The VMS Vendor Landscape — Buyer's Field Guide

Read the market by family first, then by four axes. Match your deployment to a family before you shortlist a single vendor.

The four families at a glance

	Enterprise on-prem	Cloud VSaaS	Open hybrid	Custom-built
Deployment	Your servers, your network	Vendor cloud, browser + mobile	Commodity hardware you pick	Wherever you put it
Open SDK?	Yes — mature	Limited — vendor API	Yes — dev-friendly	You write it
Cost shape	One-time per channel + support	Per camera per month, forever	Moderate one-time per channel	Build cost + maintenance
Best fit	>500 cams, multi-site	5–200 cams, many sites, no IT	Mid-market, ONVIF choice	Regulated, proprietary AI
Examples	Genetec, Milestone, Bosch	Verkada, Eagle Eye, Rhombus	Nx Witness, Hanwha WAVE	Open parts + V.A.L.T.

The four axes to compare on (after you pick the family)

- Where it runs — on-prem, cloud, or hybrid? (the family answers most of this)
- How open — ONVIF camera support AND a developer SDK you can build on?
- Who owns the AI — vendor-controlled, SDK-extendable, or fully yours?
- Which rules — does it pass NDAA 889 / GDPR / BIPA for your jurisdiction?

The two cost shapes

CapEx (on-prem, open hybrid): a one-time licence per camera plus annual support — a lump up front, then a slow climb. OpEx (cloud VSaaS): a recurring per-camera-per-month fee — cheap to start, rising forever. Put both on the same five-year footing; they cross. Below the crossover, VSaaS convenience wins; above it, the monthly meter overtakes a one-time licence. (Figures illustrative — use your own quotes.)

The compliance filter — it runs before features

NDAA Section 889 (US, Pub. L. 115-232): federal buyers and their contractors cannot use Hikvision, Dahua, Hytera, Huawei, or ZTE equipment — a whole hardware tier off the table. GDPR Art. 35 (EU): face recognition or behaviour analytics need a Data Protection Impact Assessment, and a face template is special-category data (Art. 9). Illinois BIPA (740 ILCS 14): written consent before a face template, with a private right to sue. Engineering and procurement guidance, not legal advice — confirm with qualified counsel.

Choose a family

On-prem if…	Cloud VSaaS if…	Open hybrid if…	Custom if…
>500 cameras, multi-site, integration-heavy, or cloud not allowed.	5–200 cameras, many small sites, no on-prem IT, want AI on day one.	Mid-market budget, want ONVIF camera choice, keep your own storage.	Regulated workflow, proprietary AI to own, or you sell VMS yourself.

Standard floor: any VMS — bought or built — should meet IEC 62676 and keep the camera boundary on ONVIF. 'ONVIF-conformant' is a baseline, not full feature parity.



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This guide sorts the VMS market into four families and four axes before any shortlist. We wrote seven volumes on the video stack under every family: Volume 6 covers analytics, detection and search, Volume 7 compliance and biometric rules, and Volume 1 codecs.

WHAT YOU WILL FIND INSIDE

- Detection, tracking and video search
- Codecs and ONVIF camera streams
- Biometric rules: GDPR, BIPA
- Real-time analytics pipelines

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Not sure whether to buy, wrap or build your VMS?

We will match your deployment to a VMS family, check compliance gates, and build the custom layer where market tools fall short. 250+ video products shipped since 2005.

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