

2025 Trends



in
Video
Surveillance

Introduction

The world of video surveillance is changing fast, driven by evolving hardware, software, and business practices. Knowing how new developments drive up the value of surveillance helps businesses plan how to use it.

This report can help decision makers — business leaders, IT managers, and security integrators — by providing them with information to understand recent developments and make plans for organizational changes.

We name six trends in this report, but in the background is what you might consider **Industry Trend Zero: the sustained rise of the cloud as a unifying force**. Cloud allows business owners to access video from a wide range of devices in any location. And through APIs and secure data sharing, cloud offers an on-ramp for third-party technology integrations and remote video monitoring. Cloud also enables cameras to be updated remotely through security hotfixes, interface improvements, and upgrades to on-board analytics.

With the cloud as the foundation and driven by several rapidly advancing technologies, here are some trends we think will dominate in 2025.



According to the Indianapolis Metropolitan Police Department, **most crimes solved in the city are solved with the aid of surveillance video.**



The trends at a glance

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Trend 1

Remote video monitoring

Historically, live viewing of on-site security camera footage required a security guard or facility manager to watch video on a screen on-site. Tapes or hard drives were often quickly re-used or stored off-site, complicating access to recorded video. With today's technology, it's much easier to transmit and remotely access surveillance video.

With remote monitoring, fewer people need to perform guard duties on foot. This allows businesses to focus on actual incidents. Fast network connections, cheaper bandwidth, and robust wireless connections mean that each year this kind of monitoring is more practical and affordable. Crucially, AI can also help sort false alarms from real ones by spotting the overwhelming bulk of accidental sensor activations. This raises the value of monitoring by letting personnel focus on critical incidents without distraction.



Ongoing access

Rather than employ a large on-site team to monitor cameras, organizations can instead choose a remote (cloud-based) video monitoring service. This kind of remote monitoring is flexible so it can be quickly adjusted to account for factors such as seasonality.

Trend 1

Remote video monitoring



Based on what remote personnel observe, they can contact a business's staff on site to investigate an incident. In some cases, they can resolve a situation themselves, for instance by warning trespassers through a camera-integrated speaker.

Temporary or emergency camera sharing

Remote video monitoring can also be situation-dependent and temporary. For instance, schools and businesses can integrate technology to transmit video from their cameras to an Emergency Communication Center if a 911 call is placed from nearby. In an emergency such as a fire or a criminal attack, these systems can enable emergency telecommunicators to relay visual information to first responders in real time. This kind of remote monitoring also allows responders to keep tabs on a scene without endangering human observers.

Trend 2

Cameras in more places



Surveillance cameras are showing up in more and more places. This includes many locations where just a few years ago they would have been too difficult or expensive to install.

It's getting easier to deploy more cameras faster, for mobile and temporary placements too. Today's mobile surveillance systems often require towable trailers which can be set up in a parking lot, at a construction site, or backstage of an event. These trailers typically house power equipment, networking gear, and storage. Their size requires thoughtful placement, especially when they contain potentially noisy generators.

However, wireless networking, smaller cameras, solar power, and long-lasting batteries are making it easier to put cameras practically anywhere. This trend is also driven by smaller, specialized cameras for more mobile devices, including drones and body cameras worn by police, technicians, and delivery drivers.

The changes that make more cameras practical aren't all in hardware, either. A user-friendly video management system (VMS) makes it easier to keep track of what's being seen even with many cameras in use. High-bandwidth wireless — and even satellite connections — can now be cost-effectively used for video surveillance by transmitting video straight to the cloud with minimal on-premise equipment.

ESTIMATE OF LOSSES

\$112.1 billion

Estimate of 2022 losses to shrink in U.S. retail, mostly to theft and organized retail crime.

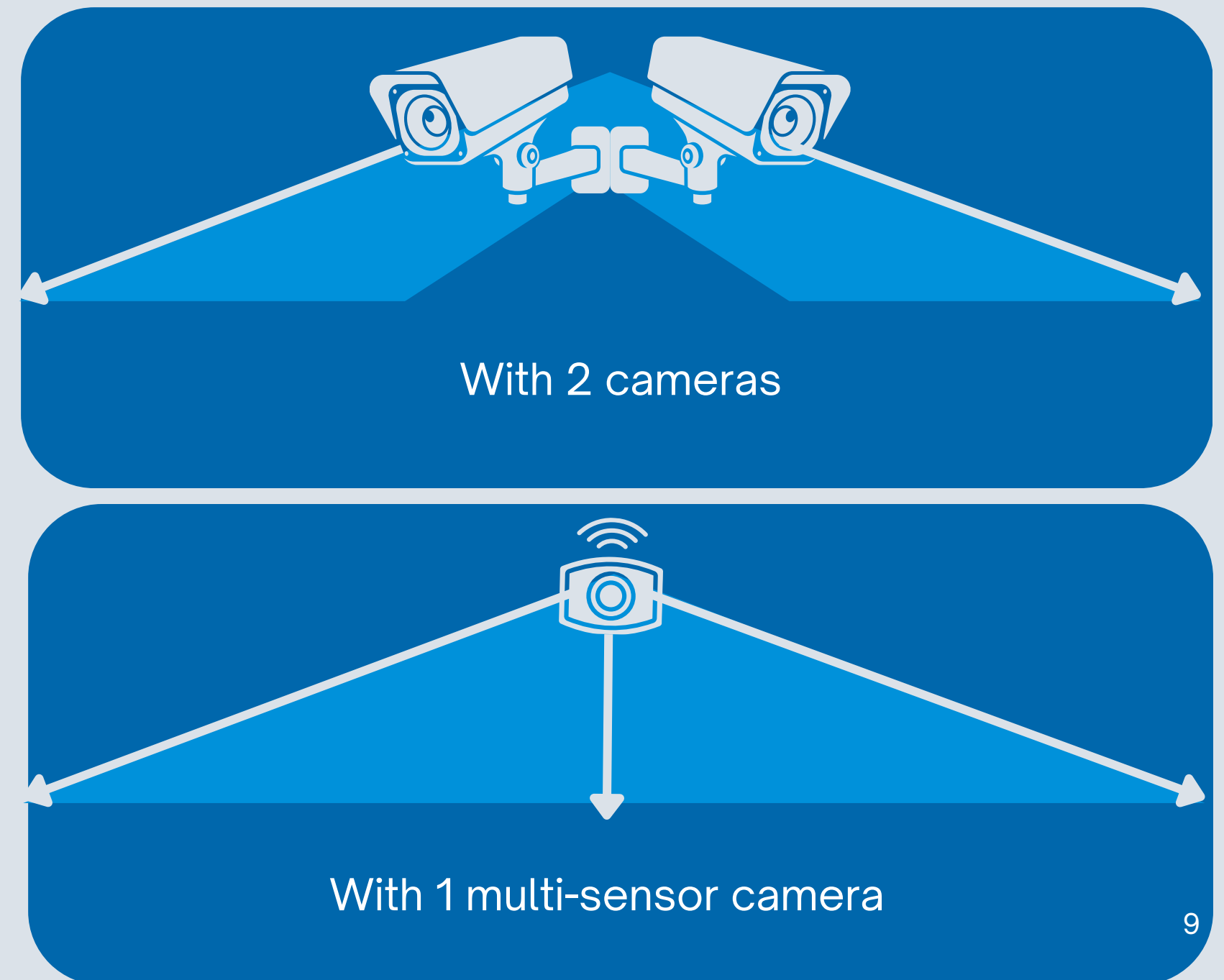
Trend 3

Increasing coverage with multi-sensor cameras

Related to the use of cameras in ever more places is the development of cameras which capture a wider area. A common way to achieve this is to deploy cameras equipped with extremely wide-angle lenses — also known as fisheye lenses. These cameras capture a wide field of view but suffer from two serious challenges.

First, they tend to have effectively limited resolution because they're trying to record much more visual information on the same size sensor as a more ordinary camera. That means fewer pixels for each part of the scene, making for blurrier images.

Another major issue is that extreme-angle cameras often cause significant distortion or warping. This means the video needs to be dewarped for easier viewing. That dewarping takes time and processing power to accomplish. Downloading video files or sharing them for review is complicated for the same reasons.



Trend 3

Increasing coverage with multi-sensor cameras



Multi-sensor cameras eliminate that warping by using more than one conventional (straighter) lens rather than just one with a very wide angle lens. A camera built this way can be nearly as small as a fisheye camera, but the video it creates is easier to work with. As a bonus, it's easier to adjust the lenses separately, which can be useful when one side of a building is better lit than the other.

All these reasons help explain why more camera manufacturers than ever are offering multi-sensor cameras, and why we expect even more in the future.

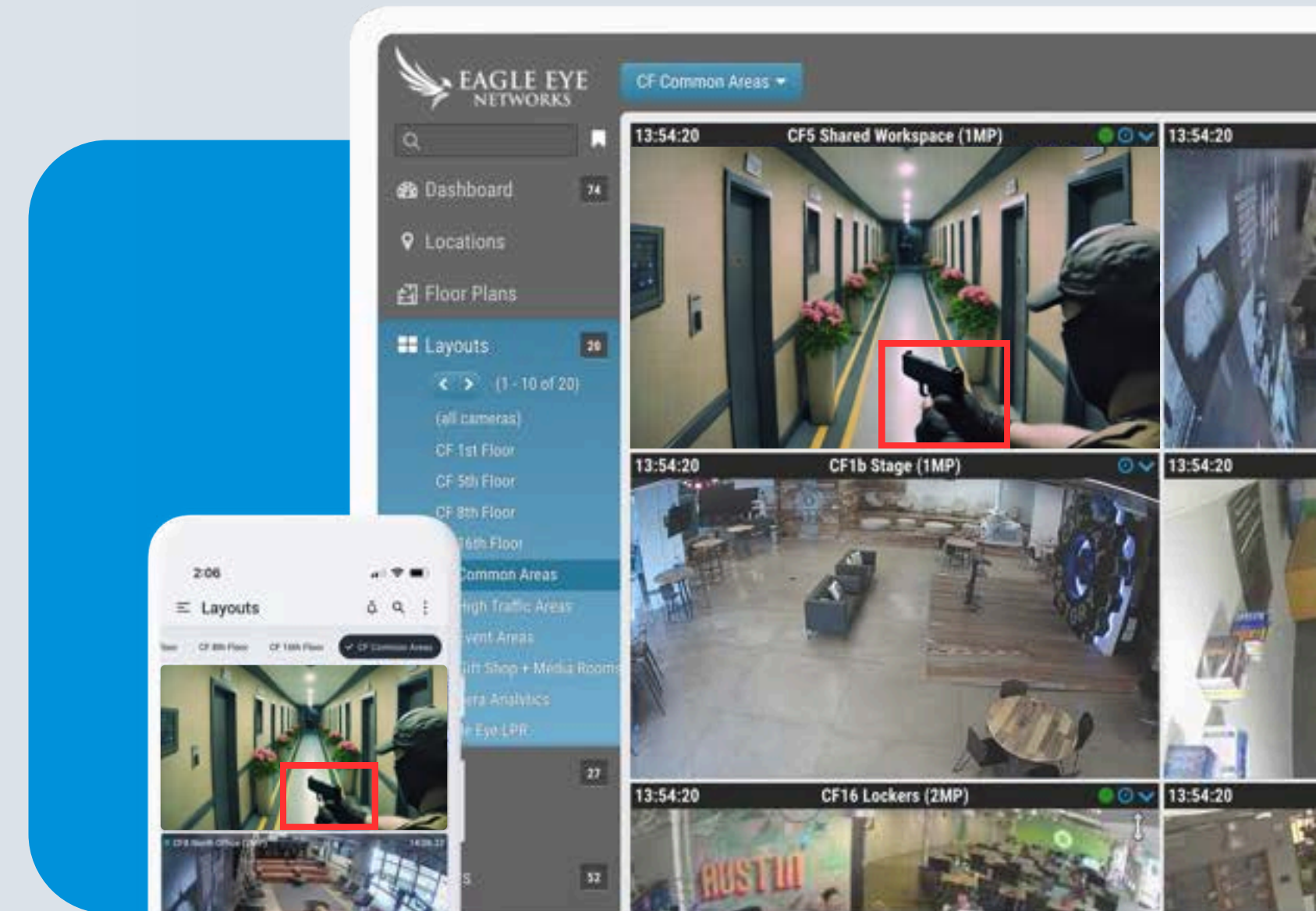
Trend 4

Gun detection

Early detection of guns in schools, offices, and public places could speed response to armed attackers. AI systems in use today can already detect firearms in many situations and send alerts. Unlike human guards, they can do it without resting and with capabilities that are always improving, which is why we see this as an important trend.

Though a rapidly developing area, gun detection is a difficult task. Firearms vary in shape and size, and attackers can take steps to avoid detection. Even something as simple as keeping a gun out of sight can fool a camera as easily as it can a person. AI is currently most capable of spotting long arms (rifles and shotguns), because their larger size and distinct shapes make them easier to identify.

However, the technology is improving rapidly and systems offering some variety of visual detection are already on the market, either built into cameras or in the form of add-on software.



Looking for firearms visually is only the start, however. Adding in factors like how people carrying a concealed weapon walk and how they behave before pulling it out enhances the overall effectiveness of detection systems.

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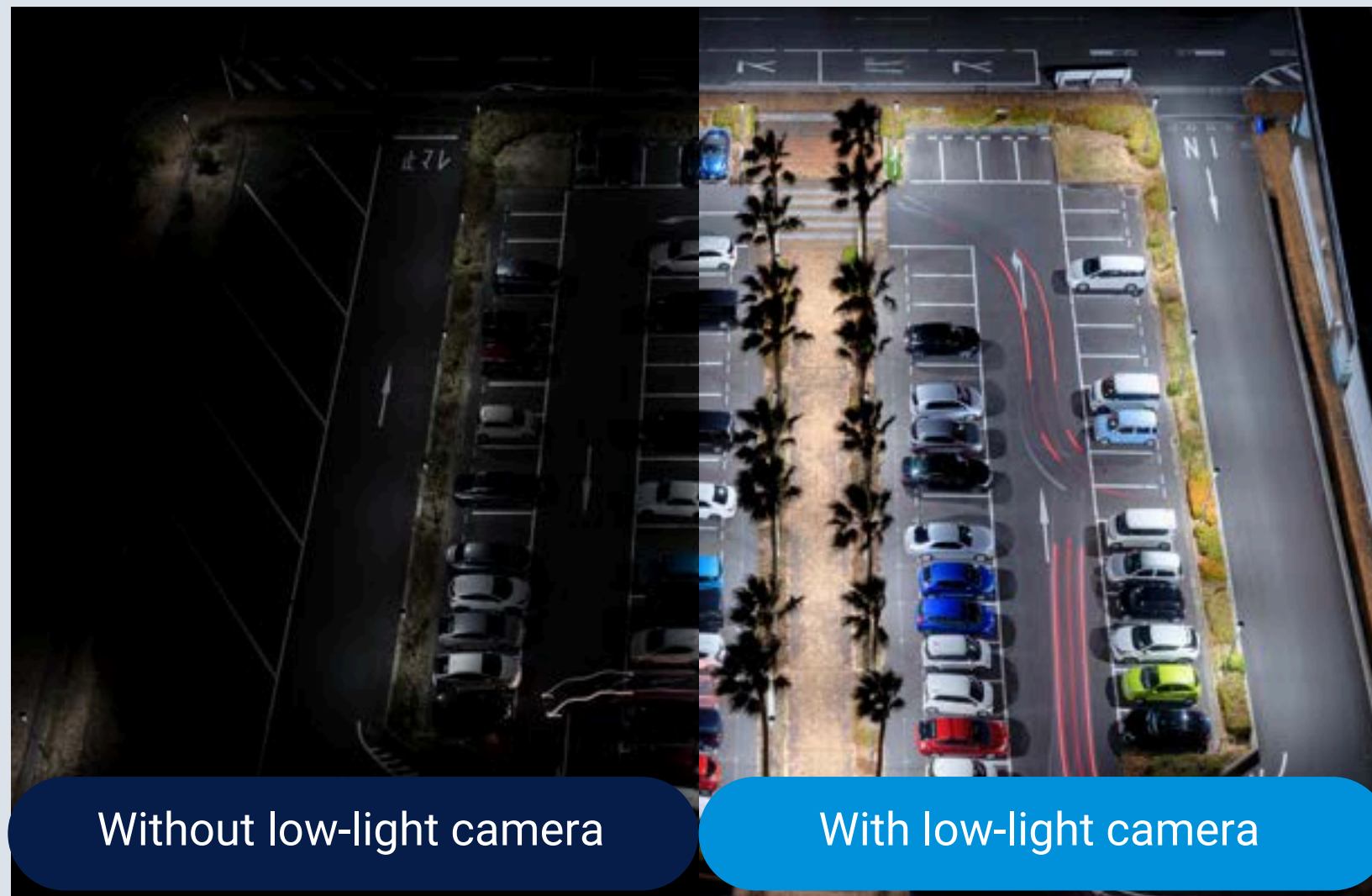
Mass shooting incidents involving four or more victims reported across the U.S. in 2023

According to the Gun Violence Archive

Trend 5

Low-light capabilities

If a surveillance camera delivers only blurry or dim video when it's dark out, it's effectively broken as soon as the sun goes down or the lights go out. We see two related factors driving a trend in 2025: greater low-light capabilities on tap for surveillance cameras.



Without low-light camera

With low-light camera

The first of these developments is the increasing availability of hardware (lenses and sensors) with strong low-light performance. These can capture more of a scene's light, even outdoors on moonless nights or inside unlit buildings. The larger and more sensitive a sensor is, the less light it needs to capture high-quality video.

The second factor is software. Low-light color correction can be used to make images that are difficult for a human viewer to interpret into a close equivalent of a daytime image, and the resulting color image can look very natural. For example, blue skies and green grass help the viewer feel more grounded and make the video easier to interpret.

This kind of image correction makes AI-based object recognition, face detection, and license plate recognition more reliable.

Trend 6

AI in cameras

Many manufacturers are already offering cameras capable of object recognition, detection of specified events, and more, without the need for processing in an external computer. Essentially, they are moving from yesterday's "dumb" cameras into ones with artificial intelligence (AI) built in.



The tasks these cameras can tackle include event detection, license plate reading, object counting, filtering false alarms, identifying safety violations or accidents, and detecting problems with the cameras themselves (like bad focus or a blocked lens). They can also conserve network bandwidth by only passing on video when events occur rather than full-time.

There are trade-offs with AI in cameras, though. For instance, when a security update, bug fix, or routine software update is required, each camera needs to be accessed and upgraded. Different camera brands, too, may require different ways to use their AI features, and may require a subscription to make those features work. Even so, onboard AI in cameras will likely have a dramatic effect on the world of video surveillance, in the same way software improvements have changed the landscape of mobile phones.

Converging on a new state of surveillance

The convergence of these trends points to a world where previous conceptions of surveillance barely apply.

Integrated observation and controls based on video surveillance will increasingly be the norm, thanks to smarter cameras, evolving upstream AI capabilities, better optics and sensors, and trustworthy cloud access for users, third parties, and trusted software add-ons.

If you employ video surveillance today, at least some of the trends identified here are likely to affect you soon, if they haven't already. Consider what changes your surveillance infrastructure might require to take advantage of the increased coverage and responsiveness that they make possible.





The 2025 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.

Learn more

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