

TOSHIBA

Capture The Details

Toshiba S300 Pro Surveillance Internal Hard Drive



The Toshiba S300 Pro Surveillance Internal Hard Drives deliver up to 10 TB¹ of storage capacity and support up to 64 high-definition surveillance video cameras⁶ for around-the-clock security.

The S300 Pro is designed for 24/7 operation¹², supporting up to one million hour MTTF/MTBF¹⁰ and up to 180 TB per year workload⁵ rating, giving you peace of mind knowing that your surveillance stays vigilant.

With a range of available large capacities and 7,200rpm performance, the S300 Pro offers real-time drive performance that supports high-resolution video recording and streaming and longer content retention periods.

For high reliability and scalability in RAID and multi-disk enclosures, the S300 Pro utilizes RV sensor technology to compensate for the effects of vibration from adjacent drives or cooling fans. Robust cache size helps to support smooth video recording and guard against frame drops.

Toshiba S300 Pro Surveillance Internal Hard Drive

Application

Surveillance Network Video Recorders (sNVR)
Surveillance Digital Video Recorders (sDVR)
Hybrid sDVR (analog and IP)
RAID Storage Arrays for Surveillance



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



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



Massive Capacity

Capture and retain surveillance-critical frame



Peace of Mind

Toshiba Three-year limited warranty⁹

Toshiba S300 Pro Surveillance Internal Hard Drive

Capacity ¹	10TB	8TB	6TB
Model Number (Retail packaging)	HDWT31AUZSVAR	HDWT380UZSVAR	HDWT360UZSVAR
Model Number (Bulk)	HDWT31AUZSVA	HDWT380UZSVA	HDWT360UZSVA
Basic Specifications			
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor¹¹	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
Features			
Number of Cameras Supported⁶	64	64	64
Drive Bays Supported⁷	8+	8+	8+
Rotational Vibration (RV) Sensors	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes
Drive Stabilization Technology	Yes (Dual Tied)	Yes (Dual Tied)	Yes (Dual Tied)
Toshiba Cache Technology	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR
Performance			
Rotational Speed [RPM]	7,200	7,200	7,200
Max Data Transfer Speed⁴ [MB/s Typ.] (Sustained)	Up to 248	Up to 241	Up to 241
Cache Size [MB]	256	256	256
Reliability			
24x7 Operation¹²	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 Warranty⁹ [Years]	3	3	3
Power Management			
Supply Voltage	5 V DC +6 / -5 % 12 V DC ±10 %	5 V DC +6 / -5 % 12 V DC ±10 %	5 V DC +6 / -5 % 12 V DC ±10 %
Power Consumption (Spin up (+12 V DC)) [A]	1.45	1.43	1.44
Power Consumption (Operating/Idle) [W]	9.48/7.15	8.61/6.33	7.88/5.59
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)	7.35 m/s ² {0.75G} (5 to 300Hz) 2.45 m/s ² {0.25G} (300 to 500Hz)	7.35 m/s ² {0.75G} (5 to 300Hz) 2.45 m/s ² {0.25G} (300 to 500Hz)	7.35 m/s ² {0.75G} (5 to 300Hz) 2.45 m/s ² {0.25G} (300 to 500Hz)
Vibration (Non-Operating)	29.4 m/s ² {3.0G} (5 to 500Hz)	29.4 m/s ² {3.0G} (5 to 500Hz)	29.4 m/s ² {3.0G} (5 to 500Hz)
Shock (Operating)	686 m/s ² {70G} (2 ms duration)	686 m/s ² {70G} (2 ms duration)	686 m/s ² {70G} (2 ms duration)
Shock (Non-Operating)	2,450 m/s ² {250G} (2 ms duration)	2,450 m/s ² {250G} (2 ms duration)	2,450 m/s ² {250G} (2 ms duration)
Acoustics (Idle Mode) [dB]	34	34	34
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.]	770	770	770
Bottom Holes Type⁸	TYPE1	TYPE1	TYPE1

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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, $\text{Annualized Workload Rate} = (\text{Lifetime Writes} + \text{Lifetime Reads}) * (8760 / \text{Lifetime Power On Hours})$ in case Power On time is 8760h or longer. Otherwise (i.e. Power On time is shorter than 8760h), $\text{Annualized Workload Rate} = (\text{Lifetime Writes} + \text{Lifetime Reads})$ 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 10Mbps rate. 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 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 one million hours and AFR(Annualized Failure Rate) is 0.88%. This assumes power-on hours are 24 x 7 in normal surveillance usage (8760 h/year power on hours, up to 180TB/year total data transfers, 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.

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