Safe and Smart Surveillance Drive Selection Guide

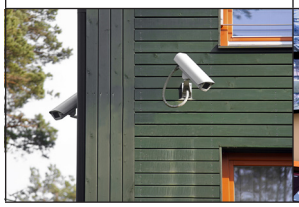
Marketing Bulletin

A Comparison of Seagate® HDDs for Video Surveillance and Analytics

Your security can take many forms—receiving notifications when the kids arrive home from school, monitoring your business over a weekend or holiday closure, overseeing visitor activity at schools, and monitoring hospital traffic flow and patterns to prepare medical teams to react faster. There are many scenarios and possibilities. But no matter where you implement these security systems, storage is essential as data is captured and analyzed 24 hours a day, 7 days a week.

Seagate offers storage to support a variety of systems; here we'll focus on those drives which support video and analytics. The applications these drives support include surveillance DVRs (SDVR), network video recorders (NVR), and centralized or cloud surveillance for video data analytics.

Safe and Smart Surveillance Drive Selection Guide

HDD Options		
Surveillance DVRs (SDVR)	**Network Video Recorders (NVRs)**	**Centralized Storage for video analytics**
Surveillance Digital Video Recorders, or SDVRs, are simple systems enabling significant cost and space savings when capacity and scalability are not top priorities. Single drive, supports up to 18 cameras.	NVRs support the use of up to 32 cameras in their multi-drive system to maximize space for video recordings.	The opportunity to analyze and make use of large amounts of video data is enormous. Cities can predict and improve traffic flows, and stores can lay out merchandise in more compelling ways with the support of 100+ cameras.
Seagate® Video 2.5 and 3.5 and SV35 Series™ HDDs	SV35 Series and Seagate Enterprise Capacity 3.5 HDD	SV35 Series and Seagate Enterprise Capacity 3.5 HDD
		

To choose the right drive, take the time to learn your system requirements. How often will cameras be running and recording? How long do you need to keep your footage? Where will you be storing and streaming your data? How many drives does your system support? These questions will help you understand which Seagate HDD will best support your system: **Seagate Video 2.5, Video 3.5, SV35 Series**™ or **Enterprise Capacity 3.5**.

It's important to understand the workload of a security system first so you can determine the performance the system requires from the drive. Will the system be used for fast video analytics (the use of features like facial recognition programs), or will it more simply be used to record content and play it back only when an incident needs reviewing? If it is, then these factors are important to understand the level of performance you'll expect from the drive. For example, surveillance systems often feature advances in intelligent video analytics and high-definition image recording. In order to manage the vast amounts of video and related metadata in an intelligent surveillance solution, a relational database or similar traditional data system is typically used. It is absolutely critical that reads and writes for such systems employ the utmost levels of performance and error detection and correction to ensure data integrity isn't compromised.

Next consider what implications this workload will have on your system design. All surveillance applications expect support 24×7, but how does this affect your storage requirements. Applications that stream video to a central location may need higher capacities and throughput to accommodate their streaming activity, remote access and data replication. In fact, ever increasing file sizes in video surveillance are behind the insatiable hunger for greater storage capacity; such data can quickly fill even the most copious storage system. But sometimes sheer drive capacity is just part of the answer. Efficiently transferring these voluminous files demands drives with outstanding throughput, as well as robust error correction features to ensure data integrity is maintained during transmission. The SATA interface takes advantage of breakthroughs in very large scale integration (VLSI) technology and high-speed serial transceivers, enabling SATA drives to deliver an unprecedented blend of performance, flexibility, data integrity and reliability.

To learn more about the data security encryption features offered on Seagate HDDs, refer to the Security Selection Guide (MB629).

Safe and Smart Surveillance Drive Selection Guide

Government or retail applications usually require data be stored for a given amount of time versus a typical home security system, which is usually saved for about a month. This will help you understand what capacity requirements, streaming requirements and vibration tolerance will be required to support a system.

All are important considerations when choosing the right drive for your security systems and will affect the reliability and ultimately ROI of the system design. By knowing your system workload, the number of cameras that will be supported, storage requirements and drives required per system, you can choose the right drive for your surveillance environment.

	Video 3.5 HDD/Video 2.5 HDD	SV35 Series™ HDD	Enterprise Capacity 3.5 HDD
Form Factor/ Capacity	**3.5-inch**: 250, 320, 500GB, 1, 2, 3, 4TB **2.5-inch**: 250, 320, 500GB	**3.5-inch**: 1, 2, 3TB	**3.5-inch**: 500GB, 1, 2, 3, 4TB
Application	Low cost, low resolution, simple to install and use for SMB, retail and commercial use, or home applications	Central monitoring applications typically using IP cameras for medium-sized businesses like banks, casinos or airports	Bulk storage, data center, government or corporate applications where HD video and/or video analytics are valued
Advantages	Low power, quiet, reliable storage for consumer or SMB surveillance	Reliable performance in multi-drive systems with quick time-to-ready	Fast random performance and time-to-ready in multi-drive applications
Time-to-Ready	Good: Idle 1, 2 support	Good: Idle 1, 2 support	Best: Power Choice™ technology for customized time-to-ready and power savings
Performance	180MB/s Max Sustained Data Rate	210MB/s Max Sustained Data Rate	175MB/s Max Sustained Data Rate
System Vibration Tolerance	1 to 6 drives	1 to 6 drives	10+ drives
Data Security	—	—	ISE feature in SED or FIPS configurations[2]
Reliability	0.55% AFR/SATA	1M-hr MTBF/SATA	1.4M-hr MTBF/SAS, SATA
Limited Warranty	3 years	3 years	5 years

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 See FIPS 140-2 Level 2 Certificate at http://csrc.nist.gov/groups/STM/cmvp/validation.html#05

www.seagate.com

AMERICAS Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000
ASIA/PACIFIC Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888
EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 16–18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00