

TOSHIBA

Capture The Details

Toshiba S300 Pro Surveillance Internal Hard Drive



Image does not represent actual product.

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 1.2 million hour MTTF/MTBF¹⁰ and up to 300 TB per year workload⁵ rating, giving you peace of mind knowing that your surveillance stays vigilant.

With a range of available large capacities and 7,200 rpm 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



Product image may represent a design model.

Application²

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



Robust Performance

Workload rate of up to 300 TB/yr^{5,12}.
MTTF/MTBF up to 1.2 million hours¹⁰



Built to Last

Mitigate Rotational Vibration with built-in RV sensors. Designed to work in a wide temperature range



Optimized Recording & Playback

Fast 7200 RPM speed with large cache size to help reduce frame loss



High Reliability

Designed for 24/7¹² security systems. CMR recording technology¹⁴ provides consistent performance and broad compatibility.



Rich Scalability

Support up to 64 HD cameras⁶



Massive Capacity

Capture and retain surveillance-critical frame



Peace of Mind

Toshiba five-year limited warranty⁹



Toshiba S300 Pro Surveillance Internal Hard Drive

Capacity¹

10TB

8TB

Model Number (Retail packaging)

HDWTA1AUZSVAR

HDWTA80UZSVAR

Model Number (Bulk)

HDWTA1AUZSVA

HDWTA80UZSVA

Basic Specifications

Interface

SATA 6.0 Gbit/s

SATA 6.0 Gbit/s

Form Factor¹¹

3.5-inch

3.5-inch

Advanced Format (AF)

Yes

Yes

RoHS Compatible¹³

Yes

Yes

Sector Size

512e

512e

Features

Number of Cameras Supported⁶

Up to 64

Up to 64

Drive Bays Supported⁷

Up to 24

Up to 24

Rotational Vibration (RV) Sensors

Yes

Yes

Native Command Queuing (NCQ)

Yes

Yes

Shock Sensor

Yes

Yes

Toshiba Cache Technology

Yes

Yes

Recording Technology

CMR

CMR

Performance

Rotational Speed [RPM]

7,200

7,200

Max Data Transfer Speed⁴ [MB/s Typ.] (Sustained)

281

281

Cache Size [MB]

512

512

Reliability

24 x 7 Operation¹²

Yes

Yes

Maximum Workload Rate [TB/Year]^{5,12}

300

300

MTTF/MTBF [Hours]¹⁰

1,200,000

1,200,000

Unrecoverable Error Rate

1 per 10¹⁴

1 per 10¹⁴

Load/Unload Cycles

600,000

600,000

Limited Warranty⁹ [Years]

5

5

Power Management

Supply Voltage

5 VDC +10 / -7 %
12 VDC ±10 %

5 VDC +10 / -7 %
12 VDC ±10 %

Power Consumption (Operating) [W]

9.07

8.19

Power Consumption (Active Idle) [W]

5.74

4.92

Environmental

Temperature (Operating) [°C]

0 to 65 (surface)

0 to 65 (surface)

Temperature (Non-operating) [°C]

-40 to 70

-40 to 70

Vibration (Operating) [m/s²]

7.35 {0.75G} (5 to 300Hz)
2.45 {0.25G} (300 to 500Hz)

7.35 {0.75G} (5 to 300Hz)
2.45 {0.25G} (300 to 500Hz)

Vibration (Non-Operating) [m/s²]

29.4 {3.0G} (5 to 500Hz)

29.4 {3.0G} (5 to 500Hz)

Shock (Operating) [m/s²]

686 {70G} (2 ms duration)

686 {70G} (2 ms duration)

Shock (Non-Operating) [m/s²]

2,450 {250G} (2 ms duration)

2,450 {250G} (2 ms duration)

Acoustics Idle Mode [dB]

34

34

Physical

Height [mm Max.]

26.1

26.1

Length [mm Max.]

147.0

147.0

Width [mm Max.]

101.85

101.85

Weight [g Max.]

755

730

Bottom Holes Type⁸

TYPE1

TYPE1



Toshiba S300 Pro Surveillance Internal Hard Drive

Capacity¹

6TB

4TB

Model Number (Retail packaging) HDWTA60UZSVAR HDWTA40UZSVAR

Model Number (Bulk) HDWTA60UZSVA HDWTA40UZSVA

Basic Specifications

Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ¹¹	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes
RoHS Compatible ¹³	Yes	Yes
Sector Size	512e	512e

Features

Number of Cameras Supported ⁶	Up to 64	Up to 64
Drive Bays Supported ⁷	Up to 24	Up to 24
Rotational Vibration (RV) Sensors	Yes	Yes
Native Command Queuing (NCQ)	Yes	Yes
Shock Sensor	Yes	Yes
Toshiba Cache Technology	Yes	Yes
Recording Technology	CMR	CMR

Performance

Rotational Speed [RPM]	7,200	7,200
Max Data Transfer Speed ⁴ [MB/s Typ.] (Sustained)	281	281
Cache Size [MB]	512	512

Reliability

24 x 7 Operation ¹²	Yes	Yes
Maximum Workload Rate [TB/Year] ^{5,12}	300	300
MTTF/MTBF [Hours] ¹⁰	1,200,000	1,200,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁴
Load/Unload Cycles	600,000	600,000
Limited Warranty ⁹ [Years]	5	5

Power Management

Supply Voltage	5 VDC +10 / -7 % 12 VDC ±10 %	5 VDC +10 / -7 % 12 VDC ±10 %
Power Consumption (Operating) [W]	7.43	6.75
Power Consumption (Active Idle) [W]	4.14	3.49

Environmental

Temperature (Operating) [°C]	0 to 65 (surface)	0 to 65 (surface)
Temperature (Non-operating) [°C]	-40 to 70	-40 to 70
Vibration (Operating) [m/s ²]	7.35 {0.75G} (5 to 300Hz) 2.45 {0.25G} (300 to 500Hz)	7.35 {0.75G} (5 to 300Hz) 2.45 {0.25G} (300 to 500Hz)
Vibration (Non-Operating) [m/s ²]	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)
Shock (Non-Operating) [m/s ²]	2,450 {250G} (2 ms duration)	2,450 {250G} (2 ms duration)
Acoustics Idle Mode [dB]	34	34

Physical

Height [mm Max.]	26.1	26.1
Length [mm Max.]	147.0	147.0
Width [mm Max.]	101.85	101.85
Weight [g Max.]	710	690
Bottom Holes Type ⁸	TYPE1	TYPE1

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, $\text{Annualized Workload Rate} = (\text{Lifetime Writes} + \text{Lifetime Reads}) * (8760 / \text{Lifetime Power On Hours})$ 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 1.2 million hours and AFR(Annualized Failure Rate) is 0.73%. This assumes power-on hours are 24 x 7 in normal surveillance usage (8760 h/year power on hours, up to 300TB/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.

¹³ 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.

¹⁴ CMR is Conventional Magnetic Recording technology.