

# RA8T2 Group

Evaluation Kit for RA8T2 Microcontroller Group  
EK-RA8T2 v1  
Errata

Renesas RA Family  
RA8 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-RA8T2 v1**

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## 1. Introduction

This Errata describes the known issues and exceptions to the functional specifications for the EK-RA8T2 v1, Evaluation Kit for the RA8T2 MCU Group. For additional information on the kit, see the EK-RA8T2 v1 User’s Manual.

## 2. Known Issues and Exceptions

### 2.1 Occasional Power Up Failure

#### 2.1.1 Description

Power to the board is supplied by a DA9279 Power Management IC (PMIC), U7. The data sheet for the DA9279 PMIC specifies that ENA should be enabled first followed by ENB and ENC in any order. However, the three enable pins are connected and so all three are enabled at the same time. The consequence of this is that very occasionally the board does not power up when power is applied.

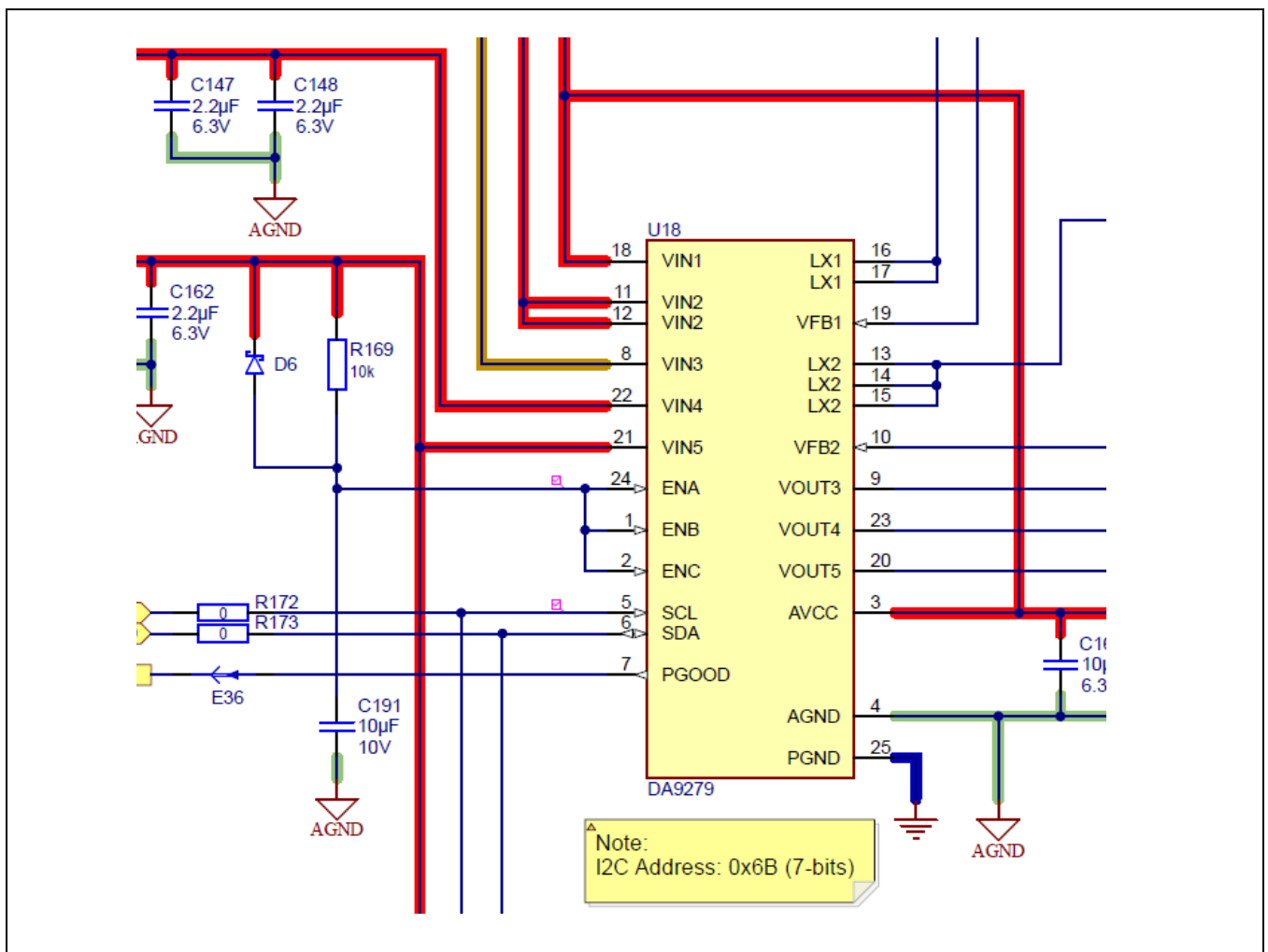


Figure 1. PMIC Schematic Connection of ENA, ENB and ENC

#### 2.1.2 Corrective Action

##### [Affected Kits]

There is no corrective action. The issue occurs very rarely and is usually remedied by power cycling the board.

##### [Future Kits]

This issue will be corrected in later versions of the kit.

#### 2.1.3 Kits Affected

Version:	1
Serial numbers:	305919-305988

## 2.2 Ethernet Connectors Missing Filter Capacitors

### 2.2.1 Description

There are no filter capacitors on the CT pins of the Ethernet connectors. This does not normally cause any problems but may affect performance if very long cables are used when connecting to J15 or J34.

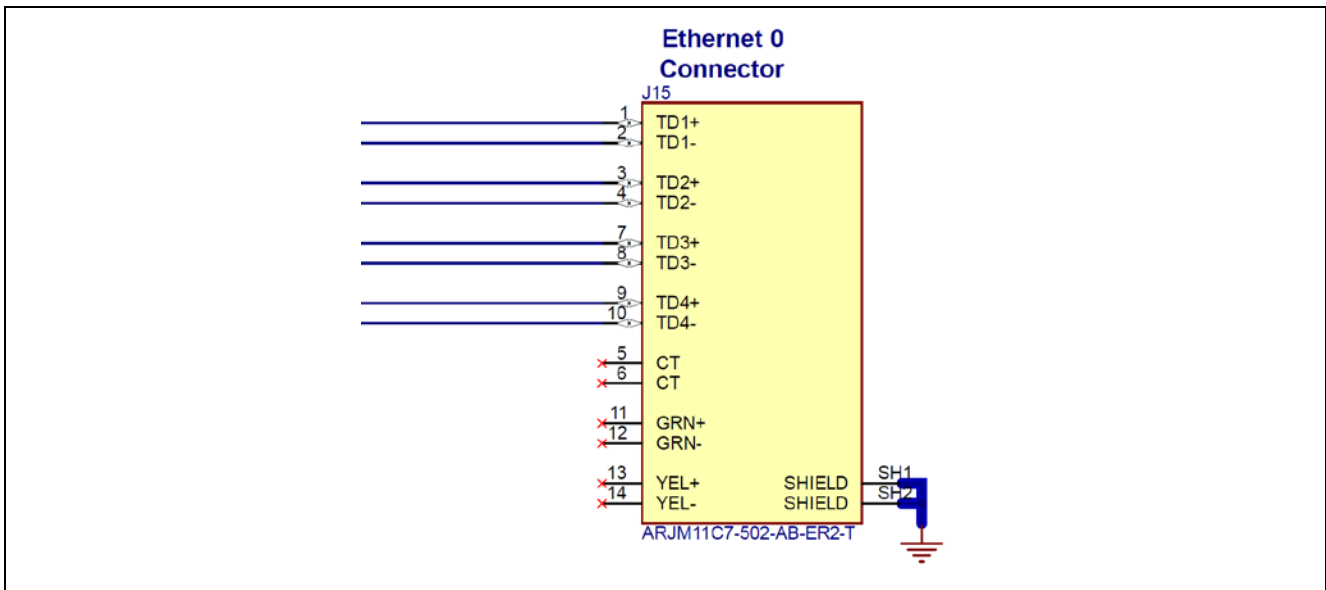


Figure 2. Channel 0 Ethernet Connector Schematic

### 2.2.2 Corrective Action

#### [Affected Kits]

To address this, solder 220 nF capacitors (for example GCM155R71C224KE02D) between each of the CT pins and GND on J15 and J34.

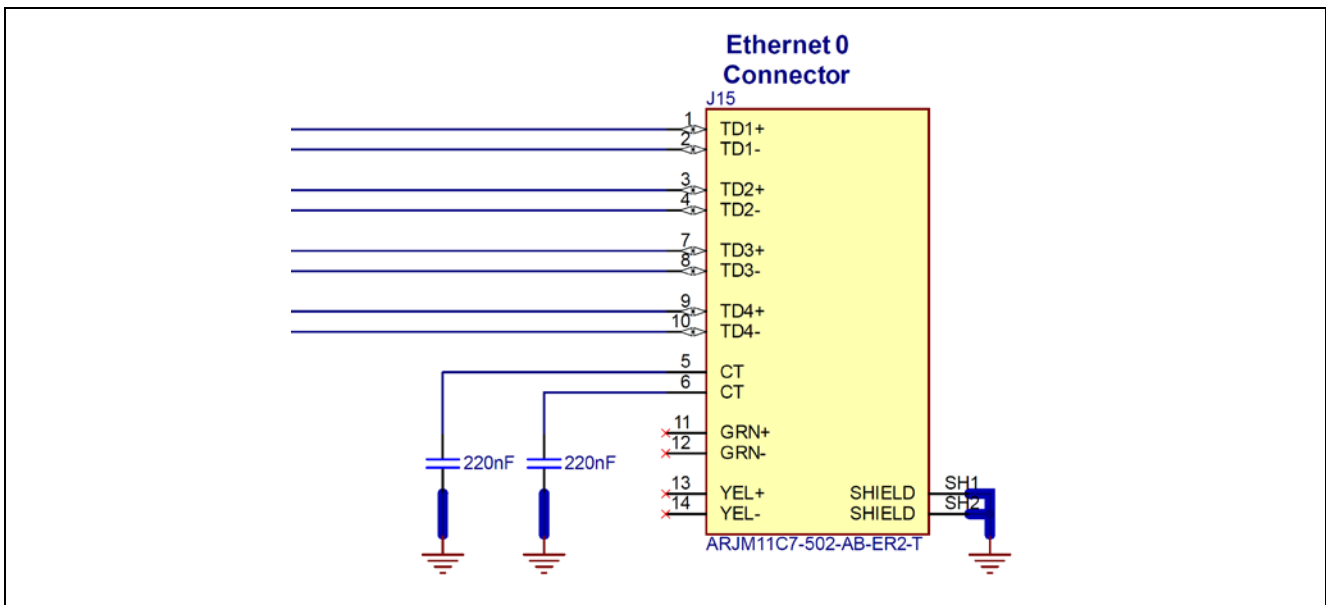


Figure 3. Adding 220 nF Capacitors to J15

#### [Future Kits]

This issue will be corrected in later versions of the kit.

### 2.2.3 Kits Affected

Version:	1
Serial numbers:	305919-305988

## 2.3 Ethernet PHY COMA\_MODE Pin

### 2.3.1 Description

The VSC8541XMV-02 Ethernet PHYs U8 and U12 fitted to the board incorporate an internal pull-up which, in conjunction with the external resistors RA1F and RA21F, prevent the COMA\_MODE signal meeting the required levels to enable and disable the PHY.

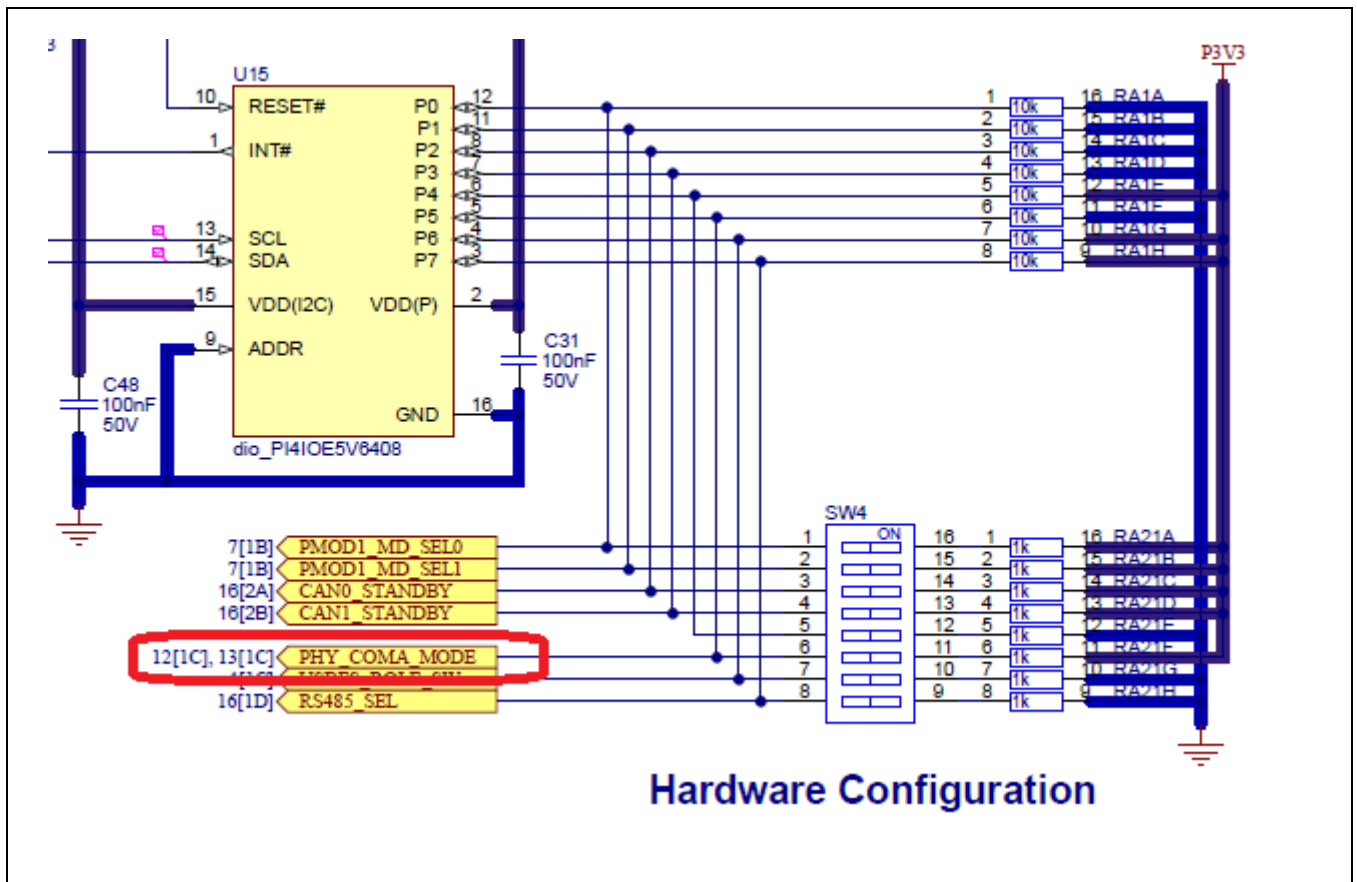


Figure 4. Ethernet PHY COMA\_MODE Pin

### 2.3.2 Corrective Action

#### [Affected Kits]

The boards have been modified such that a 5k6 resistor pack has been fitted in parallel with RA1 and a 4k7 resistor pack has been fitted in parallel with RA21. This enables the PHYs to be correctly enabled and disabled without affecting operation of the other signals.

#### [Future Kits]

This issue will be corrected in later versions of the kit.

### 2.3.3 Kits Affected

Version:	1
Serial numbers:	305919-305988

### 3. Appendix – Kit Identification

#### 3.1 Kit Version

The kit version is identified on the board above the Renesas RA logo as shown in Figure 5.



Figure 5. Identification of the Kit Version Number on the EK-RA8T2 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 bar code sticker on the back/bottom side of EK-RA8T2 board. In the example in Figure 6, the serial number is “305942”.

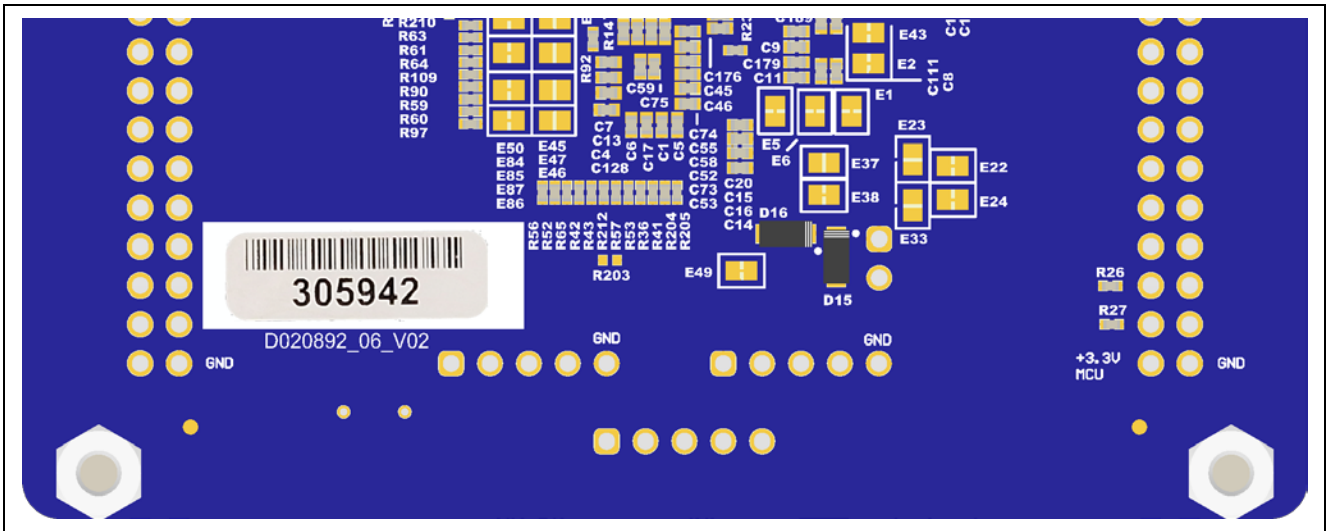


Figure 6. Identification of the Serial Number on the EK-RA8T2 board

#### 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-RA8T2 Resources	<a href="https://renesas.com/ek-ra8t2">renesas.com/ek-ra8t2</a>
RA Kit Information	<a href="https://renesas.com/ra/kits">renesas.com/ra/kits</a>
RA Product Information	<a href="https://renesas.com/ra">renesas.com/ra</a>
RA Product Support Forum	<a href="https://renesas.com/ra/forum">renesas.com/ra/forum</a>
RA Videos	<a href="https://renesas.com/ra/videos">renesas.com/ra/videos</a>
Renesas Support	<a href="https://renesas.com/support">renesas.com/support</a>
RA Flexible Software Package (FSP)	<a href="https://renesas.com/fsp">renesas.com/fsp</a>

**Revision History**

Rev.	Date	Description	
		Page	Summary
1.00	Feb.10.26	—	Initial release

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