

TOSHIBA



N300 NAS Hard Drives

Built for 24/7 reliability

Toshiba N300 NAS Hard Drive offers unprecedented reliability for NAS and other high-performance storage systems. It is optimized to meet the reliability, endurance, performance and scalability requirements of 24-hour/7-day high-capacity storage. Suitable for personal, home office and small business use. The N300 is available in capacities of up to 22 TB.



Use for

- NAS and Multimedia Server
- Desktop RAID and Server
- Private Cloud Storage
- Small Business Server and Storage

Top Features

- Designed for 24/7 operation
- Up to 8 drive bays
- Workload up to 180 TB/year
- MTTF/MTBF up to 1.2 million hours
- 7200 rpm speed with up to 512 MiB buffer
- CMR technology
- 3.5-inch Form Factor

Capacities

22 TB	20 TB	18 TB	16 TB	14 TB
12 TB	10 TB	8 TB	6 TB	4 TB



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Capacity *1	22 TB	20 TB	18 TB	16 TB	16 TB	14 TB	14 TB	12 TB	12 TB
Parts Number	HDWG62CUZSVA	HDWG62AUZSVA	HDWG51JUZSVA	HDWG51GUZSVA	HDWG31GUZSVA	HDWG51EUZSVA	HDWG21EUZSVA	HDWG51CUZSVA	HDWG21CUZSVA
Basic Specifications									
Recording Technology	CMR								
Interface	SATA 6.0 Gbit/s								
Mechanical Design	He								
Form Factor *2	3.5-inch								
Sector Size	512e								
Features									
Drive Bays Supported	up to 8								
24 / 7 Operation	yes								
Rotational Vibration Sensor	yes								
Shock Sensor	yes								
Performances									
Rotation Speed	7200 rpm								
Sustained data transfer rate *3	281 MB/s (268 MiB/s)				274 MB/s (262 MiB/s)	281 MB/s (268 MiB/s)	260 MB/s (248 MiB/s)	281 MB/s (268 MiB/s)	253 MB/s (242 MiB/s)
Buffer Size *4	512 MiB						256 MiB	512 MiB	256 MiB
Reliability									
MTTF / MTBF *5	1 200 000 hours						1 000 000 hours	1 200 000 hours	1 000 000 hours
Unrecoverable Error Rate	1 per 10E15		1 per 10E14						
Maximum rated workload *6	180 TB/year								
Load/Unload cycles	300 000 times								
Power Requirements									
Supply Voltage		12 VDC ±10 % 5 VDC +10 / -7 %					12 VDC ±10 % 5 VDC ±5 %	12 VDC ±10 % 5 VDC +10 / -7 %	12 VDC ±10 % 5 VDC ±5 %
Power Consumption	Operating	8.02 W		7.48 W	6.91 W	7.38 W	6.77 W	6.85 W	6.49 W
	Active Idle	4.35 W	4.41 W	4.14 W	4.03 W	3.77 W	4.54 W	3.3 W	4.28 W
Environmental									
Temperature	Operating	5 to 60 °C (Surface)				0 to 65 °C (Surface)	5 to 60 °C (Surface)		
	Non-operating	-40 to 70 °C							
Vibration	Operating	7.35 m/s² {0.75 G} (5 to 300 Hz) 2.45 m/s² {0.25 G} (300 to 500 Hz)							
	Non-operating	29.4 m/s² {3.0 G} (5 to 500 Hz)							
Shock	Operating	490 m/s² {50 G} (2 ms duration)		686 m/s² {70 G} (2 ms duration)					
	Non-operating	1960 m/s² {200 G} (2 ms duration)		2450 m/s² {250 G} (2 ms duration)					
Acoustics (Active Idle)		20 dB (Typ.)							
Physical									
Dimension	147 (L) x 101.85 (W) x 26.1 (H) mm (Max)								
Weight	720 g (Max)					705 g (Max)	720 g (Max)	690 g (Max)	720 g (Max)

*1 Definition of capacity: One terabyte (TB) = one trillion bytes, but storage capacity actually available may vary depending on operating environment and formatting. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

*2 "3.5-inch" means the form factor of HDDs. They do not indicate drive's physical size.

*3 Read and write speed may vary depending on the host device, read and write conditions, and file size.

*4 A mebibyte (MiB) means 1 048 576 bytes.

*5 MTTF/MTBF (Mean Time to Failure/Mean Time Between Failures) 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.

*6 Workload is a measure of the data throughput of the year, and it is defined as the amount of data written, read or verified by commands from the host system.

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Capacity *1	10 TB	8 TB	8 TB	6 TB	6 TB	4 TB	4 TB	4 TB
Parts Number	HDWG71AUZSVA	HDWG780UZSVA	HDWG480UZSVA	HDWG760UZSVA	HDWG460UZSVA	HDWG740UZSVC	HDWG440UZSVA	HDWQ140UZSVA
Basic Specifications								
Recording Technology	CMR							
Interface	SATA 6.0 Gbit/s							
Mechanical Design	Air							
Form Factor *2	3.5-inch							
Sector Size	512e						512n	
Features								
Drive Bays Supported	up to 8							
24 / 7 Operation	yes							
Rotational Vibration Sensor	yes							
Shock Sensor	yes							
Performances								
Rotation Speed	7200 rpm							
Sustained data transfer rate *3	281 MB/s (268 MiB/s)	260 MB/s (248 MiB/s)	281 MB/s (268 MiB/s)	250 MB/s (239 MiB/s)	281 MB/s (268 MiB/s)	232 MB/s (222 MiB/s)	204 MB/s (195 MiB/s)	
Buffer Size *4	512 MiB	256 MiB	512 MiB	256 MiB	512 MiB	256 MiB	128 MiB	
Reliability								
MTTF / MTBF *5	1 000 000 hours							
Unrecoverable Error Rate	1 per 10E15							1 per 10E14
Maximum rated workload *6	180 TB/year							
Load/Unload cycles	600 000 times	300 000 times	600 000 times	300 000 times	600 000 times	300 000 times		
Power Requirements								
Supply Voltage		12 VDC ±10 % 5 VDC +10 / -7 %	12 VDC ±10 % 5 VDC ±5 %	12 VDC ±10 % 5 VDC +10 / -7 %	12 VDC ±10 % 5 VDC ±5 %	12 VDC ±10 % 5 VDC +10 / -7 %	12 VDC ±10 % 5 VDC ±5 %	
Power Consumption	Operating	9.07 W	8.19 W	8.41 W	7.43 W	7.72 W	6.75 W	9.6 W
	Active Idle	5.74 W	4.92 W	5.61 W	4.14 W	4.93 W	3.49 W	5.2 W
Environmental								
Temperature	Operating	5 to 60 °C (Surface)	5 to 65 °C (Surface)	5 to 60 °C (Surface)	5 to 65 °C (Surface)	5 to 60 °C (Surface)	5 to 65 °C (Surface)	0 to 65 °C (Surface)
	Non-operating	-40 to 70 °C						
Vibration	Operating	7.35 m/s² {0.75 G} (5 to 300 Hz) 2.45 m/s² {0.25 G} (300 to 500 Hz)	7.35 m/s² {0.75 G} (2 to 300 Hz) 4.90 m/s² {0.50 G} (300 to 350 Hz) 2.45 m/s² {0.25 G} (350 to 500 Hz)	7.35 m/s² {0.75 G} (5 to 300 Hz) 2.45 m/s² {0.25 G} (300 to 500 Hz)	7.35 m/s² {0.75 G} (2 to 300 Hz) 4.90 m/s² {0.50 G} (300 to 350 Hz) 2.45 m/s² {0.25 G} (350 to 500 Hz)	7.35 m/s² {0.75 G} (5 to 300 Hz) 2.45 m/s² {0.25 G} (300 to 500 Hz)	7.35 m/s² {0.75 G} (2 to 300 Hz) 4.90 m/s² {0.50 G} (300 to 350 Hz) 2.45 m/s² {0.25 G} (350 to 500 Hz)	7.35 m/s² {0.75 G} (5 to 300 Hz) 2.45 m/s² {0.25 G} (300 to 500 Hz)
	Non-operating	29.4 m/s² {3.0 G} (5 to 500 Hz)						
Shock	Operating	686 m/s² {70 G} (2 ms duration)						
	Non-operating	2450 m/s² {250 G} (2 ms duration)						
Acoustics (Active Idle)	34 dB (Typ.)		31 dB (Typ.)	34 dB (Typ.)	31 dB (Typ.)	34 dB (Typ.)	31 dB (Typ.)	30 dB (Typ.)
Physical								
Dimension	147 (L) x 101.85 (W) x 26.1 (H) mm (Max)							
Weight	755 g (Max)	730 g (Max)	720 g (Max)	710 g (Max)	700 g (Max)	690 g (Max)	693 g (Max)	720 g (Max)

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