

Cloud & Hybrid Storage Decision Guide

The price tag is storage; the bill is bandwidth and egress. Figures are representative 2026 rates - confirm against current pricing.

Three ways to put surveillance in the cloud

Model	What goes up	Upload load	Best for
Cloud-only (VSaaS)	Every camera, continuously	Highest	Few cameras, small sites
Cloud backup	A copy of local recording	Medium	Off-site survival
Hybrid edge + cloud	Events, previews, backup	Lowest	Most multi-camera systems

Size the upload bandwidth first

Sustained upload = sum of camera bitrates. 1080p H.265 ~2 Mbps; 4K H.265 ~4-6 Mbps. Example: 40 x 2 Mbps = 80 Mbps, 24/7. Most business internet is asymmetric (far less upload than download), so cloud-only recording often exceeds the pipe. Hybrid uploads only events and previews - a few Mbps.

What cloud storage costs - three meters

Meter	Typical 2026 rate	The trap
Storage (hot / instant)	~\$0.023/GB-mo (~\$23/TB)	Looks cheap read in isolation
Storage (deep archive)	~\$0.001/GB-mo (~\$1/TB)	12-48 h to read - not for active footage
Egress (data out)	~\$0.09/GB (~\$90/TB)	Every export / investigation pays it
Retrieval (thaw archive)	per-GB fee + wait	Too slow for an active incident

When cloud beats buying disks - and when not

Cloud / hybrid wins: many small sites, off-site survival, no hardware to own. On-prem wins: many cameras recording continuously at one site (the upload wall + egress), frequent fast playback, footage that must stay on-site or in-country. Most systems land on hybrid: local for the firehose and fast reads, cloud for backup and reach.

Where the footage lives is a privacy choice

GDPR Art. 5(1)(e): keep footage no longer than necessary - delete at the legal maximum. Chapter V: sending EU footage outside the EEA needs adequacy / SCCs / BCRs. An in-region data center does not by itself settle the transfer question (EDPB Guidelines 05/2021).

Your site - size the upload and pick a model

Cameras x bitrate	Sustained upload	Model	Retention (days)
___ x ___ Mbps	___ Mbps	_____	_____
___ x ___ Mbps	___ Mbps	_____	_____
___ x ___ Mbps	___ Mbps	_____	_____
___ x ___ Mbps	___ Mbps	_____	_____

Representative 2026 cloud rates (a major provider); Azure / GCP differ in the cents. The three-meter pattern, not the exact cent, is the point. This is engineering guidance, not legal advice - confirm retention and cross-border rules with counsel.



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This guide compares cloud-only, cloud backup and hybrid storage for surveillance and prices the three cloud meters. Our seven-volume handbook covers the video stack behind those choices; start with Volume 7 for cost per stream-hour and compliance, then Volume 6 for analytics at the edge, and Volume 1 for encoding bitrates.

WHAT YOU WILL FIND INSIDE

- Cost per stream-hour (Vol. 7)
- EU AI Act and data rules (Vol. 7)
- Deployment topologies: edge or cloud (Vol. 6)
- H.264, HEVC and AV1 bitrates (Vol. 1)

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Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery

Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing

Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs

Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video

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Deciding between on-prem, cloud and hybrid storage for your cameras?

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