

Multi-DRM Cheat Sheet

DRM × platform × encryption mode × max resolution × license-server vendor — Widevine, FairPlay, PlayReady at a glance.

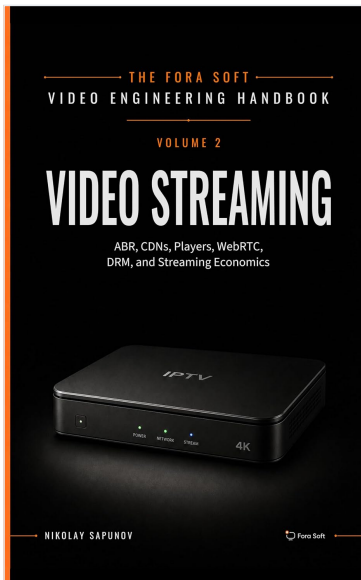
DRM matrix — the three you ship

DRM	Where it ships	Modes	Tiers	Max resolution	License-server protocol
Widevine	Chrome · Firefox (licensed) · Edge non-Windows · Android · Android TV · ChromeOS · Linux · Chromecast	cenc · cbcs	L1 · L2 · L3	L1: 4K HDR · L2: 1080p (deprecated) · L3: 480p	HTTPS POST · Google Widevine Protobuf challenge / response (modular)
FairPlay Streaming	Safari macOS · Safari iOS / iPadOS · tvOS · AVFoundation	cbcs only	Software · Secure Enclave	Enclave: 4K HDR (A7+ / Apple Silicon / Apple TV 4K) · Software: 720p-1080p	SPC (Server Playback Context) out · CKC (Content Key Context) in
PlayReady	Edge on Windows · Windows UWP · Xbox · Samsung Tizen · LG webOS · Hisense Vidaa · STB family	cenc · cbcs	SL150 · SL2000 · SL3000	SL3000: 4K HDR · SL2000: 1080p · SL150: testing only	SOAP licence challenge over HTTPS (PlayReady protocol)

CENC modes (ISO/IEC 23001-7)	EME licence flow	Four mistakes everyone makes first
cenc — AES-128 CTR, full subsample. Pre-2018 DASH default.	1. requestMediaKeySystemAccess() — browser picks supported key system.	1. Encrypt cenc-only — locked out of FairPlay later.
cbcs — AES-128 CBC pattern (1-of-10). 2026 default: required by FairPlay, accepted by Widevine and PlayReady. One encryption serves HLS + DASH.	2. encrypted event — PSSH → CDM.	2. No persistent-licence flag — triples licence-server bill.
cbc1, cens — defined but rarely deployed.	3. generateRequest() → licence-server HTTPS POST.	3. Same licence to every device — TV catalogue fails studio review.
	4. update() — CDM installs key.	4. Skip the licence-server load test — premiere event throttles.
	5. Renewal via message event.	
	Typical RTT 15–40 ms · server 70–180 ms.	

Decision in one line

Web + mobile: Widevine + FairPlay. Add Smart TV or Xbox: + PlayReady. 4K HDR: hardware tier (L1 · SL3000 · Secure Enclave) + HDCP 2.2 on the cable.



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This sheet shows which DRM ships where, the CENC modes, the EME licence flow and the classic mistakes. Volume 3 covers DRM as part of the delivery stack: licence servers and security levels, players and EME, HLS and DASH packaging with cbcs, and what protection costs to run.

WHAT YOU WILL FIND INSIDE

- Widevine, FairPlay and PlayReady side by side
- EME licence flow inside the player
- cbcs and CENC packaging for HLS and DASH
- Security levels, HDCP and 4K output rules

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