Quick Start
Renesas Starter Kit for RX210

LCD Module

Application Interfaces — Reset Switch — Serial Port

LCD Module Header

DC Power Jack
Power LED
E1 Header
User LEDs

Application Interfaces
Analogue Adjust
User Switches

E1 Debugger
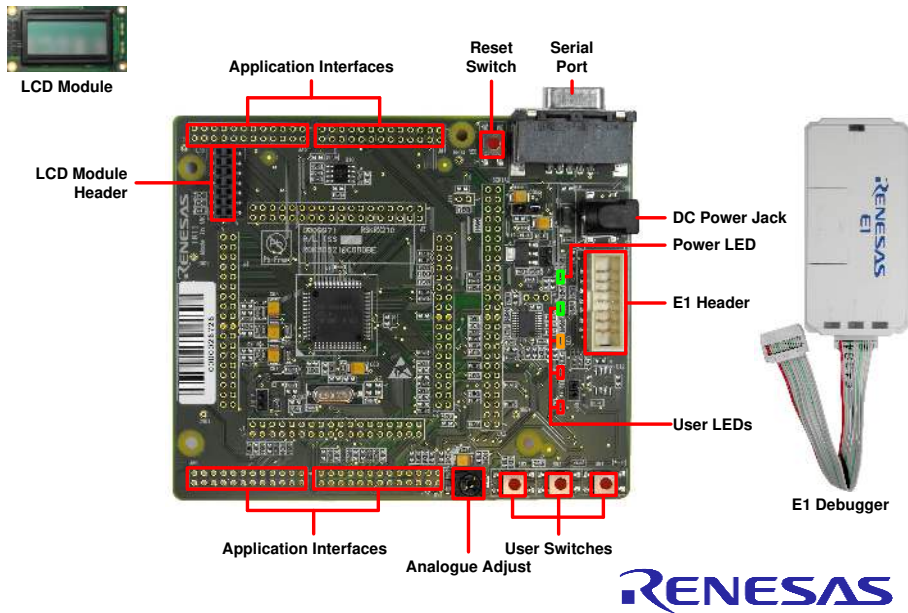
RENESAS

1. Installation

Do not connect the E1 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™ 7/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, 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 your region and click <Next>.

7. The destination folders are shown on the next screen. It is recommended to accept the default settings.

   Click <Next> to begin copying the program files into the destination folders.

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

8. After the completion of successful installation, click <Finish>.

2. Connection

9. 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.

10. Connect the E1 debugger module to the connector marked 'E1' on the RSK using the ribbon cable.

11. Connect the E1 debugger module to a spare USB port of your PC. The green 'ACT' LED on the E1 debugger will flash.

12. 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	Windows™ 7/Vista
a. Select option 'No, not this time' in "Found New Hardware" Wizard dialog, and click <Next> button.	a. "Device driver software installed successfully" pop-up will appear in the Windows toolbar and installation will complete.
b. Verify the "Recommended" option is selected and click <Next>.	
c. Click <Finish> to close the wizard.	

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

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

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)

14. Launch HEW from the Start Menu. (Start Menu > All Programs > Renesas > High-performance Embedded Workshop).

15. In the "Welcome" dialog box: Verify "Create New Workspace" is selected. Click <OK>

16. In the "New Project Workspace" dialog box: Set the "CPU Family" to "RX", and verify the "Tool chain" is set to "Renesas RX Standard". Select "RSKRX210" from the left hand pane.

17. 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>.

18. On the "RSKRX210 – Step 1" window: Select "Tutorial" and click <Next>.

19. On the "RSKRX210– Step 2" window: Click <Finish>.

20. 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.
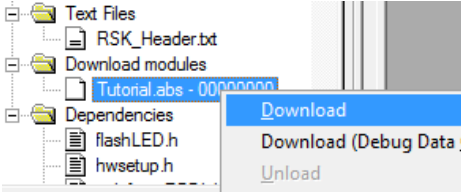

21. Select the 'Debug' build configuration in the left hand drop down list on the toolbar.

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

4. Programming and Debug

23. Ensure that 'SessionRX_E1_E20_SYSTEM' session in the right hand drop down list on the tool bar is selected.

    `Debug ▼`   `SessionRX_E1_E20_SY: ▼`

24. Click the <Connect> button on the 'Debug' toolbar.

25. Select the correct MCU Group type (RX210 Group as illustrated).

26. Select the correct device type (R5F52108 as illustrated).

27. Select "Debugging Mode".

28. Select "Power target from emulator" with 5.0V as the power supply and click the 'Startup and Communication tab. Check that the FINE Baud Rate is set to 2000000 bps. Also check that Mode Pin and Register Setting are set to 'Single-chip mode', and Endian is set to 'Little Endian'. Click <OK>.

29. In the next dialog box 'Configuration Properties' ensure that ''Single-chip mode" is set.

30. Click <OK>.
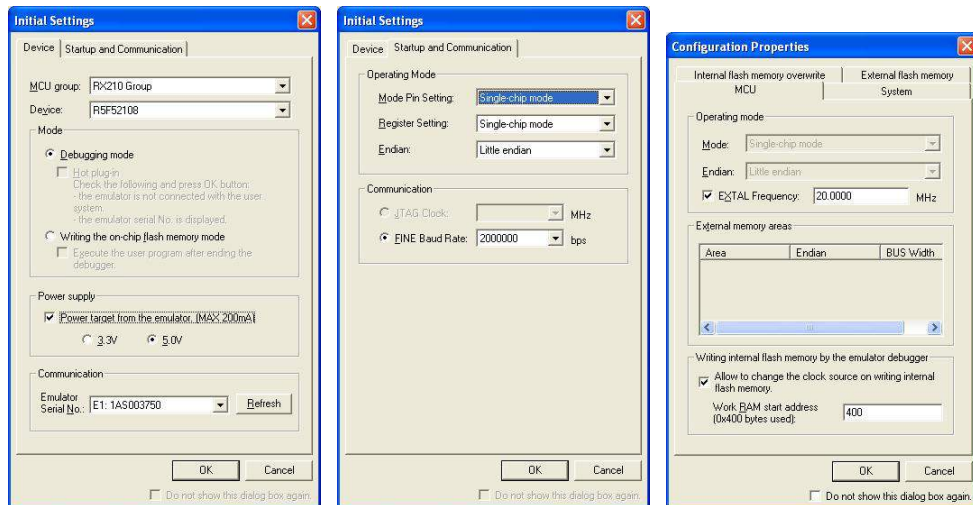
35. The flash memory write program is then downloaded to the microcontroller. The Output window in HEW will state 'Connected'.

36. Right click on the download module listed in the left hand pane and select "Download". The code will be downloaded to the microcontroller.

37. Click the <Reset – Go> button.
    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.

38. Click the <Stop> button.
    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/rskrx210

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. Support

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

Technical Contact Details

America: techsupport.america@renesas.com

Europe: software_support-eu@lm.renesas.com

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.

Website: www.renesas.com

First use of the E1 module

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

32. 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>.

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

34. The firmware will be downloaded to the E1 module; this will take a few moments.
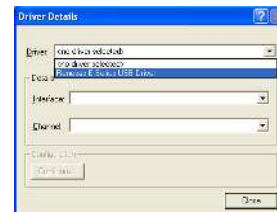
Please do not disconnect the E1 from the host during download, doing so is likely to damage the E1 module.