

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

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Renesas Electronics Corporation

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**Be sure to read this note.**

# C Compiler Package for 740 Family V.1.01 Release 02

## Release Notes

First Edition  
Renesas Solutions Corporation.  
June 16, 2007

### Abstract

Welcome to the C Compiler Package for 740 Family V.1.01 Release 02. This document contains supplementary descriptions to the electronic User's Manual.

Please read this release note while you refer to a corresponding item in electronic User's Manual.

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## Contents of upgrading from old versions

The two functions as follows added in High-performance Embedded Workshop:

- The project corresponding to each target is made by using the New Project Wizard.
- The compilation option etc. are set by using GUI.

The tow problems as follows have been fixed:

- Problem with the number of files to be linked in a project folder:  
Published to RENESAS TOOL NEWS on September 16, 2006: 060916/tn4
- Problem with Registration of the Dependencies of Source Files on a Header (include) File:  
Published to RENESAS TOOL NEWS on September 16, 2006: 060916/tn4

## Precautions to be observed when installing

Please pay attention to the following point, in starting installation.

### About the Install Manager

The C Compiler Package for 740 Family that is the V.1.01 Release 02 or later is installed by through the Install Manager. Therefore, please confirm the paragraph "How to install The C Compiler Package for 740 Family " in this document, because the installation procedure differs from the V.1.01 Release 01 and older.

The Install Manager can install plural integrated environment HEW (High-performance Embedded Workshop) on one PC. You can construct plural tool-environments (means combinations of compilers and debuggers) by this function of the Install Manager.

For more details, look the help topics that will be displayed when first Install Manager execution.

### About the license ID

You need to input a license ID in the intermediate step of installation. Before you start installing CC32R, check your license ID.

Yet, a fee is necessary to the changing from previous version to V.5.00 Release 00. Therefore, this version of CC32R cannot be installed by license ID of V.4.30 Release 00 or earlier.

### About the ICC740 V2.16A and older

When upgrading the C Compiler Package for 740 Family, Renesas recommends uninstalling the existing version of the C Compiler Package for 740 Family before installing the new version.

Uninstalling the C Compiler Package for 740 Family

To uninstall the C Compiler Package for 740 Family, choose "Control Panel" and "Add/Remove programs" and then execute uninstall.

### Precautions about virus check program

If this software is started while a virus check program is resident in memory, it may not operate properly. In such a case, remove the virus check program from memory before you start the software.

### **About technical supporting**

For technical supporting, input user information in an installing. Then, the support information will be displayed in the support information tool on end of installations.

Please tell us question item with this support information when you take a technical support.

For information on our policy concerning the protection of personal information, please refer to the Renesas Technology Homepage.

URL:

<http://www.renesas.com/fmwk.jsp?cnt=privacy.htm&fp=/privacy/&site=i>

The information we receive via the User Registration Form aids us greatly in our customer support activities. We provide Renesas Technology and related companies, distributors, etc., with essential user information (electronically or on paper) that will further help them provide customer support.

If you do not wish to have your user information provided to other related

### **How to get the latest information of C Compiler Package for 740 Family**

Renesas has an internet home page in the URL shown below. The latest information on Renesas Development Environment are published here.

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

## Installing the C Compiler Package for 740 Family

### How to install the C Compiler Package for 740 Family

1. Execute the installer by the method of items as follows (A or B).

A. In the case of installing from the included CD:

Go to the directory corresponding to your system, which can be found the name of the software you purchased, on the CD-ROM.

\icc740\win

Please run the hewinstman.exe on the CD.

B. In the case of utilizing online version up]:

Download installer files and install by the method that is written to the tool homepage.

2. Control the install manager by the method of items as follows (A or B).

A. In the case of the first time of HEW installing:

\* If the HEW is already installed → Jump to "B. The case of HEW already installed"

1) Push "Installation" button.

[About entering user information]

The data you input in the intermediate of installation is used to create a file for technical supporting sheet.

\* Please confirm "Entering user registration" of chapter 2, for information on our policy concerning the protection of personal information.

2) Check "Install a High-performance embedded workshop for the first time." and push "Next" button.

3) The install directory of HEW will be displayed on the "Choose of an installation". Ordinariness does not exist the problem as it is, please push "Next" button.

[About installation directory]

This directory only for HEW. The directory of ICC740 (C Compiler) will be inputted by the installer that run after the operations.

4) Please check the softwares you want, and push "Install" button.

In the default, the main compiler "740 Family C Compiler package V.X.XX Release xx" and "Autoupdate" are checked.

[What is the AutoUpdate Utility?]

The AutoUpdater will start and station into PC automatically.

The AutoUpdater is an utility that watch the Renesas HomePage periodically and detects the renewal of the installed development tools.

5) "Do you wish to install a new High-performance embedded workshop ?" will be displayed. Please push "Yes" button.

The installers were selected would run in order. → jump to the step 3.

B. In the case of HEW already installed:

1) Push "Installation" button.

2) Select "Update the active High-performance embedded workshop (Recommend)", and push "Next" button.

3) The installed list in present were displayed. Push "Next" button.

4) Please check the softwares you want, and push "Install" button. In the default, the main compiler "740 Family C Compiler package V.X.XX Release xx" and "Autoupdate Utility" are checked.

[What is the AutoUpdate Utility?]

The AutoUpdater will start and station into PC automatically.

The AutoUpdater is an utility that watch the Renesas HomePage periodically and detects the renewal of the installed development tools.

5) "Do you wish to update the active High-performance embedded workshop ?" will be displayed. Please push "Yes" button.

The installers were selected would run in order. → jump to the step 3.

3. Please follow the each installer's messages.

[About target directory of installation]

The install directory of the ICC740 (C Compiler) could be inputted in the installer that was launched in the step. Its default is "C:\Program Files\IAR Systems\ew23".

[Constitution of start menu]

After installation, the folders and shortcuts that showed them below will be registered to the [start]->[Programs]->[Renesas].

High-performance Embedded Workshop

740 Family C Compiler Package V.x.xx Release xx (Numbers or versions are displayed to "x".)

Renesas Tools HomePage

4. It is return to the install manager.

Push [Exit] button to end the install manager.

## How to uninstall

The program that became unnecessary can be eliminated from PC by the following method.

1. Confirm whether or not the AutoUpdate icon is on the Windows task tray.  
If its icon is exist, choose by the right click, and select "(E)nd" to finish the AutoUpdate .
2. Open the "Add and remove programs" (or "Add and remove applications" [\*\*]) from the Windows "Control panel".
3. Select "High-performance embedded workshop" in the "Add and remove programs" list and click the "Modify and remove". (This button may be not the "Modify and remove" but the "Remove" or "Add and remove"[\*\*].)  
[\*\*] These differ by Windows.
4. Uninstallation will start. Then wait until "Completed" is displayed and push "OK".
5. Select "IAR C Compiler Package for Renesas 740 V2.17A" in the "Add and remove programs" list and click the "Modify and remove".
6. Uninstallation will start. Then wait until "Completed" is displayed and push "OK".



## Software to be installed and Directories created by installation

When you've finished installing the C Compiler Package for 740 Family, the following directories are created below the installer's default installation directory :

C:\Program Files\IAR Systems\ew23\740

And the following files are installed in each directory.

Directory	File
bin	a740.exe (Assembler) icc740.exe(C Compiler) xlink.exe (Linkage editor) xlib.exe (Librarian)
inc	(Header files)
smptw74	tutor3.c (sample program)
lib	(Library files)
manual	rej10j1141_icc740_u.pdf (C Compiler Package electronic manual)

## Setting PC environment

If you use on DOS prompt, please set environment variables as follows.

Environment variables	Example of setting
C_INCLUDE	SET C_INCLUDE=C:\Program Files\IAR Systems\ew23\740\inc\
A740_INCLUDE	SET A740_INCLUDE=C:\Program Files\IAR Systems\ew23\740\inc\
XLINK_DFLTDIR	SET XLINK_DFLTDIR=C:\Program Files\IAR Systems\ew23\740\lib
Command path	"C:\Program Files\IAR Systems\ew23\740\bin";%PATH%

### [NOTES]

- In this setup example, products are installed by " C:\Program Files\IAR Systems\ew23" of the installer. If you wish to install products in a different directory, change the setup contents to the one you want.
- If you use from HEW (High-performance Embedded Workshop) you do not need to be set these environment variables.

## 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.

sc74

A source file converter that allows you to convert the source files created for the Assembler Package for 740 Family into the source file format of the assembler A740 included with the ICC740.

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.

## Notes

### Problems on Handling Interrupts

If a function called or to be called from an interrupt-handling function during interrupt service is called from another function, the warning message\* shown below cannot be displayed at linking. (The message is displayed in V.1.00 Release 1 through V.1.00 Release 1B.)

Warning[w16]: Function "name" in module (file) is called from two function trees (with roots name1 and name2 )

\* The M3T-ICC740 statically places local variables (arguments and auto variables) of a function. So using such a function within both an interrupt-handling function and another one may corrupt local variables. If calls are made to such a function from both of the above-mentioned functions, the linker sends Warning[w16]. However, in the product concerned, the linker does not.

Example:

```
-----  
void func2( int );  
  
interrupt[2] void  intr_1(void)  
{  
    func2( 2 );      /* If an interrupt generated while func1() is */  
                   /* executing func2(), local variables of      */  
                   /* func2() be corrupted after func2() returns */  
                   /* from interrupt                               */  
}  
  
void func1( void )  
{  
    func2( 1 );  
}  
  
void main( void )  
{  
    func1();  
}  
-----
```

Workaround:

Don't use the same function within an interrupt-handling function and another one.

## Problem on Calling Undefined Functions

Making a call to an undefined function does not display the warning message shown below at linking.

(The message is displayed in V.1.00 Release 1 through V.1.00 Release 1B.)

```
Error[e46:] Undefined external "external" referred in module(file)
```

### Example

```
-----  
void func3( int );  
  
void main( void )  
{  
    func3();      /* undefined function */  
}  
-----
```

### Workaround:

If you need to call an undefined function, define it.

## Documents of IAR Systems

Please refer to the following document in the DOC folder generated after installing ICC740 about the newest information.

a740.pdf	Programming Guide of 740 Assembler, Linker and Librarian.
cs740M.pdf	With the C Compiler Package for 740 Family it is reference unnecessary.
cw740.pdf	With the C Compiler Package for 740 Family it is reference unnecessary.
ew740.pdf	With the C Compiler Package for 740 Family it is reference unnecessary.
icc740.pdf	Programming Guide of 740 C Compiler.
xlink.pdf	Reference Guide of IAR Linker and Library Tools.

a740.htm	Readme file for A740.
CLibrary.html	Readme file for CLIB.
coding.htm	Efficient Coding with the ICC740.
cs740.htm	With the C Compiler Package for 740 Family it is reference unnecessary.
cs740m.htm	With the C Compiler Package for 740 Family it is reference unnecessary.
cwgui.htm	With the C Compiler Package for 740 Family it is reference unnecessary.
ewgui.htm	With the C Compiler Package for 740 Family it is reference unnecessary.
icc740.htm	Readme file for ICC740.
manuals.htm	User guide corrections and updates.
readme.htm	Readme file.
wtd740.htm	With the C Compiler Package for 740 Family it is reference unnecessary.
xar.htm	Readme file for the IAR XAR Library Builder.
xlink.htm	Readme file for the IAR XLINK Linker.
xman.htm	Recent Manual Updates for XLINK.

## Startup of High-performance Embedded Workshop

### High-performance Embedded Workshop

Click [High-performance Embedded Workshop] in the [High-performance Embedded Workshop] folder in the [Renesas] folder in the [Program] folder of the Windows® [Start] menu.

### Launch Manual Navigator

It displays the online manuals and attached document.

Click [Manual Navigator] in the [High-performance Embedded Workshop] folder in the [Renesas] folder in the [Program] folder of the Windows® [Start] menu.

Note!

Manual Navigator requires Adobe Reader.

If Manuals folder is moved, Manual Navigator cannot show them.

## Operating Environment

The operation of C Compiler Package for 740 Family has been checked and confirmed on the host computers with the operating system versions shown below.

Host Machine Name	Supported OS
IBM PC/AT compatibles	Microsoft Windows 2000
	Microsoft Windows XP

## Software version list

The C Compiler Package for 740 Family V.1.01 Release 02 comprises the following.

ICC740	V2.17A	IAR ANSI C Compiler
A740	V2.17A	IAR Assembler
CLIB	V3.34L	IAR C runtime library
XLINK	V4.59M	IAR Linker
XLIB	V3.29I	IAR Librarian

The C Compiler Package for 740 Family includes a freeware program the following.

SC74	V.1.00.00	Source file converter (Outside software for technical support)
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