

# How Much Data Does Streaming Use? Per-Hour Data Consumption Across Video, Audio, and Video-Call Services

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## ABSTRACT

Streaming a two-hour movie in 4K uses about 14 GB of data. Streaming two hours of music uses about 0.3 GB. That 49-to-1 gap is what decides whether your data plan survives the month. We pulled the official per-hour figures from Netflix, Spotify, Apple and others, computed the audio numbers exactly from their bitrates, and put every service on one scale: gigabytes per hour, by quality.

### 0.1 Download the full study as a PDF

Prefer a formatted, citable reference? This study is also available as a journal-style PDF, "*How Much Data Does Streaming Use*," with the full per-service tables, sources, and the raw dataset as CSV. → [Download the PDF \(journal format\)](#)

**KEYWORDS:** how much data does streaming use, how much data does netflix use, spotify data usage, how many gb to stream a movie, streaming data usage

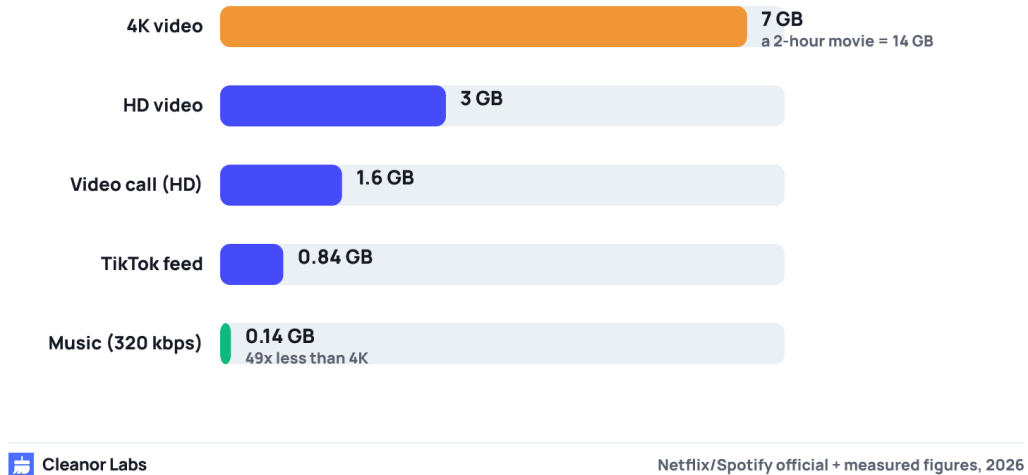
## KEY FINDINGS

- 4K video uses about 7 GB per hour; a two-hour 4K movie is about 14 GB. HD video is about 3 GB per hour.
- Music is trivial by comparison: Spotify at its top 320 kbps setting is about 0.14 GB per hour, roughly 49 times less than 4K video.
- Even "lossless" audio stays small: Apple Music Hi-Res peaks near 2.9 GB per hour, still under half an hour of 4K video.
- An HD video call runs about 1.6 GB per hour; TikTok about 0.84 GB per hour; an audio-only call is almost nothing (a few MB).
- A 50 GB data plan buys roughly 7 hours of 4K, 17 hours of HD video, 60 hours of TikTok, or 347 hours of music. If data is tight, the single biggest lever is dropping video resolution, not skipping music.

## 1. How much data does an hour of streaming use?

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Gigabytes per hour. Video is in a different universe from music.



**Figure 1.** Data used per hour: 4K video about 7 GB (a 2-hour movie is 14 GB), HD video 3 GB, an HD video call 1.6 GB, TikTok 0.84 GB, and music at 320 kbps only 0.14 GB, about 49 times less than 4K.

The single most useful fact about streaming data is that video and audio are not in the same league. An hour of 4K video moves about fifty times more data than an hour of high-quality music. Resolution is the dial that matters: going from 4K to HD roughly halves your usage, and HD to SD

roughly halves it again. Everything else, which app, which song, is noise next to that.

### 2. Video: 4K is the data hog

Video figures are adaptive, they flex with your network and the codec, but the official and measured per-hour numbers land close together across services:

Service	Low / SD	HD	4K
Netflix	0.3 to 0.7 GB	3 GB	7 GB
YouTube	0.6 GB (480p)	3 GB (1080p)	8 to 16 GB
Amazon Prime Video	0.38 GB	1.4 GB	~6.8 GB
Disney+	0.6 GB	2 GB	7.7 GB
Max (HBO)	-	2.25 GB	7.7 GB
TikTok	0.84 GB (feed)	up to 1.8 GB	-

Netflix is the reference point because it publishes exact figures: 0.3 GB per hour on Data Saver, about 3 GB in HD, and about 7 GB in Ultra HD. YouTube 4K is the wild card, its usage depends heavily on frame rate and codec, so an hour of 4K/60 can approach 16 GB while an efficient AV1 stream is nearer 8.

### 3. Audio: even lossless is tiny next to video

Audio is simple, because bitrate translates directly to data: one hour equals the bitrate in kilobits per second times 0.45 megabytes. So the numbers are exact, not estimated:

Service	Tier	Bitrate	Per hour
Spotify	Low	24 kbps	11 MB
Spotify	Normal	96 kbps	43 MB
Spotify	High	160 kbps	72 MB
Spotify	Very High	320 kbps	144 MB
Apple Music	AAC	256 kbps	115 MB
Apple Music	Lossless	ALAC	~720 MB
Apple Music	Hi-Res Lossless	up to 24/192	~2.9 GB
Amazon Music	HD	~850 kbps	383 MB
Amazon Music	Ultra HD	~3,730 kbps	~1.7 GB

The takeaway: normal music streaming is so light that worrying about it is a waste of attention. A full eight-hour workday of Spotify at the highest lossy setting is barely over 1 GB. The only audio that rivals video is hi-res lossless, and even

Apple's Hi-Res Lossless at 2.9 GB per hour is still less than half an hour of 4K.

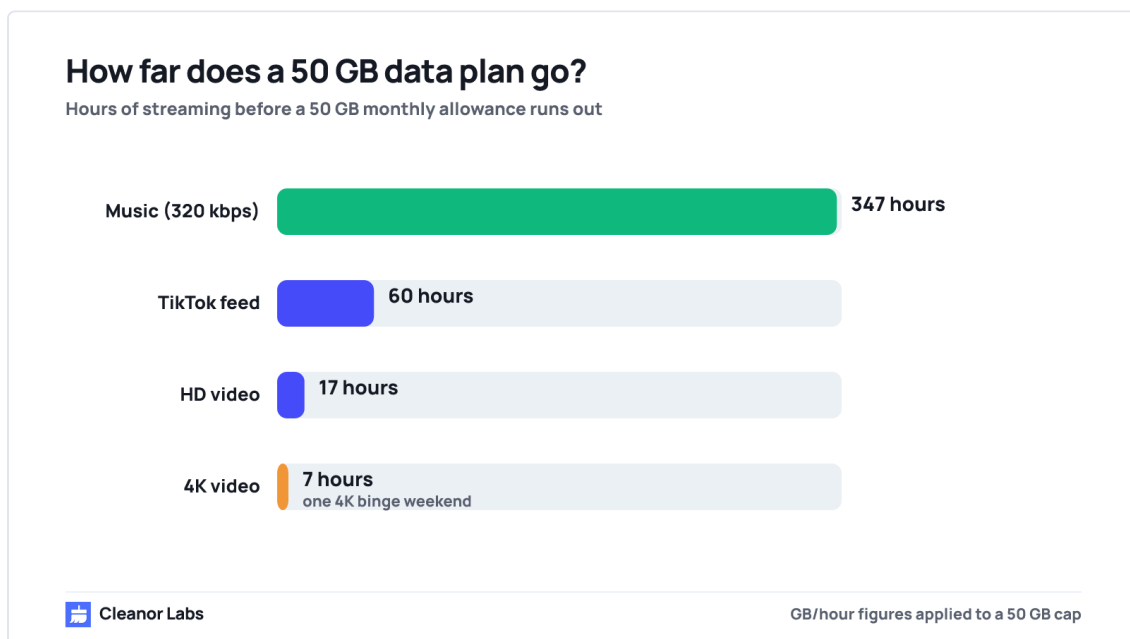
#### 4. Video calls

Service	Scenario	Per hour
Zoom	1:1 HD (720p)	~1.08 GB
Zoom	1:1 Full HD (1080p)	~1.62 GB
Zoom	Group HD	up to ~2.4 GB
Zoom	Audio only	~3 MB
FaceTime	Video	~0.25 GB
Google Meet	HD video	~0.8 GB

Group calls cost more than one-to-one because each participant's camera is a separate video stream your device downloads. Switching a call to audio-only cuts data usage by more

than 99 percent, from over a gigabyte an hour to a few megabytes.

#### 5. What it means for your data plan



**Figure 2.** A 50 GB data plan buys about 347 hours of music, 60 hours of TikTok, 17 hours of HD video, but only 7 hours of 4K video.

Put the per-hour numbers against a real allowance and the priorities become obvious. A 50 GB monthly plan is:

- About 7 hours of 4K video, roughly one binge weekend.
- About 17 hours of HD video.
- About 60 hours of TikTok.
- About 347 hours of music.

One 4K film costs the same data as more than a week of music. If you are rationing data, the fix is to stream video in HD rather than 4K and to download on Wi-Fi, not to cut back on Spotify.

## 6. How to use less data

1. Drop the resolution. HD instead of 4K roughly halves video data; SD halves it again. On a phone screen the difference is hard to see.
2. Download on Wi-Fi. Every major video and music app can cache content for offline play, which uses zero mobile data on the trip.
3. Turn on Data Saver. Netflix, YouTube and others have a low-data mode that caps resolution automatically.
4. Use audio-only for calls when you can. It cuts a video call from over a gigabyte an hour to a few megabytes.
5. Remember downloads use storage, not just data. Offline video is the fastest way to fill a phone; clearing old downloads frees space the same way clearing large videos does.

## 7. Method and sources

Video and call figures are adaptive by nature and vary with network, device, codec and frame rate; we use representative per-hour values, official where the service publishes them (Netflix's four tiers and Spotify's four bitrates are vendor-published; Amazon Music and YouTube Music bitrates are official; Disney+ and Prime Video figures come from the services' own tier labels; YouTube video, TikTok, Max and video-call figures are third-party measurements, as those

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companies publish no per-hour numbers). Audio per-hour data is computed exactly from bitrate (kbps times 3,600 seconds divided by 8 bits divided by 1,000). All values are in decimal gigabytes and megabytes. The full per-service dataset is available as CSV.

## 8. Frequently asked questions

**How much data does streaming a movie use?** A two-hour movie uses about 14 GB in 4K, about 6 GB in HD, and about 1.5 GB in standard definition, based on roughly 7, 3 and 0.7 GB per hour respectively.

**How much data does Netflix use per hour?** Netflix publishes it: about 0.3 GB per hour on Data Saver, up to about 3 GB per hour in HD, and about 7 GB per hour in Ultra HD (4K).

**How much data does Spotify use per hour?** About 144 MB per hour at the highest 320 kbps setting, 72 MB at High (160 kbps), 43 MB at Normal (96 kbps), and just 11 MB on the lowest setting. Music streaming uses far less data than most people expect.

**Does streaming music use a lot of data?** No. Even a full day of high-quality music streaming is barely over 1 GB. It is roughly 50 times lighter than 4K video, so if you are managing a data cap, video resolution is what to watch, not music.

**How much data does a video call use?** An HD video call uses roughly 1 to 1.6 GB per hour on Zoom, less on FaceTime (~0.25 GB). Switching to audio-only drops it to a few megabytes per hour.