



Application Notes

Multimedia Codec Benchmark AML 8726-M

AMLOGIC, Inc.
3930 Freedom Circle
Santa Clara, CA 95054
U.S.A.
www.amlogic.com

AMLOGIC reserves the right to change any information described herein at any time without notice.
AMLOGIC assumes no responsibility or liability from use of such information.

Table of Content

IMAGE	4
IMAGE DECODER	4
AUDIO	5
AUDIO DECODER	5
AUDIO ENCODER	6
VIDEO	7
VIDEO DECODER	7
VIDEO ENCODER	8

Distribute to Geniatech!

Revision History

Revision Number	Revised Date	By	Changes
0.1	2010/12/20	Justin Shen	Initial release draft
0.2	2010/12/30	Justin Shen	Add movie subtitle support section
0.3	2011/02/22	Justin Shen	Correct some error description

Distribute to Geniatech!

Image

Image Decoder

Joint Photographic Experts Group (JPEG)	
Codec	JPEG baseline/Progress
Resolution	No restriction
Container	JPG, JPEG
Remarks	Memory limitation, 8000x8000 pixels tested
Bitmap Image (BMP)	
Codec	BMP
Resolution	No restriction
Container	BMP
Remarks	Memory limitation, 8000x8000 pixels tested
Graphic Interchange Format (GIF)	
Codec	GIF
Resolution	No restriction
Container	JPG, JPEG
Remarks	Memory limitation, 6000x4500 pixels tested
Portable Network Graphics (PNG)	
Codec	PNG
Resolution	No restriction
Container	PNG
Remarks	Memory limitation, 8000x8000 pixels tested

Image Encoder

AML8726-M supports software image encoder.

Audio

Audio Decoder

MPEG Audio	
Codec	MPEG 1/2/2.5, Audio Layer 1/2/3
Channel	6
Bit Rate	8 ~ 320 kbps, CBR and VBR
Sample Rate	8 ~ 48 kHz
Container	MP1/MP2/MP3
Remarks	n.a
Windows Media Audio	
Codec	WMA Version 4, 4.1, 7, 8, 9, WMA Pro
Channel	2
Bit Rate	8 ~ 320 kbps, CBR and VBR
Sample Rate	8 ~ 48 kHz
Container	WMA
Remarks	Non-support Loseless/MBR
WAV Audio	
Codec	PCM
Channel	2
Bit Rate	Up to 1.5Mbps
Sample Rate	8 ~ 48 kHz
Container	WAV
Remarks	n.a
Xiph.org OGG Audio	
Codec	Vorbis
Channel	2
Bit Rate	n.a
Sample Rate	8 ~ 48 kHz
Container	OGG/OGA
Remarks	n.a
Xiph.org FLAC Audio	
Codec	Flac
Channel	2
Bit Rate	VBR
Sample Rate	8 ~ 48 kHz
Container	FLAC
Remarks	n.a
Apple Loseless Audio Coding	
Codec	ALAC
Channel	2
Bit Rate	VBR
Sample Rate	8 ~ 48 kHz
Container	alac
Remarks	n.a

Monkey's Audio	
Codec	APE
Channel	2
Bit Rate	VBR
Sample Rate	8 ~ 48 kHz
Container	Ape
Remarks	Loseless

Advanced Audio Coding (AAC)	
Codec	AAC-LC, AAC-HE
Channel	5.1
Bit Rate	VBR
Sample Rate	8 ~ 96 kHz
Container	AAC/M4A
Remarks	n.a

AC-3	
Codec	AC-3
Channel	5.1
Bit Rate	Up to 384kbps
Sample Rate	32~48kHz
Container	Contained in VIDEO file
Remarks	n.a

Digital Theater Systems (DTS)¹	
Codec	DTS
Channel	5.1
Bit Rate	Up to 576bps
Sample Rate	32~48kHz
Container	Contained in VIDEO file
Remarks	Need license from DTS Inc.

Real Audio	
Codec	Real Audio
Channel	2
Bit Rate	8 ~ 256kbps
Sample Rate	8 ~ 48 kHz
Container	RM
Remarks	n.a

Note:

1. Commercial license may be needed.

Audio Encoder

AML8726-M supports software audio encoder.

Video

Video Decoder

MPEG-1	
Video Codec	MPEG-1
Max. Performance	720x576p @ 30pfs
Audio Codec	MP2
Container	DAT, MPEG, MPE, MPG
Remark	n.a
MPEG-2	
Video Codec	MPEG-2
Max. Performance	1920x1080p @ 30pfs
Audio Codec	MP3, AC3, DTS, AAC, PCM
Container	MPEG, MPE, MPG, M2V, ISO, TS, VOB
Remark	n.a
MPEG-4 ASP	
Video Codec	MPEG-4 ASP
Max. Performance	1920x1080p @ 30pfs
Audio Codec	MP2, MP3, AC-3, AAC, PCM, ADPCM (MS/IMA), DTS
Container	AVI, MKV, MP4, MOV, 3GP, 3GPP, FLC
Remark	n.a
DivX3	
Video Codec	DivX 3
Max. Performance	720x576p @ 30pfs
Audio Codec	MP3, WMA
Container	AVI
Remark	n.a
DivX 4	
Video Codec	DivX 4
Max. Performance	1920x1080p @ 30pfs
Audio Codec	MP3, MS-ADPCM
Container	AVI
Remark	n.a
DivX 5	
Video Codec	DivX 5
Max. Performance	1280x720p @ 30pfs
Audio Codec	MP3, PCM, ADPCM, MS-ADPCM, AC3, DTS
Container	AVI
Remark	n.a
XviD	
Video Codec	XviD
Max. Performance	1920x1080p @ 30pfs
Audio Codec	AC3, MP3, MP2
Container	AVI
Remark	n.a

AVC/H.264	
Video Codec	H.264
Max. Performance	1920x1080p @ 30fps
Audio Codec	AAC, AAC-LC, MP3, DTS, AC3, PCM, Vorbis
Container	AVI, MOV, MP4, MKV, TS, M2TS, M3TS, M4TS, M5TS, MTS, M4V, FLV
Remark	n.a

VC-1	
Video Codec	VC-1
Max. Performance	1920x1080p @ 30fps
Audio Codec	AC3, PCM, DTS
Container	AVI, TS
Remark	n.a

Windows Media Video	
Video Codec	WMV
Max. Performance	1920x1080p @ 30fps
Audio Codec	WMA
Container	WMV, AVI
Remark	n.a

H.263	
Video Codec	H.263
Max. Performance	720x480p @ 30fps
Audio Codec	MP2, MP3, AC-3, AAC, AMR-NB
Container	AVI, FLV, 3GP, 3GPP, MOV, MP4, 3G2
Remark	n.a

Video Encoder

AML8726-M supports software video encoder.

Movie Subtitle

Subtitle Format	Container
SAMI	SMI
Advanced Substation Alpha	ASS / SSA
SubRip	SRT
DVD	SUB
VobSub	SUB and IDX
Blue Ray	PGS

Distribute to Geniatech!