

Guide



AVIGILON™

Video analytics guide

Avigilon Unity and Alta



MOTOROLA SOLUTIONS

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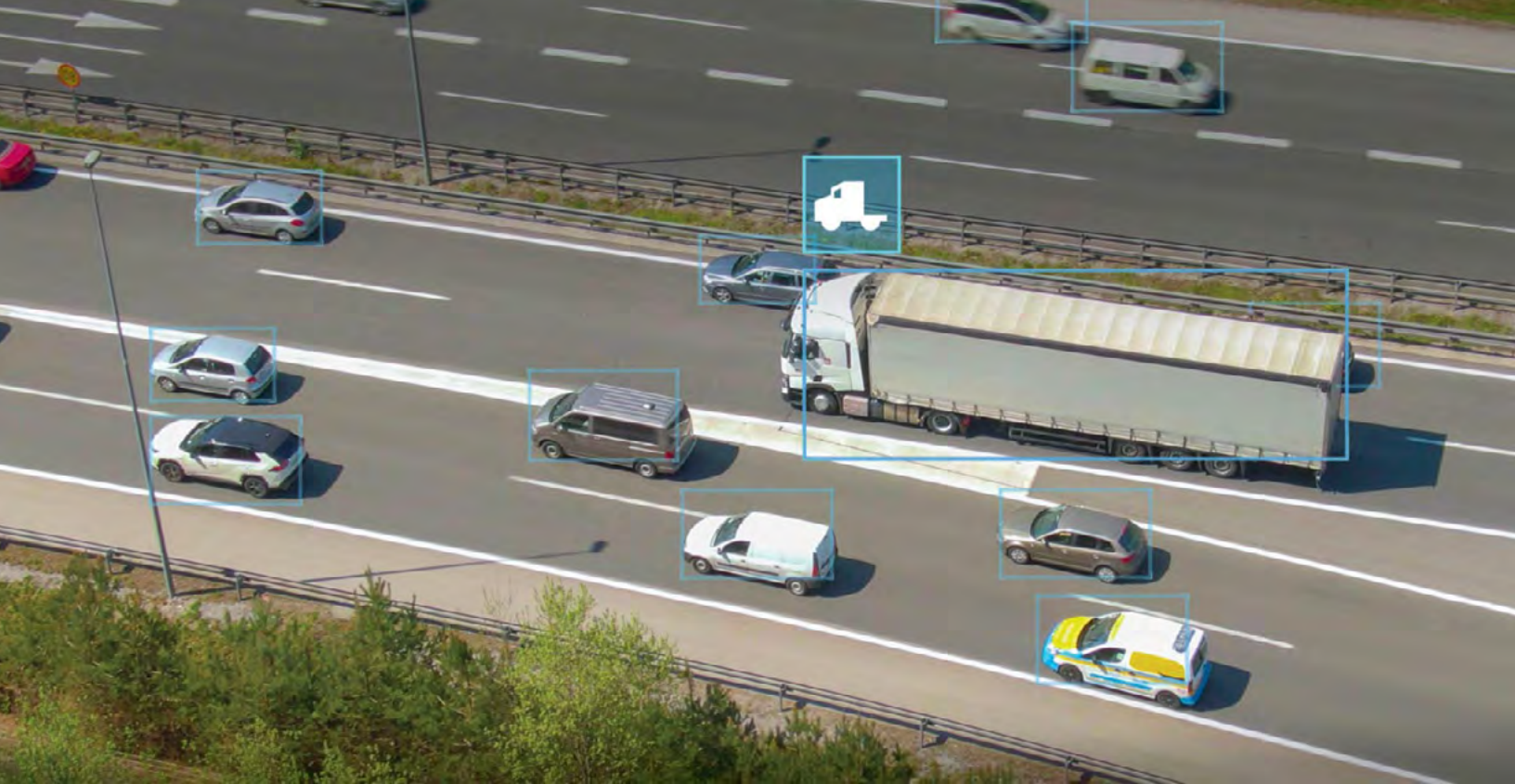
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Introduction to Avigilon video analytics

“A wealth of information creates a poverty of attention.” – Herbert A. Simon

It is estimated that there are over 1.5 billion video security cameras currently in use globally.*

This abundance of data far outweighs a human’s ability to process and analyze all this information on our own. Security teams watching hours of video from multiple camera feeds over the course of a day poses a real risk of critical events being missed. The more data that needs to be consumed, analyzed, evaluated and investigated, the more challenging it is for security operators to determine what matters most and be as effective and efficient as possible.

Artificial Intelligence, or AI, powering video analytics can help increase the productivity of security teams and enable effective monitoring of events to facilitate proactive, real-time responses.

With Avigilon, our AI-powered video analytics can help detect potentially critical events that are happening by presenting information in a consumable way—removing the noise, clutter, and bringing the right information with the right criticality to a security operator’s attention at the right time. This helps to boost productivity by allowing security teams to efficiently allocate scarce resources so they can spend less time on watching live and recorded video, and use their human reasoning to determine the best course of action and drive a more decisive and timely response.

Whether it’s a local mom-and-shop with a couple of cameras, or a large retail chain with multiple locations and thousands of cameras, security operators can stay a step ahead of potential threats with Avigilon video analytics – available in the cloud with Avigilon Alta Video or on-premise with Avigilon Unity Video software.

*Source: IDC MarketScope: Worldwide Video Surveillance Camera 2023 Vendor Assessment





Video analytics with Avigilon Unity

Detect anomalies, automate investigations

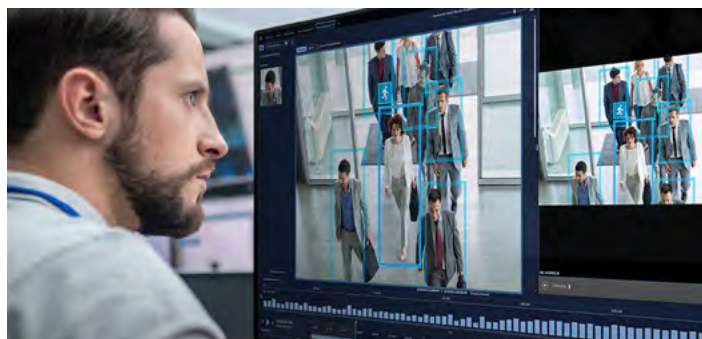
Overview

Protect what matters today and adapt to tomorrow's emerging threats with Avigilon video and audio analytics. Designed to make your security system more insightful, our analytics are continually evolving with new features and improvements to solve today's security challenges. Avigilon Unity analytics are self-learning and offer a Focus of Attention interface to easily monitor and review analytic alerts. Enhance responses to critical security events and make informed decisions with automated alarm workflows. Save time during investigations without the need to watch hours of video. Instead, search for video clips featuring specific appearance metrics and license plates.





Live video monitoring with Unity



AI-powered analytics

Reduce alarm fatigue with AI-powered video analytics that understand the typical environment and notify operators of deviations from the norm. Detect the movement of people and vehicles, while ignoring motion not relevant to the scene, enabling a proactive response to critical security incidents.

Focus of Attention interface

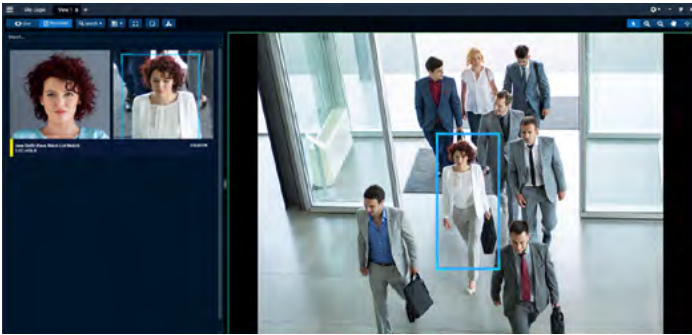
Make video monitoring intuitive by viewing your entire camera population on a single screen with Focus of Attention. Customize your setup by grouping camera nodes into a honeycomb formation according to your camera organization. Ensure a swift response to critical security alerts with color-coded notifications, allowing operators to prioritize their investigations.

Notifications

- ◆ Motion detected
- ◆ Unusual motion detected or analytic event
- ◆ Unusual activity detected, unusual crowd detected, face watch list match event, license plate watch list match event
- ◆ Alarm



Real-time alerts for quick response



Facial Recognition

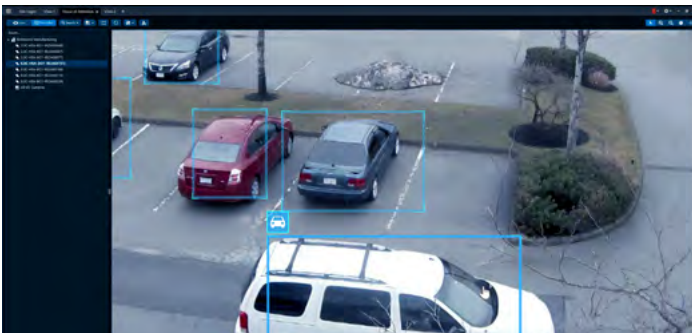
Proactively respond to critical security events and make informed decisions with Facial Recognition. People of interest are identified on live video using secure watch lists built by your organization.



Visible Firearm Detection (VFD)*

Have confidence that your people are protected against potential active shooter threats. With our human-in-the-loop approach, receive alerts when brandished firearms are detected at your site and notify security operators.

*U.S. only, requires AI NVR 2/ENVR2 Plus or H6A/H6X camera



Classified object detection

Detect and classify people and multiple types of vehicles. Protect your perimeter with enhanced detection for people crawling or set-up alerts when unknown personnel enter restricted areas.



Crowd detection

Detect when an unusual crowd has formed and receive alerts when the crowd size has crossed a certain threshold.





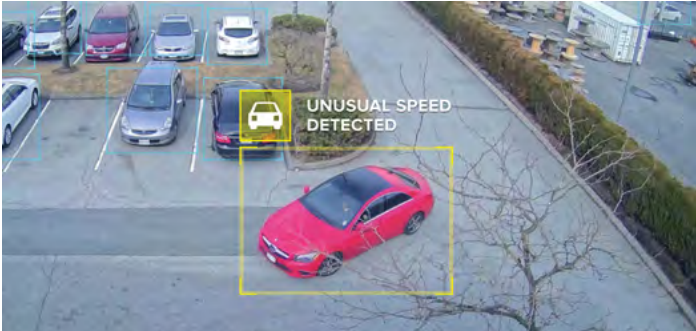
Occupancy counting

Analyze visitor flow at your site with Occupancy Counting video analytics. Eliminate the need for manual counting and guesswork by automating people counting.



Audio analytics

Detect potentially critical events, even when you don't have line-of-sight. Our audio analytics can intelligently analyze sound patterns and alert you of specific auditory disturbances such as: gunshots, screams, car/fire alarms, breaking glass, dog barks, loud noises, ultrasound and screeching tires.

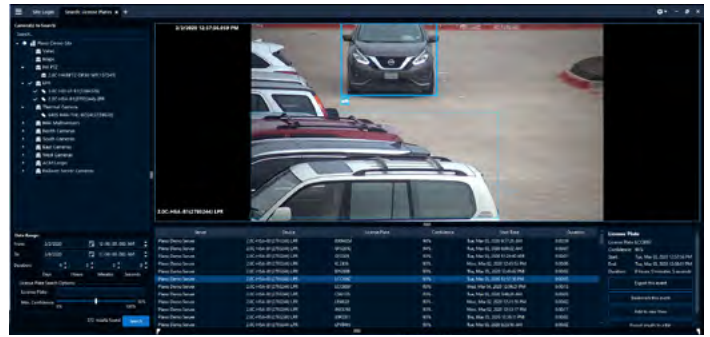
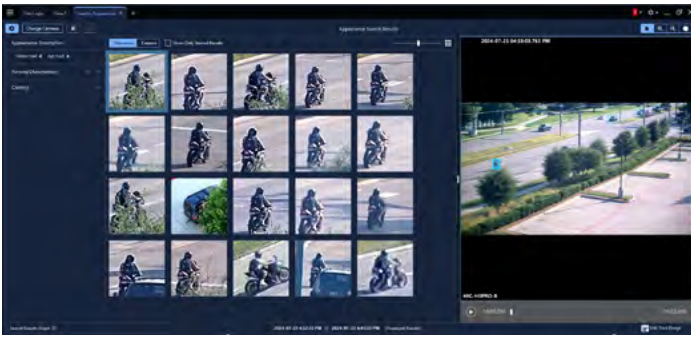


Unusual Activity Detection (UAD)

Highlight the unanticipated with the detection of unusual activities. Receive live alerts of events, such as people or vehicles traveling at faster speeds or located in unusual locations. UAD analytics learns what a scene typically looks like to detect and flag activity that deviates.



Intelligent recorded video search with Unity



Appearance Search

Looking for a specific person or vehicle? Sort through hours of video with ease by entering physical descriptions or providing an example image. As you search, Appearance Search learns what you are looking for and brings forward relevant imagery, expediting your investigations.

License Plate Recognition (LPR)

LPR analytics automatically reads license plate information from vehicles, linking it to live and recorded video. This enables you to search and quickly find specific captured license plate video for verification and investigation. Create and import license plate watch lists so that Unity Video can provide you with match alerts, helping you take decisive action when needed.



Video analytics with Avigilon Alta

Overview

Experience cloud-based video management platform that puts actionable intelligence at your fingertips, anywhere and at any time. It offers smart, intuitive search tools that can transform time-intensive review of video footage into fast answers, empowering security operators. Use data and insight from video analytics and sensors to optimize business processes and efficiencies and improve the customer experience.



Cloud-based live monitoring with Alta



Classified object detection for people and vehicles

Enable faster response times by detecting, classifying and receiving alerts for suspicious objects such as people or vehicles.

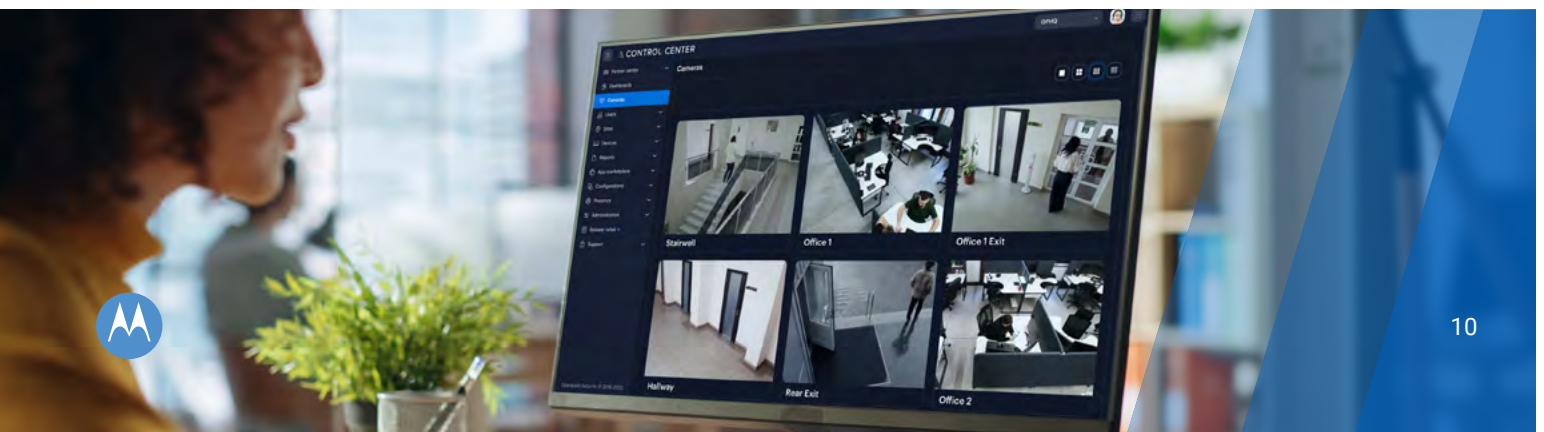
Anomalies

Detect out-of-the-ordinary activities for people, vehicles, or both, such as an unusual time of day, location, velocity, or sound.



Audio analytics

Detect specific sounds commonly associated with critical security incidents. For example, glass breaking, loud noises, gunshots, screaming, smoke alarms, car alarms, ultrasonic panic alarms, dog barks and tire screeching.



Search critical events in recorded video with Alta



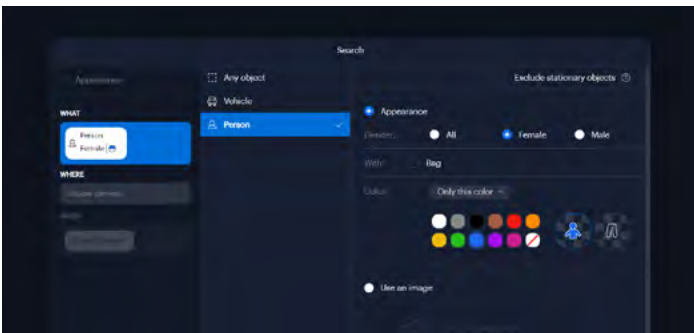
License Plate Recognition (LPR)

Find license plates in video footage for verification and investigation with LPR analytics. License Plate Recognition automatically reads license plate information from vehicles and links it to live and recorded video.



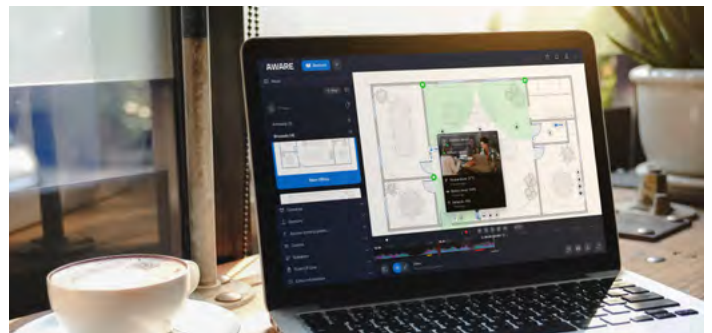
Face Search

Search by face to quickly isolate key footage and where a specific individual has been previously seen at the site.



Appearance

Search and alert on people and vehicles of interest with appearance-based filters. People filters include gender, bag, top and bottom clothing color, or based on an image. For vehicles, the filters include vehicle type, color and license plate.



Operational insights

Monitor site congestion and movement trends with real-time activity tracked using intuitive heatmaps. Manage site occupancy with live accounts and create reports by downloading historical data.



Search video faster

Tired of watching hours of security footage? With Avigilon Alta video analytics, you can quickly find:

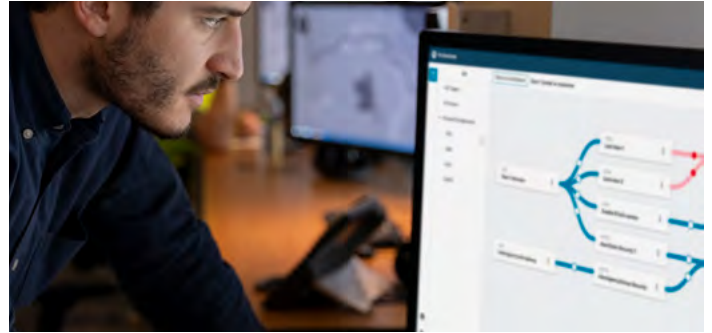
- **People:** Appearance filters, facial recognition
- **Vehicles:** Appearance filters
- **Line crossing:** People or vehicles by appearance
- **Loitering:** People or vehicles, by appearance or time
- **Sound:** Glass breaking, loud noise, gunshot, screaming, smoke alarm, car alarm, ultrasonic panic alarm, dog bark, tire screeching

Set a time frame for search and pare down video by matching a reference image of people or vehicles.



Integrations with Unity and Alta

Leverage the Motorola Solutions safety and security ecosystem to help your teams make faster decisions and close the response gap.



HALO Smart Sensors

Integrate the HALO Smart Sensor with Avigilon Alta Video and Unity Video for superior situational awareness of areas where security cameras are not suitable. Detect vape and smoke, count how many people are in an area, and be alerted of abnormal noise levels such as gunshots or calls for help.

Address security events from start to finish

Accelerate response times during critical security incidents with automated processes following triggered alerts. Motorola Solutions Orchestrate connects Avigilon Alta and Unity with the Motorola Solutions technology ecosystem across voice, video, data and access control, improving collaboration and strengthening safety everywhere.



Additional resources

Unity

- [Fact Sheet: Unity Video](#)
- [Video: Visible Firearm Detection](#)
- [Video: Appearance Search](#)
- [Video: Audio Analytics](#)
- [Video: Crowd Detection](#)
- [Video: Person Crawling Detection](#)
- [Video: Vehicle Subclass Alerts](#)

Alta

- [Datasheet: Alta Aware](#)
- [Video: Appearance Search](#)
- [Video: Analytics for Cloud Security Cameras](#)
- [Video: Line Crossing Detection](#)
- [Video: LPR Analytics](#)
- [Video: Heatmaps](#)
- [Whitepaper: Audio Analytics](#)

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