

Dolby AC-4 — Cheat Sheet

What AC-4 is, the four built-in features, bitrates, the AC-3/DD+/AC-4 split, and where it ships.

AC-3 vs E-AC-3 (DD+) vs AC-4

Property	AC-3	E-AC-3 / DD+	AC-4
Year standardized	1991	2004	2014
Core / max channels	5.1	up to 15.1	5.1 core → 7.1.4
Object audio	No	Via JOC	Native (7+)
Efficiency	baseline	> AC-3	~50% < DD+
Dialogue control	No	Limited	Yes, viewer
A/V frame align	No	No	Yes

Four features built into the stream

Intelligent loudness	consistent level across devices, no jumps
Dialogue enhancement	viewer raises speech vs music & effects
Advanced accessibility	audio description as a small object
A/V frame alignment	splice at video frames, no re-encode

Bitrates (same perceived quality)

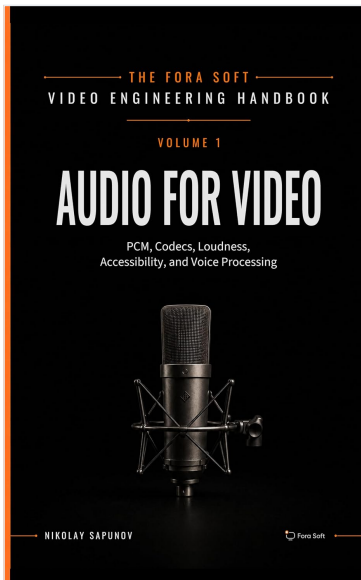
AC-4 stereo (ATSC 3.0 test)	96 kbit/s
AC-4 5.1 surround	192 kbit/s
AC-4 7.1.4 immersive	288 kbit/s
vs DD+ 5.1 (Netflix)	up to 640 kbit/s

Deployed: ATSC 3.0 NextGen TV (US, Korea), DVB / NorDig. Streaming still mostly DD+; Peacock first (2026).

Pitfall: AC-4 does NOT play everywhere AC-3 does

AC-4 only exists in hardware built since ~2017. Older TVs, soundbars, set-top boxes cannot decode it.

For a mixed device fleet, fall back to AC-3 / DD+ or detect capability and serve the right format.



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This sheet compares AC-3, DD+ and AC-4 and flags where AC-4 will not play. Volume 4 covers the ground under that decision: audio codecs and their trade-offs, channels and layouts, loudness and LUFS targets, and accessibility features such as audio description and dialogue control.

WHAT YOU WILL FIND INSIDE

- Audio codecs compared for broadcast and streaming
- Loudness, LUFS and dialogue normalisation
- Channel layouts from stereo to immersive
- Accessibility: audio description and dialogue control

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