



An Arrow Company

CREATING SOLUTIONS OPTIMIZED FOR SURVEILLANCE.

**OPTIMIZED • CERTIFIED • GUARANTEED**



Seneca's flagship xVault xNVR200 is a purpose built video storage appliance that features the Intel® Xeon® Processor for optimal performance

Intel Inside.® Powerful Solution Outside.

Have questions about our products, services, or solutions?

Contact a Seneca Account Manager at **877.814.0348** or visit **[www.senecadata.com](http://www.senecadata.com)**

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## Digital Security and Surveillance



## SENECA® an Arrow Company

Seneca®, an Arrow Company, has been building and distributing computer products for over 35 years. Founded in 1979, Seneca has adapted to the market and evolved into a leading custom appliance manufacturer. We have turned our talent and passion for technology towards an ambitious vision **“to create solutions that simplify technology”**. Seneca specializes in delivering the highest quality video technology solutions for surveillance, visual media, digital signage and business.

Today we are one of the largest custom computer builders in the nation and rapidly evolving into a preferred brand in many vertical markets. Seneca has the ability to meet the needs of multiple markets with global operations and reach being part of Arrow Electronics, a Fortune 150 company. Our world class engineering experience and capabilities provides product design, development and innovation for every solution we create.

### THE STORY BEHIND XVAULT

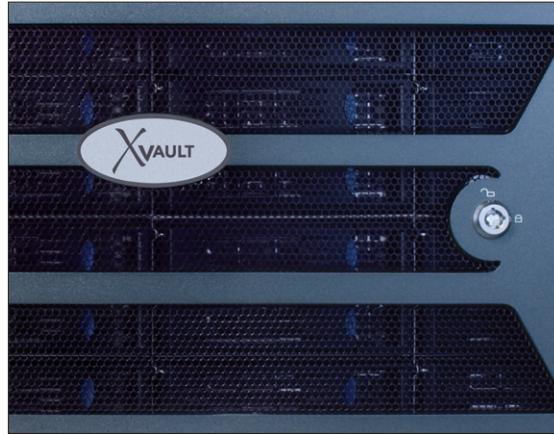
xVault was introduced to the security and surveillance market in 2011 and has become one of the most well-known quality brands in the physical security market. Building our foundation by understanding the market and its challenges, xVault offers solutions to manage, record, store and view video surveillance with recording servers, viewing stations, and storage appliances.

Striving to create dynamic and quality surveillance solutions, xVault products are developed through in-house design and engineering. We design, test, build and support xVault products through stringent component selection from industry leaders. All xVault products are certified with leading video management software (VMS) platforms to ensure compatibility and performance.



## PARTNER WITH SENECA

The leading supplier for integrators who need a manufacturer that simplifies technology specific to security.



### SPECIALIZED PRODUCT

#### Optimized

Enhanced performance and reduced installation time

#### Certified

Servers tested and certified with leading VMS platforms

#### Guaranteed

Performance guaranteed by Seneca with specifications and backed by a full system warranty



### EXPERIENCE

#### Premier System Builder

We design, test, build, and support purpose built products with over 12 years of experience in manufacturing of IP surveillance products

#### Partnerships

Strategic technology partnerships (Intel, Microsoft, Seagate, Avago, NVIDIA)

#### Flexibility

System builder that offers alternative solutions as needed  
Pride in providing the right solutions...every time



### EXPERTISE

#### Engineering Capabilities

Hands on philosophy: pre-sales support and design tools to solve your challenges

#### Support

Dedicated Support Team for product design, solution recommendation and service

#### Design

Systems designed specifically for surveillance applications that simplify deployments

Find your perfect solution for security with our product selector, use this tool at: [dssproductselector.senecadata.com](http://dssproductselector.senecadata.com)

## SIMPLIFYING TECHNOLOGY UNDER ONE ROOF



**EXPERTISE**

**PRODUCT**

**EXPERIENCE**

**MAKE THE RIGHT CHOICE**

**OPTIMIZED**

**CERTIFIED**

**GUARANTEED**

Save time and money with the leading manufacturer of **computing technology** for physical security.



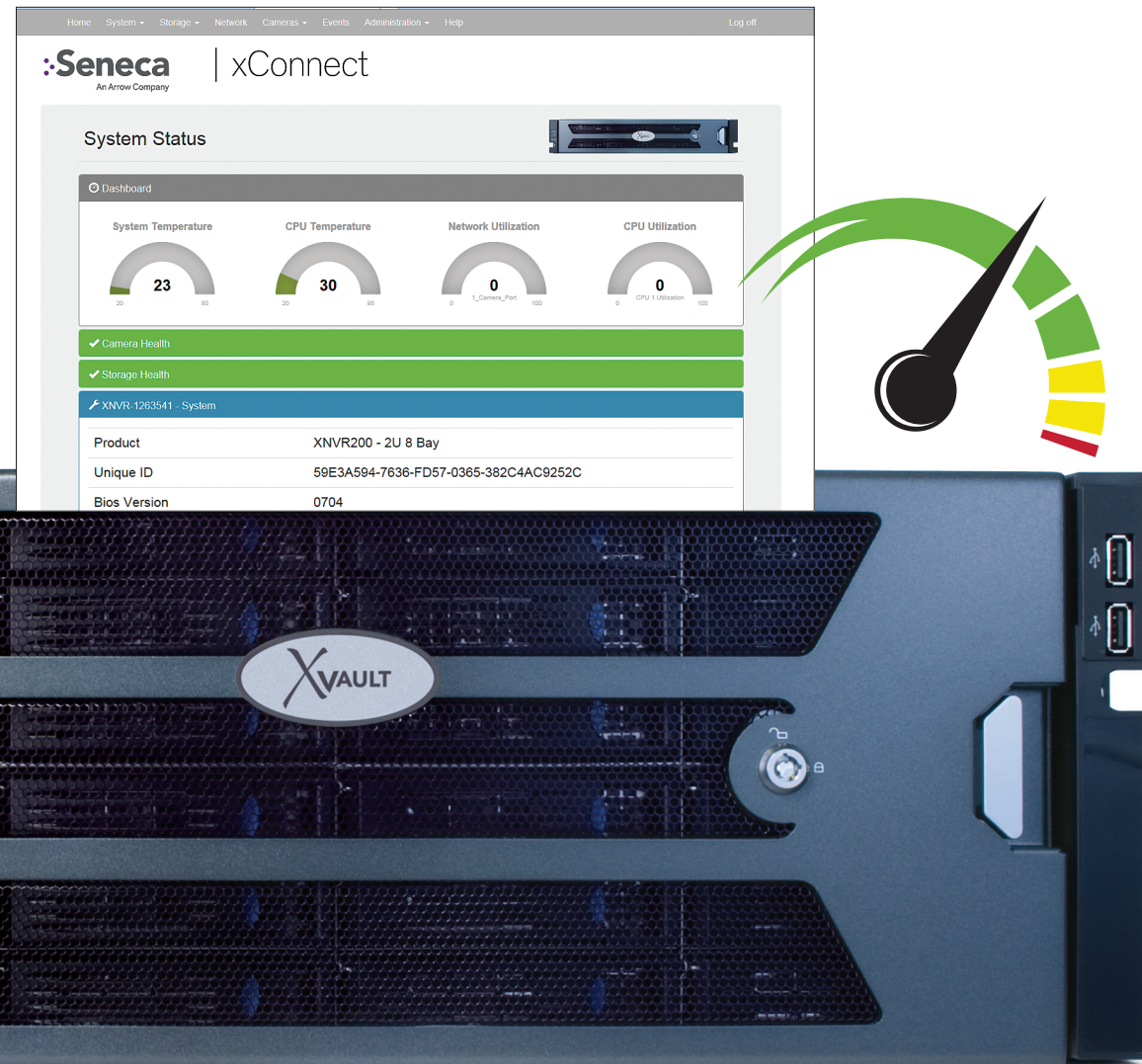
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**Seneca**  
An Arrow Company

# XCONNECT MONITORING SOFTWARE

Customers require a solution that is performing as intended for video surveillance. xConnect provides the tools and resources to ensure system operation and up-time, while preventing future issues.

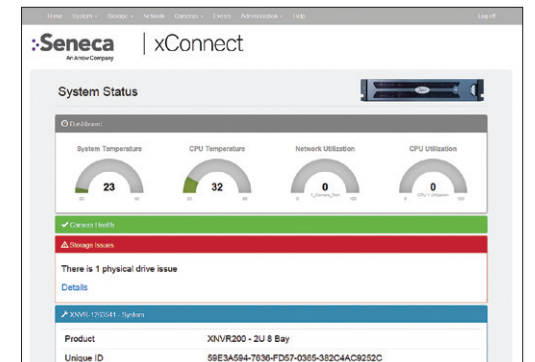
Seneca's xConnect monitoring software is a web-based system designed to monitor, report and manage the overall health, environment and performance on xNVR surveillance hardware. This monitoring tool will help with predictive analysis to identify potential failure, allowing users to respond to these events.



## SYSTEM MONITORING

The system home page is the go-to location for users to monitor key components that are critical to the integrity of your surveillance hardware.

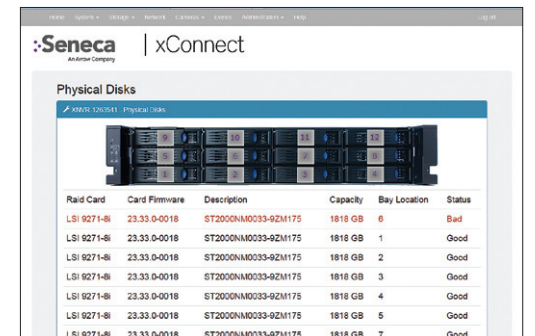
- Monitor system issues, environmental characteristics and performance from a single screen
- System analysis can identify potential issues before a failure occurs highlighted in red



## IMMEDIATE ALERTS

Receive instant notifications for critical issues on your NVR to take immediate actions.

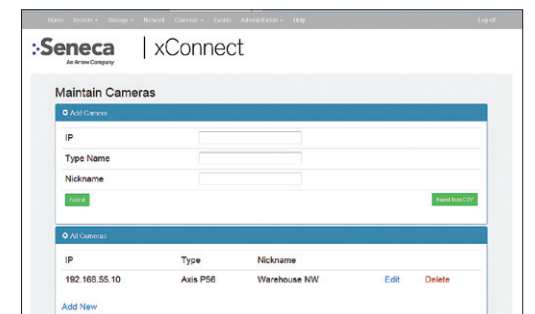
- Instant notifications sent via email or SNMP



## CAMERA CONNECTIVITY

Monitor the registered cameras on the network to indicate the connectivity and status

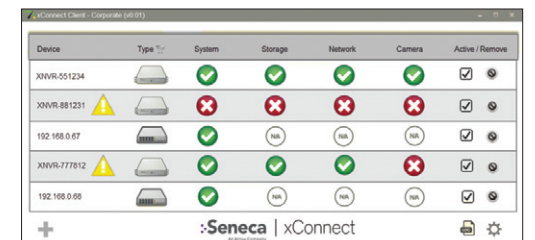
- Instant notification when a camera has lost connection



## XCONNECT CLIENT

The desktop web-based client allows customers to monitor the key components remotely

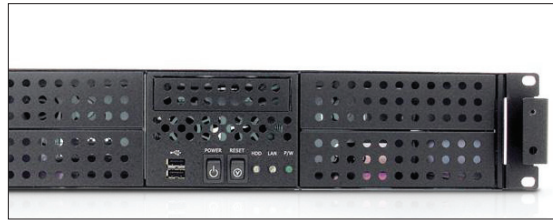
- Accessible through any Windows based device for on-the-go monitoring
- High level status view of system, storage, network and cameras
- Multiple client versions with enhanced features



xConnect is installed on the: **xNVR200, xNVR300, and xNVR400**

# NETWORK VIDEO RECORDERS

The xVault xNVR product line has been custom configured to support leading video management software platforms to ensure xVault appliances reach their maximum performance. With guaranteed hardware platforms, Seneca continues to design quality products that improve and simplify installation. The xNVR product line supports single site, simple installations to multi-site, high performance surveillance projects.



## XNVR100

UP TO 100 Mbps OF THROUGHPUT

Series of small form factor NVRs for entry level, low camera count surveillance projects.

- All-in-one system for video recording, viewing, and storage
- Robust, ready-to-use solutions with seamless VMS installation

## XNVR150

100–150 Mbps OF THROUGHPUT

Provides customers with high definition IP recording for single and remote site locations that require additional throughput.

- Equipped with enterprise class components with excellent performance
- Onboard RAID for enhanced reliability and protection



## XNVR200

150–250 Mbps OF THROUGHPUT

Designed for professional grade surveillance deployments with the ability to scale desired video storage.

- **Our flagship product!**
- Open platform design to deliver better performing systems while reducing costs
- Certified and optimized with leading VMS platforms for guaranteed performance
- Pre-installed with xConnect monitoring software

# XNVR QUICK REFERENCE GUIDE

### DAYS OF STORAGE

	15	30	60	
<b>4 CAMERAS</b>	xNVR100-R2-2TB	xNVR100-R2-2TB	xNVR100-R2-4TB	NON-RAID
<b>8 CAMERAS</b>	xNVR100-R2-2TB	xNVR100-R2-4TB	xNVR100-R2-6TB	
<b>16 CAMERAS</b>	xNVR100-R2-4TB	xNVR100-R2-6TB	xNVR150-R2-12TB-W7	
<b>24 CAMERAS</b>	xNVR150-R2-4TB-W7	xNVR150-R2-8TB-W7	xNVR200-2U4-20T-W7	RAID
<b>32 CAMERAS</b>	xNVR150-R2-8TB-W7	xNVR150-R2-16TB-W7	xNVR200-2U8-24T-W7	
<b>48 CAMERAS</b>	xNVR200-2U4-12T-W7	xNVR200-2U8-24T-W7	xNVR200-2U12-36T-W7	
<b>64 CAMERAS</b>	xNVR200-2U4-16T-W7	xNVR200-2U8-24T-W7	xNVR200-2U12-48T-W7	

The product selection provided is for planning purposes and is based on performance testing with 2Mbit/sec stream rate for each camera at 720p 10fps. Days of storage was calculated using 50% recording for 12 hours.

## SYSTEM SPECIFICATIONS

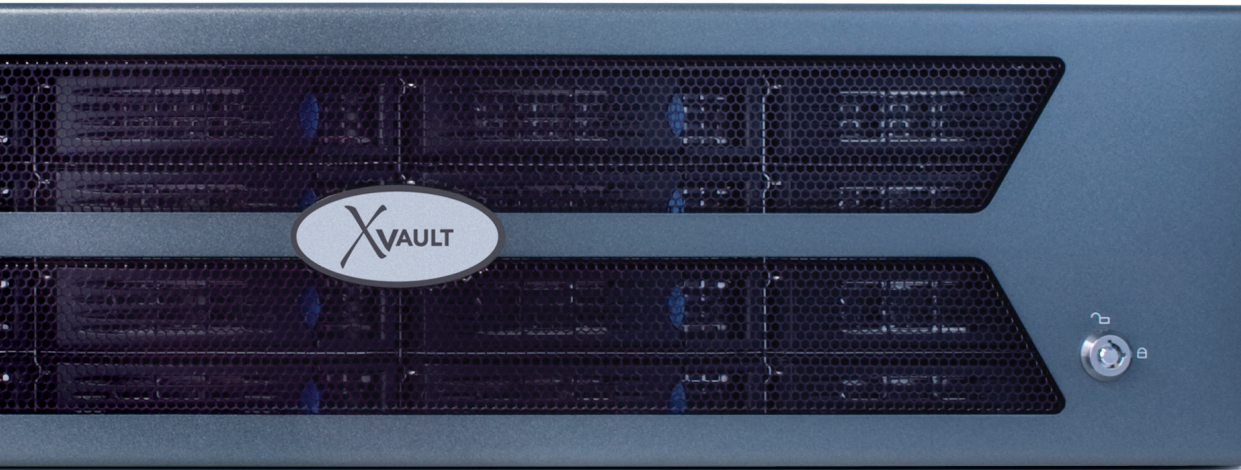
<b>Processor</b>	Intel® Xeon® Processor E3 Series
<b>Operating System</b>	Windows Server® 2012 R2 Windows Server® 2008 R2 Windows 7 Embedded Enterprise
<b>Memory</b>	16GB DDR3 1333MHz ECC Registered
<b>Maximum Raw Storage</b>	Up to 192TB
<b>HDD Tray</b>	Hot-Swappable
<b>Networking</b>	2 × 1GbE LAN Ports Standard Up to 6 × 1Gb LAN Ports
<b>Management LAN Port</b>	Optional KVM-Over-Internet Remote Management
<b>OS RAID</b>	RAID 1
<b>RAID Level Support Options</b>	0, 1, 5, 6, 10, 50, 60, JBOD
<b>Warranty</b>	3 Year, Next Day, Onsite Server Warranty Optional 5 Year, Next Day, Onsite Server Warranty

**Certification and Performance Built into a Dynamic NVR.**  
Explore the xNVR200 today [www.senecadata.com](http://www.senecadata.com).

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### XNVR300

250–350 Mbps OF THROUGHPUT

Series of enterprise network video recorders engineered for mid to large scale deployments.

- Fully customizable with a wide range of options to build for your individual project
- Storage expansion options to meet additional video storage demands
- Pre-installed with xConnect monitoring software

### XNVR400

350–450 Mbps OF THROUGHPUT

High performance NVRs engineered for enterprise surveillance deployments with exceptional throughput.

- Built with dual Intel® Xeon® processors for extensive workflows and performance
- Seamless integration with enterprise hardware and software platforms
- Pre-installed with xConnect monitoring software

Specifications	XNVR100	XNVR150	XNVR200	XNVR300	XNVR400
<b>Processor</b>	4th gen Intel® Core™ i3 Processor	Intel® Xeon® E3 Processor	Intel® Xeon® E3 Processor	Intel® Xeon® E5 Processor	2 × Intel® Xeon® E5 Processor
<b>Throughput</b>	Up to 100 Mbps	100–150 Mbps	150–200 Mbps	200–300 Mbps	300–450 Mbps
<b>Max Storage</b>	16TB	32TB	192TB	192TB	192TB
<b>RAID</b>	N/A	O.S., 0, 1, 5	0, 1, 5, 6, 10, 50, 60	0, 1, 5, 6, 10, 50, 60	0, 1, 5, 6, 10, 50, 60
<b>Form Factor</b>	Desktop Rackmount	Pedestal Rackmount	Pedestal Rackmount	Pedestal Rackmount	Pedestal Rackmount
<b>Memory</b>	Up to 16GB	Up to 16GB	Up to 16GB	Up to 64GB	Up to 128GB
<b>Warranty</b>	3 Year, Next Business Day, Onsite Warranty Standard (Optional 5 year)				

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# The future of digital video surveillance is here.

Get the surveillance storage portfolio that protects your customers' data.



Seagate offers the industry's only complete portfolio of surveillance-optimized drives, including the new 6TB Surveillance HDD with Seagate Data Recovery Services,\* for added data protection and 24x7 reliability.



### Surveillance HDD

Surveillance-optimized for systems with high camera and drive counts to improve both recording and playback performance and data reliability. Ideal for DVR, NVR, and Video Management Systems.

**1TB–6TB Capacity**



### Enterprise Capacity HDD

High capacity, high performance for video analytics and bulk storage with security features for secure drive disposal.

**1TB–6TB Capacity**



\*Available on select models of Surveillance HDD



[www.seagate.com/sdmag](http://www.seagate.com/sdmag)

# CLIENT VIEWING STATIONS

Seneca provides client viewing solutions for single and multi-site surveillance systems. Whether viewing from a single monitor with multiple cameras or multiple screens across a control room, Seneca can provide a solution to fit your demands. Seneca solutions are purpose built for the surveillance market and optimized for leading VMS platforms.

## XVIEW MINI

CLIENT VIEWING IN A SMALL FOOTPRINT

The xView Mini is a client viewing solution designed specifically for surveillance projects that require exceptional viewing on a single monitor.

- Powered by the Intel® Celeron® Processor
- Single monitor solution that streams up to 8 camera views
- Small form factor design with the ability to be mounted anywhere
- Excellent value and price point for small viewing solutions



## XVIEW CAMERA COUNT REFERENCE GUIDE

Resolutions	Monitor(s) →	xView Mini			xView Professional			xView Corporate			xView Enterprise			
		Single	Single	Dual	Quad	Single	Dual	Quad	Single	Dual	Quad	Single	Dual	Quad
VGA 30fps		8	38	34	24	48	40	36	64	48	42			
720p 10fps		8	36	32	24	40	36	32	56	44	40			
1080p 10fps		4	18	18	16	36	30	24	48	40	36			

Camera count listed is the maximum video streams for all monitors.

The stream count represents an average of several VMS clients. Individual VMS results will vary depending on total camera bit stream received by the system.

The values provided are for planning purposes only and are estimates based on performance testing done by Seneca. Seneca assumes no liability for damages or losses resulting from the use of the information.

\* Bit Rate data reflects the default bit rate for the specific Camera Type/Compression, Images Per Second (IPS) and Resolution options selected. Actual bit rate may differ.



## XVIEW PROFESSIONAL

MID-RANGE CLIENT VIEWING SOLUTION

One of the most versatile client viewing stations on the market today, the xView Professional is a client viewing station designed with multiple features and form factors.

- Equipped with the 4th generation Intel® Core™ i5 Processor
- Flexible form factors and installation options
- Ability to handle up to six independent monitors

<b>Processor</b>	Intel® Core™ i5 Processor
<b>Operating System</b>	Windows 8.1 Pro 64 Bit Windows 7 Professional 64Bit
<b>Memory</b>	Up to 16GB DDR4 2133MHz
<b>Graphics</b>	PNY K620 or K1200 Sapphire W600
<b>Display Support</b>	Up to 6
<b>Networking</b>	2 × 1GbE LAN Ports Standard Up to 6 × 1Gb LAN Ports



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### XVIEW CORPORATE

#### LARGE SURVEILLANCE PROJECTS

Designed to deliver exceptional performance, the xView Corporate client viewing appliance is equipped with the 4th generation Intel® Core™ i7 Processor Extreme Edition.

- Ability to drive up to 12 monitors
- Multiple configuration options tailored for project requirements
- Ideal for large surveillance monitoring projects including control rooms



### XVIEW ENTERPRISE

#### EXTENSIVE SURVEILLANCE VIEWING

Designed to support some of the largest and most extensive client viewing projects, the xView Enterprise appliance can handle it all.

- Powered by dual Intel® Xeon® E5 Processors
- Handles high volume surveillance viewing projects
- Powers up to 12 monitors simultaneously
- Ideal for supporting large control rooms and video wall projects

Specifications	MINI	PROFESSIONAL	CORPORATE	ENTERPRISE
<b>Processor</b>	Intel® Celeron® Processor	4th gen Intel® Core™ i7 Processor	4th gen Intel® Core™ i7 Processor Extreme	2 × Intel® Xeon® E5 Processor
<b>Displays Support</b>	Single	Up to 6	Up to 12	Up to 12
<b>Storage</b>	Up to 1TB Data	Up to 1TB Data	Up to 1TB Data	Up to 1TB Data
<b>Front Ports</b>	2 × USB 2.0	2 × USB 2.0 1 × Mic 1 × Audio	2 × USB 2.0 1 × Mic 1 × Audio	2 × USB 2.0 1 × Mic 1 × Audio
<b>Form Factor</b>	Ultra Small Form Factor	Small Form Factor Tower 2U Rackmount	Tower 2U Rackmount 4U Rackmount	Tower 2U Rackmount 4U Rackmount
<b>Memory</b>	4GB	8GB	16GB	16GB
<b>Warranty</b>	3 Year, Next Business Day, Onsite Warranty Standard (Optional 5 year)			

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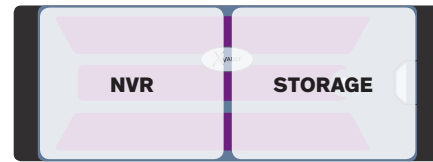
[support.senecadata.com](http://support.senecadata.com)



# SENECA STORAGE AND EXPANSION SOLUTIONS

## TRADITIONAL

- This solution allows users to record, manage, and store from one dedicated appliance
- As your project grows, this solution may not be able to handle additional storage or power



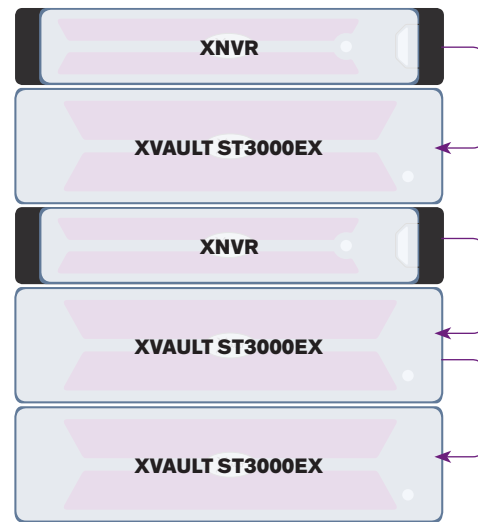
## EXPANSION

- xVault ST3000EX is ideal for video archiving
- Continue to build and add storage with xVault ST3000EX
- Expand through xVault's direct attached expansion



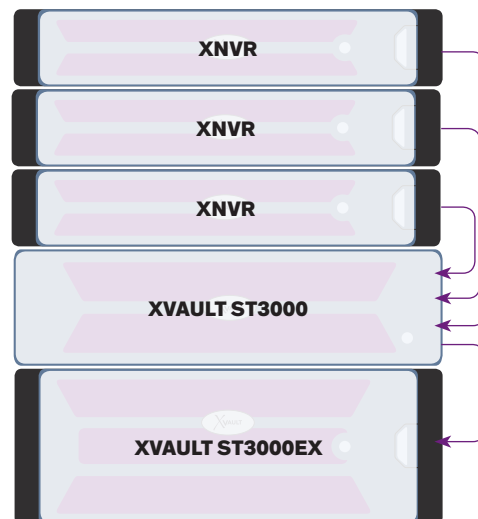
## DE-CENTRALIZED

- Add more cameras
- Have multiple NVRs
- More throughput
- This all can be achieved by adding multiple xNVRs and a ST3000EX
- xNVRs **cannot** communicate with each other



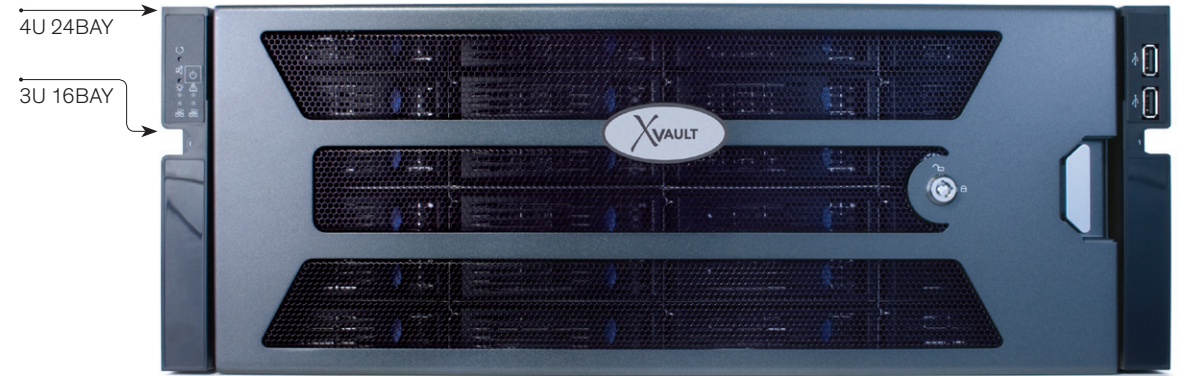
## CENTRALIZED MANAGEMENT

- Increase bandwidth by adding xNVRs
- Increase storage by adding a ST3000 master enclosure
- Manage a single system; xNVRs can communicate with each other



### xNVR Supports:

- SAS SAN
- iSCSI
- Fibre Channel
- Infiniband



## XVAULT ST3000

xVault ST3000 storage appliances allow integrators to scale their surveillance systems by adding additional bandwidth. One of the most versatile storage appliances with the ability to support 1Gbe, 10Gbe, SAS 6g, 8 and 16 Gb/s Fibre Channel and infiniband connections.

- Scalable storage appliance to accommodate storage and bandwidth expansion without an additional NVR
- Flexibility to tune to specific metrics and view high demand analytics
- Hold up to 1.536PB of raw storage with expanders

<b>Native Capacity</b>	192TB
<b>Disk Drives</b>	24 x 2.5" or 3.5"
<b>Client OS</b>	Windows Server 2012/2008, Windows 10, 8/7 VMware, Citrix, Linux, Solaris
<b>Bootable</b>	iSCSI, SAS, and Fibre Channel

## XVAULT ST3000EX

The ST3000EX is a cost effective storage solution to increase video retention or camera count without adding additional recorders. The ST3000EX storage expansion product requires connection to an XNVR or ST3000 as a controller device. Up to four enclosures can be daisy chained to a single controller connected to an xNVR or an ST3000 for up to 1.728PB of raw storage.

- Expand your NVR storage up to an additional 384TB of raw storage per expander
- 3U and 4U configurations available
- Cost effective solution to expand video storage

<b>Native Capacity</b>	<b>3U:</b> Up to 128TB / <b>4U:</b> Up to 192TB
<b>Disk Drives</b>	<b>3U:</b> 16 x 2.5" or 3.5" / <b>4U:</b> 24 x 2.5" or 3.5"
<b>Drive Interface</b>	SATA II/III, SAS, 3G/6G/12G

## XVAULT ST1000

Need to expand your xNVR100 and xNVR150 product lines? Try the xVault ST1000 to expand up to 32TB of storage in a small form factor design for easy storage.





# LSI AM A TRAILBLAZER.

I AM NOT GOING ANYWHERE WITHOUT  
HARDWARE RAID.

The difference is Hardware RAID.  
I wouldn't count on anything other than hardware  
RAID to keep my IT environment running at its peak.  
So that I can keep moving ahead at my peak. LSI is  
my silent partner in innovation.



## MegaRAID

Ensure critical data is protected and available with the most widely deployed RAID data protection architecture. Our broad range of MegaRAID and 3ware RAID controller cards are designed to address virtually all direct-attached storage environments where data protection, performance and expandability are crucial requirements – SATA or SAS, hard disk drives (HDDs) or solid state drives (SSDs), server-based storage or external directattached JBODs and storage enclosures.



Storage. Networking. Accelerated.™



## ACCESS CONTROL SERVER

Designed for compatibility with access control systems, the server stores and manages valuable information. This appliance provides a range of access control solutions from storing badge information for simple door access, all the way up to managing integrated systems (such as intrusion, video, and alarms).

- Optimized to work seamlessly with existing access control systems
- Serial port for direct connection to different I/O to establish a gateway through IP connections
- Dedicated NICs for simplified connectivity with cameras and other downstream devices



## MANAGEMENT SERVER

Manage your entire surveillance system in a single appliance with the management server. The server functions as your primary data management for the surveillance system, allowing your recorders to apply bandwidth to focus on video storage for optimal performance.

- Allows management application to be removed from NVR for more bandwidth
- Provides cost effective solution to manage complex surveillance solutions
- Manage workflows and system configurations in a single appliance

Contact us about rugged or hybrid network video recorders!





**NVIDIA® NVS™ 810  
SURVEILLANCE  
REVOLUTIONIZED**

Are you ready?

**VWC-PLUS**  
MISSION CRITICAL CONTROL ROOM VISUALIZATION

The VWC-PLUS is designed to dominate the command center. It continues to change the paradigm of control room display. Meticulous design with attention to details provide the VWC-PLUS with 24/7 reliability and up-time for command centers and surveillance control rooms.

- 4th generation Intel® Core™ i7-5960X Processor Extreme Edition
- Up to 32 independent inputs and outputs
- Infocomm 2015 Best-in-Show Award
- True 4K Outputs

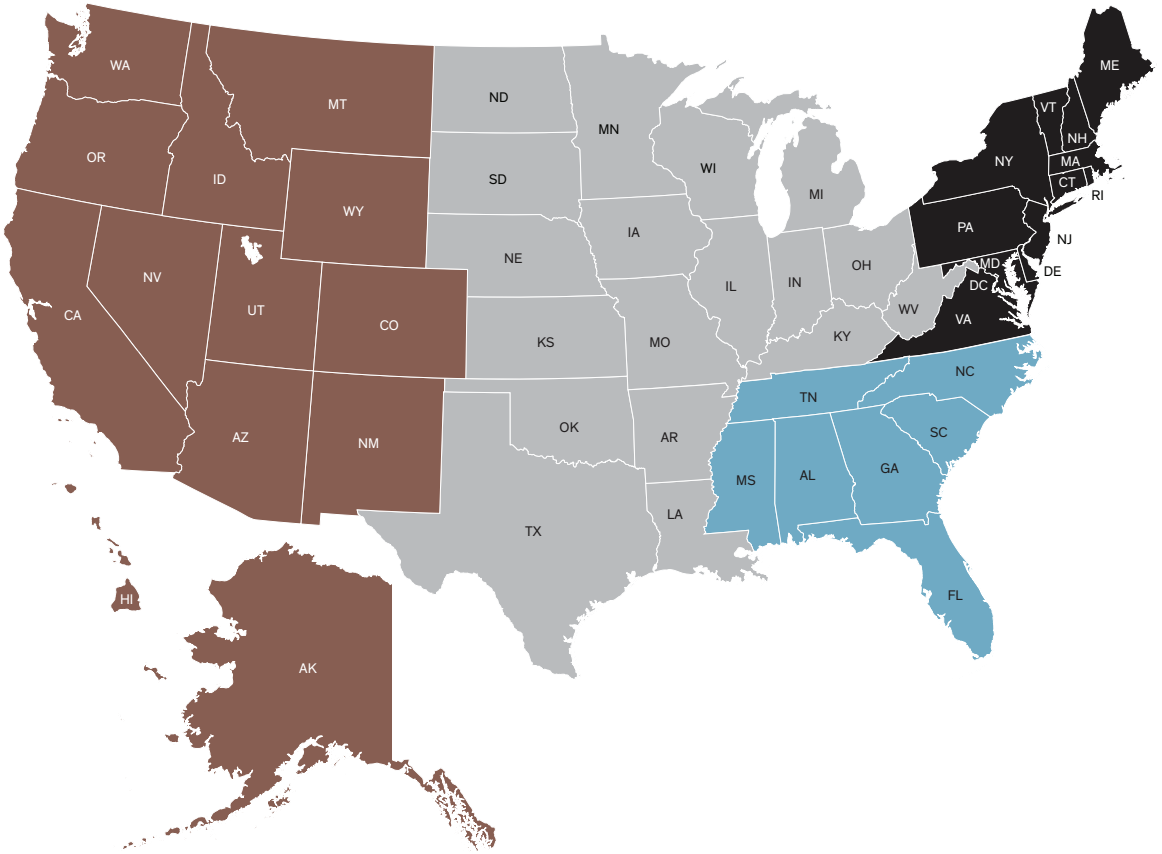


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THE REVOLUTION BEGINS 2016

OPEN THE DOOR  
TO ALL THE POSSIBILITIES

**EXPERTISE  
PRODUCT  
EXPERIENCE**



## SECURITY AND SURVEILLANCE BUSINESS DEVELOPMENT TERRITORY MAP

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