

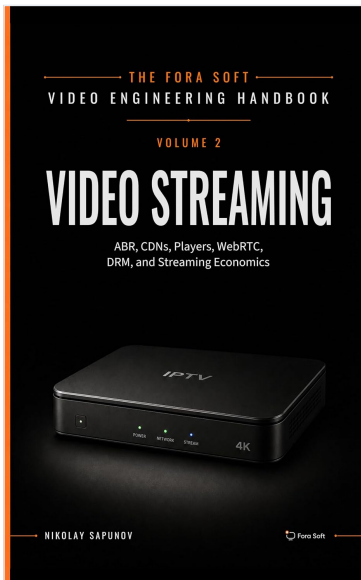
Smart TV player cheat sheet — codecs, DRM, engines (2026)

Six platforms, four programming models. Per-platform native player API, supported formats and DRM, top-tier codec, market band, and the single biggest pitfall.

Platform · model	Native player API	Supported formats	Supported DRM	Top-tier codec	Market band	Single biggest pitfall
Samsung Tizen HTML5 web app · Tizen 9.0 (2025)	AVPlay (JS API on WebKit-fork engine); HTML5 video as fallback	HLS · DASH · Smooth · progressive	PlayReady primary · Widevine Modular secondary	HEVC (H.265)	~23% US · ~19-23% global	<i>Register every remote-control key via tizen.tvinputdevice.registerKey() or it never fires.</i>
LG webOS HTML5 web app · webOS 25 (2025-2026)	HTML5 video + MSE/EME · Chromium fork engine (webOS 6+)	HLS (v7 limited) · DASH via MSE · progressive	Widevine Modular · PlayReady	HEVC (H.265)	~12-25% global	<i>Older webOS 5 TVs run HLS Pantos draft 14 (2014); ship a JS player on MSE rather than rely on native HLS.</i>
Roku OS BrightScript + SceneGraph	Video SceneGraph node · streamFormat = hls dash	HLS · DASH	PlayReady · Widevine (per drmParams on content node)	HEVC; AV1 on newer models	~28% US · ~10% global	<i>Entry-level Roku Express has 256 MB RAM and sub-1-GHz single-core; certification fails on UI that runs only on Ultra.</i>
Android TV / Google TV Kotlin/Java · Media3 1.10 (Mar 2026)	ExoPlayer · MediaDRM · Leanback or Compose for TV	HLS · DASH · Smooth · progressive	Widevine L1 (hardware-backed); PlayReady not deployed	HEVC + AV1	~35-40% global	<i>PlayReady is not on Android TV; multi-DRM catalogues still ship PlayReady on every other surface.</i>
Fire TV · Fire OS Kotlin/Java · AOSP fork · ExoPlayer · LEGACY	ExoPlayer through standard Android stack	HLS · DASH · Smooth · progressive	Widevine L1; PlayReady absent	HEVC; AV1 on modern models	~8% global; installed base only	<i>No new Fire TV Sticks ship Fire OS after 2025; investing in Fire OS-only features is investing in a shrinking surface.</i>
Fire TV · Vega OS React Native + web · Linux base · NEW (Oct 2025)	Vega player API via Amazon Vega toolchain	HLS · DASH	Widevine · PlayReady	HEVC + AV1	All future Fire TV Sticks	<i>Android .apk does NOT run on Vega; it is a forced rewrite, not a recompile.</i>
Hisense Vidaa OS HTML5 web app · custom Linux engine	Vidaa media-player plugin + DRM manager + streaming manager	HLS · DASH · Smooth · HTTP progressive	PlayReady · Widevine	HEVC; AV1 newer models	~3-8% global · growing in budget segment	<i>Hisense + Toshiba TV partnership — skip Vidaa and you give up the entire budget-TV slice of Europe and Asia.</i>

One source, three DRMs — the 2026 recipe:

CMAF source (H.264 + H.265 ladders) · cbcs Common Encryption · Widevine for non-Apple · PlayReady where present · FairPlay on Apple.



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Video Streaming: A Complete Guide to Video Delivery

From ABR and CDNs to Players, WebRTC, DRM, and the Economics of Streaming

By Nikolay Sapunov, CEO at Fora Soft · 1,182 pages · Kindle & paperback on Amazon

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This sheet lists player APIs, formats, DRM, codecs and the biggest pitfall for six smart-TV platforms. Volume 3 covers players in depth: ABR and bitrate ladders, DRM with Widevine, PlayReady and FairPlay, subtitles and trick play, and QoE monitoring across devices.

WHAT YOU WILL FIND INSIDE

- Players across devices and engines
- ABR ladders for TV hardware
- Multi-DRM and Common Encryption
- QoE monitoring on living-room devices

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