AI-enabled security solutions for healthcare

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HEALTHCARE

AXIS COMMUNICATIONS

Healthcare facilities are among the most vulnerable locations in society. A mix of public access, people seeking care, prescription drugs, valuable equipment, and rising instances of workplace violence have created a high-risk environment. This makes keeping patients, staff, and visitors safe a very complex task.

There is no one-size-fits-all approach. Each use case poses a unique set of challenges, be it medication monitoring, visitor management, or emergency response. As a result, healthcare systems are leveraging increasingly advanced technology and surveillance systems within their broader physical security strategy.

Healthcare providers the world over rely on robust, trusted technologies to protect people, property, and the integrity of their organization. A range of AI-driven solutions can enhance your facility's security posture, drive new operational efficiencies, improve incident responses, and enrich the patient experience. An extensive portfolio of cameras, audio equipment, access control, AI-powered analytics, features, applications, and unified platform facilitate to tailor systems to changing needs.

We understand that when adopting any new security technology healthcare administrators must account for a huge range of sensitivities, regulations, and risk factors. All solutions must meet strict security standards, data protection laws, and mobility regulations – the most effective solutions also prioritize accessibility, enabling seamless and secure data sharing across systems and organizations.

Built on open standards, our solutions give you flexibility, scalability, and straightforward integration with existing systems, workflows, and devices for easy and meaningful adoption.

Our products and solutions integrate with a vast ecosystem of alert communicators that can span interdepartmentally within a hospital. This allows for relevant computer vision alarms to be routed to relevant parties and not bog down other departments with low value alarms.

Together with our global network of partners, you gain access to the tools and technologies needed to future-proof your security systems with cutting-edge solutions.

Axis hardware + third-party facial recognition

Facial recognition

Healthcare facilities experience high census regularly. It makes knowing who is on, and meant to be on, your premises extremely difficult. Third-party AI-driven facial recognition (FR) provides several useful advantages here, from spotting persons of interest (POIs) through to face verification for access control and evidence searching.

In EU Countries and other markets, i.e. in USA, biometric face verification is subject to strict regulation, while the use of facial recognition may be prohibited or heavily restricted, particularly for government use, due to privacy and surveillance concerns. Face verification requires explicit consent, a clearly defined purpose, and safeguards to ensure biometric data is only processed when legally permitted. Additionally, the reference image, such as a facial photo, must be provided voluntarily by the individual for face verification. This includes compliance with the EU AI Act and GDPR, as well as applicable USA laws such as Illinois BIPA and California's CCPA/CPRA.

Person of interest alerts

Facial recognition solutions can send targeted alerts when POIs enter your premises. They provide effective warning and prevention of casing, violent offenders, and other forms of crime. Furthermore, systems can track POIs movements across locations.

Access control

Face verification can serve as a highly accurate touchless biometrics access solution. It is much more hygienic, secure, reliable, and accurate than keycard-based access which can easily be misplaced and is infamous for being shared among staff. Face verification technology can also work as part of a multi-factor authentication system for the highest level of physical security available.

Evidence searching

When reviewing existing footage, facial recognition technology can be a valuable tool to help quickly and accurately identify suspects. This is a practice that complies with relevant data sharing agreements and applicable local regulations. It significantly expedites investigations as watchlists can be augmented by third parties in law enforcement.

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Axis hardware + third-party visible weapon detection

Visible weapon detection

Gun violence is a very real threat for healthcare facilities. Identifying a person(s) carrying a weapon is both a formidable and extremely sensitive task, requiring validation, precise escalation procedures, and rapid response.

The use of more traditional solutions such as metal detectors is a very accurate means of weapon screening. They work well when someone enters the building through typical ingress points. Layering on visible weapon detection third-party AI models can offer an additional aid to your security posture by providing visual evidence, both inside and outside of the facility.

The combination of these third-party rich capabilities provides safety teams with the broadest array of solutions, spanning emergency prevention, notification, engagement and management.

Designed to assist human operators by highlighting potential threats, these technologies are based on visual cues and should always be reviewed by authorized personnel. With technical limitations, they should complement an overall security solution and be used in accordance with applicable laws. Privacy and data protection are key, with safeguards in place to ensure compliance with relevant regulations.

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Axis solution or third-party sound detection

Sound detection and alerts

Sound is often the earliest indicator of an incident. Being able to identify and respond quickly and meaningfully to specific sounds can greatly affect an incident's outcome.

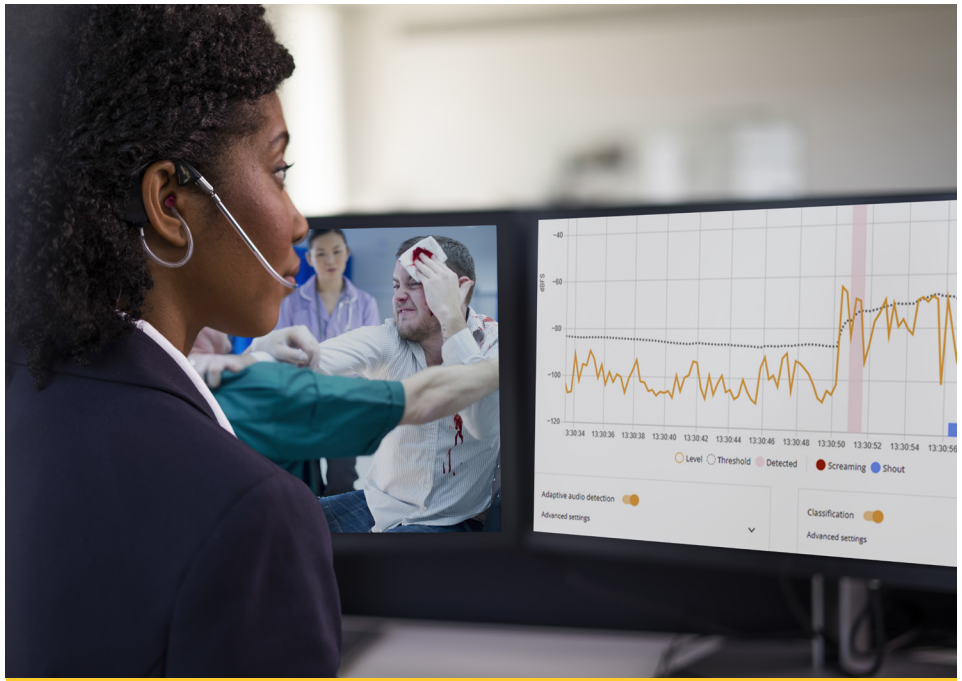
Advances in AI have led to the development of highly accurate sound detection. These solutions add an extra dimension to active incident management. They can also be combined with video analytics for even greater accuracy.

Through AI-driven sound detection we automatically filter through the ambient "noise" to alert you to actionable security events.

Third-party solutions can also be used to enhance patient care, monitoring, and alerting a healthcare professional when sounds such as coughing or wheezing occur.

This third-party AI-based application notifies you whenever something relevant happens, even when audio recording is disabled and there's no visual indication. This is possible as it only transmits event metadata as opposed to the audio stream itself.

As part of our audio privacy control, audio streaming is disabled by default and it's up to the user to turn it on, following the data protection policies of the healthcare facility. These solutions can be particularly useful in environments where video cannot be used for privacy issues, for instance, in sensitive areas, such as bathrooms and changing rooms.



Sound detection can detect:

> Developing incidents leading to unwanted behaviors

> Glass breakages

> Sudden increases in volume

> Screaming and shouting

> Firearm discharge (third-party solution)

...giving you the chance to respond immediately and appropriately.

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Axis solution or third-party parking managment

Vehicle identification can be used for:

> Access control, opening gates for authorized vehicles

> Automatic registration of visiting vehicles

> Wrong-way detection and alerts

> Watch list monitoring, alerting staff to the presence of registered vehicles

License plate and vehicle recognition

Vehicle access points are among the first areas over which security teams have control. Early identification of suspicious vehicles can greatly reduce the chances of escalation and improve crime prevention.

AI-driven license plate and vehicle recognition offer real-time alerts and controls. Recognizing vehicle types, colors, read and cross reference license plates with existing databases – be they registered staff vehicles or criminal watch lists. Following local regulation policies and laws, these tools provide powerful and actionable data to security teams.

These same solutions can contribute toward improving the day-to-day management of your parking facilities, assisting with things such as ticketing and automatic payments, queue reduction, and space availability. The latter features are developed by third-party solutions that are neither provided nor endorsed by Axis, which fully disclaims any responsibility for them.

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Axis solution

Loitering detection

People wait at healthcare facilities for all kinds of reasons. It's important that security teams can distinguish between casual waiting and loitering with intent.

Often, members of the public will loiter because they are lost or cannot access facilities after hours. These people can need urgent assistance and so identifying and responding to them in good time is critical. Surveillance systems may help facilities meet aspects of the regulatory requirements of Laura's Law.

At the other end of the spectrum, wrongdoers will loiter around high value locations such as medication stores, as well as parking lots, or ingress points. Security teams need timely alerts to respond meaningfully and prevent any escalation.

Loitering detection detects people and triggers an event, such as lighting, sounds, or staff notifications, if they've been in an area for too long.

Additionally, the solution helps prevent crimes like vandalism, theft, and break-ins. By sending and recording video only on event triggers it makes reviews and searches easier, while reducing bandwidth and storage needs.

Axis solution or third-party color-based authorization

Clothing color classification

The color of clothing or a vehicle is frequently used to identify individual members of the public, staff, and vehicles of interest. It can at times even signify credentials, such as scrubs being blue or turquoise, or protective hazmat suits being orange or yellow.

AI-based object tracking allows you to find persons of interest around your facility based on the color of their apparel. Both the color of their upper and lower garments can be tracked, allowing for greater accuracy and more precise search capabilities when reviewing footage.

Likewise, a vehicle's color can be used as part of the defining search criteria. When combined with other metadata such as time frame, location, or type of vehicle, powerful forensic search capabilities can help you readily find persons and vehicles of interest.

Color identification, from third-party solutions, can also be used as part of authorizing access to areas where specific garments are required to be worn, such as scrubs and gowns in operating theaters. When used in conjunction with third-party facial recognition technology, it not only enhances security through multifactor authentication but also helps ensure best practices and strict procedural compliance.

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Axis hardware + third-party unified communications

Unified communications

In healthcare, effective communication is vital to delivering a safe environment for staff, patients and visitors. Whether it's an evacuation or an active shooter alarm, sending a page requesting medical assistance, or pressing a panic button when confronted by a disruptive individual, the appropriate communication must reach the right people the moment they need it.

Unified notification tools help healthcare facilities prioritize safety while delivering efficient, targeted communications through any and every channel, both across the entire site and externally.

Readily integrating Axis speakers with your existing third-party mass notification systems and workflows, unified notification tools provide robust configuration options for precise and deliberate communication.

Third-party unified communications can:

> Automate message sequences and recipients for specific scenarios

> Send intrusive audio, visual, and text alerts through speakers, signage, and personal devices (pagers, mobile phones)

> Establish internal groups and zones to avoid sensitive areas and minimize disruptions in other areas

> Set up external groups such as with police and fire departments

> Trigger silent alarms or send panic messages with a touch of a button

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Axis hardware + third-party fall prevention

Fall prevention

Keeping track of patients and their whereabouts is a perennial challenge. It is important that nursing staff are aware of when a patient leaves their bed or even attempts to, has been out of bed for longer than expected, or indeed has fallen, to allow a timely and appropriate response.

A third-party AI-powered solution to monitor patient out of bed, fall, and elopement uses computer vision to identify and track body positions and automatically send an alert when a fallen person is detected in view of the camera. Even partially visible people may be detected.

When a patient has eloped, the solution alerts staff to ensure timely intervention. Additionally, users can create customized alerts, for example, once a second person enters the room.

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WHY AXIS?

Privacy, data protection, and cybersecurity

We understand that healthcare providers handle some of the most sensitive data there is. Using surveillance technologies respectfully within these environments can be particularly challenging.

Not only do we build our solutions to high security standards and comply with regulations, but we also provide a range of privacy-first technologies to suit the needs of your use case. These include technologies such as:

> **Versatile dynamic privacy masking.** This AI-based technology enables dynamic masking of moving and still objects such as humans, license plates, or backgrounds. With different levels of masking available, for example you may need to mask entire human bodies or just faces, users can choose the appropriate level of masking or even designate masking exclusion areas.

> **Thermal imaging cameras.** Ideal for detection purposes in sensitive areas as their sensors do not produce the minutia of detail required for identification purposes.

Axis network products come with built-in cybersecurity features and default security settings.

We are ISO/IEC 27001-certified and work only with ISO 9001- or IATF-certified suppliers.

We implement cybersecurity best practices in our information security management system, supply chain, product development, and vulnerability management. And because cybersecurity is a shared responsibility, we also offer software upgrades, tools, and services.

WHY AXIS?

Total cost of ownership

When you are looking at a network solution, the price tag on the camera is only the tip of the iceberg. The total cost of ownership includes solution design, deployment, operation, and maintenance. Those associated costs make up most of the cost of owning the camera over its lifetime.

Here, Axis shines. Why?

> Our extensive customer tools to save time and money in product selection and site design

> Our products are built on open standards meaning they integrate readily with your existing systems

> We make technologies that lower bandwidth, storage, and energy consumption, noticeably reducing ongoing operating costs

> We build high-quality, rugged cameras that last, even in harsh or vandal-prone environments

In other words, we save you money every step of the way, from design and deployment to ongoing operation and maintenance.

The savings on hidden costs, together with the return on your investment, and depth of our portfolio are the core of the Axis advantage.

WHY AXIS?

Get secure

Today's AI capabilities can greatly enhance the safety and responsiveness of security teams and healthcare professionals alike.

Our robust range of products and services, further bolstered by our extensive partnership ecosystem, can enhance your physical security posture, improve care delivery, and increase operational efficiency.

Cameras, analytics, intercoms, and speakers are powerful tools for patient care. An Axis network solution integrated with partners' technologies, isn't just a way to ensure you have enough hands on deck. It's a flexible, scalable solution that enables you and your facility to set a new standard for hospitals.

To learn more, visit: www.axis.com/healthcare

Or, find an Axis partner near you and start enhancing your security today.

Healthcare organizations that decide to leverage AI must also ensure that the use of AI aligns with relevant laws, governance frameworks, ethical standards, and data protection policies.

About Axis Communications

Axis enables a smarter and safer world by improving security, safety, operational efficiency, and business intelligence. As a network technology company and industry leader, Axis offers video surveillance, access control, intercoms, and audio solutions. These are enhanced by intelligent analytics applications and supported by high-quality training.

Axis has around 5,000 dedicated employees in over 50 countries and collaborates with technology and system integration partners worldwide to deliver customer solutions. Axis was founded in 1984, and the headquarters are in Lund, Sweden.