



# CATHEXIS<sup>®</sup>

## CathexisVision<sup>®</sup>

Video Surveillance Management Solutions

The CathexisVision Video Management Software suite provides an extensive range of sophisticated solutions to satisfy all security and infrastructure management requirements across a wide variety of market sectors. These sectors include: retail, banking, hospitality, mining, education campuses, residential and commercial estates, manufacturing facilities, healthcare, transport and logistics, city surveillance, and many others.

With an emphasis on simplicity, the open architecture enables seamless integration with cameras and third-party systems, providing complete, optimal solutions and maximum return on investment for the widest range of applications.

CathexisVision's standout features include:

- Open Architecture VMS platform
- Enterprise, Multi-Site Architecture
- Video Analytics/AI
- Automatic Number Plate Recognition (ANPR)
- Third-party System Integration
- Sophisticated Command Centre Environment
- Advanced Video Search
- Cyber Protection and Failover Redundancy
- Multiple Language Support



**Effective Innovation**



## Camera Support

CathexisVision supports thousands of the most popular brands of IP cameras using both proprietary (MJPEG, H.264, H.265, MxPeg) and ONVIF protocols, via a true "plug and play" interface. Support includes multiple video streams, audio, input/output control, on-camera (Edge) video analytics and recording, as well as fisheye camera de-warping algorithms.

Our setup wizards ensure the quick, accurate installation of hundreds of cameras on site. We also perform reference image analysis to ensure that cameras have not been moved from their desired positions. Additionally, our sophisticated integration with thermal cameras enables us to perform accurate temperature measurement readings on selected cameras.



## Upgradeable Architecture

CathexisVision offers the flexibility to upgrade and expand systems, or add features whenever necessary. If the solution calls for an increase in camera population or an increase in the number of recording servers, the CathexisVision solution is easily upgradeable to meet new or changing demands.



## Multi-Server Site Management

CathexisVision Premium provides a true site-based management infrastructure, with multiple recording and viewing servers, cameras, and storage - all managed from a centralised location. The user-friendly graphical interface provides the operator with seamless access to cameras and resources anywhere on or off-site.



## Enterprise Multi-site Management

CathexisVision is the ideal solution when multiple sites need to be managed from one central location. The site management software provides authentic remote client system management. This includes performing all system functions from setup to viewing, reviewing and system management, from anywhere across the globe. Compression techniques also provide efficient video streaming across limited bandwidth infrastructures.



## Flexible Storage Solutions

CathexisVision provides complete flexibility when it comes to choosing a storage solution. This includes support for Network Storage systems such as NAS and SAN, as well as on-server storage with various RAID configurations and "Edge" storage on selected network cameras.

Multiple, user-defined databases enable clients to maximise storage effectiveness and flexibility. CathexisVision can store critical video to more than one database simultaneously for ultimate redundancy.



## Third-party Systems Integration

CathexisVision is easily integrated with a wide range of third-party systems to provide a powerful single user interface with video verification of events.

These third-party systems include intrusion alarms and fire panels, access control, point-of-sale, building and plant management systems, perimeter monitoring equipment and more. Integration is enhanced by the ability to perform predetermined actions upon specific information received from various systems.



### Retail



### Banking



### Education







## ANPR (Automatic Number Plate Recognition)

CathexisVision provides an ANPR solution for both low- and high-speed applications. License plates are recognised and stored in a database with associated video footage. These license plates can be compared to blacklists or whitelists in real-time, which provides the ability to take appropriate action against these comparisons.

CathexisVision provides the ideal solution for parking and access control applications or high-speed freeway detection requirements. Traffic rules such as vehicles loitering, repeat detections and average speed measurement and reporting are just some of the additional features available in this solution.



## Event and Action Management

CathexisVision offers intelligent configuration of events as well as actions that can be initiated in response to these events. Various inputs, video analytics, or integrated third-party systems can trigger events. Rules-based configuration means that specific events can set off automatic responses, optimising the system according to your site's requirements. Actions include switching cameras to monitors, sending emails, controlling relay outputs, sending alarms to a control room, playing audio clips, and many others. CathexisVision's event and action management can be configured to identify changes and automate tasks in response to those inputs, maximising your site's efficiency and operational power.



Hospitality



Mining



City Surveillance



## Failover Redundancy

CathexisVision provides complete redundancy by way of its elegant failover feature. This ensures that if any recording or video management server fails on a site, a "failover server" will automatically perform the tasks of the failed server. In addition, when the failed server is replaced, all configuration and recorded footage is automatically ported back to the replacement server. This ensures that the site continues to run seamlessly through the whole process.

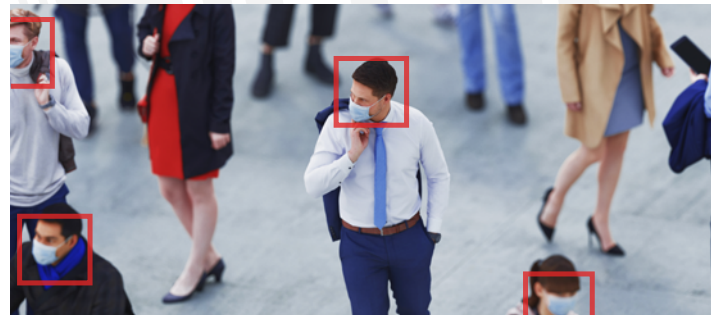


## Video Analytics

CathexisVision offers a powerful video analytics suite and also has the ability to integrate on-camera (Edge) analytics. We have recently introduced several Covid-specific algorithms, including occupancy counting, proximity analysis, and face and mask detection.

Object classification algorithms, using Neural Networks, improve decision-making and dramatically reduce false alarms by enabling the system to identify specific objects (for example, people, animals or cars). Our other algorithms include multi-zone motion detection, abandoned object detection, loitering, speed, direction, line-crossing and many more.

CathexisVision's "dynamic background" learning algorithms minimise false positives. The user-friendly interface allows users to easily configure the algorithms with both live and recorded video footage.



## Alarm Management

Our Alarm Management software provides a "black-screen"/exception-based approach for sites with many cameras or for centralised command centres monitoring multiple sites. The local or remote site's alarms are logged and managed by the Alarm Management software, which automatically guides operators to the associated cameras. Comprehensive search and reporting tools complete the system. By only bringing relevant alarm information to operators' attention, our Alarm Management software allows operators to focus their attention on high-priority events, streamlining the control room.



## Advanced Video Search

Advanced Video Search features are sophisticated tools that dramatically speed up the ability to review recorded video footage. They allow operators to find specific and relevant footage through four highly customisable tools:



## Snap Search

Snap Search uses linked snapshots (thumbnails) to enable users to quickly pinpoint the exact time of an incident, even in very busy areas, and play video immediately from that point.



## Motion Search

Motion Search will automatically find recorded video footage associated with motion in selected areas. The identified motion is reflected in the timeline for easy navigation.



## Activity Trails

The unique CathexisVision Activity Trails feature enables users to display an overlay map that shows the latest activity in all areas of the selected camera view, enabling immediate navigation to the selected area of activity.



## Bookmarking

This feature enables users to bookmark recorded video from specific cameras at a point in time. Users can then add personalised comments to the bookmark, and easily search the bookmark database to quickly find video footage that has been identified for further examination or analysis.



## Heatmaps

Heatmaps can be used for a quick overview of areas of movement. The heatmap shows a colour-map overlay onto the video depicting the amount of movement within that camera view. The red areas show maximum movement while a green area demonstrates minimal movement. Applied in retail environments, store managers can use heatmaps to analyse the most popular areas in a specific store.



## Adjacent Camera Mapping

At the click of a button, operators can switch to adjacent cameras and easily follow people moving between cameras, using Adjacent Camera Mapping. This feature can be used on live and recorded footage, and is especially beneficial in large-scale applications.

Through Adjacent Camera Mapping, operators can monitor developing situations and suspicious activity, anticipate incidents and switch between camera views with ease. Displaying all cameras adjacent to a selected camera saves time and enhances the control room's efficiency.



## Video Wall

The CathexisVision video wall displays footage on multiple monitors so that operators can intelligently manage video. In response to events, the camera and sequences layout can be configured to automatically switch cameras to monitors or panels. Monitor layouts are controlled via an interactive mimic panel, and it is possible to review recorded footage on select cameras on the video wall. The CathexisVision video wall can be tailored to your control room environment.



## Cyber Security and Privacy

Because we value security and privacy, CathexisVision offers enhanced levels of user protection. In addition to conventional measures, CathexisVision includes high-level encryption for communication between system components. These include secure camera communication protocols, watermarking, encryption and password protection applied to any archived video, as well as face redaction algorithms - all of which provide peace of mind for you and your customers.



## Access Rights Management

Large sites often require multiple control rooms and tiers of management, making it imperative to control users' access levels. CathexisVision offers multiple levels of users, each with a unique username and password. Administrators can centrally manage users across the site or multiple sites.

## Warehousing & Logistics



## Healthcare



## Transport







## CatMobile

Access the system from anywhere in the world using Cathexis mobile device applications. Users can remotely view cameras from their mobile devices - be it a tablet or a phone, Apple iOS or Android.

CatMobile allows clients to view live footage from multiple devices simultaneously, review recorded footage from selected cameras, and control PTZ cameras from the user interface. Physical outputs on the remote site can also be controlled through the interface. With CatMobile, users can easily connect to multiple sites from any location.



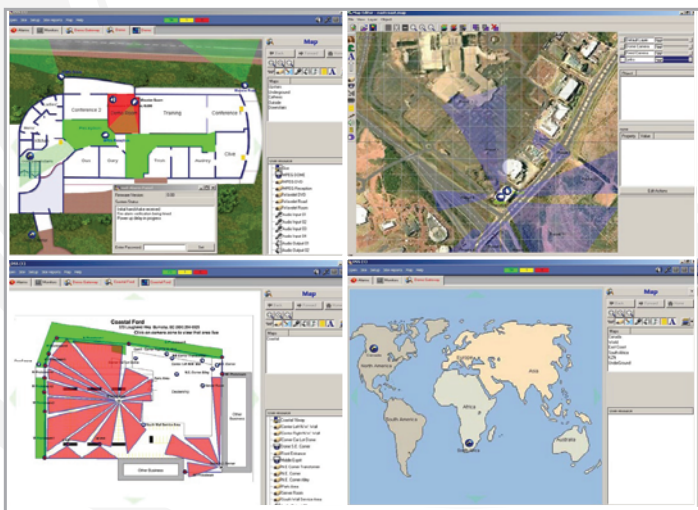
## CatObserver (Monitor Recording)

CatObserver allows a viewing monitor or screen to be configured as a virtual camera, so that activity viewed on the screen can be recorded. This convenient feature means that when an operator has tracked an incident across multiple cameras (for example, using adjacent camera mapping), the footage can be easily accessed and archived, without the need to retrieve the footage from all the cameras involved.



## Map Interface

The CathexisVision maps feature offers multi-layered, hierarchical, interactive interfaces. This provides representation and control of a site and its resources. These resources include cameras, input/output devices, access control doors, alarm/fire panel points, and more, which are all displayed on a graphical interface. The map also provides the ability to represent, and control, pre-set PTZ dome positions from the GUI, drag-and-drop cameras from the map to selected monitors, and control selected integrated third-party systems.



## Setup Wizards

The CathexisVision Setup Wizards are designed to guide users through the setup process for cameras, databases, recording, analytics, events and event actions. This decreases the likelihood of error and supports a seamless user experience.



## Camera Parameter Cloning

Camera Parameter Cloning makes it easy to apply settings across multiple cameras. Users can simply copy and paste settings (multiple video streams, resolutions, frame rates, bitrates and others) from one reference camera to as many other cameras required, significantly reducing site setup times.



## Diagnostics

CathexisVision's powerful diagnostics suite provides installers with the tools to analyse the whole system environment, both in real-time and historically. By being able to monitor network camera video streaming performance, recording bitrates, live viewing statistics, and network throughput, Cathexis partners can easily troubleshoot problems on-site. This provides real intelligence on the technical integrity of the solution.



## Health Monitoring

Optimising system performance is paramount. Operators can stay updated with system status reports from CathexisVision's full reporting capability. The Cathexis Health Manager provides real-time analysis of the system and can be configured to send alarms to selected recipients if problems are detected. A wide range of parameters (such as camera failures, hard drive analysis, environmental conditions, communication integrity and software errors) are monitored, so you can be confident that CathexisVision supports the speedy detection and resolution of any system issues that might arise.

Manufacturing



Airports



Housing Estates



# Effective Innovation



# CathexisVision 2021 Package Comparison

+ Available with license • Feature included - Not applicable

Features	LITE Single server package	CORE Single Server product	PROFESSIONAL Medium to large site	PREMIUM WAN/large site
Upgradeable (To Higher Package)	-	•	•	•
<b>Camera and Server Limits</b>				
Max Camera channels per site*	48	48	150	Unlimited
Max Recording Servers per site	1	1	Unlimited	Unlimited
<b>Camera Support</b>				
MJPEG, H.264, H.265 and MXPEG and ONVIF Support	•	•	•	•
Multiple Video Streaming (Per Camera)	•	•	•	•
Thermal camera support	•	•	•	•
Audio and I/O Support	•	•	•	•
Fisheye De-warping	•	•	•	•
<b>Client Connections</b>				
Max Simultaneous Connections (Including Local)	3	7	10	Unlimited
Viewing & Setup Client	•	•	•	•
Mobile Client Support	•	•	•	•
<b>Useability and Functionality</b>				
Multiple language support	•	•	•	•
Redundant failover server/s support	-	-	+	+
Interactive map support	+	+	+	•
Adjacent camera mapping	•	•	•	•
Audio recording & bi-directional	•	•	•	•
CatObserver (monitor recording)	+	+	+	+
<b>Video Analytics</b>				
Basic VMD	•	•	•	•
Cathexis SMART Motion Detection	+	+	•	•
Advanced Analytics Suite	+	+	+	+
Edge Analytics Support	•	•	•	•
Object Classification (Neural Networks)	+	+	+	+
Face and facial landmark detection	+	+	+	+
Mask detection	+	+	+	+
Object/occupancy counting	+	+	+	+
<b>Smart Search</b>				
Snap Search	•	•	•	•
Motion Search	•	•	•	•
Activity Trails	•	•	•	•
Bookmarking	•	•	•	•
<b>Storage</b>				
Local Storage (On Recording Server)	•	•	•	•
Network Support	•	•	•	•
Edge Storage	•	•	•	•
<b>Event Triggers</b>				
Physical Input Triggers	•	•	•	•
On-Server Analytics Triggers	•	•	•	•
Edge Analytics Triggers	•	•	•	•
Third-party System Event Triggers	+	+	+	+
Technical Alarm Triggers	•	•	•	•
<b>Event Actions</b>				
Record Pre-and Post-events	•	•	•	•
I/O Output Control	•	•	•	•
Send SMS and Email	-	•	•	•
Send Alarm/Event to Alarm Management Gateway	-	•	•	•
Video Wall Control	•	•	•	•
Play Audio Clip	•	•	•	•
PTZ - Move to a preset location on an event trigger	-	•	•	•
Send Technical Alarms to Alarm Gateway	•	•	•	•
<b>ANPR (Automatic Number Plate Recognition)</b>				
Low and High Speed	+	+	+	+
Average speed measurement	+	+	+	+
Traffic rules	+	+	+	+
<b>Integration</b>				
Third-party Systems Integration	+	+	+	+
API Integration	•	•	•	•
<b>Video Wall</b>				
Mimic Panel	+	+	+	•
Camera and Layout Tours	+	+	+	•
Automatic Camera and Layout Switching on Events	+	+	+	•
<b>Alarm Gateway Integration</b>				
Technical Alarms	•	•	•	•
Event Alarms	-	•	•	•
Alarm Escalation and Tracking	•	•	•	•
<b>Reporting</b>				
System Health Reports	•	•	•	•
Customizable Management Reports	•	•	•	•
<b>User Management</b>				
Access Rights Control	•	•	•	•
User Activity Logs	•	•	•	•

\*Multi-head cameras or encoders utilise multiple channels in the software-level channel count, even when only a single license is required.

**Disclaimer:** While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit nor implied. Specifications are subject to change without notice.