Quick Start Renesas Starter Kit for RX63T



NOTE: This Quick Start Guide covers installation of the e²studio DVD.

1. Installation

Do not connect the E1 debugger module until the software support has been installed.

- 1. Insert the DVD into your computer's DVD-ROM drive. The DVD should automatically run the installation program. If the installer does not start, browse to the DVD root folder and double click on 'setup.exe'.
- 2. Windows[™] 7 /Vista users may see "User Account Control" dialog boxes. If applicable, enter the administrator password and click <OK>.
- 3. Follow the on screen instructions to install the RSK software.

Note: When prompted to specify a different location for installing any of the tools, **DO NOT** change the default location; click <Next>. The Windows Security driver signing dialog boxes may be displayed. Please accept the driver to continue.

2. Connection

- 4. Fit the LCD module to the connector marked 'LCD' on the RSK. Ensure all the pins of the connector are correctly inserted in the socket.
- 5. Connect the E1 debugger module to the connector marked 'E1' on the RSK using the ribbon cable.
- 6. Connect the E1 debugger module to a spare USB port of your PC. The green 'ACT' LED on the E1 debugger will flash.
- 7. 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[™] XP / Vista / 7 machine.

Windows[™] XP

- Select option 'No, not this time' in the "Found New Hardware" Wizard dialog box, and click the <Next> button.
- b. Verify the "Recommended" option is selected and click <Next>.
- c. Click <Finish> to close the wizard.

Windows[™] 7 / Vista

A "Device driver software installed successfully" popup will appear in the Windows[™] toolbar and installation will complete.

8. The green 'ACT' LED on the E1 debugger will illuminate.

3. Importing Sample Code into e²studio

e²studio integrates various tools such as compiler, assembler, debugger and editor into a common graphical user interface. Start e²studio from the start menu:

Start > All Programs > Renesas Electronics e2studio > Renesas e2studio

- 9. In the 'Select a workspace' folder that appears, browse a suitable location and folder name to save your new workspace. A Windows[™] administrator dialog box that may appear stating that administrator privileges are required, click <Yes> to continue.
- 10. In the Toolchain registry dialog select Renesas Toolchains and ensure that RXC v1.02.01.00 is selected. Click 'Register'. A dialog will appear "Selected Toolchains were successfully integrated with e2studio". Click OK.
- 11. In the e²studio welcome screen, click the 'Go to the workbench' arrow icon, on the far right.
- 12. Right click in the project explorer window, and select 'Import'.
- 13. In the import source type, select General > Existing Projects into Workspace, and click 'Next'.
- 14. Click the 'Browse' button, and locate the following root project directory: C:\Renesas\Workspace\RSK\RSKRX63T
- 15. Ensure the 'Copy projects into workspace' option is ticked and then click 'Finish'.

Programming and Debug 4.

📄 Main 🕸 Debugger 🛛 🕨 Startup 🧤 Source 🔲 <u>C</u>ommon Debug hardware: E1 Target Device: R5F563T6

- 16. Select a sample code by left clicking on it (it is recommended to start with the tutorial project), then click the arrow next to build button (hammer icon), and select 'HardwareDebug' from the drop down menu.
- 17. e²studio will now build the project. Once this is complete, debugging can be started by clicking the arrow next to debug button (bug icon), and selecting 'Debug Configurations'.
- 18. Click the arrow next to the entry 'Renesas GDB Hardware Debugging' to expand the list. Select the configuration entry which matches the current project.

19.	Click the 'Debugger' tab, then the 'Connection Settings' secondary tab. Review the settings listed in the screenshot
	below.

- GDB Settings Connection Settings Debug Tool Settings Clock EXTAL Main Clock Source 16.0000 Extal Frequency[MHz] ng Ir Yes Connection with Target Board JTag . Connection Type JTag Clock Frequency[MHz] 16.5 + + Fine Baud Rate[Mbps] 2.00 Power Ŧ Power Target From The Emulator (MAX 20 Yes Supply Voltage 3.3V CPU Operating Mode Register Setting Single Chip . Mode pin Single-chip mode Communication Mode Debug Mode Mode Execute The User Program After Ending Th No Flash FFFFFFFFFFFFFFFFFFFFFFFFFFFFF ID Code
- 20. If using an external power supply, ensure that the "Power Target from the Emulator" option is set to No. (See the RSKRX63T User Manual for power supply options and board settings.) The board is configured by default to run from emulator power.
- 21. Click the 'Debug' button to download the code to the target, and begin debugging.
- 22. A firewall warning may be displayed for 'e2-server-gdb.exe'. Check the 'Private networks, such as my home or work network' box and click 'Allow access'.
- 23. Windows[™] 7 /Vista users may see "User Account Control" dialog boxes. If applicable, enter the administrator password and click <OK>.
- 24. e²studio may ask you to change to the 'Renesas Debug Perspective', click 'Yes'.
- 25. Once the code has been downloaded, click the 'Resume' button to run the code up to the main function. Click 'Resume' again to run the target through the rest of the code.
- 26. 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.
- 27. Click the 'Suspend' button. The program will stop and the source code will be opened at the current program counter.



🔬 GHS Local C/C++ Launch

🍻 Renesas GDB Hardware Attach

Renesas GDB Hardware Debugging

HEW Debugging









5. Next Step

After you have completed this quick start procedure, please review the tutorial code and sample code that came with the kit. 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: <u>http://www.renesas.com/rskrx63t</u>

To learn more on how to use e^2 studio, open the e^2 studio help files from the menu bar by clicking Help > Help Contents while the program is open.

6. Renesas RX 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 128Kbytes. Full licensed RX compiler versions are available from your Renesas supplier.

7. User Manuals

User manuals can found in the Windows Start Menu. (Start Menu > All Programs > Renesas Electronics Tools > RSKRX63T e2studio > Manuals).

8. Support

Online technical support and information is available at: <u>http://www.renesas.com/rskrx63t</u>

Technical Contact Details

America: <u>techsupport.america@renesas.com</u>

Europe: <u>http://www.renesas.eu/ibg-kitsupport</u>

Japan: <u>csc@renesas.com</u>

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.

© 2013 Renesas Electronics Europe Limited. All rights reserved

© 2013 Renesas Electronics Corporation. All rights reserved.

© 2013 Renesas Solutions Corp. All rights reserved.

Website: http://www.renesas.com