

RK1808 Multimedia Codec Benchmark

Ver. 1.0

May 13, 2019

Index

Index	- 2 -
History	- 3 -
Notice	- 4 -
1. Image	- 5 -
1.1 Image Decoder	- 5 -
1.2 Image Encoder	- 6 -
2. Audio	- 7 -
2.1 Audio Decoder	- 7 -
2.2 Audio Encoder	- 8 -
3. Video	- 9 -
3.1 Video Decoder	- 9 -
3.2 Video Encoder	- 10 -

History

Date	Author	Version	Description
2019.5.13	Herman Chen	1.0	Initialize all descriptions

Rockchip

Notice

All the data involved in this document will be in accordance with the development progress and possible changes without notice.

The features listed in this document may or may not be present in actual product, and may be subject to the third party licensing requirements.

Please contact Rockchip for actual product feature configurations and licensing requirements.

Rockchip

1. Image

1.1 Image Decoder

JPEG	
Image Codec	JFIF file format 1.02
Support Image Size	48x48pixels to 8176x8176pixles
Container	JPG, JPEG
Remarks	(1) Not Support Non-interleaved Scan (2) Software support SRGB JPEG (3) Software support Adobe RGB JPEG
BMP	
Image Codec	BMP
Support Image Size	No Restriction ¹
Container	BMP
Remarks	n.a.
GIF	
Image Codec	GIF
Support Image Size	No Restriction
Container	GIF
Remarks	n.a.
PNG	
Image Codec	PNG
Support Image Size	No Restriction
Container	PNG
Remarks	n.a.

¹ Limited by actual memory available

1.2 Image Encoder

JPEG	
Image Codec	JPEG Baseline
Support Image Size	96x32pixels to 8176x8176pixles
Maximum Data Rate ²	90Mpixels/Second
File Format	JFIF file format 1.02
Remarks	

² Ideal case

2. Audio

2.1 Audio Decoder

AAC Audio	
Audio Codec	ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD
Channel	5.1
Bit rate	n.a
Sampling rate	8KHZ~48KHz
File Format	AAC, M4A
Remarks	n.a
G.711	
Audio Codec	G.711
Channel	1
Bit rate	64 kbps
Sampling rate	8KHZ
File Format	PCM a-law
Remarks	n.a

2.2 Audio Encoder

AAC Audio	
Audio Codec	AAC-ADTS-LC
Channel	1
Bit rate	4.75kbps~60Kbps, CBR
Sampling rate	8KHZ~44.1KHZ
Container	AAC, 3GPP, Mpeg2TS
Remarks	n.a
G.711	
Audio Codec	G.711
Channel	1
Bit rate	64 kbps
Sampling rate	8KHZ
File Format	PCM a-law
Remarks	n.a

3. Video

3.1 Video Decoder

H.264/AVC	
Video Codec	H.264
Supported Image Size	48x48pixels to 1920x1080pixels
Maximum Frame Rate	1080P@30fps
Maximum Bit Rate	30Mbps
File Format	AVI, MKV, MP4, MOV, 3GP, TS, FLV
Remarks	<ul style="list-style-type: none"> ● Support Field Coding; ● Support MBAFF
MOTION JPEG	
Video Codec	MJPEG
Supported Image Size	48x48pixels to 8176x8176pixels
Maximum Frame Rate	30fps
Maximum Bit Rate	38.4Mbps
File Format	AVI
Remarks	

3.2 Video Encoder

H.264/AVC	
Video Codec	H.264
Supported Image Size	144x96pixels to 1920x1080pixels
Maximum Frame Rate	1080P@30fps
Maximum Bit Rate	20Mbps
File Format	MOV, 3GP
Remarks	<ul style="list-style-type: none"> ● Not support MBAFF

Rockchip