Errata

RA2E1 Group

Evaluation Kit for RA2E1 Microcontroller Group
EK-RA2E1 v1
Errata

Renesas RA Family
RA2 Series

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Precautions

This Evaluation Kit is only intended for use in a laboratory environment under ambient temperature and humidity conditions. A safe separation distance should be used between this and any sensitive equipment. Its use outside the laboratory, classroom, study area, or similar such area invalidates conformity with the protection requirements of the Electromagnetic Compatibility Directive and could lead to prosecution.

The product generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off or on, you are encouraged to try to correct the interference by one or more of the following measures:

• Ensure attached cables do not lie across the equipment.

• Reorient the receiving antenna.

• Increase the distance between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that which the receiver is connected.

• Power down the equipment when not in use.

• Consult the dealer or an experienced radio/TV technician for help.

Note: It is recommended that wherever possible shielded interface cables are used.

The product is potentially susceptible to certain EMC phenomena. To mitigate against them it is recommended that the following measures be undertaken:

• The user is advised that mobile phones should not be used within 10 m of the product when in use.

• The user is advised to take ESD precautions when handling the equipment.

The Evaluation Kit does not represent an ideal reference design for an end product and does not fulfill the regulatory standards for an end product.

Renesas RA Family

EK-RA2E1 v1

Contents

Figures

1. Introduction

This Errata describes the known issues and exceptions to the functional specifications for the EK-RA2E1 v1, Evaluation Kit for the RA2E1 MCU Group. For additional information on the kit, see the EK-RA2E1 v1 user's manual.

2. Known Issues and Exceptions

2.1 MCU Unique ID Factory Programming Error

2.1.1 Description

The Flash memory register UIDRn is a read-only register that stores a 16-byte ID code (Unique ID, UID) for identifying the individual MCU. Due to a device factory programming error the MCU on affected boards does not report a correct UID.

For the same reason the AES function also does not work. Affected devices are marked 012AZ00 or 032AZ00.

2.1.2 Corrective Action

None. MCU has been correctly programmed at the factory on later builds of the board.

2.1.3 Kits Affected

Version : 1
Serial number : 214505 to 214604

2.2 MCU Unique ID Leading Zeros

2.2.1 Description

The Flash memory register UIDRn is a read-only register that stores a 16-byte ID code (Unique ID, UID) for identifying the individual MCU.

In certain cases the Quick Start Software programmed into the board may incorrectly display the device UID.

The UID is displayed in 'Kit Information' as a series of 4-byte values *bbbb-bbbb-bbbb-bbbb* as can be seen in the example below. If any single byte is of the form '0000nnnn', that is, has a leading zero, it will not be displayed.

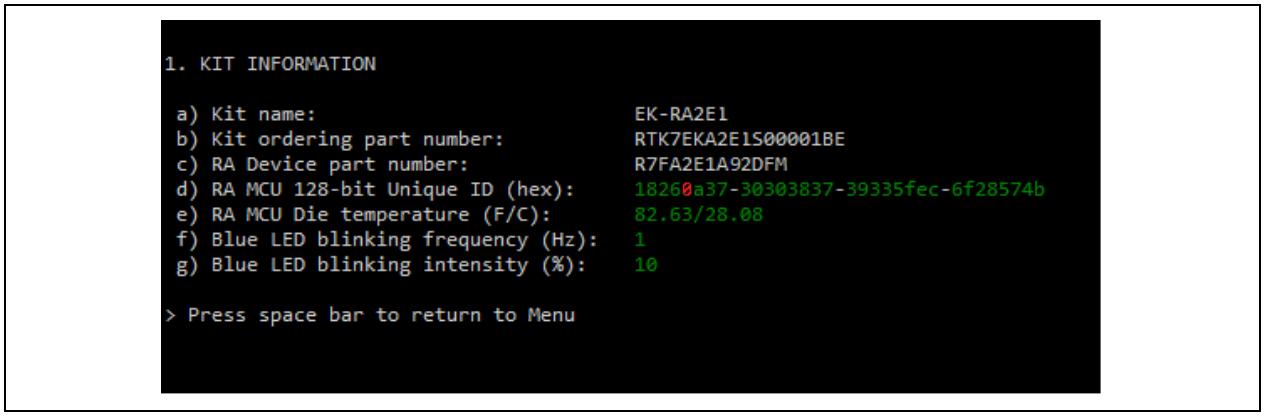

Figure 1. MCU UID Leading Zero Not Displayed

2.2.2 Corrective Action

The Quick Start Software programmed into later boards has been updated to show the correct device UID. The latest sample software can be downloaded from

https://github.com/renesas/ra-fsp-examples/tree/master/example_projects

2.2.3 Kits Affected

Version : 1
Serial number : 218097 to 218496

2.3 VCL Capacitor C18

2.3.1 Description

The VCL pin is used for stabilization of the MCU's internal operating voltage. The RA2E1 MCU hardware manual specifies that the VCL pin be connected to VSS using a 4.7 µF multilayer ceramic capacitor placed physically close to the pin. In earlier builds of the EK-RA2E1 board this capacitor (C18) has an incorrect value of 0.1 µF (100 nF).

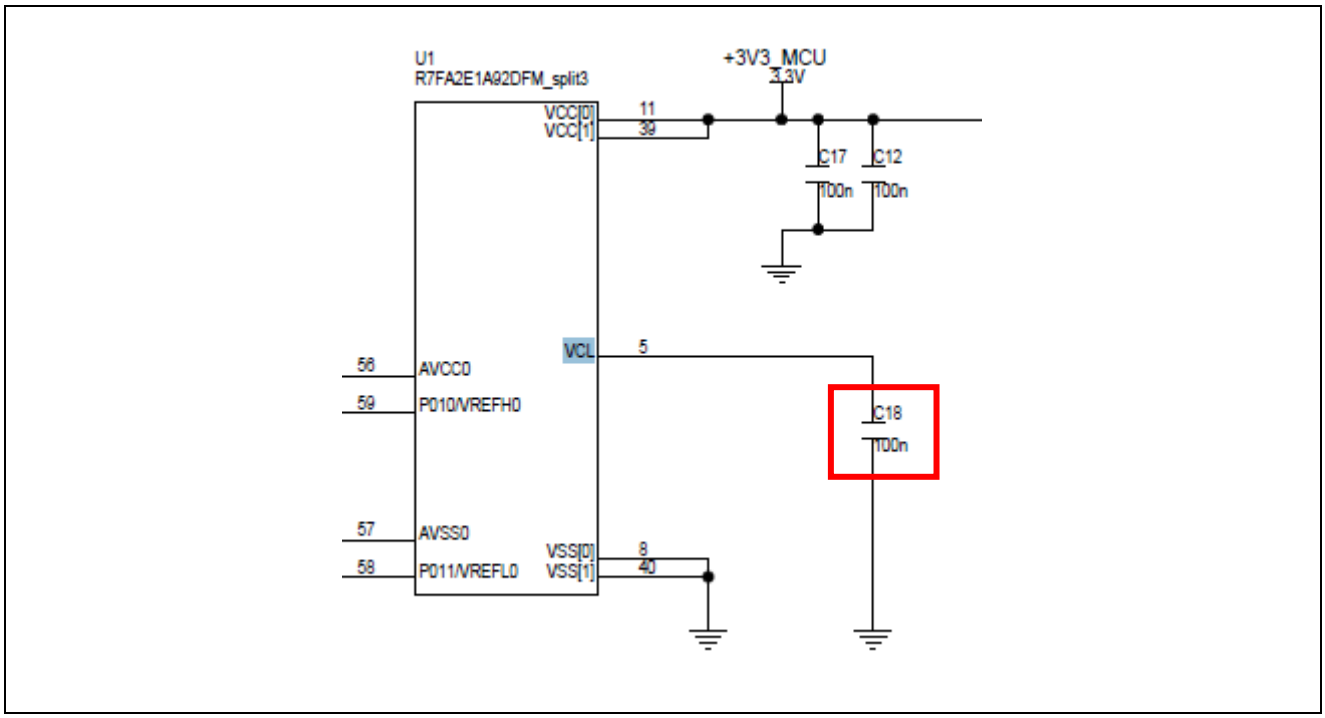

Figure 2. MCU VCL Pin Capacitor Incorrect Value

2.3.2 Corrective Action

It is recommended that you replace this capacitor with one with the correct value and type if mis-operation occurs when switching between low power and full power modes.

2.3.3 Kits Affected

Version : 1

Serial number : 214505 to 214604, 218097 to 218496, 220949 to 221348, 222178 to 222777

2.4 MCU Pin Header J2 Silkscreen

2.4.1 Description

The MCU Pin Header J2 has an incorrect label for pin 8. This is identified as P406 when it should be P408. The schematic is correct.

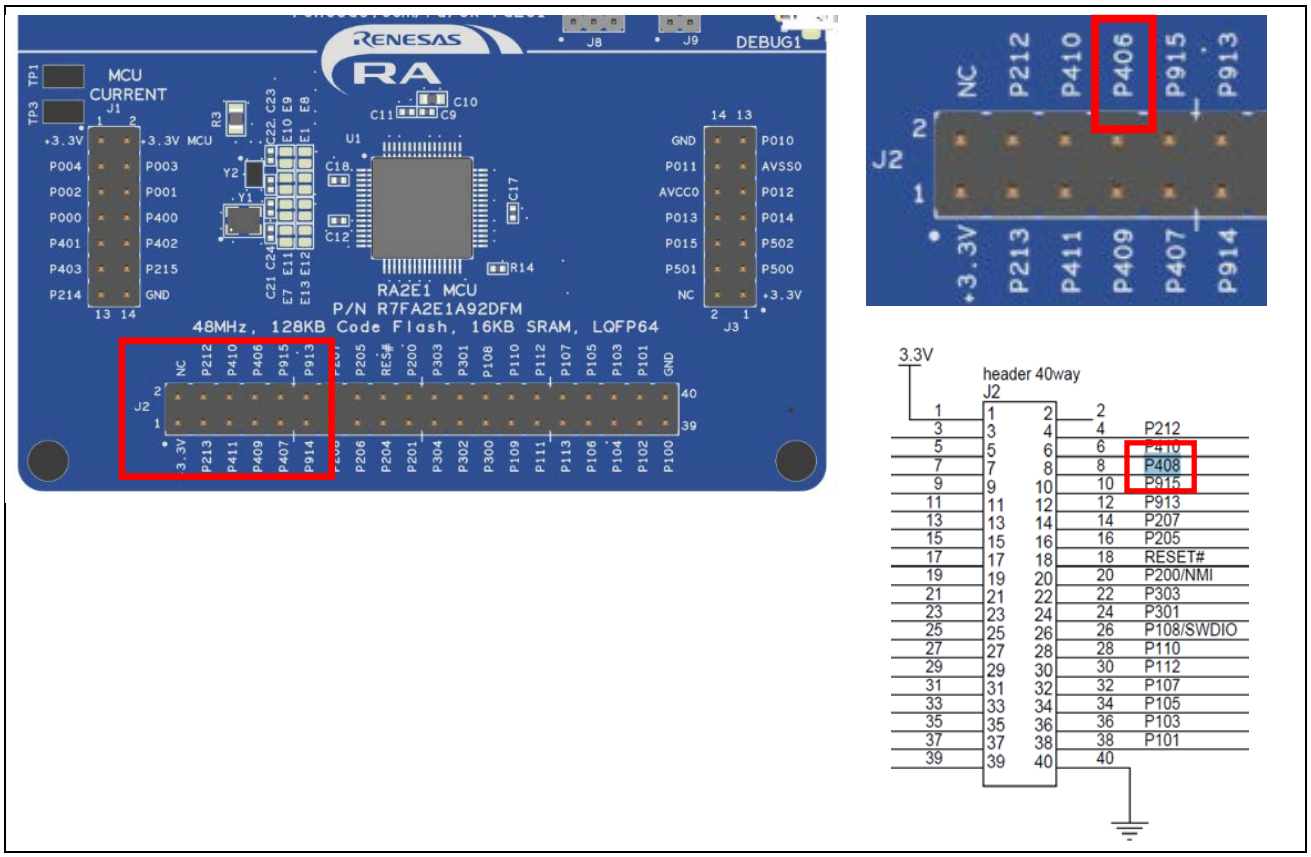

Figure 3. MCU Pin Header J2 Pin 8 Silkscreen Error

2.4.2 Corrective Action

None. The silkscreen has been corrected to show the correct pin identification on later builds of the board.

2.4.3 Kits Affected

Version : 1
Serial number : 214505 to 214604, 218097 to 218496, 220949 to 221348, 222178 to 222777

3. Appendix – Kit Identification

3.1 Kit Version

The kit version can be found on the EK-RA2E1 kit packaging and EK-RA2E1 board as described in this section. The kit version is the last digit in the orderable part number as shown in the second box in Figure 2. In the example below, the kit version number is “1” as shown in both Figure 2 and Figure 3.

Figure 4. Identification of the Kit Version Number on the EK-RA2E1 Kit Packaging

Figure 5. Identification of the Kit Version Number on the EK-RA2E1 Board

3.2 Serial Number

In addition to the kit version number, the kit serial number is used to uniquely identify a kit.

The serial number is located on the packaging label identified as S.LOT and on the bar code sticker on the back/bottom side of EK-RA2E1 board. In the example in Figure 4 and Figure 5, the serial number is “218279.”

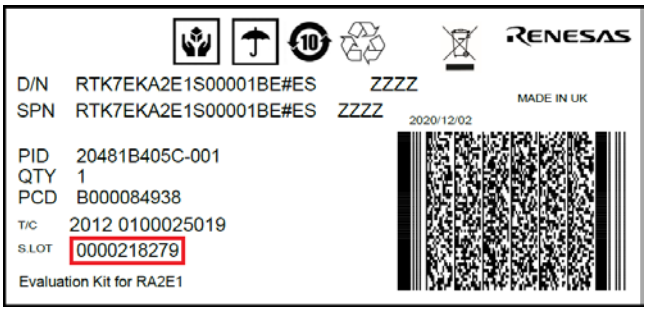

Figure 6. Identification of the Serial Number on the EK-RA2E1 Kit Packaging

Figure 7. Identification of the Serial Number on the EK-RA2E1 Board

4. Website and Support

Visit the following URLs to learn about the kit and the RA family of microcontrollers, download tools and documentation, and get support.

EK-RA2E1 Resources	renesas.com/ra/ek-ra2e1
RA Product Information	renesas.com/ra
RA Product Support Forum	renesas.com/ra/forum
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Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan.12.21	—	Initial release
2.00	Oct.04.21	6, 7	Inclusions for VCL Capacitor C18 and silkscreen P408.

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