Audio/Video Formats Guide

2023-03-26

Table of Contents

For high quality local recording one should use the best quality **hardware** encoder available (AV1 > HEVC > H.264) together with high-bitrate AAC or lossless audio (e.g. ALAC).

MKV is the default container and recommended for most use cases, as it can be easily remuxed into a more compatible format. However, fragmented MP4/MOV may be a good fit for most users who wish to simply upload their videos onto platforms such as YouTube or edit them in common software like Adobe Premiere or DaVinci Resolve.

Use the following tables to determine which audio codecs are compatible with which video formats, suited to your requirements:

Containers

Codecs	H.264	HEVC	AV1	ProRes
AAC	Any	MP4, MOV, MKV, TS	MP4, MKV	MOV, MKV
ALAC	MP4, MOV, MKV	MP4, MOV, MKV	MP4, MKV	MOV, MKV
FLAC	MP4, MKV	MP4, MKV	MP4, MKV	MKV
Opus	MP4, MKV, TS	MP4, MKV, TS	MP4, MKV	MKV
PCM	MP4, MOV, MKV	MP4, MOV, MKV	MP4, MKV	MOV, MKV

For the purposes of this list, `TS` also includes M3U8 (HLS).

MKV supports every single codec combination possible in OBS Studio and is the default container. You may want to consider using fragmented MP4 or MOV for better compatibility with video editing software if compatible with your codec choices.

Container	Details
MKV (Windows/Linux Default)	MKV is a very flexible container that is compatible with every audio and video encoder supported in OBS Studio. It is failsafe, i.e. an unfinished recording due to power loss or other causes will remain playbale and recoverable. However, it is not well supported in editing software and may reuqire remuxing for use in editing software. Poor support in editing software.
MP4/MOV	MP4 is the de-facto standard for internet video. MOV is its sister format with slight differences in codec compatibility, mostly favoured on Mac platforms. MP4/MOV require "finalisation" of a file to be playable, if the writing is interrupted for any reason the file may not be recoverable. It is therefore not recommended to record to MP4/MOV directly. Excellent support in editing software.
Hybrid MP4	Combination of fragmented and regular MP4, providing the resilience of fragmentation with the wider compatibility of a regular

Container	Details
	file. Excellent support in editing software.
Fragmented MP4/MOV (macOS Default)	Fragmentation is a method of writing MP4/MOV files in self-contained chunks so that a file does not require finalisation to be usable, allowing it to offer higher compatibility than MKV while being similarly fault-resistant. May require remuxing to work properly in some editing suites when using lossless or uncompressed audio. Good support in editing software.
FLV	FLV is the container used in RTMP. It has very limited codec support (H.264/AAC) and only supports a single audio track. It is resilient like MKV but rarely supported by editing software. Poor support in editing software
MPEG-TS/HLS (M3U8)	MPEG-TS is used in various streaming protocols and offers resilience similarly to MKV with lesser codec support. When using HLS the video is written in segments that are individual `.ts` files plus a playlist that instructs a player on how to read the files. This is largely used in internet streaming. MPEG-TS is well support in editing software. HLS has poor to no support in editing software.

Video Formats

Container	H.264	HEVC	AV1	ProRes
FLV	✅	❌	❌	❌
MP4	✅	✅	✅	❌
MOV	✅	✅	❌	✅
MKV	✅	✅	✅	✅
M3U8 (HLS)	✅	✅	❌	❌

Container	H.264	HEVC	AV1	ProRes
TS	✅	✅	❌	❌

AV1 in MPEG-TS is being standardised, once finalised it will be available for both TS and HLS outputs.

Format	Details
AVC/H.264 (Default)	H.264 is the default codec in OBS. It is fairly old (standardised 2004), but ubiquitous for web video and will be playable on nearly every device or software. For most streaming services it is currently the only supported codec. Excellent support in editing software.
HEVC/H.265	Successor to H.264 (standardised 2013), offers better quality at the same bitrate/file size. However, it was not widely supported or used in web streaming due to its more restrictive licensing agreements. It is supported only via hardware encoders in OBS Studio (NVIDIA NVENC, AMD AMF, Intel QSV, Apple VT). Good support in editing software.
AV1	The newest codec supported in OBS Studio (standardised 2019), offers improved quality/file size over HEVC. Software encoding is available with SVT-AV1/libaom-av1 but requires high end CPUs for real-time compression. Also available via hardware encoders on recent GPUs from AMD (RX 7000 Series), NVIDIA (RTX 40-Series), and Intel (Arc). Not well supported in editing software yet.
ProRes	Apple's codec targeted at professional use cases where large file sizes are not a concern, various profiles available depending on quality needs. Supported via hardware and software encoders on Macs. Good support in editing software.

Audio Formats

Containers	AAC	ALAC	FLAC	Opus	PCM
FLV	✅	❌	❌	❌	❌
MP4	✅	✅	✅	✅	✅
MOV	✅	✅	❌	❌	✅
MKV	✅	✅	✅	✅	✅
M3U8 (HLS)	✅	❌	❌	✅	❌
TS	✅	❌	❌	✅	❌

Codec	Detail
AAC (Default)	Like H.264, AAC is fairly old (1997), but very widely supported while still offering decent quality at typical bitrates. Nearly all streaming services use this codec. Excellent support in editing software.
Opus	Newer and higher quality codec than AAC (2012), and freely licensed. It offers increased quality but worse compatibility. Mediocre support in editing software.
FLAC	Lossless codec, freely licensed and widely used for music, but not well supported in video files. Mediocre support in editing software.
ALAC	Apple's lossless audio codec, well supported in MOV/MP4 and by editing software. Good support in editing software.
PCM (Uncompressed)	Uncompressed audio, including 32-bit floating point recording support which allows greater flexibility in editing. Excellent support in editing software.

Similar Articles

How do I add my webcam?

Video Feedback Effect Troubleshooting

Video Capture Sources