

## Outline

When using C Compiler CA78K0R for RL78 family and 78K0R, note the following point.

1. Addresses of the stack area symbols `__@STBEG` and `__@STEND`

## 1. Addresses of the Stack Area Symbols `__@STBEG` and `__@STEND`

### 1.1 Applicable Products

- CA78K0R V1.70 to V1.72 (CS+ integrated development environment)
- CA78K0R V1.20 to V1.70 (CubeSuite+ integrated development environment)
- CA78K0R V1.10 (CubeSuite integrated development environment)

### 1.2 Details

When specifying any of the following options: `-self`, `-selfw`, `-ocdtr`, `-ocdtrw`, `-ocdhpi`, or `-ocdhpiw`, the addresses of the stack area symbols `__@STBEG` and `__@STEND` generated by a linker may be incorrect.

### 1.3 Conditions

The addresses of the stack area symbols may be incorrect when all the following conditions are met.

- (1) For CA78K0R V1.40 to V1.72

(1-1) Any of the following options is specified: `-self`, `-selfw`, `-ocdtr`, `-ocdtrw`, `-ocdhpi`, or `-ocdhpiw`.

(1-2) The `saddr` area has free space (except the general-purpose register area).

(1-3) The start address of free space in (1-2) is located within the `saddr` area.

Example: If the address range of free space is `0FFE10H - 0FFE30H`, the condition is not met because the start address is located before the start address of the `saddr` address (`0FFE20H`).

- (2) For CA78K0R V1.10 to V1.30

(2-1) Either the `-self` or `-selfw` option is specified.

(2-2) The largest free space within the internal RAM area includes the `saddr` area.

Example: If the address range of free space is `0FFE10H - 0FFE30H`, the condition is met because it includes the `saddr` area (`0FFE20H`).

### 1.4 Examples

A map file in which incorrect addresses are generated is shown below. The incorrect addresses are shown in red.

[Map file]

```

*** Public symbol list ***

MODULE      ATTR      VALUE      NAME
           NUM      FFE20H     __@STBEG
           NUM      FFE2AH     __@STEND
    
```

In the above map file, the addresses are incorrect because the bottom address of stack (`__@STEND`) is located above `__@STBEG`, which is the top address of stack +1.

## 1.5 Workaround

Use a memory directive in the link directive file to specify the saddr area and internal RAM area separately.

[Link directive file example]

memory RAM: (0FE300H, 01B20H)	#RAM area
memory SDR: (0FFE20H, 000E0H)	#SADDR area

## 1.6 Schedule for Fixing the Problem

There is no schedule for fixing this problem.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jul.01.19	-	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.

URLs in 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.