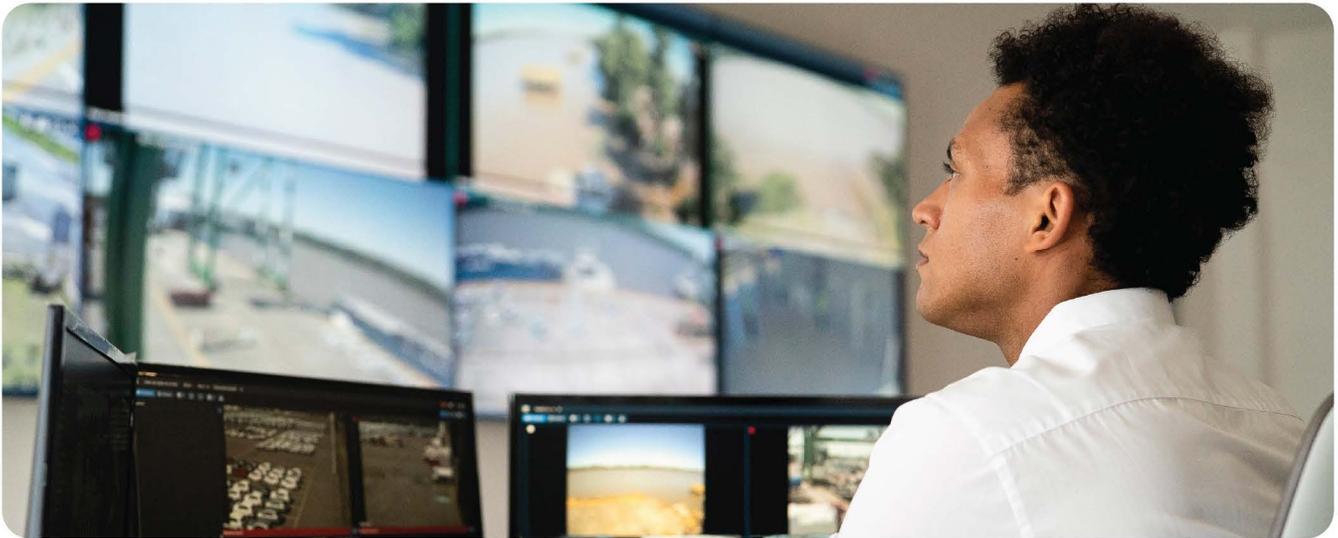


TOSHIBA

Surveillance That Keeps Watching.

Designed for home and office DVRs and NVRs, the Toshiba S300 Surveillance Hard Drive delivers efficient surveillance storage that is optimized for 24/7 video recording environments with support for up to 64 high-definition camera streams⁶.



S300 Surveillance Internal Hard Drive

The S300 is designed for 24/7 operation¹², supporting up to one million hour MTTF/MTBF¹⁰ and up to 180 TB per year workload⁵ rating to provide peace of mind when operating around-the-clock security camera systems.

The S300 features a low-power profile design to deliver reliable performance for 24/7, multi-stream surveillance environments in a wide operating temperature range. This drive has efficient power consumption which helps lower heat emissions and enhance reliability.



Image does not represent actual product.

TOSHIBA

S300 Surveillance Internal Hard Drive

Application²

- Surveillance Network Video Recorders (sNVR)
- Surveillance Digital Video Recorders (sDVR)
- Hybrid sDVR (analog and IP)



Product image may represent a design model.



Robust Performance
Workload rate of up to
180 TB/yr^{5,12}. MTTF/MTBF
up to 1 million hours¹⁰



Built to Last
Mitigate Rotational Vibration
with built-in RV sensors*.
Designed to work in a wide
temperature range
* available on select models only



**Optimized Recording
& Playback**
Large cache size and fast
data transfer speed help
reduce frame loss



High Reliability
Designed for 24/7¹²
security systems



Rich Scalability
Support up to 64
HD cameras⁶



Efficient Design
Low-spin design helps
reduce heat and power profile



Peace of Mind
Toshiba Three-year
limited warranty⁹



Capacity ¹	<u>6TB</u>	<u>4TB</u>	<u>2TB</u>
Model Number (Retail packaging)	-	-	-
Model Number (Bulk)	HDWT860UZSVA	HDWT840UZSVA	HDWT720UZSVA
Basic Specifications			
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ¹¹	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
RoHS Compatible ¹⁶	Yes	Yes	Yes
Sector Size	512e	512e	512e
Features			
Number of Cameras Supported ⁶	Up to 64	Up to 64	Up to 32
Drive Bays Supported ⁷	Up to 8	Up to 8	Up to 8
Rotational Vibration (RV) Sensors	Yes	Yes	-
Native Command Queuing (NCQ)	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes
Tarnish Resistant	Yes	Yes	Yes
Toshiba Cache Technology	Yes	Yes	Yes
Recording Technology ¹⁵	Drive-Managed SMR	Drive-Managed SMR	Drive-Managed SMR
Performance			
Rotational Speed [RPM]	5,400	5,400	5,400
Max Data Transfer Speed ⁴ [MB/s Typ.](Sustained)	Up to 184	Up to 184	Up to 184
Cache Size [MB]	256	256	128
Reliability			
24x7 Operation ¹²	Yes	Yes	Yes
Workloads [TB/Year] ^{5,12}	180	180	180
MTTF/MTBF [Hours] ¹⁰	1,000,000	1,000,000	1,000,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴
Load/Unload Cycles	600,000	600,000	600,000
Limited Warranty ⁹ [Years]	3	3	3
Power Management			
Supply Voltage	5 VDC ±5 % 12 VDC ±10 %	5 VDC ±5 % 12 VDC ±10 %	5 VDC ±5 % 12 VDC ±10 %
Power Consumption (Operating) [W] ¹³	4.84	4.36	4.01
Power Consumption (Active Idle-A) [W] ¹⁴	2.81	2.33	2.08
Environmental			
Temperature (Operating) [°C]	0 to 70 (surface)	0 to 70 (surface)	0 to 70 (surface)
Temperature (Non-operating) [°C]	-40 to 70	-40 to 70	-40 to 70
Vibration (Operating) [m/s ²]	4.90 {0.5G} (5 to 350Hz) 2.45 {0.25G} (350 to 500Hz)	4.90 {0.5G} (5 to 350Hz) 2.45 {0.25G} (350 to 500Hz)	4.90 {0.5G} (5 to 350Hz) 2.45 {0.25G} (350 to 500Hz)
Vibration (Non-Operating) [m/s ²]	29.4 {3.0G} (5 to 500Hz)	29.4 {3.0G} (5 to 500Hz)	29.4 {3.0G} (5 to 500Hz)
Shock (Operating) [m/s ²]	686 {70G} (2 ms duration)	686 {70G} (2 ms duration)	686 {70G} (2 ms duration)
Shock (Non-Operating) [m/s ²]	2,940 {300G} (2 ms duration)	3,430 {350G} (2 ms duration)	3,430 {350G} (2 ms duration)
Acoustics (Idle Mode) [dB]	24	22	21
Physical			
Height [mm Max.]	26.1	26.1	26.1
Length [mm Max.]	147.0	147.0	147.0
Width [mm Max.]	101.85	101.85	101.85
Weight [g Max.]	680	650	440
Bottom Holes Type ⁸	TYPE2	TYPE2	TYPE2

TOSHIBA

Toshiba Consumer Internal Hard Drives.

A drive for every storage application.



Image does not represent actual product.

To see our full line of consumer HDD storage products, visit:

storage.toshiba.com/consumer-hdd

¹ One Gigabyte (1GB) means $10^9 = 1,000,000,000$ bytes and One Terabyte (1TB) means $10^{12} = 1,000,000,000,000$ bytes using powers of 10. A computer operating system, however, reports storage capacity using powers of 2 for the definition of $1GB = 2^{30} = 1,073,741,824$ bytes and $1TB = 2^{40} = 1,099,511,627,776$ 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 and other factors. Actual formatted capacity may vary.

² Compatibility may vary depending on user's hardware configuration, and operating system.

³ Product specifications, configurations, colors, components and features are subject to change without notice.

⁴ The maximum sustained data rate and interface speed may be restricted to the response speed of host system and by transmission characteristics. Read and write speed may vary depending on the host device, read and write conditions, and file size.

⁵ Annual Workload Rating: HDDs keep track of various drive usage such as power on hours, lifetime writes and lifetime reads from the host computer. With this data we calculate an Annualized Workload Rate, under 40 deg. C ambient environments, Annualized Workload Rate = (Lifetime Writes + Lifetime Reads) * (8760 / Lifetime Power On Hours) in case Power On time is 8760h or longer. Otherwise (i.e. Power On time is shorter than 8760h), Annualized Workload Rate = (Lifetime Writes + Lifetime Reads) Each drive is designed to perform up to the Annualized Workload Rate stated, after which the drive may be expected to decline. The Annualized Workload Rate in no way alters the warranty policy for such drive. Workload is defined as the amount of data written, read or verified by commands from host system.

⁶ Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras at up to 10Mbps rate, depending on the HDD model. Actual results may vary based on various factors, including the types of cameras installed, the system's hardware and software capabilities, and the video compression technology used, as well as system variables such as resolution, frames per second, and other settings. Compatibility may vary depending on user's hardware configuration and operating system. "High Definition" is calculated assuming Full HD 1080p, 30fps, transfer rate of up to 10Mbps/stream.

⁷ For "Drive Bays Supported", please contact your Solutions Provider because the compatibility with the host device will vary based on the system.

⁸ Location of bottom mounting hole is different from product. For more information, please see the following page.

<https://toshiba.semicon-storage.com/us/storage/support/faq/storage-holes.html>

⁹ Standard limited warranty applies. The warranty brochure can be viewed online at <https://storage.toshiba.com/consumer-hdd/support/warranty-info>.

¹⁰ MTTF (Mean Time to Failure) or MTBF (Mean Time Between 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 or MTBF. MTTF (Mean Time to Failure) or MTBF (Mean Time Between Failure) of the HDDs during its life time is 600,000 hours and AFR (Annualized Failure Rate) is 1.46%, or 1.0 million hours and AFR is 0.88%, or 1.2 million hours and AFR is 0.73%, or 2.5 million hours and AFR is 0.35% (depending on HDD models). This assumes power-on hours are 24 x 7 in normal usage (8760 h/year power on hours, up to 180TB/year, or up to 300TB/year, or up to 550TB/year total data transfers (depending on HDD models), and average HDA surface temperature: 40°C or less). Use at case HDA surface temperature above 40°C may degrade product reliability and reduce warranty period.

¹¹ 2.5-inch and 3.5-inch mean the form factor of HDDs. They do not indicate drive's physical size.

¹² Drive life may vary depending on usage and workload.

¹³ Operating watt is measured using 80 % random read/write and 20 % performance idle.

¹⁴ Idle is active idle.

¹⁵ SMR is Shingled Magnetic Recording Technology.

¹⁶ Toshiba Electronic Devices & Storage Corporation defines "RoHS-Compatible" products as products that either (i) contain no more than a maximum concentration value of 0.1% by weight in Homogeneous Materials for lead, mercury, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) and of 0.01% by weight in Homogeneous Materials for cadmium; or (ii) fall within any of the application exemptions set forth in the Annex to the RoHS Directive (Directive 2011/65/EC of the European Parliament and of the Council of 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment). "Homogeneous Material" means a material of uniform composition that cannot be mechanically disjointed (meaning separated, in principle, by mechanical actions such as unscrewing, cutting, crushing, grinding and/or abrasive processes) into different materials. Examples of "Homogeneous Materials" would be individual types of plastics, ceramics, glass, metals, alloys, paper, board, resins and coatings.