

[Notes]

R20TS0174EJ0100

Rev.1.00

RL78 Family

Jun. 16, 2017

Sound Playback/Compression System (Original ADPCM Codec)

M3S-S2-Tiny V.3.04 Release 00

Outline

When using the sound playback/compression system (original ADPCM codec) for the RL78 family, M3S-S2-Tiny V.3.04 Release 00 (hereafter called S2), note the following point.

1. The `R_adpcm_encode()` and `R_adpcm_decode()` functions returning undefined values

1. The `R_adpcm_encode()` and `R_adpcm_decode()` Functions Returning Undefined Values

1.1 Applicable Products

Sound playback/compression system (original ADPCM codec) for the RL78 family, M3S-S2-Tiny V.3.04 Release 00

1.2 Applicable MCUs

RL78 family

1.3 Details

When the `R_adpcm_encode()` or `R_adpcm_decode()` function is executed, an undefined value other than the return values (0 and -1) defined in the API information in the manual is returned.

1.4 Condition

The problem arises when the S2 assembler source code for the CC-RL or IAR compiler is used.

1.5 Workaround

Modify the red text in the source code as shown in 1.5.1 and 1.5.2.

1.5.1 Modification of the S2 Assembler Source Code for the CC-RL compiler

(1) adpcm_decoder_rl78_ccrl.asm

(1-a) Below the S2_dec_error: label near line 74

Before modification:	After modification
<pre>S2_dec_error: clrw bc decw bc br \$!S2_dec_exit</pre>	<pre>S2_dec_error: clrw ax decw ax br \$!S2_dec_exit</pre>

(1-b) Below the S2_dec_normal_exit: label near line 372

Before modification:	After modification
<pre>S2_dec_normal_exit: clrw bc S2_dec_exit: addw sp, #10+4</pre>	<pre>S2_dec_normal_exit: clrw ax S2_dec_exit: addw sp, #10+4</pre>

(2) adpcm_encoder_rl78_ccrl.asm

(2-a) Below the ERROR_EXIT: label near line 180

Before modification:	After modification
<pre>ERROR_EXIT: clrw bc decw bc addw sp, #10+4</pre>	<pre>ERROR_EXIT: clrw ax decw ax addw sp, #10+4</pre>

(2-b) Below the EXIT: label near line 448

Before modification:	After modification
<pre>EXIT: clrw bc addw sp, #10+4 pop de</pre>	<pre>EXIT: clrw ax addw sp, #10+4 pop de</pre>

1.5.2 Modification of the S2 Assembler Source Code for the IAR compiler

(1) adpcm_decoder_r178.s87

(1-a) Below the S2_dec_error: label near line 176

Before modification:	After modification
<pre>S2_dec_error: clrw bc decw bc br N:S2_dec_exit</pre>	<pre>S2_dec_error: clrw ax decw ax br N:S2_dec_exit</pre>

(1-b) Below the S2_dec_normal_exit: label near line 374

Before modification:	After modification
<pre>S2_dec_normal_exit: clrw bc S2_dec_exit: addw sp, #10+4</pre>	<pre>S2_dec_normal_exit: clrw ax S2_dec_exit: addw sp, #10+4</pre>

(2) adpcm_encoder_r178.s87

(2-a) Below the ERROR_EXIT: label near line 182

Before modification:	After modification
<pre>ERROR_EXIT: clrw bc decw bc addw sp, #10+4</pre>	<pre>ERROR_EXIT: clrw ax decw ax addw sp, #10+4</pre>

(2-b) Below the EXIT: label near line 450

Before modification:	After modification
<pre>EXIT: clrw bc addw sp, #10+4 pop de</pre>	<pre>EXIT: clrw ax addw sp, #10+4 pop de</pre>

1.6 Schedule for Fixing the Problem

This problem will be fixed in the next version.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jun. 16, 2017	-	First edition issued

TOYOSU FORESIA, 3-2-24 Toyosu, Koto-ku, Tokyo 135-0061 Japan
 Renesas Electronics Corporation

■Inquiry

<https://www.renesas.com/contact/>

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.

All trademarks and registered trademarks are the property of their respective owners.