Smart TV (Tizen & webOS) — One-Page Spec Sheet

The web-app model, native media path, DRM, encryption-scheme reality, and certification gate for both TV platforms. Engineering reference; OS, web-engine, and store-policy details change per model year — confirm against current docs.

1 · SAMSUNG TIZEN

- **App** — web app (HTML/CSS/JS) built in Tizen Studio; every Samsung TV since 2015 runs Tizen.
- **Media** — AVPlay API for adaptive streaming, 4K UHD, subtitles, and DRM; HTML5 video for simple clips.
- **Formats** — both HLS and MPEG-DASH play through AVPlay.
- **Certify** — Samsung TV Seller Office; package as a widget, pick model groups, certify each version.

2 · LG WEBOS

- **App** — web app (HTML/CSS/JS), Enact (React-based) UI; webOS TV SDK (ares-* tools) + Luna Service API.
- **Media** — HTML5 media + webOSTV.js; HLS is native, MPEG-DASH is not officially supported.
- **Quirk** — align audio and video HLS segment durations, or webOS playback can fail.
- **Certify** — LG Seller Lounge + App Self Checklist; ~130M+ TVs, ~16% share.

3 · DRM & SCHEME (BOTH)

- **Systems** — PlayReady + Widevine via EME (W3C). FairPlay is Apple-only — never on TV.
- **Scheme** — Common Encryption (ISO/IEC 23001-7): cenc (CTR) and cbcs (CBC) are not interchangeable.
- **TV reality** — older fleet (pre-2019) leans on cenc (CTR); cbcs-only carried from mobile breaks it.
- **PlayReady 2026** — v4.8 (11 Jun 2026) revocation change is a license-server job; the TV client is frozen.

4 · FRAGMENTATION TAX

- **Test old** — validate on the oldest model year you support, not the newest.
- **Matrix** — ~9+ model years per OS, each with a different web engine and memory budget.
- **Support matrix** — the lever: narrow it to cut cost, widen it to gain reach.
- **Quality** — PlayReady/Widevine security levels gate HD/4K; HDCP is a separate output layer.

THE RULE — ONE WEB APP, A DECADE OF TVS

Samsung Tizen and LG webOS both run your app as a web app — HTML, CSS, and JavaScript in the TV's built-in browser engine — so a single codebase can target both, while video and content protection bind to each platform's native plumbing (AVPlay on Tizen, the HTML5-plus-EME path on webOS). Both protect content with PlayReady and Widevine through Encrypted Media Extensions; Apple's FairPlay never appears on TV. The detail that breaks first builds is the encryption scheme: on phones the convergence is "encrypt once with cbcs", but a large slice of the installed TV fleet predates reliable cbcs support and needs the older cenc (CTR) scheme, so a cbcs-only catalogue can play in the lab and black-screen on a 2018 set. Decide your cenc/cbcs strategy before you encrypt, produce HLS for webOS, and align HLS segment durations. The real cost of TV is not writing the app once; it is the device-fragmentation tax — testing on the oldest model, certifying per platform through Samsung Seller Office and LG Seller Lounge, and protecting content across roughly a decade of model years whose web engine, memory, and DRM behaviour all differ. Set the support matrix deliberately, and re-check the PlayReady 4.8 (June 2026) revocation change against your license server before launch.



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This spec sheet covers the web-app model, media path, DRM schemes and certification gates for Tizen and webOS. We wrote seven volumes on the video stack. Start with Volume 3 for players and DRM, then Volume 2 for HLS, DASH and CMAF packaging, and Volume 1 for codecs on TV hardware.

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- Players and multi-DRM on TVs
- HLS, DASH and CMAF packaging
- cenc and cbcs encryption schemes
- Codec support across model years

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