute ".ASM" is chosen as a predetermined value.
- Files of the attribute other than ".ASM" can be specified by specifying the file name by a full name.
- The directory passing name can be specified for the file name. When only the file name is described, the file in the current directory is processed.

2. Command parameters

The option of AS4 conforms to the option specification of ASM45. Please refer to the user's manual of ASM45 for details of the option.

Options	Contents
-.	Not outputs message to the screen.
-A	Generates a MAP file.
-C	Outputs source line debugging information to symbol file.
-D	Sets a numeric value to a symbol.
-E	Generates a TAG file.
-L	Generates a PRN file.
-M	Specifies the name of the MCU to be used.
-N	Forbids the BRN instruction.
-O	Specifies the output path of the generated file.
-P	Specifies the directory and drive containing the data file.
-R	Specifies that the expansion of bit macro pseudo instruction and the BRN instruction is to be output to the PRN file.
-S	Specifies output of symbol file.
-VER	Displays the version of each execution file.
-X	Invokes the cross reference program CRF45 after assembly.

3. Input Method

AS4 starts by inputting the command line in the DOS window. (-S is options)

Example) C> AS4 sample -S<Enter>

5.3.3 Source Program Coding method

Please specify "BRN" the mnemonic to optimize the branch instruction. AS4 converts "BRN" line into the best branch instruction. ("B" or "BL") Please describe "B" and "BL" in the source program as usual about the branch instruction not optimized.

```

-M34520M6
    .org 0,0
start:
next:  LA    0
      SEA  3
      A    1
      BRN  loop ; Optimization object
      B    next ; Optimization is off the subject
      .
loop:  B    loop ; Optimization is off the subject
      .end

```

5.3.4 Limitations

There are the following limitations in the use of AS4.

- The operand of the instruction "BRN" for optimization should be either of the following.
 - (1)Label
 - (2)Immediately value
 - (3)Predetermined value symbol
- The operand of the pseudo instruction ". ORG" should be either of the following.
 - (1)Immediately value
 - (2)Predetermined value symbol
- It is necessary to specify the pseudo instruction ". ORG" in the source program in order of the address (ascending order).

6. Notes

6.1 The FILE Command

If a downloaded program is made up of two or more source files, and one of those source files (xxxx) has been deleted, executing the following command

```
FILE filename
```

may result in the following error message being displayed regardless of whether the specified file exists.

```
"File xxxx not found."
```

In this case, either restore the deleted file or use the View button in the Program Window to display the source file.

6.2 File operation on Windows

PD45/ASM45/CRF45/AS4 runs under Windows, but the following points should be noted:

1. File names and directory names
 - PD45/ASM45/CRF45/AS4 does not support long file names. Files must be named according to MS-DOS naming convention (8.3). You therefore cannot specify long file names or file names that include two or more periods.
 - File names and directory names including blank characters cannot be specified.
2. About specifying files and directories
 - "... " (Two levels upper directories) cannot be specified.
 - Network path names cannot be specified. To specify network path names, set drives.

6.3 Microcomputer by which the maximum address of ROM exceeds 2000h

The label of the address where 2000h is exceeded can be described in the operand of the TABP instruction. However, the page depends on a set situation of the RBK/SBK instruction.

6.4 Branch Instruction Optimization

6.4 Branch Instruction Optimization

ASM45 may fail to optimize the description that contains a branch-optimizing instruction "BRN" and result in an out-of-range error.

[Conditions]

This problem may occur if the following two conditions are satisfied:

- (1) The label used as the operand of a "BRN" instruction is forward referencing.
- (2) The label in (1) above is described in the next page to the one where the "BRN" instruction has been described.

Note that the problem will not arise when the operand of the "BRN" instruction is either an immediate address or a backward-referencing label.

```

.org 0h,7bh
BRN lab1 ; <-- Processed as a "B" instruction, resulting in an error
BRN lab2
BRN lab3
lab1: NOP ; A forward-referencing label
lab2: NOP
lab3:

```

Change the "BRN" instruction in the line where an error will appear to the "BL" instruction (jump to an address out of the page).

7. Version Report

This section describes the specification of the changed software.

7.1 PD45 V.1.31 Release 2

In this version, the following specifications were changed from former version PD45 V.1.31 Release 1.

7.1.1 Function addition

- Support of new MCU
 - The data file of the new MCU correspondence was added.
 - M34518M2/M4/M6/M8
 - M34519M6/M8
 - M34583MD
 - M34584MD

7.1.2 Specification change

- The company name displayed at launching the M3T-PD45 has been updated.

7.2 PD45 V.1.31 Release 1

In this version, the following specifications were changed from former version PD45 V.1.30 Release 1.

7.2.1 Function addition

- Support of new MCU
 - The data file of the new MCU correspondence was added.
 - M34506M2/M4
 - M34507M2/M4
 - M34524M8/MC/ED
 - M34554M8/MC/ED
- Windows 2000-compliant

7.2.2 Revision of Restriction

- The following problem has been fixed: when the target program was executed by the following operations, the display of PD45 is not updated when the program stops.
 - Go Command
 - GoBreak Command
 - F1 Key
- The following problem has been fixed: in the target program for M34580, the operation of the SCP instruction and the RCP instruction becomes the same operation as the NOP instruction.
 - SCP: Set C port value.
 - RCP: Clear C port value.

7.3 PD45 V.1.30 Release 1

In this version, the following specifications were changed from former version PD45 V.1.20 Release 2.

7.3.1 Function addition

- Support of new MCU
 - The data file of the new MCU correspondence was added.
 - M34501M2/M4
 - M34502M2/M4
 - M34580M2/M4

7.3.2 Revision of Restriction

- The following problem has been fixed: when RAM is displayed in the dump window, the data of the final line cannot be displayed.
- The following problem has been fixed: when instruction BRN for the branch optimization exists in page final address, it is judged the branch instruction in the page.

7.4 PD45 V.1.20 Release 2

In this version, the following specifications were changed from former version PD45 V.1.20 Release 1A.

7.4.1 Function addition

- Support of new MCU
 - The data file of the new MCU correspondence was added.

- M34512M2/M4

7.5 PD45 V.1.20 Release 1A

In this version, the following specifications were changed from former version PD45 V.1.20 Release 1.

7.5.1 Revision of Restriction

- Execute of PD45
The following PD45 users were not able to start emulator debugger PD45. In this version, this problem was corrected.
 - (1) First ordering of PD45 V.1.20 Release 1
 - (2) Version up from PD45 V.1.00 Release 1
 - (3) Grade up from WDB45/RTT45

7.6 PD45 V.1.20 Release 1

In this version, the following specifications were changed from former version PD45 V.1.10 Release 1.

7.6.1 Function addition

- Support of new MCU
The data file of the new MCU correspondence was added.
 - M34513M2/M4/M6/M8
 - M34514M6 / M8
 - M34570MD

7.6.2 Specification change

- 16K edition MCU correspondence
The label of the address where 2000h is exceeded can be described in the operand of the TABP instruction. The page depends on a set situation of the RBK/SBK instruction.

7.6.3 Revision of Restriction

- Data file for M34570 M4/M8
When the target program for microcomputer M34570 M4/M8 was debugged by emulator debugger PD45, the display of the program window was not correct, because the data file is not correct. (The machine language file generated with assembler ASM45 is correct.)
In this version, this problem was corrected.

7.7 PD45 V.1.10 Release 1

In this version, the following specifications were changed from former version PD45 V.1.00 Release 1.

7.7.1 Function addition

- Support of Windows NT 4.0
Windows NT 4.0 is available for a host OS (on IBM PC/AT or compatible only).
- Support of PD45 target program reload function
When you reload the target program, the function to read easily was added. Please refer to "5.2 Reload the Target Program" of this release note for details.
- Support of branch instruction optimization function
The function to optimize the generation code of branch instructions("B" or "BL") was supported. Please refer to "5.3 About branch instruction optimization program AS4" of this release note for details. Moreover, the support of BRANCH was ended because of the support of this function.
- Support of new MCU
The data file of the new MCU(M34555M4) correspondence was added.

7.7.2 Revision of Restriction

- Data File for M34570 M4/M8
The mistake was found in the data file for microcomputer M34570M4 and M34570M8. The error does not occur when the source program is assembled even if instruction SST exists in the source program. These limitations are repaired by this version. The SST instruction is an instruction which does not exist in M34570 M4/M8.

8. License Agreement

IMPORTANT

This contract is a legally valid agreement concluded regarding our software products between the purchaser (limited to corporations) and Renesas Solutions Corporation. This contract is assumed to have been effected upon installation of the software product by the purchaser, an act by which the purchaser is assumed to have accepted the conditions set forth herein.

Software User License Agreement

The purchaser (hereafter called the "Purchaser") and Renesas Solutions Corporation (hereafter referred to as "Licensor") do hereby agree to the terms and conditions as specified in this Software User License Agreement (hereafter referred to as "Agreement") concerning the enclosed software and its explanatory manuals.

ARTICLE 1. Definition of Terms

1. The terms used in this contract shall be construed as defined below.
 - (1) The "Software Product" refers to the software product provided by Licensor (product name: M3T-PD45 as called by Licensor) that is comprised of the following:
 - (a) The "Program" refers to the program that has the functions to control the Licensor's emulator system.
 - (b) The "Manual" refers to technical data (including user's manuals, etc.) associated with the program, which are provided by means of electronic documents or printed material.
 - (2) The "Emulator" refers to the Licensor's emulator systems whose type numbers are given below.
 - PC4504
 - (3) The "Designated System" refers to the computer system managed and owned by the Purchaser, in which the Software Product is installed and run.
 - (4) The "License ID Certificate" is a certificate issued to the Purchaser by Licensor when the Purchaser uses the Software Product for the purpose of controlling the Emulator. This certificate is included with the Software Product, and is required when the Purchaser receives upgrades of the Software Product or technical support from Licensor.
 - (5) The "Number of Granted Licenses" refers to a total quantity of the Software Product, as stipulated in the "License ID Certificate," which the Purchaser can use at the same time for the purpose of controlling the Emulator.

ARTICLE 2. Definition of Terms

1. Licensor grants the Purchaser the following non-transferable, non-exclusive rights free of charge:
 - (1) To install the Software Product in the Designated System for the purpose of controlling the Emulator. However, the total quantity of the Software Product that the Purchaser uses at the same time shall not exceed the "Number of Granted Licenses."
 - (2) To print the electronic documents included with the Manual to a printing device for the purpose of using the Software Product in conformity with paragraphs (1) above.
 - (3) The Purchaser can duplicate the Software Product to produce one and only one copy of it for backup purposes.
2. When the Purchaser has installed or duplicated the Software Product in accordance with the foregoing, the Purchaser shall keep an appropriate record describing the number of duplicates of all of the Software Product owned, the location where they are stored, and the Designated System in which the Software Product was installed. When requested by Licensor, the Purchaser must promptly disclose said record to Licensor.
3. For only the rights explicitly stipulated under this contract, Licensor grants use of the Software Product to the Purchaser. Except the rights for the Software Product that are expressly granted under this contract, Licensor does not grant the Purchaser the license or the right of using or utilizing anything based on Licensor's patent rights, utility models, design rights, trademark rights, copyrights, semiconductor circuit arrangement utilization rights, and trace secrets.

ARTICLE 3. Limitations

1. Unless granted under this contract, the Purchaser cannot transfer the right of using the Software Product under this contract, nor can the Purchaser use, duplicate, transfer, rent or otherwise dispose the Software Product or grant sublicenses to any third parties. However, if handling of the Software Product in ways other than granted under this contract is wished by the Purchaser and Licensor recognizes it as necessary, such handling may be determined separately from this contract by consultation between the two parties.
2. The Purchaser cannot remove copyright indications from the Software Product and its duplicates.
3. The Purchaser cannot reverse-engineer, decompile, or disassemble the Software Product.
4. The Purchaser cannot print the electronic documents included with the Software Product to a printing device in an attempt to use printout for commercial purposes.
5. The provisions set forth in this article remain effective even after this contract terminates.

ARTICLE 4. Rights to the Software Product

1. All copyrights to the Software Product belong to Licensor. No articles and clauses in this contract convey the whole or part of said copyrights to the Purchaser.
2. The provisions set forth in this article remain effective even after this contract terminates.

ARTICLE 5. Support

1. Regarding the Software Product, Licensor provides technical support to the Purchaser in the manner deemed appropriate by Licensor.
2. When the Purchaser wishes to upgrade the Software Product, the Purchaser will be notified of upgrading procedures separately from this contract through Licensor's home page or by other means deemed appropriate by Licensor. Licensor may claim payment for the cost needed for upgrading from the Purchaser. If the Purchaser is using the Software Product for the purpose of controlling the Emulator, Licensor may request presentation of the License ID Certificate by the Purchaser when upgrading the Software Product.

ARTICLE 6. Exemption Clause for Licensor

1. What is stipulated in Article 5 of this contract is the only responsibility Licensor shall assume under this contract. Article 5 only explicitly stipulates the responsibility of Licensor under this contract, so that whatever damages the Purchaser may suffer from the Software Product or use of it by the Purchaser, Licensor will not provide the Purchaser with any guarantee or any warrant at all. It is expected that the Purchaser assumes responsibility and bears the cost for problems that may occur with respect to the Software Product.
2. The provisions set forth in this article remain effective even after this contract terminates.

ARTICLE 7. Safekeeping of the Included Documents

1. When the Purchaser is using the Software Product for the purpose of controlling the Emulator, the Purchaser shall keep the License ID Certificate in a safe place and when requested by Licensor, shall promptly present it to Licensor.

ARTICLE 8. Secrecy

1. Regarding the Software Product and this contract, the Purchaser shall keep in secret the information that has been disclosed to the Purchaser by Licensor after designating it to be secret (which includes the Software Product, hereafter called the "Secret Information") and shall not disclose or leak the whole or part of it to any third parties. It can only be used to control the Licensor's emulator system, and not for any other purpose.
2. The forgoing obligation does not apply to the following:
 - (1) The information that the Purchaser already owned when it received the Secret Information
 - (2) The information that was already known when the Purchaser received the Secret Information
 - (3) The information that became known for reasons for which the Purchaser is not responsible after the Purchaser received the Secret Information
 - (4) The information that the Purchaser originally developed without any references to the Secret Information
 - (5) The information that the Purchaser is requested to disclose by administrative agencies or courts of law. In this case, however, the Purchaser shall, prior to disclosure, inform Licensor in writing in order to provide Licensor with opportunities to make a complaint against the said disclosure.

3. The provisions set forth in this article remain effective for three years after this contract terminates.

ARTICLE 9. Contract Period and Termination

1. This contract becomes effective at the time the Purchaser has installed the Software Product and remains effective until it terminates for reasons stipulated below.
2. When the Purchaser terminated the right of use under this contract by notifying Licensor of it in writing one month earlier.
3. When the Purchaser violates one of the clauses in this contract, and said violation remains uncorrected more than 30 days after the Purchaser received a written notice from Licensor requesting that said violation be corrected.
4. When the Purchaser or Licensor falls under the application of any one of the following:
 - (a) When the Purchaser or Licensor received a petition for attachment, provisional attachment, provisional disposition, compulsory execution, or public auction, or a petition for the commencement of bankruptcy, special liquidation, civil resuscitation, corporate liquidation, or company reorganization and rehabilitation procedures, or Purchaser or Licensor themselves plead for the above.
 - (b) When the Purchaser or Licensor received an administrative disposition from the competent authorities to the effect that its business be closed or its business license or business registration be canceled.
 - (c) When the Purchaser or Licensor adopted a resolution to discontinue or change business or dissolve the company.
 - (d) When the Purchaser or Licensor received a disposition from a relevant clearinghouse to the effect that its transactions of bills in that clearinghouse be stopped.
 - (e) When the Purchaser or Licensor committed a breach of faith, has had its financial situation worsened, or had a good reason to justify the doubt about that.
5. Notwithstanding the above provisions, even when this contract has terminated, if any different period is stipulated in one of the clauses of this contract, it shall have priority.

ARTICLE 10. Obligations after Termination of This Contract

1. When this contract has terminated, the Purchaser must discard the Software Product, the duplicates of the Software Product created based on this contract, and all instances of the Software Product installed in the Designated System within 15 days from the date of termination. When requested by Licensor, the Purchaser shall supply a document attesting to that effect to Licensor within one month after the request.

ARTICLE 11. Other

1. Matters not stipulated in this contract and doubts arising between the Purchaser and Licensor shall be settled by consultation between the two parties.
2. If an attempt to solve the foregoing by mutual consultation fails, giving rise to a dispute between the Purchaser and Licensor, it shall be solved through a legal procedure before a court that is designated as the competent court by Licensor.
3. The provisions set forth in this article remain effective even after this contract terminates.

**LICENSEE ACKNOWLEDGES THAT LICENSEE HAS READ THIS AGREEMENT
AND AGREES TO ALL TERMS AND CONDITIONS STATED HEREIN.**