

INFRASTRUCTURE SOLUTIONS TO SECURE TRANSIT SYSTEMS

Safer, Smarter Transit Security and Operations

Managing Large-Scale Security Systems in Today's Environment

In today's world, passenger safety is top of mind for transit systems. Security concerns range from thwarting a high-profile terrorist attack to monitoring for articles left behind in a station, identifying people or items that have fallen on train tracks, preventing assaults, and implementing crowd control measures. At the same time, operational issues, such as fare jumping cost transit systems millions of dollars each year.

Transit agencies juggle a staggering volume of video data; monitoring, managing, and accessing video from stations, depots and platforms, many miles of track, and millions of riders is an enormous task. In this environment, an ever-increasing amount of video data must be stored and processed quickly and efficiently in the right location in order to ensure passenger safety and reduce the risk and liability of the transit system.

At the same time, the role of video data continues to expand. The security team must constantly evaluate new technologies, such as video analytics to increase the effectiveness of security measures, and to enhance business operations.

Transit System Security Challenges

Video Management
Recording and storing high volumes of video data 24x7 with no frame loss

Real-time Insight and Response
Situational awareness, traveler monitoring, access control, and forensics

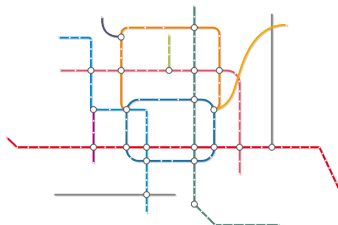
Business Requirements
Security and screening, station and platform management, ticket sales, and minimization of fare loss

Integration
Emergency responder reporting, forensic reporting and event management

Long-Term Archive
Video retention for analysis, investigative, legal, and regulatory compliance

Safe Transit Requirements

Stations, Depots, and Platforms
People, cell phone, and crowd monitoring; tracking persons of interest; employee authorization; incident tracking and reporting; baggage monitoring/authorization; retail and commercial security; mobile device tracking; digital signage



Transit Lines
Flow control; personnel access; perimeter surveillance; people, cell phone, and rider monitoring; tracking persons of interest; incident tracking and reporting; remote facility surveillance; baggage handling

SOLUTION BRIEF

BUSINESS BENEFITS

- **Manage Video Over its Lifecycle**
Quantum provides a comprehensive portfolio of solutions matched to how video surveillance data needs to be managed and enriched over its lifecycle so that the optimum performance, resiliency, economics, and access time is achieved for that point in its lifecycle.
- **Reduced Risks**
Quantum technologies ensure security and safety are never compromised due to lost access to critical video, hardware failures disrupting video recording and playback, impact to the integrity of captured video, or unauthorized access to video and other data.
- **Maximum Value for Your Investment**
Quantum employs latest-generation industry-standard hardware and innovative software-based intelligence for longer lifecycles and the best return on investment that helps transit systems stay within budget and achieve meaningful return on every dollar spent.
- **World-Class Service and Support**
Our customers benefit from world-class pre- and post-sale services provided by our global support organization, leveraging the experience gained from servicing tens of thousands of customers around the globe.

Providing a Solid Infrastructure Foundation for Safe Mass Transit

Whether you're looking for an entry-level network video recorder (NVR) for a small number of surveillance cameras, a large-scale server and shared storage deployment for tens of thousands of cameras, or a long-term archive solution to preserve critical video over the years, Quantum employs the latest in software-based intelligence and industry-standard hardware technology to provide the best solution for your public safety and business needs.

VS-HCI Series. In today's reality, reliable video surveillance is critical to the operations of all mass transit agencies. Quantum's VS-HCI Series designed for mission-critical environments eliminates the risks associated with losing access to video or dropped video frames, meeting the demands for 24x7x365 security operations with advanced system-level resilience, predictive health monitoring, and non-disruptive updates and system expansion.

VS-NVR Series. For scenarios where a simple NVR is appropriate, the Quantum VS-NVR Series offers a range of form factors, storage capacities, and performance based on the latest generation server hardware that are both easy to deploy and maintain. This includes an ultra-dense 4U 60-bay rack mount server for recording and retaining footage from hundreds of cameras for months or years.

VS-A Series. As transit systems turn to analytics software to optimize both security and operational efficiency, Quantum's VS-A Series provides a platform optimized for the processing requirements of today's video analytics applications for both edge and centralized environments.

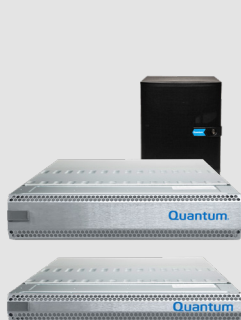
ActiveScale™ Object Storage and Scalar® Tape Libraries. Video retention times continue to get longer—increasing storage capacity requirements, which leads to increased cost and complexity. Quantum has solutions optimized for automatically archiving video data in object storage, tape libraries, and the public cloud, plus software tools that automate the movement of cold video for long-term retention and protect it from cyber and ransomware attacks.

R-Series Edge Storage. Quantum offers the R-Series Edge Storage to meet the unique challenges of remote and edge environments common in transit systems, such as moving vehicles and miles of tracks, roads, and remote stations. The R-Series is designed specifically to meet the demands of both video surveillance monitoring and Internet of Things (IoT) technologies in far-flung environments.

Virtual SOC. The Quantum Virtual Security Operations Center (SOC) delivers fully secure video streams and other security applications to any device, anytime, anywhere and overcomes the costs and complexity of managing individual physical desktops and workstations through a unified infrastructure of compute, storage, and virtual desktop technology.

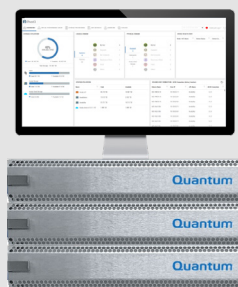
Quantum's Infrastructure Portfolio: Optimized for Surveillance and Physical Security

For over 40 years, Quantum has been a leader in high-speed video capture, storage, and processing. Our global customers include the world's largest transit systems, airports, cities, education institutions, gaming and entertainment complexes, and government agencies. By using software-based intelligence and automation, the latest industry-standard hardware, and our years of expertise in video capture and storage, we've built a portfolio of solutions optimized for video surveillance and physical security that deliver the resilience, performance, scalability, and economics required in transit environments.



VS-NVR Series

Cost-effective network video recording servers.



VS-HCI Series

Hyperconverged infrastructure for video recording, storage, and hosting other applications.



VS-A Series

Servers optimized for video analytics, access control, management, and more.



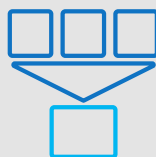
Shared and Archive Storage

Scale-out file storage, object storage, tape, and cloud.



Quantum StorNext®

Video Management Platform reduces storage and protection costs and manages video over its lifecycle using automated policies.



Quantum Acuity

Hyperconverged Infrastructure Software Platform in VS-HCI Series turns industry-standard servers into a resilient, scalable system of compute and storage optimized for video.



Quantum Cloud-based Analytics

The core of Quantum Distributed Cloud Services enables system admins and technical support personnel to monitor and proactively assess system health remotely.

Key Advantages

- Complete portfolio to meet the specific requirements of video at all stages of its lifecycle and environments from small to large and from remote to centralized locations.
- Performance, resilience, and density designed for demanding video surveillance, IoT, and security applications, including the latest in sensors, cameras, analytics, and incident reporting.
- Simple, centralized management of systems distributed around the transit environment without specialized IT skills.
- Flexible scalability allows for growth without interruption as new security, video, and IT functions are deployed.
- Industry-leading archive solutions to cost-effectively address the requirements for long-term video retention.

Deep Technology Partnerships

Quantum has a long history of partnering with the leading video management, analytics, access control, and camera companies to jointly test, validate, and support mission-critical security solutions. You can deploy with confidence knowing the Quantum product you select has been validated as a total solution.

For more information about our video surveillance solutions, visit: www.quantum.com/surveillance

Quantum

Quantum technology, software, and services provide the solutions that today's organizations need to make video and other unstructured data smarter – so their data works for them and not the other way around. With over 40 years of innovation, Quantum's end-to-end platform is uniquely equipped to orchestrate, protect, and enrich data across its lifecycle, providing enhanced intelligence and actionable insights. Leading organizations in cloud services, entertainment, government, research, education, transportation, and enterprise IT trust Quantum to bring their data to life, because data makes life better, safer, and smarter. Quantum is listed on Nasdaq (QMCO) and the Russell 2000® Index. For more information visit www.quantum.com.

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