OMX Media Component

Product Manual:

OMX Media Component Common Library

for Linux

Renesas Electronics
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Product Manual:
OMX Media Component Common Library
for Linux

RTM0AC0000XCMCTL20SL32E
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1. Overview

1.1. Overview of This Document

This document is the Product Manual of OMX Media Component Common Library for Linux. For the functional specifications of the library, see related documents [1].

1.2. Related Documents

Table 1-1 lists the related documents.

Table 1-1 List of Related Documents

No.	Document Name	Description
[1]	OMX Media Component User's Manual Common Part	The user's manual that describes functional specifications of this library.
[2]	OMX Integration Guide for Linux	OMX Integration Guide documents describe how to integrate the OMX to the system.

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	RTM0AC0000XCMCTL20SL32C
Product Name	OMX Media Component Common Library for Linux
Software categories	Multimedia codec processing
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 chain	GCC 4.7.4 (cortexa15hf-vfp-neon-poky-linux-gnueabi) built by R-CarH2/M2 Yocto recipe package
Library Format	Dynamic Link Library
CPU load	See each OMX Media Component Product Manual.
Number of thread	See each OMX Media Component Product Manual.
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.

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	Description
Object Size	296 [Kbyte]
Stack Size	See each OMX Media Component Product Manual.
Heap Memory Size	See each OMX Media Component Product Manual.
Shared Memory Size	See each OMX Media Component Product Manual.

2.3. Reserved Words

Table 2-3 lists reserved words of this library.

Table 2-3 Reserved Words

Reserved Words	Description
OMX	The prefix word for the names of defines, functions and Macros that is defined in OpenMAX IL Specification.
OMXR	The prefix word for the names of defines and Macros in this library.
Omxr	The prefix word for the names of functions and variables in this library.

3. List of Files

Table 3-1 shows the file list of this library.

Table 3-1 File List

Directory			File name	Description
RTM0AC0000XCMCTL20SL32C			-	
+	Document		-	
	+	en	omx_integration_guide_for_linux_en.pdf	Integration Guide Document
			omx_users_manual_cmn_en.pdf	User's Manual
			RTM0AC0000XCMCTL20SL32C_ReleaseNote.txt	Release Note
			RTM0AC0000XCMCTL20SL32E.pdf	Product Manual(This document)
	-		Software.tar.gz	See Table 3-2

Table 3-2 Files included in Software.tar.gz

Directory					File name	Description
Software					-	
+	OMXR				-	
	+	config			omxr_config_base.txt	Configuration file
		include			OMX_Audio.h	Khronos OpenMAX IL header
					OMX_Component.h	Khronos OpenMAX IL header
					OMX_ContentPipe.h	Khronos OpenMAX IL header
					OMX_Core.h	Khronos OpenMAX IL header
					OMX_Image.h	Khronos OpenMAX IL header
					OMX_Index.h	Khronos OpenMAX IL header
					OMX_IVCommon.h	Khronos OpenMAX IL header
					OMX_Other.h	Khronos OpenMAX IL header
					OMX_Types.h	Khronos OpenMAX IL header
					OMX_Video.h	Khronos OpenMAX IL header
					OMXR_Extension.h	Renesas OMX Extension header
	lib				-	
	+	linux			-	
		+	linaro_4_7_3		libomxr_core.so.2.0.0	Library for Linux
					libomxr_mc_cmn.so.2.0.0	Library for Linux
	UDF_Linux				-	
		modules			-	
		+	omxr_utility		-	
			+	config	omxr_utility_config.c	UDF sample source code
				hw_dep	omxr_debug_func.c	UDF sample source code
					omxr_dll_loader.c	UDF sample source code
					omxr_file_loader.c	UDF sample source code
				include	omxr_debug.h	UDF sample source code
					omxr_dep_common.h	UDF sample source code
					omxr_module_common.h	UDF sample source code
				os_dep	omxr_mem_osdep_func.c	UDF sample source code
					omxr_os_wrapper.c	UDF sample source code
					omxr_os_wrapper.h	UDF sample source code
					omxr_string_osdep_func.c	UDF sample source code
					omxr_workbuffer_func.c	UDF sample source code
				-	Makefile.am	Makefile for UDF sample source code
			-		Makefile.am	Makefile for UDF sample source code
		-			autogen.sh	Script to make UDF sample source code
					Makefile.am	Makefile for UDF sample source code

4. Dependent Products

This library does not depend on the other products.

5. User Defined Functions (UDF)

This library requires User Defined Functions (UDF) to operate the function. UDF contains OS and Hardware abstraction for the OMX libraries. A user of this library needs to implement UDF part to adapt the library to user's platform. UDF shall have the following functions:

- OS system call for signal, mutex and thread
- Memory allocation for heap
- Memory allocation for dedicated memory area
- String manipulation
- File handling
- DLL handling
- Log output for debugging
- Configuration file handling

This abstraction enables a user to customize the system dependent implementation to fulfill the requirements of each system, such as the policy for thread priority, the method for memory allocation, the mechanism for debugging and so on.

UDF sample source code is available in the deliverable of this library. The UDF sample source code is out of warranty. The UDF sample source code has been confirmed by using Renesas R-Car H2/M2 Linux Board Support Package and R-Car H2/M2 Series MMP Reference Library for Linux.

For the details of implementation and integration of UDF, see related document [2].

6. Installation

See related document [2].

		Product Manual:
REVISION HISTORY		OMX Media Component Common Library
		for Linux

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		Page	Summary
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