

# DDN<sup>®</sup> STORAGE

**INDUSTRY  
SOLUTION BRIEF**

**ACCELERATE  
VIDEO  
SURVEILLANCE**  
STATIONARY &  
BODY WORN



## VIDEO SURVEILLANCE

### WHEN PERFORMANCE MATTERS

The volume, velocity and variety of surveillance data are growing exponentially. The volume of data in a single surveillance project – stationary or body worn - is moving from Terabytes to Petabytes, stressing VMS and storage scaling. Data Velocity is increasing from Megabytes to Gigabytes speeds with a need for millions of I/Os consuming more and more resources. Mixed I/O performance is increasingly critical and many traditional systems do not handle Variety – both large and small files well and cannot handle both structured and unstructured data.

#### BIG DATA: A PROBLEM AND A VIRTUE

Finding the right balance of control, performance, scalability and availability to keep up with and effectively exploit the data deluge is rewarding and missing the mark means painful and costly upgrades. Performance needs to scale to allow for increasingly demanding playback and / or analytics features. Capacity needs to scale non-disruptively as cameras are added while resolutions and retention periods may increase over time. Availability at scale is tricky – something as simple as slow rebuild times become critical in larger systems – endangering availability and system data integrity.

In addition to net new installations, DDN does a healthy business in replacing underpowered infrastructures that deliver on the initial requirements but fail on scaling. The most frequent culprits when a video surveillance site fails and needs a significant replacement / upgrade include: single controller architectures, silent data corruption, data loss from secondary failures during drive rebuilds, performance impact of rebuilds, alternates to RAID6 data protection and lack of experience scaling into the petabyte or multi-petabyte range.

#### THE RIGHT APPROACH FOR SECURITY TODAY & TOMORROW

For over 15 years, DataDirect Networks (DDN) has been delivering the world's fastest storage solutions for data-intensive workflows. DDN has delivered HD quality solutions to over 600 of the world's largest media organizations. Mid-range to large scale Video Surveillance solutions have been deployed at leading companies and institutions in law enforcement, corrections, public transportation, retail, housing, hotels, casinos, universities, landmarks and more.



**Maricopa County Sheriff's Department** selected a multi-petabyte solution from DDN to Improve Security and Speed Time-to-Response at Correctional Facilities with Real-Time Video Surveillance Data Capture, Storage and Processing.



To reduce street crime, **The City of Anyang**, South Korea backed 1,300 cameras with DDN storage for a solution with unmatched bandwidth and reliability at nearly half the cost of other bids.

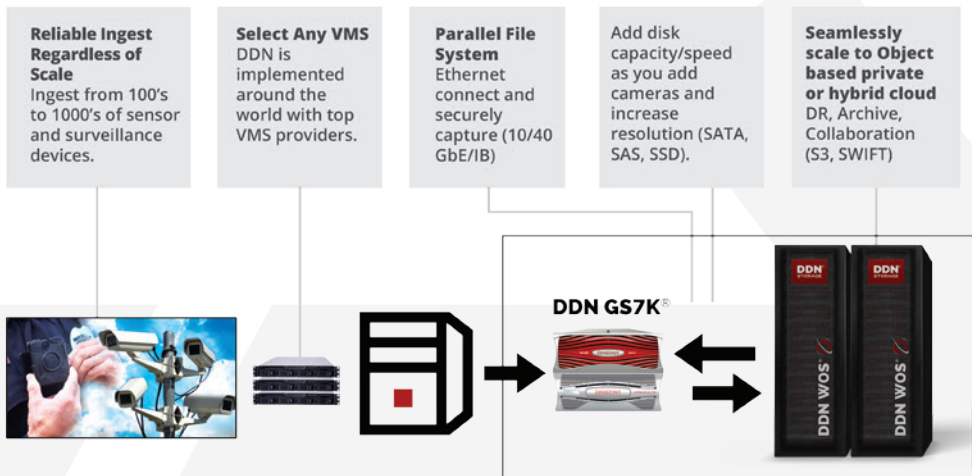


To better ensure the physical security of its facilities and the safety of its officers, employees and inmates, **The World's Largest Sheriff's Department** deployed over 5PB of high-density DDN storage to quickly and effectively refute false use-of-force claims and identify misconduct.



Public Transport Authority

To improve passenger safety and reduce IT Costs, **The Public Transit Authority of Western Australia** deployed 1.5PB of DDN Storage to consolidate over 75 direct attach storage systems which improved capture performance by 12x for 1300 cameras across 70 train stations and 90 rail cars.



# DDN TECHNICAL ADVANTAGES

## RELIABLE PERFORMANCE SCALES SUPPORTING INGEST, PLAYBACK & DISTRIBUTION UNDER ALL CONDITIONS

DDN platforms deliver full performance even during outage and rebuild conditions. Traditional Storage systems lose performance during drive rebuilds, data integrity checks and error events further diminishing system reliability and usability. During any of these situations traditional storage can lose 20 to 100% of its performance dropping camera feeds, delaying retrieval and making shared archival data inaccessible to local and remote users. The DDN SFA™ architecture includes advanced features like DirectProtect™ Real-Time Error Detection & Correction, automatic reboots of drives that fail, ReACT™ Intelligent Cache Management to ensure mixed I/O workloads perform and intelligent journaling for partial drive rebuilds. The result is up to 80% fewer rebuilds and faster rebuilds when they do occur – protecting both system availability and performance.

## START SMALL AND SCALE TO MULTI-SITE OR CITYWIDE IN ONE ARCHITECTURE

Problems with Scalability and Expansion are the critical reasons large video surveillance infrastructures fail. DDN storage solutions start as low as 80TB with a throughput performance of at least 5GB/s and scale to 10s of Petabytes delivering as much as a TB/s of throughput if required from the same platform. As they scale they become even more cost-effective, making DDN the storage platform of choice around the world for Academia to Gaming and Transportation to Law Enforcement applications.

## A GLOBAL INSTALLED BASE WITH ALL MAJOR VMS PROVIDERS



## DDN PRODUCTS FOR MID-RANGE AND LARGE SCALE VIDEO DEPLOYMENTS

### SFA7700X™



**World Leading Density • 480 TB in Only 4U • Over 3PB on 1/2 a Rack**

SFA7700 delivers the storage performance DDN is famous for in a system that starts under 100TB and scales to Petabytes with up to 10GB/s of throughput making it ideal for mid-range video surveillance projects. The SFA7700 was designed for On-Demand Expansion capable of handling many VMS instances with hundreds to thousands of HD quality camera streams. The SFA7700 delivers enterprise level video storage performance and reliability at mid-range pricing.

### SFA14K™



**World Leading Density • Scaling to 7 PB in 1 Rack**

SFA14K is the industry's fastest storage system, delivering unprecedented levels of performance, scalability and reliability. On-Demand Expansion starts at <100 Terabytes and scales non-disruptively to 10s or 100s of Petabytes whenever needed. SFA14K is well suited for very large video surveillance projects that require dozens of VMS instances and thousands of body-worn or stationary cameras. The SFA14K is a must have for organizations that demand maximum return from their high performance large scale video storage solution.

## ABOUT DDN®

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations. For more than 15 years, DDN has designed, developed, deployed and optimized systems, software and solutions that enable enterprises, service providers, universities and government agencies to generate more value and to accelerate time to insight from their data and information, on premise and in the cloud. Organizations leverage the power of DDN technology and the deep technical expertise of its team to capture, store, process, analyze, collaborate and distribute data, information and content at largest scale in the most efficient, reliable and cost effective manner. DDN customers include many of the world's leading financial services firms and banks, healthcare and life science organizations, manufacturing and energy companies, government and research facilities, and web and cloud service providers. For more information, visit our website [www.ddn.com](http://www.ddn.com) or call 1-800-837-2298.