

[Notes]

R20TS0510EJ0100

Rev.1.00

Dec. 16, 2019

RE Software Development Kit

RE01 1500KB Group CMSIS Driver Package Rev1.00

RAM Allocation Limitations of the Low Power Management Driver

## Outline

When using the product in the title, note the following point.

1. Execution on RAM of the "R\_LPM\_PowerSupplyModeAllpwonSet" Function of the Lower Power Management driver (LPM)

## 1. Execution on RAM of the "R\_LPM\_PowerSupplyModeAllpwonSet" Function of the Lower Power Management driver (LPM)

### 1.1 Applicable Products

- RE01 1500KB group CMSIS Driver Package Rev1.00(Document number: R01AN4947EJ0100)

### 1.2 Applicable Devices

- RE family: RE01 1500KB group

### 1.3 Details

Even if the "R\_LPM\_PowerSupplyModeAllpwonSet" function is set to be allocated to RAM in the configuration setting file (r\_lpm\_cfg.h) of the low power management driver, some internal functions may not be allocated to RAM and internal functions placed in ROM (instead of RAM) may be called.

For this reason, calling a function placed in ROM in EXFPWON or MINPWON mode (in which the internal flash memory is powered off) causes the CPU to run away because it cannot reference ROM.

### 1.4 Conditions

If the following two macro definition values are set to "SYSTEM\_SECTION\_CODE" in the r\_lpm\_cfg.h file, some internal functions of the "R\_LPM\_PowerSupplyModeAllpwonSet" function are not allocated to RAM but are placed in ROM.

- LPM\_CFG\_SECTION\_R\_LPM\_POWER\_SUPPLY\_MODE\_EXFPWONSET
- LPM\_CFG\_SECTION\_R\_LPM\_POWER\_SUPPLY\_MODE\_MINPWONSET

r\_lpm\_cfg.h file:

```
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLY_MODE_ALLPWONSET  
(SYSTEM_SECTION_RAM_FUNC)  
  
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLY_MODE_EXFPWONSET  
(SYSTEM_SECTION_CODE)  
  
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLY_MODE_MINPWONSET  
(SYSTEM_SECTION_CODE)
```

## 1.5 Workaround

Rewrite either or both of the following two macro definitions in the r\_lpm\_cfg.h file to "SYSTEM\_SECTION\_RAM\_FUNC".

- LPM\_CFG\_SECTION\_R\_LPM\_POWER\_SUPPLYMODEEXFPWONSET
- LPM\_CFG\_SECTION\_R\_LPM\_POWER\_SUPPLYMODEMINPWONSET

r\_lpm\_cfg.h file:

```
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLYMODEALLPWONSET  
(SYSTEM_SECTION_RAM_FUNC)  
  
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLYMODEEXFPWONSET  
(SYSTEM_SECTION_RAM_FUNC)  
  
#define LPM_CFG_SECTION_R_LPM_POWER_SUPPLYMODEMINPWONSET  
(SYSTEM_SECTION_RAM_FUNC)
```

## 1.6 Schedule for Fixing the Problem

This problem will be fixed in the next version Rev1.01. (Scheduled to be released in December 2019.)

**Revision History**

Rev.	Date	Description	
		Page	Summary
1.00	Dec.16.19	-	First edition issued

Renesas Electronics has used reasonable care in preparing the information included in this document, but Renesas Electronics does not warrant that such information is error free. Renesas Electronics assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

The past news contents have been based on information at the time of publication. Now changed or invalid information may be included.

The URLs in the Tool News also may be subject to change or become invalid without prior notice.

**Corporate Headquarters**

TOYOSU FORESIA, 3-2-24 Toyosu,  
Koto-ku, Tokyo 135-0061, Japan  
[www.renesas.com](http://www.renesas.com)

**Contact information**

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:  
[www.renesas.com/contact/](http://www.renesas.com/contact/)

**Trademarks**

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.