

Title Option 1

Desktop Drives Just Can't Cut It in The Surveillance World

Choosing a capable hard drive for the modern surveillance system

Title Option 2

When Seconds Count: Why Surveillance Drives Are Crucial to NVRs and DVRs

Cutting corners with your DVR or NVR can cost you

It's 4a.m. and you're fast asleep in your hotel room when your smartphone chimes loudly to alert you of a security event at your home, thousands of miles away. You quickly grab your phone to view the most recent recorded footage only to realize that it's either degraded by so many dropped frames, or it didn't record at all.

The person in the next room hears a slightly muffled scream: "Aaaaaaagghhhh! Am I crazy? Why did I use those old, mismatched desktop drives in my new NVR??", and agrees...you're crazy.

Video surveillance options for small business and home users are becoming increasingly sophisticated, with installations incorporating anywhere from two, to dozens of high-definition cameras. With this evolution comes a need for hardware that is custom-designed to meet the specific needs of surveillance applications. In addition to supporting multiple high-resolution video streams, the hardware solution must provide consistent quality of service, and reliable 24/7 always-on performance.

- While a typical desktop hard drive *can* function in a surveillance environment, they are not purpose-built for that application. Using ordinary desktop drives in a surveillance system can result in dropped frames, missing footage, and even premature drive failure due to excessive heat and vibration.
- Desktop drives perform well for what they are designed to do...operate in short intervals, typically for a few hours per day...they are not engineered to endure the prolonged temperature fluctuations and equipment vibrations typical in an enclosed surveillance environment.

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Today's sophisticated video surveillance systems require hardware that is custom-designed to exceed the capabilities of standard desktop drives. In addition to supporting multiple high resolution video streams, the solution must provide consistent quality of service and reliable, 24/7 always-on performance.

Choosing A Specialized Drive

Not all hard drives are created equal, and not all hard drives serve the same purpose. The sheer amount of data we now create and consume is growing at an exponential rate, and the storage industry has reacted by creating lines of specialized hard drives designed for specific tasks.

From everyday desktop drives that typically operate from 9 to 5, to massive-capacity, high-performance multimedia drives aimed at creative professionals, digital storage is evolving to encompass our ever-growing, specific needs. Among these top uses is surveillance – one of the fastest-growing segments of specialized storage today.

A high-definition, multi-camera surveillance system used to be an expensive, complicated endeavor. But with new technologies, and drives that are specifically designed for the task, a multi-bay DVR or NVR system is now within reach of the average small business or home owner. And while surveillance drives can cost a bit more, they are better suited to their task than ordinary drives.

Cutting Corners Can Cost You

Now, you may be thinking: “Well, if I just get brand new cheaper desktop drives, they should be fine and if they crash, I can just replace them cheaper.” You wouldn’t use a compact car to transport a grand piano across country, because it’s not the right tool for the job. The same is true for hard drives – you wouldn’t use a desktop drive in your surveillance security system, because it simply was not designed for that application.

Consider this: Surveillance-class drives are designed for 24/7 high-definition surveillance environments that use up to 64 cameras and beyond – ordinary desktop drives cannot make that claim.

- With firmware optimized for the ATA streaming Command Set, (a specification providing features aimed at video payloads), specially designed surveillance drives reduce the error pixilation and video interruptions that can occur when regular desktop storage is used in security systems.
- Surveillance drives have additional support ATA commands that are specific to multimedia devices like Surveillance systems. These additional SATA ATA commands help to prevent dropped frames and are not supported on standard drives.

When seconds count, having clear, accurate security footage can mean the difference between recovery and unrecoverable loss.

Additional Benefits

Surveillance drives additionally use caching algorithms tuned for write-intensive, high stream count applications resulting in a reduced risk of data corruption. Surveillance drives are rated for higher temperatures and non-stop operation.

Some surveillance drives utilize proprietary on-board technology that calculates optimum seek speeds, which can lower power consumption as well as the noise and vibration that can cause drives to wear out ordinary drives more quickly.

The Choice Is Yours

With the advent of specialized drives, the consumer now has a choice to optimize their particular situation. And while desktop drives remain the most popular choice for personal computers, they simply can’t cut it in the harsh, high-temperature, vibrating, always-on world of the surveillance enclosure.