

iOS streaming gotchas — one-page checklist

Every playback-attribute, format, DRM, and AirPlay gate that has caught at least one team off guard.

Playback attribute traps

- ☐ `<video playsinline>` — without it, the iPhone goes fullscreen on play.
- ☐ `<video muted>` — Safari refuses to autoplay any video with audio.
- ☐ `<video autoplay muted playsinline>` — the canonical iOS recipe.
- ☐ `preload="auto"` is rate-limited on cellular; test on a metered network.
- ☐ Use `<source type="application/vnd.apple.mpegurl">` for the HLS URL.
- ☐ `controls` attribute is the simplest cross-Safari UI; chrome works.

Safari native HLS gotchas

- ☐ Safari plays HLS only — `<video src="movie.mpd">` fails silently.
- ☐ FairPlay via EME `com.apple.fps` is the only DRM Safari accepts.
- ☐ LL-HLS works through native `<video src=m3u8>` — no JS path.
- ☐ Apple's HLS Authoring Spec is the conformance gate, not RFC 8216.
- ☐ Use `canPlayType('application/vnd.apple.mpegurl')` to feature-detect.
- ☐ Pause-on-lock is the default; cannot be overridden in Safari.

Managed Media Source gotchas

- ☐ `ManagedMediaSource` shipped in Safari 17.1 (Nov 2023) — iPhone only.
- ☐ On iPadOS Safari, MSE has been available since 2022 (Safari 16).
- ☐ `hls.js` auto-detects `window.ManagedMediaSource` and prefers it.
- ☐ Shaka Player added MMS support during 2024-2025.
- ☐ Listen for `startstreaming` / `endstreaming` to back off when locked.
- ☐ MMS does not unlock LL-HLS in JS; use native `<video>` for sub-3s.

AVPlayer (native app) checklist

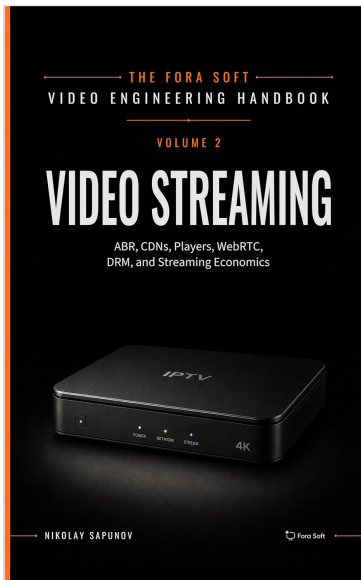
- ☐ `AVPlayer(url:) + AVPlayerViewController` = full system chrome in 3 lines.
- ☐ Use `AVContentKeySession` (iOS 11+) for FairPlay, not the legacy delegate.
- ☐ `preferredPeakBitRate` and `preferredMaximumResolution` control ABR.
- ☐ PiP needs `allowsPictureInPicturePlayback + UIBackgroundModes=audio`.
- ☐ Background audio needs `AVAudioSession` category `.playback` + activation.
- ☐ WWDC 2025: `AVMetrics` now covers progressive download + offline HLS.

DRM and encryption

- ☐ FairPlay is the only DRM on every iOS surface — no Widevine, no PlayReady.
- ☐ Use `cbcs` CENC mode; `cenc` (CTR-mode) does not play on Apple devices.
- ☐ One CMAF source, three DRMs: FairPlay on Apple, Widevine + PlayReady elsewhere.
- ☐ FairPlay needs an Apple-issued application certificate per deployment.
- ☐ Offline FairPlay key persistence is supported on `AVContentKeySession` only.
- ☐ FPS license servers: PallyCon, EZDRM, Axinom, BuyDRM, AWS, in-house.

Decision shortcuts

- ☐ HLS-only catalogue + simple website → `<video src=m3u8>`. Done.
- ☐ Cross-platform player that also plays DASH → `hls.js` + MMS on iPhone.
- ☐ Premium OTT with offline + FairPlay → native app + `AVPlayer`.
- ☐ Sub-3-second live on iPhone → LL-HLS through native `<video src=m3u8>`.
- ☐ Podcast-style background audio → native app; Safari pauses on lock.
- ☐ Picture-in-picture + AirPlay 2 → native app for full system integration.



GO DEEPER · VOLUME 3 OF 7

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 checklist collects the Safari, AVPlayer, Managed Media Source and FairPlay traps that break playback on iPhone. Volume 3 covers the player side in depth: ABR and rung selection, players and stall recovery, trick play and subtitles, DRM including FairPlay, and QoE monitoring to see what iOS viewers actually get.

WHAT YOU WILL FIND INSIDE

- Player architecture, ABR and stall recovery
- Subtitles and trick play across devices
- DRM in practice: FairPlay, Widevine, PlayReady
- QoE monitoring per platform and device

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