

To our customers,

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

April 1st, 2010
Renesas Electronics Corporation

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

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Be sure to read this note

Assembler Package for 77xx Series V.5.10 Release 1B

Release Note

4th Edition

Renesas Solutions Corporation

February 15 2006

Abstract

Welcome to Assembler Package for 77xx Series V.5.10 Release 1B. This document contains supplementary descriptions to User's Manual. When you read certain items in the User's Manual, please read this document as well.

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Inquiry

On April 1, 2003, Mitsubishi Electric Semiconductor Application Engineering Corporation, a member of the Mitsubishi Electric group, joined the new Renesas Technology group and changed its name to Renesas Solutions Corp. Please note the following new sites and address:

- User Registration
regist_tool@renesas.com
- Tool Technical Support
<http://www.renesas.com/inquiry>
- Tool Homepage
<http://www.renesas.com/en/tools>

The latest info

Please refer to the useful following sites:

<http://www.renesas.com/en/tools>

User registration

To be eligible for upgrade information, technical support, and other services, you must be registered as a user with Renesas Technology Corporation. Unless you are a registered user, the said services cannot be received.

Please register your name with Renesas Technology Corporation within 30 days after purchase.

1. Installing

1.1. Before installing RASM77

Please confirm as follows before installing RASM77 in your computer.

- Please carefully read the "License Agreement" and "Release Note(this note)" included with your product before using RASM77. If you've installed this product in your computer, it is assumed that you've agreed to the provisions stipulated in the License Agreement.
- In order that RASM77 operates comfortably, it requires at least 32 Mbytes of memory and a hard disk having 20 Mbytes or more of space.
- Use the dedicated installer to install RASM77.
- You need to input a license ID in the middle of installation. Before you start installing RASM77, check your license ID.
- When upgrading RASM77, Renesas recommends uninstalling the existing version of RASM77 before installing the new version.

Uninstalling RASM77

To uninstall RASM77, choose "Control Panel" and "Add/Remove programs" and then execute uninstall.

1.2. RASM77 Installer

■ English environment

Supported host	Supported OS	Installer name	Directory on CD-ROM
PC	Windows 98 Windows 2000 Windows NT Windows Me Windows XP	SETUP.EXE	¥RASM77¥W95E

■ Japanese environment

Supported host	Supported OS	Installer name	Directory on CD-ROM
PC	Windows 98 Windows 2000 Windows NT Windows Me Windows XP	SETUP.EXE	¥RASM77¥W95J

1.3. Installing

Please use the following procedure for installation on a PC.

- (1) Go to the directory corresponding to your system, which can be found the name of the software you purchased, on the CD-ROM.
- (2) Start up the installer and follow the messages displayed on the screen as you install RASM77.

Note!

- The data you input in the middle of installation is necessary to create a file for user registration.
- When changing the item "Installation directory" from the "Select Components" screen by using "Browse..." during installation, a trouble sometimes occurs that you cannot select some of the drives displayed by "Drives:" on the "Chose Directory" screen. In such a case, return to the "Select Components" screen and use "Disk Space..." on that screen to specify a drive. If you still

- You cannot specify a name that contains a blank for the directory in which RASM77 will be installed.

1.4. Software to be installed and Directories created by installation

When you've finished installing RASM77, the following directories are created below the installer's default installation directory : ¥mtool

And the following files are installed in each directory.

Directory	File
bin	rasm77.exe (Assembler)
	link77.exe (Linkage editor)
	lib77.exe (Librarian)
	hex2s.exe (Motorola S format file converter)
	crf77.exe (Cross Referencer)
	br77.exe (Branch optimizer)
	RASM77 help file
manual	rasm77ue.pdf (RASM77 electronic manual)

1.5. Setting environment after installation

After you finished installing RASM77, set environment variables next.

Setting PC environment

The environment variables marked by "Auto" in the tables below do not need to be set because the Windows installer automatically rewrites AUTOEXEC.BAT.

Environment variable	Example of setting
INC77	Auto (SET INC77=C:¥MTOOL¥INC77)
TMP77	Auto (SET TMP77=C:¥MTOOL¥TMP)
Command path	Auto (C:¥MTOOL¥BIN is added)

1.6. Programs in the freeware directory

The freeware directory on the CD-ROM contains programs with functions that support the product's functions. These programs are not installed by the installer; each program must be installed directly from the CD-ROM. See the document files for the respective programs for details of how to install the program and its functions.

lst77

Converts the address data in the list files generated by the assembler into absolute addresses.

xref77

Generates a cross-reference list of local and global symbols.

Note!

Neither Renesas Technology Corporation nor Renesas Solutions Corporation, therefore, accepts any liability for damage directly or indirectly incurred by the use of this software.

2. Precautions

2.1. Precautions on PC version

Precaution on Environment to operate

RASM77 does not work under Windows 3.1 and Windows NT 3.5x or earlier. As for environment to operate, refer to the clause of "Operating Environment".

Suggestions Concerning File Names

The file names that can be specified are subject to the following restrictions:

- Directory and file names that contain kanji cannot be used.
- Only one period (.) can be used in a file name.
- Network path names cannot be used. Assign the path to a drive name.
- Keyboard shortcuts cannot be used.
- Directory and file names that contain a space character cannot be used.
- The "..." symbol cannot be used as a means of specifying two or more directories.
- A file name in length of 128 characters or more including path specification cannot be used.

Precautions about virus check programs

If the virus check program is memory-resident in your computer, RASM77 may not start up normally.

In such a case, remove the virus check program from memory before you start RASM77.

2.2. Note for the RASM77 product

The TM including CD-ROM of product can not install and use on the occasion for buying the RASM77 product.

3. Contents of upgrading from old versions

This version " V.5.10 Release 1" is the same as the " V.5.10 Release 1B" shipped on and after Apr. 1, 2004. Contents are the same although version numbers differ in both. (Only number change.)

3.1. Changed RASM77

It corrected the problem to develop the macro argument expansion which was described in the condition false part of the condition assembly.

3.2. Changed LINK77

- Added command option -BRAL

LINK77 outputs warning message when processing with this option if the code data which the jump address of BRAL is 0xFFFFH is found.

Confirm that the found data is under BRAL mnemonic, because LINK77 searches machine language file for the machine code pattern.

- Added warning message

WARNING NO.1: BRAL specified address is xxxFFFh (description address xxxxxh)
 It is possible that BRAL mnemonic which jump address is xxxFFFh was located at xxxxxh address.

3.3. Added BR77

- It added branch optimizing tool br77 to the product.
 BR77 is the tool which changes the branch instruction which was made the "out of range" error into the optimal branch instruction.

3.4. Changed LST77

- It corrected the problem that an error occurs in LST77 at the definition of the succeeding section, if two or more sections with the same name are defined successively in a file.
- It corrected the problem that selecting only an option without specifying the name of a file to convert will force termination of LST77 at typing a command.

4. Operating Environment

The operation of RASM77 has been checked and confirmed on the host computers with the operating system versions shown below.

Host Machine Name	OS version	Directory of CD-ROM
IBM PC/AT compatibles	Microsoft Windows 98 Microsoft Windows NT 4.0 Microsoft Windows 2000 Microsoft Windows Me Microsoft Windows XP	W95E

5. Software version list

RASM77	V.5.10.00	Relocatable assembler
PRE77	V.5.00.00	Structured language preprocessor
LINK77	V.2.10.00	Linker
LIB77	V.5.00.00	Librarian
CRF77	V.2.10.10	Cross referencer
hextos2	V.2.00.00	Machine language file converter
BR77	V.1.00.00	Branch optimization tool

RASM77 includes several freeware programs.

xref77	V.1.10.00	Cross referencer for multiple files
lst77	V.1.00.10	Absolute address list generation tool