Video vs. Desktop HDDs

Marketing Bulletin

Improving Performance and Reliability in Video and Surveillance Applications

The Best HDDs for Video and Surveillance Applications

Selecting a hard drive for any given application relies on a number of critical considerations, including workload type, environmental demands, capacity requirements, performance needs and reliability concerns. For video and surveillance applications, these considerations are of particular importance to ensure high performance and system durability.

As consumers continue saving large amounts of digital video content from movies, TV shows and other media, the demand for more storage in DVR and media centre applications expands. Video data from surveillance configurations is also growing rapidly. Even at typical resolution and frame-rate settings, the world's surveillance cameras require over 18.4 billion gigabytes (GB) of storage for a mere two-week recording period!

While some system integrators might be tempted to deploy budget-friendly desktop hard drives in their video and surveillance applications, the smarter choice is selecting speciality storage designed for the unique demands of these configurations. Leveraging Seagate® video or surveillance HDDs can improve costs as much as 30% by enhancing overall performance and reliability once systems are in the field - therefore averting the expense of servicing customers due to drive failures or corruption.

Video vs. Desktop HDDs

High-Write Workloads

While PC data workloads require storage biased for read capability and small-block, random data transfers, video storage must be engineered for writing, and large sequential data blocks. In fact, the writing function can represent up to 95% of a hard drive's operation in a surveillance application. Furthermore, the always-on nature of most video and surveillance environments intensifies the demands of such high-write workloads.

Seagate video and surveillance HDDs support video-streaming firmware designed and built for write performance. With this enhanced write functionality, the Seagate line of video-optimised drives ensures first-rate performance and better drive durability for DVR, media centre or video security applications.

24×7 Reliability

One of the most important aspects of Seagate video-optimised drives is their ability to withstand always-on operational demands. Desktop hard drives do not include the application-specific features necessary to handle these environments. In contrast, Seagate video and surveillance HDDs are built to record data 24×7 from multiple camera streams or channels. While this increased workload can be mimicked on a desktop-class drive, the device will eventually fail under constant, 24×7 operation, resulting in compromises to both performance (the number of streams supported) and reliability. Video-optimised drives provide reliability benefits far beyond desktop drives, which are designed to run lighter workloads - perhaps only eight hours a day, five days a week.

Additionally, the Seagate line of video and surveillance HDDs offers low-power profiles, which not only help with energy conservation, but also ensure cool operating temperatures and enhanced system reliability while working a 24×7 profile. Seagate video and surveillance HDDs also provide industry-leading AFRs, as measured in their respective environments - ensuring dependable storage for personal and critical video content. This means your DVR or surveillance systems are less expensive once deployed in the field - needing little maintenance or repair.

Leading Storage Technology

In conjunction with their ability to handle high-write workloads and 24×7 operation, Seagate video and surveillance HDDs feature industry-leading storage technology for today's DVR and video security applications.

Like many desktop drives on the market, Seagate video and surveillance HDDs deliver large capacity points, reaching up to 4TB of reliable data storage. Unlike budget-priced desktop drives, however, these video and surveillance HDDs combine high capacity with powerful dual processor technology and video-optimised write-cache management. This blend of features meets the storage needs of multiple, high-quality video streams, which are common in DVR and surveillance environments. Furthermore, it enables long-term retention of important video archives - a key need for many video security configurations.

By melding high capacity points with the unique ability to withstand the vigorous demands of video environments, Seagate video and surveillance HDDs maximise cost-per-gigabyte performance, giving system builders and integrators the best value for money!

Conclusion

The demanding workloads of video and surveillance applications require hard drives with specialised features to enhance performance, reliability and capacity. Designed to accommodate high-write workloads, always-on demands and considerable amounts of video content from multiple camera streams, Seagate video and surveillance HDDs offer system integrators and end users significant long-term benefits over budget-priced desktop options. And by minimising service costs for deployed systems, these purpose-built drives contribute to greater cost savings over time.

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