



2024 TRENDS

in Video Surveillance



INTRODUCTION

The *2024 Trends in Video Surveillance* report looks at new developments and technologies in the video surveillance industry and how organizations across various industries are using their security systems and implementing these technologies.

Artificial intelligence (AI) will transform how businesses use video surveillance, and 2024 will see widespread adoption of intelligent, proactive security solutions. The continued rapid adoption of cloud technologies is enabling this revolution and shifting what businesses want and expect from their video surveillance systems.

The *2024 Trends in Video Surveillance* report is meant to provide business leaders, IT managers, and security integrators insights and direction to understand new technologies and uses to optimize new or existing video surveillance systems.

“The video surveillance industry is poised to transform to AI-driven security systems. Traditional video surveillance systems are evolving into comprehensive AI security solutions. These systems will record video footage, but will also do a lot more to enhance safety and security. This shift reflects the fact that customers are less interested in video and more concerned about preventing and addressing security issues.

— Dean Drako, *Eagle Eye Networks CEO*. November, 2023



TREND 1

Broader AI use enabled by cloud

The role of artificial intelligence in video surveillance is rapidly evolving, enhancing security and productivity. The increase in cloud adoption, improvements in AI accuracy, and a host of new AI-powered applications are leading to broader AI use in video surveillance.

AI security features, including video search, are changing how business owners, property managers, and security directors interact with their surveillance systems. New applications are making AI more practical and deployable for proactive monitoring and greater liability protection.



“The VMS of today will evolve into an AI-powered security and safety system.

— Dean Drako, *Eagle Eye Networks CEO*

New AI applications are designed to identify specific events within video feeds using trained AI models. Some applications now available include the detection of slips and falls or fire and smoke. To comply with safety regulations and increase jobsite safety, AI features can automatically detect when people are not wearing hard hats or other personal protective equipment (PPE). These AI features allow businesses to proactively maintain the highest levels of jobsite safety for any industry using their surveillance system.

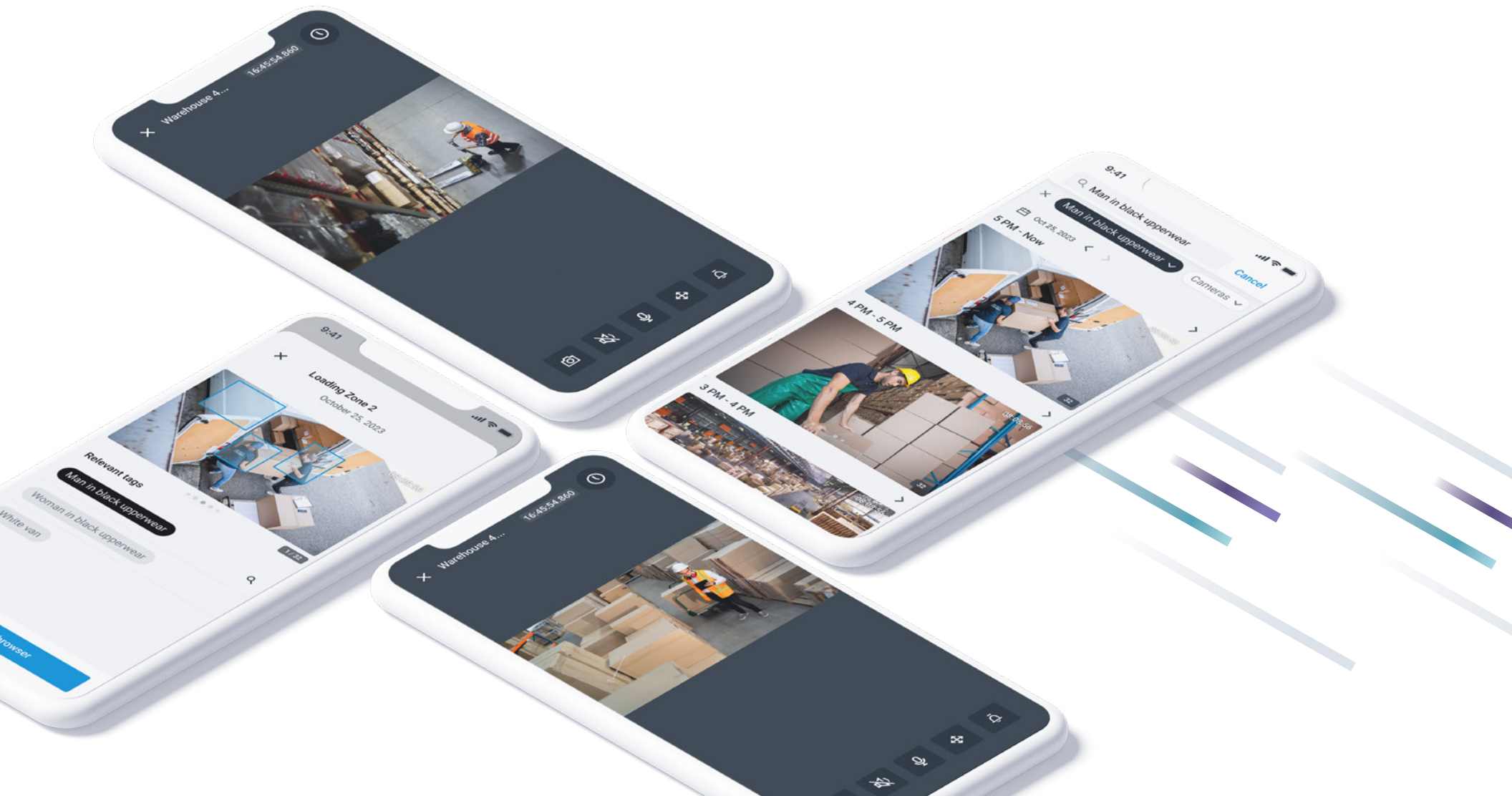
AI models are also being trained to recognize firearms, enabling continuous monitoring for immediate response in case of emergencies. Businesses and schools that implement gun detection can use AI to alert the necessary authorities. It should be noted, particularly in the case of weapons detection, that AI systems can produce false positives – for example, by identifying a toy gun as a real one – but alerts notify a human to make the ultimate decision on what action is needed.



Cloud computing enhances the capabilities of AI by providing the necessary infrastructure, resources, and services, enabling organizations to efficiently deploy and scale AI applications. AI algorithms, especially deep learning models, benefit from extremely large cloud-accessible datasets for training purposes to improve accuracy and reduce false positives.

The improved accuracy of AI will spark greater reliance on its capabilities. AI filtering, for example, can differentiate types of motion detected and alert users to vehicles or persons, eliminating other motion, such as a tree blowing in the wind.

Cloud-based systems are making AI features attainable for businesses of any size because of the economies of scale afforded by cloud computing.



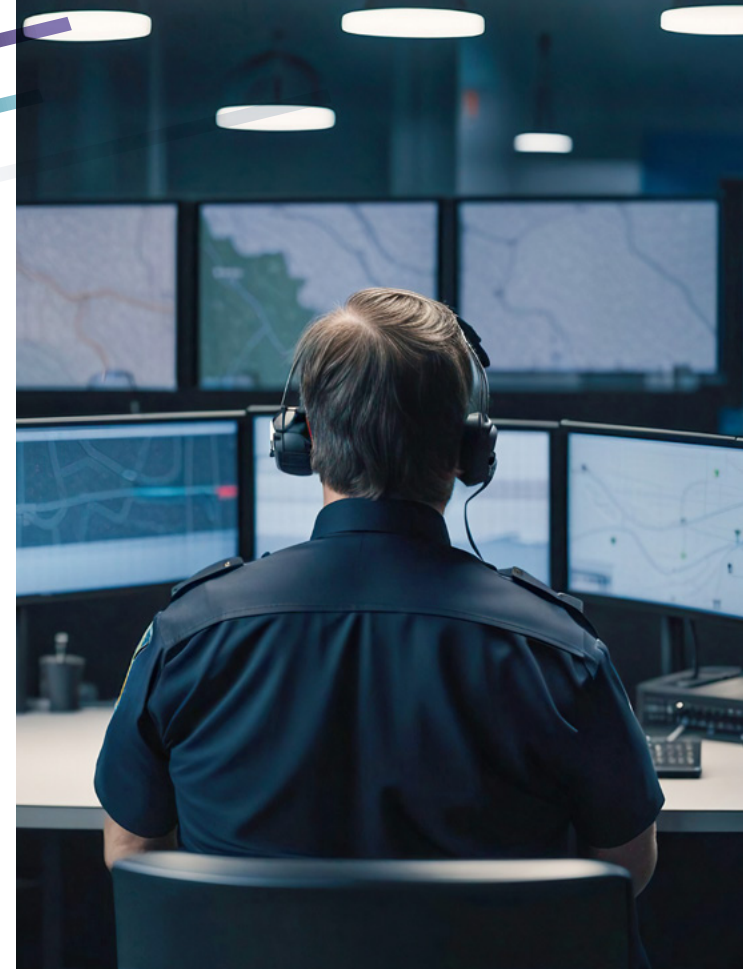
TREND 2

Proliferation of professional video monitoring

Many organizations rely on professional central station alarm monitoring for 24/7 peace of mind. Adding video monitoring however has previously been costly, laborious, and error-prone for all but very large enterprises. With previous generations of monitoring technology, more than 90% of passed-on video alerts were actually false positives, generated by everything from animals to wind-blown branches. Investigating each alarm quickly drives up customer costs.

New technologies and integrations are making professional video monitoring more cost-effective for more businesses. We expect to see such monitoring grow rapidly in the next year.

Professional monitoring allows organizations to have always-on site visibility, without additional personnel or payroll. New integrations on the market simplify the deployment of central station monitoring software, making a multi-site VMS installation more approachable and eliminating complicated and often costly configuration work-arounds. These new integrations add video monitoring to a single interface (which may already include fire or intrusion alarm systems) for central station operators to access.



Professional central station alarm monitoring can provide businesses peace of mind

24/7

Central station software provider **Immix** has integrated video surveillance into its software.

“New integrations deliver powerful solutions which make managed video services more affordable and effective and open the door for more businesses to take advantage.

— Chris Brown,
Immix CEO

Besides its role in increasing surveillance system efficiency and cost-effectiveness, professional monitoring is increasingly a legal requirement within regulated industries.

Beyond these reasons, why is this trend a growing one? In part because of advancements enabled by AI. The cost associated with false positive alarms has previously been a barrier for professional video monitoring, reducing its net value for both customers and resellers. AI alert filtering can vastly reduce the number of false positive alarms, by intercepting and evaluating sensor triggers and only passing on to the central station motion events that include people or vehicles.



TREND 3

Upgraded workplace security as more people return to the office

According to a [survey by ResumeBuilder](#), 90% of companies will return to the office (RTO) by 2024. Business owners and property managers alike are preparing for the “end of remote work” with a review and overhaul of office security systems.

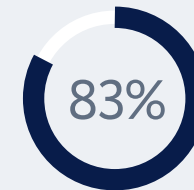
Driving this security upgrade is the desire for improved safety and convenience for employees as well as improvements to the overall security system’s operational efficiency. At the top of the list of requested improvements is integrated video surveillance and access control. An integrated system helps security system managers better control access to designated buildings and areas and delivers immediate visibility and tracking capabilities for who is entering those spaces.



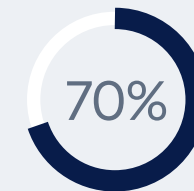
90%

of companies will return to the office by 2024.

Source: [ResumeBuilder](#)



of businesses that have returned to in-person work say they track employee attendance



of businesses planning to RTO in 2024 say they will also track attendance.

Source: [ResumeBuilder](#)

Open video surveillance platforms make for easy integration and customization with access control and other security applications. Open video APIs mean that upgraded cloud video surveillance can be added while existing systems remain in place. This drives efficiency as business leaders want to connect video surveillance to other business operations to maximize security and reduce liability. Other third-party integrations include smart sensors, face-based access control, point-of-sale, and parking automation.

Enterprise office buildings are turning to AI to expand beyond secure entry. AI-powered video surveillance systems can improve either local security monitoring by prioritizing motion activity and detecting anomalies in shared areas, or reduce false alarms for professional monitoring services (as detailed earlier). These sophisticated systems also support advanced operational reporting using analytics and user data to meet audit and regulatory requirements.



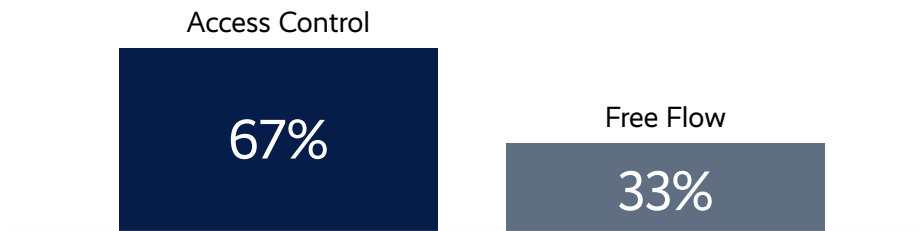
TREND 4

Homeowners associations (HOAs) and multifamily residential will widely adopt LPR Technology

Homeowners associations (HOAs) and multifamily residential properties will use AI-powered license plate recognition (LPR) technology to increase security and convenience. Further benefits already in use include parking and traffic management, parking enforcement, and in some cases new revenue streams.

AI enables the LPR that operates on cloud video systems, making it more effective and affordable. AI improves the accuracy of LPR cameras, allowing for expanded uses including automating parking management. LPR integrations make parking access without remote controls or radio tags possible and can even automate parking payments. The [2023 Eagle Eye Cloud Video Surveillance Camera Worldwide Statistics Report](#) shared that LPR technology is being used in both gated and ungated locations. Access control is used in 67% of the applications, whereas the other 33% are cameras capturing license plates in free flow — without a gated stopping point.

License Plate Recognition Positioning



A 2023 analysis of cloud-connected LPR cameras identified three primary uses for LPR:



68% parking



22% operations



10% security

Source: [The 2023 Eagle Eye Cloud Video Surveillance Camera Worldwide Statistics Report](#)

10X ROI

generated with LPR integration in just six months.

Source: [Parkstash](#)

By implementing LPR technologies, properties can create new revenue streams. Some multifamily complexes using LPR to manage parking reported as much as a **10X ROI from new parking revenue** within six months. Another use a multifamily property manager shared was to identify gate crashers and prevent expensive gate damage, which they reported to cost approximately \$50,000-\$100,000 per year.

The deployment of LPR, especially for the purpose of crime reduction, should be carefully considered and executed. HOAs must balance privacy concerns with the desire for improved safety.



TREND 5

Businesses value energy efficient, environmentally sustainable solutions

Sustainability as a business focus has gained momentum in recent years, as organizations of all kinds devote efforts to ensuring that their operations maximize effectiveness with a minimum of waste and other negative effects on the environment, both locally and globally.

From a business perspective, sustainability dictates that every business initiative pays for itself with a minimum of discarded equipment, raw material outlay, and expended energy. This applies just as much to surveillance and other security measures as it does to other areas of business operations.

Sustainability is challenging, though, in the face of ongoing pressures that affect video surveillance as an aspect of IT. Upgrading on-site storage capacity to account for increasing resolution and bit depth of video, or upgrading local processing power to effect AI solutions, can both significantly increase an organization's power consumption and hardware churn. Upgrading cameras for particular features or applications can mean replacing (and discarding) significant amounts of existing cameras or networking equipment.



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business leaders see sustainability as helping optimize or reduce costs.

A cloud-based video management system (VMS) can significantly increase the sustainability of a modern surveillance system, with scalable on-demand capacity which eliminates the need for overprovisioning on-site equipment. Cloud solutions, by their nature, also take advantage of efficient commodity storage and processing. Finally, cloud solutions can eliminate the need for comprehensive on-site storage options while still providing adequate on-site local backup of recent data.

Perhaps most importantly, by placing AI and storage capabilities upstream of the local network, cloud-based surveillance can greatly extend the life cycle of installed cameras, switches, and cabling. Further, open systems that do not require proprietary cameras allow businesses to move to a cloud system using existing infrastructure. Eliminating the need to rip and replace working cameras is more efficient and also cost effective.



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RESELLER BONUS TREND

The total cost of ownership benefits of cloud are better understood

Organizations of all sizes and types are increasingly aware of the value in cloud-based business applications, including data storage and infrastructure, software and platforms. **According to a McKinsey survey**, the average company estimates that by 2024 their cloud spend will represent 80% of their total IT-hosting budget.

The security industry is also rapidly adopting cloud-based video surveillance systems, and Total Cost of Ownership (TCO) is one of the major factors.

Security resellers looking to capitalize on the business opportunities of cloud-based security should be discussing TCO with all customers and potential customers.

TCO is a financial estimate that helps businesses evaluate the complete cost of a particular asset or solution over its entire life cycle. When applied to cloud business applications, TCO analysis goes beyond the initial purchase or subscription costs and includes various factors that contribute to the overall expense.

Typical TCO Savings – Cloud VS. On-Prem

Small business



5% - 15%

Multi-site retail business



25% - 40%

Large commercial business



15% - 35%

A cloud video management system (VMS), compared to a traditional on-premise DVR or NVR system, provides significant savings when comparing all the costs to own and operate the technology over an average lifespan of five years for a system. Savings, though they vary by system deployment type, can be substantial.

TCO savings exist even with a single-site deployment with a low camera-count, but become more noticeable as multiple locations are added.

80%

of the average company's IT-hosting budget will go toward cloud spend by 2024.

Source: [McKinsey Survey](#)

Because of the nature of a cloud VMS, system updates and upgrades are automatically and continuously delivered. In comparison, a DVR/NVR server refresh is typically required after 2-4 years for:

- Upgrading outdated server computers for increased processor power and memory
- Meeting new software requirements
- Replacing hard drives nearing their failure point

Moving the computing and video storage infrastructure to the cloud results in significant economies of scale. Additionally, cloud system reliability and flexibility, advanced AI capabilities, and strong system cybersecurity far surpass what is feasible for on-prem deployments.

To read more about TCO and see real side-by-side analysis of cloud and on-prem systems, read the updated [Eagle Eye Total Cost of Ownership whitepaper](#).



The *2024 Trends in Video Surveillance* report provides industry insights so that business leaders, IT managers, and security integrators can make informed decisions and stay ahead of the competition with the latest security trends and technologies.

AI in security has been a trending topic in this report for several years. As more systems move to the cloud, there are more AI capabilities coming to market every day.

If you would like to learn more about how AI + Cloud can transform your business security, please contact Eagle Eye Networks to:

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