

ACTi

Physical Security End-to-End Solution Provider

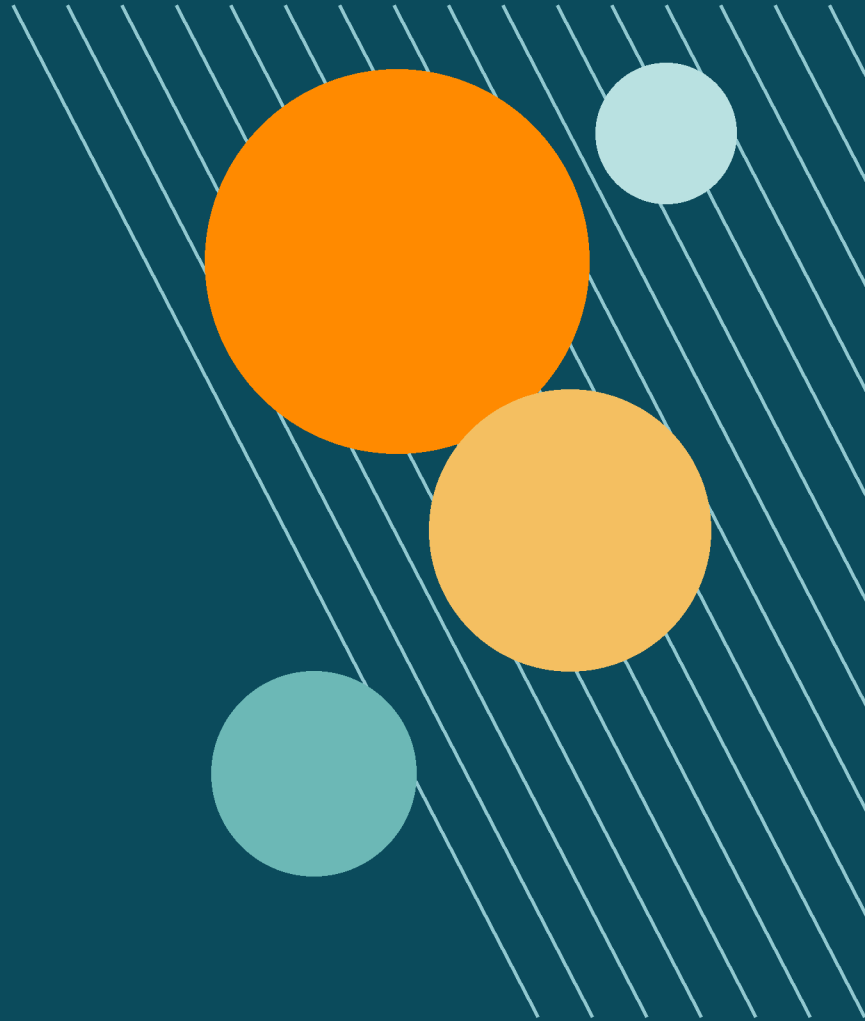
White Paper | Cloud NVR

CLOUD NVR

A practical white paper for scalable off-site recording,
secure access, and hybrid surveillance operations

Prepared by ACTi Corporation

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Document purpose

Purpose and audience

This white paper explains cloud NVR as a professional video-recording option and positions ACTi Cloud NVR within practical security architectures. It is written for system integrators, consultants, security managers, facility teams, IT teams, managed-service providers, and end users evaluating off-site recording, remote access, temporary-site deployment, mobile surveillance, or hybrid migration.

Planning focus: Evaluate cloud NVR as an end-to-end evidence service - camera capture, connectivity, retention, user access, playback, export, continuity, privacy, and operating responsibility.

1. Executive Summary

Cloud NVR moves the primary recording and storage function from an on-site NVR server to a cloud service. ACTi presents the service as a way to avoid the cost and maintenance burden of local NVR hardware, while keeping recordings available through client applications.

The official product page identifies four especially relevant conditions: sites without personnel to maintain local servers, cameras installed inside vehicles, deployments where recordings should not be physically accessible or removable on site, and temporary locations. [1]

ACTi lists generic recording and motion-triggered recording options, support across camera resolution classes, retention choices from 7 to 180 days, one-year and two-year contract options with flexible extensions, and scaling to an unlimited number of cameras. Service fees are defined per camera per month. [1]

Core message

Cloud NVR should not be evaluated only as outsourced storage. It is an operating model that changes where evidence is retained, who maintains the recording platform, how bandwidth is engineered, how users reach live and recorded video, and how the project handles cybersecurity, privacy, service continuity, and long-term cost.

Key takeaways

- The strongest use cases are distributed sites, temporary deployments, mobile cameras, locations with limited local IT support, and applications where off-site evidence storage reduces physical theft or tampering risk.
- A per-camera subscription can simplify scaling and reduce on-site server maintenance, but the design must compare recurring service costs with local hardware, storage, support, and replacement costs.
- Recording quality depends on the complete upstream path: camera bitrate, motion profile, available upload bandwidth, Internet stability, latency, and cloud ingest behavior.
- Retention must be selected from operational and legal needs, not only from the lowest service tier.
- Hybrid architecture is useful when some channels remain local while other channels are managed in the cloud, or when migration is phased over time. [1]

Procurement principle

Specify the required business outcome: which sites and cameras are covered, how many days of evidence are needed, what happens during connectivity loss, who administers users, how video is exported, what service availability is required, and how the solution will evolve if channels move between local and cloud recording.

2. About ACTi Corporation

ACTi Corporation is the writer and publisher of this document. ACTi is a Taiwan-based international company founded in 2003 and serving customers in more than 100 countries. ACTi states that it has more than 20 years of security-industry experience and has been a pioneer in video-based security technology development and innovation. [2]

ACTi positions itself as a physical security end-to-end solution provider. Its public portfolio covers video surveillance, access control, control-center systems, system management, AI-enabled solutions, integration, and cloud-related solution concepts. The surveillance ecosystem includes IP and analog cameras, recording platforms, video management software, workstation applications, web clients, and integration with alarm, intercom, access-control, sensors, IoT devices, and third-party systems. [2]

This end-to-end scope is relevant to cloud NVR projects because a recording subscription is only one layer of the security workflow. Cameras, client access, incident response, user management, hybrid deployment, and integration must operate as one system.

Why ACTi is relevant to cloud NVR projects

ACTi strength	Project relevance
End-to-end system scope	Cloud recording can be planned together with cameras, clients, local recording, central management, access control, alarms, and third-party systems.
Security-industry experience	ACTi reports more than 20 years of experience and global adoption across commercial, government, infrastructure, and vertical-market requirements. [2]
Cloud and hybrid approach	The Cloud NVR page supports cloud-managed channels, local NVR channels, hybrid combinations, and migration in either direction. [1]
Integrator-oriented planning	System integrators can design subscriptions, camera groups, retention, connectivity, user access, and support responsibilities around the needs of each site.

3. Definition of "Cloud NVR"

A cloud NVR is a network video recording service in which camera video is transmitted over an Internet or wide-area network connection to a cloud-hosted recording platform. The service performs the primary recording and retention function, while authorized users access live video, playback, search, and export through supported client interfaces.

This differs from a conventional NVR, where recording software and storage are located at the site or in a customer-controlled data center. A cloud NVR can reduce dependence on local server hardware, but it increases the importance of upstream bandwidth, connectivity continuity, service governance, and account security.

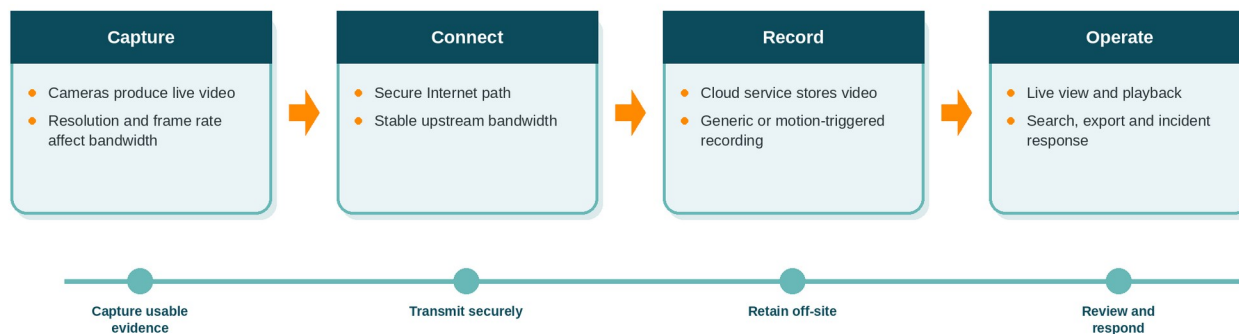
Cloud NVR vs. related concepts

Term	Meaning	Common misunderstanding
Cloud NVR	Primary video recording and retention are delivered as a cloud service.	It is not simply remote viewing; the recording location, service responsibility, and retention model are different.
Local NVR	Recording server and storage are deployed at the customer site or private facility.	Local equipment gives physical control but still requires maintenance, capacity planning, security, and lifecycle replacement.
Hybrid recording	Some channels are managed in the cloud while others remain on local NVR servers.	Hybrid does not have to be permanent; it can support phased migration or different risk profiles by site or camera.
Cloud backup	A secondary copy of selected local recordings is transferred off site.	Backup is not the same as primary cloud recording; ingest rules, retrieval, and continuity responsibilities may differ.
Hosted VMS	Video management software is hosted remotely and may manage cameras, events, and users.	The term does not automatically define where all video is recorded or how long it is retained.

Visual concept

How cloud NVR creates surveillance value

From camera capture to off-site recording and operator access



Design principle: plan camera quality, connectivity, retention, and operator workflow as one evidence chain.

4. Core Technical Concepts

Cloud NVR design should combine camera settings, network engineering, service policy, storage retention, cybersecurity, and operator workflow. The concepts below help project teams compare services accurately and avoid under-designed deployments.

Concept	Practical meaning
Recording mode	ACTi lists generic recording and motion-triggered recording options. Confirm the recording schedule, event logic, and pre/post-event behavior for the selected service plan. [1]
Retention	ACTi lists retention choices from 7 to 180 days. Select the duration from incident-discovery time, legal and insurance needs, operational policy, and export workload. [1]
Camera resolution and bitrate	ACTi states that cameras with any resolution are supported. Higher resolution, frame rate, and image complexity normally increase upstream bandwidth and storage consumption, so current plan compatibility must be confirmed. [1]
Connectivity and upload capacity	Each camera needs reliable upstream bandwidth. Design for aggregate bitrate, peak conditions, packet loss, latency, ISP availability, and other business traffic sharing the same connection.
Client access	ACTi states that Cloud NVR recordings are accessible with ACTi client applications. Confirm live view, playback, search, export, user roles, supported endpoints, and operator training. [1]
Scale and subscription	ACTi lists per-camera monthly fees, one-year and two-year contracts with flexible extensions, and an unlimited number of cameras. Compare recurring cost, growth, decommissioning, and contract administration. [1]
Cybersecurity and identity	Use strong authentication, least-privilege roles, secure credential handling, account review, logging, endpoint security, and approved network paths. Confirm current service controls before procurement.
Continuity and outage behavior	Define what occurs when Internet access is interrupted: camera buffering, retry behavior, missing-video visibility, alerts, recovery, and whether critical channels need local recording redundancy.

Specification interpretation

A cloud recording service may be easy to subscribe to but still require disciplined design. A camera with excellent image quality cannot produce complete cloud evidence if upstream bandwidth is insufficient or connectivity is unstable. Likewise, long retention is not useful unless authorized users can find, play, export, and preserve the correct incident efficiently.

Procurement warning

Do not compare cloud NVR offers only by price per camera. Compare the complete service outcome: recording mode, camera compatibility, resolution class, retention, bandwidth, outage behavior, client access, export, user administration, security controls, service support, contract term, data governance, and hybrid options.

5. High-Value Applications

ACTi positions Cloud NVR for environments where local NVR maintenance is undesirable, cameras are mobile, on-site recordings require physical protection, or the installation is temporary. These conditions also apply to many distributed and managed-service projects. [1]

Application	Operational value	Typical locations
Distributed branch security	Avoid deploying and maintaining a recording server at every small location while central users review video remotely.	Retail branches, clinics, small offices, restaurants, service counters
Temporary-site surveillance	Deploy cameras for a defined project period without purchasing and later relocating local recording servers.	Construction sites, events, pop-up facilities, temporary warehouses
Mobile and vehicle cameras	Record video from cameras installed inside vehicles when connectivity and data plans are suitable.	Buses, shuttles, delivery fleets, service vehicles, mobile command units
Theft-resistant evidence	Keep the primary recording away from the protected site so an intruder cannot remove the local recorder and its storage.	Small businesses, remote sites, high-risk premises, unattended facilities
Low-IT-support locations	Shift recorder maintenance away from sites that have no local technical personnel.	Franchise sites, kiosks, rural facilities, small campuses
Hybrid migration	Move selected channels to cloud recording while other channels remain local, then adjust the mix as requirements change.	Existing NVR estates, phased upgrades, mixed-bandwidth sites

Value by stakeholder

Stakeholder	Main benefit
Security manager	Central access to evidence across distributed sites, with off-site retention and standardized review workflows.
IT / network team	Reduced local server footprint, provided that WAN capacity, security policy, identity, and service governance are well defined.
System integrator	A recurring-service option for sites where server deployment, maintenance, and storage replacement are difficult or uneconomical.
Consultant / procurement team	A clear design framework for retention, bandwidth, continuity, contract terms, support responsibilities, and hybrid migration.
End user	Less on-site hardware to maintain and access to recordings through supported client applications.

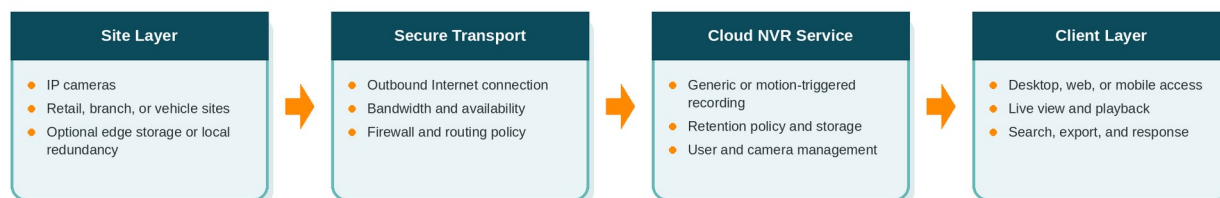
6. System Architecture

From a system perspective, Cloud NVR is an evidence pipeline. Cameras capture video, the site network sends the streams through an approved Internet path, the cloud service records and retains the video, and authorized clients perform live view, playback, search, export, and incident response.

ACTi also supports a hybrid approach in which some channels are managed by the cloud platform while other channels are managed by conventional local NVR servers. The official page states that projects may migrate from conventional NVR to Cloud NVR, or from Cloud NVR back to conventional NVR, at any time. [1]

Reference system architecture

Reference cloud NVR system architecture



Hybrid option

Selected channels may record in the cloud while other channels remain on conventional local NVR servers. Projects can also migrate between cloud and local recording as operational requirements change.

Architecture layers

Layer	Role in cloud NVR surveillance
Site layer	Cameras, mounting, power, local network, time synchronization, image settings, and optional edge storage or local redundancy.
Transport layer	Internet service, firewall and routing policy, upstream bandwidth, availability, packet loss, latency, and secure connectivity.
Cloud recording layer	Camera enrollment, recording mode, retention, storage, health visibility, service administration, and subscription management.
Management layer	Client access, user roles, live view, playback, search, export, multi-site navigation, and evidence handling.
Response layer	Operator procedures, escalation, dispatch, incident preservation, reporting, and coordination with access control or third-party systems.

7. ACTi Product Portfolio Overview

ACTi presents Cloud NVR as a service portfolio rather than as a single on-site recorder. The public page organizes the offer around recording method, camera resolution class, retention duration, contract term, client access, scale, and hybrid deployment. Specific commercial plan identifiers are intentionally omitted so this white paper remains useful as service options evolve. [1]

Portfolio categories

Category	Where it fits	Items to confirm
Generic recording service	Projects requiring predictable recording coverage and straightforward evidence retention.	Schedule, frame rate, bitrate, retention, bandwidth, and service plan.
Motion-triggered recording service	Projects seeking event-based recording and lower average data volume.	Motion behavior, pre/post-event coverage, scene tuning, missed-event risk, and audit process.
Retention tiers	Operational, legal, insurance, and investigation needs ranging from short-term review to long-term evidence storage.	Available duration from 7 to 180 days, incident discovery time, export policy, and cost. [1]
Resolution classes	Camera deployments with different image-detail requirements and data rates.	Current plan compatibility, camera stream profile, actual bitrate, and network capacity.
Subscription and contract terms	Per-camera service procurement for small deployments through large multi-site estates.	Monthly fee basis, one-year or two-year term, extension rules, activation, transfer, and cancellation. [1]
Hybrid recording solution	Mixed environments where selected channels use cloud recording and others remain local.	Channel ownership, operator interface, migration plan, redundancy, and support boundaries.

Portfolio-level capabilities to confirm

- Camera compatibility, resolution profile, recording mode, frame rate, bitrate, audio handling, and time synchronization.
- Retention duration, storage policy, incident preservation, export format, download time, and evidence chain-of-custody workflow.
- Internet bandwidth, ISP resilience, outage behavior, health alerts, edge buffering, and optional local recording redundancy.
- Client platforms, concurrent users, live view, playback, search, user roles, audit logs, password policy, and account administration.
- Contract term, camera activation and deactivation, site transfer, support scope, service availability, regional availability, and current quotation conditions.

Project note

Service availability, plan details, retention options, camera compatibility, cybersecurity controls, and regional commercial terms should be reconfirmed from the latest ACTi product pages, service documents, and quotation materials before formal project commitment.

8. Related Keywords and Terminology

The following keyword reference groups collect common terms related to cloud recording, hosted video surveillance, hybrid NVR architecture, security operations, network design, and project procurement.

Keyword group	Related terms
Core topic keywords	cloud NVR, cloud network video recorder, cloud video recording, hosted video surveillance, cloud CCTV, cloud camera recording, off-site video storage, video surveillance as a service, VSaaS, subscription video recording, remote video recorder, managed cloud surveillance
Architecture keywords	IP camera to cloud, cloud recording architecture, secure camera upload, cloud video ingest, hybrid NVR, local and cloud recording, edge storage, cloud retention, multi-site surveillance, remote client access, centralized video management, camera bandwidth planning
Recording and retention keywords	continuous cloud recording, motion-triggered cloud recording, video retention policy, 7-day video retention, 30-day video retention, 90-day video retention, 180-day video retention, evidence preservation, video playback, cloud video export, incident video search
Application keywords	retail cloud surveillance, branch office cloud NVR, temporary-site security, construction-site cloud camera, vehicle cloud recording, fleet video surveillance, small business cloud NVR, remote-site recording, theft-resistant video evidence, low-maintenance surveillance
Network and security keywords	upload bandwidth for cameras, camera bitrate planning, Internet outage video recording, firewall for cloud cameras, secure remote video access, role-based video access, cloud surveillance cybersecurity, account security, camera credential management, data privacy for video surveillance
Procurement keywords	cloud NVR cost per camera, cloud NVR subscription, cloud video storage pricing, cloud NVR contract, cloud vs local NVR, hybrid NVR migration, cloud NVR specification, cloud NVR for system integrators, cloud NVR for consultants, ACTi Cloud NVR white paper
Common question phrases	what is a cloud NVR, how does cloud NVR work, cloud NVR vs local NVR, how much bandwidth does cloud recording need, what happens when Internet fails, how long should video be retained, can cloud and local NVR be combined, can I migrate back to local recording

Source notes

This white paper is based on ACTi public source pages and general professional video-surveillance system-design practices. Product and service details should always be reconfirmed against the latest ACTi service documentation, regional availability, security policies, and quotation materials before formal project commitment.

Ref.	Source
[1]	ACTi Corporation, "Cloud NVR," official product category page. URL: https://www.acti.com/products/cloud-nvr . Accessed: July 21, 2026.
[2]	ACTi Corporation, "About ACTi," official corporate page. URL: https://www.acti.com/corporate/about . Accessed: July 21, 2026.

Revision note: This document is a marketing and technical education white paper. It is not a regulatory certification, legal opinion, privacy assessment, service-level agreement, or final project design. Validate connectivity, camera compatibility, recording continuity, retention, cybersecurity, privacy, and operator workflow for the target deployment.

Prepared by ACTi Corporation

For Cloud NVR projects, confirm current service options, camera and resolution compatibility, bandwidth, retention, contract terms, client access, hybrid design, and regional availability with your ACTi sales contact or authorized system integrator.

sales@acti.com | www.acti.com