WHAT IS BITRATE

Bitrate defines the rate of data in your file and is measured in bits per second (b/s). Bitrate is one of the main controllers we use when we compress a file. A lower bitrate means a smaller file size, but also reduced quality as every frame can hold less data about colors. See page two for an example of reduced quality.

Bitrates tend to be pretty high, so we use the prefix kilo for thousands and mega for millions. In other words, 2 000 000 b/s is the same as 2Mb/s.

”Bits” always use a lower case b as a unit symbol, not to be mixed up with “Bytes”, which use a capital B. A byte (B) contains eight bits (b), so 1MB/s is equal to 8Mb/s.

Bitrate, file size, and the length of the video are all dependent on one another. If you have any two of the values you can calculate the last one. This is a good way to calculate your file size before you start exporting/converting your file. You can do that with the following formula:

$$bitrate \times length = file\ size$$

If we flip the formula, we can also find out what bitrate we need to use to achieve a certain file size.

$$20MB \div 10\ seconds = 2MB/s = 16Mb/s$$

What bitrate should I use?

Different file formats and video settings require different bitrates to achieve a good look. The main factors to keep in mind are the video resolution, frame rate, and color depth. YouTube’s table of technical specifications is a good reference when you’re choosing your bitrate.

Recommended upload encoding settings

https:/ /support.google.com/youtube/answer/1722171

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40 Mb/s
1 Mb/s