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Cathexis is Changing the Security Management Industry with a Versatile, Scalable, and Reliable Video Management System

CathexisVision Video Management Software & Video Analytics solution, optimized with the Intel® Distribution of OpenVINO® toolkit for Intel processors, enhances security monitoring with a cost-effective, powerful video management solution that pairs innovation with reliability.

CATHEXIS®

Effective Innovation

2022
$48.7B

2027
$76.4B

The video monitoring market is projected to grow to

$76.4 USD Billion

by 2027[1]

9.4% CAGR

2022   2027

During the period of 2022 to 2027, the video monitoring market is projected to grow at a

CAGR of 9.4%[1]

AI Technology Is Enabling Superior Security Monitoring For Large Sites

Manual, human-reliant security is inherently inefficient and costly due to error-prone human analysis, costly staffing for tedious, resource intensive tasks, and delayed response times to security incidents. Manual monitoring is especially challenging for large sites with hundreds of cameras that span multiple locations and capture thousands of hours of footage, far surpassing what humans can realistically monitor. If an incident does occur, it is usually discovered after the fact and hours of footage must be laboriously searched to find any evidence leading to the perpetrators. As a result, facilities utilizing such traditional security management systems are often less safe than their number of cameras might imply.

Due to these limitations, businesses are looking to AI solutions to strengthen security measures, especially across large sites. AI technology brings intelligent, automated, real-time identification and detection of events that spur immediate notifications to the correct personnel. These features help increase response times to events, reduce burdens on security personnel, and provide tailored insights into activities at each individual premises. AI-assisted Video Management Software (VMS) solutions enable a more intelligent and streamlined approach to security management.

However, not all VMS solutions are equal. **Ideal VMS solutions must be easy to use while also being flexible, scalable, and reliable.**

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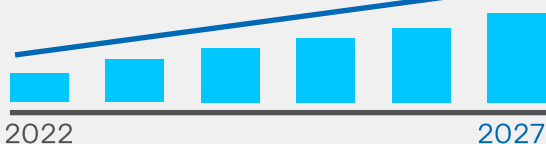## CathexisVision Video Management Software And Video Analytics Helps Cost-effectively Maximize The Efficacy Of Security Systems

CathexisVision is a comprehensive Video Management Software suite that gives security operators the ability to manage and monitor thousands of cameras across multiple sites using AI technology, all through a single platform. As a complete, end-to-end solution, CathexisVision's wide range of capabilities help maximize security and improve operational efficiency across all verticals and markets from education to manufacturing, retail, and smart cities. Perhaps most importantly, the solution integrates seamlessly with third-party systems and camera models to instantly amplify the capabilities of existing infrastructure.

The flexibility of the solution and its features creates an opportunity for businesses to deploy a security platform optimized for their specific needs. The user-friendly interface enables users to easily configure the provided algorithms with both live and recorded video footage, set alert triggers within the system, and create specific protocols to follow once a given trigger is activated. Combined with a level of reliability that enables deployments both wide (across many sites) and far (to remote locations), CathexisVision is the archetype of an ideal VMS solution through its enablement of effective site management, control room efficiency, reliable evidence collection, and enhanced situational awareness.

By implementing the CathexisVision solution, businesses can attain the following:

Key End Customer Benefits

Accelerated return on investment both short and long term with immediate operational efficiency improvements, reduced labor costs, and a low cost of ownership

Simplified control room management with flexible integrations of IP cameras and third-party systems, all managed from a centralized location

Strengthened on-site security with automated notification protocols to help operators make informed decisions and implement pre-configured actions

Improved operational efficiency through analysis of large amounts of data to help pinpoint incidents in real-time and proactively improve processes based on insights over time

CathexisVision Features

- Integration with third-party systems
- Automatic failover redundancy
- Automated system health monitoring
- Site management
- Video analytics
- Smart search
- Event management
- Alarm management
- Access rights management
- Human identification and tracking
- ANPR identification
- Incidents tracing with motion search and snap search tools
- Adjacent camera continuity
- Database filtering and easy exporting of video evidence
- Cybersecurity and data protection features

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Intel® Technology Optimizes And Maximizes The Performance Of The CathexisVision Solution

Developed using Intel developer tools and powered by Intel processors, the CathexisVision Video Management Software and Video Analytics solution is optimized for security monitoring use cases across all verticals.

The CathexisVision solution harnesses Intel® Core™ processors and Intel® Xeon® Scalable Processors to deliver innovation customers can trust. Intel silicon enables high-performance video inferencing at large scale sites without the need for discrete graphics cards (GPUs), making the CathexisVision solution highly cost efficient. Intel® Xeon® Scalable processors include breakthrough memory and I/O capabilities with the introduction of DDR5 memory, PCIe 5.0, CXL 1.1, and a new acceleration engine within Intel® Deep Learning Boost called Intel® Advanced Matrix Extensions (Intel® AMX), which optimizes deep learning training and inferencing workloads.

In addition to workload acceleration, Cathexis utilized the security technologies baked into Intel® Core™ processors and Intel® Xeon® Scalable Processors to implement hardware-based protections at the foundational level of the CathexisVision Video Management Software and Video Analytics solution.

CathexisVision software was developed and optimized for maximum AI inferencing performance using:

Intel® Distribution of OpenVINO™ Toolkit

This toolkit optimizes the deep learning and visual inferencing to maximize performance and removes the need for an additional discrete GPU. Developing with OpenVINO™ enabled Cathexis to speed up development by providing fast and accurate pre-trained neural networks that could be tested and integrated quickly. It also helped optimize the solution by providing example applications, the ability to convert models from other frameworks, and enabling model optimizations such as quantization, which helped improve speed with a negligible loss of accuracy.

Intel® Optimization for TensorFlow*

This widely-used machine learning framework in the deep learning arena is leveraged to take full advantage of and extract the maximum performance from Intel® Architecture, supporting the efficient utilization of computational resources.

Intel® oneAPI Analytics Toolkit

Cathexis leveraged the Intel® oneAPI Analytics Toolkit to accelerate end-to-end machine learning, data science applications, and analytics pipelines with optimized deep learning frameworks and high-performing Python* libraries on Intel® Architecture.

Model Zoo for Intel® Architecture

This open-sourced collection of optimized machine learning inference application helped Cathexis and their customers extract the best performance of AI models and applications on Intel platforms .

Though the CathexisVision solution greatly enhances security in all verticals, it has proved especially valuable in the education space. A perfect example of this trend can be found at a major international university, which implemented the CathexisVision Video Management Software and Video Analytics solution to help keep their students and faculty safe.
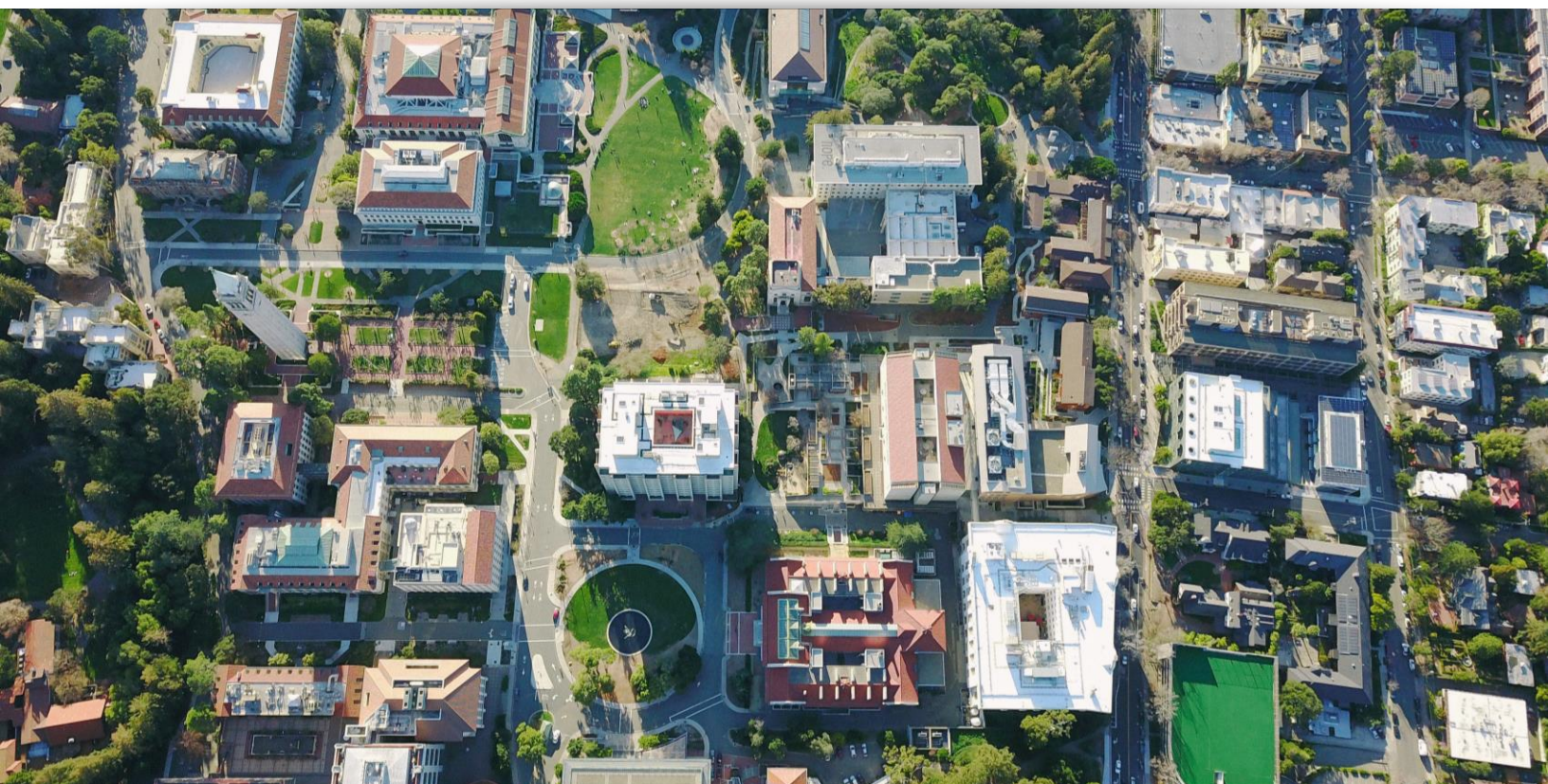
Case Study: Enhancing Efficiency And Security Monitoring For A Major University

The Challenge: The university sees tens of thousands of students, faculty, and visitors pass through its campus daily. With multiple buildings spanning a large area, keeping its property secure and its community safe was a challenging task for their traditional security system. To enhance their security capabilities, Istanbul University reached out to Cathexis to leverage their smart security expertise.

The Solution: Cathexis deployed their CathexisVision Video Management Software and Video Analytics solution on 2475 cameras across the university, seamlessly integrating with models from nine different camera brands, all monitored through only two control rooms.

The Results: The CathexisVision solution helped protect thousands of people as well as historic buildings and grounds. The two control rooms included multiple CathexisVision client operator stations, Alarm Management Gateways, interactive maps, and Video Walls with automated switching to relevant camera views in response to events. The solution increased efficiency since only a few operators are required to monitor thousands of cameras. In addition, it enabled the institution's head of security to monitor events through the CathexisVision mobile app. Lastly, the solution's failover redundancy ensured maximum system up-time and consistent monitoring. Overall, CathexisVision helped Istanbul University secure its people and premises with a highly efficient AI-powered VMS solution.

▬ Try the CathexisVision Solution and Start Securing Your Campuses ▬

The CathexisVision Video Management Software and Video Analytics solution provides a comprehensive set of modern VMS capabilities to maximize security and operational efficiency across a wide range of market sectors. It's easy to manage, packed with powerful features, and gives users the ability to manage a single site or multiple sites through a single platform. With the CathexisVision solution, Cathexis pairs innovation with reliability to provide customers with cost-effective security that they can trust.

Learn More

To learn more about the Cathexis Solution visit:

- Cathexis Website
- CathexisVision Product Page
- CathexisVision Product Brochure

To learn about Intel® technologies visit:

- Intel® Core™ Processors Product Page
- Intel® Xeon® Scalable Processors Product Page
- Intel® Distribution of OpenVINO™ Toolkit Product Page
- Intel® Distribution for Python* Product Page
- Intel® Optimization for TensorFlow* Introduction
- Model Zoo For Intel® Architecture GitHub Page

About Cathexis

Cathexis is a software developer and electronics manufacturer specializing in video management software and AI solutions. With over 25 years of experience, Cathexis delivers tailored solutions various industries in over 65 countries. Their solutions help organizations across industries maximize security and operational efficiency with the ability to manage multiple sites and third-party integrations through a single platform.

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1. Markets And Markets, "Video Surveillance Market by Offering…..", 2023

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