

TOSHIBA

Level Up Your Drive Performance.

Toshiba X300 Performance Internal Hard Drive



Push your gaming and creative limits with the speed, reliability, and capacity of the Toshiba X300 Performance Internal Hard Drive. Optimized to handle high-end graphics and videos, the X300 is powered by a fast 7200 RPM drive with large cache size to minimize buffering time. Toshiba cache technology is designed to help eliminate lag for an ultra-responsive gaming experience. Plus, the X300 offers massive capacity to grow with your gaming and HD content. The X300 Performance Hard Drive works hard so you can play harder.

Toshiba X300 Performance Internal Hard Drive

Application

Powerful desktop workstations / All-in-one PCs
Gaming computers / Home media computers



Product image may represent a design model.



Powerful

Designed for gaming
& high end desktop PCs



Responsive

Toshiba's cache technology
delivers real-time drive performance



Massive Capacity

Store your growing gaming
libraries & HD content



High Performance

7200 RPM with large
cache size



Accurate

Drive stabilization technology*
helps optimize read/write
performance



Reliable

Ramp loading technology &
built-in shock sensors to
help protect your content

* available on select models only



Toshiba X300 Performance Internal Hard Drive

Capacity ¹	<u>18TB</u>	<u>16TB</u>	<u>14TB</u>	<u>12TB</u>
Model Number (Retail Packaging)	HDWR51JXZSTA	HDWR31GXZSTA	HDWR51EXZSTA	HDWR21CXZSTA
Model Number (Bulk)	HDWR51JUZSVA	HDWR31GUZSVA	HDWR51EUZSVA	HDWR21CUZSVA

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
Sector Size	512e	512e	512e	512e

Features

Shock Sensors	Yes	Yes	Yes	Yes
Drive Stabilization Technology	Yes (Dual Tied)	Yes (Dual Tied)	Yes (Dual Tied)	Yes (Dual Tied)
Toshiba Cache Technology	Yes	Yes	Yes	Yes
Ramp Loading Technology	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR

Performances

Rotation Speed [RPM]	7,200	7,200	7,200	7,200
Cache Size [MB]	512	512	512	256

Reliability

MTTF [Hours] ⁴	600,000	600,000	600,000	600,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴
Load/Unload Cycles	300,000	300,000	300,000	300,000
Limited Warranty [Years] ⁵	2	2	2	2

Power Management

Supply Voltage	5 VDC +10 % / -7 % 12 VDC ± 10 %	5 VDC +10 % / -7 % 12 VDC ± 10 %	5 VDC +10 % / -7 % 12 VDC ± 10 %	5 VDC ± 5 % 12 VDC ± 10 %
Power Consumption (Operating) [W]	7.48	6.91	7.38	6.77
Power Consumption (Active Idle) [W]	4.14	4.03	3.77	4.54

Environmental

Temperature (Operating) [°C]	5 to 60 (surface)	5 to 60 (surface)	5 to 60 (surface)	5 to 60 (surface)
Temperature (Non-Operating) [°C]	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Vibration (Operating) [m/s ²]	7.35 {0.75 G} (5 to 300 Hz) 2.45 {0.25 G} (300 to 500 Hz)	7.35 {0.75 G} (5 to 300 Hz) 2.45 {0.25 G} (300 to 500 Hz)	7.35 {0.75 G} (5 to 300 Hz) 2.45 {0.25 G} (300 to 500 Hz)	7.35 {0.75 G} (5 to 300 Hz) 2.45 {0.25 G} (300 to 500 Hz)
Vibration (Non-Operating) [m/s ²]	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)
Shock (Operating) [m/s ²]	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)
Shock (Non-Operating) [m/s ²]	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)
Acoustics (Sound Power) Idle Mode [dB]	20	20	20	20

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.]	720	720	705	720
Bottom Holes Type⁶	TYPE1	TYPE1	TYPE1	TYPE1

Toshiba X300 Performance Internal Hard Drive

Capacity ¹	10TB	8TB	6TB	4TB
Model Number (Retail Packaging)	HDWR11AXZSTA	HDWR480XZSTA	HDWR460XZSTA	HDWR440XZSTA
Model Number (Bulk)	HDWR11AUZSVA	HDWR480UZSVA	HDWR460UZSVA	HDWR440UZSVA

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
Sector Size	512e	512e	512e	512e

Features

Shock Sensors	Yes	Yes	Yes	Yes
Drive Stabilization Technology	Yes (Dual Tied)	-	-	-
Toshiba Cache Technology	Yes	Yes	Yes	Yes
Ramp Loading Technology	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR

Performances

Rotation Speed [RPM]	7,200	7,200	7,200	7,200
Cache Size [MB]	256	256	256	256

Reliability

MTTF [Hours] ⁴	600,000	600,000	600,000	600,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴
Load/Unload Cycles	300,000	300,000	300,000	300,000
Limited Warranty [Years] ⁵	2	2	2	2

Power Management

Supply Voltage	5 VDC ±10 % / -5 % 12 VDC ±10 %	5 VDC ±5 % 12 VDC ±10 %	5 VDC ±5 % 12 VDC ±10 %	5 VDC ±5 % 12 VDC ±10 %
Power Consumption (Operating) [W]	9.48	8.41	7.72	6.81
Power Consumption (Active Idle) [W]	7.22	5.61	4.93	4.00

Environmental

Temperature (Operating) [°C]	5 to 60 (surface)	5 to 60 (surface)	5 to 60 (surface)	5 to 60 (surface)
Temperature (Non-Operating) [°C]	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Vibration (Operating) [m/s ²]	7.35 {0.75 G} (5 to 300 Hz) 2.45 {0.25 G} (300 to 500 Hz)	7.35 {0.75 G} (2 to 300 Hz) 4.90 {0.50 G} (300 to 350 Hz) 2.45 {0.25 G} (350 to 500 Hz)	7.35 {0.75 G} (2 to 300 Hz) 4.90 {0.50 G} (300 to 350 Hz) 2.45 {0.25 G} (350 to 500 Hz)	7.35 {0.75 G} (2 to 300 Hz) 4.90 {0.50 G} (300 to 350 Hz) 2.45 {0.25 G} (350 to 500 Hz)
Vibration (Non-Operating) [m/s ²]	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)
Shock (Operating) [m/s ²]	686 {70 G} (2 ms duration)	784 {80 G} (2 ms duration)	784 {80 G} (2 ms duration)	784 {80 G} (2 ms duration)
Shock (Non-Operating) [m/s ²]	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)	2,940 {300 G} (2 ms duration)
Acoustics (Sound Power) Idle Mode [dB]	34	31	31	31

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	720	700	693
Bottom Holes Type⁶	TYPE1	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 $1\text{GB} = 2^{30} = 1,073,741,824$ 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 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.

⁵ Standard limited warranty applies. The warranty brochure can be viewed online at <http://storage.toshiba.com/consumer-hdd/warranty-info>.

⁶ 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>

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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