AV1 Deployment Checklist 2026

SVT-AV1 recipes, hardware support, CRF cheat sheet, four-stage deployment plan

Companion to article 3.7 of Block 3 (Codec Evolution). Print on A4 or US Letter. Fora Soft — 250+ shipped video projects since 2005.

AV1 in one paragraph — the royalty-free top-of-line codec for 2026

- **AV1:** AOMedia Video 1; spec frozen Jun 2018; ~30% below HEVC, ~50% below H.264 at matched VMAF
- **Licence:** AOMedia Patent License 1.0 - royalty-free for AOMedia members; Sisvel pool claims contested
- **Reference encoders:** libaom (slow), SVT-AV1 (production, Intel+Netflix), rav1e (Rust)
- **Universal decoder:** dav1d (VideoLAN); saturates 8-16 CPU cores at 4K60

AV1 hardware decode footprint — May 2026

Platform	Decode lands in	Encode lands in	Notes
Intel CPU iGPU	Tiger Lake Sep 2020	Arc / 14th-gen iGPU	Earliest mainstream HW decode
NVIDIA dGPU	RTX 30 Sep 2020	RTX 40 Oct 2022	RTX 40+ = real-time AV1 NVENC
AMD GPU	RDNA 2 Q4 2020	RDNA 3 Dec 2022	VCN 4 = AV1 encode
Apple silicon	A17 Pro / M3 Sep 2023	M5 Pro / M5 Max Mar 2026	Encode round-trip completed
Android flagship	Tensor / SD8 Gen 1 (2021-22)	Tensor G3+ / SD8 Gen 3+	Universal on post-2022 flagships
Smart TV	Most 2020+ models	n/a (cloud encode)	2023+ TVs ship AV1 at 4K60
iPhone 14 / earlier	NO hardware decode	n/a	Ship HEVC ladder fallback
Mid-range Android pre-2022	Software dav1d only	n/a	1080p comfortable, 4K marginal

FFmpeg + SVT-AV1 recipes you will actually use

1080p60 SDR VOD (production sweet spot, preset 5, 10-bit, CRF 28):

```
ffmpeg -i in.mxf -c:v libsvtav1 -preset 5 -crf 28 -b:v 0 -pix_fmt yuv420p10le \
  -g 240 -svtav1-params tune=0:film-grain=8 -c:a libopus -b:a 128k out.mkv
```

4K HDR10 (BT.2020 PQ), constant quality preset 3:

```
ffmpeg -i master.mxf -c:v libsvtav1 -preset 3 -crf 22 -pix_fmt yuv420p10le \
  -color_primaries bt2020 -color_trc smpte2084 -colorspace bt2020nc \
  -svtav1-params tune=0:enable-hdr=1 -c:a copy out_4k_hdr.mkv
```

Live 1080p60 ingest, NVIDIA RTX 40+ hardware encoder:

```
ffmpeg -hwaccel cuda -i in -c:v av1_nvenc -preset p4 -tune ll -cbr 1 \
  -b:v 4M -g 60 -keyint_min 60 -c:a libopus -b:a 96k -f mpegts udp://...
```

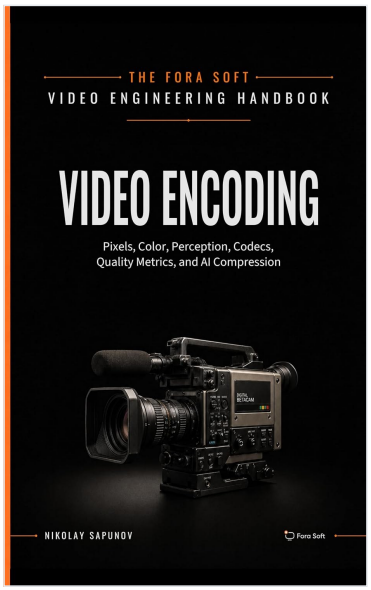
SVT-AV1 CRF cheat sheet (CRF != x265 CRF)

- **CRF 18-22:** Near-transparent; archival; 4K HDR masters
- **CRF 22-26:** Production VOD 1080p-4K; the default range
- **CRF 26-30:** Bandwidth-priority streaming; mobile-first content
- **CRF 30-36:** Low-bitrate device tail; 480p / 360p ladders

Four-stage AV1 rollout plan for a streaming product

1. **Audit.** Measure how many of your viewers have AV1 hardware decode (~80% by Netflix 2025 cert data).
2. **Pilot.** Add an AV1 SVT preset 5 ladder for top-traffic 1080p/4K assets; keep HEVC + H.264 fallback.
3. **Expand.** Move 30-50% of catalogue to AV1 + HEVC dual ladders; track CDN savings vs encoder cost.
4. **Default.** AV1 + H.264 floor for all greenfield; HEVC retained only while pre-A17-Pro Apple tail matters.

Companion to: 'AV1: The New Internet Standard And Where It Stands In 2026'
www.forasoft.com/learn/video-encoding/articles/av1-state-2026



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Video Encoding: A Complete Guide to Video Compression

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This checklist gets an AV1 ladder into production: decode footprint, SVT-AV1 recipes, CRF ranges and a four-stage rollout. Volume 1 explains why those settings behave as they do: AV1 coding tools against H.264 and HEVC, rate control and CRF, 10-bit and HDR signalling, and measuring quality with VMAF before you switch traffic.

WHAT YOU WILL FIND INSIDE

- AV1 coding tools compared with H.264 and HEVC
- Encoder presets: the speed versus efficiency trade
- VMAF and BD-rate for ladder decisions
- CRF, two-pass VBR and CBR rate control
- 10-bit and HDR10 signalling in AV1

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