

TOSHIBA

Capture Every Moment.

Toshiba S300 Surveillance Internal Hard Drive



Image does not represent actual product.

For those serious about security, the Toshiba S300 Surveillance Internal Hard Drive has you covered from every angle. The S300 offers equally high performance and surveillance-critical reliability designed for 24/7 operation¹¹ in your home office and small office video surveillance systems. Engineered for high durability, the S300 Surveillance Hard Drive supports a high workload rating and is tested to perform around-the-clock and never sleeps – so that you can.

Toshiba S300 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^{7,11}.
MTTF/MTBF up to 1 million hours⁸



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 24/7¹¹ security systems



Rich Scalability

Support up to 64 HD cameras⁴



Massive Capacity

Capture and retain surveillance-critical frame



Peace of Mind

Toshiba Three-year limited warranty⁹

Toshiba S300 Surveillance Internal Hard Drive

Capacity ¹	<u>10TB</u>	<u>8TB</u>	<u>6TB</u>	<u>4TB</u>
Model Number (Retail packaging)	HDWT31AUZSVAR	HDWT380UZSVAR	HDWT360UZSVAR	HDWT140UZSVAR
Model Number (Bulk)	HDWT31AUZSVA	HDWT380UZSVA	HDWT360UZSVA	HDWT140UZSVA

Basic Specifications

Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor²	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes
RoHS Compatible³	Yes	Yes	Yes	Yes

Features

Number of Cameras Supported⁴	64	64	64	32
Drive Bays Supported⁵	8+	8+	8+	1 to 8
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes	Yes
Drive Stabilization Technology	Yes	Yes	Yes	Yes
Toshiba Cache Technology	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR

Performance

Rotational Speed [RPM]	7,200	7,200	7,200	5,400
Max Data Transfer Speed⁶ [MB/s Typ.] (Sustained)	Up to 248	Up to 241	Up to 241	Up to 157
Cache Size [MB]	256	256	256	128

Reliability

24x7 Operation¹¹	Yes	Yes	Yes	Yes
Workloads [TB/Year]^{7,11}	180	180	180	110
MTTF/MTBF [Hours]⁸	1,000,000	1,000,000	1,000,000	1,000,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴
Load/Unload Cycles	600,000	600,000	600,000	600,000
Limited Warranty⁹ [Years]	3	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 %	5 V DC ±5 % 12 V DC ±10 %
Power Consumption (Operating/Idle) [W]	9.48/7.15	8.61/6.33	7.88/5.59	- /4.0

Environmental

Temperature (Operating) [°C]	0 to 70 (surface)	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	-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)	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)	49.0 m/s ² {5.0G} (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)	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)	2,940 m/s ² {300G} (2 ms duration)
Acoustics (Idle Mode) [dB]	34	34	34	26

Physical

Height [mm Max.]	26.1	26.1	26.1	26.1
Length [mm Max.]	147.0	147.0	147.0	147.0
Width [mm Max.]	101.85	101.85	101.85	101.85
Weight [g Max.]	770	770	770	720
Bottom Holes Type¹⁰	TYPE1	TYPE1	TYPE1	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 $1\text{GB} = 2^{30} = 1,073,741,824$ bytes and $1\text{TB} = 2^{40} = 1,099,511,627,776$ 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.

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

³ Toshiba Storage & Electronic Devices Solutions Company 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.

⁴ Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras at 10Mbit/s 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.

⁵ As for "Drive Bays Supported", please contact your Solutions Provider because the compatibility with the host device will vary based on the system.

⁶ 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. Transfer speed varies by capacity.

⁷ 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.

⁸ MTTF (Mean Time to Failure) and/or MTBF (Mean Time Between/Before 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/MTBF.

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

¹⁰ Location of bottom mounting hole is different from product. For more information, please see the following page. <https://toshiba.semicon-storage.com/us/design-support/faq/storage-holes.html>

¹¹ Drive life may vary depending on usage and workload. See also MTTF/MTBF and Annual Workload Rating for more details.

Product prices, specifications, configurations, colors, components, features, and availability are subject to change without notice. Compatibility may vary depending on user's hardware configuration and operating system.

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