

Cloud Video Analytics - Cost Worksheet

Price the three cloud meters for your own fleet before you commit. Uploading is free at the cloud; compute, storage, and egress are not. Match the billing model to the workload.

A. Get the video up (bandwidth)

- Count cameras x bitrate = sustained upload (e.g. 50 x 2 Mbps = 100 Mbps).
- Confirm the site's internet UPLINK can hold that 24/7 - upload is the constraint.
- Ingress to the cloud is free; you pay your ISP for the uplink, not the cloud.
- If the uplink cannot hold continuous upload, you need edge pre-filtering (see hybrid).

B. Pick the compute model

- Occasional / clip jobs: a per-minute API (~\$0.10/min) is cheap because you use it rarely.
- Continuous fleet: per-minute API explodes (~\$4,320/camera/month) - do NOT use it.
- Continuous fleet: rent GPUs (~\$0.80/hr L4, ~24 streams) ~\$24/camera/month compute.
- Find the camera-count where the per-minute API stops being cheaper than a GPU.

C. Storage and egress

- Storage: GB/camera/month x retention x ~\$0.023/GB-month (grows with retention window).
- Egress: every GB pulled back to view or export costs ~\$0.09/GB (first 100 GB free).
- View footage locally where possible - streaming up and back down doubles the egress.
- Decide what is stored in the cloud vs kept on a local recorder.

D. The cross-border legal gate

- Is the video personal data leaving the EEA? GDPR Chapter V needs a transfer mechanism.
- US cloud today: the EU-US Data Privacy Framework (valid, but under appeal in 2026).
- Biometric video (faces): confirm the legal basis FIRST (EU AI Act, GDPR Art. 9, BIPA).
- Conservative default: keep recognizable video in-region; send the cloud only metadata/clips.

Remember: the cloud's meters are priced for occasional, modest, or spiky use. Pointing a per-minute API at many cameras running continuously is the most expensive way to do the job - which is why most large systems pre-filter at the edge and send the cloud only events and clips. Engineering guidance, not legal advice. Rates are representative US list prices (2026) and vary by region, commitment, and provider. Sources: AWS Rekognition / EC2 G6 / S3 pricing; Google Cloud Video Intelligence pricing; GDPR Reg. (EU) 2016/679 Ch. V; EU-US Data Privacy Framework (2023); EU AI Act Reg. (EU) 2024/1689; Illinois BIPA 740 ILCS 14.