# FLEXIBLE ANALYTICS WITH AI NVR

The AI NVR is the first converged appliance that brings the capabilites of an NVR and AI Appliance into a single platform. This provides the ultimate flexibility to mix-and-match Avigilon's analytics with any camera within a site, to optimize analytics coverage across your camera deployment. Even if your site is equipped with a special purpose camera, the AI NVR's ability to run Avigilon's Classified Object Detection on any connected camera* means that you can use the camera that best fits your site's requirements.

Avigilon AI NVR's Classified Object Detection delivers the same next generation video analytics capabilities, previously only available on Avigilon H5A cameras in an NVR. This automatically detects people and vehicles in a scene and tracks their movements across it. Rules and alerts can then be set to trigger based on the movement, position, and activity of the objects within a scene. This is the foundational analytic upon which advanced video analytic solutions such as Appearance Search, Facial Recognition, Classified Object Detection and select COVID-19 response technologies are built.

Avigilon's hybrid analytics architecture allows for linear scalability within a system by leveraging camera processors for the most intensive tasks. Where possible, it's recommended to use a H5A camera to free up resources on the AI NVR for more advanced analytics functions.

Avigilon's Appearance Search takes Classified Object Detection one step further by letting you search across cameras and time for a specific person or vehicle across a site. This lets you build a timeline of a target's appearance on cameras across a site using descriptions or an earlier instance of their appearance in video. This effectively delivers a synopsis of targets' appearance across all cameras within mere seconds. Typically, this would be a job that requires many hours and days of multiple investigators scrubbing video timelines.

Facial Recognition builds upon Appearance Search, by letting you keep watchlists of faces of interest. When these faces of interest appear on a camera, rules and alarms can automatically be triggered. Additionally you can search for faces of interest to know where they have been in your site. When you combine the AI NVR with Avigilon Access Control Manager (ACM)'s Identify Search, you can leverage your exisiting employee badge photos to trigger alarms and initiate a search.

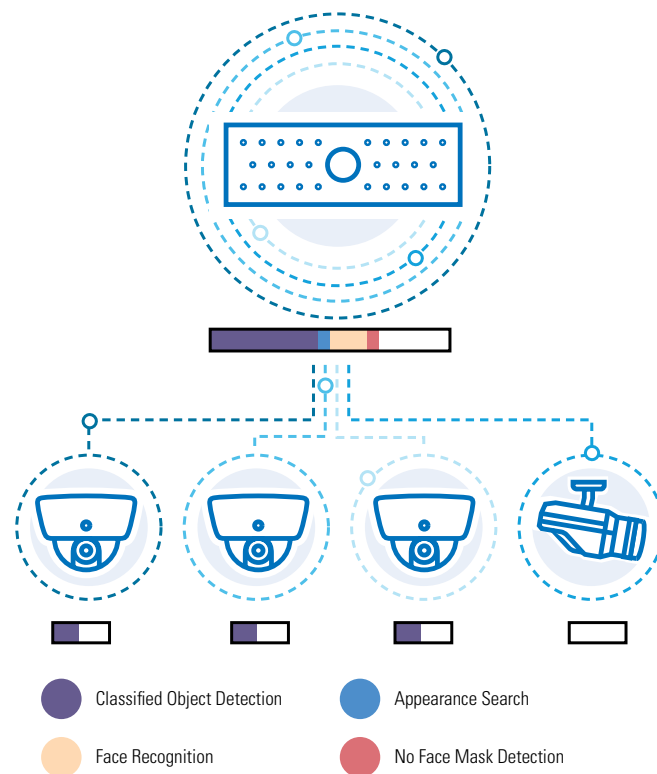* Refer to AI NVR Datasheet for specific camera requirements.

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In response to the COVID-19 pandemic, Avigilon has developed response technologies to help curb the spread of the virus. Avigilon's Occupancy Counting leverage cameras placed at the entrance and exits of an enclosed area, to show a running tally of the number of people within a space, helping you ensure everyone has room to physically distance.

Avigilon's No Face Mask Detection technology can detect if someone in your facility does not have a face covering, so you can take action now or run weekly reports on violations. Avigilon's Occupancy Counting and No Face Mask Detection technology work together to let you quickly determine where attention is required to improve compliance and safety.

With the AI NVR, these analytics can run simultaneously on the same cameras, or select analytics can be run on specific cameras. Additionally, using the hybrid architecture employed by Avigilon H5A cameras and AI NVR lets you flexibly offload some analytics onto H5A cameras, freeing up the AI NVR to run more analytics on non-analytic cameras. Whether it's an Avigilon H5A analytic camera or any other camera, the AI NVR gives you complete flexibility to design your site to meet your needs.

With so many options to mix-and-match analytics, it can get tricky to manage the setup across your whole site. That is why Avigilon has created a brand new ACC Analytics Dialogue which simplifies the process of setting up analytics per cameras. On this platform, you will see a tab for each analytic, and within each tab you can see a list of all the cameras eligible for the given analytic.

Your AI NVR's resources are displayed at the bottom so you are able to adjust your analytics setup to take full use of the appliance. There is also a resource estimate for cameras that haven't yet been enabled to give you all the information you need to plan out your site. Lastly, to help partners design sites before deployment, we are bringing analytics sizing for the AI NVR into Avigilon System Design Tool (SDT).



- Classified Object Detection
- Appearance Search
- Face Recognition
- No Face Mask Detection

## SERVER-SIDE ANALYTICS FOR NON-ANALYTIC CAMERAS

### CLASSIFIED OBJECT DETECTION
Detects and classifies people or vehicles to help operators verify and respond faster. Unusual Activity Detection (UAD) automatically detects atypical behaviour of learned objects.

### AVIGILON APPEARANCE SEARCH™ SUPPORT
Quickly locates a specific person or vehicle of interest across an entire site using a sophisticated deep learning AI search engine

### FACE RECOGNITION
Detects matches from managed watchlists to alert operators of people of interest. Requires Appearance Search and an additional license.

### NO FACE MASK DETECTION
To help prevent community transmission, this feature determines whether a person is not wearing a face mask. Immediate notifications in the Focus of Attention interface coupled with detailed reporting in Avigilon Cloud Services provides notification on non-compliance.

### OCCUPANCY COUNTING
By placing cameras at exits and entrances, a running total of occupancy can be monitored in real time. You can get an overview of occupancy for up to 30 days using the Avigilon Cloud Services Reports tab.

Avigilon's hybrid analytics architecture provides scalability and optimization of resources across a system. Unparalleled scalability is achieved by optionally leveraging H5A camera's processorfor the most computationally intensive operations: Classified Object Detection. This also allows for new analytics to be added to your site with a software update, making the system future-proof and upgrades possible without the need for infrastructure expansion.

The converged infrastructure model used in the AI NVR drastically simplifies design, deployment and management of security systems by offering a single pane of glass for managing all system components. By combining an NVR with an AI Appliance, a lower total cost of ownership can be achieved. This offers you both flexibility and scalability in your security system with an end-to-end solution for video recording, enhanced with self-learning video analytics and the power of appearance search, facial recognition, no face mask detection, occupancy counting technologies all in one appliance for any camera network.

With the AI NVR, a single appliance that already acts as your NVR can now flexibly scale to meet your analytics needs. Combining Avigilon's next-generation analytics on any video stream* and a whole new simplified setup UI to make analytics accessible for all customers. Weather it's analytic perimeter alerts, a face watch list, or even a drop in place COVID-19 response solution, the AI NVR is an ideal choice to introduce analytics to increase the safety and security of your site.

* Refer to AI NVR Datasheet for specific limitations.

For additional information about CBRS products, please visit: avigilon.com/ai-nvr

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