# Quick Start
## Renesas Evaluation Board Kit for RZ/A2M



MIPI Camera Header

CPU Board

User LED

Power Switch

User Switches

CPU Board Socket

Sub Board

Reset Switch

Power LED

Debugger Header

Display Output Board

USB Serial
(Micro USB)

USB Power
(Mini USB)

MIPI 8MP Camera Board

J-Link Lite Debugger

**RENESAS**
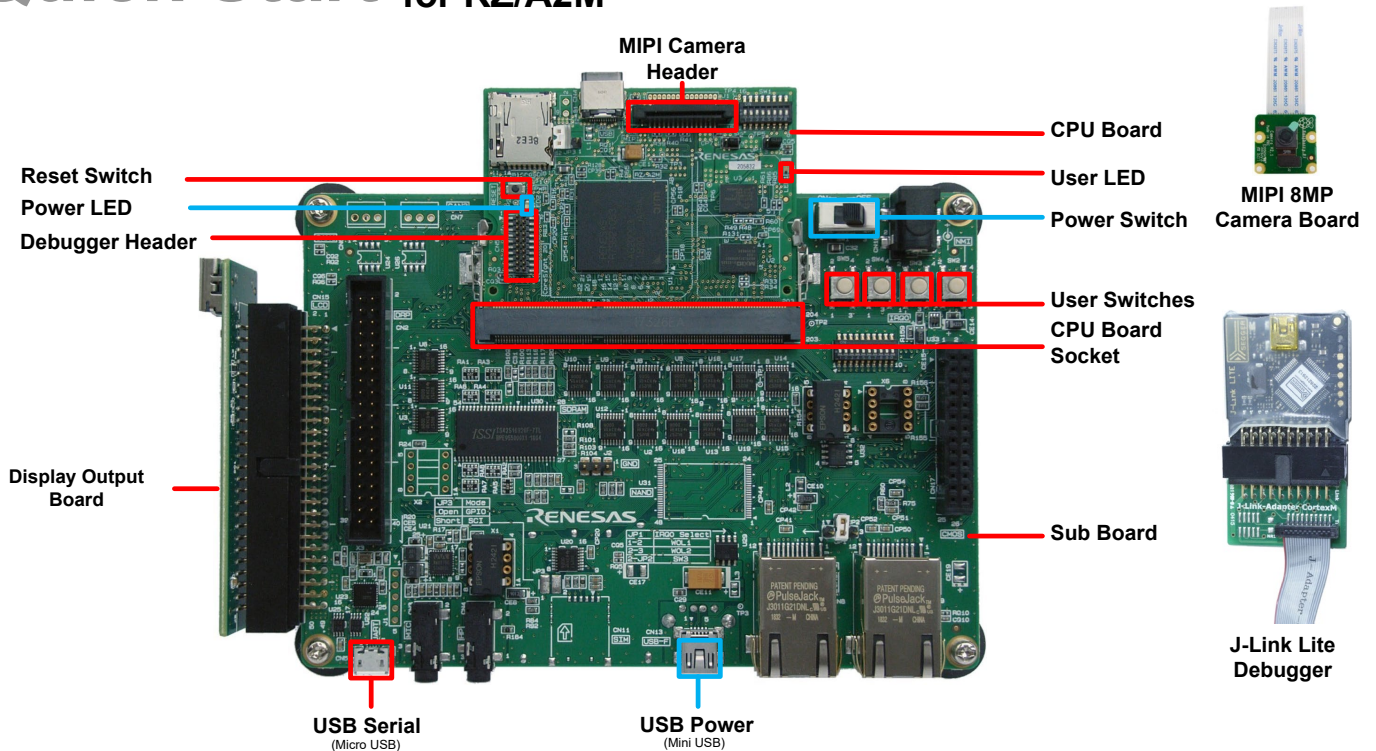
NOTE: This Quick Start Guide covers installation of the e$^2$ studio IDE (available from https://www.renesas.com/e2studio where version 7.3.0 or later is required). An active internet connection is required for downloading the installer.

## 1. Installation

**Do not connect the debugger module until the software support has been installed.**
**Internet access is required during the installation process.**

1.  Software for this Renesas Evaluation Board Kit is available for download from;

### https://www.renesas.com/rza2mevb

2.  After download the installer will run and display the Welcome dialog box. Follow the on-screen instructions to install the IDE software, selecting the RZ device family when prompted. This process will take several minutes.

*Note:*

Windows™ 10 / 8.1 / 8 / 7 users may see "User Account Control" dialog box. If applicable, enter the administrator password and click 'Yes'.

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

Users may see a Renesas trust certificate dialog box. If applicable select the checkbox to trust the certificate.

# 2.  Preparing the Evaluation Board Kit

3.  Connect the CPU board to the sub board using the 204-pin connector (note the key slot is to the left of centre). Orientate at approximately 45° from horizontal, inserting the edge connector fully into the socket before gently rotating the CPU board down flat until the clamps lock the board in place.

Actions for inserting CPU
Board in Sub Board CN1

**1**

CPU Board

**2**

CN1
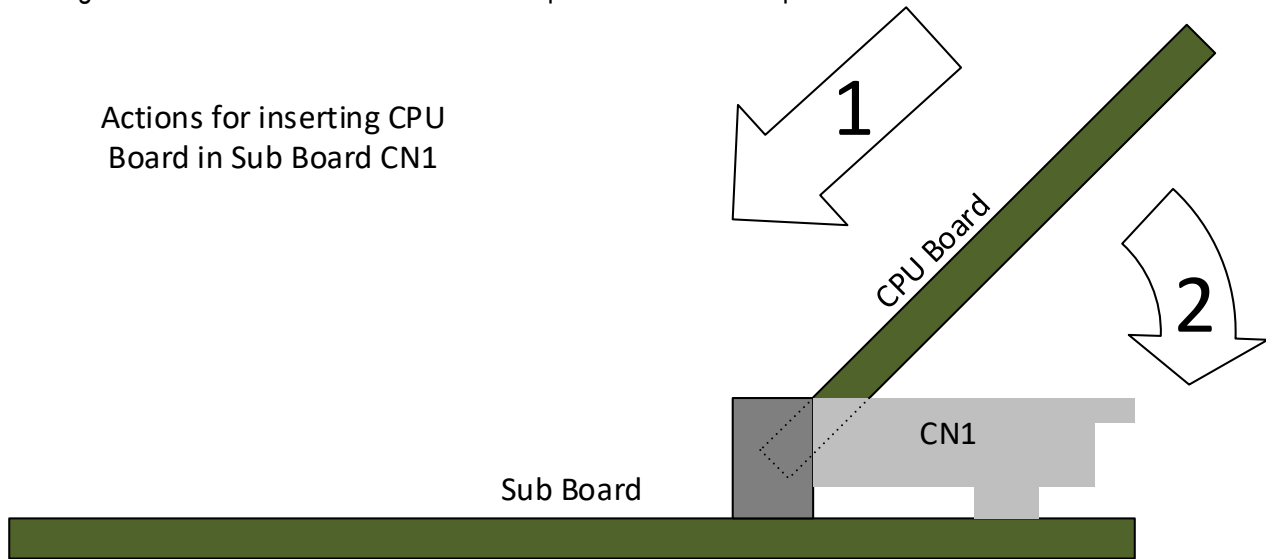
Sub Board

4.  Connect the Display Output Board to the display connector (CN15 LCD) on the sub board. The central key ensures correct orientation by aligning it with the slot in the socket.

5.  Connect the Display Output Board to an external monitor capable of 800x600 resolution using a monitor cable (not supplied).

6.  Connect the camera module to the camera connector (CN2 MIPI) on the CPU board.
    Open the connector by pulling up on the tags at either side, then insert the camera's ribbon cable. The correct orientation is with the contacts on the ribbon cable facing the CPU, and the blue insulated rectangle to the outside. To hold the cable firmly, push down on the top of the connector until it clips in place.

Pull tags to open

Push centre  to close
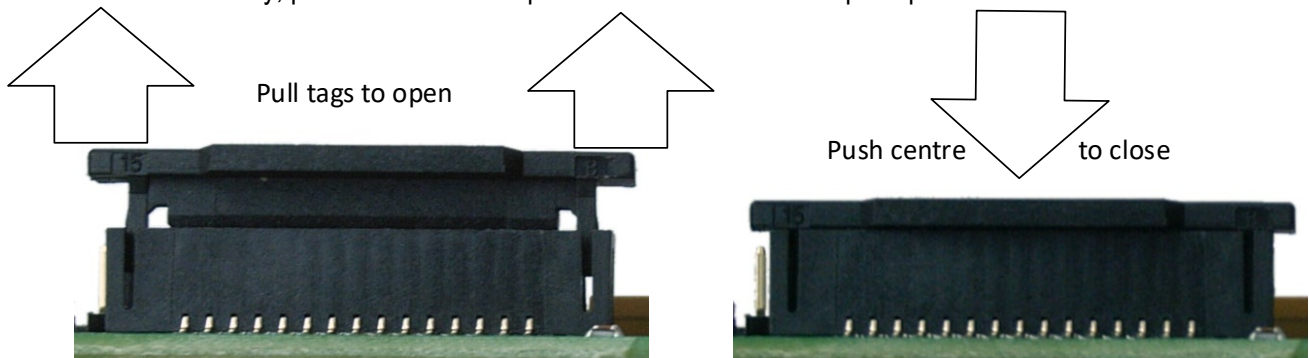
7.  Connect the J-Link LITE Segger debugger module to the debugger connector (CN5 Coresight 20) on the CPU board using the ribbon cable. Ensure that pin 1 (red strand) mates with the triangle mark ► on the PCB silk screen.

8.  Connect the debugger module to a USB port on the host PC. The green LED on the debugger will illuminate.

9.  The debugger drivers will now be installed. Note that, this may take up to a minute and administrator privileges will be required.

| Windows™ 7 | Windows™ 8.1 / 8 | Windows™ 10 |
|---|---|---|
| "Device driver software installed successfully" pop-up will appear in the Windows™ Taskbar and installation will complete. | An icon will appear in the Windows™ Taskbar and installation will complete. | A Windows™ taskbar buttons of "Device Setup" will appear in the Windows™ Taskbar and installation will complete. |

The Segger's J-Link LITE included in the evaluation kit is dedicated for the attached evaluation board.
This J-Link LITE cannot be used for any other boards and products.

10. Connect a USB cable between the micro USB Serial connector (CN5 UART) on the sub board and a USB port on the host PC. The board will enumerate in the Device Manager under Ports (COM & LPT) → Communications Port (COM*n*) as "RZA USB Serial Port". The micro USB Serial connector (CN5 UART) on the sub board may be used to provide a serial console for the sample applications.
    If you have not previously installed another Renesas kit with this virtual serial port driver, or if the board enumerates as an "Unknown device," then disconnect the board and install the "RZ/A2M Evaluation Board Kit inf File for USB to Serial Conversion IC" available from https://www.renesas.com/software/D6002724.html

    a. Note: Windows™ 10 / 8.1 / 8 / 7 users may see "User Account Control" dialog box. If applicable, enter the administrator password and click 'Yes'.

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

11. Use any serial terminal (e.g. HyperTerminal, Tera Term or PuTTY), select the appropriate COM port and set the baud-rate to 115200 bps, Data bits to 8, Stop bits to 1, Parity to None and Flow as None.

12. Connect a USB cable between the mini USB Power connector (CN13 USB-F) on the sub board and a USB port on the host PC.

13. Apply power by moving SW1 away from the power jack; the blue power LED will illuminate.

14. Power down the system by moving SW1 towards the power jack.

# 3. Preparing the e² studio development environment

Renesas e² studio integrates various tools such as compiler, assembler, debugger and editor into a common graphical user interface.

15. Start e2 studio:

    Windows™ 7: Start Menu > All Programs > Renesas Electronics e2studio > e2 studio

    Windows™ 8.1 & 8: From Apps View ⊕, Renesas Electronics e2studio > e2 studio

    Windows™ 10: Start Menu > All Apps > Renesas Electronics e2studio > e2 studio

16. In the 'Select a workspace' folder that appears, browse a suitable location and folder name to save your new workspace to. Click 'OK' to continue.

17. In the 'Toolchain Registry' dialog box select Renesas Toolchains and ensure that 'GCC ARM Embedded 6.3.1.20170620' is selected. Click 'Register'. A dialog box will appear "Selected Toolchains were successfully integrated with e2 studio". Click 'OK'.

18. If the 'Code Generator Registration' dialog box is shown, click 'OK' and follow the on-screen instructions to restart e² studio. This is required before the Code Generator can be used.

19. To learn more on how to use e² studio, open the program's help files by using Help > Help Contents.

# 4. Next Step

20. In the e² studio Welcome screen, click the 'Workbench' arrow icon, on the far right.
    You are ready to download and program an application from the RZ/A2M Simple Applications Package (R01AN4494EJ).

21. Select one of the available application notes, and follow the instructions in the readme files, ensuring the correct switch and jumper settings are made before applying power. Recommendations:
    ● If you have a display supporting 800x600 input, access the camera_display_sample (R01AN4477EJ).
    ● If you want to quickly check the kit's operation, access the blinky_osfree_sample (R01AN4321EJ).

# 5.  GNU ARM Compiler

The version of the compiler provided with this evaluation board kit is fully functional.

# 6.  User Manuals

The user manuals for this product are available at: https://www.renesas.com/rza2mevb

This includes, but not limited to:

- RZ/A2 Group User's Manual: Hardware (R01UH0746EJ)
- CPU Board User's Manual (R20UT4397EJ)
- Sub Board User's Manual (R20UT4398EJ)

# 7.  Support

Online technical support and information is available at: https://www.renesas.com/rza2mevb

**Technical Contact Details**

America:         techsupport.america@renesas.com
Europe:          https://www.renesas.com/eu/en/support/contact.html
Global & Japan: https://www.renesas.com/support/contact.html

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