

TOSHIBA

Keep Business Moving.

The Toshiba N300 Pro NAS Internal Hard Drive is designed to provide medium to large businesses a reliable, scalable, and centralized data storage and sharing in a 24/7 multi-user NAS environment. The N300 Pro helps streamline workflows across the business, making it easier for your teams to collaborate.

N300 Pro NAS Internal Hard Drive

Offering a higher workload rate of up to 550TB/year⁶ and an expanded capacity of up to 24TB¹ (compared to the N300), the N300 Pro is a reliable drive to help you take your business to the next level. Designed for 24/7 operation¹⁰ with a fast 7200 RPM speed, the N300 Pro helps keep your data readily accessible when you need it most. Powered by NASLink™, an innovative firmware that intelligently manages mixed workloads and optimizes cache usage in real time to deliver stable, consistent performance across file sharing, backups, media streaming, and RAID operations.

The N300 Pro is designed to work in wide temperature ranges and has built-in RV sensors to mitigate rotational vibration in a multi-bay RAID environment. Engineered with CMR technology to deliver a consistent performance and broad compatibility¹³, this drive offers time-tested quality that is backed by Toshiba's five-year limited warranty⁸ providing you with peace of mind.

When speed, reliability, and performance are critical to your business, the N300 Pro hard drive delivers. Keeping your data safe and accessible, so you can keep your business moving.



Image does not represent actual product.

TOSHIBA

N300 Pro NAS Internal Hard Drive

Application¹³

- Network Attached Storage for high-intensity workloads
- NAS systems for medium or large-sized businesses
- RAID-optimized NAS systems with up to 24 bays⁴



Product image may represent a design model.



Operate Around the Clock

Designed for commercial and enterprise NAS systems in 24/7 operating environments¹⁰.



Grow Your Business

Scalable up to 24 drive bays⁴ for medium or large-sized business. CMR technology for broad compatibility¹³.



Powerful Performance

7200 RPM speed with up to 1.0GB cache size. Powered by Toshiba cache technology.



Optimized for RAID Environment

Built-in RV sensors to mitigate rotational vibration. Error Recovery Control technology limits recovery time to help optimize error correction.



Toshiba NASLink™ Technology

Intelligent firmware manages NAS mixed workloads and optimizes cache usage to deliver stable, consistent performance across RAID operations, multi-user access, media streaming, and backups.



Capacity for More

Store and access your critical data and important documents with up to 24TB¹ storage capacity.



Enhanced Reliability

Workload rate up to 550 TB/yr^{6,10}, MTTF up to 2.5 million hours⁷.



Peace of Mind

Toshiba Five-year limited warranty⁸.

TOSHIBA | N300 Pro Specifications

Capacity ¹	24TB	22TB	20TB
Model Number (Retail Packaging)	HDWG82EXZSTB	HDWG82CXZSTB	HDWG82AXZSTB
Model Number (Bulk)	HDWG82EUZSVB	HDWG82CUZSVB	HDWG82AUZSVB
Basic Specifications			
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ²	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
RoHS Compatible ³	Yes	Yes	Yes
Sector Size	512e	512e	512e
Features			
Firmware Technology	NASLink™	NASLink™	NASLink™
Drive Bays Supported ⁴	Up to 24	Up to 24	Up to 24
Rotational Vibration (RV) Sensors	Yes	Yes	Yes
Native Command Queuing (NCQ)	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes
Toshiba Cache Technology	Yes	Yes	Yes
Ramp Loading Technology	Yes	Yes	Yes
Recording Technology ¹¹	CMR	CMR	CMR
Performance			
Rotational Speed [RPM]	7,200	7,200	7,200
Max Data Transfer Speed ⁵ [MB/s Typ.] (Sustained)	309	298	294
Cache Size [MB]	1024	1024	1024
Reliability			
24x7 Operation ¹⁰	Yes	Yes	Yes
Maximum Workload Rate [TB/Year] ⁶	550	550	550
MTTF [Hours] ⁷	2,500,000	2,500,000	2,500,000
Unrecoverable Error Rate	1 per 10 ¹⁵	1 per 10 ¹⁵	1 per 10 ¹⁵
Load/Unload Cycles	600,000	600,000	600,000
Limited Warranty [Years] ⁸	5	5	5
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 %
Power Consumption (Operating) ¹⁴ [W]	7.62	7.62	7.62
Power Consumption (Active Idle-A) ¹⁵ [W]	4.35	4.35	4.35
Environmental			
Temperature (Operating) [°C]	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
Vibration (Operating) [m/s²]	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/s²]	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)
Shock (Operating) [m/s²]	490 {50 G} (2 ms duration)	490 {50 G} (2 ms duration)	490 {50 G} (2 ms duration)
Shock (Non-Operating) [m/s²]	1,960 {200 G} (2 ms duration)	1,960 {200 G} (2 ms duration)	1,960 {200 G} (2 ms duration)
Acoustics Idle Mode [dB]	20	20	20
Physical			
Height [mm Max.]	26.1	26.1	26.1
Length [mm Max.]	147.0	147.0	147.0
Width [mm Max.]	101.85	101.85	101.85
Weight [g Max.]	730	730	730
Bottom Holes Type ⁹	TYPE1	TYPE1	TYPE1

TOSHIBA | N300 Pro Specifications

Capacity ¹	18TB	16TB	14TB
Model Number (Retail Packaging)	HDWG81JXZSTB	HDWG81GXZSTB	HDWG81EXZSTB
Model Number (Bulk)	HDWG81JUZSVB	HDWG81GUZSVB	HDWG81EUZSVB
Basic Specifications			
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ²	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
RoHS Compatible ³	Yes	Yes	Yes
Sector Size	512e	512e	512e
Features			
Firmware Technology	NASLink™	NASLink™	NASLink™
Drive Bays Supported ⁴	Up to 24	Up to 24	Up to 24
Rotational Vibration (RV) Sensors	Yes	Yes	Yes
Native Command Queuing (NCQ)	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes
Toshiba Cache Technology	Yes	Yes	Yes
Ramp Loading Technology	Yes	Yes	Yes
Recording Technology ¹¹	CMR	CMR	CMR
Performance			
Rotational Speed [RPM]	7,200	7,200	7,200
Max Data Transfer Speed ⁵ [MB/s Typ.] (Sustained)	294	294	294
Cache Size [MB]	1024	1024	1024
Reliability			
24x7 Operation ¹⁰	Yes	Yes	Yes
Maximum Workload Rate [TB/Year] ⁶	550	550	550
MTTF [Hours] ⁷	2,500,000	2,500,000	2,500,000
Unrecoverable Error Rate	1 per 10 ¹⁵	1 per 10 ¹⁵	1 per 10 ¹⁵
Load/Unload Cycles	600,000	600,000	600,000
Limited Warranty [Years] ⁸	5	5	5
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 %
Power Consumption (Operating) ¹⁴ [W]	7.41	6.94	6.94
Power Consumption (Active Idle-A) ¹⁵ [W]	4.16	3.66	3.66
Environmental			
Temperature (Operating) [°C]	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
Vibration (Operating) [m/s²]	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/s²]	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)
Shock (Operating) [m/s²]	490 {50 G} (2 ms duration)	490 {50 G} (2 ms duration)	490 {50 G} (2 ms duration)
Shock (Non-Operating) [m/s²]	1,960 {200 G} (2 ms duration)	1,960 {200 G} (2 ms duration)	1,960 {200 G} (2 ms duration)
Acoustics Idle Mode [dB]	20	20	20
Physical			
Height [mm Max.]	26.1	26.1	26.1
Length [mm Max.]	147.0	147.0	147.0
Width [mm Max.]	101.85	101.85	101.85
Weight [g Max.]	730	730	730
Bottom Holes Type ⁹	TYPE1	TYPE1	TYPE1

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N300 Pro Specifications

Capacity ¹	12TB	10TB	8TB
Model Number (Retail Packaging)	HDWG51CXZSTB	HDWG71AXZSTB	HDWG780XZSTB
Model Number (Bulk)	HDWG51CUZSVB	HDWG71AUZSVB	HDWG780UZSVB
Basic Specifications			
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ²	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
RoHS Compatible ³	Yes	Yes	Yes
Sector Size	512e	512e	512e
Features			
Firmware Technology	NASLink™	NASLink™	NASLink™
Drive Bays Supported ⁴	Up to 24	Up to 24	Up to 24
Rotational Vibration (RV) Sensors	Yes	Yes	Yes
Native Command Queuing (NCQ)	Yes	Yes	Yes
Shock Sensor	Yes	Yes	Yes
Toshiba Cache Technology	Yes	Yes	Yes
Ramp Loading Technology	Yes	Yes	Yes
Recording Technology ¹¹	CMR	CMR	CMR
Performance			
Rotational Speed [RPM]	7,200	7,200	7,200
Max Data Transfer Speed ⁵ [MB/s Typ.] (Sustained)	281	281	281
Cache Size [MB]	512	512	512
Reliability			
24x7 Operation ¹⁰	Yes	Yes	Yes
Maximum Workload Rate [TB/Year] ⁶	300	300	300
MTTF [Hours] ⁷	1,200,000	1,200,000	1,200,000
Unrecoverable Error Rate	1 per 10 ¹⁴	1 per 10 ¹⁵	1 per 10 ¹⁵
Load/Unload Cycles	600,000	600,000	600,000
Limited Warranty [Years] ⁸	5	5	5
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 %
Power Consumption (Operating) ¹⁴ [W]	6.85	9.07	9.07
Power Consumption (Active Idle-A) ¹⁵ [W]	3.30	5.74	5.74
Environmental			
Temperature (Operating) [°C]	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
Vibration (Operating) [m/s²]	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/s²]	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)
Shock (Operating) [m/s²]	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)
Shock (Non-Operating) [m/s²]	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)	2,450 {250 G} (2 ms duration)
Acoustics Idle Mode [dB]	20	34	34
Physical			
Height [mm Max.]	26.1	26.1	26.1
Length [mm Max.]	147.0	147.0	147.0
Width [mm Max.]	101.85	101.85	101.85
Weight [g Max.]	690	755	755
Bottom Holes Type ⁹	TYPE1	TYPE1	TYPE1

TOSHIBA | N300 Pro Specifications

Capacity ¹	6TB	4TB
Model Number (Retail Packaging)	HDWG760XZSTB	HDWG740XZSTD
Model Number (Bulk)	HDWG760UZSVB	HDWG740UZSVD
Basic Specifications		
Interface	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor ²	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes
RoHS Compatible ³	Yes	Yes
Sector Size	512e	512e
Features		
Firmware Technology	NASLink™	NASLink™
Drive Bays Supported ⁴	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
Ramp Loading Technology	Yes	Yes
Recording Technology ¹¹	CMR	CMR
Performance		
Rotational Speed [RPM]	7,200	7,200
Max Data Transfer Speed ⁵ [MB/s Typ.] (Sustained)	281	281
Cache Size [MB]	512	512
Reliability		
24x7 Operation ¹⁰	Yes	Yes
Maximum Workload Rate [TB/Year] ⁶	300	300
MTTF [Hours] ⁷	1,200,000	1,200,000
Unrecoverable Error Rate	1 per 10 ¹⁵	1 per 10 ¹⁵
Load/Unload Cycles	600,000	600,000
Limited Warranty [Years] ⁸	5	5
Power Management		
Supply Voltage	5 VDC +10 % / -7 % 12 VDC ±10 %	5 VDC +10 % / -7 % 12 VDC ±10 %
Power Consumption (Operating) ¹⁴ [W]	8.19	7.43
Power Consumption (Active Idle-A) ¹⁵ [W]	4.92	4.14
Environmental		
Temperature (Operating) [°C]	5 to 60 (surface)	5 to 60 (surface)
Temperature (Non-Operating) [°C]	-40 to 70	-40 to 70
Vibration (Operating) [m/s²]	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/s²]	29.4 {3.0 G} (5 to 500Hz)	29.4 {3.0 G} (5 to 500Hz)
Shock (Operating) [m/s²]	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)
Shock (Non-Operating) [m/s²]	2,450 {250 G} (2 ms duration)	2,450 {250 G} (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.]	730	710
Bottom Holes Type ⁹	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 $1\text{GB} = 2^{30} = 1,073,741,824$ 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. Actual formatted storage capacity may vary.

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

⁵ 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.

⁶ 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, Annualized Workload Rate = (Lifetime Writes + Lifetime Reads) * (8760 / Lifetime Power On Hours) in case Power On time is 8760h or longer. Otherwise (i.e. Power On time is shorter than 8760h), Annualized Workload Rate = (Lifetime Writes + 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.

⁷ 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. MTTF (Mean Time to Failure) of the HDDs during its life time is 1.0 million hours and AFR (Annualized Failure Rate) is 0.88%, or 1.2 million hours and AFR is 0.73%, or 2.5 million hours and AFR is 0.35% (depending on HDD models). This assumes power-on hours are 24 x 7 in normal usage (8760 h/year power on hours, up to 180TB/year, or up to 300TB/year, or up to 550TB/year total data transfers (depending on HDD models), 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.

⁸ Standard limited warranty applies. The warranty brochure can be viewed online at <http://storage.toshiba.com/consumer-hdd/warranty-info>.

⁹ 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>

¹⁰ Drive life may vary depending on usage and workload. See also MTTF and Annual Workload Rating for more detail.

¹¹ CMR is Conventional Magnetic Recording technology.

¹² Product prices, specifications, configurations, colors, components, features, and availability are subject to change without notice.

¹³ Compatibility may vary depending on user's hardware configuration and operating system.

¹⁴ Operating watt is measured using 80 % random read/write and 20 % performance idle.

¹⁵ Idle is active idle.

¹⁶ NASLink is a trademark or registered trademark of Toshiba Electronic Devices & Storage Corporation in the United States and other countries. All other trademarks are the property of their respective owners.