ebook

Reducing False Alarms With AI-Powered Threat Detection and Visual Verification

CHeKT

The monitoring industry is at a tipping point. AI and cloud services are fundamentally redefining how operators, central stations, and integrators can deliver safety, efficiency, and intelligence at scale.

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Source: Security World Market

False alarms cost everybody. They waste operator time, frustrate customers, create fines, and reduce confidence in the entire system.

A modern security program must stop nuisance signals at their source, deliver clear visual context when a real event occurs, and make it easy for operators to act quickly. Combining video with AI delivers the most practical, scalable solution.

CHeKT approaches the problem with a proactive, video-first platform that connects cameras, alarms, and people into one workflow.

- ✓ First, on-camera analytics detect motion and record video to the hub over a secure, private wireless signal.
- ✓ Then, in the cloud, AI filters out everyday motion — like passing cars or windblown shadows — and highlights potential threats, typically involving people.
- ✓ Operators receive a single, clear notification with video, a timeline, and tools to deter or escalate.

The result is fewer nuisance events and better outcomes when a real threat shows up.

This eBook explains:

- ✓ Why false alarms happen.
- ✓ What AI-powered detection really means.
- ✓ How AI-powered threat detection and proactive visual security eliminates false alarms.

Included is a blueprint for proactive visual security success, with:

- ✓ Actionable steps to implement CHeKT
- ✓ Deployment checklist
- ✓ Measurement plan
- ✓ Dealers FAQs

Why do false alarms happen?

Traditional intrusion systems were built around binary signals. A door might open, a motion sensor may detect movement, or window glass shatters. The system reports an alarm but provides no context. Was the alarm triggered by an authorized worker opening a door, a pet moving in front of a motion sensor, or a branch breaking a window?

Lack of context forces operators and first responders to make decisions with incomplete information.

Video adds context, but classic motion detection is noisy. Pixel-based motion catches all changes and treats them as equal threats.

- ✓ A spider near a night-vision camera's infrared light can look like a major event
- ✓ Headlights sweeping across a wall can cause repeated alerts.
- ✓ Rain, fog, shadows, or swaying trees can all trigger false alarms that clutter the system.

If every change results in an alert, operators become overwhelmed and customers lose trust. That's where artificial intelligence changes the game.

AI-powered detection redefines how motion is interpreted. Instead of reacting to every pixel change, it focuses on what's important — people, vehicles, or unusual movement within specified zones. By filtering out non-threatening background activity, the system stops most nuisance alerts before they ever reach an operator.

*Center for Policing

What AI-powered detection really means

Artificial intelligence isn't just a buzzword — it's a practical tool for focusing operator attention where it matters. It uses defined models and rules to improve the signal-to-noise ratio and focus attention where it matters. In a practical security deployment, AI-powered detection usually includes the following layers.

Edge analytics: Modern security cameras and some Network Video Recorders (NVRs) provide elevated on-board analytics. These systems have evolved to detect people and vehicles more accurately and can apply rules such as line crossing or monitoring specific regions of interest.

Cloud classification: A second pass in the cloud validates those detections, confirming that the camera is capturing people or vehicles (or both) and suppressing low-confidence or ambiguous events.

Policy: Site policies determine how refined events are handled. That might mean sending alerts if people are detected outdoors after hours, requiring confirmation from multiple sensors indoors, or muting notifications during scheduled activity.

Operator action: When an event passes all filters and policies, the platform presents the video, timeline, and deterrent tools — like audio or flood lighting — so that the operator can quickly and confidently contact the subscriber, or escalate to authorities with clear visual evidence.

The value isn't in any single layer, but in how they work together. Edge analytics reduce bandwidth and noise, cloud AI adds confidence, and site policies align detection with business rules. The result is that operators spend their time on the events that truly matter.

* ASU Center for Policing

How CHeKT Proactive Visual Security reduces false alarms

The CHeKT Proactive Visual Security system was designed to deliver this layered approach without the complexity of traditional Video Management System (VMS) deployments or custom integrations. The platform improves detection and operator response through three key capabilities:

1. Connecting alarms and video with the CHeKT Video Control Panel: The panel links camera channels to alarm inputs and outputs, so every protected zone produces both a signal and the video that explains it. This turns existing cameras into monitored security devices that support professional response, preserving the simplicity of alarm workflows while giving operators the visual context they need at the moment of an alert.

2. Cloud AI filtering on top of on-camera analytics: Many cameras already include on-board analytics: CHeKT uses these detections as a first pass, then applies Cloud AI to validate people and vehicles while suppressing irrelevant activity. Dealers can enable Cloud AI site-wide and tune policies by zone and schedule. This layered filtering removes most nuisance alerts that would otherwise overwhelm pixel-based motion detection, including those caused by weather, insects, shadows, and passing headlights.

3. Operator-ready events within existing automation: CHeKT integrates directly into central station software, giving operators alarms with video, a timeline, and site tools within the console they already use. There's no need to switch between multiple systems — the platform provides live context, supports talk-down and lighting deterrents, and clearly documents the recommended steps and resulting actions.

* Park Associates

Proactive visual security in action

From retail to warehouses, here's how AI-enabled surveillance keeps operations secure and efficient.

After-hours retail storefront

A virtual line set two meters inside the glass door triggers an alert only when someone approaches. Cloud AI confirms it's a person, not a passing car. The operator issues a talk-down, the person leaves, and the event logs with a short clip — no false alerts from headlights or sidewalk traffic.

Distribution yard with frequent traffic

Daytime vehicle detections are logged but not escalated unless a vehicle crosses into a restricted row or idles too long. At night, person detections inside the fence go to the monitoring center. Operators use light pole references for quick deterrent messages and accurate dispatching.

Multi-tenant office building

Lobby motion runs nonstop, so zones focus on interior doors after hours. Lobby activity routes to property management instead. Cloud AI filters out cleaning crews, keeping operators focused on unexpected movement.

School campus

Cameras cover entrances and parking lots. Policies shift for school hours, events, and weekends. After hours, if anyone is detected hanging out in play areas the system prompts a friendly talk-down about posted hours — most cases end without a dispatch.

Indoor warehouse aisle

A door contact opens, followed by a person entering within seconds. This dual trigger confirms a valid after-hours event. Operators see both signals and video for faster, more confident decisions.

* Fortune Business Insights

End-to-end event flow

DETECTION

- Person enters protected zone
- Camera's on-board analytics triggers (line cross rule)

AI VERIFICATION

- Cloud AI confirms human
- Suppresses irrelevant triggers (e.g., headlight sweep)

SITE POLICY APPLICATION

- After-hours detections routed to central station
- Low-confidence events suppressed
- Vehicle activity logged but not escalated

OPERATOR RESPONSE

- Alarm, short clip, live view, and timeline delivered
- Operator uses script to talk down or escalate, if needed

OUTCOME & DOCUMENTATION

- Intruder leaves / operator intervenes
- Video verification leads to faster police response

Ready to transform your security ops?

False alarms aren't inevitable — they're a systems problem. Connect alarms and video for context. Use layered AI to filter background motion. Integrate everything into the operator's existing workflow for eamless handling of events. You'll reduce noise, improve response, and deliver a service that feels smarter and more reliable.

Whether you're an alarm dealer, a monitoring center, or protecting your own facilities, CHeKT Proactive Visual Security helps you put video at the center of protection.

See how AI-powered visual security stops false alarms before they start — and turns every camera into a proactive defense system.

Book a demo today.

WANT A DEEPER DIVE?

Turn the page to see how to get more proactive with your visual security. There you'll find CHeKT's Blueprint for Proactive Visual Security Success, including:

- ✓ **A deployment checklist for dealers as well as monitoring centers**
- ✓ **Five key metrics to measure performance**
- ✓ **Frequently asked questions**
- ✓ **A playbook for your first month of next steps**

CHEKT'S BLUEPRINT FOR PROACTIVE VISUAL SECURITY SUCCESS

A deployment guide

Use this checklist to make AI-assisted video verification consistent, repeatable, and effective across every site.

SITE SURVEY

- ✔ Start by identifying business risks and mapping them to zones — perimeters, entries, loading areas, fuel islands, high-value aisles, and construction laydown spaces are common priorities.
- ✔ Check lighting conditions to ensure AI and operators get usable night images. Add or reposition lights where scenes are underexposed or high contrast.
- ✔ Understand normal activity windows — deliveries, cleaning crews, or early shifts — so policies reflect real-world schedules.
- ✔ Finally, confirm network strength, clip sizes, and retention policies. For critical sites, plan extra resiliency to keep data and connectivity stable.

HARDWARE AND I/O PLANNING

- ✔ Choose cameras with reliable on-board analytics for people and vehicles.
- ✔ Favor consistent fields of view that show full-body movement and avoid extreme angles.
- ✔ Place audio speakers and lighting deterrents where operators can intervene effectively — clarity beats maximum volume.
- ✔ Install a CHeKT Video Control Panel to link camera channels and alarm inputs, and map outputs to speakers or lights for one-click control from the monitoring console.

CHEKT'S BLUEPRINT FOR PROACTIVE VISUAL SECURITY SUCCESS

CONFIGURATION

- ✔ Set analytic zones or lines that ignore public sidewalks or roads, triggering slightly inside the perimeter to reduce false alarms.
- ✔ Enable Cloud AI filtering and apply site policies by zone — or example, flag outdoor person activity after hours, use dual triggers for indoor stock rooms, or set separate rules for vehicle loitering.
- ✔ Calibrate schedules to the customer's operations. If a yard is staffed until 9 p.m., start monitoring at 9:15 to avoid stragglers.
- ✔ Set talk-down scripts and escalation steps in the operator runbook, including notification preferences and dispatch thresholds.

QUALITY ASSURANCE

- ✔ Run a one-week burn-in to monitor event volume and fine-tune zones and thresholds.
- ✔ Review nighttime video samples for exposure, sharpness, and field of view, adjusting as needed.
- ✔ Once stable, document each zone's purpose, schedule, and policy so future updates stay intentional and traceable.

OPERATOR ENABLEMENT

- ✔ Train operators on the site layout, deterrent placement, and what success looks like for that customer.
- ✔ Provide clear, consistent language for talk-downs and dispatch notes — clarity shortens handle time and sharpens response.
- ✔ Debrief monthly with the most significant or frequent events and annotated clips. Use these sessions to refine policies and highlight deterrents that prevent loss.

5 key metrics for proactive visual security

False alarm reduction is a measurement game — you improve only what you track. Focus on these five key metrics:

1. **Signals per camera per day:** Track by site and zone to spot outliers.
2. **AI suppression rate:** Measure how many events Cloud AI filters before an operator sees them.
3. **Operator touches per dispatch:** Aim for automation to handle most events, with fewer escalations that lead nowhere.
4. **Verified event ratio:** Track how many escalations include clear video of a person or vehicle — this is your quality score.
5. **Customer outcome score:** This can be measured by combining deterrent activations, resolved incidents, and avoided fines over a set period. Review these monthly with customers to show progress and reinforce the value of verified monitoring.

FAQs from dealers and operators

Here are answers to common questions from dealers and operators implementing AI-based video verification.

Will AI eliminate all false alarms?
Not entirely — but it will suppress the vast majority. Camera placement, lighting, and zone design still matter.

How do we prevent operator fatigue?
Suppress noise at the source, deliver clean events with video and one-click deterrent tools, and provide short, consistent talk-down scripts.

Do I need to replace every camera?
Not necessarily. Most existing cameras can still generate useful insights, and focusing upgrades on critical areas usually gives the best results.

What if the AI misses something?
CHeKT's layered approach combines edge analytics, Cloud AI, and policy. High-risk zones can be made more permissive; low-risk zones can be more conservative.

How does this align with modern response policies?
By putting video at the forefront, alarms match today's response standards—making verification faster and reducing potential fines.

CHEKT'S BLUEPRINT FOR PROACTIVE VISUAL SECURITY SUCCESS

CHeKT's next step playbook

Here's our Proactive Visual Security plan you can apply over the next 30 days:

- ✔ Pick one site with recurring nuisance alarms.
- ✔ Do a quick night survey for lighting, glare, and blind spots.
- ✔ Add or reposition two cameras for full-body coverage.
- ✔ Install a CHeKT Video Control Panel and connect deterrents.
- ✔ Enable Cloud AI filtering with simple after-hours policies.
- ✔ Train operators with a short runbook and talk-down scripts.
- ✔ Run a one-week burn-in, tune settings, and review results after 30 days.

In just one month, you'll likely find you have a measurable drop in nuisance events and a cleaner operator experience. More importantly, you'll have a repeatable model to refine and scale.

Let us show you how Proactive Visual Security can work for you and your customers.

BOOK A DEMO

About CHeKT

With CHeKT, video isn't an afterthought — it's the frontline. Every camera, every alarm, and every AI tool work seamlessly in one cloud platform to prevent crime in real time. What was once reactive is now proactive.

We provide security integrators, monitoring centers, and the people they protect a Proactive Visual Security Platform that seamlessly integrates with the systems they use everyday and enables them to quickly identify what triggered an event, and the tools they need to instantly verify, deter, and ensure an immediate response.

Today, our platform powers proactive security for thousands of companies worldwide. With the backing of Alarm.com (NASDAQ: ALRM), we're scaling fast while staying independent and true to our dealer-first roots.

For more information, visit www.chekt.com