

# TOSHIBA

Leading Innovation >>>

> **BUILD A BETTER VIDEO SURVEILLANCE –  
WITH TOSHIBA OPTIMISED STORAGE**



# OPTIMISED STORAGE SOLUTION FOR YOUR SURVEILLANCE APPLICATION

## > OUTSTANDING SPEED & RELIABILITY WITH TOSHIBA HDDs

The use of video surveillance is growing for numerous applications of today's daily life. But capturing video is pointless if there is no way to store the data – and this is leading a dramatic increase in the demand for storage devices.

Surveillance systems continue to transition from analogue towards digital data capture, with storage on hard disk drive (HDD)-based systems. As higher resolution IP cameras are increasingly being used, there is a growing demand for larger data storage capacities. Higher frame rates and the resolution advantage leads to greater data rates and file sizes.

Innovations in speed, capacity and interfaces have dramatically reduced HDD cost per gigabyte and enable HDDs to handle large amounts of data very quickly. In order to increase the performance and reliability of HDD-based systems, multiple HDDs can be used in a RAID array (redundant array of independent disks).



## > KEY CHARACTERISTICS OF VIDEO SURVEILLANCE SYSTEMS

### > RELIABILITY

Often one of the most important factor of surveillance systems is reliability. Selecting a high quality storage product in your surveillance system improves reliability and will reduce total cost of ownership and ensure customer satisfaction.

### > CAPACITY

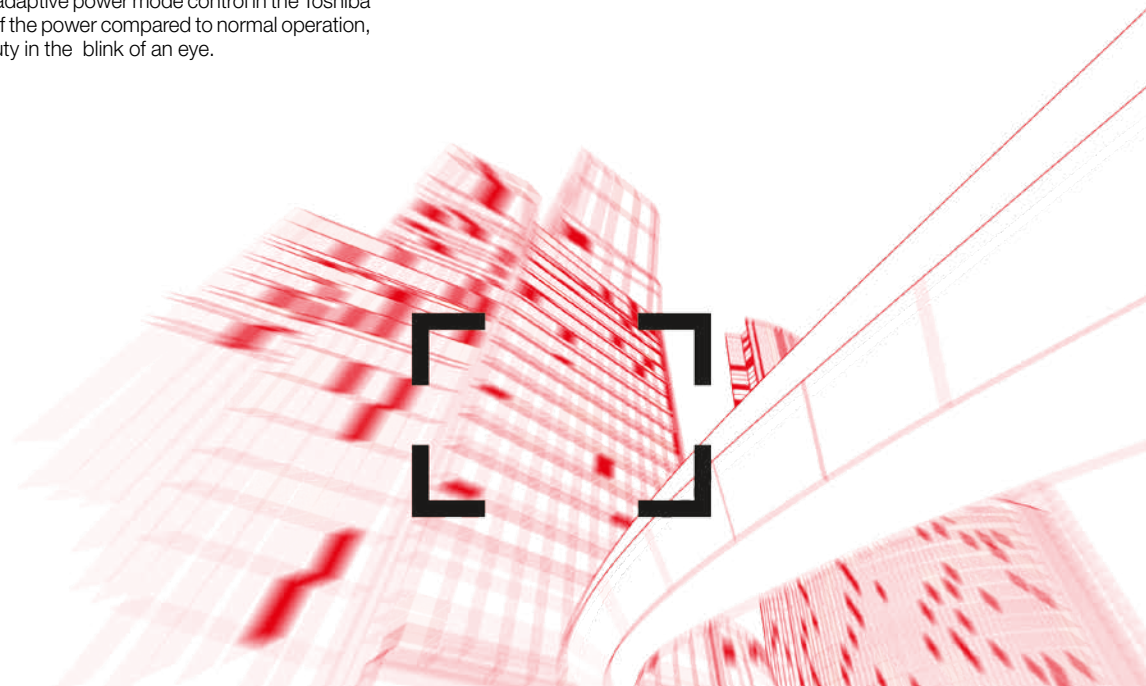
With Toshiba's massive 5TB surveillance HDDs, organizations now can store more data for longer periods on fewer number of HDDs. This means fewer storage systems to deploy, less physical real-estate for storage, lower management and energy costs. The net result in savings in Operating Expense (OPEX) and Capital Expendure (CAPEX).

### > VIBRATION TOLERANCE

A built-in Rotational Vibration Sensor (RVS) enables the drive to compensate for any rotational vibration that occurs from the drive itself, or outside of the drive, and continue to read and write while maintaining its high performance preventing data loss and frame drops.

### > POWER CONSUMPTION

Power efficiency is key to save cost. Toshiba offers one of the most power efficient surveillance drives in the market. The adaptive power mode control in the Toshiba surveillance HDDs saves up to 15 % of the power compared to normal operation, while ensuring the drive is back on duty in the blink of an eye.



# THE RIGHT STORAGE PRODUCT FOR THE NEED IN FOCUS

Today, surveillance professionals must choose a hard drive that fits the needs of their specific surveillance system. Choosing a product that is designed specifically for surveillance applications is crucial, as they will deliver optimal performance in terms of capacity, reliability, workload and cost.

Toshiba offers three types of storage products for different systems and workloads.

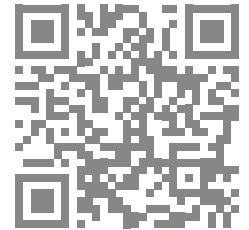
Surveillance DVR	Public Safety NVR	Centralised Surveillance Video Analytics
With up to 3 TB of storage capacity Toshiba's Video Stream HDDs are a great choice for applications where large space, low power and low acoustics are critical. Suitable applications are Digital Video Recorders (DVR) – simple systems that allow notable savings considering cost and space.	With great capacity, reliability and scalability TOSHIBA's robust Surveillance HDDs are designed for demanding 24x7 surveillance environments. They suit Network Video Recorders (NVR) that support up to 32 high-definition cameras simultaneously to generate the largest space available for video recordings. The Rotational Vibration Sensor (RV) supports multi-drives systems.	Toshiba's HDDs designed for centralized video surveillance systems offer up to 6TB capacity and support high write workloads, a function representing the main part of the HDD's operation. This high-write workload is combined with large, sequential data blocks from numerous data streams, which operate in a 24x7 environment. A reliable basis for comprehensive video analytics.
DT01ABA-V*1	MD03ACA-V*1 MD04ABA-V*1	MG04*1
Video Stream HDDs	Surveillance HDDs	Enterprise Capacity HDDs

## > MD04ABA-V – THE SURVEILLANCE OPTIMISED HDD

Especially designed for digital video security systems, the latest Toshiba Surveillance series offers purpose-built advanced features:

- Support for up to 32 high-definition cameras\*2
- 24x7 always-on operation
- 1 million hours MTTF\*3
- Rotational Vibration (RV) sensors for higher reliability in RAID/multi-HDD platforms
- Up to 5TB capacity to retain higher resolution surveillance video data\*4
- Large 128MiB buffer/cache for better streaming performance\*5
- Lower power consumption when using low spin and adaptive power mode control
- Quieter operation versus higher RPM HDDs





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## > ENGINEERED FOR COMPATIBILITY

Toshiba Surveillance storage products are designed and manufactured specifically for surveillance applications and include features to optimise performance, save power and maintain reliability. They are compatible with industry-leading video systems.

For further information on Toshiba storage products and solutions and local sales information, please visit: [toshiba.semicon-storage.com](http://toshiba.semicon-storage.com)  
Or contact us at: [spdinfo@tee.toshiba.de](mailto:spdinfo@tee.toshiba.de)

<sup>\*1</sup> „2.5-inch“ and „3.5-inch“ mean the form factor of HDDs or SSDs. They do not indicate drive's physical size.

<sup>\*2</sup> Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras as 2 MiB/s rate.

<sup>\*3</sup> MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.

<sup>\*4</sup> Definition of capacity: Toshiba defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2<sup>30</sup> = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

<sup>\*5</sup> A kibibyte (KiB) means 2<sup>10</sup>, or 1,024 bytes, a mebibyte (MiB) means 2<sup>20</sup>, or 1,048,576 bytes, and a gibibyte (GiB) means 2<sup>30</sup>, or 1,073,741,824 bytes.