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Original Research

Video Shifts from PAUSE TO PLAY

Slowed by the effects of the pandemic and supply chain morass, this sector is looking to push the fast-forward button. *SSI*'s Video Surveillance Deep Dive freeze-frames installations, prices, profits, verticals, challenges and technologies.

By Scott Goldfine

For many years now, video surveillance has ruled the electronic security roost where it comes to opportunities for providers of professionally installed systems to grow their businesses and for their end-user customers to realize much higher value for their dollar. The trend paid off exponential dividends as the parade of enhancements and advancements to cameras, recorders, compression and imaging software, and network infrastructure proceeded at a seemingly boundless clip. Then just as it seemed the raging torrent might be tapering off, a multitude of innovations — such as analytics or the Cloud — that further augment or are built on video's foundation have flooded the market. The most recent one, which promises myriad permutations and incalculable possibilities, is artificial intelligence (AI).

The ongoing vitality of video has played a key role upholding the security industry's longstanding reputation for being recession-resistant and notoriously resilient, even in the face of and wake of potentially crippling events like the pandemic, inflation, supply chain, labor shortage and crises abroad. Further entrenching video surveillance into the basic fabric of commercial enterprises has been its expanded integration capabilities with other security and building systems, extending functionality to operations and productivity. Similarly on the residential side, hastened by the ubiquity of doorbell, poolside and perimeter cameras, video has become equally pervasive in the home.

Against that dynamic backdrop, witness how those chief factors and catalysts are at play affecting the results and conclusions of *Security Sales & Integration's* 2023 Video Surveillance Deep Dive research project. Conducted during April 2023, the fifth installment of *SSI*'s Video Deep Dive survey again included dealers and integrators from throughout the United States and Canada. In addition to the sprawling territorial footprint, the study pulled more than 100 respondents from an expansive span of company sizes with various years in business. The questions ran the gamut of residential, commercial and industrial sectors — including projects, prices, margins, verticals, challenges, technologies and more.

According to the survey's results — despite acknowledgement of the supply chain's snarl of components and logistics complications — by and large security contractors indicate they find themselves toiling in a landscape more closely resembling pre-pandemic projects, profits and possibilities. For instance, aside from a dip in

the number of industrial jobs, installation volume, sales prices and gross profit margins are up across the board. This positive perspective is further heightened by looking at the healthy upticks in both video surveillance business during the past year and, as a consequence, the past five years.

Less encouraging is the ongoing commoditization of cameras, as evidenced via more units per installation but at lower prices. The top three markets are commercial offices, government and single-family homes. Megapixel cameras, IP-based LAN systems and remote access capabilities are the most pervasive video technologies. Helping immensely on the recurring revenue front, video surveillance as a service (VSaaS) is more rapidly being adopted, even as dealers and integrators note more conflicts dealing with customers' IT departments and network challenges.

From a 30,000-foot view, end users are being won over by ever-more advanced, appealing and affordable technology and products, along with an almost infinite array of capabilities and use cases that bridge security and organizational efficiencies. On top of that, security dealers and integrators are tapping into new video-based RMR streams and, as the supply chain unfurls, manufacturers figure to ramp up their R&D and introductions of more innovative solutions. This portends that video surveillance will remain a massive market for the foreseeable future. Descending down from that high altitude, take a Deep Dive into the latest key datapoints.

Extent of Supply Chain Impact on New Video Sales & Upgrades

No impact	2%
Minimal	25%
Moderate	45%
Significant	24%
Enormous	4%

By now most expected this issue to be behind us but these results tell a different, less rosy story. Dealers and integrators rating the impact moderate or worse rose almost 11%, from 66% in 2022 to 73% today.

Type/Number Video Installations in Average Month

Residential
13.6

Commercial
22.5

Industrial
4.8

Commercial projects continue to lead the way in video surveillance projects, and despite supply chain challenges both commercial and residential showed nice increases from a year ago. However, industrial experienced a sharp decline.

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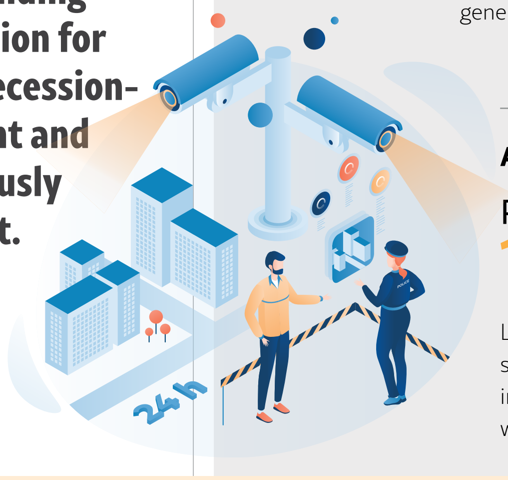

Average Sales Price for a Video System

Residential
$4,000

Commercial
$18,000

Industrial
$28,000

Not only are the number of residential and commercial installations up but the median revenue per project rose across the board, including industrial surveillance jobs. Multiplying by installation averages yields respective $54,400, $405,000 and $134,400 residential, commercial and industrial monthly revenue generation.

Average Video Project Gross Profit Margin

29.1%

Terrific news here as a pandemic-induced lull that resulted in margin erosion the past two years was stopped in its tracks. Respondents note an improvement of nearly 10%, from 26.5% in 2022. Multiplying the margin by residential, commercial and industrial project revenues in the previous graph computes to monthly gross profits of $15,830, $117,855 and $38,994, respectively.

Average Video Surveillance Business Growth

Past year
17.8%

Past 5 Years
26.5%

Light shines through here after the pandemic and supply chain sent these percentages south. Dealers and integrators report a 17% improvement for the past year (up 2.6 points from the prior survey), which helps elevate the five-year outlook almost 13% (up 3 points).

Snap One: Advanced Surveillance Technology Drives Customer Satisfaction & Integrator Profitability

▶ Video surveillance technology is constantly evolving, and integrators are increasingly seeking products with advanced technologies and simpler installation processes that make their jobs easier and help drive profitability.

Surveillance products have come a long way, and with the inclusion of technology like artificial intelligence that reduces false alarms, both integrators and customers can rest assured that their products are working effectively. For example, AI-enabled video surveillance offers detection features that can differentiate actual threats, like vehicles pulling into the driveway late at night, and harmless movements, like a raccoon scampering across the lawn. When developing new products, including the Luma X20 line of NVRs and cameras, Snap One considers these trends to ensure customer standards are being met. The ability to filter events leads to fewer resources being wasted on false alarms, giving customers greater confidence and higher satisfaction. In turn, saving integrator resources and increasing profitability.

Furthermore, simpler set-up processes make a significant difference in daily business operations for integrators. The ability to quickly set up and deploy video surveillance systems and features like camera cycling has made it easier for security integrators to manage complex systems remotely. Plus, remote monitoring tools like Snap One's OvrC can simplify management by allowing security personnel to manage all cameras from one location — saving valuable time and resources.

Faster, easier remote setup and remote management capabilities make integrator businesses more profitable because faster installs with reduced service calls provide a better end-user experience. Ultimately, integrators will be able to provide customers with continued support and enjoy the financial benefits of not rolling a truck every time a device requires troubleshooting or a firmware update. ***— Clint Choate, Senior Director of Security Markets, Snap One***

25 Most Popular Video Vendors

▶ In alpha order, these manufacturers are most commonly used among the *SSI* 2023 Video Deep Dive dealer/integrator respondents.

- Axis
- Arecont Costar
- Avigilon
- Bosch
- Dahua
- Digital Watchdog
- Eagle Eye Networks
- Genetec
- Hanwha
- Hikvision
- Honeywell
- IDIS
- Johnson Controls/Tyco Security Products/ American Dynamics
- LILIN
- March Networks
- Milestone Systems
- Mobotix
- Panasonic/i-PRO
- Pelco
- Snap One
- Speco
- Teledyne FLIR
- Uniview
- Verkada
- Vicon

Average Number Cameras Per Project

Residential
22*

Commercial
48

Industrial
56

* INCLUDES MULTIDWELLINGS

The average number of cameras per project has risen by 14 commercially and nine on industrial jobs. Residential has been flat, and worth noting the median is only three. On a per-camera revenue basis, contractors are charging $181, $375 and $500 for residential, commercial and industrial projects.

Top 8 Reasons for Not Offering or Struggling Selling Cloud-Based VSaaS

1. **Costs**
2. **Developing pricing or business model**
3. **Determining sales incentives**
4. **Demand and marketplace acceptance**
5. **Training**
6. **Marketing**
7. **Staffing**
8. **Codes, regulations or standards**

While costs continues to top this list, developing a pricing or business model (certainly interrelated) skipped from No. 5 to No. 2. Sales incentives leaped from No. 7 to No. 3 on the list. It switched positions with staffing.

Most Commonly Deployed Video Technologies

Megapixel Cameras	55%
IP Based (Local Area Network)	49%
Remote Access/Viewing/Control	47%
NVRs	45%
Video Management (VMS) or PSIM Systems	36%
H.265 Compression	35%
IP Based (Wide Area Network)	29%
4K Ultra HD	26%
Integrated With Access Control or Other Systems	25%
Video Analytics	24%
Multisensor Camera Arrays	17%
Thermal Imaging or Night Vision	16%
Cloud Storage or Control	16%
Video Doorbells	12%
Facial Recognition or Other Biometrics	12%
License Plate Recognition	11%
Wireless Signal Transmission	11%
Gunshot Detection	6%
Wireless Cameras	6%
Encoders	6%
Analog HD Using Coax	5%
Drones/Robotics	4%

Megapixel cameras collected another 3 percentage points from a year ago to move atop the list. Last year's No. 1, remote access, slid 5 points. Integrating with access control rose 7 points, and thermal imaging fell 9 points.

Familiarity With Cloud-Based or Hosted Video Services (VSaaS)

Not familiar at all
5%

Familiar but choose not to sell them
17%

Familiar and considering offering them to customers
46%

Familiar and currently do offer to customers
32%

This highly promoted offering has been goosed by the pandemic, as offering or considering offering rose a whopping 11 percentage points. Furthermore, those unfamiliar with this RMR-focused service was halved. Those selling it reported 7% growth the past year, with an average per-camera monthly storage fee of $22.

Not only are the number of residential and commercial installations up but the median revenue per project rose across the board.

Extent End-User IT Departments Hinder Deploying Cloud-Based/Networked Video Solutions

Always	17%
Most of the time	23%
Sometimes	36%
Infrequently	16%
Never	9%

Following some common ground evident in this question's past responses, dealers and integrators seem to be experiencing more friction with clients' IT personnel. Those citing always or most of the time rose by 14 percentage points compared to a year ago.

Top 8 End-User Challenges Running Surveillance System on Corporate Network

1. Cybersecurity risks
2. Privacy issues
3. More complex networks
4. Network reliability
5. Conflicts with IT staff
6. Higher network costs
7. Quality of service concerns
8. System access privileges

While integrators say their end-user clients continue to most often cite cybersecurity as the top networked video surveillance risk factor, privacy leaped from No. 7 to No. 2. Network costs fell from No. 3 in 2022.

Top 7 Features That Help Integrators Sell Video Surveillance Products

1. End-customer ease of use (app or portal)
2. Ease or speed of installation
3. NDAA compliance
4. Protected "pro only" lines (no online sales)
5. Brand recognition to your end customer
6. Industrial design/color options
7. Edge-based analytics (no NVR or Cloud fees)

The top two items held their ground, but NDAA compliance stormed up from No. 5 to No. 3 (it was sixth in 2021).

TD SYNNEX: Public Safety Is About More Than Just Video Surveillance

▶ Though public spaces are meant for everyone's enjoyment, they are not always safe. From street crime to acts of terrorism, people face many risks. To counteract these risks, public spaces often employ video surveillance to monitor activity and ensure safety.

Video surveillance is an effective way to deter crime and provide video evidence of crimes that have occurred. Advancements like high-definition video and full-color video in low-light have improved image detail. The use of AI to detect objects like people, cars and license plates has become commonplace. However, video surveillance alone cannot guarantee work, school and public space safety. There must be an effective system in place to alert authorities and the public in the event of an emergency.

The solution to improving public space safety lies in a combination of video surveillance AND solution aggregation.

Solution aggregation from TD SYNNEX for physical security combines multiple security technologies to create a comprehensive safety system. This includes integrating video surveillance and access control, perimeter security, and emergency response systems. TD SYNNEX solutions from its partners specializing in RF signal intelligence and AI-powered algorithms provide high-trust analytics to make city streets, sidewalks, and crosswalks "smart."

For example, if a camera detects suspicious behavior, the system can automatically alert security personnel who can remotely monitor the area and take appropriate action. This could involve dispatching on-site security personnel or notifying law enforcement. Additionally, the system can be configured to automatically trigger emergency alarms or notify the public through messaging systems or public address systems.

Video surveillance is an essential component of public safety, but it is not enough on its own. By combining video surveillance with solution aggregation at TD SYNNEX, our channel partners and their customers can deploy a comprehensive safety system that monitors activity, detects potential threats, and responds quickly to incidents. With the right technology and personnel in place, public spaces can become safer and more enjoyable for everyone.

— Sandi Stambaugh, Senior Vice President, Product Management, TD SYNNEX

Top 10 Video Vertical Markets by Revenues

Commercial Offices	**11%**	Small-to-Midsize Businesses (SMB)	**6%**
Government	**9%**	Retail	**6%**
Residential – Single Family	**8%**	Residential – Multidwelling	**6%**
Industrial Manufacturing	**7%**	Healthcare	**6%**
Schools, K-12	**7%**	Higher Education	**5%**

Commercial offices bounced back, overtaking single-family homes atop this list. Government came back in a big way as it failed to break into the top 10 markets in the 2022 results. K-12 schools gained 2 percentage points.

A-Z Video Features Integrators Want Most

Verbatim comments from SSI *survey-takers (edited for brevity and grammar)*

- Access to product database over API.
- AI-based storage of critical video clips, so storage requirements are minimized.
- Allow embedded monitoring that can be enabled by a license.
- Avoid port forwarding requirements.
- Better solution allowing end user or installing company access to multiple sites from single app and single log-in.
- Catalogs to leave with customers after walk-through, plus real-time tech support.
- Cheaper Cloud storage.
- Compatibility with old and new cameras to easily expand VMS.
- Continued development of dashboards and health monitoring.
- Cybersecurity tools.
- Do not sell on Amazon.
- Ease of use with regard to the VMS and mobile/offsite viewing.
- Free system configuration and installation training.
- Help dealer sales team better communicate ROI of Cloud storage, and value of replacing old analog technology.
- Improved analytics at lower cost.
- Improved ONVIF standards & development of UL standards.
- Integration of old technologies to VMS, and more AI in the platform to avoid false positives!
- Less cost for end users to utilize Cloud services.
- Longer range cameras at an affordable rate.
- More open AI features at the camera level to allow clean functionality with VMS platforms.
- More remote application and diagnosis services.
- More robust and feature-rich products that can provide more benefits without high-priced equipment.
- More tech support availability. Secure price for 6-12 months.
- More training from manufacturer reps; more and better online demonstrations.
- Multi-imager cameras; online calculators; functional website.
- No camera license requirements.
- Online support for end users.
- Patrol function; a lock on movement and track.
- Perform product and market testing.
- Presales support.
- Regardless of company size, regardless of its line of business, regardless of the geographical area it operates in, high-quality customer service is one of the most important ingredients in a business' success.
- RMR for video surveillance (not just Cloud storage); RMR for VMS or similar.
- Secure connection to Cloud applications and tools to maintain them.
- Secure edge connection to Cloud platforms.
- Shelf life.
- Simpler licensing options; training on demand options; consistent product availability.
- "Single pane of glass" to see video/access on single sign-in.
- Technical backup on after-sales support. Replacement NVR boards.
- Too many fly-by-night companies offering the world for half the price and then not delivering.
- Understand what quality is.
- Upgrades.
- Video training for end users.
- Wish that remote viewing apps would make it easier for end users to search for specific video and to record snippets as well as to email or text to others directly from the app. **SSI**