



VIDEO ANALYTICS

CATHEXISVISION FEATURES



Powerful investigation



Automatic responses



Technical stability

CathexisVision[®]
Video Surveillance Management Solutions

CathexisVision's **video analytics suite** enhances any VMS installation.



Monitoring hundreds of camera views to identify incidents in real time would be impossible without **video analytics**. Our video analytics suite is an **exception-based monitoring** tool that uses the latest **Artificial Intelligence technology** and **deep learning models** to analyse footage and optimise the control room.



Powerful investigation

Configure analytics on pre-recorded or live footage, so algorithms can identify and log incidents in a **database** for review. Retrieving **evidence** is easy.



Automatic responses

Create a **safe, efficient** site by using video analytics to trigger automated **actions**. These include alarms, sending emails, and recording footage.



Technical stability

System reliability and **low maintenance** maximise up-time and cost-effectiveness. Real-time **feedback** on algorithms makes setup intuitive.



Several features ensure **smooth setup, ease-of use** and **accurate results**. These include size filters, calibration, inclusion zones, image stabilisation, shadow suppression, and direction settings.

Our **background model**, with accurate tracking, fixed lighting, travelling average and adaptive noise suppression, **fine-tunes the calibration process**.

Boost **safety and efficiency**, whatever the situation.



Our video analytics suite has many applications, from automated responses to **motion** in an area, to identifying objects and making sure they are where they should be. Using **deep learning models**, CathexisVision can **classify** a huge range of objects and set the conditions under which they will trigger actions. If a suitcase is left in an airport lounge, a chair blocks a fire escape, or a vehicle is abandoned in a parking lot, **object detection** can identify the stationary object and raise an alarm. If an object is **removed**, operators can be notified.

Rules can be added to **object classification**, so that the speed or direction of a person, vehicle or animal can be tracked without setting off false alarms. Other rules include picking up **loitering**, **stopping** in an area, or the **enter and exit area** algorithm, which could trigger events if an object enters and/or exits a zone.

Create commands for when...

- a person enters a restricted area
- an item is left unattended
- a vehicle stops on the shoulder of a freeway
- someone loiters next to an ATM
- a queue is too long
- a vehicle speeds
- someone attempts to scale a perimeter wall
- people enter or exit a shop
- blocked or authorised vehicles attempt to enter a premises
- a venue reaches capacity



Presence trigger



Enter/exit area

CathexisVision applies **Artificial Intelligence** to do the analysis for you.



CathexisVision uses **deep learning models** based on **neural networks** to simulate mental processing and **differentiate** between objects.



Choose from several algorithms to find the **most effective solution**, based on the scene and the site's requirements.

Combine video analytics with other powerful features through the **CathexisVision GUI**:



- Link video analytics with integrations
- Review footage with SMART search
- Control cameras
- Archive video
- Investigate with a multi-layered map
- Database events and operator activities
- Assign priority levels and resources to events

Our video analytics suite can meet the needs of **diverse sites and industries.**



Our analytics enhance the management of sites in any sector, optimising safety and efficiency. Be it in hospitality, residential estates, conservation, logistics, healthcare facilities, commercial properties, campuses or cities – **the applications are vast.**



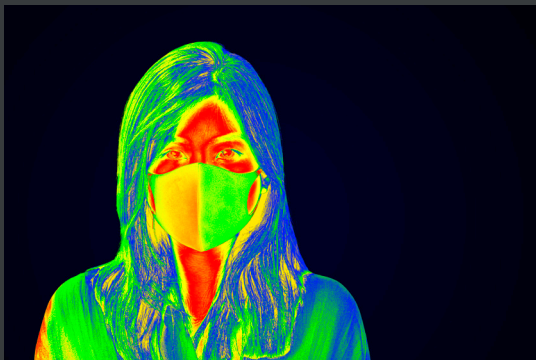
In retail settings, the **Queue Length** algorithm can detect if a queue of people or objects is occupied for too long. For example, an audio clip calling staff to attend to a till can be played automatically when a queue of customers is too long. **Line crossing** can be used to count people entering or leaving a store or other establishment.



The CathexisVision line crossing algorithm can be easily adjusted to meet site specifications. **Advanced line crossing** can track a person if they cross a double or segmented line around a perimeter. CathexisVision's other **counting algorithms** can count people crossing a line, from cameras mounted directly above or obliquely.



Managing vehicles is simplified with our algorithms. The **speed** rule provides alerts and recordings when vehicles travel over a desired speed limit. Working with a range of standard or specialised cameras, **Automatic Number Plate Recognition** uses character recognition to identify license plate details from regions worldwide.



We offer algorithms to implement health and safety measures automatically, such as **mask detection** to ensure compliance in public areas, **people proximity** for safe physical distancing, **occupancy** monitoring through people counting and object classification, and thermal camera integrations to read **facial temperatures.**

3. Analytics III license (includes 2, 1, 0)

Advanced analytics

- 3D line crossing rules (line crossing; top-down head tracker)
- Speed rule
- Filter & track objects (direction, size, speed)
- Object classification (person, vehicle, animal)

Health and safety

- Mask detection
- Social distancing

2. Analytics II license (includes 1, 0)

Intermediate analytics

- Area rules (enter/exit; stop in area; loitering)
- Line crossing (multi-segmented line; double line)
- Queue length
- Static object (object left; object taken)

1. Analytics I license (includes 0)

Basic analytics

- Simple presence in area
- Line crossing trigger
- Simple line counting trigger
- Dynamic background model
- Object classification (metadatabase)

Smart VMD

(free on Professional/ Premium)

- Flare suppression
- Track lighting

0. Basic VMD (includes Background Model)

Basic VMD

- Counting algorithms (line crossing; top-down head counter)
- Motion detection (basic VMD)
- Tamper

Background model

- Accurate tracking
- Fixed lighting
- Travelling average
- Adaptive noise suppression