Intellect

PHYSICAL SECURITY INFORMATION MANAGEMENT PLATFORM

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AxxonSoft

A world’s leading developer of intelligent video management and physical security information management software (VMS and PSIM). Since 2003, the company has been creating disruptive technologies that push the Safety & Security industry forward.

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First **video analytics** product

Motion Wavelet codec

Intellect PSIM First Safe City project

Starting **Axxon Next VMS** development

Forensic Search technologies

AI Analytics Cloud

AxxonSoft today

50 offices around the world
500 employees

Operating in **more than 100** countries
Over **6,000 certified partners**

More than **1,500 installations** every month
More than **2,500,000 video channels** activated

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Our clients

e-plus

LIDL

MARKS & SPENCER

ALBCHROME

amazon go

Media Markt

AXION energy

METRO

SPAR

IKEA

Apple Store

DHL

citi

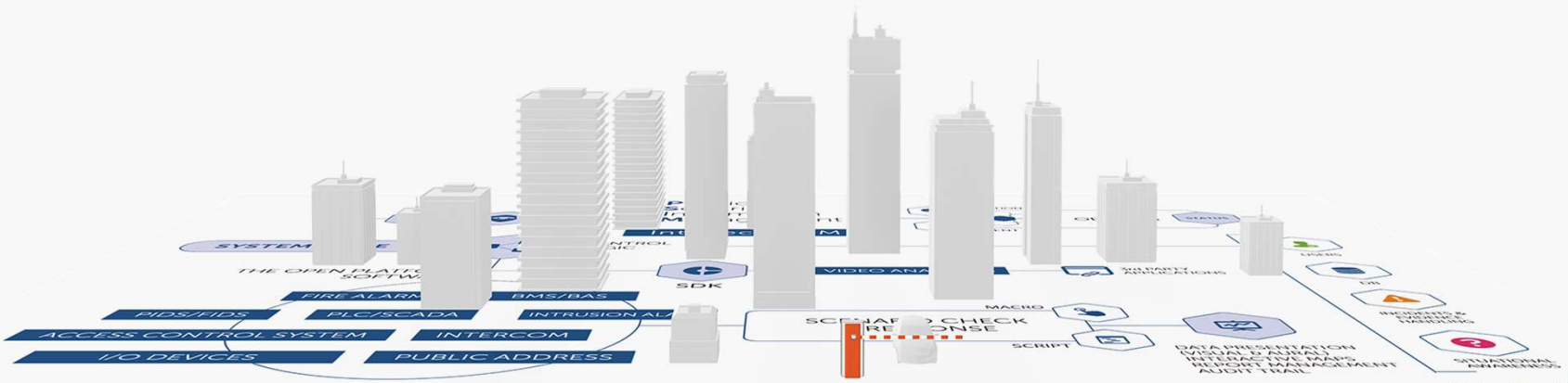
ShopRite

LOCALFRIO
Logística inteligente e personalizada

BURGER KING

Intellect PSIM

Intellect is an open platform for physical security information management that can support integrated security systems of any complexity and size. Intellect-powered systems can centralize security tasks in a single interface: video surveillance, fire and security alarm systems, perimeter security, access control, audio monitoring, and industry-specific vertical solutions. Its open architecture allows other systems to be integrated.



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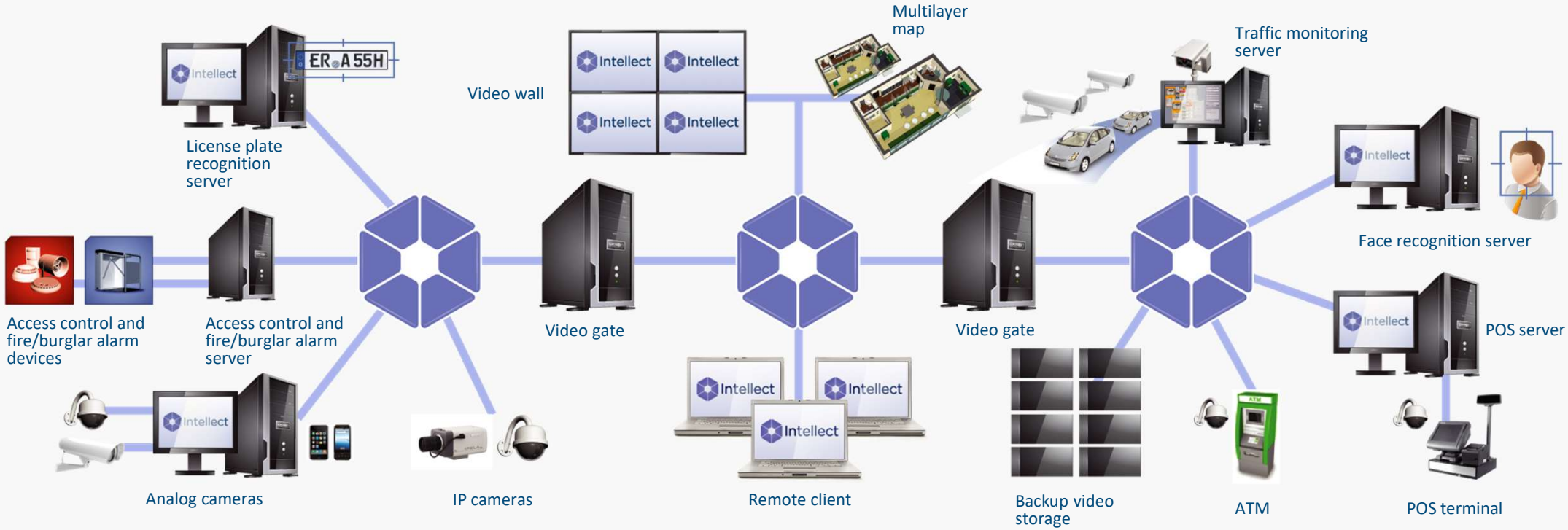
Integration, Distributed Architecture



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Benefit from the Open Platform and Integrations

- Combine equipment from different manufacturers and manage it from a single control center.
- Minimize the financial costs of equipping the facility by reducing the hardware and software needed and connecting existing equipment to the system.
- Implement new features that aren't available with self-contained systems.
- Reduce the amount of information that the operator has to process, with a more intuitive interface.
- Get improved situational analysis based on information from different sources.
- Automate decision making for standard situations.
- Significantly reduce the likelihood of operator mistakes.
- Better protect the system from external interference.

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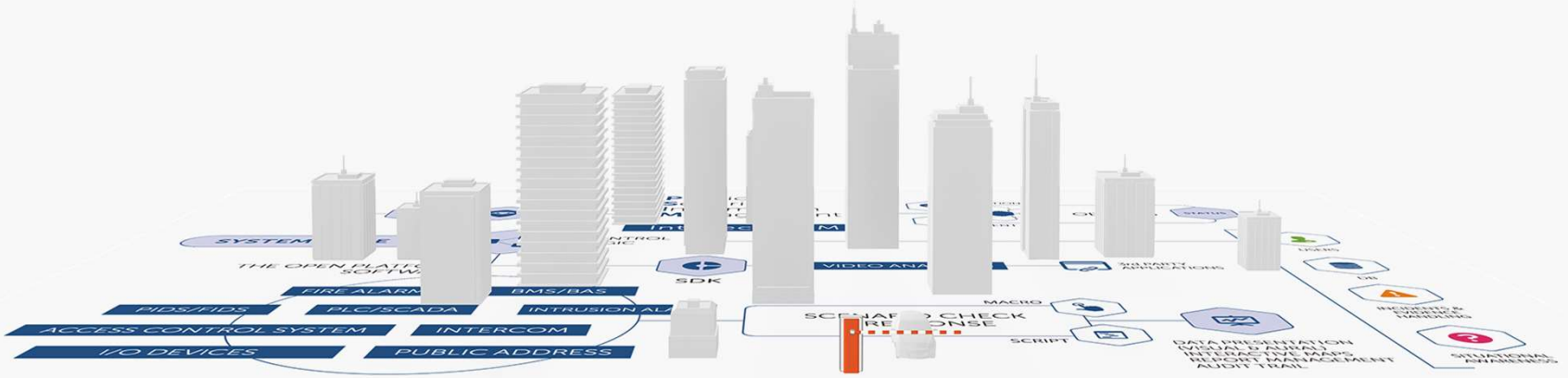
Auto Intellect

ANPR, Rail Car and Freight Container Number Recognition, Traffic Violations Detection, Traffic Statistics Collection



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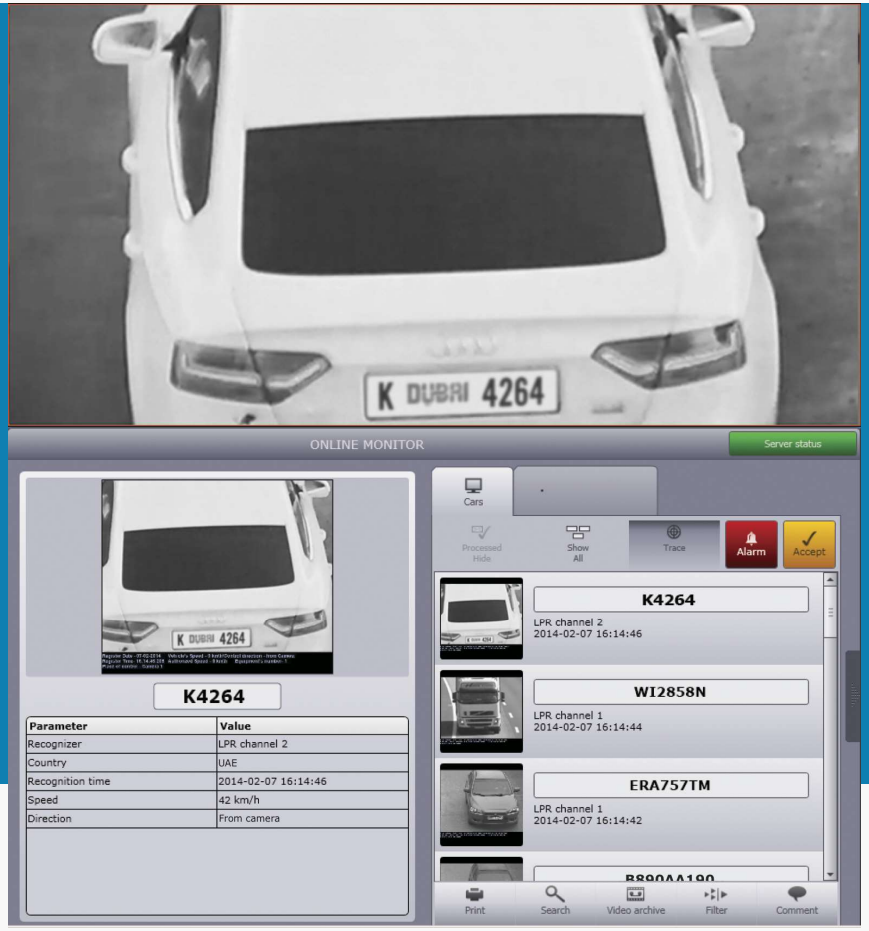
Automatic Number-Plate Recognition (ANPR)



- Recognizes number plates and saves vehicle registration numbers, video and still images, date/time, registration addresses, and other data.
- Triggered by any system event.
- Supports camera-side ANPR.
- Checks recognized numbers against internal and external databases.
- Performs internal database checks to retrieve number-specific information.
- Controls vehicle access by number, or access card + number combination (using Virtual Access Server).

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Traffic Statistics Collection

Current value | Statistics | Table | Charts

	Traffic Detection 1			
	1	2	3	4
Total number of vehicles	13	17	4	14
Time of registration	5:01 07-02-2	5:00 07-02-2	5:00 07-02-2	4:56 07-02-2
Motorcycles	0	0	0	0
Passenger cars	2	6	1	7
Trucks less than 12 m long	1	1	0	3
Trucks more than 12 m long	9	10	3	1
Buses	1	0	0	3
Registered vehicle speed (km\h)	39	11	11	62
Vehicle length	30	28	24	6
Average speed for all vehicles (km\h)	20.15	21.71	39.25	21.00
Average speed for passenger cars (km\h)	6.00	23.33	62.00	34.29
Average speed for trucks (km\h)	22.73	20.82	31.67	7.71
Distance between vehicles (m)	71	14	18	65
Road availability (%)	14	15	2	14
Number of speed overruns	3	2	2	3
Moving along oncoming lane	4	16	15	4
Total vehicle stops	0	0	0	0
Traffic jam	Vacant	Vacant	Vacant	Vacant
Violations	7	18	17	7

The module calculates the following macro-parameters for each traffic lane:

- Total number of vehicles
- Number of vehicles by type
- Average traffic speed
- Average vehicle speed by type
- Distance between vehicles
- Traffic density per lane
- Congestion conditions

It also registers the following violations:

- Speeding
- Wrong-way driving
- Improper stopping/parking
- Reversing
- Failing to comply with traffic ban for lorries/trucks/bikes etc.

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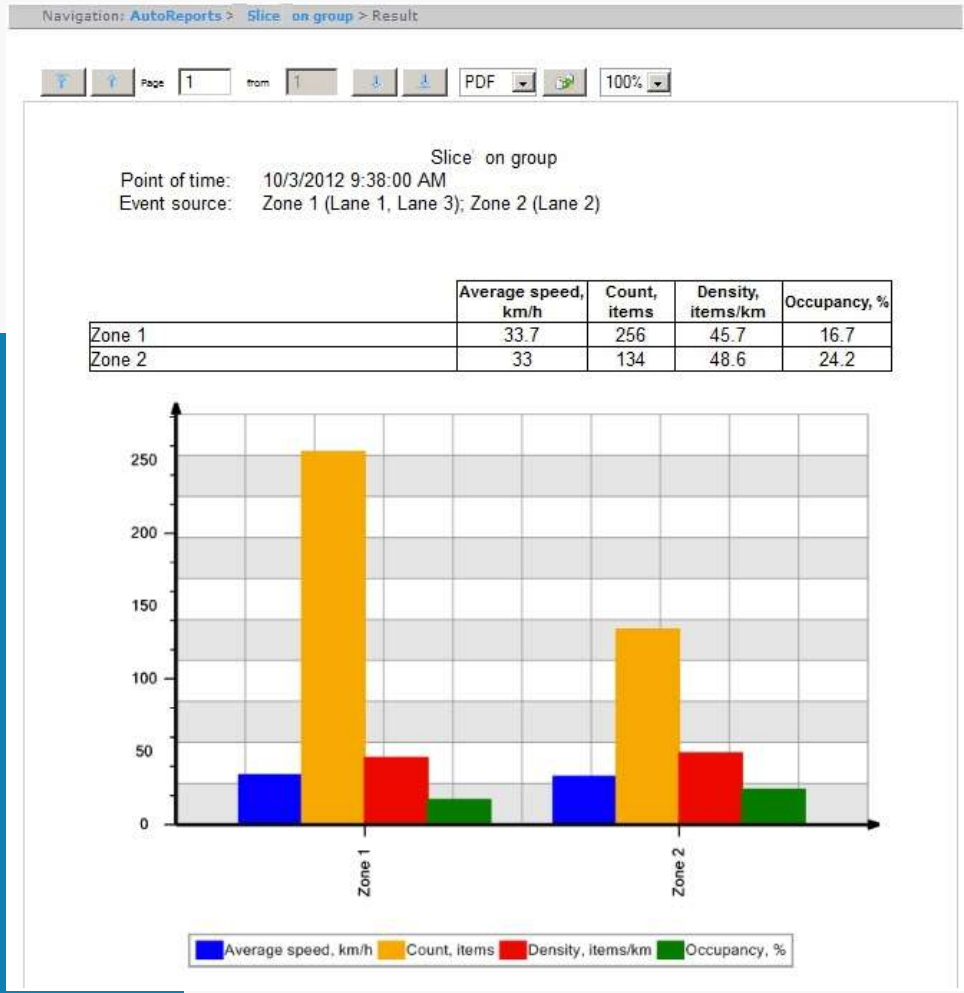
Web Reports

Centralized report retrieval via the web interface. Reports can be printed and/or exported as PDF, RTF, HTML, Excel, CSV, or TXT files.

- **Report by Lane/Time:** average speed, traffic volume, and density for a specified lane within a specified timeframe.
- **Report by Group:** average speed, traffic volume, and density for a specified group of lanes at a specified time.
- **Report by Vehicle Type:** statistics by specified types of vehicles.
- **Report by Vehicle Type Group:** statistics by specified group of vehicle types.
- **Report by Recognized Numbers:** a list of vehicle numbers recognized within a specified timeframe.



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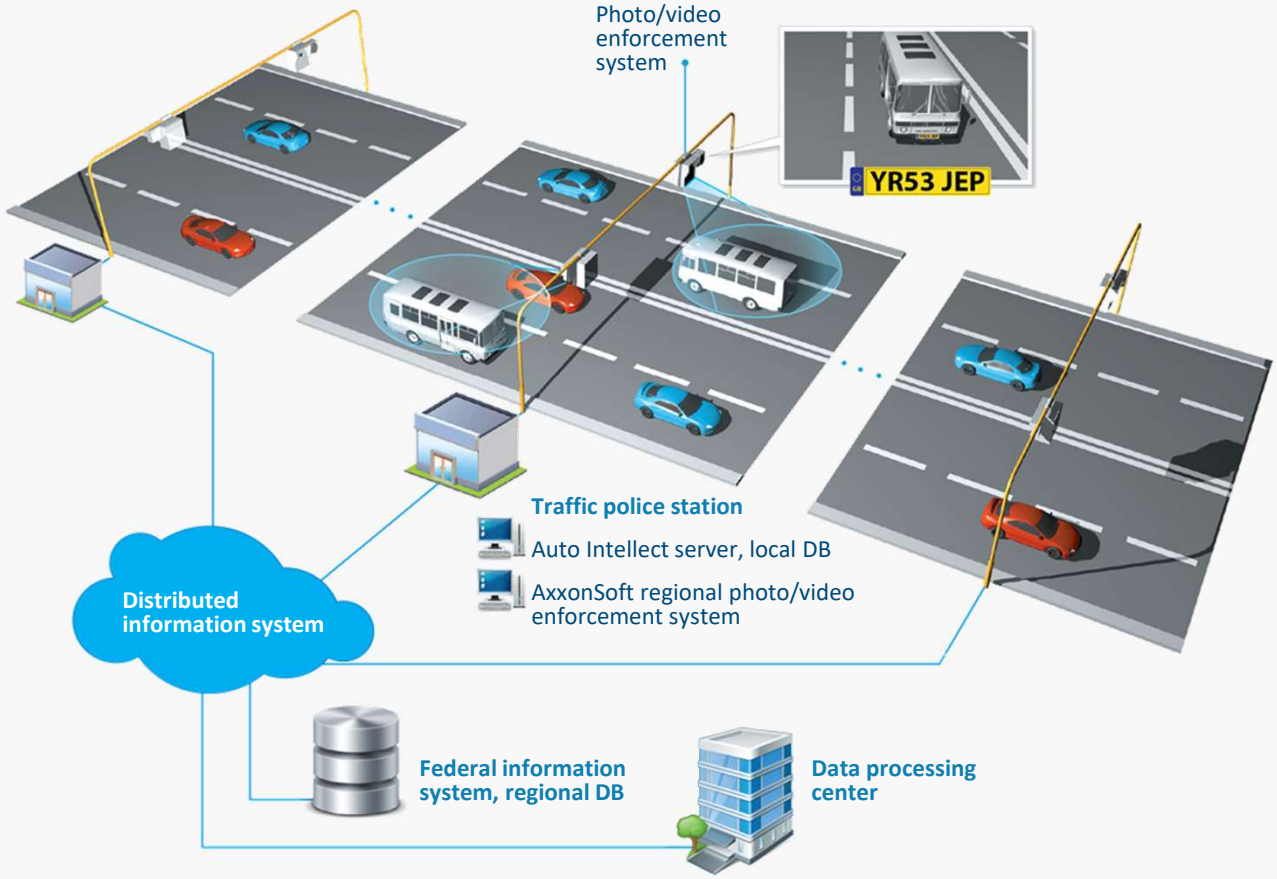
Traffic Violations Detection

Automatic video recording of traffic violations to provide evidence for further action.

Violation types:

- Speeding
- Running a red light
- Crossing stop line
- Stop on a crosswalk
- Illegal parking
- Wrong-way driving



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Stopped Vehicle Detection Tool

- Detects congestion and idle/stalled vehicles in specified areas.
- Detects dissolved congestion and idle/stalled vehicle movement.
- Records events to the database.

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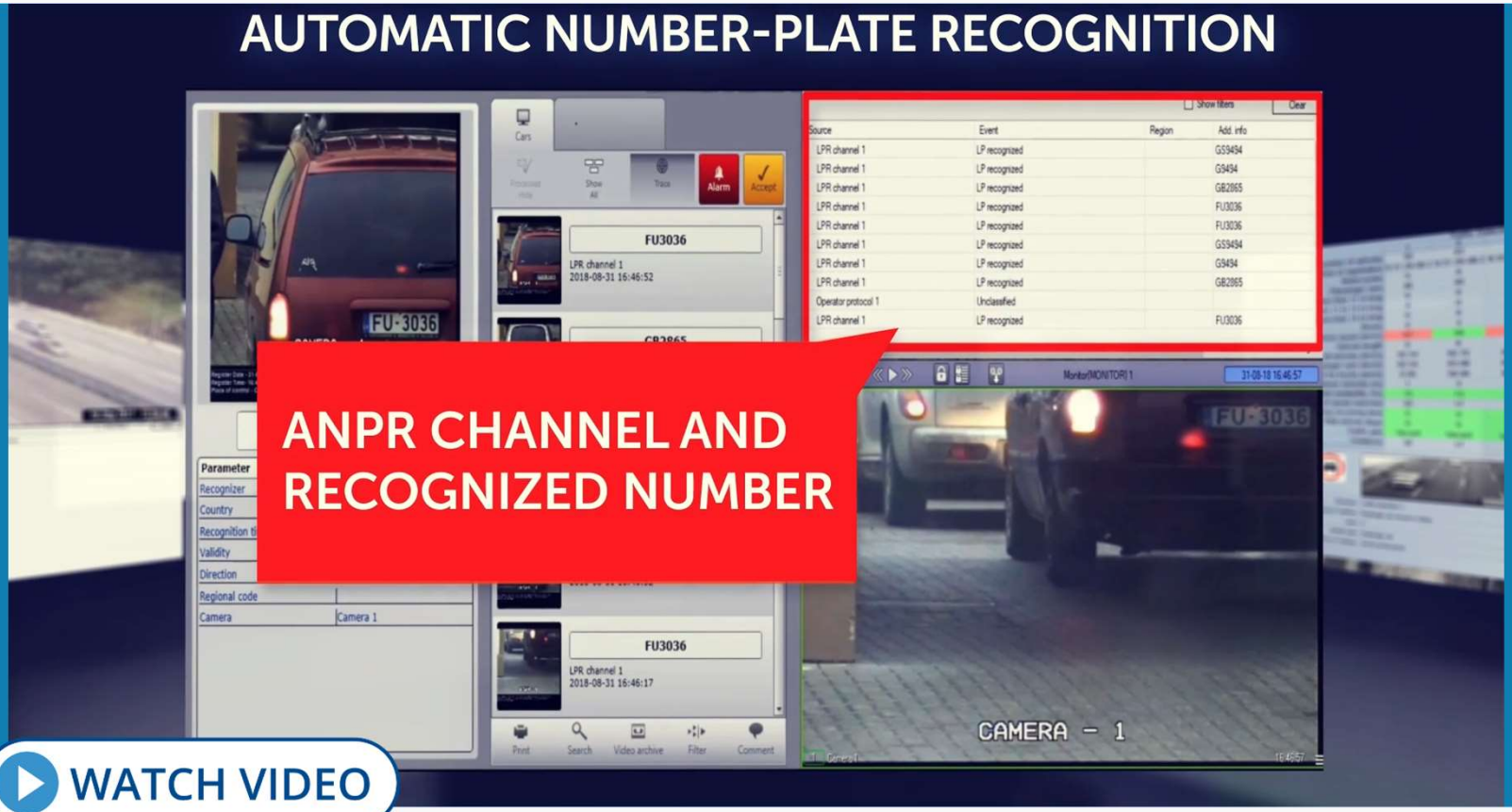
Auto Intellect Video Demo



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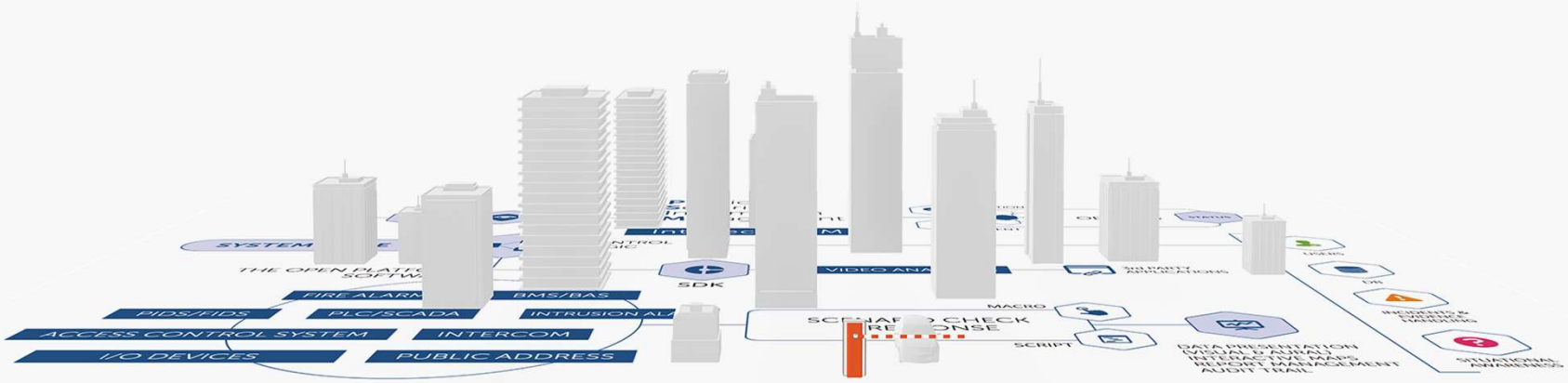
Video Analytics



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Scene Analytics Based on Object Tracker

VMD in a specified zone:

- Motion in zone
- Zone entry
- Zone exit
- Crossing zones
- Appearance of an item in zone
- Disappearance of an item in zone
- Stopping in zone
- Loitering/presence in zone for over 10 seconds
- Abandoned object

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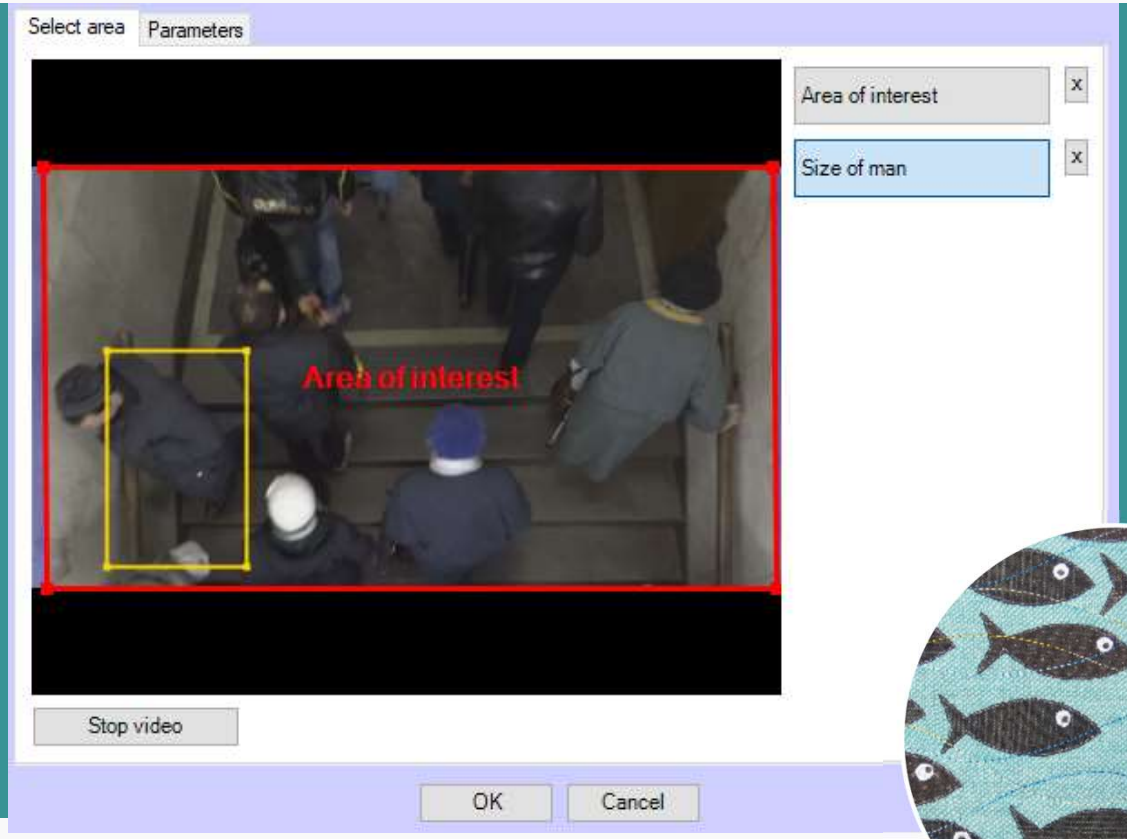
Movement Against the Crowd Detection Tool



The video analytics detects objects moving in the opposite direction to the rest of the group.

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Neural Filter

- Neural network–based classifier.
- Individually trained.
- High classification accuracy.
- The neural filter helps the tracker recognize specified types of objects, e.g. humans or vehicles.

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AI Neural Network Analytics

Tailor-made neural network tools

WATCH VIDEO

Track and count specific object types

WATCH VIDEO

Detect abandoned objects

WATCH VIDEO

Recognize potentially dangerous situations

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AI-Powered Behavior Analytics

Pose recognition

- Behavior Analytics recognizes potentially dangerous situations by detecting specific human poses: for example, a cashier's raised arms, or a person crouching by an ATM.
- Based on Behavior Analytics, the Active Shooter tool detects a potential gunman in real time.
- Swift alerts to first responders minimize the risks for individuals, groups, and facilities.

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Thank you!

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