

AxxonSoft

A world's leading developer of intelligent VMS and PSIM software. Since 2003, the company has been creating disruptive technologies that push the safety & security industry forward.

The collage illustrates the AxxonSoft software interface with various components:

- Top Left:** A search bar with a magnifying glass icon.
- Train it yourself:** A section for adding image samples, showing a grid of vehicle images and buttons for 'Camera' and 'Upload'. A red house icon is also present.
- Training:** A section with a large 'AI' logo, a 'Settings' dropdown, a video preview of a highway, and a prominent 'START TRAINING' button.
- Event panel:** A list of detected events with timestamps and camera identifiers. Each entry includes a thumbnail and recognized attributes:
 - 2024-03-25 11:48:26 | Camera 1:** Gender: Male, Position: Front, Clothes: Longsleeve, Trousers.
 - 2024-03-25 11:47:53 | Camera 2:** Gender: Female, Position: Side, Clothes: Jacket, Trousers.
 - 2024-03-25 11:46:12 | Camera 3:** Gender: Male, Position: Back, Clothes: T-Shirt, Trousers.
- Privacy Masking:** A video feed showing a crosswalk with a 'Privacy Masking' overlay and a red bell icon.
- Camera View:** A top-down view of a white car with license plate 'A-1234'.
- Person Detection:** A video feed showing a crowd of people with blue bounding boxes for detection.
- Event board:** A bottom navigation bar with icons for a grid, list, and 'Event board' text.
- Navigation:** A red double-headed arrow at the top right indicates a transition between views.

Company Profile

- Founded in 2003
- Over 20,000 customers
- 30+ offices worldwide
- Sales in 140+ countries

About AxxonSoft

AxxonSoft is a software development company that offers video management software (VMS), a physical security information management platform (PSIM), cloud solutions (VSaaS), and in-house-designed customizable AI video analytics. AxxonSoft software provides best-in-class integration and customization capacity for building intelligent video surveillance and integrated security systems of any scale and for diverse industries.

Technology First, Since 2003

Starting with the invention of a revolutionary video codec, proceeding with a pioneering smart search for recorded video, and then focusing on AI, comprehensive integration, and cloud — we have always considered innovation to be our main driver.

Integrated Approach

We believe that intelligent technology can deliver great value to business and society through extracting actionable data from video and making decisions based on that data in combination with information from other sources. That is why we see the unification of standalone systems and seamlessly integrated AI video analytics as our key competitive advantages. And why we have always taken an integrated approach, forging strong partnerships with IT market leaders and being among the first VMS developers to support advanced video camera capabilities and interoperability standards, such as ONVIF Profile G, T, and M.

Our Mission

Based on years of real-world experience, our mission is to help businesses and government agencies create safer environments and improve operations by using video and physical security systems in the most efficient and intelligent ways. We don't just say it — we do it.

Our Partners

AxxonSoft is an extremely partner-oriented company that puts its partner's needs first. We never compete with our partners, integrators and distributors, as system implementation is not our business. Moreover, functionality enhancements are often made based on partner requests according to specific project requirements. Alongside leading-edge products, we provide our partners with training, presale, project assessment, hardware calculation, marketing and sales support, and 24/7 technical support.

Technology Timeline

2023

Launch of AxxonSoft's unified physical security platform.

2022

AxxonSoft is among the first VMS developers to support ONVIF Profile M.

2021

Axxon VSaaS Datacenter platform is launched.

2019

AxxonSoft supports ONVIF Profile T. Behavior Analytics are added to the AI toolset.

2017

AI is applied to detect people and vehicles. More than 10,000 IP devices are integrated.

2016

AxxonSoft implements a deep learning approach to fire and smoke detection.

2015

AxxonSoft supports ONVIF Profile G. The number of integrated IP devices exceeds 8,500.

2012

AxxonSoft's scalable VMS is launched.

2011

Intelligent search technologies are introduced for recorded video. Edge video analytics on IP devices are supported.

2010

AxxonSoft joins ONVIF as a contributing member.

2005

Industry-specific solutions are introduced for retail, transportation, and banking.

2004

First access control/alarm systems integration. Support is added for ten Axis IP cameras.

2003

The concept of a universal security platform is implemented in AxxonSoft's PSIM.

AxxonSoft Solutions & Customers



Retail

Solution

POS supervision, queue detection, visitor counting, visitor interest heat mapping



Education

Solution

Vape detection, access control, scheduled intrusion detection, foot traffic heat mapping



Healthcare

Solution

Locating patients leaving their rooms, man down detection, medical mask detection



Banking

Solution

ATM tampering and raised hands detection, access control, remote branch monitoring



Casinos

Solution

Identification of VIPs and unwanted visitors, self-exclusion list checks via facial recognition



Airports

Solution

Queue length estimation, detection of people, vehicles, and foreign objects on the runway



Safe City

Solution

Unlimited scalability, video wall management and centralized monitoring of distributed sites



Production

Solution

Locating people in hazardous areas, monitoring the use of personal protective equipment



Atlantis The Palm

UAE

Total no. of cameras: 2,050+

Solution: High availability video surveillance with AI analytics



Atlantis The Royal

UAE

Total no. of cameras: 2,728

Solution: High availability video surveillance, PSIM + VMS, integration with BMS



Khalifa University

UAE

Total no. of cameras: 1,500+

Solution: General surveillance with failover



IKEA

UAE

Total no. of cameras: 460

Solution: High availability video surveillance, cash register integration



Liverpool Store

Mexico

Total no. of cameras: 1,000+

Solution: LPR, facial recognition, visitor counting; queue, crowd, and loitering detection



Mexico City International Airport

Mexico

Total no. of cameras: 2,700+

Solution: LPR, facial recognition, fever screening, AI-based video analytics and intelligent search, failover



Felipe Ángeles International Airport

Mexico

Total no. of cameras: 3,000+

Solution: LPR, facial recognition, fever screening, access control, perimeter protection, failover



A.C. Camargo Cancer Center

Brazil

Total no. of cameras: 700+

Solution: Behavior Analytics, mask detection, people counting, LPR, intelligent search



Axxon One is scalable video management software (VMS) that fits both small and large video surveillance installations, including those distributed across many locations. It supports the latest ONVIF standards, such as Profile M, and delivers unique value through integrated solutions, customizable AI video analytics, and fast, intelligent search in video footage from multiple cameras.

Scalability and Monitoring

Unlimited Scalability

- Axxon One supports on-premises, cloud-based, and hybrid deployments. You can implement a local system with a few servers and operator workstations, or a large-scale security solution that spans multiple locations, such as retail stores, schools, or gas stations.

A hybrid solution can employ different types of cameras connected to on-site VMS servers, or cloud-based VMS servers via bridge appliances and camera plug-ins. It provides centralized system configuration, health monitoring, reporting, and advanced user rights management. You can establish a command-and-control center while combining local and remote video monitoring through web, desktop, and mobile client applications.

Scalable Cloud Storage

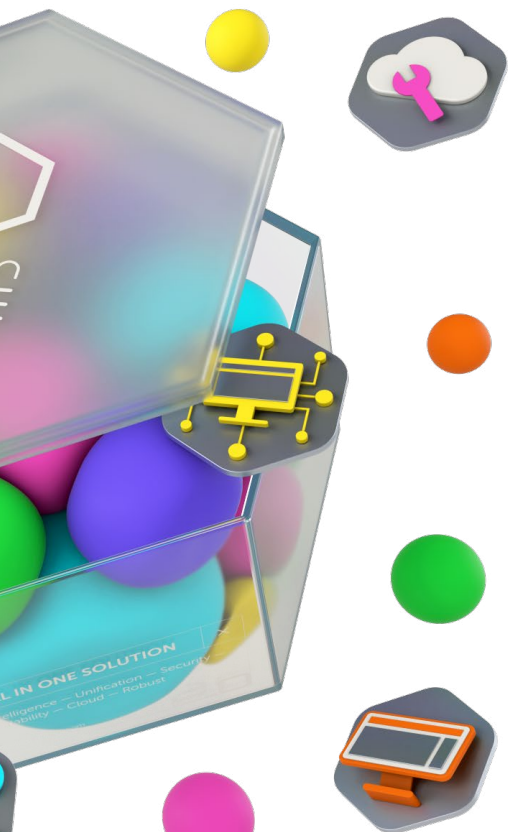
- Cloud object storage services, such as Seagate® Lyve™ Cloud and Wasabi Hot Cloud Storage, provide reliable long-term video retention and rapid storage expansion. Cloud storage-as-a-service scales up and down in no time, so you will always have the space required for your video footage while not spending time and money on hardware procurement.

Cloud Monitoring Service

- Axxon One comes with AxxonNet — a free cloud service for working with on-premises video surveillance systems. It provides convenient and secure remote video monitoring, customizable reporting, and centralized management of watchlists for real-time facial and license plate recognition. The feature-rich web client supports virtually the same functionality as the desktop client. It also provides configurable dashboards for visual display of video analytics and POS transaction data.

Video Walls and Interactive Maps

- With Axxon One, operators can work efficiently and conveniently. You can designate a client computer or several computers as a video wall, easily configure multi-computer and multi-monitor video walls, and manage them from any client workstation. The interactive map helps quickly identify where a selected camera is located. It supports floor plans, Google Maps and OpenStreetMap geo-maps, as well as multi-story building plans.



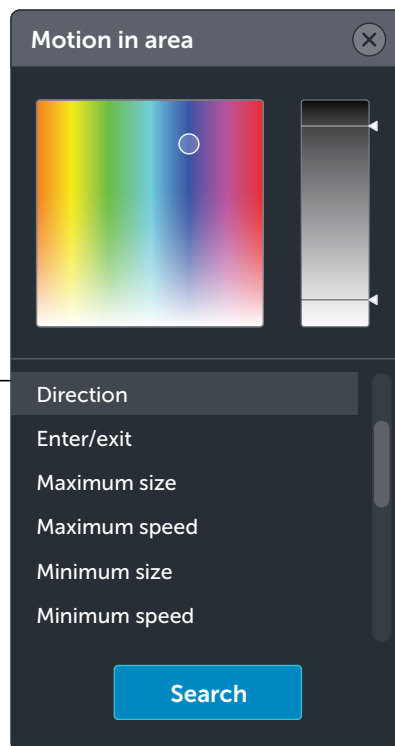
Integration

Security Systems Integration

Axxon One integrates access control, fire/intruder alarm, and perimeter protection systems. It links camera videos to events occurring in the connected systems and allows for monitoring and controlling security devices using the interactive map and dedicated boards. An operator can quickly locate an alarm or access event and get the corresponding footage to assess the situation.

Cash Register Systems Integration

Axxon One receives data from cash registers and links it to video feeds. The receipt text is superimposed on the video or displayed in a separate pane. You can use receipt data to retrieve POS transaction videos from recorded footage. This offers a full picture of what's happening at the checkout and helps reveal violations that are almost impossible to detect using conventional video surveillance.



Video Analytics

Scene Analytics

- Scene analytics detection tools trigger alarms based on different object movements within a camera's field of view. The following are detected: motion in area, stop in area, area entry/exit, loitering, abandoned objects, line crossing, multiple objects, moving from area to area. To fine tune the detection, you can set object size, speed, color, and type and configure the perspective. Scene analytics can be combined with AI object trackers and custom AI analytics.

AI Object Tracker and Counter

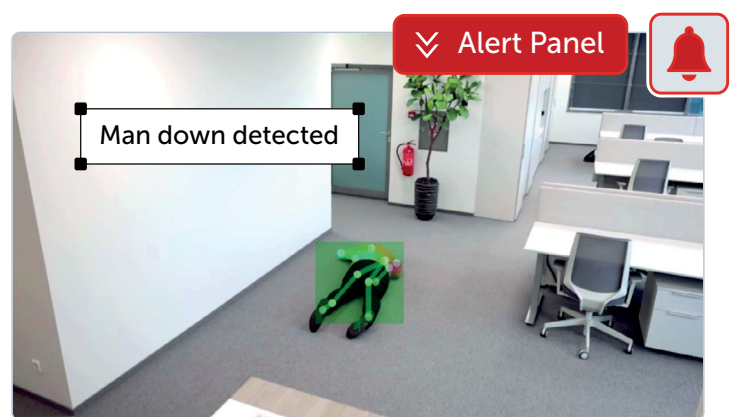
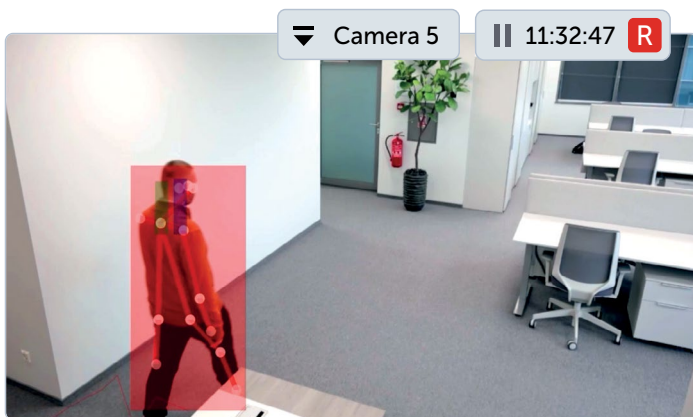
- Pre-trained neural networks accurately detect humans and vehicles. This technology can filter out false alarms in complex scenes with a large amount of non-relevant details. The tracker follows objects as they move, so you can apply scene analytics to detected humans or vehicles. The counter counts moving or static objects, such as cars in a parking lot or people on the sales floor. This is a valuable tool for non-security-related applications.

Custom AI Analytics

- Custom AI analytics expand the capabilities of an object tracker or counter by detecting specific object types, such as cyclists, animals, or products on a conveyor. To meet the needs of a certain facility and task, we train neural networks using video materials obtained onsite. Custom AI analytics can also be applied with thermal imagers under difficult surveillance conditions.

Human Behavior Analytics

- Behavior Analytics recognize situations of risk early on by detecting specific human postures, for example, an individual lying down, a cashier with raised hands, or a person squatting by an ATM. Swift alerts to first responders minimize the risks for individuals, groups, and facilities.



Facial and License Plate Recognition

- You can create watchlists of faces and license plates and configure automatic scenarios when a match is found. For example, notify the operator when the recognized plate number is on the negative watchlist or open a barrier when the number is on the access list. Facial watchlists of regular customers or unwanted visitors help automatically notify retail, security, or casino staff of their entry. The facial recognition tool can also collect anonymized visitor age/gender data for customer analysis.

PPE Detector

- Personal protective equipment (PPE) detector is a tool used for workplace safety enforcement. It locates individuals wearing no hard hats, high-visibility vests, or protective clothing and individuals wearing improperly applied PPE.

Fire and Smoke Detectors

- Intelligent fire and smoke video detectors operate in areas where other types of sensors are ineffective, for example, in open spaces. They provide early detection of fire hotspots, which leads to a significant reduction in damage.

Visitor Counter

- This tool is especially useful for retail facilities. It counts customers entering and exiting a store or a certain area. The information collected can be used, along with sales data, to estimate your sales conversion rates and for market research.

Dynamic Privacy Masking

- Axon One can automatically mask objects in live and recorded video, which is essential for compliance with data protection/privacy regulations. An intelligent, resource-optimized algorithm masks moving objects in the camera's FOV while using minimal computing power. You can also use AI detection to hide only certain objects, such as people.

Queue Length Detector

- The tool detects the number of people in queueing areas using a top-down perspective. Knowing actual customer numbers empowers you to manage human resources in both the short and long term.



New and Upcoming Features

- Recently added features include the Train It Yourself service, which allows users to train neural networks to detect specific objects; a meta-detector for alerting to text-specified events like “a red car on a crosswalk”; a crowd counting detector for 10 to 10,000 people; and a fighting detector for identifying brawls.

Upcoming releases will feature new tools, such as appearance attributes recognition for locating people in recorded video by criteria like age and clothing, multi-camera tracking for following objects across cameras and displaying their movement on the map, and text video search that functions similarly to the meta-detector when sorting through video footage.

Intelligent Search

Facial and License Plate Search

- Axxon One can capture and store human faces and vehicle license plates (face images are kept anonymous). This enables you to quickly check a person's photo or a vehicle number, full or partial, against video footage from multiple cameras. This helps pinpoint where and when a person or vehicle of interest appeared and what they did at those locations.

Similarity Search

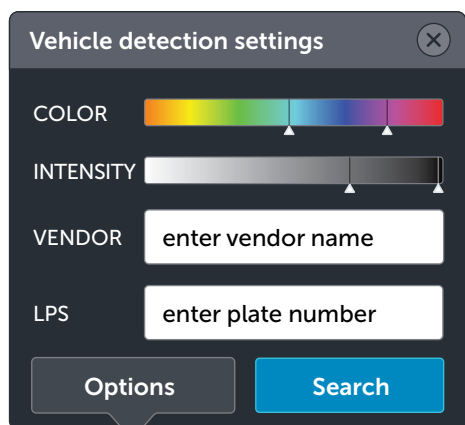
- AI recognizes human appearance features and stores them in a database. You can select a person in the frame or upload a photo, and Axxon One will quickly sort through the database to find similar individuals in video footage from multiple cameras.

Instant Event Search


- Axxon One analyzes video as it is recorded and stores metadata. To quickly retrieve the footage of an event of interest, set the search criteria: motion in area(s), line crossings, object color and size, etc. You can also simply specify an area within the frame to swiftly locate all instances of motion within that designated region. Axxon One seamlessly integrates with smart cameras to receive metadata, enabling resource-optimized intelligent search.

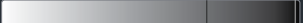
Vehicle Search

- AI identifies and stores the make, model, speed, and color of vehicles in a traffic stream. You can use all of these criteria to find vehicles in recorded video from multiple cameras. This is essential when the license plate number of a vehicle of interest is unknown.



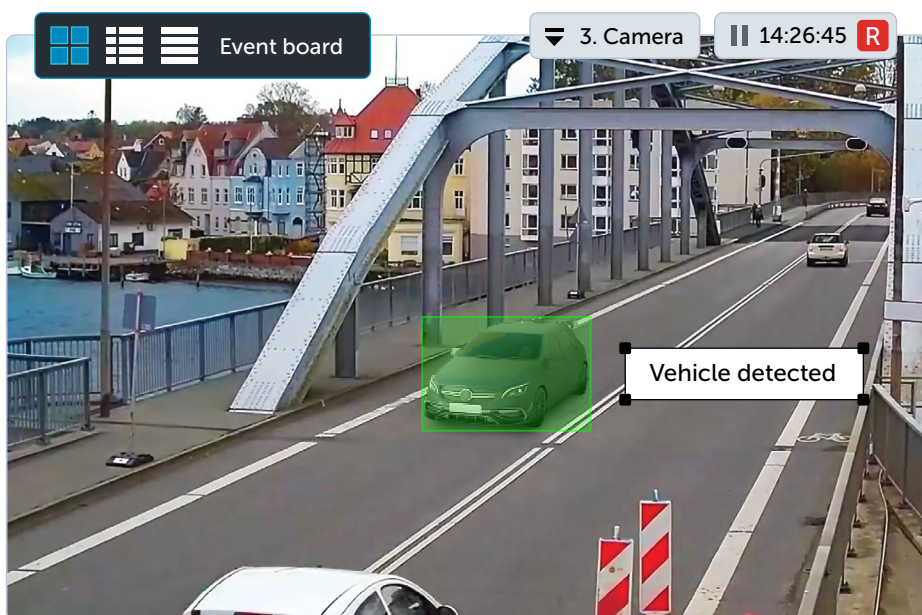
Vehicle detection settings

COLOR 

INTENSITY 

VENDOR

LPS



Axxon VSaaS Datacenter is a software platform that enables communications service providers and system integrators to build cloud-based video surveillance solutions (VSaaS) that harness the power of AxxonSoft's neural network analytics and intelligent search for recorded video.

Build Your Own VSaaS



Camera-to-Cloud

- Cloud-based VMS servers with remote configuration and monitoring. Only cameras and network equipment are installed at the client's site. Video can be buffered to SD cards. The client doesn't need to maintain and support complex hardware infrastructure. Easy system scaling.

Hybrid Architecture

- On-site VMS servers that can be configured and monitored locally or via the cloud. Video is stored locally; recording is not affected by internet connection failures. Selected portions of video can be stored in the cloud to be quickly accessed from different devices. The cloud helps easily access, configure, and monitor any local system.

Joint Solutions

- Leverage the power of AxxonSoft's integrated solutions with IT market leaders to increase the performance, scalability, and cost-effectiveness of your VSaaS system.



SEAGATE

Seagate® Lyve™ Cloud

Use reliable, scalable, and secure cloud storage for long-term video retention and instant storage expansion.



Intel

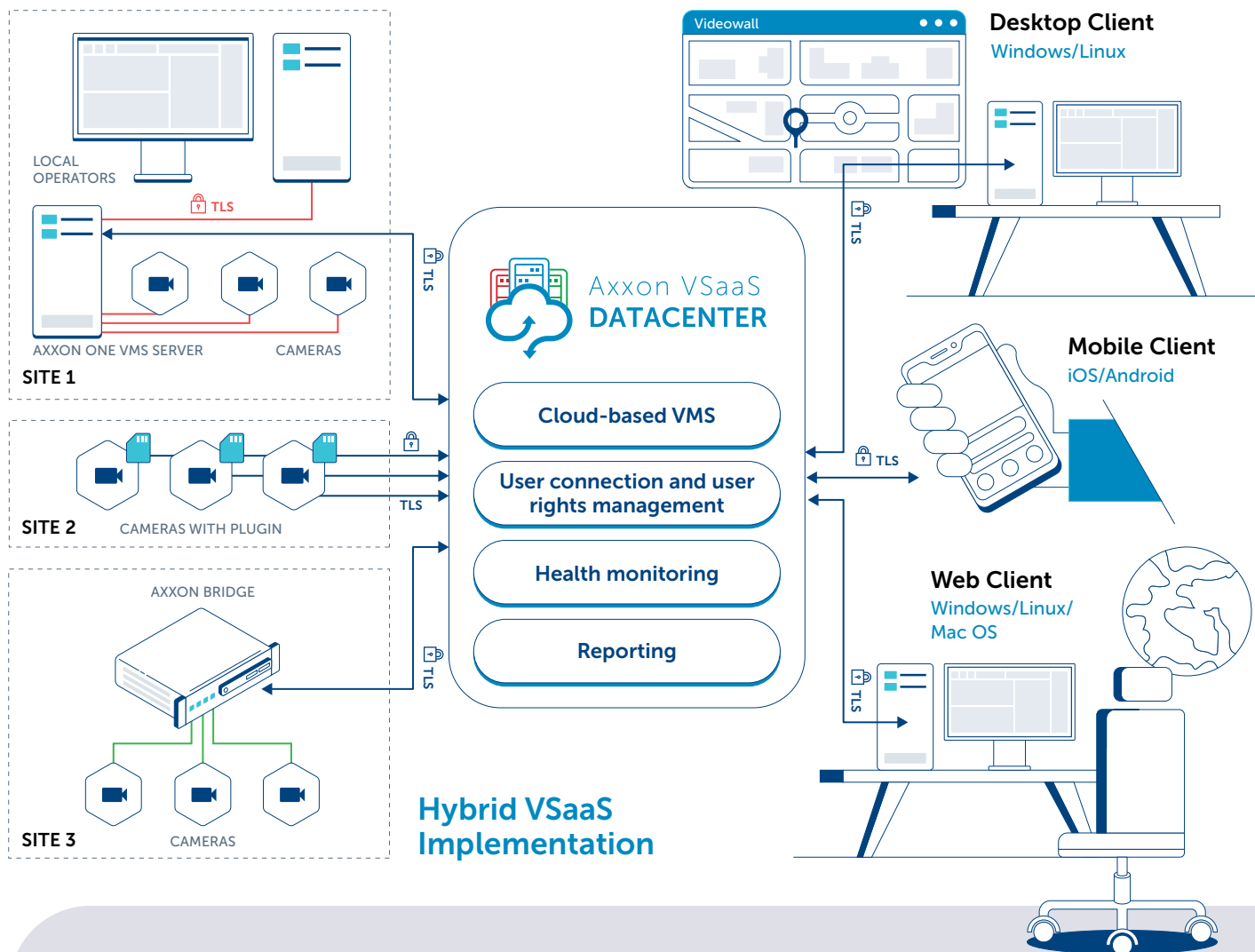
Extend AI workloads across Intel® hardware and maximize performance with CPU, GPU, and VPU acceleration.

Various Deployment Options

- To deploy your VSaaS solution, you can use your own computing infrastructure or rent it in a public cloud. Support for object storage and purchasing reserved virtual machine instances for a set period help reduce the total cost of ownership, minimizing the customer price and maximizing your profit.

Cybersecurity

- - Secure connection via HTTPS with TLS encryption. reCAPTCHA v3 on the login screen. Two-factor authentication.
 - User password hashing, password expiry and history, password strength control.
 - Setting the lockout time/number of failed login attempts.
 - Auto-logout after a set period of inactivity. Locking of long-term inactive accounts, with reactivation by email.



Features and Benefits for End-Users



AI Facial and License Plate Recognition

Identification and search for people and vehicles in video footage from multiple cameras.



Intelligent Search Across Recorded Video

Quick search by multiple criteria: motion in area(s), line crossings, object color and size, etc.



AI Fire and Smoke Recognition

Early detection of fire hotspots in areas where other types of sensors are ineffective.



AI Human/Vehicle Detection

Scene analytics based on intelligent object detection in complex environments.



AI Behavior Analytics

Identification of risky situations based on specific human postures, such as raised hands.



Multi-Level User Rights Management

Flexible role-based user rights configuration, convenient for large systems.



Retail Analytics

Visitor counting, age/gender analysis, queue detection, motion heat mapping, and POS supervision.



Comprehensive Reports

Custom reports from any client's facility based on detection tools, alarms, and retail analytics.

axxon PSIM

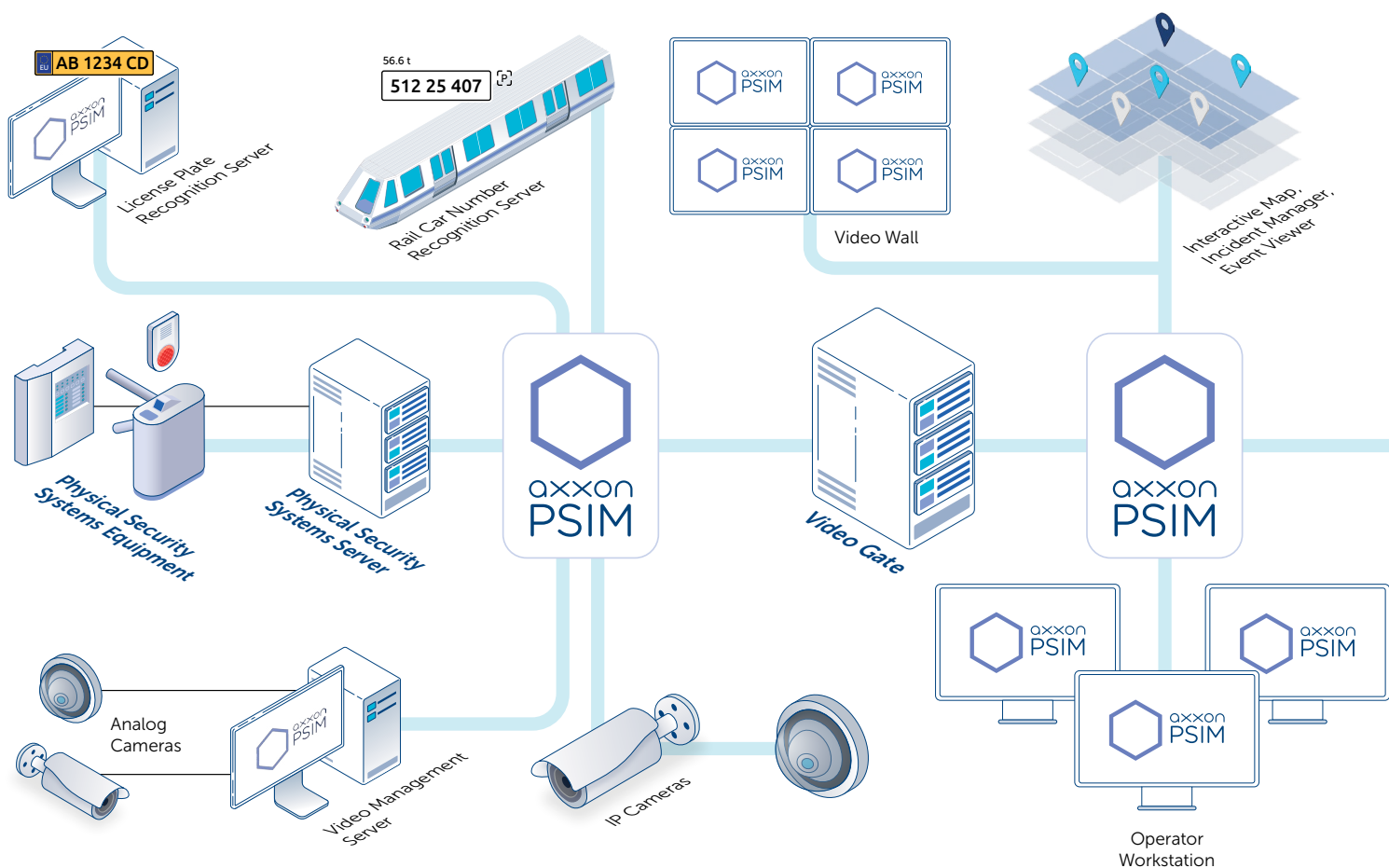
Axxon PSIM is remarkably advanced distributed physical security information management (PSIM) software that combines intelligent video analytics, universal IP connectivity, and event-driven automation capabilities in a single environment. Axxon PSIM can integrate all physical security systems, enabling system management through unified interfaces and highly customizable automated scenarios.

Distributed Architecture

- An unlimited number of servers, operator workstations, cameras, sensors, and other edge devices in a single configuration. Axxon PSIM synchronizes data across all subsystems and components, enabling centralized and remote monitoring and system management.

Integration

- Axxon PSIM integrates with IP cameras, access control systems, fire and intruder alarms, perimeter protection systems, screening equipment, and other types of systems and devices. Support for open communication protocols enables interaction with BMS, engineering equipment, industrial automation systems, and more.





Automation

Axxon PSIM supports four layers of automation, ranging from standard reactions to events that can be easily activated through the graphical user interface to scripting programming languages for creating scenarios of any complexity.

Incident Manager

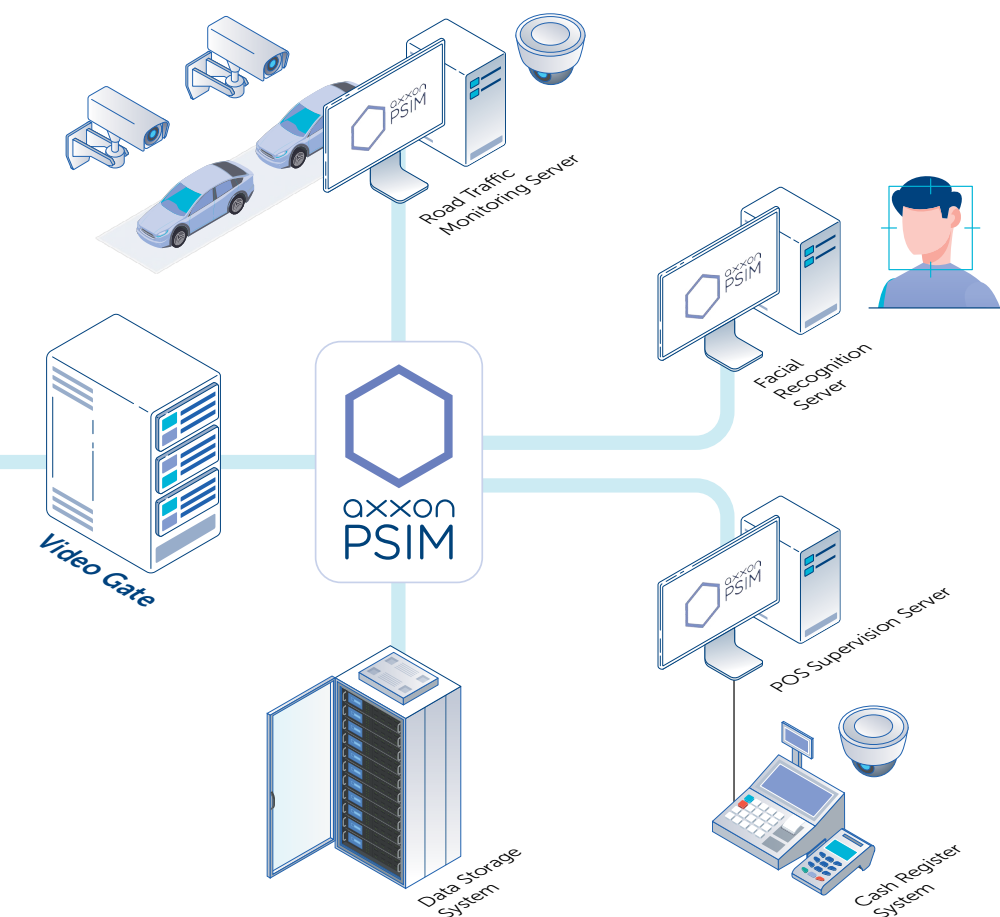
Incident Manager is a universal tool for handling any events, such as triggering a video detector or alarm sensor, or receiving specified events from the integrated systems. It helps organize an efficient and reliable incident management system that fully corresponds to the specifics of the protected site.

For each type of event, a step-by-step processing logic can be configured, with the option to add comments and automatically initiate a predefined scenario at each step. Each next step can be selected based on the operator's actions. Due to its step-by-step approach, Incident Manager helps the operator handle any alarm in even the most stressful situation.

Monitoring Distributed Sites

- The Monitoring module receives and records alarm messages from local systems installed at distributed sites. The operator receives a notification and can view detailed information about the alarm, including associated video recordings. The time of alarm reception is logged, enabling the monitoring of operator performance.

Operators have access to real-time video feeds from the cameras and can request video recordings from the archives of remote servers. They can also remotely control alarms, access control systems, and executive devices. This includes actions such as activating a siren, locking a door, arming or disarming the site, and more.



AXXON PSIM APPLICATIONS:

- Video surveillance with audio recording and video analytics
- Access control
- Fire and intruder alarm management
- License plate recognition, road traffic monitoring, traffic violation recording
- Rail car and container number recognition, rolling stock monitoring
- Point-of-sale/retail monitoring
- Monitoring multiple distributed sites



ACFA PSIM is a subsystem for managing access control systems, fire and intruder alarms, and perimeter protection systems. It includes integration and service modules, specialized interfaces and supports dozens of systems from different manufacturers.

Equipment Operation

- To display and control the status of devices, the Interactive Map and Event Viewer interfaces are used. Operators can monitor events from devices, view video from linked cameras, configure and manage equipment, including arming/disarming alarm groups, controlling actuators, etc. For a number of systems, auto-configuration is available, which involves reading the equipment configuration and automatic creation of the object tree in Axxon PSIM.

Access Control

- ACFA PSIM includes a full-featured access management system that allows you to create employees (card holders) and departments, configure schedules, and set access levels. It supports passport scanning, electronic pass printing, access card issuance, and user identification at entry points through card scanning and video image comparison with photos stored in the database.

Time and Attendance

- The Time and Attendance module helps monitor work discipline. It allows flexible configuration of work schedules, taking into account days off, holidays, justification documents, and overtime. ACFA PSIM generates more than 20 types of access control and time and attendance reports, which can be centrally retrieved via the web interface, printed, and exported in various formats.



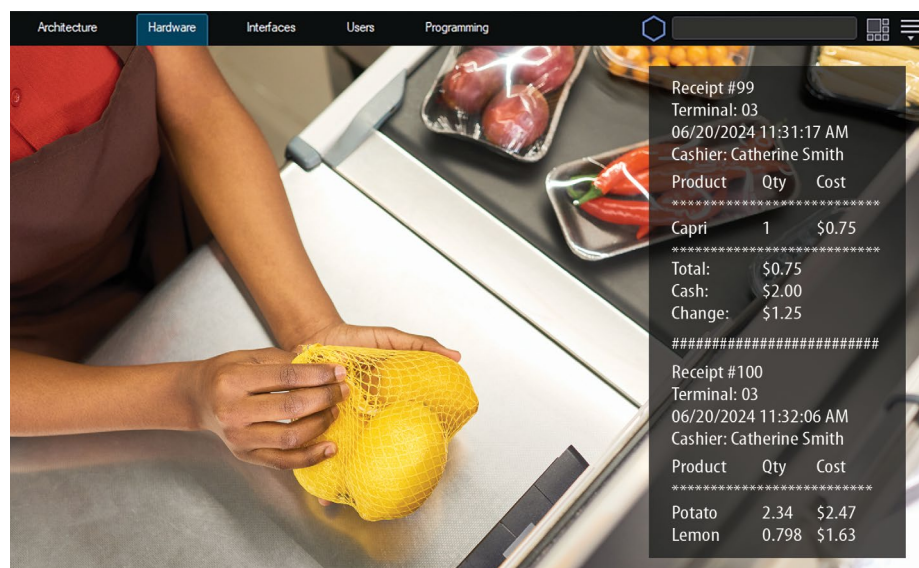
POS PSIM is a solution for retail that combines video monitoring of cash register operations, retail video analytics, and web reports. It helps detect fraud and compliance violations and is used by security departments and commercial units of retail enterprises.

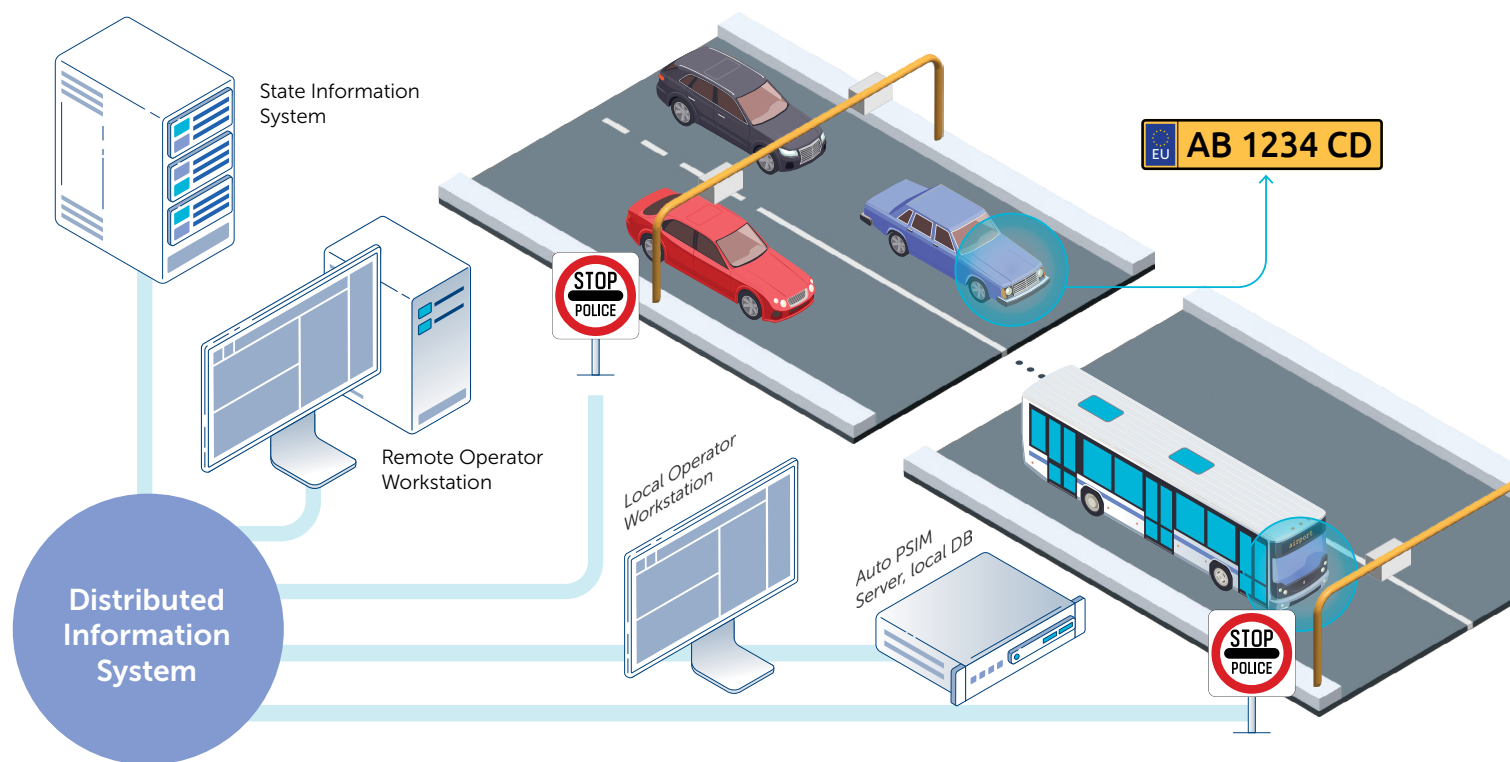
POS Supervision

- POS PSIM's cashier operations supervision capability is based on synchronizing the cash register information with video sequences captured by a camera pointed at the cash register. As a result, watching the real time video stream or archived video, the operator sees the picture of the customer's checkout accompanied by subtitles. The subtitles include the receipt text and cash register operations that are not indicated on the receipt, such as cash drawer opening or manual product code input. This gives the operator the full picture of what is happening at the cash operation unit and helps detect common fraud incidents, cashier errors, violations, and facilitates faster resolution of disputed situations with customers.

POS Reports

The Web Reports system provides access to centralized statistics of the cashier operations supervision from any store of the retail chain. It can be used as part of an integrated monitoring center and individually to provide remote access to required statistics for managers, security department heads, and retail chain top management. The system allows for viewing reports on cashier operations, related footage and the receipts, as well as printing the reports out or emailing them.





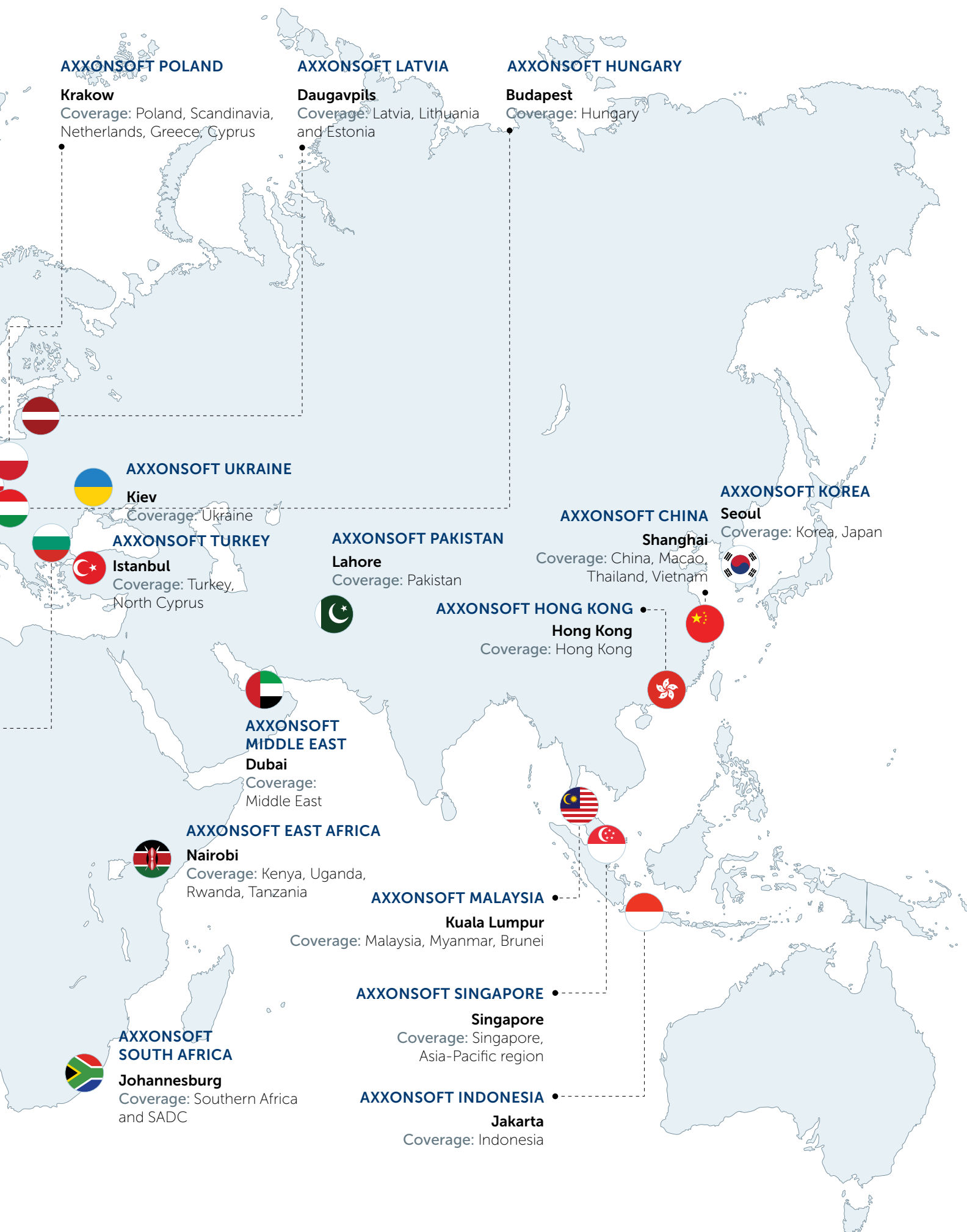
- Auto PSIM recognizes the license plates of vehicles and stores the plate number, video recording, vehicle image, date, time, location of capture, and other data. It supports the identification of vehicle types, makes, models, and speeds. This creates a database of all vehicles passing through control zones, with the ability to add comments to each license plate.

The recognized license plate can be compared in real time with internal and external databases, such as federal and regional wanted lists. If a match is found, an alert window is displayed with the vehicle's license plate and associated information, such as make and color.

- Auto PSIM detects and records traffic violations to provide evidence for further action. Violation types include speeding, running a red light, crossing stop line, stop on a crosswalk, illegal parking, wrong-way driving.

- Auto PSIM collects traffic statistics and provides reports by vehicle types and vehicle type groups: total number of vehicles; average vehicle speed; number of violations, vehicle stops, and traffic jams; average road congestion. The report by recognized license plates contains a list of vehicle plate numbers recognized within a specified timeframe and includes date and time, place, vehicle speed, and still frame/video.





AXXONSOFT POLAND

Krakow

Coverage: Poland, Scandinavia, Netherlands, Greece, Cyprus

AXXONSOFT LATVIA

Daugavpils

Coverage: Latvia, Lithuania and Estonia

AXXONSOFT HUNGARY

Budapest

Coverage: Hungary

AXXONSOFT UKRAINE

Kiev

Coverage: Ukraine

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Coverage: Pakistan

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Coverage: China, Macao, Thailand, Vietnam

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Seoul

Coverage: Korea, Japan

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Hong Kong

Coverage: Hong Kong

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Dubai

Coverage: Middle East

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Nairobi

Coverage: Kenya, Uganda, Rwanda, Tanzania

AXXONSOFT MALAYSIA

Kuala Lumpur

Coverage: Malaysia, Myanmar, Brunei

AXXONSOFT SINGAPORE

Singapore

Coverage: Singapore, Asia-Pacific region

AXXONSOFT SOUTH AFRICA

Johannesburg

Coverage: Southern Africa and SADC

AXXONSOFT INDONESIA

Jakarta

Coverage: Indonesia



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Live

Playback

Equipment

Type: Model: State: Map:

Device	State	
1. 20.0.Door 2	Unlocked, Closed	
2. 20.1.Door 4	Unlocked, Closed	
3. 21.Lock 1	Locked	
4. 21.0.Door 1	Unlocked, Closed	
5. 21.1.Door 3	Unlocked, Closed	

Meta-detector

Advanced settings

Number of measurements in a row 10

Basic settings

Detection mode	NVIDIA GPU 0
Detection threshold	20
Text query 1	Man with a backpack
Text query 2	
Text query 3	Running human

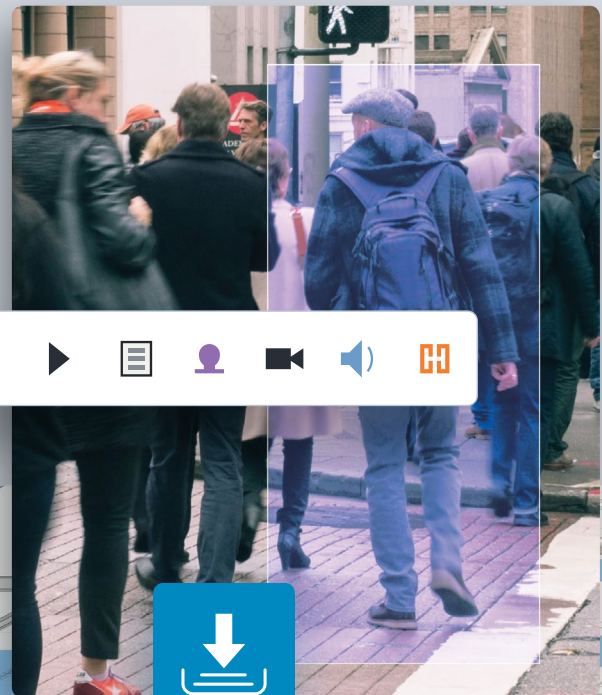


Similarity, % — 75 +

C:\User\Photos\photo.jpg



Search



1. Camera



2. Camera

