



**Securitas
Technology**



2023
Technology
Outlook Report

Contents

Thank you to our participating strategic technology partners:















SPOTLIGHT

- 8. Introducing Securitas Technology
- 10. Engineering Center of Excellence

13. COLLECTIVE INSIGHTS

- 14. Data, Trends & Insights

17. TRENDING TOPICS 1: GLOBAL IMPACTS AND SUPPLY CHAIN

25. TRENDING TOPICS 2: EMERGING TECHNOLOGIES

33. TRENDING TOPICS 3: CYBERSECURITY AND PRIVACY

41. TRENDING TOPICS 4: AI & AR

SPOTLIGHT

- 50. Guarding Services
- 52. Pinkerton Crime Index

TECHNOLOGY PARTNERS

- | | |
|--------------------------|--------------------|
| 56. AMAG | 78. Hanwha |
| 58. American Dynamics | 80. HID |
| 60. ASSA ABLOY | 82. LenelS2 |
| 62. Avigilon | 84. March Networks |
| 64. Axis Communications | 86. OpenEye |
| 66. BOSCH | 88. PACOM |
| 68. Brivo | 90. Resideo |
| 70. Cognyte | 92. Software House |
| 72. Costar Video Systems | 94. Verint |
| 74. Eagle Eye Networks | 96. 3xLOGIC |
| 76. Exacq | |

Securitas Technology



We're proud to present the fifth annual Technology Outlook Report, which features breakthrough insights, trends and data on a variety of global security topics. Across all verticals, the report is designed to be a valuable resource for clients in evaluating new technologies, emerging trends, opportunities and challenges in the industry.

Whether looking to protect their people, property and assets or optimize their operations, businesses can gain essential insights to support their security programs. Developed in collaboration with our **Client Advisory Board** and technology experts, this 2023 edition includes insights on the following topics: global impacts, supply chain, emerging technologies, cybersecurity, privacy, artificial intelligence (AI) and augmented reality (AR).

These trending topics remain top of mind for many organizations as they encounter complex situations and look for new ways to drive security, sustainability and profitability. As a security partner, we help clients navigate these situations and make informed security and business decisions – and we're proud to do so with support from our strategic technology partners.

We'd like to extend a special thanks to AMAG, American Dynamics, ASSA ABLOY, Avigilon, Axis Communications, BOSCH, Brivo, Cognyte, Costar Video Systems, DMP, Eagle Eye Networks, Exacq, Hanwha, HID, LenelS2, March Networks, OpenEye, PACOM, Resideo, Software House, Verint and 3xLOGIC for their valued contributions.

As we do each year, we debut the Technology Outlook Report at the Security Symposium, a best-in-class industry experience for top security professionals. Inspired by our ambition to approach technology through a lens of innovation and thought leadership, the Symposium creates a collaborative space for clients to learn from one another, engage with security experts and explore the future of security technology.

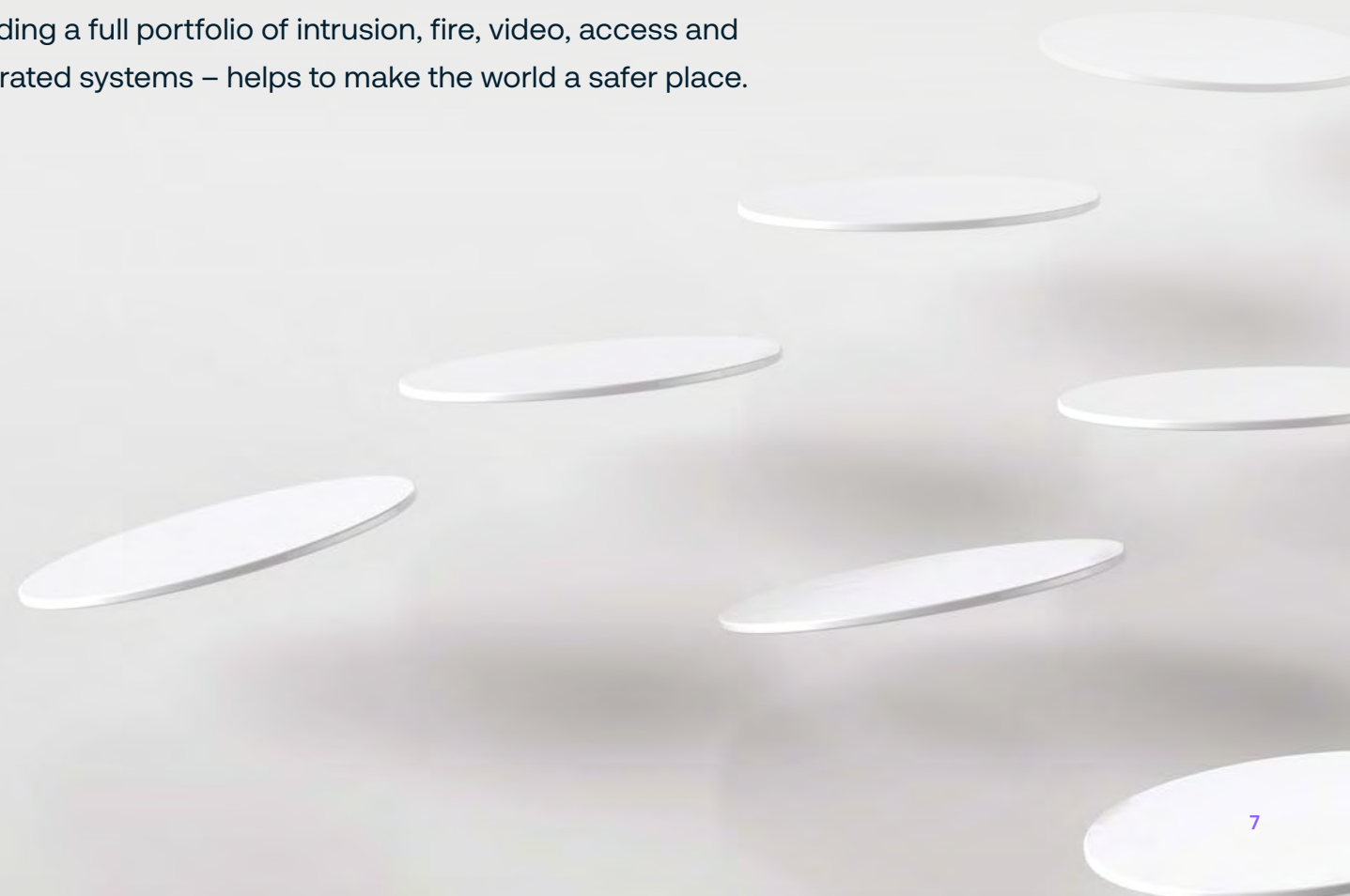
This year, it is with great pride and excitement that we host the Symposium as Securitas Technology – a new brand that brings together Securitas Electronic Security and STANLEY Security. We're on a mission to become the industry's premier trusted partner and advisor in security, health and safety technology – and we can't wait to share with you what the future holds.

Tony Byerly,
Global President
Securitas Technology



A World Leader in Security Technology, Services & Expertise

Securitas Technology, together with Securitas, is a world-leading security solutions partner that delivers innovative technologies, value-enhancing services and deep industry expertise to clients across the globe. The company's technology ecosystem – including a full portfolio of intrusion, fire, video, access and integrated systems – helps to make the world a safer place.



Introducing Securitas Technology

Securitas Electronic Security and STANLEY Security – two award-winning industry leaders with decades of experience – are coming together to become Securitas Technology to deliver smarter, innovative and seamless technology solutions. With in-depth expertise and tech-driven innovation, Securitas Technology creates significant value for businesses worldwide.

CLIENT EXPERIENCE AT THE CORE

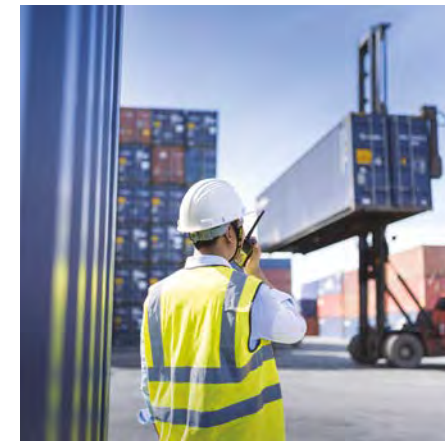
Service excellence is in our DNA, laying the foundation for an unparalleled client experience. From streamlined account and program management to fast and effective client support, our highly skilled personnel have a proven track record of delivering an outstanding client experience. Beyond traditional services, we empower clients with tech-enabled solutions and insights to optimize operations and make proactive, informed business decisions.

CONNECTED ECOSYSTEM

In a highly fragmented industry, technical capabilities and expertise are often scattered across the market. Now, businesses can partner with Securitas Technology as a trusted advisor that offers a connected ecosystem of health, safety and security solutions.

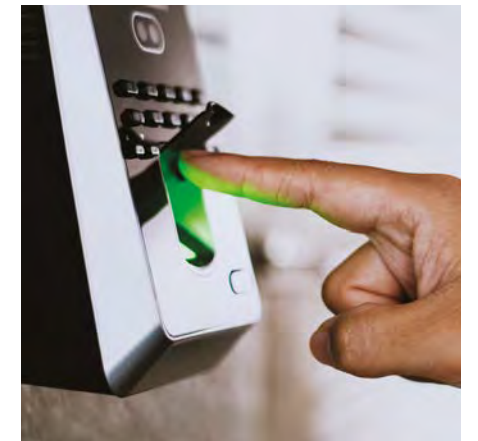
GLOBAL PRESENCE, LOCAL KNOWLEDGE

Securitas Technology combines the reputation, scale and reliability of a global brand, with the accountability, responsiveness and personal touch of a local partner. We're proud to be a provider that global organizations can trust for consistent, specialized support around the world.



COMMITMENT TO INNOVATION

We believe the future of the industry is built on global presence, connected technology and intelligent use of data. Driven by innovation, Securitas Technology helps businesses leverage next-generation solutions and services to protect their people, property and assets, connect their technologies and optimize their operations.



Engineering Center of Excellence

At the Securitas Technology Engineering Center of Excellence (CoE), projects are designed, engineered and commissioned to the highest of industry standards to meet our clients' unique needs. We specialize in centralized installation and service for enterprise and multisite security programs, delivering consistency and reliability for the most robust security systems.

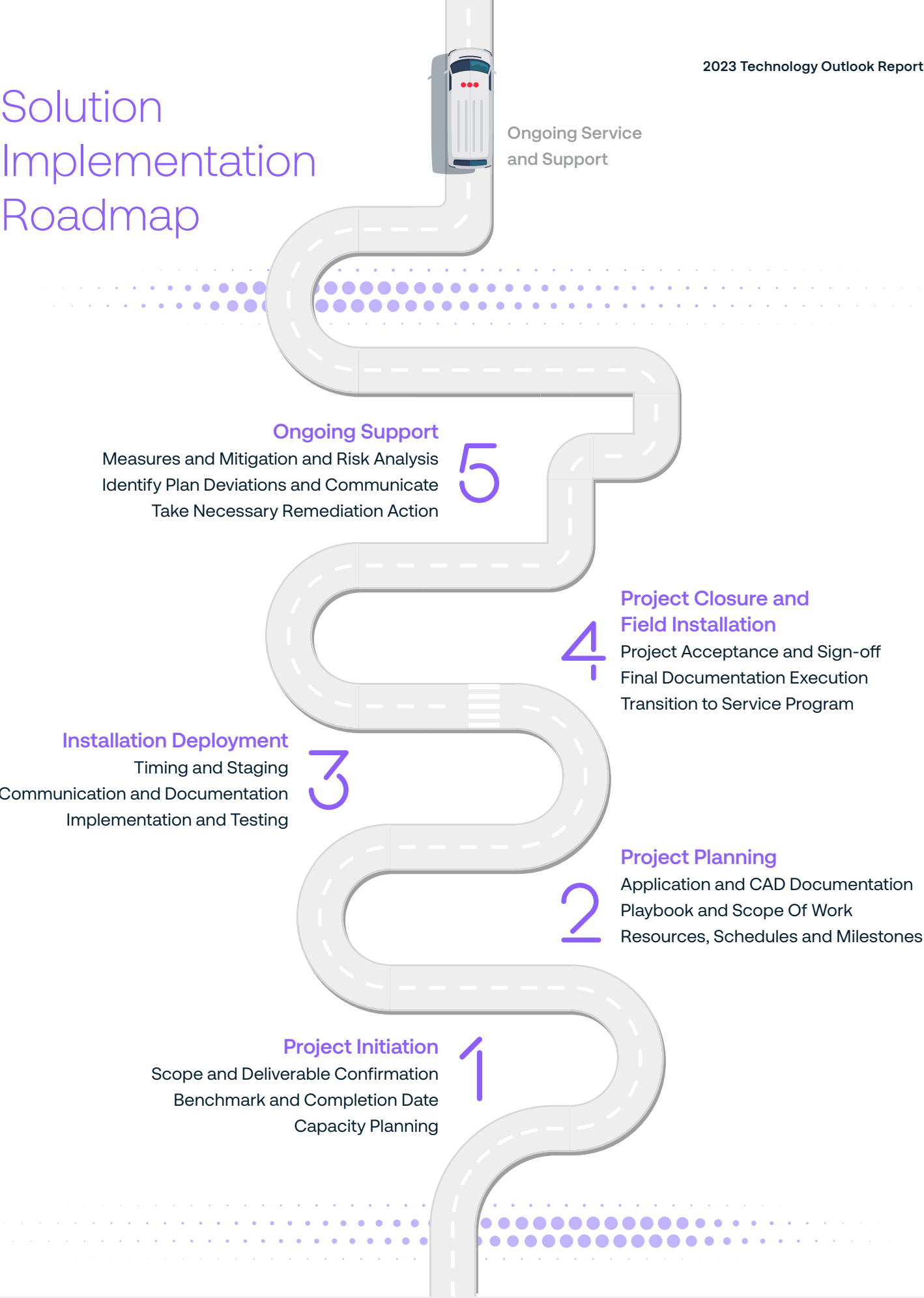
A successful solution implementation starts at the Center of Excellence with a systematic, customized approach. Uniformity is a guiding principle of the CoE's core design and engineering solutions:

- > CAD and programming
- > Engineering and prefabrication
- > Complete system and project documentation
- > Requirements and compliance reviews
- > Programming and testing pre-installation

UNIQUELY DESIGNED FOR OUR CLIENTS

Security panels prefabricated at the Engineering Center of Excellence follow a standardized configuration that minimizes the space requirements, reduces out-of-box failures and allows for seamless ongoing service by Securitas' certified and experienced field network. The CoE's leading processes have been proven and tested through some of the industry's most expansive projects.

Solution Implementation Roadmap





Collective Insights

Global megatrends are significantly impacting the world and the security industry, and each year businesses must adapt to address new challenges. Security technology and services play an integral role in this process, helping businesses navigate emerging risks, mitigate security threats and drive operational efficiencies.

We surveyed leading security companies for their perspectives on the state of the industry. Let's take a look at how they see businesses leveraging security solutions today and the trends shaping how they may use security technology in the future.

“
The shift from older proximity cards continues as we see more adoption of secure smart credentials.

Mobile credential support in iOS and Android wallets allows for encrypted, digital credentials and biometrics to be stored and used from virtually any smart phone. Thanks to new, affordable and reliable biometric readers, including touchless fingerprint and facial recognition readers, there have been many successful deployments.

Doug Walsh,
Senior Director,
Technology Strategy
Securitas Technology

Data, Trends & Insights

Consumer technologies and trends influencing the security market:

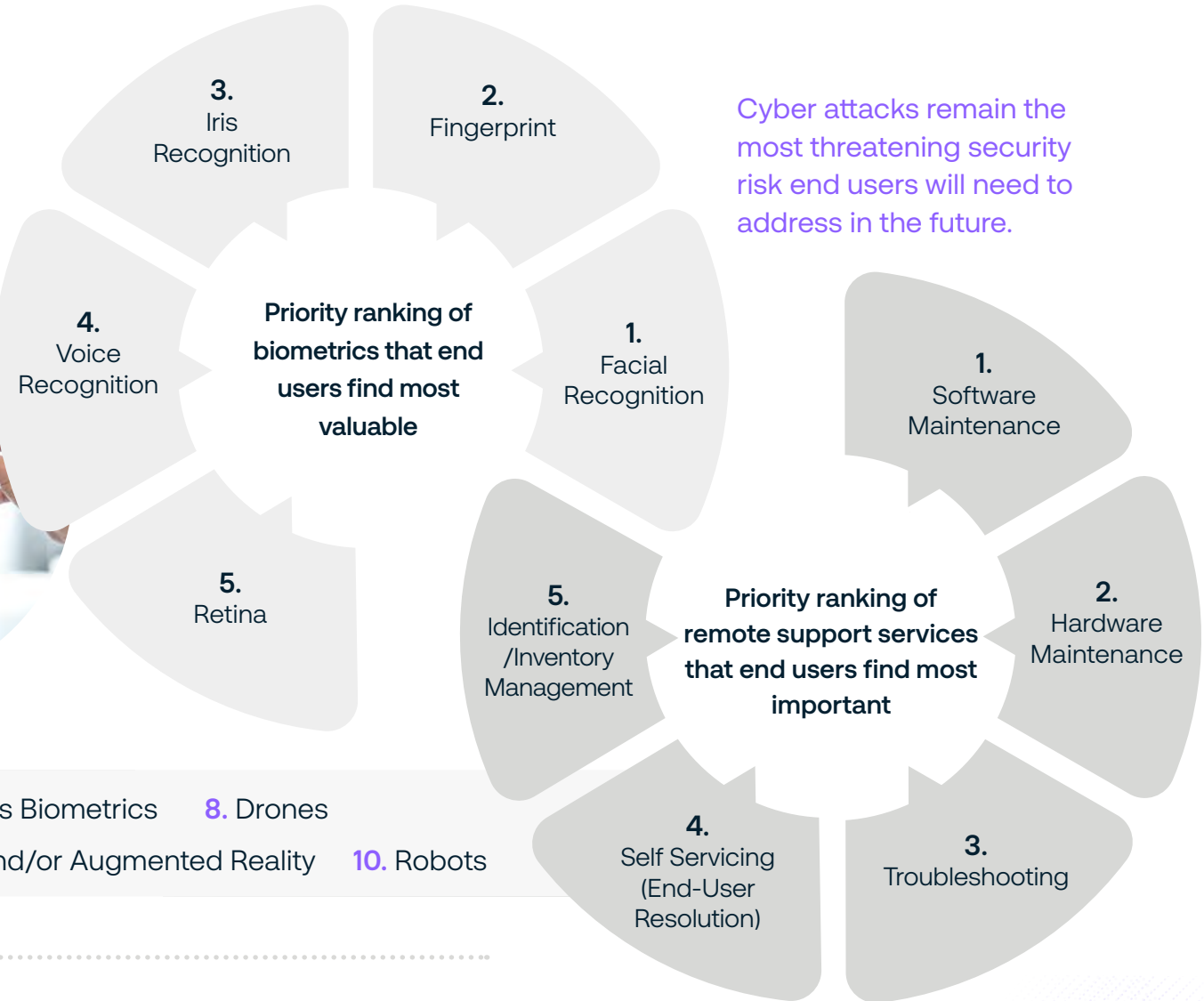
- 1 User-Centered Design / CX
- 2 Cloud-Based
- 3 Automated Updates
- 4 Mobile Technologies (Apps, Bluetooth, etc.)
- 5 Upgrade Cycle / Product Lifespan
- 6 Aesthetics & Ergonomics
- 7 Bring Your Own Device (BYOD)
- 8 Intelligent Virtual Assistants

Technologies that will have the biggest impact over the next 3-5 years:

- 1. Data Analytics 2. Cloud
- 3. Artificial Intelligence 4. Internet of Things (IoT)
- 5. Mobile 6. 5G / Next-Gen Cell Network

- 7. Touchless Biometrics 8. Drones
- 9. Virtual and/or Augmented Reality 10. Robots

Cyber attacks remain the most threatening security risk end users will need to address in the future.



- 1. Object Type Detection
- 2. Data Analytics
- 3. Behavioral Recognition
- 4. Loitering

Advanced security analytics most frequently demanded from end users

- 5. Pattern Recognition
- 6. Face Detection
- 7. Differentiate Inanimate Movement
- 8. Audio Classification

Analog, physical proximity credentialing and POTS technology were rated as the top 3 technologies that will no longer have a significant impact on the security industry in the next 3-5 years.

Priority ranking of features when developing new solutions:

- 1 Reliability
- 2 Cybersecurity
- 3 Quality
- 4 Ease of Use
- 5 Longevity
- 6 Price

Security threats that influence research & technology development:

- 1 Cyber Attacks
- 2 Internal Threats
- 3 Active Shooter/Workplace Violence
- 4 Social Engineering
- 5 Natural/Environmental Disasters

Drones, followed by robots and machine learning, were rated as the top technologies receiving industry buzz that are not yet ready for the electronic security industry.



1 TRENDING TOPICS

Global Impacts and Supply Chain

Global supply chain disruptions have tested the resilience of virtually every business, and many in the security industry have risen to the challenge. They're taking steps to address extended lead times, labor supply and parts shortages by pivoting operations, talent development, sourcing practices and more. Let's take a closer look at how security technology manufacturers have adapted to remain agile.

“

The last three years of pandemic uncertainty, geopolitical events and extreme weather have underlined that resiliency and adaptability are essential considerations in planning security.

It's very important for organizations to work with security partners who can help them succeed in the face of the unexpected, through solutions and services that help prevent or mitigate loss and support rapid recovery from events. Our strategy at Securitas Technology is to build resiliency into our solutions and operations, and to partner with leading vendors who are proactive in de-risking their products, operations and supply chain.

Troy Dayon,
Chief Development Officer
Securitas Technology

Q1 What has your business done to address the supply chain challenges in 2022 and beyond (e.g., extended lead times, the labor market, parts shortages, etc.)?

AMAG

AMAG’s lead times, for AMAG-manufactured parts, are fortunately shorter than our competition. AMAG had the foresight to purchase a large volume of components at the start of the pandemic, so we would be able to continue delivering products to our customers in a timely manner. We also evaluated the existing components on our hardware panels and made changes where possible to use components that were potentially easier to source.

ASSA ABLOY

We have been fortunate to maintain a relatively stable workforce during this time. Internship and apprentice programs have allowed us to cultivate new talent, providing fresh perspectives and increasing our bench strength and depth. Comprehensive training programs allow us to help our partners and customers attract new talent and develop skilled labor. In addition, our professional services are a resource that have been incredibly valuable to customers as they deal with a retiring workforce.

AXIS COMMUNICATIONS

Axis has taken several steps to ensure that our supply chain is as robust as possible. These activities include:

- Investing in stock of components throughout the supply chain
- Identifying and redesigning products that are at greater risk of impact from the component shortage
- Introducing second-source suppliers for components, without sacrificing quality
- Cooperating closely with our supply chain partners and making sure that we have high priority with our suppliers by involving Axis top management
- Closely monitoring macroeconomic trends, our market and related markets
- Regularly reviewing the order process to optimize production output capabilities.

“

We have witnessed numerous manufacturers slowing down on their new product development/delivery this year to update sourcing and/or re-engineer existing solutions for better delivery of their products.

Michael DeWalt,
Technology Manager, Evaluation & Research
Securitas Technology

COGNYTE

Cognyte provides special attention to forecasting third-party hardware components through a weekly process referred to as Build To Forecast (BTF). This process is designed to ensure that lead times and component shortage impacts are minimized. In addition, for high-volume parts, Cognyte stores additional inventory as needed.

COSTAR VIDEO SYSTEMS

Our customers depend on Costar as a key supplier needed to open new stores, bank branches, distribution centers. Missing dates created a tremendous amount of stress to our customers’ supply chain. Costar implemented forward-looking supply chain models and worked with customers to look further into the future than ever before, which minimized extended lead times on Costar products.

DMP

The labor market has continued to be a challenge, but we are blessed to be in a part of the country that has fared relatively well. We continue to adjust our hiring and compensation and benefit packages to stay competitive and be one of the best places to work in our geography. We have added an in-house medical clinic with free visits for employees and their families; we have adjusted all of our benefits packages to start on day one of employment; and we have increased wages and bonuses for all employees.

LENEL S2

To address extended lead times, we’ve made an effort to place orders earlier than usual, which allows us to better manage demand despite the difficulty to predict the global supply chain environment. We have continually hired new talent as needed and have successfully maintained a full team capable of meeting our goals. We’ve worked with multiple vendors to secure hard-to-find components and focused on creating new designs while simultaneously improving our designs and products.

OPENEYE

OpenEye has well-established plans and contingencies in place to protect or adapt our supply chain. To reduce lead times, OpenEye nearly doubled its inventory stock holding capacity in 2022. We work directly with manufacturing partners to identify potential shortages upstream in our supply chain. This allows us to manage lead time expectations and compensate inventory forecasts to meet customer demand. In addition, OpenEye’s production capacity increased by more than 50%, both in terms of floorspace and headcount.

PACOM

PACOM has tried to address the challenges through a multi-focused approach:

- Provided increased forecast and visibility to component suppliers and worked with customers to gain better understanding of the market needs for the next 18-24 months.
- Invested in expedited freight and prioritized allocation to ensure continuity of product where possible.
- Worked to procure components through all channels of distribution to purchase components that were not already allocated to a customer.
- Worked with component manufacturers to understand when parts will be back in stock.
- We have been fortunate on the labor side to retain well-trained, knowledgeable employees. We do annual reviews on labor rates and compensation to ensure we remain competitive in the market.

RESIDEO

Like others, we have faced material shortages in key commodities, especially microprocessors and semiconductors. We believe we have navigated the shortages better than expected due to a positive, cross-functional approach of resolving material shortages. We have high-level relationships with key suppliers that allow us higher-level access to resolving material shortages. Also, we have an established tiger-team resolution approach consisting of employees from sourcing, engineering, product management and manufacturing, which has also successfully developed alternative solutions to mitigate supply gaps.

VERINT

Verint works closely with our supplier bases to ensure that multiple actions are being taken to address supply chain challenges and ensure smooth deliveries of our products. We have extended our forecast plan across a longer time horizon to better respond to long lead-time items, provide sufficient safety stocks and approve additional sources for procuring materials. In addition, we are driving production operations in more than one single site for our key platforms to ensure a robust supply chain.

Q2 How has your business designed or evolved your supply chain to be resilient in light of recent geopolitical events?

ASSA ABLOY

We continue to mitigate the risk of supply chain disruption due to a variety of reasons, from environmental and geopolitical factors to health and safety-related issues. Recent geopolitical events have highlighted a new risk that informs our ongoing analysis of potential business risks and threats.

AVIGILON

Motorola has been strategic in reviewing system components which we considered to be at risk for shortages, addressing concerns with the materials vendors to secure stock and/or changing vendors where applicable.



BRIVO

Brivo has expanded our supplier base, increased order sizes to ensure products are on hand now and in the future, and continues to optimize our supply chain management processes to minimize disruptions in our hardware availability.

Brivo is advantaged as a cloud-based access control solution in that we are not beholden to on-prem server equipment in order to implement new solutions, so our supply chain impacts only impact the physical IoT hardware and third-party device availability.

HANWHA

We have increased our manufacturing capacity in three facilities to help with duplication and to support redundancy within our supply chain. We have also added another logistics center in the Americas to support our growth and add supply chain redundancies so if any one point fails or has to shut down unexpectedly, we can continue to process orders.



HID

We utilize multiple sourcing options for many of our products and, as a global organization, typically have suppliers in various regions. This provides for more efficient availability of products as well as better resiliency to geopolitical events.

MARCH NETWORKS

March has always prided itself on the design and execution of a reliable, low-cost, resilient supply chain. Our outsourcing strategy and tool sets allow for the real-time monitoring of contract manufacturers' performance to ensure minimal exposure.

OPENEYE

OpenEye sources materials and components across multiple geographic regions to ensure that if one area is impacted, the entire supply chain is not compromised. During periods of supply chain instability, OpenEye rapidly reacts by engaging suppliers to increase reserve stock and places contingency orders to boost inventory. OpenEye also has relationships with multiple technology suppliers and qualifies secondary component solutions, should products sourced from our primary suppliers be reduced or discontinued.

RESIDEO

We have spent significant resources to drive a greater focus on sole and single-source materials, which is now driving investment within R&D to create multiple sources in multiple geographies. We have also now started to drill down into multi-level embedded supply chains, understanding every aspect and origin of the composition of all components – semiconductor being the focus.

VERINT

Verint quickly responded to supply chain issues and worked diligently to understand where risks could be mitigated to provide the best possible service for our customers. We have understood for many years that significant investment in supply chain planning and risk management helps ensure a resilient supply chain in times of crisis. Verint has successfully and efficiently managed supply chain issues and significantly decreased long lead times.

3XLOGIC

3xLOGIC is constantly monitoring the global community for business risks. We have designed redundant purchasing channels into our business model to ensure we leave “no stone unturned” in the search for the best quality and price for the components required for manufacturing. In addition, we expanded our Global Supply Management organization to include other teams throughout the business to make sure all stakeholders are represented in the supply chain equation.



Q3 Are your business sourcing practices changing to drive a positive environmental impact?

ASSA ABLOY

More than a decade ago, we changed our practices to ensure that our business started making a positive environmental impact. Environmental impact considerations are also fundamental to our sourcing practices. ASSA ABLOY promotes inclusive and sustainable economic growth by integrating sustainability into sourcing processes.

Labor rights, decent work with equal pay, health and safety, and gender balance are key priorities at all levels throughout the group and the supply chain. In 2021, ASSA ABLOY reduced energy and water intensity by 14% and 23%, respectively. ASSA ABLOY conducted 861 supplier sustainability audits, while 73% of all direct and indirect material supplier spend signed the Business Partner Code of Conduct.



BOSCH

Since 2020, the Bosch Group with its more than 400 locations worldwide has been climate neutral, and an independent auditing company has officially confirmed this. We are now broadening the focus of our activities to also reduce emissions produced outside Bosch’s direct sphere of influence – for example, at suppliers, in logistics, or when our products are used. We want to reduce these upstream and downstream emissions by 15% in absolute terms by 2030.

COGNYTE

Cognyte is certified in ISO 14001 and has been for many years. ISO 14001 is an internationally agreed standard that sets out the requirements for an environmental management system and helps organizations improve their environmental performance.



HANWHA

To make our products more environmentally friendly, we are innovating our manufacturing processes across the board. Our objective at the moment is to meet the most stringent environmental standards of any developed country, but the ultimate goal remains the protection of our natural environment and the welfare of the worldwide population.

Our environmental policy is built on the principle that no hazardous substances should be introduced to our products at any stage of production, beginning with the earliest stages of product development and design. In an initiative called ‘Green Procurement,’ even the sourcing of our parts is subject to critical evaluation of its environmental footprint.

HID

HID Global has established a Sustainability Program that pre-dates recent supply challenges and we continue to focus on reducing our impact on the environment in everything we do. Our products and facilities have multiple certifications and this continues to be a focal area for our business.

AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

JCI is a major contributor to global environment initiatives committing to a net-zero pledge. This is embodied in our product manufacturing operations, as well as in our sourcing process. We are taking initiatives to measure, monitor and publish embodied carbon content in our products. This can help our customers make better decisions about products they choose to deploy, as well as comply with their environmental initiatives. We hold our supplier community to the highest standards when it comes to their role in our environmental pledge.

OPENEYE

The majority of OpenEye’s packaging solutions contain a minimum of 47% post-consumer recycled material. The percentage continues to grow as we engage with new partners who offer even greater recycled content options. OpenEye also has made some product accessories optional, yet free, instead of automatically including them in all shipped units, which helps reduce waste.

LENEL S2

We are always evaluating environmental practices and have strong metrics to reduce [our] carbon footprint. Our parent company, Carrier Global Corporation, has bold ESG goals to achieve by the year 2030, and our business will play a significant role in helping us get there.

MARCH NETWORKS

All of March Networks are RoHS approved. Our chosen volume contract manufacturing partner has a stated goal to reduce their overall carbon emissions footprint by 40% by 2030 and be net zero by 2050. They have also created a portfolio of opportunities for each location and are working on prioritization and implementation using multiple forms of clean energy, such as solar, wind, biomass, hydro and geothermal to aid in the reduction of greenhouse gas emissions.

RESIDEO

We have a targeted ESG program managed by a corporate-level ESG team to meet or exceed all environmental requirements. It is a core pillar for our company.

VERINT

Verint takes its environmental impact very seriously and is committed to best practices that help our organization maintain environmentally sound decisions. We are continuously investing in meeting environmental and trade compliance regulations such as RoHS, TSCA, REACH and ODS. Additionally, we are globally certified for the ISO 14001 Environmental Management Standard and regularly encourage our suppliers to pursue “green” policies that comply with sustainability directives.



2 TRENDING TOPICS

Emerging Technologies

Businesses today face complex and rapidly evolving challenges, requiring an ecosystem of health, safety and security solutions to mitigate risks and boost resiliency. In recent years, a surge of innovation has led to myriad emerging security technologies that provide businesses new ways to address these challenges. Let's take a look at what's ahead for some of our technology partners and where they see the biggest opportunities for businesses.

“

Security technology innovation is growing at an unprecedented rate, and for the first time in the industry, we're seeing adoption keep pace.

Businesses are eager to explore new ways to enhance their security profile and many are inquiring about new technology that can benefit them while integrating with their existing platforms. Costs, sourcing and delivery concerns are top of mind as they explore emerging tech.

Michael DeWalt,
Technology Manager,
Evaluation & Research
Securitas Technology

Q1 What new technologies is your business investing in for future products?

AMAG

There are a host of interesting technologies that may drive the future of the physical security industry. Data and video analytics are important software technologies, and mobile applications continue to grow in the market.

ASSA ABLOY

The top emerging technologies we are investing in are centered around 3D-metal printing for unique hardware designs; intelligent door locks becoming industrial IoT (IIoT) devices for higher security, more seamless interoperability and to take advantage of the power of the cloud; and machine learning/artificial intelligence to begin intelligently interpreting the increased data generated through the proliferation of access control.

BOSCH

We continue to invest in video analytics, as it strengthens the protection of people and property and helps to uncover business opportunities that create new revenue streams or reduce operational costs. Leveraging the power of AI for video analytics enables users to understand their environments more deeply. Bosch cameras are offered with AI as a built-in standard. Their AI capabilities enable them to understand what they're seeing and to add meaning to captured video with metadata. This is an important first step in converting video data into actionable insights. Further development in deep neural network-based video analytics continues to improve the accuracy of video analytics in challenging environments and is simplifying setup so that camera configuration is not needed for deploying analytics. This is making AI-driven video analytics straightforward and ready to use out of the box for a range of applications.

COSTAR VIDEO SYSTEMS

Video analytics is a large area of focus for Costar. Areas of searchable data, such as person detection, object detection, loitering and car/truck, are at the top of the list. Artificial intelligence technologies are advancing at a faster-than-ever pace. Artificial intelligence will change the way we conduct video searches, as well the way we trigger alarm events. Advances of smart devices (such as smart phones) will continue to drive analytic advances at a rapid pace, which in turn will help drive technology we use in the security sector and how we analyze video in the future.



HANWHA

We are adding more features and more functions to our cameras, including adding AI features to existing cameras and recording products. This includes algorithms that customers need, such as Hanwha Techwin's edge-based LPR camera solution, Wisenet Road AI, which uses AI camera technology to help identify vehicles on the road. These license plate recognition (LPR) cameras featuring make, model and color recognition (MMCR) can accurately capture vehicle information in various traffic conditions, ranging from low-speed parking situations to free-flowing highway scenarios.

LENEL S2

We are continually evaluating new technologies and are specifically focused on cloud deployment options for our offerings. In addition, we are delivering on the vision of frictionless access through mobile and NFC credentials. Beyond those areas, we are also investing in and delivering AI-based analytics and more advanced unified incident management.

OPENEYE

OpenEye is investing in analytics because it provides organizations with the most actionable intelligence. Finding a specific incident on video can be like searching for a needle in a haystack. By incorporating analytics into OpenEye Web Services, we deliver a platform that's efficient, easy to use, intuitive and one that can give users the information they need faster. OpenEye is investing in more advanced types of searches, monitoring abnormal activity and Boolean logic to solve more complex business problems, delivering a greater return on users' security investment. We are actively developing solutions for license plate recognition, point of sale, appearance search, multi-region alerts, automated clip uploads and expanded native analytics capabilities.

PACOM

PACOM is investing in evolving its current security offering to include enhanced cybersecurity, more building management and biometric identification integrations, and offering a cloud-based SaaS model, in addition to our current on-premises software.

3XLOGIC

As a leader in security technology and business efficiency, 3xLOGIC is currently investing in and developing cloud-based products and business intelligence solutions that leverage data generated by existing products, as well as deep learning video products with cutting-edge analytics. Our ecosystem of solutions is tightly integrated to take advantage of the data sharing that can enhance our customers' ability to better understand the situational intelligence our products provide. By offering a holistic view of the customer's estate, we can ensure that real-time data is analyzed quickly and efficiently. This automated analysis removes the guesswork and human delays when incident response time is critical.



Q2 What does your business see as the biggest opportunities that emerging technologies bring to end users, with respect to active shooter detection and first responder communication?

ASSA ABLOY

Audio and video analytics provide opportunities to reduce the time between the first event and the first response, in an active shooter situation or any type of emergency. It increases the speed of notification and awareness and reduces the risk of uncertainty. Providing a mechanism for first responders to be aware of what's going on inside a building reduces risk for the first responders and ensures that they are directed to where they can best help a situation.

AVIGILON

Technologies such as concealed weapons detection, radio integration and audio analytics continue to be the leading edge of technologies being developed for this critical application.

AXIS COMMUNICATIONS

Emerging audio technologies present opportunities to end users when it comes to detection and communication. Accordingly, ... we are investing in high-quality microphones and audio data through our devices. We've also made significant improvements to our audio processing technologies and grown our partnerships with audio analytic developers.

We have worked to enable two-way communication in all our devices so that first responders can see, hear and speak into an environment remotely. We have also worked with gunshot detection and audio analytic companies to improve the data they receive from our edge devices, so they can offer the best results for the end customer.



Emerging technologies around threshold security are paving the way for more proactive protection in an area that has historically been very reactive in nature. It's exciting to see increasing innovation in this space, and I expect to see some of these weapons and threat detection technologies become mainstays for many verticals.

Kyle Gordon,
VP, Field Sales
Securitas Technology

BOSCH

In the future, select Bosch cameras will offer audio analytics based on deep neural networks. With digital microphones and audio AI, the cameras give meaning to the sounds they hear and trigger relevant alerts concerning the approximate location where the sound originated. The cameras' AI-based software is trained to detect the unique audio signatures of gunshots and glass breaking while ignoring false positives, like slamming car doors or banging carts. Audio AI enables security personnel to respond quickly and appropriately while protecting privacy since no audio information is recorded or leaves the camera.

BRIVO

With the unfortunate rise in active shooter and similar emergency situations, a number of new technologies have been developed to augment existing physical security procedures. It remains to be seen how widespread these will be adopted. However, all share a similar goal: quickly identify threats and take immediate action to protect lives. Brivo's API ecosystem allows third-party manufacturers to quickly integrate with our access control solution to protect spaces when a threat is detected.

COGNYTE

We leverage our innovative incident management platform and mobile phone app called NowForce. NowForce, part of the Symphia Platform, receives incidents from different connected sensors and also includes crowdsourcing with the mobile app. With crowdsourcing, we allow the public to report about an active shooter and to be notified about such an event and what steps and actions to take. In addition, we added indoor location with Beacon integration to NowForce. This is a game changer since it's the only way to dispatch responders to an exact indoor location and to track them inside the building.

EAGLE EYE NETWORKS

AI-enabled video can be used to identify certain vehicles, shapes, packages, animals and persons of interest based on clothing type and instantly make determinations like frequency of visit between sites and/or locations, times of day, patterns, dwell times in a certain area, behavior of interest like crouching down and hiding, etc. This information can now be used for investigatiive purposes. Protecting schools and/or places of gathering prior to nefarious actions can be enhanced through this type of technology.

HANWHA

Sound classification at the camera can trigger alerts when sounds that indicate a hostile environment are heard (gunshot, glass break, scream, explosion). This alert can be pushed to school resource officers, security officers, and/or administrative personnel to prioritize a response. Edge-based audio push notifications can be associated with person(s) loitering or entering unauthorized areas utilizing AI-based intelligent video analytics.

MARCH NETWORKS

March Networks has openly partnered with active shooter detection application providers as well as incident monitoring software providers through our formal developer program, allowing customers to integrate whichever software or service best suits their particular needs.

VERINT

Verint continues to deliver new and innovative technologies that simplify access to video, ensuring that the decision-makers have real-time data access while events are transpiring so that they can respond quickly and effectively.

3XLOGIC

Our leading-edge gunshot detection solution offers a unique opportunity to provide immediate notification of gunfire inside or in proximity to a facility. When integrated with a mass notification, external alarm system, video system and/or access control system, our gunshot detection sensor can trigger automated response events providing critical time for response.

Q3 What does your business see as the biggest challenges that emerging technologies bring?

AMAG

It is always difficult to know what technology will have a real impact on the market, versus ones that just generate hype. New technology has to have a real benefit or it will not be adopted. The rate of adoption of new tech is also limited by the legacy hardware installed in the market. Customers may be slow to adopt new technology if they have to replace their existing infrastructure.

COGNYTE

The security industry is slow to adopt new products; end users are hesitant to be the first to purchase an emerging technology. As an example, analytics and AI are transforming nearly every other industry (healthcare, retail, automotive, marketing, FinTech and more). After many years in the market, physical security enterprises are finally accepting these types of systems as a core part of their ecosystem.

DMP

The bigger a company is, the harder it is to get them to adjust their standard operating procedures – even when the benefit to their organization is very significant.

EAGLE EYE NETWORKS

Training/education and updating of the end user community as well as the reseller/integrator base. Ensuring all understand the developing technologies and their fit in and ability to solve complex needs is an ongoing challenge taking massive resources, time and great partnerships.

AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

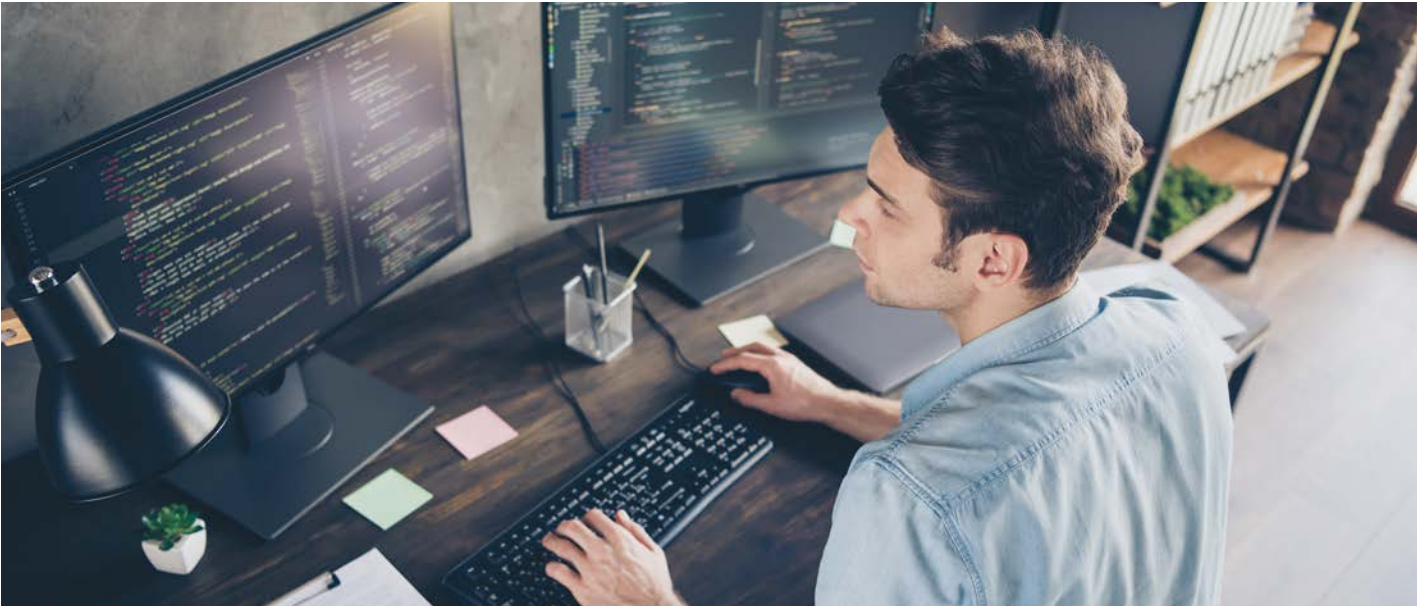
Adoption is often a concern with emerging technologies as to whether there is enough value in the solution to drive shift in usage/ consumption of technology. For businesses that are likely to be impacted by new technology, disruption is a significant concern.

LENELS2

Emerging technologies have the potential to bring the risk of cyber vulnerabilities. We are constantly analyzing and reviewing potential threats and vulnerabilities so that our solutions remain secure.

MARCH NETWORKS

Top of mind for our customers at the moment are cloud-based video solutions as well as analytics and AI. The biggest challenge for cloud-based solutions and recording is balancing the approach to ensure economic viability, for which we have taken an approach that puts the infrastructure in place while allowing our customers to move to the cloud (or not) at their own pace. For analytics and AI, it comes down to applying technologies in a way that provides real business value.



OPENEYE

The biggest challenge with emerging technologies is data overload. All these new analytics and detection solutions are providing more data, which can be married with video verification to provide businesses with more actionable intelligence. Users only have so much time in the day, however, so this data needs to be filtered and processed to highlight only the most relevant events. Solution providers need to leverage anomaly detection, big data in the cloud and other filtering methods to protect users from data overload and present only the most actionable information. OpenEye continues to incorporate these solutions into our platform.

PACOM

In the electronic security industry, some of the biggest challenges revolve around the historically slow adoption rate of emerging technologies. The slow rate of initial adoption leads to the necessity of maintaining old technology, balancing resource needs between current and emerging tech, increased integration of disparate systems, and additional training (installers and end users) requirements.

VERINT

Verint believes that one of the biggest challenges with any emerging technology is how to leverage the existing installed infrastructure. New technologies must be developed and deployed with the full knowledge that many banks and credit unions may have a significant investment in their install base. It is critical that any new solution takes advantage of that infrastructure. For example, Verint is developing a path toward the cloud that allows financial institutions the ability to leverage the equipment that has been purchased and installed over a number of years and still take advantage of the benefits that the cloud can bring.



3 TRENDING TOPICS

Cybersecurity and Privacy

As cybersecurity vulnerabilities and increasingly sophisticated threats continue to evolve, businesses must remain vigilant in protecting against and mitigating new risks. Let's take a look at how security technology companies are supporting organizations' cybersecurity preparedness.

“

We operate in a highly dynamic technology and cyber-threat environment, where protecting our security infrastructure and the data flowing within it has never been more important, nor more complex.

Data privacy legislation – including General Data Protection Regulation (GDPR) and California Consumer Privacy Act (CCPA) – requires us to protect the personal information of individuals, but our overarching objective is preventing any data loss and blocking all cyber attacks. Effective cybersecurity practices start with robust system design supported by continuous threat assessments and periodic system updates.

Mike Beattie,
Chief Information Officer
& SVP, Information Technology
Securitas Technology

Q1 How does your business build cybersecurity protection into your products during development and post-deployment?

ASSA ABLOY

This process starts with training and system design, and moves through an internal system evaluation of security and ultimately, third-party validation.

Our product development process includes penetration testing and a thorough security evaluation of our products. Post-deployment, OTA update capabilities ensure that our new products benefit from the IIoT model of being able to receive updates in the field. This allows us to make changes as needed even after the product is installed.

BOSCH

Bosch engages the latest cyber hardware and software in product development. For example, Bosch cameras use a crypto co-processor, which is more secure than a TPM. It is a dedicated, hardened, self-contained processor chip that is responsible for several key functions. Our products require signed certificates, and we use a closed operating system and signed firmware.

BRIVO

Cybersecurity starts with how we build products. ... Our devices include 256-bit encryption. We also work to reduce the potential for cyber attacks by making sure there are no open inbound ports that make malicious attacks more likely. Brivo also builds cybersecurity protection into how we deploy applications. Because we are cloud-based, we push regular and automatic software updates that safeguard customers against the latest cyber threats. We also implement triple redundancy that ensures high availability.

COSTAR VIDEO SYSTEMS

Hardening technology security measures are designed around edge encryption recording, extracted data encryption, two-factor authentication, firewalls, as well as restricted network port access to name a few. Overall, the Costar system incorporates over 75 user-definable security features to allow you the flexibility to control your level of security.

DMP

DMP employs secure software development life cycle management procedures throughout the life of all products. These include procedures such as formal change management process, separate development, verification and production environments, version control procedures, code inspections, and dedicated testing groups.

HID

As a globally focused, trusted identity provider, HID takes cyber resiliency into account in everything we do.

HID has an SSDL policy that establishes a common, minimum baseline for all products and product development environments. This policy pulls from OWASP, NIST (SSDF), BSA, BSIMM and others and is mandated across the physical access control business unit, which results in the creation of PSPW (Product Security & Privacy Workbooks) for all the products and services.

We work on mitigating the vulnerabilities and addressing any other gaps as applicable using these PSPWs on a consistent basis. (These also include the relevant threat models and data flow diagrams for every product.)

AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

Johnson Controls proactively manages cybersecurity and privacy risks. We have dedicated organizations governing product security, information security and data privacy. These organizations work together to deliver high-quality and consistent cybersecurity and data privacy support in a way that meets the unique mission and technology needs of each customer. Powering our customers' mission is our top priority, and that means doing our part to protect our customers' sensitive data and operations.

MARCH NETWORKS

The Linux-based operating systems in our NVRs are custom built to help safeguard against vulnerabilities, and all March Networks products use a sophisticated one-time password mechanism. We do not use fixed or backdoor passwords on any of our devices.

“

In today's environment, every connected device poses a potential threat. As such, it's essential for organizations to find a security partner that takes proactive steps to protect their clients and harden their solutions. We're committed to data privacy and cybersecurity, and our SOC 2 certification helps clients feel confident that they're partnering with a secure, trusted provider.

Nelson Barreto,
SVP, Global Clients
Securitas Technology

OPENEYE

OpenEye Web Services (OWS) employs multiple layers of security for its cloud platform and end-user accounts. Strong cybersecurity policies, procedures and user adherence to best practices are critical to maintaining a solid barrier to external network threats. The platform features encrypted user metadata at rest, and all data and video utilize transport layer security (TLS). In addition, OWS' simplified networking model removes the traditional "port forwarding" that most legacy VMS software solutions rely upon for remote access. For user security, OWS requires unique logins for each user, multi-factor authentication and password strength policies.

PACOM

Our developers are receiving ongoing training on best practices for cybersecurity. Many have received their white belt and several have received their black belt. We embed tools into the development process to monitor for security issues. Our products go through a cyber hygiene and cyber test evaluation prior to launch and as an ongoing best practice.

RESIDEO

We have a rigorous standardized Secure Lifecycle Development Program within which all our products go through security reviews in every phase, starting with requirements, design reviews, code hygiene, software scans, penetration testing and incident response.

3XLOGIC

3xLOGIC has a dedicated corporate policy, secure design, build and run architectures, cybersecurity training for engineers, and contract terms and conditions on third-party components.

Q2 How does your business respond to emerging cybersecurity threats post-deployment?

AVIGILON

MSI and Avigilon are committed to providing software and firmware updates to address security vulnerabilities as they apply to non-end-of-life products.

BOSCH

Any vulnerability discovered during our constant testing is identified and technical bulletins are sent to customers along with instructions for closing the vulnerability.

BRIVO

Brivo is continuously monitoring for threats across the entire lifecycle of our deployments: from how we build products to how we deploy applications and even how we manage our business. As a SaaS provider, we release regular updates to our products not only to expand functionality, but also to address any potential bugs or vulnerabilities that are identified.

COGNYTE

In today’s environment, governments, critical infrastructure organizations, financial institutions and enterprises face cyber attacks on a daily basis, which is why they have security protocols, procedures and policies to deal with these threats. As a result, system administrators as well as end users must ensure that their systems are safe and secure. As such, Cognyte has gone to extensive lengths to ensure that safety and security by designing a security and network hardening guide in order to mitigate an environment that is conducive to such attacks.

COSTAR VIDEO SYSTEMS

We are constantly evaluating cyber risks. Costar maintains a product laboratory with each of our network products and subscribes to multiple independent services that specialize in detecting and protecting against malicious threats. Once a threat is discovered, the Costar team quickly evaluates the threat and develops defenses. These defenses are then made available on our website for free.

HANWHA

We perform third-party vulnerability testing in addition to our in-house development and testing. Our dedicated cybersecurity response team (Security-Computer Emergency Response Team or S-cert) works with third-party security companies as well as government agencies, such as NIST. If an issue is found, our S-cert will investigate and respond. Clear and open channels of communication are important. We will determine a timeline for resolution of any issues and publicly post a notification and provide the updated software.

LENELSS2

Our product threat intel capability is designed to proactively focus upon the strategic, tactical and operational information that may impact our verticals and our offerings. We believe the information we gather offers our businesses, partners and engineering teams a comprehensive understanding of the threats and evolving attack surfaces aligned to our products.

PACOM

PACOM has defined vulnerability management processes (including our corporate coordinated disclosure program), incident response processes, privileged access management reviews, and creating and maintaining product data inventory. Pen testing on new releases creates a robust process for informing the development teams when a vulnerability is reported. Teams are tracked to ensure action is taken in a timely manner to eliminate vulnerabilities.

RESIDEO

We constantly scan the news for any new threats that may be even remotely relevant to any of our products. Any new threat that comes on our radar is immediately acted upon by our Incident Response team, which triages and recommends proactive remediations even if there is no actual incident or exploit. This enables us to stay ahead of any new threats to our products.

VERINT

Verint has built a global Infosec Incident response team to identify, mitigate and respond to threats in real time. We also ensure compliance with various industry standards like CISO, PCI, DSS and GDPR to ensure threats are managed and the proper security oversight is provided.

“

The Security Industry Association’s (SIA) Open Supervised Device Protocol (OSDP™) standard for access control established the standard for data communication between readers and access control systems and has quickly replaced legacy protocols. The data protection and two-way communication provides enhanced security and functionality. Underwriters Laboratories Cybersecurity Assurance Program (UL CAP) and the UL 2900 series of standards are helping to minimize risk by assessing software vulnerabilities, addressing known malware and expanding security awareness. Manufacturers are adopting these new standards and testing criteria, reducing the risk of exploitation.

Doug Walsh,
Senior Director,
Technology Strategy
Securitas Technology

Q3 How do new privacy legislations influence your business' design and ongoing product support?

AMAG

Data privacy directly affects the way in which our systems are designed, used and supported. AMAG has gained a lot of experience by necessity with regard to data privacy legislation. We have comprehensive data privacy policies, our systems are designed to be in compliance with regulations such as GDPR and the California Privacy Act, and AMAG's support team can assist customers with removing identity data from their system if required.

AVIGILON

MSI and Avigilon review privacy legislations and provide compliance where necessary. An example would be ACC's ability to set discrete identity data retention policies by data set type to meet GDPR requirements.

AXIS COMMUNICATIONS

The ASDM model addresses privacy regulations worldwide for product design and support. As Axis headquarters is in the EU, we follow GDPR regulations.

DMP

The evolution of privacy legislation required us to add new processes to our software development lifecycle and support operations to adopt a privacy-by-design approach.

EAGLE EYE NETWORKS

Privacy and data control are key tenants of our design solution and implementation. New legislation, such as GDPR, are factored into our strategy.

HID

As a security-focused product company, we need to be acutely aware of any time a change to privacy legislation is contemplated. We design products, systems and processes to the requirements of the strictest of legislations.

HID policies and our PSPW are regularly reviewed and updated to reflect changes in regulation and best practices.

AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

Privacy impact assessments are carried out on all new feature requests as part of an ongoing product delivery process. We have a rigorous secure product development lifecycle, agile DevSecOps practices, and approach to field operations cybersecurity that strengthen our ability to meet that commitment. Additionally, our unified security and privacy controls framework is structured to ensure compliance with laws and regulatory requirements globally.

MARCH NETWORKS

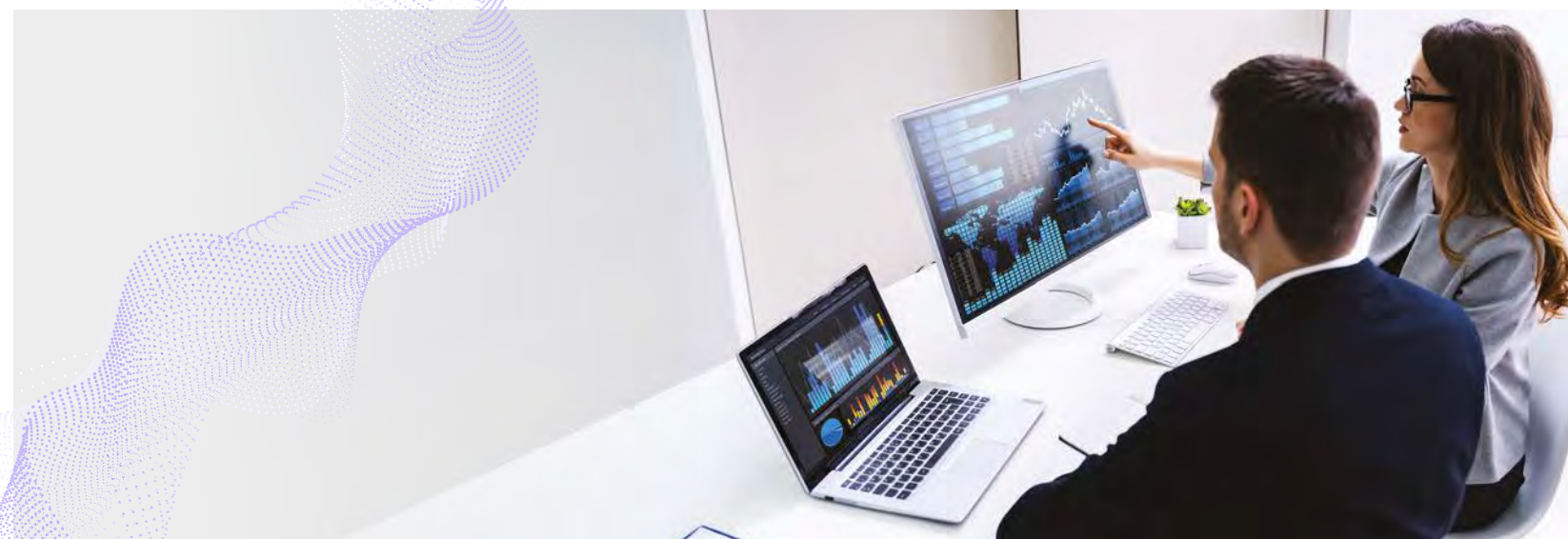
Privacy legislation is at the core of our design process, and we work to ensure that we are compliant in any markets that we sell to (e.g., GDPR compliance for Europe).

PACOM

PACOM has specific resources and processes in place to review, implement and ensure compliance with the ever-evolving privacy regulations. A challenge for any global company is the determination of applicable policies across multiple regions and jurisdictions. There is not currently a global standard and although foundational regulations such as General Data Protection Regulation (GDPR), New York's Office of Information Technology Services (NY-OIT) Internet Privacy Policies and the California Consumer Privacy Act (CCPA) are being widely adopted, many efforts are underway to expand these provisions or add new layers on top of these foundation regulations.

Within our products, we assist our customers to remain compliant with privacy regulations by employing data encryption/hashing technologies to secure databases, and we encourage our customers to limit or eliminate any personally identifiable information from the data records associated with our solutions.

As the policies continue to evolve, PACOM will continue to apply the necessary policies and procedures to ensure our continued compliance.





4 TRENDING TOPICS

AI and AR

Arguably one of the biggest trends in the industry, artificial intelligence (AI) is paving the way for new security technology use cases and helping businesses turn data overload into actionable intelligence. While not yet as ubiquitous as AI, augmented reality (AR) is poised to bring new opportunities and innovation to the security industry in the not-too-distant future. Let's take a look at what leading security companies think about these technologies.

“

AI is already significantly impacting our industry and helping industries adopt a more proactive security posture.

As security systems are cloud-enabled, data that was previously unused except for reviewing security events is now widely available. Adding environmental monitoring sensors and integration with building management systems generates a rich data set that AI can leverage to provide insights that enable our clients to better manage their entire business, not just their security. Advances in augmented and virtual reality enable fusing of live video with other real-time data to provide hands-free situational awareness for security responders, increasing their safety and making them more effective.

Charlie Erickson,
Chief Technology Officer
Securitas Technology

Q1 How does your business see AI influencing your products in the future?

AMAG

AI is a part of our product offering today. Video analytics is becoming a standard offering in the physical security market, and AMAG offers a data analytics platform that analyzes the data available in the access control system. Analytics will continue to grow and develop within the physical market, providing risk mitigation and operational efficiencies.

AVIGILON

Motorola Solutions - Avigilon has been a champion for utilizing AI in our security portfolio since its acquisition of VideoIQ and the continual investment in providing highly reliable AI-driven classified object detection. Indeed, our M and SL line of cameras have some scene-based analytics alerting. AI adoption will continue to push the expansion of our capabilities and features.

AXIS COMMUNICATIONS

To meet market needs, we are making huge efforts to bring AI capabilities to our entire portfolio. This year, we launched over 30 devices that can support AI analytics. We will add even more in 2023 and almost the entire portfolio should have AI capabilities by 2024.

Additionally, we are investing in our application platform – AXIS Camera Application Platform (ACAP) – so it is able to support AI-based applications. This is a big step forward in bringing powerful analysis to the edge and creating truly scalable and hybrid solutions.

“

There's a tremendous amount of investment in AI, which is leading to some exciting tech innovation – particularly when AI is paired with video surveillance solutions. We'll continue to see the industry double down on AI and machine learning to enhance key solutions in the years to come.

Rob Raymond,
SVP, Strategic Accounts
Securitas Technology

COSTAR VIDEO SYSTEMS

Artificial intelligence will help system users review a tremendous amount of data very quickly and identify things like people, cars, loitering, direction and motion. Events that are triggered by analytics detection help greatly reduce the number of false events and help reduce the “noise” that often hides true events. AI analytics technologies that allow the user to see only the events that were triggered by a human or car allows the user to drill into the data quickly and find what they are looking for.

DMP

It will continue to impact the evaluation and reporting of exceptions based on a whole host of criteria.

EAGLE EYE NETWORKS

AI is a burgeoning technology with really unlimited potential in video and cloud applications. Eagle Eye recently acquired a security-specific AI company to enhance our development and offerings. AI is a big part of the future of the industry.

HID

AI will increasingly be a standard technology deployed whenever complex data sets must be analyzed. As a result, the systems and services will become more powerful and feature-rich, though there will be higher resource demands as a result.

LENELSS2

AI will be used significantly in our solutions moving forward. It will be used to detect anomalies and to predict potential device failure for proactive maintenance. In addition, it will be used to understand historical information that could predict future usage patterns. AI will also be leveraged for the analysis of multimedia data, such as video and voice, to reduce the number of false positives and false negatives encountered in video and voice analytics.

RESIDEO

Resideo sees AI as a tool capable of enabling valuable insights and alerts for homeowners and professionals. From intelligent cameras to more innovative sensors all capable of reducing false alarms, we see AI as a required capability in the modern competitive landscape. Therefore, we are aligning our product roadmaps for both devices and cloud to meet those expectations.

3XLOGIC

AI or machine learning has moved from the “hype” part of the Gartner cycle to the “plateau of reality.” We have proven AI can accelerate the work professionals who use our offerings do, like loss prevention identification, by crunching huge amounts of information and providing patterns previously not considered. In our TRENDS™ offering, we are now putting in place a proof of concept that will use AI to bubble up suspect behavior to the top of an LP professional's queue to then review using data from our VIGIL NVRs.



Q2 How do you see end users utilizing AI analytics? Have you seen the value they deliver to other groups within organizations aside from security, such as marketing, health & safety and more?

AMAG

End users are very interested in what AI can do for their business, whether it's providing a security benefit or something else entirely. Retail marketing is probably the leader in this space – using video analytics and other AI technologies to track where people are standing/looking within stores, for example.

AXIS COMMUNICATIONS

We often hear from customers that they are looking to achieve more with these analytics than just security events. That might be the inception point, but once they have the camera and the ability to create insightful data, they want to leverage these capabilities more widely across their organization for better ROI and business value. This cuts across all segments and end customers.

BRIVO

Our dedication to simply better security is at the forefront of the thinking around end user adoption of AI analytics. Our goal is to take the complexity out of many security functions that are today time-consuming and repetitive tasks. We don't just “do AI” because it is cool; we put it to use in ways that actually save time, increase productivity and tangibly improve the overall security posture for our customers.

COSTAR VIDEO SYSTEMS

Leveraging security data with other internal departments, such as marketing, human resources and operations, has always been a challenge. AI technology will, for the first time, open the door for video surveillance to analyze and share meaningful data across multiple departments. Video analytics can accurately count specific objects, such as humans, and ignore everything else. Now, store traffic counts and average time spent waiting to check out (by hour) can be shared with the marketing department. Time and attendance data can be shared with human resources personnel. Operation managers can forensically follow a person who entered a large distribution facility and track everywhere the person traveled across hundreds of cameras. Security data is now more helpful than ever!

EAGLE EYE NETWORKS

AI will be used throughout our markets, which will provide not only enhanced security but business insights that will enhance the quality of their processes, operational efficiencies and marketing insights. AI will enhance end users' businesses and success.

“

Intelligent video analytics – a set of computer vision AI technologies – continue to improve our security posture by enabling real-time alerts for a variety of scenarios, including weapons detection, false alarm filtering, loitering detection, predictive and behavioral capabilities.

Doug Walsh,
Senior Director,
Technology Strategy
Securitas Technology

HANWHA

As AI becomes more broadly adopted across industries, it is more widely incorporated in video surveillance. Edge-based AI (which filters and processes data locally on a camera) will be more ubiquitous, enabling end-to-end AI technology. Today, most security cameras send the data they collect to servers to be analyzed. However, with edge-based AI, the data is analyzed by the camera first and subsequently sent to the server. This reduces the burden of transferring and storing large amounts of data to a server, thereby increasing efficiency, saving time and reducing server costs typically required to analyze data. In addition to reducing false alarms, end users can use AI to increase event monitoring accuracy.



AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

We are seeing some pull for AI solution extension into adjacent areas like occupational safety and efficiency (e.g., person falling, unsafe condition around dangerous situation like rail tracks, etc.) However, the vast majority of AI deployments have been for security use cases in our solution. Our end users currently utilize AI for better situational awareness, early threat detection, better response to critical events, as well as to improve productivity and accuracy in security monitoring.

3XLOGIC

We see immediate application in loss prevention – driving more likely candidates and events to the top of the list for review by the LP team at a customer's site. The novel patterns that AI can spot will also help drive new ways to define exception rules put in place for LP.

We see use in video analytics on the edge: monitoring and identifying traffic patterns within a store or location to help inform our customer's operations team about potential store layout improvements and staffing needs. AI helps with both the identification of customer traffic (versus things that are not people) and with the overall traffic pattern trends.

Q3 Does your business see augmented reality (AR) being adopted in the security space in the future?

AVIGILON

In the future? Possibly. However, the technology constraints and use cases for AR make near-future adoption a niche market.

AXIS COMMUNICATIONS

Yes, we see AR being adopted in the security space, but perhaps in the medium- to long-term future. There are a lot of benefits from this technology, but it is not completely practical or widely used yet. That said, we have adopted this technology within our operations and manufacturing process. When COVID halted all travel, we found it difficult to support our manufacturing partners globally when they were confronted with a problem. We quickly adopted AR to enable our techs to remotely assist in the setup and service of machinery and as a result, this will remain a key part of our process moving forward.

BOSCH

The use of AR will increase as the technology becomes easier to use. As wearables become lighter and easier to implement, the technology will gain traction.

BRIVO

As a cloud-based access control provider, we look at technologies like AR as a means of enhancing physical security and other on-site resources. Although we are not seeing a huge adoption of AR yet, we do believe it is an opportunity for security innovation.

COGNYTE

Our business at this stage does not see AR being adopted in the security space for vast use.

DMP

We are currently evaluating some training opportunities.

EAGLE EYE NETWORKS

Yes, it is developing to improve situational awareness and greater understanding of unique environments.

HID

AR will pervade every aspect of modern life; it is just a matter of when, and not if. In 2022, we still find the technology lacking to deliver the sort of effortless, natural interface that will make it ubiquitous.

AMERICAN DYNAMICS, EXACQ & SOFTWARE HOUSE (JCI)

Augmented reality is used today with UI overlay in live or replay, providing operators with a more informed overview within scenes linked to AI object models like person, vehicle detection, clothing color, etc. Bounding boxes and labels help identify the object(s) utilizing color to clearly identify alerts or normal conditions. AR is also utilized in our VMS by operator-driven live and replay on-screen navigation overlays or supporting an automated client navigation where the client switches to the next logical camera based on the direction a person moves to.



Guarding Services

REMOTE GUARDING:

Remote Guarding supports and increases a business’ overall level of security with cost-efficient remote services. Remote Guarding elevates on-site resources to perform higher quality interactive services, increasing flexibility and scalability.



REMOTE PERIMETER PROTECTION

- Customize video analytics to automatically recognize threats and alert Remote Guarding
- Advancements in AI allow for more specific detection and deterrence



REMOTE PATROL

- Make proactive use of your video surveillance system with scheduled inspections of live video
- Look for suspicious activity, document security and safety concerns and maintain compliance



REMOTE ESCORT

- Promote site safety with on-demand requests for video supervision in lone-worker situations or when arriving to or departing the site
- Assurance of compliance-regulated activities, such as openings and closings or access to restricted areas of a site



REMOTE ENTRY/EXIT MANAGEMENT

- Automate your entry process with remote processing of individuals who require access to your facility
- Verification of credentials to assure only authorized individuals are allowed access to a facility



REMOTE ALARM VERIFICATION

- Provides visibility to and mitigation of access control, IoT sensors, input device alarms and more
- Helps to mitigate jurisdiction-imposed false alarm fees and create resource efficiencies



REMOTE CROWDSOURCE SAFETY

- Empower your employees to provide inbound submission of “see something, say something” types of information
- Broadcast important information to geo-fenced groups of employees as needed
- Satisfy the duty of care with resource information, campus maps and more

MOBILE GUARDING:

Mobile Guarding is continuously adapting its security services to meet the needs of a modern, ever-changing world. By integrating cutting-edge technology with the security expertise of our mobile guards, Securitas is able to provide innovative and cost-effective security packages that help prevent incidents, optimize security officers’ time and reduce costs.

With the largest mobile footprint in North America, and over a century of security experience, Securitas is uniquely positioned to provide the security services you need, where and when you need them.

RESPONSE & PROACTIVE MOBILE SERVICES

- Patrol Inspections
- Alarm Response
- Facility Access Control
- Emergency Safety Escorts
- Duress Signal Response
- Ethical Transient Interdiction
- Facility Opening and Closing

- Employee Safety Escorts
- Fire Watch

TECHNOLOGY PRODUCT & SERVICE PACKAGES

- RGGo - Video Solution
- RGWatch - Video Solution
- LoneWorker Device - Portable personal safety Device
- MobileVision
- Smart Home Solutions
- Smart Business Solutions
- Customized Solutions

Learn more at securitasinc.com/services/mobile-guarding

ON-SITE GUARDING:

Securitas provides our clients with national security resources with a local focus. Securitas security officers are the foundation of our organization. Our on-site guarding officers are screened and trained to enable them to convey a high degree of professionalism.

We know that every business environment has different security needs, which is why we have leveraged our knowledge and expertise to develop a variety of on-site guarding functions to meet any client’s requirements. After performing a Securitas Risk Assessment, we will recommend a combination of security services.

As a client-focused organization, Securitas USA devotes extensive time and resources to hiring, training, developing and retaining our officers to achieve a level of service that meets the client’s security needs.

- Patrol and Inspection Services
- Reception/Concierge Duties
- Access Control
- Console Operations
- Emergency Response and Life Safety (including EMTs)
- Loss Prevention
- Special Event Security
- Customized and Site-Specific Security Functions

Learn more at securitasinc.com/services/on-site-guarding

INTRODUCING THE

Pinkerton Crime Index



Backed by one of the world's most trusted and long-tenured risk advisors operating today, the Pinkerton Crime Index delivers an innovative new approach to crime forecasting and analysis, enabling organizations to better understand and classify crime risk outside of their facilities. Available as a standalone report or an interactive dashboard, the Pinkerton Crime Index features expert-level coverage and analysis across the U.S., Mexico, U.K., Australia and Canada.

REPORTS

Leverage innovative technology and criminology expertise to help you safeguard your employees, facilities and investments. See crime types weighted by severity and computed as a multiple relative to the national median, giving you a detailed snapshot of crime risk at a specific location.

DASHBOARDS

A high-powered analysis platform with robust reporting and customizable features, where *Fortune 1000* companies turn to go beyond the parameters of a static crime report.



For more on the Pinkerton Crime Index, visit pinkerton.com or speak to your Securitas Technology Account Executive

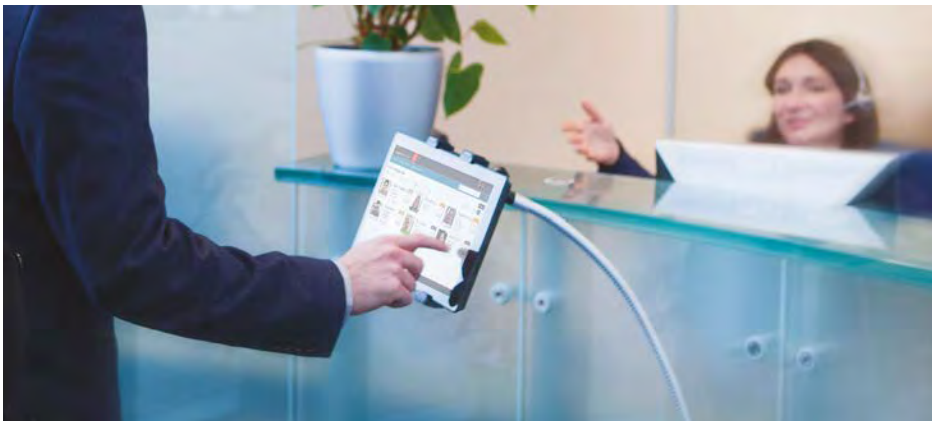


Thank you to our partners

Thank you to the 2023 Technology Outlook Report participating partners. Your contributions provide valuable insights into the outlook of the electronic security industry.

AMAG
AMERICAN DYNAMICS
ASSA ABLOY
AVIGILON
AXIS COMMUNICATIONS
BOSCH
BRIVO
COGNYTE
COSTAR VIDEO SYSTEMS
EAGLE EYE
EXACQ

HANWHA
HID
LENEL S2
MARCH NETWORKS
OPENEYE
PACOM
RESIDEO
SOFTWARE HOUSE
VERINT
3XLOGIC



AMAG Technology is the partner of choice for physical access control, identity management and integrated security solutions. A dynamic, forward-thinking organization that believes in empowering its customers to be successful in all areas of business and life, AMAG's powerful, unified and open Symmetry platform expands beyond its solid foundation of access control to provide its customers with a full solution suite ranging from video, command & control, identity management, visitor management, mobile, analytics, audio and incident management.

Symmetry is designed to mitigate risk, automate manual processes to meet compliance and provide peace of mind.

Symmetry is developed and manufactured in-house, allowing full control over feature-enhancing upgrades and ensuring continuity of supply for the long term.

The solution is completely scalable, from entry-level security to an enterprise, global deployment. Incorporating an open architecture, Symmetry integrates with any technology on the market, including other access control systems.

The support team provides complete support for every Symmetry system, including for all third-party products integrated into the system.

AMAG Technology's Symmetry Security Management Solutions can be found in a wide spectrum of markets, including government, commercial, education, transportation, healthcare, utilities, data centers and banking. Through continuous innovation, we bring new value to our customers via expansion into analytics, mobile applications and cutting-edge integrations.

Symmetry Mobile

Symmetry Mobile is a web credential application designed to be used with AMAG Technology's Symmetry Bluetooth readers. Symmetry Mobile is a convenient solution for organizations using mobile devices or in conjunction with physical credentials for users who are transitioning to a mobile system to gain access to secured doors. It works with AMAG's Symmetry Access Control system, as well as other access control systems, providing a seamless, efficient and cost-effective solution for enterprise users deploying more than one system.

The touchless solution supports multi-factor authentication when used with a PIN or biometric (fingerprint or facial recognition) on both Android and Apple iOS devices. Users can type their PIN or use a biometric on their phone, eliminating the need to touch the reader and in support of COVID-19 guidelines.

The frictionless setup of a credential eliminates the need to physically interact with the security team. Organizations can centrally issue and manage mobile credentials, photos and devices to their entire user base from a remote location, eliminating the need to buy and carry a physical credential and come into the badge office.

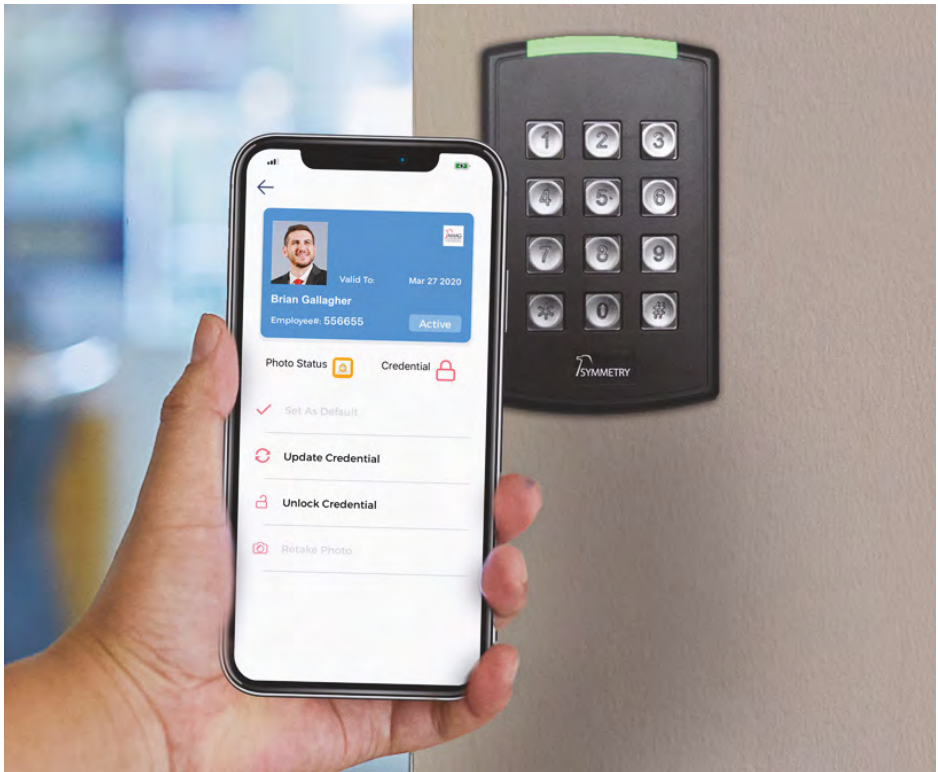
The virtual credential in Symmetry Mobile displays a person's name and photo. An unlimited number of credentials can be stored within their digital wallet, allowing people who need to access multiple sites using different access control systems to use the same mobile device.

In an effort to support businesses that required employees to be on-site and ensure the health and safety of the labor force, AMAG developed a customizable health screening questionnaire to help reduce the risk of potentially infected employees entering a building.

Upon successful completion of the questionnaire, an employee's physical access card or mobile credential will be enabled for a specified period of time, for example one day. If the form is not completed successfully, the access card will expire and the employee will be denied access to the building. The system will send email notifications to managers for visibility.

The questionnaire's functionality operates independently and can be used on virtually any existing Symmetry Access Control system installation — and without any local infrastructure changes. Symmetry Mobile data is highly secure, as all of the data is encrypted when sent to the reader or stored on the phone, ensuring the mobile solution is completely secure.

Users can customize the signal strength and read range on a per-device and/or per-person basis, increasing security and accommodating those who may need a longer read range, such as a person in a wheelchair, to open a door. Door read and unlock time is less than 1.2 seconds. Symmetry Mobile is available as a hosted or on-premises solution, in English, Spanish, French and Arabic, and in the Apple App Store and Google Play Store.



tyco | American Dynamics



Tyco Security Products is a unified group of world-leading access control, video, location-based security and intrusion brands.

Our security integration platforms, built by our developers from across all product disciplines, allow our customers to see more, do more and save more.

With the most trusted brands in security in one portfolio, we offer the most comprehensive range of premium security solutions in the industry; an unbeatable combination from a single source.

Robust, scalable, integrated enterprise solutions. Outstanding, diverse security capabilities plus deep experience in creating converged solutions for commercial and enterprise customers.

We are leaders in access control, video security, location-based security, and intrusion detection – and we have years of experience in bringing these all together into seamlessly integrated, converged solutions for our customers. Together, as part of Johnson Controls, the global leader in smart buildings, integrated infrastructure, climate control systems and distributed energy storage solutions, we are creating the future of the building – smart, safe, sustainable and data-driven. Learn more at americandynamics.net.

Tyco Radar Detection Enhanced Perimeter Security

LOW-COST PERIMETER SECURITY SOLUTION IMPROVES SURVEILLANCE

An ideal answer for advanced perimeter security needs, Tyco Radar Detection offers long-range protection, which means quicker detection of breaches for areas requiring upgraded perimeter safety, such as power plants, transportation hubs, critical infrastructure and other government, industrial and commercial sites. Tyco Radar Detection is an end-to-end site solution providing a cost-effective integration with existing video management systems.

SUPERIOR PERFORMANCE

With a high level of power efficiency, on-board signaling and processing, and superior performance in all weather and lighting conditions, Tyco Radar Detection is a site solution that ensures 24/7 perimeter security coverage for sites of all sizes. Using its slew-to-cue capabilities, the radar can point pan/tilt/zoom (PTZ) cameras to a targeted location for improved surveillance. The radars are available with 250, 500 and 1,000-meter range sensors, with accessories and management software also available for purchase.

KEY FEATURES

- Up to 1,000 meter range enables quicker threat detection
- Auto PTZ slew-to-cue to point pan/tilt/zoom (PTZ) cameras to a targeted location
- Low false alarm rate
- Extreme power efficiency at less than 4w
- Easy installation with less hardware and integrates with various VMS platforms
- Works in all weather and lighting conditions

POWERFUL INTEGRATION CAPABILITIES

Tyco Radar Detection easily integrates with American Dynamics VideoEdge video surveillance software. This scalable software solution enables the user to leverage high-performance video streaming, audio and analytic metadata. It also offers increased versatility for performance, budget and configuration preferences, including chassis flexibility, RAID options, hard drive types and sizes, and redundancy. Tyco Radar Detection can also integrate with exacqVision software, providing an easy-to-use, flexible and scalable solution that offers video analytics for license plate recognition, heat mapping and intrusion detection. With exacqVision, the user can effectively monitor video, audio and data in real time.



ASSA ABLOY



ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions and homes, businesses and institutions. Our offering includes doors, door and window hardware, mechanical and smart locks, access control and service.

ASSA ABLOY Opening Solutions is part of the ASSA ABLOY Group, the global leader in access solutions. The Group operates worldwide with 51,000 employees and sales of SEK 95 billion, with leading positions in areas such as efficient door openings, trusted identities and entrance automation. Every day, we help billions of people experience a more open world.

Combining the expertise of the industry’s most knowledgeable door opening experts with a comprehensive product offering of leading door and hardware brands, the consultative experts at ASSA ABLOY Door Security Solutions provide complete solutions to partners and end users in commercial, retail, multi-family, government and institutional facilities.



Situational Analysis

In 2016, Wake Forest University President Nathan Hatch set a goal to maximize use of the campus’ 18 academic buildings and 3 million square feet of space. The key to achieving this goal was providing students and faculty with the ability to reserve classrooms and meeting spaces for extracurricular activities. However, the university quickly found that without the right technology, the process was taking a toll on the time and resources of its administrators. To make the most of campus space – while ensuring it remained secure – and to free staff time for more pressing priorities, the university needed a new approach.

With the existing events management system (EMS), they had to coordinate distribution of brass keys or schedule unlocks for rooms with card readers, which also created opportunities for error. Additionally, the access control office and department administrators were receiving after-hours calls when problems with scheduling occurred.

These challenges illuminated the need for a new solution that would enable a more seamless, automated process for reserving and accessing university spaces.

However, when exploring solutions, the university had to account for some prohibitive factors. First, many of the buildings on campus were constructed in the 1950s. To maintain their historic integrity, they needed a solution that would minimally impact the existing infrastructure and limit installation construction – a challenge that many electronic access control solutions cannot solve.



After some exploration and conversations with partners, Wake Forest University determined ASSA ABLOY’s Aperio® wireless access control locks along with Detrios’ DAX software application were the solutions they needed. Together, these two systems achieved all of the university’s priorities – it was cost-effective, integrated with existing solutions, minimized construction, and most critically, provided an efficient, effective way for campus spaces to be reserved and accessed.

With the new integrated system, the room scheduling process was reduced from 10 minutes to mere seconds per reservation. In five months, it has saved administrators 557 hours, or 15 hours per day.

The saved time has allowed administrators to tackle important technology projects that had previously taken a back seat to reservation management, including developing an asset management inventory system, transitioning the university’s video management system and rebuilding their service platform.

The automation of the technology also allows administrators to maintain a controlled window of access to spaces, providing an additional layer of security that was not previously possible. For example, with the system’s easy-to-use start/stop function, the integration gives students or faculty access to the room 15-minutes prior to their reservation, and then automatically removes access as soon as the reservation is complete.

AVIGILON™



The Avigilon portfolio of fixed video, advanced analytics and smart access control systems are part of Motorola Solutions' mission-critical ecosystem designed for public safety and enterprise security. Avigilon solutions help you find and share critical intelligence faster, so you can respond to events with the speed and decisiveness that keeps people, operations and assets safe.

Motorola Solutions' suite of technologies — land mobile radio mission-critical communications, video security & access control and command center software, bolstered by managed & support services — create the most integrated technology ecosystem to make communities safer and help businesses stay productive and secure. Learn more at motorolasolutions.com.

Avigilon Solutions Are Powering Alabama Power's Innovative Security

Alabama Power is headquartered in Birmingham and is the primary electricity provider for the southern two-thirds of the state, with 6,500 employees serving 1.4 million customers across more than 300 locations. With so many substations distributed across such a vast area, threats such as trespassing, vandalism and sabotage were always top of mind for Alabama Power's security team. Thieves would target valuable tools and equipment at crew headquarters, as well as copper from substations and transmission lines. Stopping crimes in progress and preventing future attempts became a priority. So did recording these events so as to mitigate liability and maintain regulatory compliance.

Alabama Power's team knew they had to be proactive. Not doing so could compromise their service to hundreds — or even thousands — of customers. It could also jeopardize the safety of workers and the fundamental security of the electrical grid.

Fortunately, one of the generating plants was already equipped with Avigilon technology that was providing powerful, scalable enterprise security. Moving forward, the team used this as their model. Their goal was to implement high-quality camera installations at all their worksites, unifying the entire system so that even the most remote locations could be monitored from a centralized, analytics-enabled platform. To achieve this, they looked to Motorola Solutions' Video Security & Analytics suite of products.

The first step for Alabama Power's Corporate Security was to set up high-definition video surveillance across their substations, generating plants, and company headquarters. To that end, approximately 4,000 Avigilon cameras were installed throughout their various facilities. These installations included multiple models from the H4 line, including the H4 IR PTZ camera, which includes a pan-tilt-zoom lens with infrared functionality for visibility in all conditions, and the versatile H4A Bullet, which also has built-in infrared viewing. All of this was integrated with over 200 servers and centrally operated by Avigilon Control Center (ACC) video management, allowing operators to remotely monitor Alabama Power's various sites.

Some of the most immediate improvements came from the self-learning video analytics embedded in the Avigilon cameras and ACC™ software. Since the security solution leverages AI to understand what "normal" activity looks like, there are far fewer false flags — and Unusual Motion Detection (UMD) technology alerts security personnel when there is an anomaly. Not only has this allowed Alabama Power to replace its costly legacy motion and beam intrusion sensors, but it has also led to the identification and apprehension of several suspects while they were still trespassing on-site.

With Avigilon technologies driving their innovative new Motorola Solutions security system, Alabama Power can deliver electricity — and exceptional service — to their customers with greater assurance that the grid is protected. The success of their system has inspired Southern Company to roll out Motorola Solutions technologies to its other utilities, such as Mississippi Power. To date, providers under Southern Company's umbrella have installed 8,000 cameras and counting.





Axis enables a smarter and safer world by creating network solutions that provide insights for improving security and new ways of doing business. As the industry leader in network video, Axis offers products and services for video surveillance and analytics, access control, intercom and audio systems.

Axis has more than 3,800 dedicated employees in over 50 countries and collaborates with partners worldwide to deliver customer solutions. Axis was founded in 1984 and has its headquarters in Lund, Sweden. For more information about Axis, please visit our website axis.com.

Axis launches 8th generation ARTPEC system-on-chip powering deep-learning analytics on the edge

Axis announces the 8th generation of its custom-designed system-on-chip (SoC) made for network video. The ARTPEC-8 SoC was designed first and foremost to create new opportunities for impressive analytics applications based on deep learning on the edge. In addition, the new SoC accelerates the array of remarkable capabilities and features first seen with the implementation of ARTPEC-7. These include superior imaging, enhanced security and powerful compression.

Furthermore, the fact that ARTPEC-8 was designed in-house gives Axis a level of control crucial to cybersecurity. Going forward, the new chip will be the basis for the vast majority of Axis network video products. Some of the first cameras to include this chip are the soon-to-be-launched **AXIS Q3536-LVE/38-LVE Dome Cameras** and **AXIS Q1656-LE Box Camera**.



“

With ARTPEC-8, Axis is leading the way toward a new era of exciting analytics based on deep learning on the edge,” says Johan Paulsson, chief technology officer. “We want to deliver the easiest access to actionable insights through the widest range of analytics on the market. Our ultimate goal is to contribute to creating a smarter, safer world by addressing more and more important use cases. Plus, ARTPEC-8 is 100% optimized for high-quality network video solutions. And, as always, we have complete control over every single transistor.”

DEEP-LEARNING-BASED ANALYTICS ON THE EDGE

ARTPEC-8 supports powerful analytics applications based on deep learning on the edge where cameras have the processing power to analyze data within the camera itself. An example of deep-learning-based analytics is highly granular real-time object detection and classification that makes it possible to develop analytics that can distinguish between different kinds of objects, such as types of vehicles. This is the basis for AXIS Object Analytics. It also opens the door to other deep-learning-based analytics that deliver actionable insights for security, safety and operational purposes. Thanks to the open Axis platform, these other analytics applications will include tailor-made applications from Axis partners.

THE ADVANTAGES OF ANALYZING DATA ON THE EDGE

Deep-learning-based analytics on the edge, powered by ARTPEC-8, deliver additional significant benefits as well. Analyzing data on the edge – on the camera – means no information is lost in compression or transmission, making results more reliable. It allows for faster alerts, which in turn lets users act instantly to protect people and property and make the right decisions about their operations. It creates cost savings because less bandwidth and storage and fewer servers are needed. Less bandwidth and storage also significantly reduces the risk of loss of sensitive data and fewer servers also improves scalability.

INCREASED ANALYTICS PERFORMANCE AND THE BEST IMAGING

ARTPEC-8 continues to facilitate Axis Lightfinder 2.0 and Axis Forensic WDR for the best image processing under difficult light conditions. These are part of the foundation for Axis Scene Intelligence technology, which increases the performance of analytics applications. The result is consistent analytics results and fast, accurate forensic search capabilities with minimal false alarms even under challenging surveillance conditions. Scene Intelligence puts market-leading expertise from decades of experience with image processing to work.

CYBERSECURITY BENEFITS

ARTPEC-8 builds on cybersecurity features introduced with ARTPEC-7, including signed firmware and secure boot. ARTPEC-8 supports Edge Vault for secure storage of cryptographic keys and certificates. Trusted Platform Module (TPM) for FIPS-compliant secure storage will be available in certain cameras.



Bosch Security and Safety Systems is a leading global supplier of security, safety, and communications products and systems. Protecting lives, buildings and assets is the major aim. The product portfolio includes video surveillance, intrusion detection, fire detection, access control, and professional audio and conference systems for communication of voice, sound and music. Bosch solutions are used by retail stores, critical infrastructure organizations, government agencies, educational facilities, office buildings, casinos, and in many other commercial and industrial environments throughout the world.

Bosch's significant investment in research and development enables the company to regularly update existing products and introduce new technologies that are well received by the market and help move the industry forward. And while technological

innovation is important, the company ensures new product development addresses all the concerns paramount in the world of communications, security and life safety today, including performance, quality, and ease of installation, maintenance and use.

Bosch is also committed to upholding the highest standards for service. The company's goal is total customer satisfaction through products, service and support. For more information, visit [boschsecurity.com](https://www.boschsecurity.com)

ARTIFICIAL INTELLIGENCE DELIVERS ACTIONABLE INSIGHTS

Artificial intelligence (AI) enables machines to learn, understand and act accordingly – giving it enormous potential. In the security and safety industry, AI capabilities are just beginning to make an impact, but are expected to see wider adoption as the industry learns more about the possibilities. The potential includes enabling operators to respond before potential situations

occur and assisting managers in identifying and evaluating business opportunities that create new revenue streams or reduce operational costs. This capability requires semantic scene understanding.

Bosch AI-driven video analytics add sense and structure to video data. AI capabilities enable the cameras to understand what they are seeing and add meaning to captured video with metadata. This process is an important first step in converting rich contextual and behavioral video data into actionable insights – helping users understand events at an ever-deeper level. Video becomes more about intelligent, data-based solutions than collecting high-quality images and storing them for the record.

ADDRESSING MARKET CHALLENGES WITH AI-DRIVEN VIDEO ANALYTICS

Bosch AI-driven video analytics help strengthen security and safety and enable new uses for

video beyond security. When cameras and AI-driven video analytics are combined, they become intelligent sensors that can provide information on activity or states of objects in an area. These smart sensors enable data-driven solutions that provide business insights to bring new value to organizations.

There are many applications for AI-driven video analytics, and the possibilities for tailoring solutions to meet specific customer requirements are endless. With machine learning, cameras can be trained to recognize objects and situations for customized solutions that meet the specific needs of users in various markets.

Following are a few examples in several markets.

CRITICAL INFRASTRUCTURE

With the latest deep neural network-based video analytics, perimeter detection solutions deliver more accurate person detection capabilities, reducing false alarms. This advanced analytics technology relies on deep learning, which uses artificial neural networks that attempt to mimic the human brain, allowing it to learn from large amounts of data and recognize patterns to tackle more complex tasks faster, easier and more accurately. This higher level of accuracy reduces false alarms commonly caused by wildlife at the perimeters of remote sites, such as unmanned substations, communications towers or borders.

PUBLIC OR COMMERCIAL BUILDINGS

When a Bosch camera with on-board AI-driven video analytics detects an object blocking an emergency exit door, it can trigger the public address system to play an automated message over a nearby loudspeaker with instructions to move the object. Alternatively, this same system setup can help users enforce no-parking zones, triggering a message when a vehicle parks or loiters in a fire lane. While these situations are certainly safety concerns, the solutions also reduce the risk of violations and fines when these events occur.

RETAIL STORES

Bosch cameras can count the number of people entering and exiting a store to provide operations managers with customer traffic data. This information can help managers understand peak days and times and ensure sufficient staffing to optimize the quality of customer service.

TRANSPORTATION

At airport curbsides for passenger drop-off and pick up where vehicle-parking time is restricted, Bosch cameras can detect and alert law enforcement to vehicles parked for longer than the maximum time limit.

In lots, cameras can count the number of open parking spaces, or track ingress and egress, and relay this data to the video and parking management systems. Sharing this information and alternative parking locations on a dynamic message sign can help drivers find open parking faster to reduce traffic congestion and emissions.

TRANSFORMING DATA INTO INTELLIGENCE

Capturing the vast amount of raw data and funneling it into a platform that transforms it into intelligence is essential. This transformation is key to enabling both automated and human decisions. As AI technologies continue to grow, applications are quickly evolving, powering new abilities every day.

Software supports informed decision-making by consolidating and augmenting data from multiple cameras into actionable insights.

Users can establish a decision center using software, giving them a single, clear dashboard for evaluation. Dashboards can help users identify unforeseen, unwanted or future situations faster and more reliably – enabling a response before potential situations occur. They can also deliver business intelligence beyond security.



Brivo, Inc., created the cloud-based access control and smart spaces technology category over 20 years ago and remains a global leader serving commercial real estate, multifamily residential and large distributed enterprises. The company's comprehensive product ecosystem and open API provide businesses with powerful digital tools to increase security automation, elevate employee and tenant experience, and improve the safety of all people and assets in the built environment. Brivo's building access platform is now the digital foundation for the largest collection of customer facilities in the world, occupying over 300 million square feet across 42 countries. Learn more at [Brivo.com](https://brivo.com).

Brivo is Simply Better Security

Brivo provides cloud-based building access solutions and innovative IoT devices to property owners and operators across all types of physical spaces, including schools, hospitals, office buildings, multifamily residential and every kind of space you can imagine – from air transport to zoos.

Brivo is the global leader in mobile, cloud-based access management and smart spaces platforms serving commercial real estate, large distributed enterprises and multifamily residential. Our building access platform is the digital foundation for the largest collection of customer facilities in the world.

Unlock More With Brivo

MORE CHOICE & FLEXIBILITY

Thermostats, workplace management and video surveillance are just a few examples of intelligent environments. The Brivo complete solution integrates with hundreds of third-party devices, applications and platforms, and our open API allows facility managers flexibility to manage facilities easily with many of their existing applications.

SIMPLY POWERFUL. POWERFULLY SIMPLE

Smart spaces start with access control. Brivo elevates the user experience for employees, residents and customers who pass through physical spaces without compromising safety. And we are more than access control; we provide an incomparable insight into the usage of space and possible security threats, as well as savings opportunities.



THE BRIVO PLATFORM PROVIDES:



ACCESS MANAGEMENT

Brivo enables multisite facility access synchronized with corporate identity management systems



SENSOR MONITORING

Brivo aggregates data from building sensors for real-time response, forensic analysis and data mining



VISUAL AWARENESS

Brivo fuses access events and sensor data with video augmented by AI to accelerate event response



VISITOR & DELIVERY MANAGEMENT

Brivo orchestrates access, notifications and tracking for visitors and deliveries



DATA ANALYTICS

Brivo's BI tools allow customers to harness valuable operational insights from their data

ONE PLATFORM TO MANAGE A PORTFOLIO

The Brivo platform provides unparalleled portfolio visibility. On one screen, monitor a single facility or regional and global assets all at once. Connect video surveillance and visitor management to better manage facilities to get truly simply better security.

PUTTING MORE INSIGHTS IN SIGHT

In today's world, data is vital, but more crucially, understanding facts to act. Brivo has changed not just security, but also portfolio management. With Brivo, access, manage and trend asset data all in one location. Technology empowers everyone with data, from security guards to SOC managers to CEOs. Insights like: access events, anomalous behaviors, foot traffic patterns and space utilization trends.



300 MILLION SQ.FT
OF REAL ESTATE
PROTECTED



72,000 DEPLOYMENTS



GLOBAL REACH
SECURING FACILITIES
IN **40+ COUNTRIES**



800 DEVELOPERS USING
BRIVO API



1 MILLION MOBILE
CREDENTIALS



Cognyte’s Situational Intelligence Solutions help enterprises and governments manage complex security operations, fuse information from various sources, analyze vast amounts of data, and gain insight for better incident management, response and investigations.

With our solutions, organizations can see what’s happening across their operations and make quick and confident decisions for decisive actions. Powered by our Symphia portfolio of solutions, we help our customers orchestrate better outcomes to protect what matters most.

We serve more than 1,500 customers globally across all industry sectors, including transportation, critical infrastructure, government, safe city initiatives, enterprise, retail and healthcare.

We are committed to building customers for life, investing heavily in R&D and partnering with best-in-class technical and channel partners to ensure our clients’ success. Trusted and deployed globally, Cognyte Situational Intelligence Solutions is committed to protecting what matters most: people, property and the continuity of business and operations.



Symphia insight:
Leverage the power
of data visualization
to streamline
operations

Symphia™ Insight, part of Cognyte’s Situational Intelligence Solutions Symphia portfolio, is transforming the way organizations can track, visualize, analyze and reach their operational goals.

In most security operations centers (SOCs), it can be hard for security operators to make sense of all the data that comes in from their multiple systems. This makes it even harder to observe and understand trends that could be affecting the overall organization or its customers. Being able to set measurable objectives and metrics that can easily be displayed on a live dashboard can provide organizations the visibility and understanding of all their safety and security operations, as well as their normal business operations.

Symphia Insight provides a data visualization framework, enabling organizations to present historical data from Symphia Control and Symphia One into a live dashboard on any data visualization platform the organization uses. The visual representation of the data creates value to the organization. It makes it possible to draw conclusions about the utilization of teams, the capacity and distribution of events, and exposes potential and existing risks and problems. By obtaining meaningful interpretation of data, organizations can transform their SOC into an intelligent security operations center (ISOC).

GAIN IMMEDIATE
UNDERSTANDING OF
OPERATIONAL TRENDS
AND METRICS

- See how core operations are functioning.
- Ensure the ISOC is functioning in a healthy way.
- Immediately act on inefficiencies.

EASILY SET AND MEASURE
OPERATIONAL INDICATORS THAT
DRIVE EXCELLENCE

- Visualize the organization’s security and operational objectives.
- Make data-backed informed decisions.

BUILT FOR BIG DATA

- Fast querying of large amounts of data.
- Normalized data.
- Scalability.
- Redundancy.

OPEN ARCHITECTURE

- Connect any visualization platform.
- Present ISOC data on existing organizational data visualization solution.

BUSINESS INTELLIGENCE

- Measure metrics and KPIs.
- Set threshold alerts.
- Uncover information and trends that can help in making informed decisions.



COSTAR VIDEO SYSTEMS



Headquartered in Coppell, Texas, Costar Video Systems is a leading provider of electronic security products in the video surveillance market for some of the largest retailers in the U.S. Our product portfolio consists of video management software (VMS), surveillance cameras, network video recorders (NVRs), digital video recorders (DVRs) and more to create complete solutions for our valued customers.

Costar Video Systems products provide surveillance solutions for commercial, financial, retail, education, healthcare industries and more.

Costar Video Systems has been a leading partner of choice in the video surveillance industry, providing solutions for over 20 years. With quality products, competitive pricing and our number one goal of providing the industry's best customer service and support, we take great pride in providing total solutions that not only meet but exceed our customers' expectations. We would love the opportunity to show you how Costar Video Systems can make the difference in your business. Learn more at costarvideo.com.

Costar StarNET

Costar's StarNET Solution is a highly scalable and fully integrated network video surveillance solution that's ready to fit your needs. Costar's StarNET Pro Software is a surveillance solution for both large enterprises and small business customers. Sporting an intuitive GUI, this suite makes it easy for installers and those unfamiliar with IT networks to easily navigate its rich feature set of powerful recording options. Providing a general-purpose video recording application, StarNET meets a wide range of surveillance needs.

Costar DirectNET Technology allows a camera to easily connect to a XDi Series Network Video Recorder and automatically assign itself an IP address. The DirectNET cameras are part of the XDi Series product line and designed to self-configure on the network and begin recording within minutes of installation. Unlike other self-configuring systems, Costar's XDi system is targeted at enterprise-level applications by delivering a complete solution that can support over 1,000 XDi recorders for a total of over 64,000 cameras. The XDi recorders have dual-network capability, which allows for separation between LAN and WAN connections. One network is designated for camera streaming and one network is used for end-user access, resulting in a single IP address.

StarNET is a powerful video management system (VMS) for Costar DirectNET Technology that allows users to intuitively view live camera feeds and access specialized video tools, such as event search, playback, video export and more. The core of the Costar Video platform is centered around the StarNET Video Management Software.

The StarNET VMS allows for the management of several key technologies used to control up to 1,024 recorders, manage cameras, live views, recorded images, as well as video analytics. StarNET's management capabilities constantly monitor and provide feedback regarding the health of the entire camera network and provide instant feedback to key personnel of any camera issues, ensuring that events are not missed due to unrealized camera failures.

The Costar system management of live, recorded and archived images helps ensure that stored data is easily accessed and shared when critical events occur. The Costar Clip copy file structure embeds the compressed and watermarked video files into its own player and allows the loss prevention staff, local police and FBI to easily access the high-definition files without the need for special codecs or players that potentially slow down critical investigations.

It is the perfect solution for project-based surveillance rollouts. When the time comes to transform and update a project, this system will allow you to seamlessly integrate your customer's requirements. Born out of Costar's deep understanding of the surveillance market, StarNET is a premier surveillance solution.





Founded in 2012, Eagle Eye Networks, Inc., is number one in cloud video surveillance worldwide, addressing the needs of businesses, alarm companies, security integrators, cities and individuals.



Eagle Eye’s 100% cloud-managed solutions provide cloud and on-premises recording, bank-level security and encryption, and broad analog and digital camera support – all accessed via the web or mobile applications. Businesses of all sizes and types utilize Eagle Eye solutions for operational optimization and security. All Eagle Eye products benefit from Eagle Eye’s developer friendly RESTful API platform and Big Data Video Framework™, which allow for indexing, search, retrieval and analysis of live and archived video. Eagle Eye’s open Video API has been widely adopted for integration in alarm monitoring, third-party analytics, security dashboards and point-of-sale system integrations.

Eagle Eye sells its products through authorized global resellers and installation partners. Headquartered in Austin, Texas, USA, Eagle Eye has offices in Europe and Asia-Pacific. Learn more at een.com.

Smart, Simple, Secure Cloud Video Surveillance for Your Business

Whether you run a small business, global enterprise or something in-between, you need a video solution capable of adapting to your needs – today and tomorrow. The Eagle Eye Cloud Video Management System (VMS) simplifies video surveillance through the flexibility of cloud paired with the convenience of easy, affordable installation and remote management.

The Eagle Eye Cloud VMS equips you with:

TRUE CLOUD TECHNOLOGY

With a true cloud video solution, the video is processed and managed in the cloud, which offers users countless benefits.

- **Scalability, so the system easily grows with your business**
- **Flexibility, enabling you to use the cameras and cabling in which you’ve already invested**
- **Accessibility, meaning you can view video from anywhere, on any device**
- **Reliability, regardless of your bandwidth limitations**

EASE OF USE

Eagle Eye provides easy installation, simple setup, an attractive and intuitive interface, central management, multisite viewing, on-the-fly camera sharing, storage retention flexibility and more.

CYBERSECURITY

The Eagle Eye VMS is built and maintained by cybersecurity experts who are laser-focused on protecting the confidentiality, integrity and availability of your systems and the valuable data they contain. Among other leading cybersecurity best practices, the Eagle Eye VMS offers secure encryption to buffered and locally-recorded video, constant

monitoring against potential cyber threats, no vulnerable open ports or on-site firewalls, no on-site software to patch, triple redundant video storage and two-factor authentication.

OPEN PLATFORM

Closed systems can be problematic and costly to upgrade or add new technologies. Eagle Eye’s open architecture gives you the power to choose from unlimited integrations, giving you the freedom to add new applications as your business needs evolve, ultimately increasing the value of your system. Easily integrate access control, point-of-sale and license plate recognition, to name just a few, for a single view of your operations.

OUR OPEN API PLATFORM OFFERS:

- **Greater customization**
- **Lower total cost of ownership (with no vendor lock-in and no additional licensing fees)**
- **Stronger cybersecurity**
- **A future-proofed investment (allowing you to incorporate tools for future needs)**
- **Speed to market (applications can be built in hours, not months, and updated in minutes, not weeks).**

ARTIFICIAL INTELLIGENCE AND ANALYTICS

Create long-term strategies based on the insights gained from your video analytics. For example, easily determine the number of people entering and exiting your property at any given time. Monitoring customer traffic flow and patterns is crucial to operations and marketing, allowing for better planning around staffing, floor displays and store layouts. Video analytics also provide insight into employee behaviors, ensuring procedures are being properly followed, customer interactions are positive, and training is appropriate and effective.



Tyco Security Products is a unified group of world-leading access control, video, location-based security and intrusion brands.

Our security integration platforms, built by our developers from across all product disciplines, allow our customers to see more, do more and save more.

With the most trusted brands in security in one portfolio, we offer the most comprehensive range of premium security solutions in the industry; an unbeatable combination from a single source. Robust, scalable, integrated enterprise solutions. Outstanding, diverse security capabilities plus deep experience in creating converged solutions for commercial and enterprise customers. We are leaders in access control, video security, location-based security, and intrusion detection – and we have years of experience in bringing these all together into seamlessly integrated, converged solutions for our customers. Together, as part of Johnson Controls, the global leader in smart buildings, integrated infrastructure, climate control systems and distributed energy storage solutions, we are creating the future of the building – smart, safe, sustainable, and data-driven. Learn more at exacq.com.

Exacq Vision Enterprise Manager

POWERFUL TOOLS FOR ENTERPRISE MANAGEMENT AND MAXIMUM UPTIME

ExacqVision Enterprise, the large-scale, intuitive VMS software from Exacq includes the powerful features of Enterprise Manager, an essential component for any enterprise deployment. With robust controls for system configuration and health monitoring, administrators can increase NVR uptime and perform routine tasks across large deployments efficiently. Enterprise Manager puts control at the fingertips of administrators, making it easy to manage everything from licenses to camera health, maximizing uptime.

SPOT TRENDS, SIMPLIFY UPDATES AND PROTECT CRITICAL DATA

Enterprise Manager features a web-based dashboard that provides at-a-glance status of the environment's health. With extensive scheduling capabilities, updates can be deployed anytime. Rest assured recordings are safeguarded with Enterprise Manager's built-in failover solution that protects critical data. Best of all, Enterprise Manager is included with all exacqVision Enterprise installations and comes pre-installed on EM-Series servers or can be installed on third-party physical or virtual servers.

KEY FEATURES

- Web-based dashboard to monitor enterprise health
- Maximize uptime of the surveillance system
- Manage large user bases
- Spot trends quickly
- Quickly transfer camera licenses between NVRs

LICENSING FLEXIBILITY FOR ENTERPRISES

Enterprise Manager offers licensing flexibility, making it easy to transfer available camera licenses from any NVR to another NVR within the enterprise. When license transfers are made using Enterprise Manager, they are free of charge and happen instantaneously.

SAFEGUARD AGAINST CYBER ATTACKS ACROSS DEVICES

ExacqVision Enterprise Manager is designed to be resilient against cyber threats. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. The holistic approach to cyber protection is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.



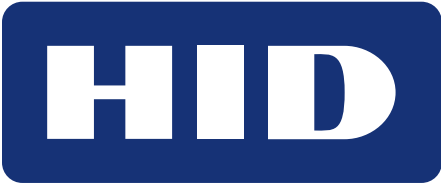


Hanwha Techwin’s intelligent video surveillance solutions combine the monitoring and protection capabilities security professionals need, with analytics that deliver data-driven insights into every aspect of their operations.

Our surveillance technologies are built for a range of professional applications: retail, transportation, education, financial services, healthcare, corrections, sports, government agencies and more. Hanwha’s product lines include IP cameras, storage systems, specialty devices, video management software and recorders. These user-intuitive solutions are designed to grow with a customer’s needs, continually evolving through updates and the addition of innovative technologies, such as artificial intelligence and cloud-based capabilities.

All Hanwha Techwin products are manufactured in our own facilities located in Vietnam and South Korea, ensuring strict quality control and enhanced cybersecurity by preventing unauthorized access to our devices during the manufacturing process and beyond. Hanwha Techwin supports NDAA-compliance across its product lines, and our products are also compliant with the Trade Agreements Act (TAA) and qualify them for sale under GSA guidelines.





HID Global powers the trusted identities of the world's people, places and things. We make it possible for people to transact safely, work productively and travel freely. Our trusted identity solutions give people convenient access to physical and digital places and connect things that can be identified, verified and tracked digitally. Millions of people around the world use HID products and services to navigate their everyday lives, and billions of things are connected through HID technology.

We work with governments, educational institutions, hospitals, financial institutions, industrial businesses and some of the most innovative companies on the planet. Headquartered in Austin, Texas, HID Global has over 4,500 employees worldwide and operates international offices that support more than 100 countries. HID Global is an ASSA ABLOY Group brand.

Vanderbilt University, Safe and Secure

The Vanderbilt campus is located approximately 1.5 miles (2.4 km) southwest of downtown Nashville, Tennessee, and has 333 acres and 177 buildings. The campus' location within city limits raised significant challenges around ensuring the right people had legitimate access to the school's resources and buildings, and directly impacts resident students. The university, often referred to as "Vandy," has more than 90% of its students residing on campus the entire time they are in school.

CHALLENGE

Mark Brown, director of business services technology at Vanderbilt University, holds student safety as the number one priority: "We need to make sure that students are in a safe environment, so it's one less thing that they have to worry about and that the parents have to worry about."

In the early 2000s, Vanderbilt decided to convert its residence halls into an academic residential college system. "With more students on campus, we have to make sure that only students are accessing their residence halls, rather than members of the public wandering onto the campus," Brown said. "A secure access identity control program, ensuring only those with proper credentials could access residence halls, academic buildings and faculty and staff areas, is of utmost importance to Vanderbilt."

Another consideration was the rapid adoption and ubiquitous nature of smartphones and mobile devices among students and faculty. With a \$600 million building expansion project underway, Vanderbilt wanted to upgrade to a more convenient, modern system for identity management and access control that was compatible with Near Field Communication (NFC) and Bluetooth technologies. This would prepare the university to deploy mobile credentials for access control, point of sale and other student services like printing or library services.

SOLUTION

Vanderbilt University selected HID Global to deploy mobile access across its campus environment. The university made an initial investment in mobile solutions with HID iCLASS SE® readers, Seos credentials and the HID Mobile Access solution. HID Mobile Access, powered by HID's Seos® credential technology, makes it possible for credential holders to use their smartphone, tablet or wearable device to unlock doors. "You hold up your device to the card reader, just as you would a contactless card, and it sends that credential to the reader and unlocks the door, giving you access," Brown explained.

BENEFITS

Vanderbilt University met their key goal of delivering a safe, secure and convenient mobile solution for identity and access control. The university enjoys the flexibility to support Android and iOS platforms and choose between Bluetooth and NFC for specific use cases. This flexibility was achieved while maintaining the university's existing reader infrastructure.

What's more, students and staff have embraced the convenience and safety of using their device of choice for securely entering and exiting different areas on campus.

“

Keeping students safe is our top priority. Another key consideration was moving to a mobile verification system and HID Mobile Access fit our needs perfectly. The integration with Apple Wallet brings added convenience for our entire campus community.

Mark Brown,
Director of Business Services Technology,
Vanderbilt University





LenelS2 is the global leader in advanced physical security solutions, including access control, video surveillance and mobile credentialing. Our technology includes web-based and mobile applications enhanced by cloud-based services. Incorporating open architecture, LenelS2 provides scalable, unified security management solutions to customers ranging from global enterprises to small- and mid-size businesses. Easy to install and use, LenelS2 products are supported by an experienced, responsive team dedicated to providing exceptional service.

LenelS2 serves segments worldwide, including corporate, education, healthcare and government. LenelS2 is a part of Carrier Global Corporation, the leading global provider of healthy, safe, sustainable and intelligent building and cold chain solutions. For more information, visit LenelS2.com or follow LenelS2 on LinkedIn and Twitter.



Humber College 'Works Smarter' With Security

BlueDiamond™ mobile credentials enable touchless access experience

CHALLENGE

Located in Toronto, Ontario, and established in 1967, The Humber College Institute of Technology and Advanced Learning (Humber College) offers a polytechnical higher education experience with more than 200 programs across 40 fields of study. Humber provides more than 30,000 students and staff with the latest technology and teaching methodologies to simulate a real-world working environment.

As a college focused on technology, among other sectors, Humber sought to adopt a modern security system to secure its rapidly growing campus, while providing an effortless access control experience for students and faculty. Humber also needed a system that could simplify its security policies and procedures.

SOLUTION

Over the past 10 years, Humber has worked closely to deploy LenelS2 OnGuard access control across campus. As Humber has grown, so has its adoption of the OnGuard system, which now includes more than 1,000 card readers.

Area access managers autonomously provision credentials and user roles to individuals who need access within their areas of control, which may include data centers, cash rooms or technology buildings. The OnGuard system also monitors water status alarms for freezers and refrigerators in laboratories and works with an intrusion alarm system at two art galleries on campus. A hardwired integration with a fire alarm system allows the OnGuard system to put all doors with card readers into read-only mode in the event of an emergency.



The college administration challenged us to be creative and innovative – we couldn't think of a better way to follow that directive than working closely with LenelS2 to test and implement the BlueDiamond platform.

Michael Freitas,
Access Control Coordinator,
Humber College

RESULTS

Humber College's security deployment has grown dramatically to include card or mobile credentials-based access control across the entire campus. Deployment of BlueDiamond technology continues to expand with another 20 readers now in use at the Humber International Graduate School building in downtown Toronto, as well as other areas on campus. All readers across campus will fully convert to BlueDiamond readers over time.





As a leading provider of IP video software and systems, we work with certified partners and customers worldwide to transform video into usable business intelligence. We give them the tools they need to enhance security, mitigate risk and reduce losses from theft and fraud. We then deliver on the true power of video with integrated applications that let them see what's happening in their organization, and make informed decisions to improve performance and profitability.

Our practical approach to innovation always starts with a fundamental question, “What business problems are our customers trying to solve?”

The result is forward-thinking products and solutions that help organizations leverage their video for success – now and in the future. Learn more at marchnetworks.com.



Command Video Management Solution

No matter your business or its size, a robust video surveillance solution is essential to the safety and security of your employees, customers, property and assets. How can you be certain you're getting the most from the investment you've made in your security infrastructure? Choosing the right set of tools to help you integrate, implement and manage that infrastructure is a critical first step.

The March Networks® Command™ suite of video management tools helps you deploy, maintain and implement all of your surveillance resources. And we deliver on the true power of video with applications that let you make informed decisions to improve performance and profitability. We know you're not just managing your organization's video — you're leveraging information to improve the way your organization runs.

Flexible, scalable and easy to use, the Command suite of video management tools gives you confidence in, and complete control over, your surveillance infrastructure.

For multisite organizations, it can be a challenge to effectively coordinate your security operations across the miles. Command scales to meet your requirements, allowing for proactive and efficient surveillance and administration, both locally and enterprise-wide.

Manage all of your systems as one coherent entity, and optimize your security operations across multiple sites:

- Record and store your video and data
- Organize, retrieve, playback, save and export that video
- Display cameras on a video wall & manage a multitude of alarms
- Access video from your smartphone or tablet
- Manage your enterprise application's security infrastructure



COMMAND RECORDING SOFTWARE

Scalable VMS for any application

Command Recording Software facilitates the efficient recording, storage and retrieval of video for all of your organization's cameras, as well as the data from third-party cameras and access control systems. The software can run on a variety of platforms — from a small independent workstation, to a COTS server, to a large-scale virtual machine — depending on your application. Additionally, the software is compatible with both Windows and Linux operating Systems.

You can also order your Command Recording Software (along with the Windows operating system) pre-installed and pre-tested on a server, certified for plug-and-play operation and optimum performance out of the box.



OpenEye, the cloud video platform company, provides solutions for video security, business intelligence and loss prevention. For over 20 years, it has been committed to developing an easy-to-use, comprehensive video management system backed by Heroic Customer Service® and support.

The OpenEye Web Services (OWS) platform streamlines operations and reduces the burden on IT, making it easier to manage video deployments and integrations, from a single site to enterprise wide. OWS combines and analyzes event data from video, alarm systems, access control, sales transactions and internet of things (IoT) devices and transforms it into actionable insights.

Those insights are provided through online clip export and sharing, video verification, rules-based alerts, real-time push notifications via email and mobile, automated reports and third-party integrations. Other features include cybersecurity measures like remote software updates and multifactor authentication, role-based user groups, system health monitoring and more.

Based in Liberty Lake, Washington, OpenEye's solutions are available globally through a trusted network of certified service providers. OpenEye is a subsidiary of Alarm.com. Visit openeye.net for more information.

Retail Chain Consolidates Store Video Security Management

Bargain Hunt is a retail discount chain that operates in a 400-mile radius of Nashville, Tennessee.

The chain has experienced rapid growth in recent years, increasing from 30 to over 80 locations and two distribution centers. As a result, they acquired numerous legacy security systems that required specialized training. Bargain Hunt wanted to make operations more efficient and easier for users to manage. They turned to OpenEye and Alarm.com for a video management, intrusion and access control solution to standardize security and loss prevention efforts, while laying the foundation for continued growth.

CHALLENGE

Bargain Hunt needed a security system that would allow loss prevention managers to easily monitor theft and safety in all sites. The loss prevention department is small and covers multiple locations, so it was imperative the tool be easy for all who access video remotely.

Bargain Hunt was using a variety of surveillance systems and had contracts with 40 intrusion vendors. Since many cameras were functional, it was difficult to justify a replacement of the legacy infrastructure. Bargain Hunt needed an open solution that would integrate with other technology partners and allow them to expand over time.

SOLUTION

Bargain Hunt selected Alarm.com to monitor intrusion and access control of their distribution centers and stores and OpenEye Web Services (OWS) for commercial video surveillance. As a cloud-managed solution, OWS brought all locations together in a single portal. This made it convenient to set up and update the system, manage profiles and permissions for users, and remotely manage all locations. The chain was able to take advantage of the two-way integration between OpenEye and their Alarm.com system. Alarm.com event data is available in OWS while OpenEye video is available in the Alarm.com platform, pairing event video with event notifications.

Asset inventory reports provide a complete view of all installed video surveillance hardware. The loss prevention department implemented regular thumbnail image reports of backroom cameras for district managers to audit store reports. It also has used the clip sharing functionality to assist law enforcement with investigations.



“

I don't need a specialized technician to set this up or use it. You plug the recorder into the network and the remote connection is available to use and secure. I can't stress enough how OpenEye has taken a product and made it easy to use.

Jacob Long
Project Manager





PACOM™ designs, develops and manufactures industry-leading security systems for complex enterprise multisite and campus environments. For over 35 years, PACOM has proudly delivered large-scale security projects around the globe – helping to keep buildings, people and assets secure and protected. PACOM is driven by making security management easier and providing customers with clarity on what matters. Learn more at PACOM.com.

Major North American Bank Relies on PACOM for All Its Security Needs at Hundreds of Locations

The subject bank is a subsidiary of a larger bank, and together the two entities have over \$20 billion in assets and thousands of employee associates. Primary banking offices are located in seven Midwest and Southwest states.



THE CHALLENGE

Several years ago, members of the bank’s security team witnessed PACOM’s multisite security management platform in action at another major bank. They liked what they saw, but at the time, the system was largely proprietary, and to truly work for the end user, they wanted more of an open architecture. PACOM listened to that feedback and moved toward a more open system architecture.

“

PACOM is really known for their extremely high level of security, and they’ve really met our expectations. They’re always coming to the table offering new opportunities for system integration.

Director of Corporate Security and Safety

THE SOLUTION

The bank has installed over 300 controller panels throughout their branch network. Each panel has the capacity to handle 256 alarm inputs, 64 outputs, 64 card readers (doors) and a maximum of 256,000 cardholders. The only system limitation is the storage capacity of the OS/hard drive, proving the PACOM solution is a true enterprise system.

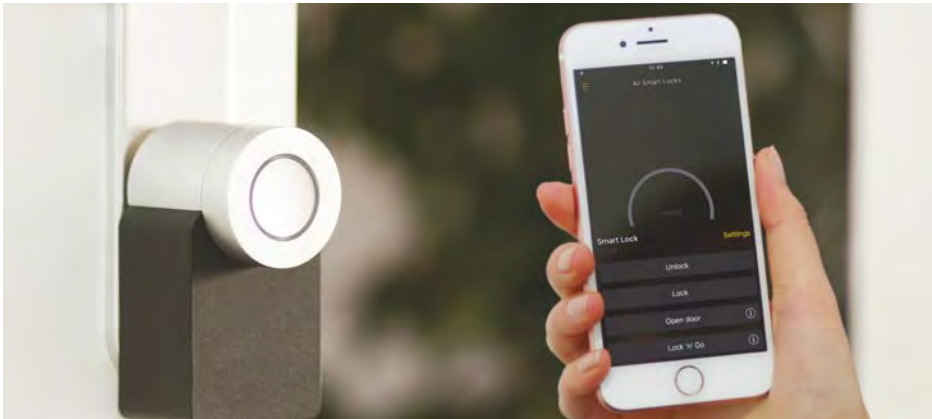


THE BENEFITS

- The reliability and stability of the platform has allowed PACOM and the bank to develop a highly productive partnership.
- PACOM’s open architecture simplifies the system, allowing the bank’s network technical teams to better understand system operation – putting them in charge while offering superior system ease of use.
- What sets PACOM apart is two-fold: The company designs all its own hardware and software and card access and alarms are managed on the same panel.
- PACOM’s integrated access and alarms are unique in the banking industry, plus the system can be remotely managed over the bank’s private network, not in the cloud, not over the open Internet.
- The PACOM system offers integrated maps and alarm monitoring, in addition to access control management, so end users have all the reporting needed to accomplish any type of investigation.

THE PRODUCTS

The PACOM solution is the perfect multisite security management platform, providing integration between access control, intrusion, video, intercom and virtually any building management or security solution. It is designed to manage thousands of locations simultaneously through a single interface, while providing industry-leading availability and redundancy. PACOM meets end-user demands for a multisite security system with multiple integrations, which can be managed through a single interface simultaneously for an unlimited number of locations.



Resideo is a \$5 billion business that is a leading global manufacturer and distributor of technology-driven products and solutions. We provide security, comfort, energy efficiency and control to customers worldwide. Building on a 130-year heritage, Resideo has a presence in more than 150 million businesses and homes globally, with 15 million systems installed each year. More than 6.7 million customers use Resideo’s connected devices, which provide them access to controls, monitoring and alerts.

We continue to serve more than 110,000 professional contractors through more than 3,000 distributors.

For decades, loss prevention professionals have relied on the flexible and capable VISTA® platform for commercial intrusion and fire protection. These rugged systems are built to last and offer maximum flexibility. Not only are the systems scalable to a limit between 32 and 250 protection zones, but they are extremely flexible regarding the types of devices supported.

Naturally all Vista panels support standard hardwired detectors (both passive and active), but they also support V-Plex®, the security industry’s leading multiplex loop technology. With V-Plex, you can enjoy the cost savings of a polling loop to far-flung locations – without sacrificing the ability to know exactly which point of protection is compromised at any given time.

For greater flexibility in detector installation, especially after build-out is complete, the VISTA family also supports wireless sensor technology. This allows the system to grow and adapt as a business grows and changes, with minimal installation cost.



The VISTA line stays connected with the most advanced communications technology available. Each site can be connected via broadband Ethernet, the latest LTE Cat-M cellular technology or both in order to provide a failsafe alternative. In addition, specially encrypted High Security communicators with extra encryption are available for sensitive installations. Panel connections to the central monitoring station can be verified as often as once every minute, ensuring rapid notification if anything is amiss.

For managers of multiple sites, Resideo Total Connect® 2.0 Remote Services (app and web app) offers a single login that can view and control multiple sites. Logins can be assigned to multiple properties, depending on that individual’s area of responsibility. That way a store manager can have access only to their own store, while a regional manager or district manager can have correspondingly broader views. With the touch of a drop-down menu, a manager may select any of the locations available to them and drill down to the specifics of that site.



This chart shows the full range of features available with the VISTA Commercial panel line. The VISTA line provides the protection that your employees deserve and that stakeholders demand!

	BURGLARY		FIRE BURGLARY		
SYSTEM CAPACITIES	VISTA-128BPT	VISTA-250BPT	VISTA-32FBPT	VISTA-128FBPT	VISTA-250FBPT
Maximum Zone Capacity	128	250	32	128	250
Maximum Standard Hardwire Zones	9	9	8	8	8
Maximum Wireless Expansion Zones	127	249	32	127	249
V-Plex® Devices	119	241	24	120	242
Two-Wire Smokes	16 (Zone 1)	16 (Zone 1)	32 (Zone 1 & 2)	32 (Zone 1 & 2)	32 (Zone 1 & 2)
Four-Wire Smokes	Zone 1-128	Zone 1-250	Zone 1-128	Zone 1-128	Zone 1-250
Maximum Number of Keypads	31 (Alpha) 6 (Graphics)	31 (Alpha) 6 (Graphics)	31 (Alpha) 6 (Graphics)	31 (Alpha) 6 (Graphics)	31 (Alpha) 6 (Graphics)
User Codes	150	250	75	150	250
Number of Partitions	8	8	2	8	8
Output Relays	96	96	96	96	96
Access Control Relays	8 Doors	15 Doors	8 Doors	8 Doors	15 Doors
Schedules	20	20	20	20	20
Event Log	512	1000	512	512	1000
UL	985/1023, 609/365, 611/1610, 1037/1076, 1635	985/1023, 609/365,611/1610, 1037/1076,1635	864/609, 611/1610, 365, 1076	864/609, 611/1610, 365, 1076	864/609, 611/1610, 365/985, 1076
ULC/ORD	S303, S304, S545, C1023, C1076	S303, S304, S545, C1023	S303, 304, S559, S545, C1023	S303, 304, S559, S545, C1023	S303, 304, S559, S545, C1023



Tyco Security Products is a unified group of world-leading access control, video, location-based security and intrusion brands.

Our security integration platforms, built by our developers from across all product disciplines, allow our customers to see more, do more and save more.

With the most trusted brands in security in one portfolio, we offer the most comprehensive range of premium security solutions in the industry; an unbeatable combination from a single source. Robust, scalable, integrated enterprise solutions. Outstanding, diverse security capabilities plus deep experience in creating converged solutions for commercial and enterprise

customers. We are leaders in access control, video security, location-based security and intrusion detection – and we have years of experience in bringing these all together into seamlessly integrated, converged solutions for our customers. Together, as part of Johnson Controls, the global leader in smart buildings, integrated infrastructure, climate control systems and distributed energy storage solutions, we are creating the future of the building – smart, safe, sustainable and data-driven. [Learn more at swhouse.com.](https://www.swhouse.com)

iSTAR Ultra G2 cyber-hardened access controller for up to 32 readers

iSTAR Ultra G2 is a powerful, cyber-hardened and network door controller that supports up to 32 readers. Built using a Trusted Execution Environment (TEE) with advanced network security features, iSTAR Ultra G2 answers the most demanding access control requirements of enterprise and government applications. Rack-mount and wall-mount options provide installation flexibility, while iSTAR Ultra G2's unique lock power management eliminates the need for separate lock power interface boards. iSTAR Ultra G2 features a hardened Linux kernel for its operating system, improving the security and scalability of the system.

KEY FEATURES

- Powerful cyber-hardened network door controller for up to 32 readers
- Trusted Execution Environment (TEE) provides advanced hardware-based cybersecurity protection
- Hardened Linux embedded OS for improved security and scalability
- Power over Ethernet (PoE) module features PoE+ to power the GCM
- Up to 1M cardholders in local memory
- Dual GigE network ports with IPv6, DHCP and 802.1X support
- Embedded lock power management lowers installation costs

- Advanced controller-to-controller communications for cluster-based antipassback and I/O logic
- Onboard 256-bit AES network encryption
- Supports OSDP Secure Channel for encrypted reader communications
- Supports Embedded High Assurance FICAM operation without third-party hardware

SUPPORTS UP TO 32 READERS

iSTAR Ultra G2 uniquely combines support for traditional hard-wired access control doors with support for wireless lock sets, all in the same controller. Up to 32 readers are supported by the iSTAR Ultra G2, which can be comprised of readers from Access Control

Modules (ACMs), IP-ACM Ethernet door modules and/or wireless locksets. iSTAR Ultra G2 is ideal for areas that require many readers in close proximity to the panel. For more distributed installations, iSTAR Ultra G2 includes up to 32 RS-485 ports, allowing the installer to run longer distances to each door. iSTAR Ultra G2 uses a General Controller Module (GCM) which includes standard 2GB RAM and 16GB memory and has two onboard gigabit network ports for reliable network communications. The GCM controls up to four ACMs, with each ACM supporting up to eight Wiegand, RM or OSDP readers, 24 supervised inputs and 16 outputs which can be individually wet- or dry-configured.



VERINT®



Verint® (Nasdaq: VRNT) helps the world’s most iconic brands – including over 85 of the Fortune 100 companies – build enduring customer relationships by connecting work, data and experiences across the enterprise. The Verint Customer Engagement portfolio draws on the latest advancements in AI and analytics, an open cloud architecture, and The Science of Customer Engagement™ to help customers close The Engagement Capacity Gap™.

“Hook and Chain” ATM Attacks

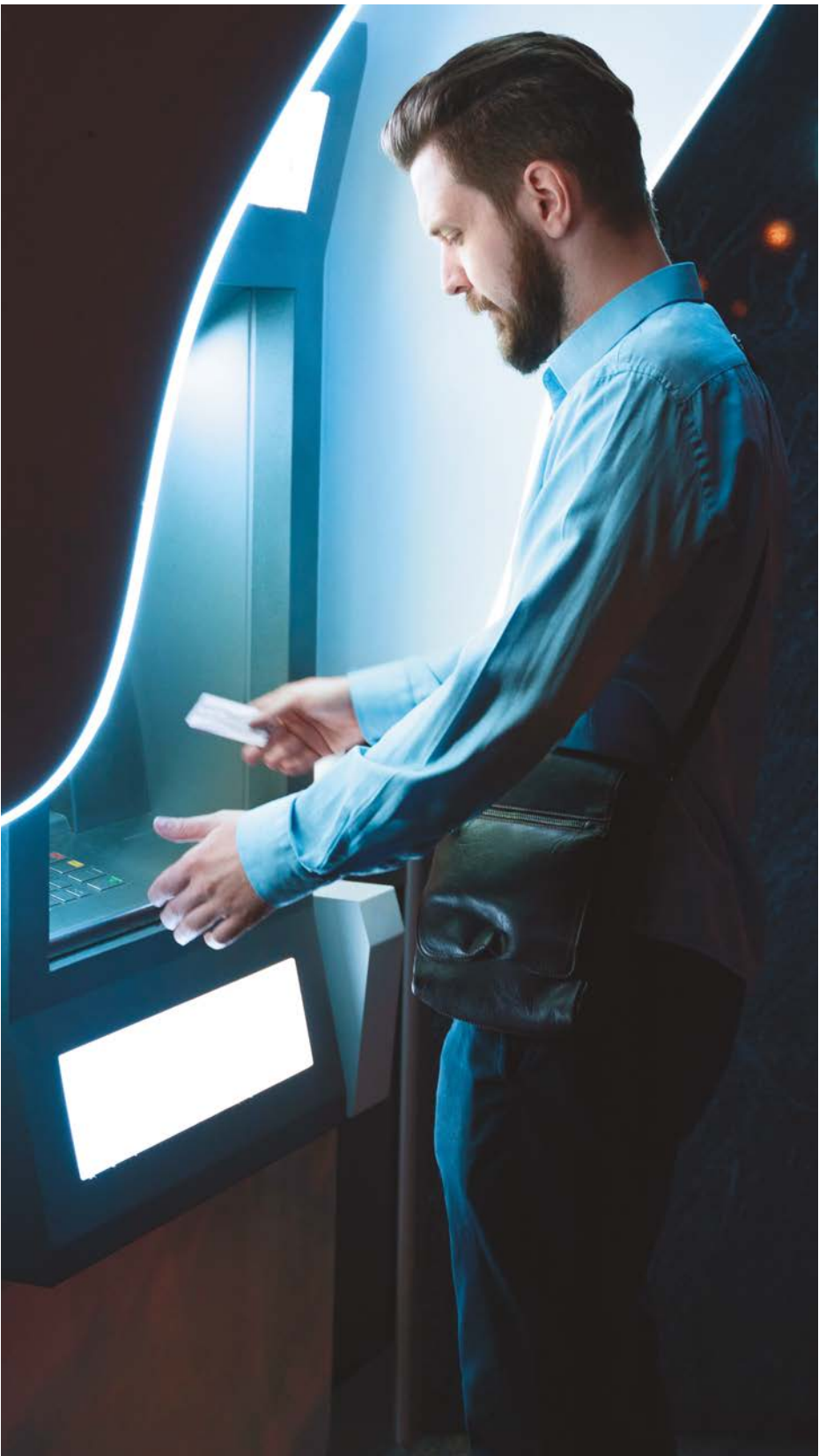
ATM attacks are changing and adapting all the time. Therefore, it is essential for banks to understand this threat and keep the integrity of their ATM security one step ahead. “Hook and chain” attacks on drive-up ATMs typically occur between 11 p.m. and 6 a.m., during which time criminals attach one end of a chain or cable to an ATM and the other to the rear of a (usually) stolen vehicle. Whether the attack is successful or not, the damage to the ATM and surrounding structure can reach as high as \$45,000. If successful, the perpetrators could get away with upwards of \$150,000 from the cash cassettes alone.

Leveraging Verint’s onboard analytics in both our **V8080 camera** and **EdgeVR**, security personnel can assign a zone around a specific area in front of the ATM to monitor people and vehicle obstructions in an effort to detect potential chain gang activity. Once the nefarious activity is detected, an event is created on the NVR, which captures and archives recorded video from all associated cameras on the ATM and at the same time dispatches an instant alert to the guard station so that immediate action can be taken to interrupt the crime while it is still in progress.

ATM criminals and theft can be deterred. Verint’s advanced security portfolio offers credit unions and banks the ability to protect ATMs through several hardware and software solutions that work in tandem.

Verint Solutions for ATM Attacks

- Advanced intrusion detection to help monitor people and vehicles
- Built-in video and audio analytics for loitering detection, facial recognition and sound identification
- Real-time recording and alerts around motion changes in a scene
- Instant alerts notification distributed via Verint Op-Center to immediately inform dispatchers and security personnel of potential breach



3xLOGIC

3xLOGIC™ is a leading innovator and provider of security hardware, software and cloud-based solutions that drive business intelligence for clients around the globe. 3xLOGIC's solutions go beyond security to deliver transformational business value by leveraging data and converting it into actionable insights for greater visibility and fresh perspective on problems businesses didn't even know they had. Learn more at [3xLOGIC.com](https://3xlogic.com).



The situation

Frederick Douglass High School, (FDHS) located in Lexington, Kentucky, comprises 350,000+ square feet with over 90 staff and hundreds of students.

THE CHALLENGE

The threat of violence in the nation's schools has been top of concern for years, with the job of protecting students, staff and teachers on the mind of every administrator charged with school safety and security. This educational facility is a new, state-of-the-art building, and FDHS planners were looking for a system that would monitor activity during the day while also fully protecting the building and equipment during off hours. The system had to be robust enough to handle hundreds of cameras while also allowing for quick, easy video review of stored footage.

THE SOLUTION

In the summer of 2017, Sonitrol of Lexington and Bates Security completed one of the companies' most innovative installations. The project includes verified audio detection, verified video and an advanced access control system. The video surveillance system utilizes 192 3xLOGIC HD and IP camera models with analytics software for verification and network health monitoring. Sixty cameras are deployed outside the building and 130+ are located inside throughout the facility.



THE BENEFITS

- The installation features verified audio detection operating in conjunction with the verified video system. Upon audio alarm detection at the central station, the Sonitrol operator also receives video footage for every camera connected to that alarm point.
- School staff and Law Enforcement are extremely pleased with 3xLOGIC's technology; they love the image clarity and the range of coverage the zoom feature provides.
- 3xLOGIC technology allows users to conduct faster, more efficient searches, and it enables staff to narrow searches to one area, such as a specific door, to quickly find out critical information.
- The system offers double alarm verification before alerting police dispatch and provides responding officers with the very latest intelligence on what they'll face upon arriving at the scene.
- The school is so pleased with system performance, they are considering migrating their other building video security from their current VMS software to 3xLOGIC VIGIL VMS.

THE PRODUCTS

3xLOGIC VISIX IP Cameras come in all shapes and styles, offer the performance and clarity you demand and have the best pricing on the market. With VISIX IP Cameras, you have the flexibility and freedom to choose the camera that fits your needs without compromising.

VIGIL™ V7300-Series of Hybrid Servers are fully-integrated intelligent video appliances. Pre-configured with VIGIL VMS software, these high-performance servers represent a cost-effective video management platform that provides ease of deployment and scalability.



VIGIL Central Management (VCM) provides the ability to monitor the status of VIGIL Servers and V-Series cameras.

Designed with the integrator in mind, VCM allows you to proactively inform your end users of any potential health concerns with their VIGIL Servers or cameras.

“

The school is so pleased they are considering migrating from their current VMS software in the remainder of their buildings to 3xLOGIC VIGIL. In fact, we're talking to several school districts who are interested in moving to VIGIL from their existing VMS.

Sean Moberly,
Project Manager
Sonitrol of Lexington

The information contained herein is provided for informational purposes only and is provided without warranty of any kind. Materials may not be reproduced without the consent of Securitas Electronic Security, Inc.



Securitas Technology



Securitas Electronic Security, Inc.
3800 Tabs Drive
Uniontown, OH 44685

www.securitases.com
855.331.0359