

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

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Renesas Electronics Corporation

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## Notice

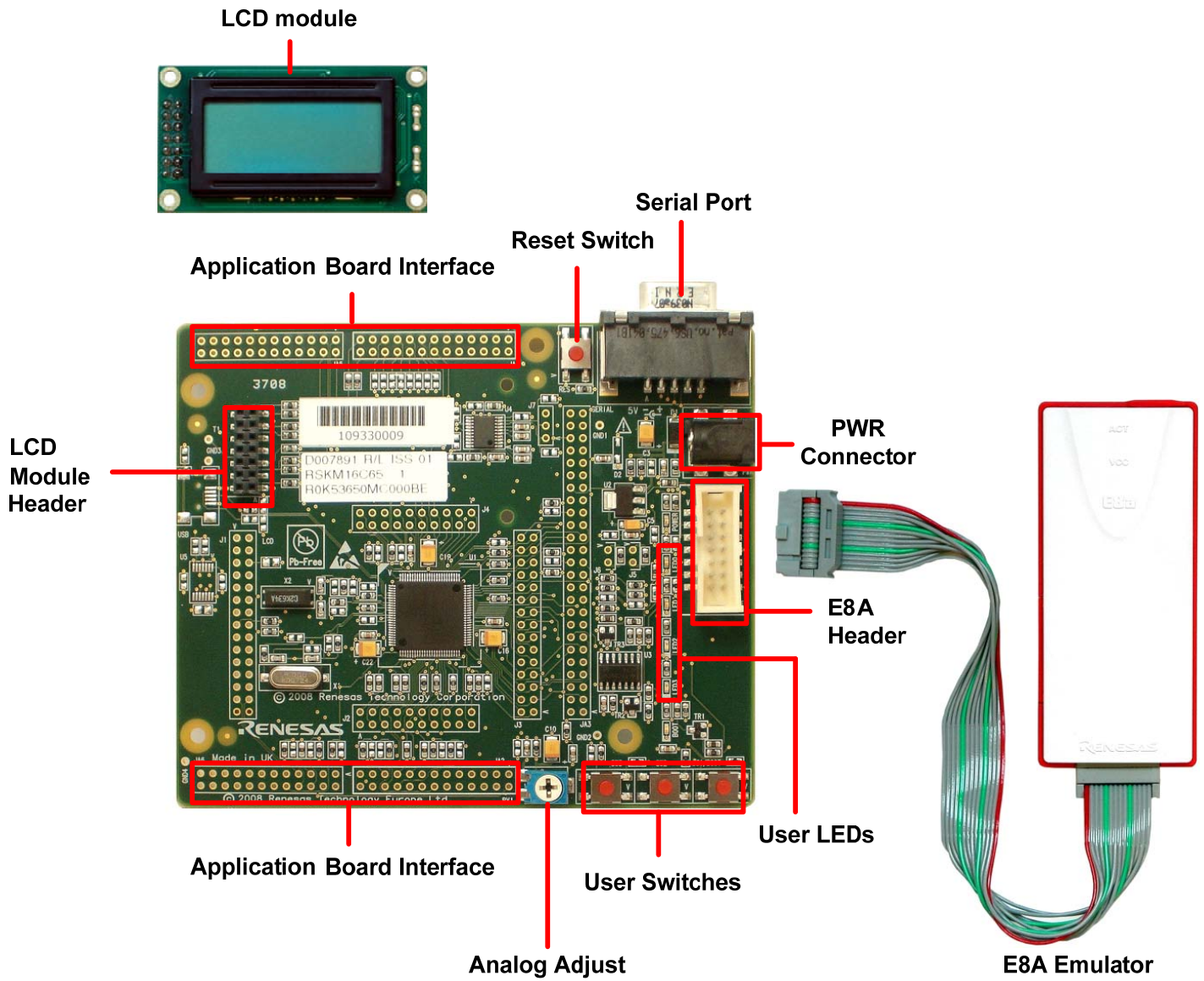
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# Quick Start

## Renesas Starter Kit for M16C65



## 1. Installation

Do not connect the E8A debugger hardware 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 'LCD' on the RSK, so it lies above U4. Ensure all the pins of the connector are correctly inserted in the socket.
11. Now connect the E8A Emulator to header marked 'E8A' on the RSK using the ribbon cable.
12. Connect the E8A debugger to a spare USB port of PC.
13. 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

- a. Select option 'No, not this time' in "Found New Hardware" Wizard dialog, and Click <Next> button.
- b. Verify the "Recommended" option is selected and click <Next>.
- c. If using Windows XP, go to step e; otherwise click <Next>.
- d. Click <Next> to install the driver.
- e. Click <Finish> to close the wizard.

### Windows Vista

- a. Select "Locate and install driver software (recommended)".
- b. "User Account Control" dialog box will appear. If applicable, enter administrator password and click <OK>.
- c. Driver installation will start. After couple of minutes "Windows security" dialog box will appear, select "install this driver software anyway".
- d. "Device driver software installed successfully" pop-up will appear in the windows toolbar and installation will complete.

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

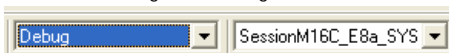
## 3. HEW Workspace

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).

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 "M16C", and verify the "Tool chain" is set to "Renesas M16C Standard". Select "RSKM16C65" 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 "RSKM16C65 – Step 1" window: Select "Tutorial" and click <Next>.
19. On the "RSKM16C65 – 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 can be used for the final release code version. The Debug configuration allows modifications to the configuration for debugging.

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

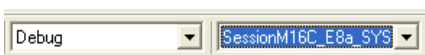


22. Click on the 'Build' icon to compile, assemble and link the project.



## 4. Programming and Debug

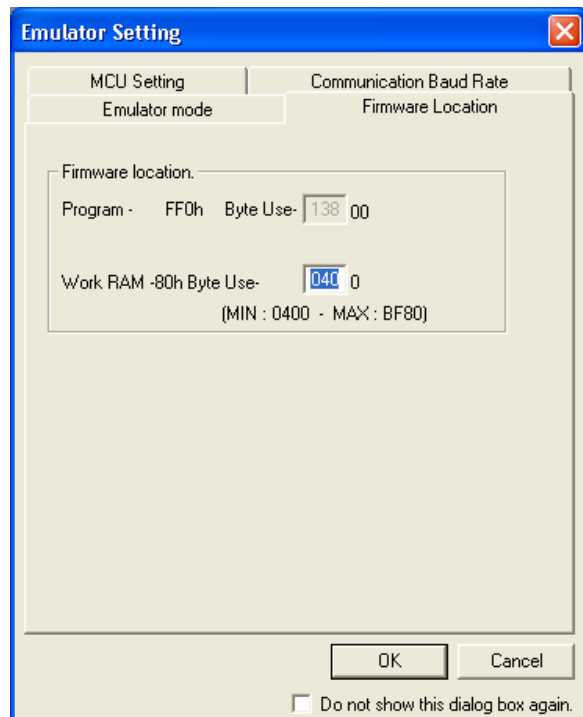
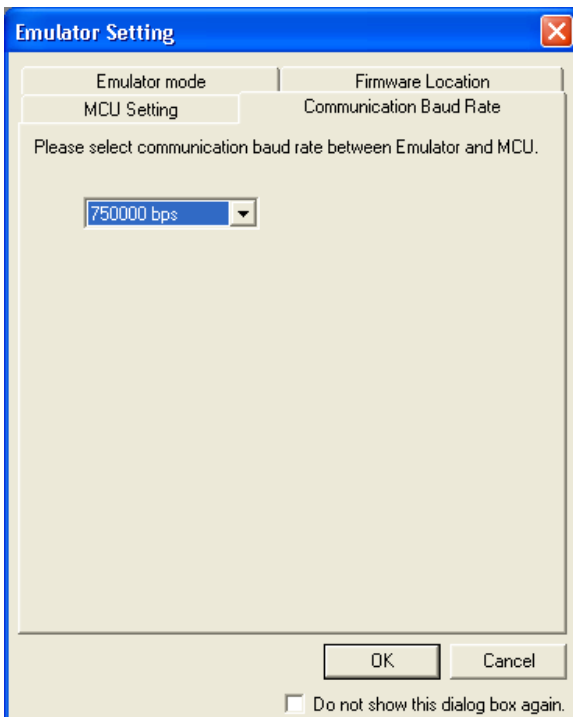
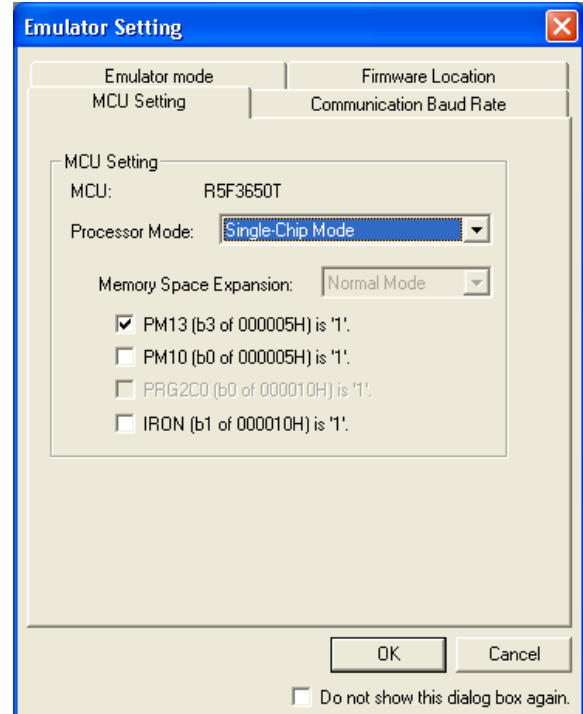
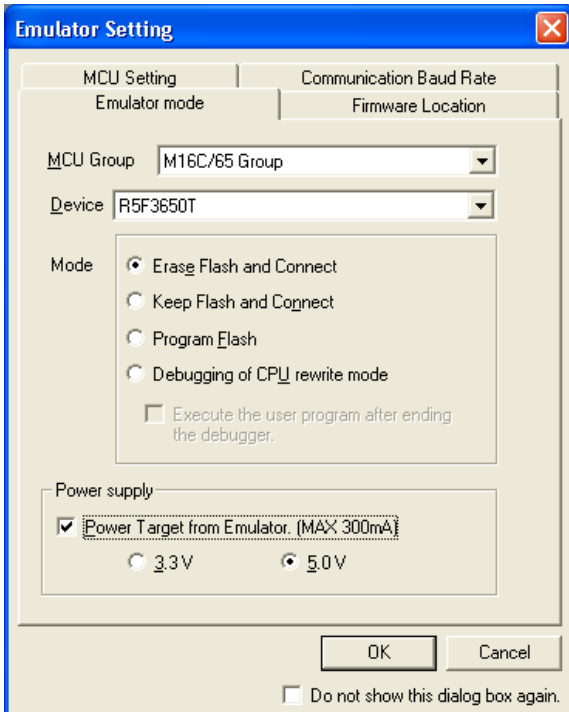
23. Ensure that 'SessionM16C\_E8a\_SYSTEM' session in the right hand drop down list on the tool bar is selected.



24. Click the <Connect> button on the debug toolbar



25. Select the correct device type (e.g. R5F3650T for RSKM16C65) and MCU group (M16C/65 Group for RSKM16C65) as shown in the following dialog box.
26. Select 'Erase Flash and Connect' option.
27. Check the option "Power Target from Emulator", Select power supply using radio button as '5.0V'. Make sure that the option "PM13 (b3 of 000005H) is '1'" is checked under 'MCU setting' tab, the baud rate is set to 750000bps, and the Firmware location Work RAM is set to 0400h and click <OK>.

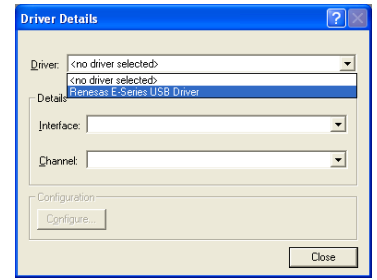


If this isn't the first time you have used the E8A module with this RSK, please skip to step 32.

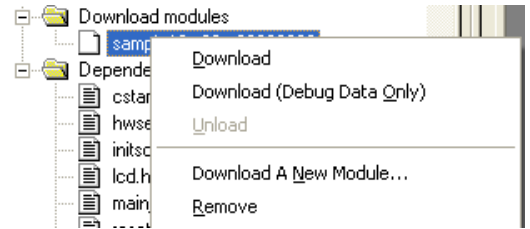
#### First use of the E8A module

28. The 'Please choose driver' dialog will be shown. Click <OK>
29. 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>.
30. The Firmware setup dialog will be shown warning you not to disconnect the USB cable until the firmware download is complete. Click <OK>.
31. The firmware will be downloaded to the E8A module; this will take a few moments.

**Please do not disconnect the E8A from the host during download, doing so is likely to damage the E8A module.**



32. Right click on the download module listed in the left hand pane and select 'Download'. The code will not yet be downloaded to the microcontroller.



33. Click the <Reset – Go> button.



The code will now be downloaded (this may take several seconds) and will then run. You will see the LED's flashing on the board.

34. 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/renesas\\_starter\\_kits](http://www.renesas.com/renesas_starter_kits)

## 6. Renesas M16C 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 64k bytes. Full licensed M16C compiler versions are available from your Renesas supplier.

## 7. Support

Online technical support and information is available at: [www.renesas.com/renesas\\_starter\\_kits](http://www.renesas.com/renesas_starter_kits)

#### Technical Contact Details

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Japan: [csc@renesas.com](mailto: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.