Quick Start
Renesas Starter Kit for RX63T(144 pin)

LCD Module

Application Interfaces

Reset Switch

Serial Port

LCD Module Header

CAN Header

LIN Header

MCU Configuration Mode

DC Power Jack

Power LED

E1 Header

User LEDs

USB Host

USB Function

Application Interfaces

Analog Adjust

User Switches

E1 Debugger

RENESAS
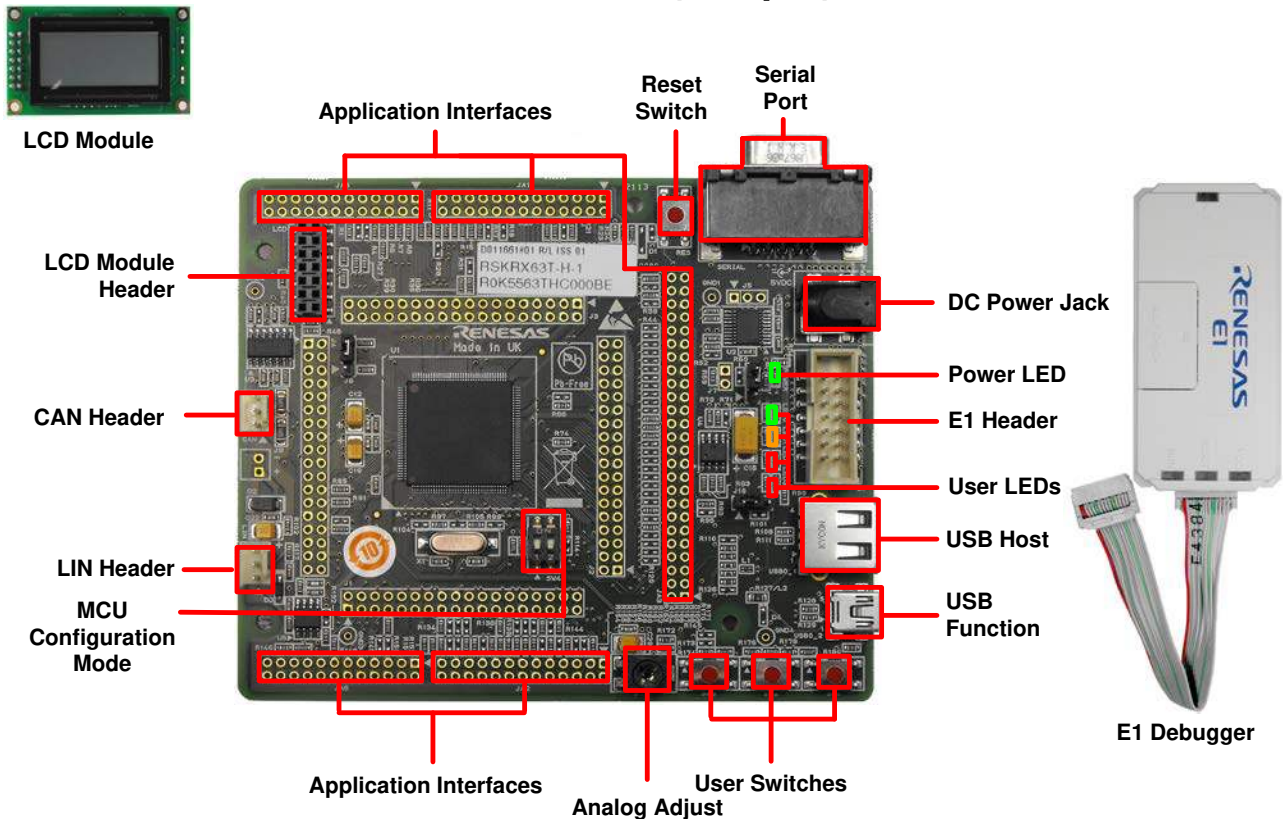
NOTE: This Quick Start Guide covers installation of the CubeSuite+ DVD.

1. Installation

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

In order to make the installer active, this RSK needs the Internet environment.

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 'CsPlusLauncher.exe'.

2. Windows™ 8 / 7 / Vista users may see a "User Account Control" dialog box. If applicable, enter the administrator password and click 'Yes'.

3. The pre-installer will first check that the CubeSuite+ prerequisites are present, and install any that are missing. Click 'Install' if prompted to. *You will be prompted to obtain a product activation code by logging onto the My Renesas website. Please follow the on screen instructions.*

4. The CubeSuite+ installer will launch. Click 'Next' to continue.

5. The End User License Agreement appears. Read the license and select 'Accept' if you wish to continue. Click 'Next'.

6. The 'Select Components' window appears. Review the components by selecting each component in turn. Click 'Next' to continue.

7. The License Key Registration window appears. If you have a license key available, click the 'License Manager' button, otherwise click 'Next' and go to Step 9.

8. Enter the license key in the opened 'License Manager' dialog box and click 'Add' to add the license key. Click 'Close' to return to the installer. Click 'Next'.

9. The 'Installation Settings Confirmation' window appears. Review the information and click 'Next' to begin installation.

10. The 'Installation Execution' window will appear showing the installation progress.

Note: The Windows™ Security dialog for installation of device software may be displayed. Select 'Install' to continue.

11. After the installation has completed, click 'Next'.

12. Uncheck 'Launch Update Manager', then click 'Finish' to exit the installer.

Note: It is recommended to run the CubeSuite+ Update Manager and install updates after completion of this guide.

2. Connection

13. 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.

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

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

16. The 'Found New Hardware' Wizard will appear. Please follow the steps below to install the drivers. Note that, administrator privileges are required to install the drivers.

| Windows™ XP	Windows™ 7 / Vista
a. Select option 'No, not this time' in the "Found New Hardware" Wizard dialog box, and click the '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'.	**Windows™ 8** An icon will appear in the Windows™ toolbar and installation will complete.
c. Click 'Finish' to close the wizard.	

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

3. CubeSuite+ Project

CubeSuite+ integrates various tools such as compiler, assembler, debugger and editor into a common graphical user interface. To learn more on how to use CubeSuite+, refer to the CubeSuite+ Tutorial manual from the menu bar (Help > Tutorial). Other CubeSuite+ manuals are available from the Windows™ 7, Vista and XP StartMenu (Start Menu > All Programs > Renesas Electronics CubeSuite+> Readme Documents). In case of Windows™ 8, Select Start, click detailed downward icon. All documents are under Apps by Name "Renesas Electronics CubeSuite+".

18. Launch CubeSuite+, from the Windows™ 7, Vista and XP Start Menu (Start Menu > All Programs > Renesas Electronics CubeSuite+ > CubeSuite+).
    In case of Windows™ 8, Select Start, click CubeSuite+ icon.

19. The 'One Point Advice' dialog box which provides useful tips will open. Click 'OK'.

20. The Start panel will appear. Select the 'RSKRX63T144_Tutorial' project under the 'Open Sample RSK Project' entry and click 'GO'.
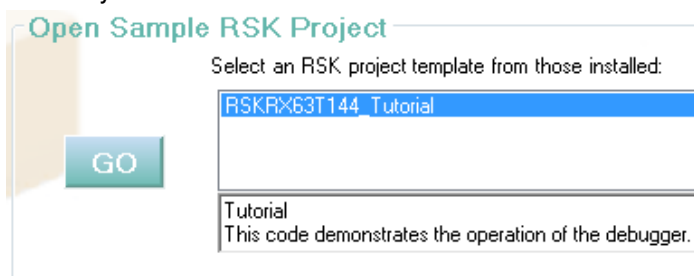
21. In the "Create Project" dialog box that follows, specify a name for the project. Leave the list of subprojects unselected.

22. Click "Create" to launch the main Tutorial project. If asked to create the project folder, click 'OK'.

4. Programming and Debug

23. Double-click on the Debug Tool to open the Property pane.

Project Tree		RX E1(Serial) Property	
RSKRX63T144 Tutorial (Project)		**Internal ROM/RAM**	
R5F563TEAxFB (Microcontroller)		Size of internal ROM[KBytes]	512
CC-RX (Build Tool)		Size of internal RAM[KBytes]	48
RX E1(Serial) (Debug Tool)		Size of DataFlash memory[KBytes]	32
Program Analyzer (Analyze Tool)		**Clock**	
File		Main clock source	EXTAL
C Source Files		Main clock frequency[MHz]	**12.0000**
dbsct.c		Allow changing of the clock source on writing internal flash memory	**Yes**
flashled.c		**Connection with Emulator**	
hwsetup.c		Emulator serial No.	E1: 0DS001099
id_code.c		**Connection with Target Board**	
intprg.c		Power target from the emulator.(MAX 200mA)	**Yes**
lcd.c		Supply voltage	**5.0V**
main.c		Communications method	FINE
resetprg.c		FINE baud rate[bps]	2000000
sbrk.c		**Flash**	
switch.c		Input Mode of ID code	Specify the ID code as a 32-digit hexadecimal
timeradc.c		ID code	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
vect.c		Work RAM start address	1000
Dependencies		Work RAM size[bytes]	1024
Text Files		**Operating Modes of CPU**	
		Mode pins setting	Single-chip mode
		Register setting	Single-chip mode
		Endian	Little-endian data
		External Flash	
		External flash definition file	[4]

24. Verify that the option to 'Power target from the emulator' is set to 'Yes'.

25. Build the project by clicking on the Build Project button.

26. Download the code to the microcontroller by clicking on the download button.

27. Click the 'Restart' button to reset the CPU and start program execution.

28. The user LEDs on the board will flash at regular intervals. Pressing any of the switches on the RSK, or after 200 flashes have elapsed, will display the string STATIC on the second line of the debug LCD. The second line will then be replaced with the string TESTTEST one character at a time; whilst allowing you to control the user LEDs' flashing rate using the potentiometer shaft.

29. Click the 'Stop' button.

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

To end the debug session, click the disconnect button.

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 or sample code from the Renesas internet site at: http://www.renesas.com/rskrx63t144

6. Renesas RX Compiler

The version of the compiler provided with this RSK is limited to 128kbytes of Code and Data. This restriction can be removed by purchasing a licensed copy of the tools.

7. User Manuals

User manuals can found in Windows™7, Vista and XP Start Menu. (Start Menu > All Programs > Renesas Electronics CubeSuite+ > Readme Documents > RSK > RSKRX63T144).

Windows™ 8. Select Start, click detailed downward icon. All documents are under Apps by Name "Renesas Electronics CubeSuite+".

8. Support

Online technical support and information is available at: http://www.renesas.com/rskrx63t144

Technical Contact Details

America: techsupport.america@renesas.com

Europe: http://www.renesas.eu/ibg-kitsupport

Japan: csc@renesas.com

Note on Update Manager: The Update Manager checks via the Internet for any updated resources available for each installed CubeSuite+ tool and downloads and installs them to simplify the update process. It is recommended to run the Update Manager and check for updates regularly.

Website: http://www.renesas.com