

# RK3308 Audio Codec Benchmark

Ver. 1.0

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# **History**

Date	Author	Reviewer	Version	Description
2018.5.14	yhx	cch	1.0	Initialize all descriptions





### **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.





# 1 Audio

#### 1.1 Audio Decoder

MPEG Audio  Audio Codec Channel Bit rate Bit rate Bkbps-320Kbps, CBR and VBR File Format MP1, MP2, MP3 Remarks  Nava Audio  Audio Codec Channel Bit rate File Format MVAV Remarks  Support 4bit MS-ADPCM, IMA-ADPCM Wava Audio  Audio Codec Channel Bit rate Na File Format Vorbis Audio  Audio Codec Channel Bit rate File Format File Format Remarks  Support 4bit MS-ADPCM, IMA-ADPCM  Audio Codec Channel Bit rate File Format File Format Remarks  Audio Codec Channel Bit rate File Format Audio Codec Channel Bit rate File Format FLAC Audio  Audio Codec Channel Bit rate Sit rate AAC Audio  Audio Codec Channel Bit rate File Format FLAC Remarks  AAC Audio  Audio Codec ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel Bit rate Remarks  AAC Audio			
Channel 2 Bit rate 8kbps~320Kbps, CBR and VBR File Format MP1, MP2, MP3 Remarks n.a  WAV Audio  Audio Codec MS-ADPCM, IMA-ADPCM, PCM Channel 2 Bit rate n.a File Format WAV Remarks Support 4bit MS-ADPCM,IMA-ADPCM  Vorbis Audio  Audio Codec Q1~Q10 Channel 2 Bit rate n.a File Format OGG, OGA Remarks n.a  FILAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a  FLAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a  FILAC Audio  Audio Codec Compress Level 0~8 Channel 5 Bit rate n.a  FILAC Audio  Audio Codec Compress Level 0~8 Channel 5 Bit rate n.a FILAC Audio  Audio Codec Compress Level 0~8 Channel 5 Bit rate n.a FILAC Audio		MPEG Audio	
Bit rate File Format File Format Remarks Remar	Audio Codec	MPEG1/2/2.5 Audio Layer1/2/3	
File Format Remarks Re	Channel	2	
Name	Bit rate	8kbps~320Kbps, CBR and VBR	
WAV Audio  Audio Codec Channel Bit rate File Format Remarks Support 4bit MS-ADPCM, IMA-ADPCM  Vorbis Audio  Audio Codec Channel Bit rate File Format File Format OGG, OGA Remarks  FLAC Audio  Audio Codec Channel Audio Codec Channel FLAC Audio  Audio Codec Channel Audio Codec Channel Audio Codec Channel Bit rate  File Format FLAC Audio  Audio Codec Channel Audio Codec Channel Bit rate File Format FLAC Remarks  AAC Audio  Audio Codec  Audio Codec AAC-HE, AAC-ELD Channel S.1 Bit rate n.a File Format AAC-HE, AAC-ELD Channel S.1 Bit rate n.a File Format AAC, M4A	File Format	MP1, MP2, MP3	
Audio Codec Channel Channel Bit rate Remarks Support 4bit MS-ADPCM, IMA-ADPCM  Vorbis Audio  Audio Codec Channel Bit rate n.a File Format OGG, OGA Remarks Nn.a  FLAC Audio  Audio Codec Channel Bit rate n.a File Format FLAC Remarks Nn.a  AAC Audio  Audio Codec Channel FLAC Remarks AAC Audio  Audio Codec Channel Audio Codec AAC-HE, AAC-ELD Channel Bit rate n.a File Format AAC-HE, AAC-ELD S.1 Bit rate n.a File Format AAC, M4A	Remarks	n.a	
Audio Codec Channel Channel Bit rate Remarks Support 4bit MS-ADPCM, IMA-ADPCM  Vorbis Audio  Audio Codec Channel Bit rate n.a File Format OGG, OGA Remarks Nn.a  FLAC Audio  Audio Codec Channel Bit rate n.a File Format FLAC Remarks Nn.a  AAC Audio  Audio Codec Channel FLAC Remarks AAC Audio  Audio Codec Channel Audio Codec AAC-HE, AAC-ELD Channel Bit rate n.a File Format AAC-HE, AAC-ELD S.1 Bit rate n.a File Format AAC, M4A			
Channel   2   Bit rate   n.a   File Format   WAV   Remarks   Support 4bit MS-ADPCM,IMA-ADPCM   Worbis Audio   Audio Codec   Q1~ Q10   Channel   2   Bit rate   n.a   File Format   OGG, OGA   Remarks   n.a     FLAC Audio   Audio Codec   Compress Level 0~8   Channel   2   Bit rate   n.a   File Format   FLAC   Remarks   n.a     FLAC   Remarks   n.a     AAC Audio   Audio Codec   ADIF ,ATDS Header AAC-LC and   AAC-HE, AAC-ELD   Channel   5.1   Bit rate   n.a   File Format   AAC, M4A   File Format   AAC, M4A   AAC, M		WAV Audio	
Bit rate File Format WAV Remarks Support 4bit MS-ADPCM,IMA-ADPCM  Vorbis Audio  Audio Codec Channel Bit rate n.a File Format OGG, OGA Remarks n.a  FLAC Audio  Audio Codec Channel 2 Bit rate n.a  FLAC Audio  Audio Codec Channel Audio Codec Channel Channel Audio Codec Channel Sit rate n.a File Format FLAC Remarks n.a  AAC Audio  AUGIO Codec A	Audio Codec	MS-ADPCM, IMA-ADPCM, PCM	
File Format Remarks Support 4bit MS-ADPCM,IMA-ADPCM  Vorbis Audio  Audio Codec Channel Bit rate n.a File Format OGG, OGA Remarks n.a  FLAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  AUGIO Codec AUGIO Codec Compress Level 0~8 Channel 2 Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  AUGIO Codec ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A	Channel	2	
Norbis Audio   Norbis Audio   Norbis Audio   Norbis Audio   Q1~ Q10	Bit rate	n.a	
Vorbis Audio  Audio Codec Channel Bit rate Ille Format OGG, OGA Remarks  Remarks  FLAC Audio  Audio Codec Channel Bit rate Ille Format FLAC Remarks  AAC Audio  Audio Codec Audio Codec Remarks  AAC Audio  AAC Audio  AAC Audio  AAC Audio  AAC Audio  AAC Audio  AAC Audio	File Format	WAV	
Audio Codec Channel Channel Channel Channel Channel Codec Compress Level 0~8 Channel Channel Channel Channel Codec Channel Channel Channel Codec Compress Level 0~8 Channel Channel Channel Channel Codec Compress Level 0~8 Channel Channel Codec Compress Level 0~8 Channel AAC Audio	Remarks	Support 4bit MS-ADPCM,IMA-ADPCM	
Audio Codec Channel Channel Channel Channel Channel Codec Compress Level 0~8 Channel Channel Channel Channel Codec Channel Channel Channel Codec Compress Level 0~8 Channel Channel Channel Channel Codec Compress Level 0~8 Channel Channel Codec Compress Level 0~8 Channel AAC Audio			
Channel 2 Bit rate n.a File Format OGG, OGA Remarks n.a  FLAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  AUDIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A		Vorbis Audio	
Bit rate File Format OGG, OGA Remarks  n.a  FLAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a File Format FLAC Remarks  AAC Audio  Audio Codec  Audio Codec AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A	Audio Codec	Q1~ Q10	
File Format Remarks  Remarks  n.a  FLAC Audio  Audio Codec Channel 2 Bit rate n.a File Format FLAC Remarks  AAC Audio  Audio Codec  Audio Codec  Audio Codec  Channel Audio Codec ADIF,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel Bit rate n.a File Format AAC, M4A	Channel	2	
FLAC Audio  Audio Codec Compress Level 0~8 Channel 2 Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  Audio Codec ADIF,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A	Bit rate	n.a	
FLAC Audio  Audio Codec Channel 2 Bit rate n.a File Format FLAC Remarks  AAC Audio  Audio Codec Channel 5.1 Bit rate n.a File Format AAC, M4A  Audio Codec Audio  Audio Codec AAC-HE, AAC-ELD AAC, M4A	File Format	OGG, OGA	
Audio Codec Channel 2 Bit rate n.a File Format Remarks  AAC Audio  Audio Codec Channel Channel Bit rate n.a AAC-HE, AAC-ELD Shift rate n.a File Format AAC, M4A	Remarks	n.a	
Audio Codec Channel 2 Bit rate n.a File Format Remarks  AAC Audio  Audio Codec Channel Channel Bit rate n.a AAC-HE, AAC-ELD Shift rate n.a File Format AAC, M4A			
Channel 2 Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  AUDIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A		FLAC Audio	
Bit rate n.a File Format FLAC Remarks n.a  AAC Audio  Audio Codec ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel 5.1 Bit rate n.a File Format AAC, M4A	Audio Codec	Compress Level 0~8	
File Format Remarks  AAC Audio  Audio Codec ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD Channel Bit rate n.a File Format  AAC, M4A	Channel	2	
AAC Audio  Audio Codec  Channel Bit rate File Format  AAC Audio  AAC Audio  ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD  AAC-HE, AAC-ELD  5.1  AAC, M4A	Bit rate	n.a	
AAC Audio  Audio Codec  ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD  Channel  5.1  Bit rate  n.a  File Format  AAC, M4A	File Format	FLAC	
Audio Codec  ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD  Channel 5.1  Bit rate n.a  File Format AAC, M4A	Remarks	n.a	
Audio Codec  ADIF ,ATDS Header AAC-LC and AAC-HE, AAC-ELD  Channel 5.1  Bit rate n.a  File Format AAC, M4A			
Audio Codec  AAC-HE, AAC-ELD  Channel 5.1  Bit rate n.a  File Format AAC, M4A		AAC Audio	
Channel 5.1 Bit rate n.a File Format AAC, M4A	Audio Codos	ADIF, ATDS Header AAC-LC and	
Bit rate n.a File Format AAC, M4A	Audio Codec	AAC-HE, AAC-ELD	
File Format AAC, M4A	Channel	5.1	
	Bit rate	n.a	
Remarks n.a	File Format	AAC, M4A	
	Remarks	n.a	



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AMR Audio		
Audio Codec	AMR-NB, AMR-WB	
Channel	1	
Bit rate	AMR-NB 4.75~12.2kbps@8kHz AMR-WB 6.60~23.85kbps@16kHz	
File Format	3GP	
Remarks	n.a	
MIDI Audio		
	MIDI Type 0 and 1, DLS version 1 and 2,	
Audio Codec	XMF and Mobile XMF, RTTTL/RTX, OTA,	
	iMelody	
Channel	2	
Bit rate	n.a	
File Format	XMF, MXMF, RTTTL, RTX, OTA, IMY	
Remarks	n.a	

#### 1.2 Audio Encoder

AMR Audio				
Audio Codec	AMR-NB, AMR-WB			
Channel	2			
Bit rate	4.75kbps~12.2Kbps, CBR			
Container	3GPP			
Remarks	n.a			

#### **AAC Audio**

Audio Codec	AAC-ADTS-LC
Channel	1
Bit rate	4.75kbps~60Kbps, CBR
Container	AAC, 3GPP, Mpeg2TS
Remarks	n.a