



## Level Up Your Drive Performance

Push your gaming and creative limits with the speed, reliability and large capacity to optimize the handling of high-end graphics and videos. Powered by a fast 7200RPM drive with large cache size to minimize the buffering time eliminate the lag for an ultra-responsive gaming experience.



## Performance Internal Hard Drive



\*1: One Gigabyte (GB) means one billion bytes and one Terabyte (TB) means one trillion bytes.  
 Total available capacity will vary based on operating environment, and your results and storage capacity will vary accordingly.  
 A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 TB = 2<sup>40</sup> = 1 099 511 627 776 bytes and therefore shows less storage capacity.  
 \*2: Read and write speed may vary depending on the host device, read and write conditions, and file size.  
 \*3: As for "Drive Bays Supported", please contact your Solutions Provider because the compatibility with the host device will vary based on the system.  
 \*4: Workload is defined as the amount of data written, read or verified by commands from host system.  
 \*5: 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.  
 \*6: Not including glitch less than 100 μs.  
 \*7: Operating watt is measured using 80 % random read/write and 20 % performance idle.  
 \*8: 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>  
 \*9: SMR means Shingled Magnetic Recording. CMR means Conventional Magnetic Recording."

\*Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant information of this document and the instructions for the application that Product will be used with or for. Product images used do not represent actual products.

### Powerful Performance

Performing at 7200RPM and equipped with an ultra-high 512MB buffer, the data will be stored securely and accessed quickly. Works great for gamers or creative professionals to handle almost any workload.

### Drive Stabilization Technology

Features with data protection and drive stabilization technologies to help mitigate vibrations and improve tracking accuracy which means more reliability than ever for backing up game data and digital content.

### Multi-Capacity Lineup

With a wide selection of capacity from 4TB to 16TB you can choose the best capacity to suit your gaming and HD content.

# X300 Hard Disk Drive

## Application

- Powerful Desktop Workstations
- All-in-one PCs
- Gaming Computers
- High Performance PCs
- Home Media Computers

## Specifications

Formatted Capacity		16TB	14TB	12TB	10TB
Model Number	Bulk	-	-	-	HDWR11AUZSVA
	Retail	HDWR31GAZSTA	HDWR31EAZSTA	HDWR21CAZSTA	HDWR11AAZSTA
<b>Specification</b>					
Mechanical Design		Helium-Sealed			Conventional Air
Interface		SATA 6.0 Gbit/s			
Form Factor		3.5-inch (Height:26.1 mm, Length:147.0 mm, Wide:101.85 mm)			
Maximum Weight		720 g			770 g
<b>Performance</b>					
Recording Technology		CMR (Conventional Magnetic Recording)			
Rotation Speed		7,200 rpm			
Buffer Size		512 MiB		256 MiB	
<b>Reliability</b>					
MTTF		600,000 hours			
Unrecoverable Error Rate		1 per 10 <sup>14</sup> bits read			
Load/Unload		300,000 times			
<b>Power Requirements</b>					
Supply Voltage		5 V DC +10% / -7% 12 V DC ±10 %		5 V DC ±5 % 12 V DC ±10 %	5 V DC +10% / -5% 12 V DC ±10 %
Power Consumption	Read/Write	6.91 W		6.77 W	9.48 W
	Active Idle	4.03 W		4.54 W	7.22 W
<b>Environmental Requirements</b>					
Temperature	Operating	5 to 60 °C	0 to 65 °C	5 to 60 °C	
	Non-Operating	-40 to 70 °C			
Vibration	Operating	7.35 m/s <sup>2</sup> { 0.75 G } ( 5 to 300 Hz ), 2.45 m/s <sup>2</sup> { 0.25 G } ( 300 to 500 Hz )			
	Non-Operating	29.4 m/s <sup>2</sup> { 3.0 G } ( 5 to 300 Hz )			
Shock	Operating	686 m/s <sup>2</sup> {70 G} (2 ms duration)			
	Non-Operating	2,450 m/s <sup>2</sup> { 250 G } ( 2 ms duration )			
Acoustic	Active Idle	20 dB			34 dB

Limited Warranty: 2 years

Formatted Capacity		8TB	8TB	6TB	6TB	4TB
Model Number	Bulk	HDWR480UZSVA	-	HDWR460UZSVA	-	HDWR440UZSVA
	Retail	HDWR480AZSTA	HDWR180AZSTA	HDWR460AZSTA	HDWR160AZSTA	HDWR440AZSTA
<b>Specification</b>						
Mechanical Design		Conventional Air				
Interface		SATA 6.0 Gbit/s				
Form Factor		3.5-inch (Height:26.1 mm, Length:147.0 mm, Wide:101.85 mm)				
Maximum Weight		720 g	770 g	700 g	770 g	693 g
<b>Performance</b>						
Recording Technology		CMR (Conventional Magnetic Recording)				
Rotation Speed		7,200 rpm				
Buffer Size		256 MiB/s				
<b>Reliability</b>						
MTTF		600,000 hours				
Unrecoverable Error Rate		1 per 10 <sup>14</sup> bits read				
Load/Unload		300,000 times				
<b>Power Requirements</b>						
Supply Voltage		5 V DC ±5 % 12 V DC ±10 %	5 V DC +10% / -5% 12 V DC ±10 %	5 V DC ±5 % 12 V DC ±10 %	5 V DC +10% / -5% 12 V DC ±10 %	5 V DC ±5 % 12 V DC ±10 %
Power Consumption	Read/Write	8.41 W	9.48 W	7.72 W	9.48 W	6.81 W
	Active Idle	5.61 W	7.22 W	4.93 W	7.22 W	4.00 W
<b>Environmental Requirements</b>						
Temperature	Operating	5 to 60 °C				
	Non-Operating	-40 to 70 °C				
Vibration	Operating	7.35 m/s <sup>2</sup> {0.75 G} (2 to 300 Hz) 4.90 m/s <sup>2</sup> {0.50 G} (300 to 350 Hz) 2.45 m/s <sup>2</sup> {0.25 G} (350 to 500 Hz)	7.35 m/s <sup>2</sup> {0.75 G} (2 to 300 Hz) 2.45 m/s <sup>2</sup> {0.25 G} (350 to 500 Hz)	7.35 m/s <sup>2</sup> {0.75 G} (2 to 300 Hz) 4.90 m/s <sup>2</sup> {0.50 G} (300 to 350 Hz) 2.45 m/s <sup>2</sup> {0.25 G} (350 to 500 Hz)	7.35 m/s <sup>2</sup> {0.75 G} (2 to 300 Hz) 2.45 m/s <sup>2</sup> {0.25 G} (350 to 500 Hz)	7.35 m/s <sup>2</sup> {0.75 G} (2 to 300 Hz) 4.90 m/s <sup>2</sup> {0.50 G} (300 to 350 Hz) 2.45 m/s <sup>2</sup> {0.25 G} (350 to 500 Hz)
	Non-Operating	29.4 m/s <sup>2</sup> { 3.0 G } ( 5 to 300 Hz )				
Shock	Operating	784 m/s <sup>2</sup> {80 G} (2 ms duration)	686 m/s <sup>2</sup> {70 G} (2 ms duration)	784 m/s <sup>2</sup> {80 G} (2 ms duration)	686 m/s <sup>2</sup> {70 G} (2 ms duration)	784 m/s <sup>2</sup> {80 G} (2 ms duration)
	Non-Operating	2,450 m/s <sup>2</sup> { 250 G } ( 2 ms duration )				
Acoustic	Idle	31 dB	34 dB	31 dB	34 dB	31 dB

Limited Warranty: 2 years