INFINIDAT

SOLUTION BRIEF

Video Surveillance

You can't go anywhere nowadays without seeing a video camera! Whether you're going to the grocery store, jogging through your neighborhood, or attending a sporting event. The use of video surveillance has grown dramatically due to increasing threats, including crime and vandalism. Additionally, terrorism is driving governments and private entities to invest in more advanced surveillance solutions to improve public safety. As of 2025, MarketsandMarkets projects the global video surveillance market size at $57.96 billion, growing to $88.71 billion by 2030.

Video surveillance is a broad category covering video capture for many use cases, including security monitoring and legal compliance. As physical security needs increase across critical infrastructure (communications, healthcare, transportation, utilities, etc.) and corporate offices, the need for high-capacity, high-performance, high-availability solutions is paramount.

Cloud storage, while infinitely scalable, can present cost challenges when large numbers of videos are retrieved for review and analysis. While AI analysis of real-time videos may spot anomalies instantly, this often leads to increased demand for immediate video retrieval for human review and further analysis, necessitating an on-premises system. As surveillance systems become more interconnected, they also become more vulnerable to cyberattacks, posing a risk to data security.

Infinidat's InfiniBox® enterprise storage platform with next-generation cyber data protection and recovery is designed to deliver secure, high-performance, scalable, and highly available storage for many diverse workloads, including high-resolution video. Key features that make the InfiniBox ideal for this use case include:

High Availability and Performance

InfiniBox's industry-leading 100% availability and performance guarantees, driven by ultra-low latency technology, enable enterprises to confidently support large video surveillance environments with thousands of cameras without performance bottlenecks.

InfuzeOS™

A single operating system runs across all InfiniBox systems, providing native support for Block (Fibre Channel, iSCSI), File (NFS, SMB), and Object (S3) protocols with simultaneous access. This provides customers with the flexibility to choose the most convenient and performant protocol available in their environment. Further, InfiniBox is available in both hybrid and all-flash configurations, enabling more choices for customers to optimize both cost and performance.

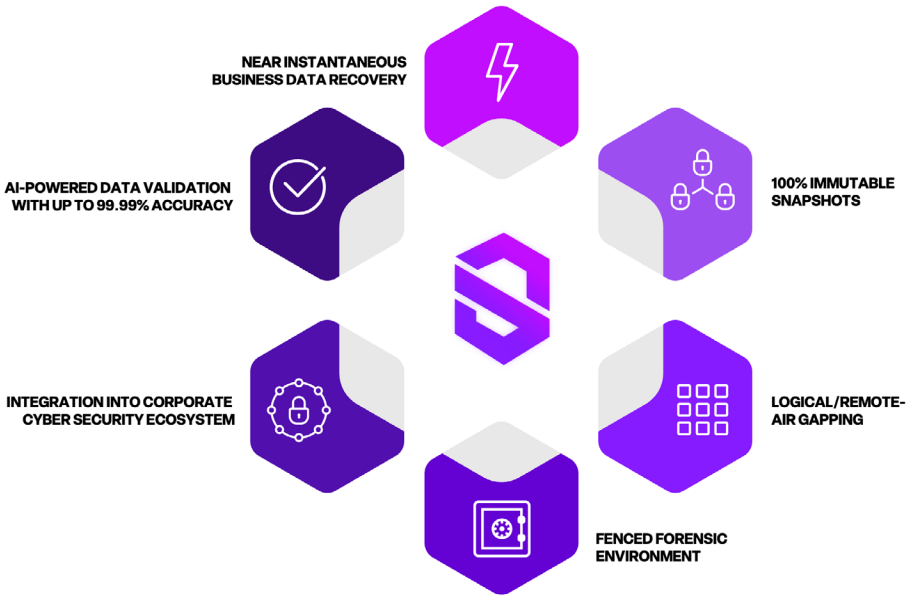
Next-Generation Cyber Data Protection and Recovery

All of our solutions are powered by our highly integrated, automated, and orchestrated InfiniSafe® solution, which has received more than 20 industry accolades from the analyst and press community in the past three years. It's all about recovery and, more so, business recovery. The technology behind InfiniSafe provides an end-to-end cyber-secure data environment to secure, detect, validate, and recover from a cyber attack.

Elements Provided with InfiniSafe Technology

Immutable Snapshots

This core InfiniSafe function is built into InfuzeOS. No-impact, immutable snaps let you protect data anytime without affecting your workload performance, and you never miss an opportunity to dynamically protect your data when integrated with InfiniSafe Automated Cyber Protection (ACP). Guaranteed immutability means there are no backdoors or vulnerabilities that could serve as access points to your protected data.



Logical/Remote Air Gapping

This is a core InfiniSafe function built into InfuzeOS. True immutability means your data is automatically logically air gapped. Combining this with our powerful replication options makes it easy to create remote air-gapped copies. This provides the flexibility you need to manage your protected data assets.

Fenced Forensic Environment

This is a core InfiniSafe function built into InfuzeOS. Providing a secure/private space to validate your data is important and easy; we automate it. This is a perfect way to isolate InfiniSafe Cyber Detection scanning engines to protect from potential compromise.

Integrate With Corporate Cyber Security Ecosystem

InfiniSafe Automated Cyber Protection is built into InfuzeOS. It can be seamlessly integrated into any SIEM- or SOAR-based application, or into almost any API-based application, to proactively protect your most critical data. Any security event in your security ecosystem can trigger InfiniSafe ACP. It can dynamically issue immutable snapshots on any defined data set across any of your Infinidat systems, reducing the threat window. Remember, snaps have zero performance impact.

Data Validation with Extreme Accuracy

InfiniSafe Cyber Detection is an on-premises subscription-based storage software-as-a-service that provides the industry's best and most comprehensive validation and detection capabilities. Knowing the exact state of your data is key to recovering your business's most critical data with accuracy up to 99.99%. The InfiniBox management console enables recovery from the exact point in time in seconds.

Near-Instantaneous Business Data Recovery

Another core InfiniSafe function built into InfuzeOS. Recover your validated data confidently with status information provided from InfiniSafe Cyber Detection. Just point, click, and recover the associated snapshot in the InfiniBox management console. Recovery is guaranteed in under a minute, regardless of the size of your dataset on InfiniBox.

It's no surprise that customers use InfiniBox as the data repository for their video surveillance footage due to its superior bandwidth, IOPS, latency, and cyber resilience versus other enterprise storage solutions. In an environment with hundreds to thousands of cameras potentially capturing video simultaneously, bandwidth is key to handling multiple streams without losing or corrupting the video data. This is even more critical as high-resolution cameras replace older cameras.

While older 2K (4 megapixels or 4MP) surveillance cameras might generate 5MB to 50MB of video per minute, the current generation of 4K with 8MP can generate 1GB of video per minute. Of course, this is based on the specific compression algorithm. Newer compression such as H.265, provides approximately 50% better compression than H.264, its predecessor. Even newer compression algorithms, such as H.265+ and AI-H.265 are becoming more widely available, further compressing video while maintaining its integrity.

In addition, the frame rate and bit rate also impact the capacity requirements for storage. A typical 4K camera operating at 30 frames per second (FPS) might have a bit rate of 15 megabits per second (Mbps). Higher frame and bit rates provide better video quality but also come with higher storage ingest and capacity requirements.

Whatever cameras and video surveillance software you choose, Infinidat has the right storage to meet your needs now, and into the future, as you grow your installed base of cameras and introduce higher resolution. The performance and cyber data characteristics of InfiniBox can manage large numbers of cameras writing, as well as provide rapid response to requests for video retrieval from storage, simultaneously.

Here are a few customer use cases that demonstrate our abilities:

US International Airport

A major US international airport serving over 37 million passengers annually has partnered with IVIS Security and currently uses over 4,000 high-resolution cameras to monitor all aspects of the airport. The airport plans to add 2,000 cameras each year to increase coverage. Video from the cameras is used by airport security to monitor threats, deter criminal activity, increase safety, and enable quick response to incidents. The airport was having difficulty with its data storage, which had reached its capacity limit and was not easy to upgrade. The video surveillance team was struggling to get adequate support from the vendor, so they decided to evaluate other options.

After an extensive evaluation, they chose InfiniBox as their data storage solution due to its SMB support, high capacity, performance, non-disruptive upgrade process, and Infinidat's white-glove support model, which ensured they could quickly get access to Infinidat through their Technical Advisor. They immediately moved over 2PB to InfiniBox in the first month and now have a more reliable solution after the upgrade. In addition, the airport security team can now retrieve stored video of any time/date much quicker than previously due to the InfiniBox trie tree metadata architecture, which stores metadata in DRAM, for lightning-fast retrieval.

European Airport

One of the largest airports in Europe, with over 500 flights per day and over 53 million passengers per year, uses 2,600 cameras to monitor all areas of the airport and Genetec Security Center as a unified security platform. The airport needed to increase data storage capacity and performance, and decrease response time.

After they selected InfiniBox as their solution, the airport quadrupled its capacity and has three sites configured for active-active replication from the primary to both backup sites. With the new InfiniBox using iSCSI protocol, they have increased throughput by greater than 63%, while lowering response time by 98%. Additionally, with InfiniBox's green IT characteristics, they improved watts/TB power savings by 81%.

US City

A US city of over 30,000 residents with thousands of traffic cameras and additional cameras monitoring school campuses uses Milestone to manage its video footage. In 2018, the city deployed new video cameras and chose Infinidat as the data storage for video capture, storage, and retrieval for the cameras. The city already had thousands of surveillance cameras and was using data storage from another provider.

Over the past seven years, the city has grown its footprint of InfiniBoxes as hundreds of new cameras have been added. In addition, it has migrated cameras that were storing video on the competitive storage to InfiniBox. Currently, the city stores 11PB of video on its InfiniBoxes and expects approximately 250TB monthly growth. This growth can be non-linear, depending on the number of new cameras deployed. For example, after the cameras were successful in helping solve some crimes, the city agreed to deploy more and increase the usage of real-time monitoring and alerting.

Some of America's most populous cities are under intense surveillance, according to new research from Comparitech. The average city has 11 surveillance cameras per 1,000 residents, while the most densely populated cities have over 200 cameras per 1,000 residents.

Since 2018, with the deployment of the InfiniBox, the city has experienced 100% availability and appreciates that the systems can fill to 95% of capacity while maintaining performance and not dropping video frames, something the competitive systems could not do. The InfiniBoxes are attached to the Milestone servers via Fibre Channel (FC), adding an incremental level of performance and lossless communication. In addition, the city has taken advantage of Infinidat's flexible capacity on demand model, which has enabled them to increase capacity as needed, spreading the cost of the systems over multiple budget cycles.

With InfiniBox's highly evolved technology and reputation in the video surveillance market we can ensure your success into the future with Infinidat. For more information on the benefits Infinidat can bring to your video surveillance environment, please contact your Infinidat account team or email us at sales@infinidat.com.

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