

Main options

Command syntax: `ffmpeg [global-options] [[infile-options] [-i infile]]... [[outfile-options] outfile]...`

Display input stream information: `ffmpeg -i video.avi`

Many of the audio/video file formats [such as WAV, AIFF, MP4, MKV, AVI, etc.] are envelope containers for multiple streams of data content such as audio, video, subtitle text, still images, fonts, etc.

Global options

`-y` Overwrite output files
`-n` Do not overwrite output files

Main options

`-f fmt` force input or output file format
`-i fName` input file name. If specified with no output file, a summary of the content streams is shown
`-c codecName` specify codec [input or output]
`-fs Nbytes` specify maximum output file size in Nbytes

The file extension typically determines the file format, so the '-f' option is not needed in most cases.

Size specification

K or k	10 ³	1000 bytes	Kilobytes
M	10 ⁶	1000000 bytes	Megabytes
G	10 ⁹	1000000000	Gigabytes
Ki	2 ¹⁰	1024	Kibibyte
Mi	2 ²⁰	1048576	Mebibyte
Gi	2 ³⁰	1073741824	Gibibyte

suffices used with most numerical values

Help options

`-h` Show basic help
`-?`
`-help`
`--help`
`-h long` Show more help
`-h full` Show all options, including all format and codec specific options
`-version` Show version
`-formats` Show available formats
`-codecs` Show available codecs
`-protocols` Show available protocols
`-filters` Show available libavfilter filters
`-sample_fmts` Show available sample formats
`-bsfs` Show available bitstream filters
`-pix_fmts` Show available pixel formats
`-v value` Log output verbosity
`-loglevel value` *value* is an integer, or one of: quiet, panic, fatal, error, warning, info, verbose, debug

Subtitle options

`-slang code` Set the ISO 639 language code (3 letters) of the current subtitle stream.
`-scodec` Set the subtitle codec. This is an alias for `-codec:s`.
`codec` Use 'copy' to copy stream.
`-sn` Disable subtitle recording.
`-newsubtitle` add a new subtitle stream to the current output stream



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Video options

-b <i>bRate</i>	set video bitrate (in kbit/s)
-fixaspect	fix aspect ratio
-bt <i>tolerance</i>	set video bitrate tolerance (in kbit/s)
-maxrate <i>bRate</i>	set maximum or minimum video bitrate tolerance (in kbit/s)
-minrate <i>bRate</i>	
-bufsize <i>size</i>	set ratecontrol buffer size (in kByte)
-sameq	use same video quality as source (implies VBR)
-newvideo	add a new video stream to the current output stream

Specialist Video filters

-vf vflip	Flip the input video vertically
-vf hflip	Flip the input video horizontally
-vf transpose= <i>transSpec</i>	Rotates or flips input video
<i>transSpec</i> is a list of values, colon separated.	
dir= <i>N</i> ;passthrough= <i>orientation</i> N = 0...7 ; passthrough is one of: none, portrait, landscape	
-vf delogo= <i>sizeSpec</i> : <i>t</i> = <i>t</i> .show: <i>N</i>	Remove a logo from x,y for w,h pixels, with fuzzy band thickness <i>t</i>
-vf removelogo= <i>imgFile</i>	Use the black pixels in the bitmap image file to remove the logo

Specialist Video filters (cont)

-vf drawbox= <i>sizeSpec</i> :color-@opacity	draw a box border colour specification 0x <i>hex</i> and opacity [0...1]
<i>sizeSpec</i> is a list of values, colon separated.	
x= <i>x</i> :y= <i>y</i> position from top left corner w= <i>width</i> :h= <i>height</i> width and height	

Audio Options

-ab <i>bRate</i>	set audio bitrate (in kbit/s)
-aframes <i>N</i>	Set the number of audio frames to record. [an alias for -frames:a]
-aq <i>q</i>	Set the audio quality (codec-specific, VBR). [an alias for -q:a]
-an	Disable audio recording
-acodec <i>codec</i>	Set the audio codec. [an alias for -codec:a] Use 'copy' to copy stream.
-vol	Change the audio volume in multiples of 256 where 256 = 100% (normal) volume. e.g. 512 = 200%
-newaudio	add a new audio stream to the current output stream
-alang <i>code</i>	set the ISO 639 language code (3 letters) of the current audio stream



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Useful examples

Transcode input file to DVD PAL format	<code>ffmpeg -y -threads 8 -i inFile -target pal-dvd -ac 2 -aspect 16:9 -acodec mp2 -ab 224000 -vf pad=0:0:0:0 outFile</code>
Convert to grayscale	<code>ffmpeg -y -i inFile -flags gray outFile</code>
Create 1 minute of audio noise	<code>ffmpeg -ar 48000 -t 60 -f s16le -acodec pcm_s16le -i /dev/urandom -ab 64K -f mp2 -acodec mp2 -y noise.mp2</code>
Extract images from video	<code>ffmpeg -i foo.avi -r 1 -s WxH -f image2 outFile%03d.png</code>
Convert image file to other formats	<code>ffmpeg -i foo0122.png foo.tiff pgm, ppm, pam, pgmyuv, jpeg, gif, png, tiff, sgi</code>
Convert images to AVI file	<code>ffmpeg -f image2 -i foo-%03d.jpeg -r 12 -s WxH foo.avi</code>
Convert a WAV file to MP3	<code>ffmpeg -i source_song.wav -vn -ar 44100 -ac 2 -ab 192 -f mp3 final_song.mp3</code>
Extract audio from a video, transcoding it to MP3	<code>ffmpeg -i source.avi -vn -ar 44100 -ac 2 -ab 192 -f mp3 sound.mp3</code>
Convert .avi to .flv	<code>ffmpeg -i source.avi -ab 56 -ar 44100 -b 200 -r 15 -s 320x240 -f flv output.flv</code>
Convert .avi to animated gif	<code>ffmpeg -i video.avi animated.gif</code>

Useful examples (cont)

Attach a picture to an mp3	<code>ffmpeg -i input.mp3 -i cover.png -c copy -metadata:s:v title="Album cover" -metadata:s:v comment="Cover (Front)" out.mp3</code>
Mix a video with a sound file	<code>ffmpeg -i song.wav -i source_video.avi outvideo.mpg</code>
Write an mp3 with an ID3v2.3 header and an ID3v1 footer	<code>ffmpeg -i inFile -id3v2_version 3 -write_id3v1 1 outFile.mp3</code>
Concatenate input files	<code>cat inFile1 inFile2 ffmpeg -f mpeg -i - -vcodec copy -acodec copy outFile.mpg</code>
Encode a clip with codec with bitrate, and mp3 audio	<code>ffmpeg -i clip.avi -vcodec libxvid -b 800000 -acodec libmp3lame -ab 128 new-clip.avi</code>
Merge audio stream with video stream from different files	<code>ffmpeg -i audioS.mp4 -i videoS.mp4 -c copy -map 0:a -map 1:v outFile.mp4</code>



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