Audio Storage & CDN Cost — Cheat Sheet

Per-codec track size, the matrix formula, both CDN billing models, and the pruning rules.

One track size (90-minute film)

Track	Codec	Bitrate	Size
Stereo (mobile)	HE-AAC v1	64 kbps	**43 MB**
Stereo standard	AAC-LC	128 kbps	**86 MB**
Stereo high	AAC-LC	256 kbps	**173 MB**
5.1 surround	E-AC-3 (DD+)	384 kbps	**259 MB**
Dolby Atmos	E-AC-3 JOC	768 kbps	**518 MB**
Dolby Atmos	AC-4	448 kbps	**302 MB**

The matrix formula and the bill

Languages × formats	**8 × 3 = 24 tracks**	one track per cell
Audio per title	**6,904 MB ≈ 6.9 GB**	≈ the whole video ladder
Storage / month	**$0.16 per title**	6.9 GB × $0.023/GB/mo
5,000-title catalogue	**≈ $794 / month**	34.5 TB of audio — cheap

Two CDN billing models

Per gigabyte	$0.01-0.085/GB	Cost = bytes x rate. Audio ~3% of egress.
95th percentile	by peak Gbps	Sample every 5 min, drop top 5%, bill the peak.

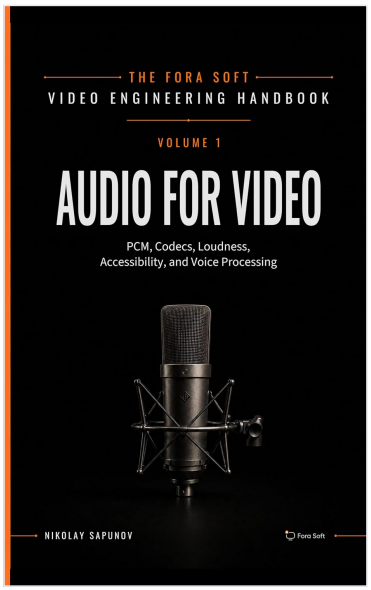
Pruning rules — tick before you ship

- ☐ Prune tracks by player telemetry, not guesswork: cut the long tail of languages and formats no one selects.
- ☐ Do not build an audio ABR ladder unless proven needed: one 128 kbps stereo rung plus a 64 kbps fallback covers nearly everyone.
- ☐ Make heavy formats opt-in, never default: the default format multiplies across your whole audience at peak.
- ☐ Migrate immersive audio to AC-4 where devices support it: Atmos quality at ~448 kbps instead of 768 kbps.
- ☐ Share one audio track across all video rungs: in HLS/DASH/CMAF audio is a separate group - do not duplicate it.

The one rule

Audio is cheap per track and expensive per matrix. The matrix grows on two axes at once - languages x formats. Egress pays for one track per play, never the whole matrix.

Companion to: 'Storage and CDN Math for Audio'
www.forasoft.com/learn/audio-for-video/articles-audio/audio-storage-cdn-cost-math



GO DEEPER · VOLUME 4 OF 7

Audio for Video: A Complete Guide to Sound in Video Products

From PCM and Codecs to Loudness, Accessibility, and Real-Time Voice Processing

By Nikolay Sapunov, CEO at Fora Soft · 1,229 pages · Kindle & paperback on Amazon

Read it on Amazon → amazon.com/dp/B0HH6PRZH1

This cheat sheet sizes each audio track, multiplies languages by formats into a bill and lists the pruning rules. Volume 4 explains what sits inside those tracks: codecs such as Opus and AAC, sampling and bit depth, channel layouts from stereo to surround, loudness and accessibility tracks.

WHAT YOU WILL FIND INSIDE

- Codec bitrates and what they buy
- Accessibility tracks and audio description
- Channel layouts from stereo to surround
- Loudness targets across a catalogue

THE FULL HANDBOOK · 7 VOLUMES · 9,000+ PAGES · ALL ON AMAZON

Vol. 1 · Video Encoding — pixels and color to H.264, HEVC, AV1, quality metrics and AI
Vol. 2 · Video Streaming I — network transport, contribution and ingest, HLS, MPEG-DASH, CMAF
Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery
Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing
Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs
Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video
Vol. 7 · AI for Video II — real-time pipelines, agents, serving, cost, compliance, verticals

Audio tracks multiplying your storage and CDN bill?

We will audit your language and format matrix against player telemetry and show which tracks to prune or move to opt-in. 250+ video products shipped since 2005.

Book a 30-min call → **WhatsApp →** **Email us →**