

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>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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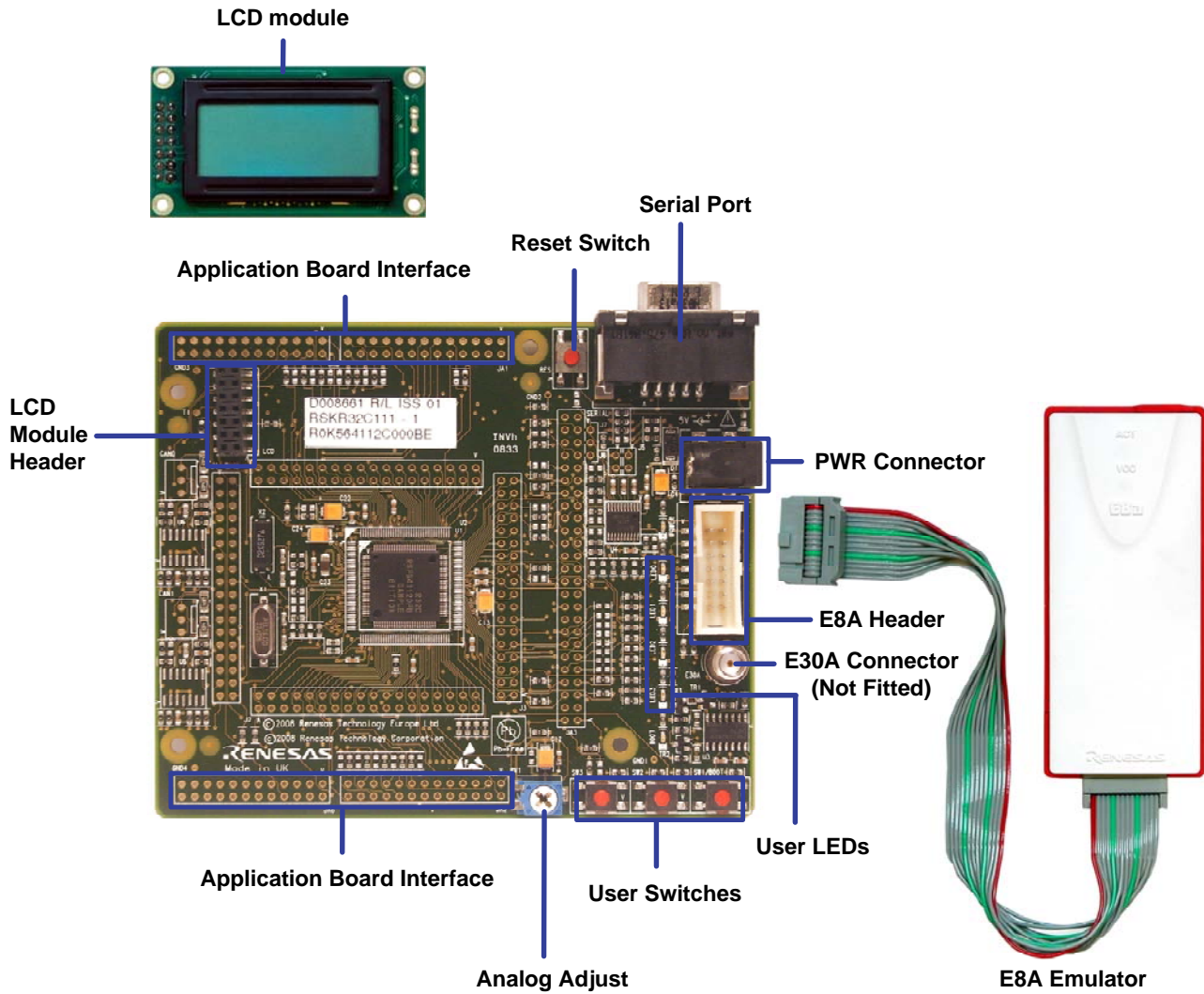
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# Quick Start

## Renesas Starter Kit for R32C/111

WS TOOL



## 1. Installation

**Do not connect the E8A module until the software support has been installed.**

1. Insert the CD into your computer's CD-ROM drive. The CD should automatically run the installation program. If the installer does not start, browse to the CD root folder and double click on 'setup.exe'.
2. The installer will ask you which language is to be used, please choose the appropriate one and click <OK>.
3. On the first screen of the installer proper, click <Next>.
4. The License Agreement will be shown, read and click <Yes>.
5. The next screen asks you to pick the world region – please select and click <Next>.
6. The destination folders are specified on the next screens. It is recommended to accept the default settings. Click <Next> to continue.
7. Click <Next> on all screens until the Installation process commences.
8. After the completion of successful installation, click <Finish>.
9. The Auto-update dialog box will be launched. Configure the Auto-update settings dialog to allow your installation to be checked for available updates.

## 2. Connection

10. Fit the LCD module to the connector marked 'LCD' on the RSK, so it lies above J4. Ensure all the pins of the connector are correctly inserted in the socket.
11. Connect the E8A module to the connector marked 'E8A' on the RSK using the ribbon cable.
12. Connect the E8A module to a spare USB port on your PC. The green 'ACT' LED on the E8A module will illuminate.
13. The 'Found New Hardware' Wizard will appear. Please follow the steps below to install the drivers. Note that, administrator privileges are required for a Windows™ 2000/XP machine.
14. Select option "No, not this time" in "Found New Hardware" Wizard dialog, and Click <Next> button.
15. Verify the "Recommended" option (Renesas E-Series USB Driver) is selected and click <Next>.
16. If using Windows XP, skip to step 18; otherwise click <Next>.
17. Click <Next> to install the driver.
18. Click <Finish> to close the wizard.

*Note: The Windows driver signing dialog may be displayed. Please accept the driver to continue.*

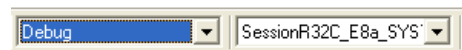
## 3. HEW Workspace

HEW integrates various tools such as compiler, assembler, debugger and editor into a common graphical user interface. To learn more on how to use HEW, open the HEW manual installed on your computer (Start Menu > All Programs > Renesas > High-performance Embedded Workshop > Manual Navigator).

19. Launch HEW from the Start Menu (Start Menu > All Programs > Renesas > High-performance Embedded Workshop).
20. In the "Welcome" dialog box: Verify "Create New Workspace" is selected. Click <OK>
21. In the "New Project Workspace" dialog box: Set the "CPU Family" to "R32C/100" and verify the "Tool chain" is set to "Renesas R32C/100 Standard". Select "RSKR32C111" from the left hand pane.
22. Enter a name for the workspace. The project name will be automatically completed with the Workspace name. You can change this name to 'Tutorial' if required. Click <OK>.
23. On the "RSKR32C111 – Step 1" window: Select "Tutorial" and click <Next>.
24. On the "RSKR32C111 – Step 2" window: Click <Finish>.
25. On the Project Generator Information window: Click <OK>.

The project that is created has two configurations. The 'Release' configuration compiles the project without any debugger support and can be used for the final release code version. The 'Debug' configuration can be used to debug the user application.

26. Select the 'Debug' build configuration in the left hand drop down list on the tool bar
27. Click on the 'Build' icon to compile, assemble and link the project.



## 4. Programming and Debug

28. Select the "SessionR32C\_E8a\_SYSTEM" session in the right hand drop down list on the tool bar.

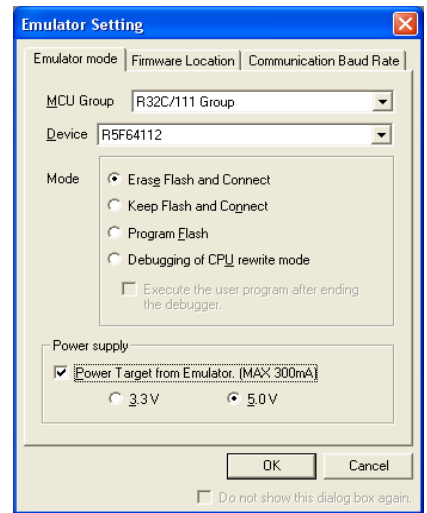


29. Click the <Connect> button on the debug toolbar.



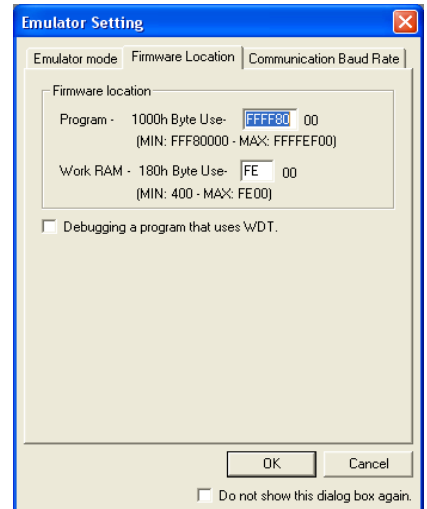
**Please note that the "Emulator Mode" wizard shown here will only appear the FIRST time you connect to the target within a project. On subsequent connections the "Emulator Setting" dialog will appear, please choose the same options to connect.**

30. The 'Emulator setting' dialog will appear. Select the MCU group as "R32C/111 Group" and device as "R5F64112".

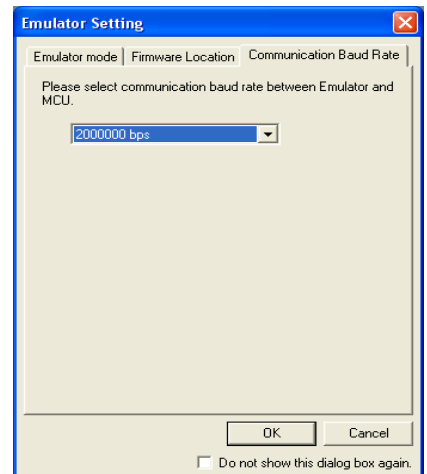


31. Please check the option "Erase Flash and Connect" Select the option "Power Target from Emulator" and select radio button "5.0V".

32. Please make sure under "Firmware location" tab that, for "Program" the memory location is FFFF8000h and that of "Work RAM" is FE00h. Please leave the option "Debugging a program that uses WDT" unchecked and click <OK>.



33. Choose communication baud rate "2000000bps" in 'Communication Baud Rate' tab and click <OK>.



The green 'Power' LED located on the RSK will illuminate.

If this isn't the first time you have used the E8A module with this RSK, please skip to step 38.

### First use of the E8A module

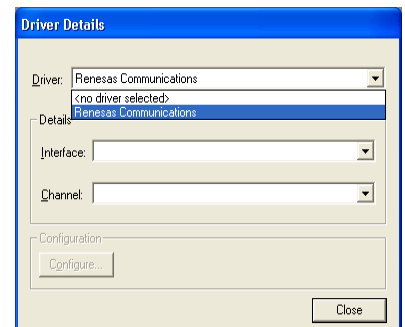
34. The 'Please choose driver' dialog will be shown. Click <OK>

35. The 'Driver Details' dialog will be shown, please select "Renesas Communications" as illustrated. The 'Interface' and 'Channel' items will be automatically populated. Click <Close>.

36. The Firmware setup dialog will be shown warning you not to disconnect the USB cable until the firmware download is complete. Click <OK>.

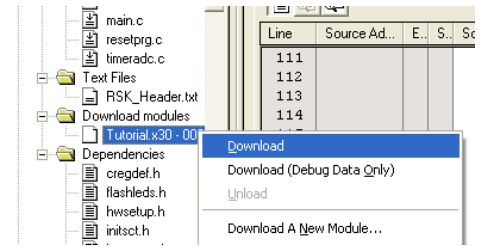
37. The firmware will be downloaded to the E8A module; this will take a few moments.

**Please do not disconnect the E8A from the host during download, doing so is likely to damage the E10A module.**



38. HEW will connect to the target and show "Connected" in the 'Output' view.

39. Right click on the download module listed in the left hand pane and select 'Download'. The code will not yet be downloaded to the microcontroller.



40. Click the 'Reset – Go' button.



41. The code will now be downloaded (this will take a moment or two) and will then run. You will see the LEDs flash on the board. Pressing any of the switches on the RSK will allow you to control the rate of flashing using the Analog Adjust control.

42. Click the 'Stop' button.



The code will stop and the source code opened at the current program counter.

## 5. Next Step

After you have completed this quick start procedure, please review the tutorial code and sample code that came with the kit. You can add projects to the current workspace by selecting (Project > Insert Project) from the main menu. The tutorials will help you understand the device and development process using Renesas Development Tools.

The Hardware manual supplied with this RSK is current at the time of publication. Please check for any updates to the device manual from the Renesas website at: [www.renesas.com/renesas\\_starter\\_kits](http://www.renesas.com/renesas_starter_kits)

## 6. Renesas R32C Compiler

The version of the compiler provided with this RSK is fully functional but time limited. You have 60 days to evaluate the full product before the linker will limit the object code to 64k bytes. Full licensed R32C/100 compiler versions are available from your Renesas supplier.

## 7. Support

Online technical support and information is available at: [www.renesas.com/renesas\\_starter\\_kits](http://www.renesas.com/renesas_starter_kits)

Technical Contact Details

America: [techsupport.rta@renesas.com](mailto:techsupport.rta@renesas.com)

Europe: [tools.support.eu@renesas.com](mailto:tools.support.eu@renesas.com)

Japan: [csc@renesas.com](mailto:csc@renesas.com)

**Note on Autoupdate:** The Autoupdater is configured to automatically add itself to the Startup folder in the Windows Start Menu and use the registry defaults for access to the web. After restarting the machine the Icon will appear in the System Tray next to the clock. To change the settings or access Autoupdate, simply right-click on the icon and use the menu that appears.

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