

## Introduction

- **Purpose**
  - This training course provides an overview of the installation and administration aspects of the High-performance Embedded Workshop (HEW), a key tool for developing software for embedded systems that use microcontrollers (MCUs) from Renesas Technology Corp.
- **Objectives**
  - Learn about the installation of HEW
  - Learn about the AutoUpdate utility and manual update functions
  - Understand HEW component administration and the start-up desktop
- **Content**
  - 10 pages
  - 1 question
- **Learning Time**
  - 15 minutes

Welcome to this course on the installation and administration aspects of the High-performance Embedded Workshop (HEW) — one of a series of courses covering various aspects of this microcontroller (MCU) support product from Renesas Technology. HEW speeds up the development of software for embedded system applications. To get the most out of this course material, you should be familiar with MCUs in general and you should understand the fundamentals of designing and developing embedded control systems.

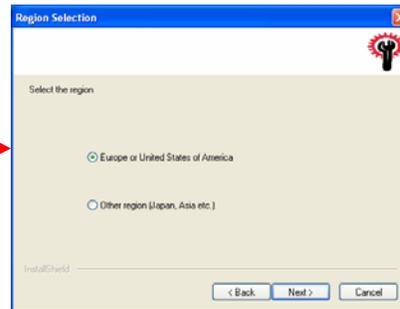
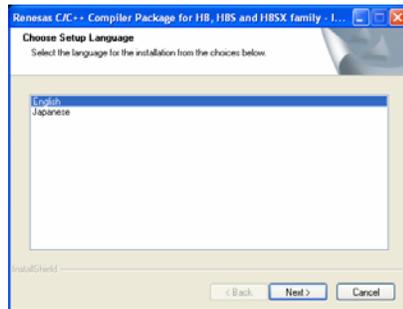
This course describes the HEW installation process, and explains the ways to update the software. It also describes how the components of HEW are administered and shows the HEW start-up desktop. Other courses in this series provide details about different HEW capabilities, features, and applications.

## HEW Installation: First Steps

- HEW GUI is installed with a compiler package or pure-debugger package
- Install latest version (HEW4 [June 2006])
  - Uninstall previous HEW versions
- Language for installation depends on operating system running on the PC
  - English and Japanese versions of Windows® 2000/XP platforms are supported



- HEW characteristics are offered in two versions:
  - “Europe or United States of America”
  - “Other region (Japan, Asia, etc.)”



It isn't difficult to install the software that implements the HEW integrated development environment. Simply follow these steps.

First, the installation software will identify what you are installing: a compiler package or a pure-debugger package. Both packages contain the HEW Graphical User Interface (GUI) front-end.

Be certain that the latest version of the HEW GUI is being installed. (HEW4 was the latest version when this course was produced.)

If a previous HEW version is installed in the PC, it's best that it be uninstalled — that is, removed — before installing the newer version.

The HEW GUI varies, depending on the operating system in your PC.

HEW4 officially supports English and Japanese versions of Windows®2000 and XP platforms.

When activating the HEW installation, the Welcome screen appears, followed by the prompt for language selection: English HEW or Japanese HEW. This selection choice will not appear after HEW has already been installed in the PC. Also, note that some HEW English editions support an Online Help function in Chinese.

Next, the “Region Selection” dialog will appear, offering two choices: “Europe or United States of America” or “Other region (Japan, Asia, etc.)”. HEW operates differently, depending on the region.

If there is any doubt about which region to select, please contact your Renesas sale office for a recommendation.

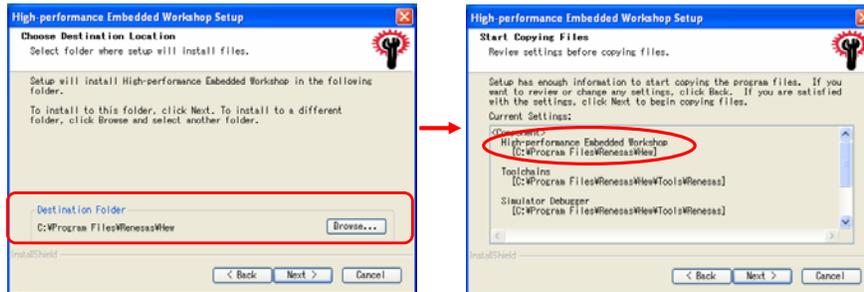
## HEW Destination Folder

- **Folder Selection**

- Default is: \Program Files\Renesas\HEW
- If installer detects a previous HEW version, the "Destination Folder selection" dialog won't be prompted; instead, the latest HEW will automatically be installed into the same folder as the previous HEW.

**Note:** If user doesn't have Administrator right to the PC, it is best to install HEW in the Root directory, instead of Program File directly.

- **Review settings to verify that they are correct**
- **Click "Next" to begin installation**



After the language and region have been selected, the installer will prompt you with the "Destination Folder selection" dialog.

The default folder is located at "Program Files\Renesas\HEW", but you can select another location.

If the installer detects a previous HEW installation for the same region selection, though, it won't prompt the "Destination Folder selection" dialog. Instead, it will automatically install the new HEW into the folder of the previous HEW.

When compiler and pure-debugger packages are being installed, it is recommended that you put them both into the same folder.

Also, if the user does not have administrator rights to the PC, it is best to install HEW in the Root directory instead of the Program File directory.

Clicking on "Next" will bring up a dialog box showing the result of the User selection process.

Be sure to verify that the destination folders of all components are correct before clicking the "Next" box to begin the HEW installation.

## AutoUpdate Utility

**1.** AutoUpdater can automatically upgrade the HEW on your PC to the level of the latest version

**2.** Allows periodic automatic updates and manual updates

**3.** Consult your local system administrator for your proxy details.

- It is not necessary to set the password if your PC is logged onto the local domain at Start.

**Activate AutoUpdate**

After the HEW installation has been completed, the dialog for the AutoUpdate utility (sometimes called the AutoUpdater) will appear. The form of the dialog screen will depend on the version of HEW installer being used.

The AutoUpdate utility is similar to other update functions. It can automatically upgrade the HEW on your PC to the level of the latest version via periodic connections to the Renesas website. This eliminates the need to hunt for updates on the Internet.

If you have an Internet connection, use the "Wizard" in the dialog to configure the AutoUpdate utility to get any new HEW data on a daily, weekly or monthly basis. Alternatively, you can select the option to initiate updates manually.

Next you will have to configure the proxy, if present.

It is wise to consult your local system administrator for your proxy details. Generally, this can be as simple as in keying in the proxy address. It may be something such as: proxy.xxx.yyy.com. The accessing port is usually "8080", or in some cases "80."

It is not necessary to set the password if your PC is logged onto the local domain at startup because the Windows environment will authenticate the access automatically. Otherwise, you will have to enter a username and password. You can input it manually at this stage or when prompted to do so.

At a later time, you might want to manually activate the AutoUpdate utility or reconfigure it. You can do so via the Program menus or the the Window task bars.

During automatic or manual downloads updated via the Internet, Renesas maintains your privacy and obtains no data from your PC.

## Manual HEW Updates

### AutoUpdate Utility vs. Individual Updates:

- AutoUpdate utility checks for all the latest HEW patches
- Individual Updaters can be also selected, but **user must know HEW very well**

#### Four individual Updaters available:

- HEW Updater
- Cross-Tool/Compiler Updater
- Device Updater
- Target Updater



- Alternatively, HEW Updaters can be downloaded manually from the Renesas website by using the “Technical Support” menu in HEW.



**Update all system components at the same time.  
Partial updates are not recommended.**

The AutoUpdate utility checks for all the latest HEW patches. However, it is not necessary to use the AutoUpdate utility for updating all of HEW.

Instead you can download individual installation Updaters — self-executable packages — from the Renesas website. However, to avoid problems, you should not perform updates this way unless you have a good understanding of HEW components.

Four different types of individual Updater packages are available.

The HEW Updater performs GUI-related enhancements.

The Cross-Tool/Compiler Updater handles upgrades to the Compiler Package and related components.

The Device Updater performs updates of the Project Generator and related components.

Finally, the Target/Platform Updater is for updating Pure-Debugger or Emulator Platform components.

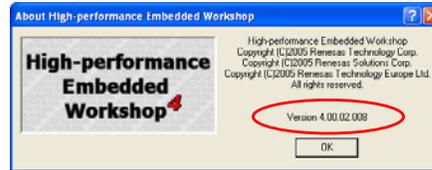
You can also manually update functions of the integrated development environment by using the “Check website for updates” menu. It’s in the “Technical Support” line of the HEW “Help” menu.

To ensure that the integrated development environment performs at an optimum level, Renesas strongly recommends that all of the latest components be downloaded so that the entire HEW system is totally brought up to date. Partial updates are not recommended because they might inadvertently introduce conflicts in the software.

## Software Version Information

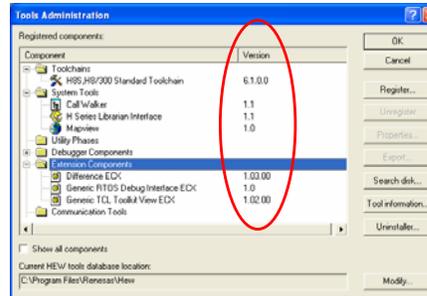
### What software is being used?

- **HEW System GUI Version**
  - Viewed in “About: Help”



- **Component Versions**

- Viewed in “Tools Administration...”
- Components are registered at the first execution of HEW after installation
- Components can also be registered and unregistered manually
- To generate a HTML list of all HEW components, click on the “Tool Information...” button
- To make changes to the HEW components, the workspace must be closed



The following installed components cannot be unregistered: the HEW builder, debugger, and flash support.

It is important to know which software versions are being used.

The version number of the GUI can be determined by selecting “Help” from the menu and then choosing “About”. The version number shown is the version of the GUI that is running.

The version numbers of the HEW components are shown in the Tool Administration dialog box. This dialog box can be displayed via the “Administration...” button in the “Welcome!” dialog box, or by selecting “Tools”, and then “Administration” from the menu.

It shows data on the many modularized components HEW contains. All of the components are registered during the first startup of HEW after installation and are tracked automatically thereafter.

You can view the details of registered components via the “Properties” button.

HEW allows you to manually register or un-register components. Only HEW-recognized components with .hrf files, can be registered. An unsuccessful registration is indicated by an exclamation-mark icon beside the component. Also, not all installed components can be un-registered. Exceptions are the HEW builder, debugger, and flash support.

A detailed list of HEW components can be created by clicking on the “Tool Information...” button. This list can show all component versions (type of toolchain, etc.), loaded tools, installation directories, operating system environment (shared system DLL information), and updates and patches applied. The list will also contain other information that can help technical support personnel remotely troubleshoot HEW in the event of a problem.

Remember that these settings for HEW components affect project and workspace operations. Therefore, the workspace must be closed in order to make changes in the list window.

## Types of HEW Components

**Toolchains** — Sets of external executable applications (compiler, assembler, linker) used in respective phases of project build operations

**Debuggers** — Components that support specific debugger functions (target platform, object reader, etc.)

**System Tools** — Applications (.EXE files) that support the toolchain and are launched from the “Tools” menu (external debugger, interactive graphical librarian, etc.)

**Utility Phases** — “Ready made” build phases that support specific additional build functions (analyze complexity of source code, count lines of source code, etc.) that are not toolchain specific.

**Extensions** — Components that provide key functions in certain areas of the HEW system.

**Communication Tools** — External tools that provide communication with HEW

**Help System Tools** — Tools that provide additional Help data for HEW

Now let's briefly review all the components in HEW, which generally fall into the following seven categories:

**Toolchains** are a set of external executable applications — compiler, assembler, linker — that are invoked during the respective phases of a project build operation.

**Debuggers** support specific debugger functions, such as the target platform and object reader.

**System Tools** are applications, such as .EXE files, that support the toolchain and are launched from the “Tools” menu. Examples include the external debugger, the interactive graphical librarian, and so on.

**Utility Phases** are “ready made” build phases that support additional build functions such as analyzing the complexity of the source code, counting lines of source code, and so on. These tools are not toolchain specific.

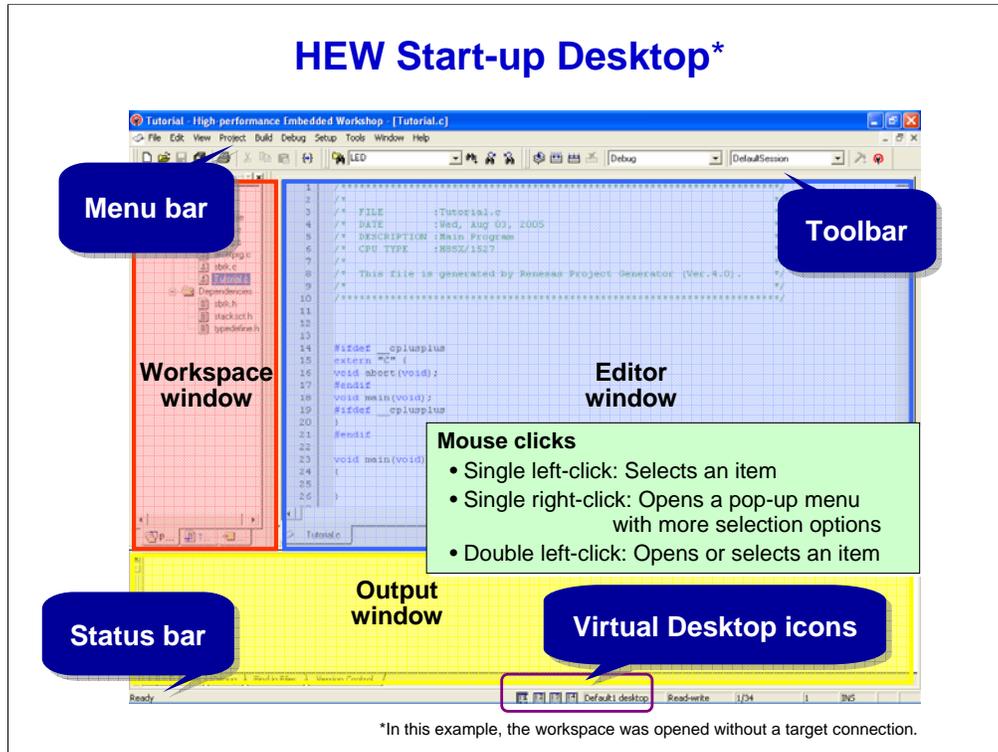
**Extensions** provide functionality in certain areas of the HEW system.

**Communication Tools** implement communication with HEW.

**Help System Tools** provide additional Help data for HEW.

The components in the first two categories — Toolchains and Debuggers — determine the most important aspects of the compiling and debugging capabilities the integrated software development environment provides. Normally, these key HEW components are installed separately.

## HEW Start-up Desktop\*



Here is the HEW start-up desktop with a workspace that has been opened without a connection to a target system. This is the default after creating a new workspace.

The basic elements that make up the HEW GUI environment are highlighted. They are the Menu bar, the Toolbar, and the Status-bar with Virtual-desktop icons.

You can also see three key GUI elements: the Workspace window, the Editor window, and the Output window. The Workspace window shows the project or projects that are in process. All of these windows are dockable. They can be moved, sized and arranged in various ways for convenience and efficiency.

For ease of use, the GUI has various familiar and intuitive operating features. When the mouse-pointer is placed over an item, you see tool-tip information at the Status bar. A single left-click selects an item, while a single right-click opens a pop-up menu with more selection options. A double left-click opens or selects an item.

## Question

**Which of these statements correctly describe HEW? Select all that apply and then click Done.**

The AutoUpdate utility must be configured to access the Renesas website, before it can be used automatically.

Manual upgrades/patches can be performed by downloading updates from the Renesas website.

Clicking on the Register button in the Tool Administration window will generate a list of registered modules within HEW.

The version number of each HEW component can be identified in the Tool Administration window.

Done

Here's a question for you about installation and administration aspects of HEW.

Correct. Before the AutoUpdate utility can be used automatically, it must be configured to access the Renesas website. You can install HEW upgrades and patches manually by downloading updates from the Renesas website. To generate a list of registered modules within HEW, click on the "Tool Information" button in the Tool Administration window. The Tool Administration window shows the version number of each HEW component.

Click the forward arrow to continue on to the next page.

[Incorrect. Before the AutoUpdate utility can be used automatically, it must be configured to access the Renesas website. You can install HEW upgrades and patches manually by downloading updates from the Renesas website. To generate a list of registered modules within HEW, click on the "Tool Information" button in the Tool Administration window. The Tool Administration window shows the version number of each HEW component.

## Course Summary

- **Installing HEW**
- **HEW Administrator**
- **Automatic and Manual Updates**
- **HEW Components**
- **Start-up Desktop**

**Download a free evaluation copy of HEW  
@ [www.renesas.com/hew](http://www.renesas.com/hew)**

This concludes our course on the installation and administration of the High-performance Embedded Workshop.

You saw the steps of the installation process and learned about the functions of the HEW administrator.

You also gained an understanding of how upgrades and enhancements can be performed automatically and manually and learned about the key components of HEW.

Finally, you saw the basic elements of the HEW start-up desktop that is the default after a workspace is created.

We now invite you to take the other courses in this series, which provide details and step-by-step explanations of HEW capabilities, features, and applications. We also encourage you to use the free VirtuaLab setups at this website to gain hands-on experience with popular MCUs and tools.

Additionally, we recommend that you obtain and experiment with a free evaluation copy of HEW, which is downloadable at: [www.renesas.com/hew](http://www.renesas.com/hew).

Thank you for your interest in Renesas microcontrollers and for taking advantage of the resources of the Renesas Interactive website. Please visit us often.