

OMX Media Component

Product manual

OMX Media Component for FLAC Decoder Library for Linux

RTM0AC0000XAFLAD20SL32E

All information contained in these materials, including products and product specifications, represents information on the product at the time of publication and is subject to change by Renesas Electronics Corp. without notice. Please review the latest information published by Renesas Electronics Corp. through various means, including the Renesas Electronics Corp. website (<http://www.renesas.com>).

Notice

1. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation of these circuits, software, and information in the design of your equipment. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from the use of these circuits, software, or information.

2. 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.

3. Renesas Electronics does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Renesas Electronics products or technical information described in this document. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.

4. You should not alter, modify, copy, or otherwise misappropriate any Renesas Electronics product, whether in whole or in part. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from such alteration, modification, copy or otherwise misappropriation of Renesas Electronics product.

5. Renesas Electronics products are classified according to the following two quality grades: "Standard" and "High Quality". The recommended applications for each Renesas Electronics product depends on the product's quality grade, as indicated below.

"Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; and industrial robots etc.

"High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control systems; anti-disaster systems; anti-crime systems; and safety equipment etc.

Renesas Electronics products are neither intended nor authorized for use in products or systems that may pose a direct threat to human life or bodily injury (artificial life support devices or systems, surgical implantations etc.), or may cause serious property damages (nuclear reactor control systems, military equipment etc.). You must check the quality grade of each Renesas Electronics product before using it in a particular application. You may not use any Renesas Electronics product for any application for which it is not intended. Renesas Electronics shall not be in any way liable for any damages or losses incurred by you or third parties arising from the use of any Renesas Electronics product for which the product is not intended by Renesas Electronics.

6. You should use the Renesas Electronics products described in this document within the range specified by Renesas Electronics, especially with respect to the maximum rating, operating supply voltage range, movement power voltage range, heat radiation characteristics, installation and other product characteristics. Renesas Electronics shall have no liability for malfunctions or damages arising out of the use of Renesas Electronics products beyond such specified ranges.

7. Although Renesas Electronics endeavors to improve the quality and reliability of its products, semiconductor products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Further, Renesas Electronics products are not subject to radiation resistance design. Please be sure to implement safety measures to guard them against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Renesas Electronics product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult, please evaluate the safety of the final products or systems manufactured by you.

8. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. Please use Renesas Electronics products in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive. Renesas Electronics assumes no liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.

9. Renesas Electronics products and technology may not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations. You should not use Renesas Electronics products or technology described in this document for any purpose relating to military applications or use by the military, including but not limited to the development of weapons of mass destruction. When exporting the Renesas Electronics products or technology described in this document, you should comply with the applicable export control laws and regulations and follow the procedures required by such laws and regulations.

10. It is the responsibility of the buyer or distributor of Renesas Electronics products, who distributes, disposes of, or otherwise places the product with a third party, to notify such third party in advance of the contents and conditions set forth in this document. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties as a result of unauthorized use of Renesas Electronics products.

11. This document may not be reproduced or duplicated in any form, in whole or in part, without prior written consent of Renesas Electronics.

12. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products, or if you have any other inquiries.

(Note 1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its majority-owned subsidiaries.

(Note 2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

Trademarks

- Linux® is the registered trademark of Linus Torvalds in the United States and other countries.
- ARM® is a registered trademark or trademark of ARM Ltd. in the United States and other countries.
- Windows and Windows Media are registered trademarks of Microsoft Corporation in the United States and other countries.
- Android is a trademark of Google Inc. Use of this trademark is subject to Google permissions.
- All other company names and product names mentioned in this manual are registered trademarks or trademarks of their respective companies.
- The registered trademark symbol (®) and trademark symbol (™) are omitted in this manual.



- Table of Contents -

1. OVERVIEW	3
1.1. Overview of This Document	3
1.2. Related Document	3
2. PRODUCT SPECIFICATION	4
2.1. Basic Specification	4
2.2. Memory Requirement	4
2.3. Reserved Word	4
3. LIST OF FILES	5
4. LIST OF DEPENDENT LIBRARY	6
4.1. Dependent Library Name	6

- Tables -

Table 1-1 List of Related Document	3
Table 2-1 Basic Specification	4
Table 2-2 Memory Requirement	4
Table 2-3 Reserved Word.....	4
Table 3-1 File List.....	5
Table 4-1 Dependent Library List	6
Table 4-2 Dependent Library Name List	6

1. Overview

1.1. Overview of This Document

This Document is the Product Manual for OMX Media Component for FLAC Decoder Library for Linux. For function specification, please read related document [1].

1.2. Related Document

Table 1-1 shows the related documents.

Table 1-1 List of Related Document

NO	Document Name	Description
[1]	OMX Media Component User's Manual FLAC Decoder Part	Specification documents of FLAC Decoder

2. Product Specification

2.1. Basic Specification

Table 2-1 shows the basic specification of this library.

Table 2-1 Basic Specification

Item	Description
Product Number	RTM0AC0000XAFLAD20SL32C
Product Name	OMX Media Component for FLAC Decoder Library for Linux
Software categories	Multimedia codec processing
Outline of Function	Provide OpenMAX IL 1.1.2 Core / Component API
Target CPU	ARMv7 architecture
Target LSI	R-Car H2 / M2 / E2 Series
Language	C Language
Endian	Little endian
Supported OS	Linux 3.10
Tool	cortexa15hf-vfp-neon-poky-linux-gnueabi gcc version 4.8.3 20140401 (prerelease) (Linaro GCC 4.8-2014.04)
Library Format	Dynamic Link Library
CPU load	4[MHz]*1
Number of thread	3 threads per a Media Component instance except for the threads created in User Defined Function part.
Thread priority	Thread priority shall be determined in User Defined Functions part.
System Call	This library does not call system call functions directly. All OS-dependent processing shall be implemented in User Defined Functions part.

*1 : It is a reference value when playing general contents (48kHz/780kbps/2ch). This value does not guarantee performance.

2.2. Memory Requirement

Table 2-2 shows the memory requirement of this library. The sizes in Table 2-2 do not include the memory consumption in User Defined Functions.

Table 2-2 Memory Requirement

Item	Size
Object Size	13Kbyte*1
Stack Size	10Kbyte
Heap Memory Size	255Kbyte
Shared Memory Size	190 – 1192Kbyte

*1: It is a value of only this library.

2.3. Reserved Word

Table 2-3 shows reserved word of this library

Table 2-3 Reserved Word

Reserved word	Description
OMX	Prefix word of define, function and macro which is specified by OpenMAX IL specification
OMXR	Prefix word of define and macro which is implemented by Renesas
Omxr	Prefix word of function and variable which is implemented by Renesas

3. List of Files

The file list of this library is shown in Table 3-1.

Table 3-1 File List

Directory			File name	Description
RTM0AC0000XAFLAD20SL32C			-	-
Document	ja		omx_users_manual_flacd_ja.pdf	User's manual (Japanese)
			RTM0AC0000XAFLAD20SL32J.pdf	Product manual (Japanese)
	en		omx_users_manual_flacd_en.pdf	User's manual (English)
			RTM0AC0000XAFLAD20SL32E.pdf	Product manual (English)
Software.tar.gz	OMXR	config	omxr_config_flacd.txt	Configuration file
		include	OMXR_Extension_flacd.h	Extended header file
		lib	libomxr_mc_flacd.so.2.0.0	Library

4. List of Dependent Library

Table 4-1 shows required libraries to use this library.

Table 4-1 Dependent Library List

Product number	Product name
RTM0AC0000XCMCTL20SL32C	OMX Media Component Common Library for Linux
RTM0AC0000XACMND20SL32C	OMX Media Component Audio Common Library for Linux
RCG2ADFLAMZ1SL32	ARM FLAC Decode Software for Linux

4.1. Dependent Library Name

Table 4-2 shows names of dependent libraries to use this library.

Table 4-2 Dependent Library Name List

Product number	Dependent library name
RTM0AC0000XCMCTL20SL32C	libomxr_utility.so.2
RTM0AC0000XACMND20SL32C	libomxr_mc_acmn.so.2
RCG2ADFLAMZ1SL32	libFLACDLA_L.so.1

If the dependent library names are different from the dynamic library file names, please create the symbolic links between them.

Revision History	OMX Media Component Product manual OMX Media Component for FLAC Decoder Library for Linux
------------------	--

Rev.	Date	Description	
		Page	Summary
0.01	Jun. 6, 2014	-	Newly created.
0.02	Jul. 8, 2014	P6	The product number and product name of FLAC Decode Middleware are changed.
0.10	Jul. 18, 2014	-	Correction of errors.
1.00	Oct. 9, 2014	-	Determine the T.B.D item.

OMX Media Component Product manual

OMX Media Component for FLAC Decoder Library for Linux

Publication Date : Oct. 9, 2014 Rev. 1.00

Published by: Renesas Electronics Corporation

© 2014 Renesas Electronics Corporation. All rights reserved.



SALES OFFICES

Renesas Electronics Corporation

<http://www.renesas.com>

Refer to "<http://www.renesas.com/>" for the latest and detailed information.

Renesas Electronics America Inc.

2801 Scott Boulevard Santa Clara, CA 95050-2549, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: +44-1628-585-100, Fax: +44-1628-585-900

Renesas Electronics Europe GmbH

Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-6503-0, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.

Room 1709, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100191, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.

Unit 301, Tower A, Central Towers, 555 Langao Road, Putuo District, Shanghai, P. R. China 200333
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

Renesas Electronics Hong Kong Limited

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2265-6688, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.

13F, No. 363, Fu Shing North Road, Taipei 10543, Taiwan
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.

80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre, Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.

12F., 234 Teheran-ro, Gangnam-Ku, Seoul, 135-920, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141

OMX Media Component Product manual



Renesas Electronics Corporation

RTM0AC0000XAFLAD20SL32E