To our customers,

Old Company Name in Catalogs and Other Documents

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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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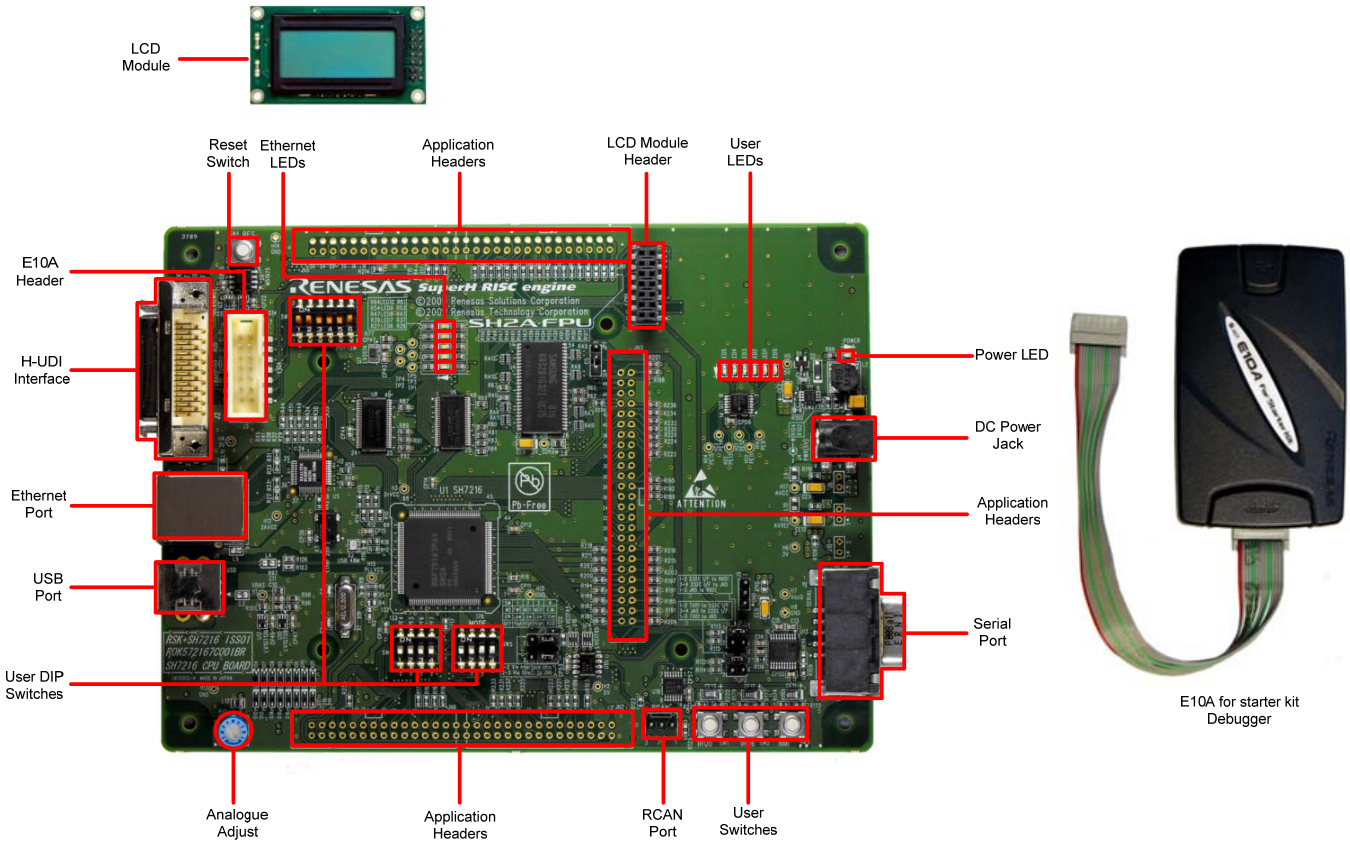
Quick Start

Renesas Starter Kit2+ for SH7216



1. Installation

Do not connect the E10A debugger 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. Windows™ Vista users may see "User Account Control" dialog box. If applicable, enter the administrator password and click <OK>.
3. The installer will ask you which language is to be used, please choose the appropriate one and click <OK>.
4. On the first screen of the installer proper, click <Next>.
5. The License Agreement will be shown, read and click <Yes>.
6. The next screen asks you to pick the world region – please select and click <Next>.
7. The destination folders are specified on the next screens. It is recommended to accept the default settings. Click <Next> to continue.
8. Click <Next> on all screens until the Installation process commences.
9. After the completion of successful installation, click <Finish>.

2. Connection

10. Fit the LCD module to the connector marked 'LCD1' on the RSK. Ensure all the pins of the connector are correctly inserted in the socket.
11. Connect the E10A debugger module to the connector marked 'E10A' on the RSK using the ribbon cable.
12. Connect the E10A debugger module to a spare USB port of your PC. The green 'ACT' LED on the E10A debugger module will illuminate.
13. Connect an external 5V power supply to the RSK+ board at 'PWR' connector, ensuring the polarity is correct (Centre positive).
14. 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/Vista machine.

Windows™ 2000/XP	Windows™ Vista
a. Select option 'No, not this time' in "Found New Hardware" Wizard dialog, and click <Next> button.	a. Select "Locate and install driver software (recommended)".
b. Verify the "Recommended" option is selected and click <Next>.	b. "User Account Control" dialog box will appear. If applicable, enter administrator password and click <OK>.
c. If using Windows™ XP, go to step 'e'; otherwise, click <Next>.	c. Driver installation will start. After couple of minutes "Windows security" dialog box will appear, select "install this driver software anyway".
d. Click <Next> to install the driver.	d. "Device driver software installed successfully" pop-up will appear in the windows toolbar and installation will complete.
e. Click <Finish> to close the wizard.	

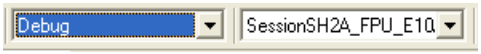
Note: The Windows driver signing dialog may be displayed. Please accept the driver to continue.

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)

15. Launch HEW from the Start Menu. (Start Menu > All Programs > Renesas > High-performance Embedded Workshop).
16. In the "Welcome" dialog box: Verify "Create New Workspace" is selected. Click <OK>
17. In the "New Project Workspace" dialog box: Set the "CPU Family" to "SuperH RISC engine", and verify the "Tool chain" is set to "Renesas SuperH Standard". Select "RSK2+SH7216" from the left hand pane.
18. 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>.
19. On the "RSK2+SH7216 – Step 1" window: Select "Tutorial" and click <Next>.
20. On the "RSK2+SH7216 – Step 2" window: Click <Finish>.
21. On the Project Generator Information window: Click <OK>.

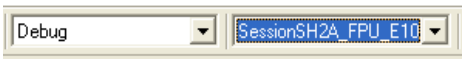
    The project that is created has two configurations. The 'Release' configuration compiles the project without any debugger support and can be used for the final release code version. The 'Debug' configuration can be used to debug the user application.
22. Select the 'Debug' build configuration in the left hand drop down list on the tool bar.



23. Click on the 'Build' icon to compile, assemble and link the project.

4. Programming and Debug

24. Ensure that 'SessionSH2A_FPU_E10A_USB_SYSTEM' session in the right hand drop down list on the tool bar is selected.



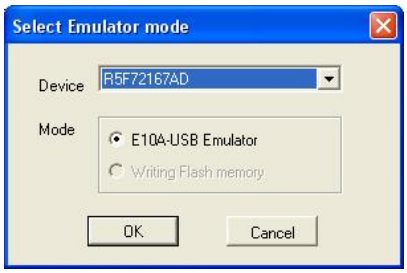
25. Ensure the DIP switches, SW5 to SW7 on the RSK2+ is set to the following configuration

SW5	1: OFF	2: OFF	3: ON	4: ON		
SW6	1: OFF	2: OFF	3: OFF	4: OFF		
SW7	1: ON	2: ON	3: OFF	4: OFF	5: OFF	6: ON

26. Click the <Connect> button on the 'debug' toolbar. 

27. In the "Select Emulator Mode" dialog choose "R5F72167AD" (as illustrated) and ensure the "E10A-USB Emulator" radio button is selected, click <OK>.

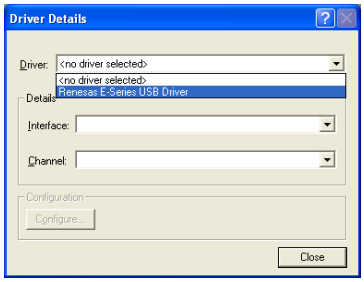
28. If this isn't the first time you have used the E10A module with this RSK+, please skip to step 32.



First use of the E10A module

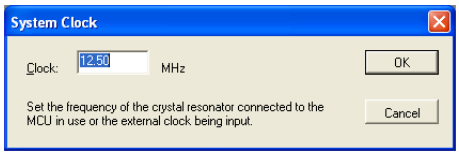
29. The 'Please choose driver' dialog will be shown. Click <OK>
30. The 'Driver Details' dialog will be shown, please select "Renesas E-Series USB Driver" as illustrated. The 'Interface' and 'Channel' items will be automatically populated. Click <Close>.
31. The Firmware setup dialog will be shown warning you not to disconnect the USB cable until the firmware download is complete. Click <OK>.
32. The firmware will be downloaded to the E10A module; this will take a few moments.

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



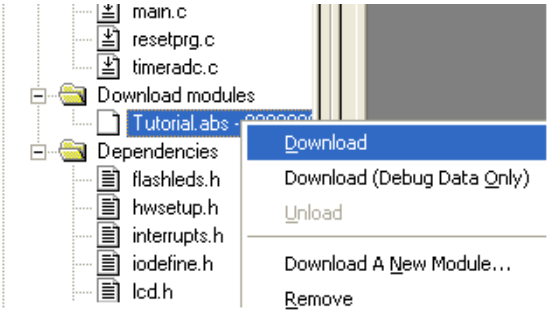
33. After a brief moment a dialog box will appear, asking you to reset the user system.
34. Press the reset (RES) switch on the board and press <Enter> (or click <OK>).

35. A 'System Clock' dialog box will appear asking you to enter the clock frequency. Ensure that the clock frequency is set to 12.50 and click <OK>.



36. An ID code dialog box will appear. Please ensure that, this is set to 'E10A' and click <OK>.

37. The flash memory write program is then downloaded to the microcontroller. The Output window in HEW will state 'Connected'
38. Right click on the download module listed in the left hand pane and select "Download". The code will be downloaded to the microcontroller.



39. Click the <Reset – Go> button. 

40. The code will run and you will see the LEDs flash on the board, the LCD will show "Renesas SH7216". Pressing any of the switches on the RSK will allow you to control the rate of flashing using the Analog Adjust control.

41. Click the <Stop> button. 

42. The code will stop and the source code will be 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 internet site at: www.renesas.com/renesas_starter_kits

6. Renesas SuperH 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 compiler will limit the code linker to 256k bytes. Full licensed SuperH compiler versions are available from your Renesas supplier.

7. Support

Online technical support and information is available at: www.renesas.com/renesas_starter_kits

Technical Contact Details

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Japan:	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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