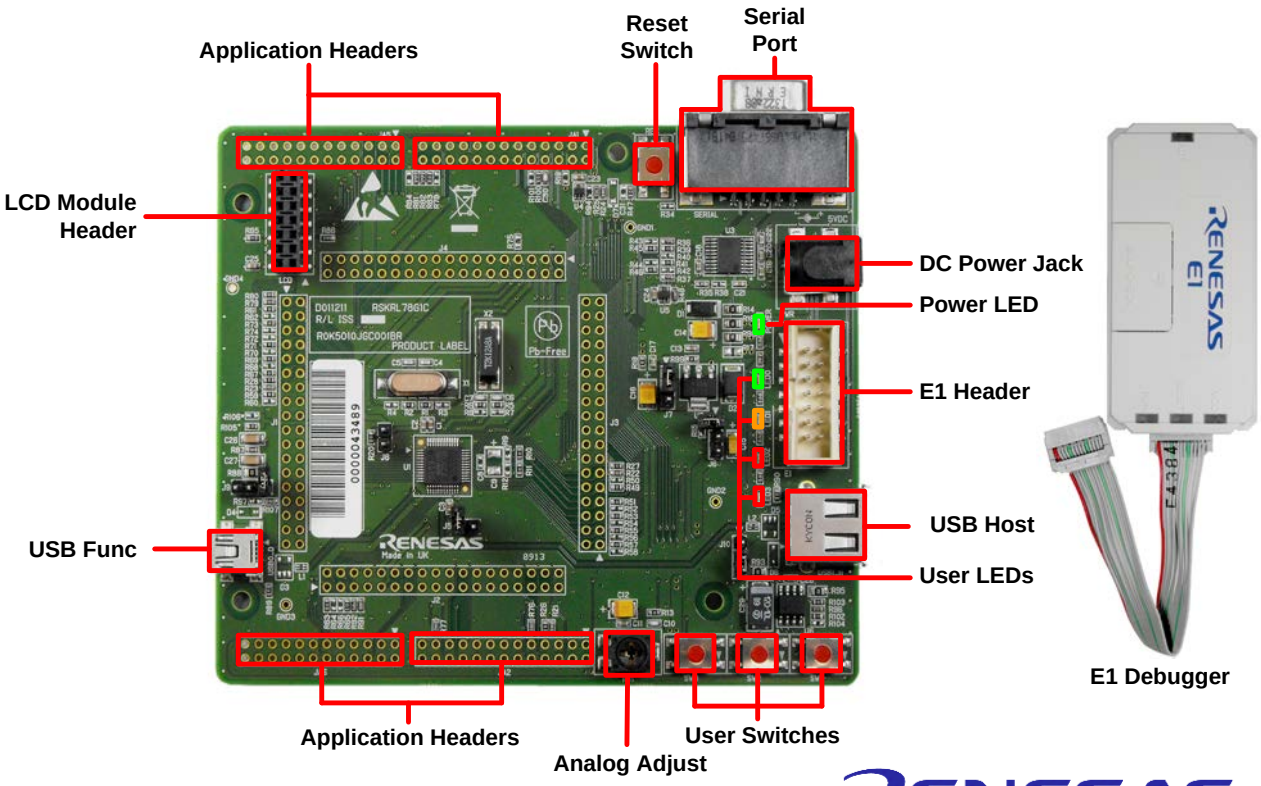
Quick Start Renesas Starter Kit for RL78/G1C



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 box. If applicable, enter the administrator password and click 'Yes'.
3. The installer welcome screen will open. Follow the on-screen instructions to install the RSK software. This process will take several minutes.

Note:

When prompted to specify a different location for installing any of the tools, it is recommended that default entries are accepted.

During installation of the GNURL78 tools an activation code may be required. The installer will provide instructions to register for a free activation code.

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

2. Connection

4. Fit the LCD module to the connector marked ‘LCD Module Header’ on the diagram. Ensure all the pins of the connector are correctly inserted in the socket.
5. Connect the E1 debugger module to the connector marked ‘E1 Header’ on the diagram 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. Please follow the steps below to install the drivers. Note that administrator privileges are required to install the drivers.

Windows™ XP

a. Select option ‘No, not this time’ in the “Found New Hardware” Wizard dialog, 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” pop-up 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

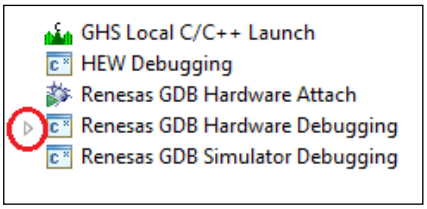
9. In the ‘Select a workspace’ folder that appears, browse a suitable location and folder name to save your new workspace. A Windows™ administrator dialog box that may appear stating that administrator privileges are required, click <Yes> to continue.
10. In the Toolchain registry dialog select Renesas Toolchains and ensure that ‘GNURL78 v13.01-ELF’ 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. Under ‘Import Source’ 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\RSKRL78G1C’
15. Ensure the ‘Copy projects into workspace’ option is ticked and then click ‘Finish’.

4. Programming and Debug

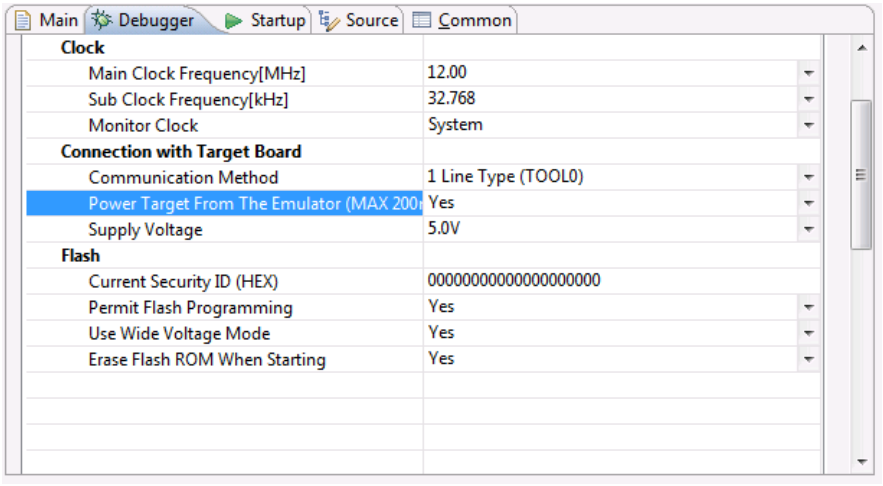
16. Left-click the Tutorial project to select it, then click the arrow next to the build button (hammer icon), and select ‘HardwareDebug’ from the drop down menu.

17. e²studio will now build the project. Once this is complete, debugging can be started by clicking the arrow next to the debug button (bug icon), and selecting ‘Debug Configurations…’.

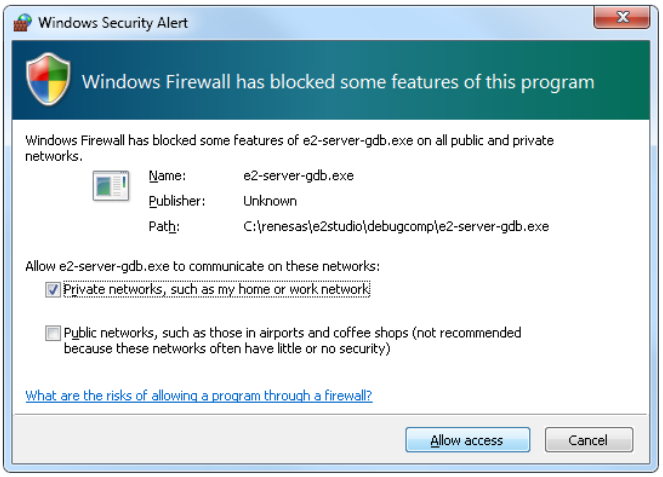
18. Click the arrow next to the entry ‘Renesas GDB Hardware Debugging’ to expand the list. Select the configuration entry ‘Tutorial’.



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



20. Click the ‘Debug’ button to download the code to the target, and begin debugging.
21. 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'.
22. A user account control dialog may be displayed. Enter the administrator password and click <Yes>.
23. e²studio will ask you to change to the ‘Renesas Debug Perspective’, click ‘Yes’.



24. 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.
25. 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.
26. Click the 'Suspend' button. The program 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 review the other samples using the sub-projects in the Project Explorer. The Tutorial Manual will help you understand the device and the 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: http://www.renesas.com/rskrl78g1c

6. Renesas RL78 Compiler

The version of the compiler provided with this RSK is fully functional with no time restrictions, but requires registration before it can be used.

7. User Manuals

User manuals can found in the Windows Start Menu. (Start Menu > All Programs > Renesas Electronics Tools > RSKRL78G1C e2studio > Manuals).

8. Support

Online technical support and information is available at: http://www.renesas.com/rskrl78g1c

Technical Contact Details

America: techsupport.america@renesas.com
Europe: http://www.renesas.eu/ibg-kitsupport
Japan: csc@renesas.com

Support for the GNURL78 Compiler is available from http://www.kpitgnutools.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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