

Avigilon Self-Learning Video Analytics

AVIGILON

Avigilon's Self Learning Analytics extends the effectiveness of your security personnel by providing effective monitoring and enabling proactive, real-time response from your team. Built from the ground up to manage high-definition video, Avigilon offers analytics embedded in Avigilon cameras up to 5K (16 MP) resolution.

Through the use of advance pattern-based analytics and teach-by-example technology, Avigilon video analytics increases the productivity of security personnel while making monitoring more affordable and efficient.



Advanced pattern-based analytics

Avigilon's advanced video pattern detection technology is able to accurately recognize the movements of people and vehicles while ignoring motion not relevant to a scene. Embedded into cameras up to 5K (16 MP), the system's ability to constantly learn reduces false positives and ensures alerts are meaningful, which avoids wasted time and improves efficiencies.

Teach-by-example technology

Our teach-by-example object classifier technology enables users to provide feedback about the accuracy of alarm events generated by Avigilon devices. Rather than decreasing analytics sensitivity to reduce false alarms, the feedback trains the device, increasing the accuracy of the analytics used to determine which alarms are real and which are false to further improve a low false-positive alarm rate.

Over time, the system tracks the operator's changing notion of value and prioritizes important events. This increases sensitivity to conditions that are of concern while reducing false alarms to keep the focus on what matters.

KEY FEATURES

Pattern-based object classification and tracking technology
Continuously self-learning analytics with no calibration required
Efficient installation and setup
Operator input Teach-by-example technology
Embedded in cameras for resolutions 1-16 MP
Analytics appliances for any IP cameras or analog system
Real time analytic ruled based alarm notifications
Forensic search capabilities of analytics events
Fully integrated with Avigilon Control Center for an end-to-end analytics solution
Powerful forensic video analytics accelerates forensic search times using a fully unified ACC client.
Cost effective. No additional servers required.
No licensing required for analytics and no rules-based licensing.

Key Features and Benefits

Ease of installation and ongoing accuracy

Point-and-shoot setup. Self-learning video analytics works out of the box with no manual calibration required.

Self-learning analytics and teach-by-example technologies

Teach-by-example technology lower false-alarm rates and increase detection times and confidence levels.

Broad variety of devices

A variety of Avigilon devices are embedded with self-learning video analytics including appliances and cameras with resolutions from 1 MP to 5K (16 MP).

Pattern-based object classification and tracking technology

Object classification and tracking using pattern-based analytics algorithms are tuned to recognize people and vehicles, while ignoring nuisance motion.

Operator input Teach-by-example technology

Teach-by-example technology enables users to provide feedback about accuracy, which further enhances the pattern-base analytics database.

Integrated with Avigilon Control Center

Fully integrated with ACC client and ACC mobile so that users can respond in real time even from mobile devices. Analytic alarm notifications can be automatically sent to any authorized client based on configured rules.

Analytics appliances for any IP cameras or analog system

Add self-learning video analytics to any IP or analog surveillance camera with Rialto™ analytics appliances.

Idle scene mode

Idle scene mode reduces bandwidth and storage, is triggered by analytics specific objects rather than motion detection.

Powerful forensics

Forensic search capabilities of analytics events accelerates search times using a fully unified ACC client.

Cost effective

No additional servers required.

No licensing required

Fully embedded edge analytics with no rules-based licensing.

Avigilon's Video Management Solution

Avigilon Control Center™ (ACC) video management software provides the ability for analytics events and alarms to be viewed and searched through an intuitive user interface. Real-time events and forensic capabilities detect and notify scene changes, missing objects and rules violations — all through an easy-to-use interface. Avigilon Control Center gives you full control over event playback, enabling you to quickly retrieve evidence to speed up response times and investigations.

RULES AND ALARMS

The Avigilon Control Center rules engine enables you to selectively apply analytics-based events as alarms and rule triggers, providing local or mobile users with immediate notifications for suspicious activities.

INTELLIGENT SEARCH OF CLASSIFIED OBJECTS

Avigilon Control Center uses powerful analytics technology to intelligently search for specified events of classified objects to help you find the video you need quickly.

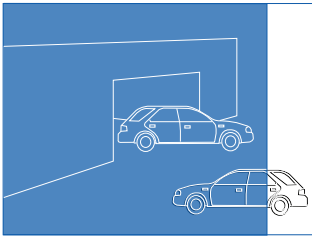


Avigilon Analytics Rules

The following is a complete list of all self-learning video analytics features for object detection and classification for live or forensic events.

The following images are for illustration purposes only.

OBJECTS IN AREA



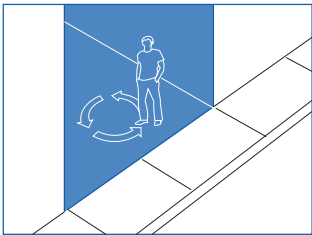
The event is triggered when the selected object type moves into the region of interest.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn region of interest (ROI).

OBJECT LOITERING



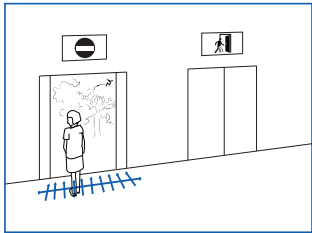
The event is triggered when the selected object type stays within a specified region of interest for an extended amount of time which is configured.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.

OBJECTS CROSSING BEAM



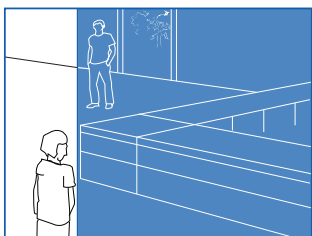
The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.

Classified objects detected in the scene:

- Person
- Vehicles

Directional arrows and line must be manually drawn.

OBJECT APPEARS OR ENTERS AREA



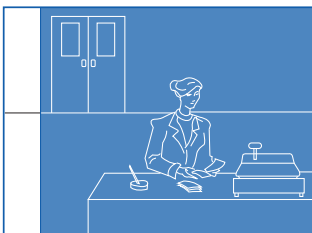
The event is triggered by each object that enters the region of interest.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.

OBJECT NOT PRESENT IN AREA



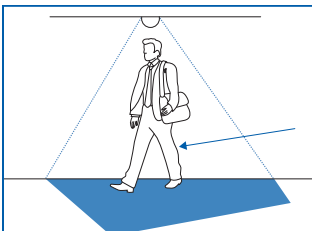
The event is triggered when no objects are present in the region of interest.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.

OBJECTS ENTER AREA



The event is triggered when the specified number of objects have entered the region of interest.

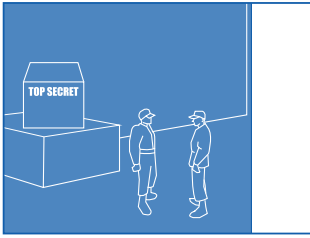
Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.



OBJECTS LEAVE AREA



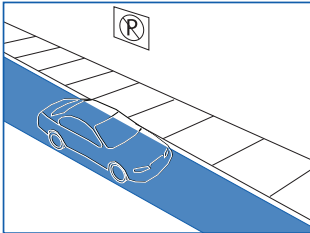
The event is triggered when the specified number of objects have left the region of interest.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.

OBJECT STOPS IN AREA



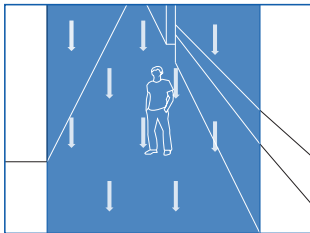
The event is triggered when an object in a region of interest stops moving for the specified threshold time.

Classified objects detected in the scene:

- Person
- Vehicles

Detects objects in the whole scene or manually drawn ROI.

DIRECTION VIOLATED



The event is triggered when an object moves in the prohibited direction of travel.

Classified objects detected in the scene:

- Person
- Vehicles

Directional arrows and line must be manually drawn.

CAMERA TAMPERING



The event is triggered when the scene unexpectedly changes.

Affects whole scene.



Specifications

ANALYTICS SOFTWARE REQUIREMENTS & CAPABILITIES

Setup with Avigilon Control Center	ACC version 5.4 or higher
Setup with Avigilon Rialto devices for 3rd party Cameras	Avigilon View
Real-Time Alerts and Events configuration	Set up in ACC 5
Real-Time Alerts and Events notification	ACC 5 Client , other multiple notifications possible based on rules engine configuration
Forensic Search capabilities	Set up in ACC 5
Display of Video ACC Client for Forensic Searches	ACC 5 Client

SUPPORTED VIDEO ANALYTICS DEVICES

Avigilon H3A series	1-3MP; bullet, dome and camera form factors.
Avigilon HD Pro series	4K (8 MP), 4.5K (12 MP) and 5K (16 MP)
Avigilon H4 series	1-5 MP and 4K (8 MP); bullet, dome and camera form factors.
Avigilon Rialto series	<ul style="list-style-type: none"> Rialto I4, A4 and R-Series. Avigilon View software is required Supported resolutions: <ul style="list-style-type: none"> D1 720 and 1080p (1920 x 1080) resolutions at 30fps utilizing RTSP H.264 video streaming Analog 3rd party camera connection supports D1 resolution at 30fps

