Quantum®

P2 Wireless and Quantum Provide a Groundbreaking Solution for Today's Wireless Video Surveillance Challenges

Over the last few years, the landscape for surveillance video has dramatically changed for the better. Camera sizes have shrunk while camera quality has simultaneously improved. The evolution from standard color to HD and now 4K continues at an unprecedented pace. But the greatest factor of all has been the decrease in camera costs. Each of these factors taken together has resulted in record-breaking unit shipments of video surveillance cameras.

As cameras are appearing in more non-traditional locations, it is becoming increasingly difficult to link the cameras using traditional wire technology such as Ethernet or fiber channel cabling.

Some organizations have experimented with mobile transmission over cellular networks. In some cases this can be a "good enough" solution. However, for most organizations, cellular is considered to be a "compromise" due to several factors:

- Cellular networks are incapable of transmitting multi-stream video surveillance at most cameras' best quality and frame rates.
- Cellular networks are not reliable enough to provide the uptime expected of organizations, which means that critical video may be lost forever.
- Cellular networks are expensive given that video can consume tens of gigabytes per day, even with compression.

SMART VIRTUAL FIBER NETWORK TECHNOLOGY EXCELS WHEN NO OTHER TECHNOLOGY WILL DO

Smart Virtual Fiber networks have several advantages over other types of networks such as cellular:

- Ability for remote locations where cables and cellular networks cannot operate.
- High-performance throughput that is capable of 4K transmission at 30 frames per second, equivalent to a crisp movie delivered by Netflix 4K.

INDUSTRY SCENARIO

Smart City regulations require effective video surveillance of streets, buildings, and open spaces such as plazas and parks.

CHALLENGES

- Complete coverage, even in areas without buildings (e.g., plazas and parks)
- Fast and inexpensive implementation
- Redundancy to overcome natural or man-made disasters
- Continuous high streams of video surveillance
- Growing costs for video surveillance retention

SOLUTION

- P2 Wireless Smart Virtual Fiber solution
- Quantum intelligent multi-tier storage platform

KEY BENEFITS

- Instant protection for critical facilities
- Always-up security network
- Deployment of cameras to locations previously not feasible
- Simultaneous feeds of more than 80 HD or 20 4K video surveillance cameras
- Cost-effective, scalable storage of large amounts of video
- Increased retention rates while still maintaining all critical data
- Ability to access video quickly and easily, regardless of storage tier

- Unparalleled uptime from the native daisy chain configuration that even compensates for the loss of a link in the daisy chain such as what may occur during a natural disaster when uptime is most critical.
- Low-cost design that is closer to traditional wired technologies than expensive cellular technologies.

P2 WIRELESS SMART VIRTUAL FIBER SOLUTION

The P2 Wireless patented Smart Virtual Fiber technology redefines conventional security surveillance, enabling real-time full HD video monitoring for areas where cabling just won't work. This technology also takes wireless beyond point-to-point application by allowing multi-hopping without traditional bandwidth loss.

Instant Protection for Critical Facilities

Simple cable-free deployment ensures short lead time for installation. Smart Virtual Fiber's flexibility secures coverage despite architectural and geographical constraints such as building structure, remote locations, and mountainous terrain.

Always-up Security Network

A self-recovery network with redundancy path and unique controller-independent architecture provides unrivalled reliability.

Flexibility in the Deployment of Cameras to Locations Previously Not Feasible

Without the constraint of cables or leased fixed lines, surveillance coverage areas can be extended at a lower cost. The grid may be easily restructured from time to time to accommodate changing or temporary needs.

Simultaneous Feeds of More than 80 x HD Surveillance Cameras, or 20 x 4K Surveillance Cameras

Gigabit network delivers premium performance designed to meet the demand for absolute and complete security.

SMART VIRTUAL FIBER NETWORKS CALL FOR ADDITIONAL, HIGH-PERFORMANCE STORAGE BUT WITHOUT ADDITIONAL COST

Video surveillance storage requirements are at an all-time high and continue to grow. Storage requirements are the product of camera count x camera quality/resolution x camera frame rate x retention time.

Traditional storage systems are not designed for, or capable of, multi-streams of high-quality surveillance video.
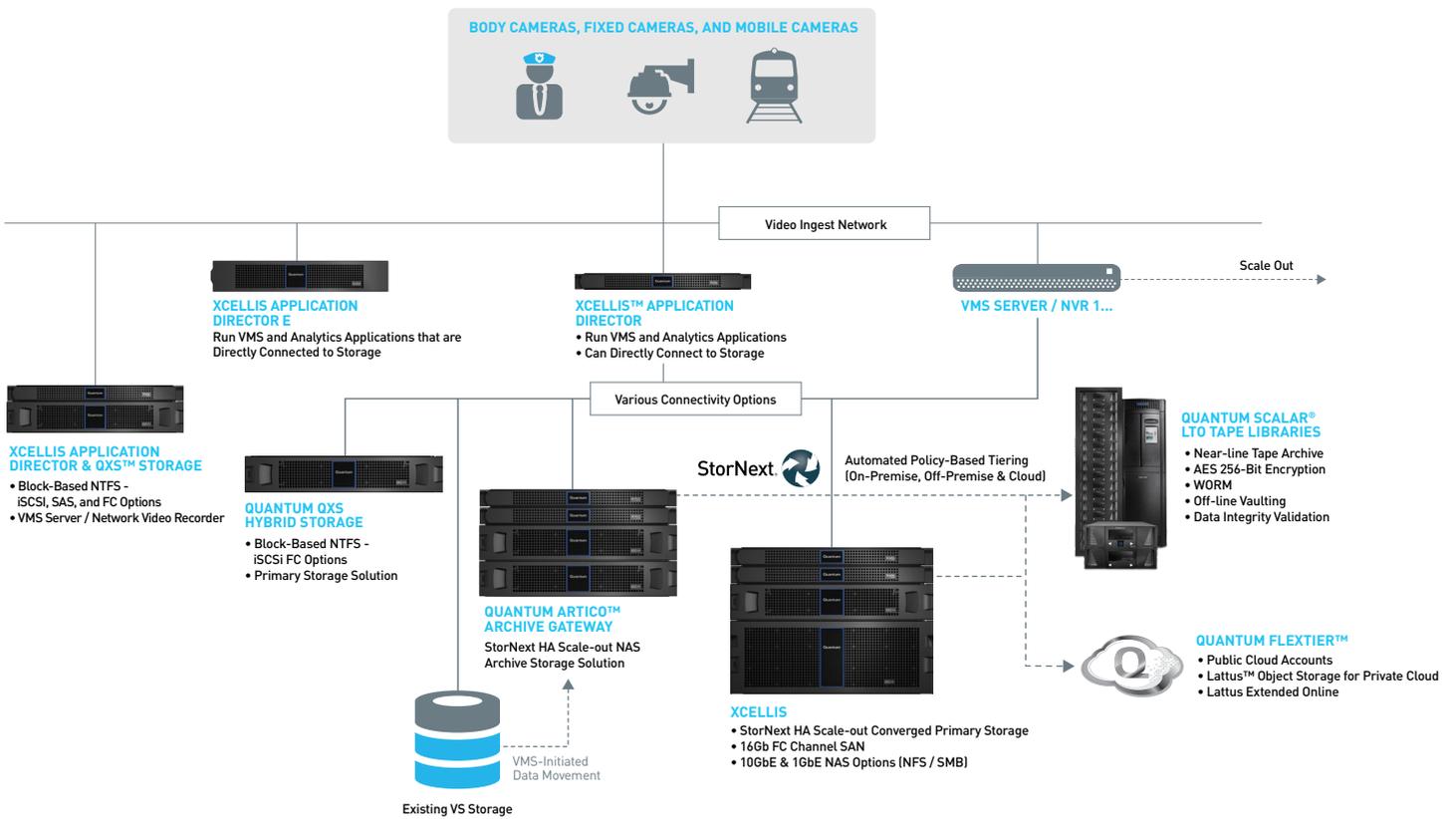
Just as importantly, the cost of storage as a percentage of an overall video surveillance solution has been increasing—to as much as 55% by some analyst estimates. This high cost forces some organizations to compromise on camera counts, resolution, retention time, and even implementation of next-generation capabilities such as analytics.

AVOID THE HIGH COST OF USING ONE TYPE OF STORAGE TECHNOLOGY

Being able to deploy multiple types of storage tiers creates a balanced infrastructure based on performance and capacity. For example, if high-performance disk costs users $1, tiering to secondary disk costs users $.35, file-based tape comes in at $.18, and the cloud costs users between $.08 – $.16. Migrating data based on retention time to more cost-effective tiers of storage frees up more money in the budget to spend on cameras and other security tools.

VIDEO SURVEILLANCE REFERENCE ARCHITECTURE

BODY CAMERAS, FIXED CAMERAS, AND MOBILE CAMERAS

Video Ingest Network

Scale Out

XCELLIS APPLICATION DIRECTOR E
Run VMS and Analytics Applications that are Directly Connected to Storage

XCELLIS™ APPLICATION DIRECTOR
• Run VMS and Analytics Applications
• Can Directly Connect to Storage

VMS SERVER / NVR 1...

XCELLIS APPLICATION DIRECTOR & QXS™ STORAGE
• Block-Based NTFS - iSCSI, SAS, and FC Options
• VMS Server / Network Video Recorder

Various Connectivity Options

QUANTUM QXS HYBRID STORAGE
• Block-Based NTFS - iSCSi FC Options
• Primary Storage Solution

StorNext.

Automated Policy-Based Tiering (On-Premise, Off-Premise & Cloud)

QUANTUM SCALAR® LTO TAPE LIBRARIES
• Near-line Tape Archive
• AES 256-Bit Encryption
• WORM
• Off-line Vaulting
• Data Integrity Validation

QUANTUM ARTICO™ ARCHIVE GATEWAY
StorNext HA Scale-out NAS Archive Storage Solution

VMS-Initiated Data Movement

Existing VS Storage

XCELLIS
• StorNext HA Scale-out Converged Primary Storage
• 16Gb FC Channel SAN
• 10GbE & 1GbE NAS Options (NFS / SMB)

QUANTUM FLEXTIER™
• Public Cloud Accounts
• Lattus™ Object Storage for Private Cloud
• Lattus Extended Online

QUANTUM SOLUTION

Quantum's intelligent multi-tier storage solution solves the storage infrastructure problems of today's organizations. Quantum's storage solution is designed for video applications and provides the best streaming performance in the industry for fast ingest and access. With Quantum's multi-tier architecture, the platform can scale incrementally as more storage capacity is needed to accommodate more cameras, longer retention times, and higher-resolution video files.

FIVE THINGS SECURITY/IT PROFESSIONALS NEED TO CONSIDER

1. Lowering Your Storage Spend
Organizations are keeping as much as 40% of their inactive data on their most expensive infrastructure. With unstructured video growing exponentially, fueled by the rise of new video surveillance programs, you can't afford to have this kind of inefficiency.

2. Providing Easy, Immediate Access to Your Data
Finding a video file in your system should be no more difficult than finding a document on a C: drive. You need a solution that allows your organization to save time and money, all while increasing efficiency.

3. Providing a High-Performance End-to-End Solution
Your storage capability will be critical—because storage that performs inefficiently prevents you from capturing usable data.

4. Scaling With Your Infrastructure Needs
The ability to seamlessly integrate more sources of information into modern analytical tools is becoming more important, as is the capacity to scale and accommodate increased camera and sensor counts, panoramic coverage, and higher image resolution. So when your organization needs grow, your systems will be ready.

5. Ensuring Compliance With Your Current Infrastructure
Supporting all major platforms, operating systems, and networks to ensure seamless integration with VMS, cameras, analytics, and storage is important. Don't let your organization get locked into a single vendor or platform.

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www.quantum.com/video-surveillance

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