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 550 TB/yr[6] and an expanded capacity of up to 24TB[1] (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 operation[10] with a fast 7200 RPM speed, the N300 Pro helps keep your data readily accessible so you can focus on growing your business.

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, so you can be confident that this drive will perform wherever and whenever you need it most. This drive is engineered with CMR technology to deliver a consistent performance and broad compatibility[13]. Plus, it offers time-tested quality that is backed by a Toshiba's five-year limited warranty[8] 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.

TOSHIBA

Hard Drive

NAS Systems

N300 *Pro*

Image does not represent actual product.

TOSHIBA

N300 Pro
NAS Internal Hard Drive

Application[13]

- Network Attached Storage for high-intensity workloads
- NAS systems for medium or large-sized businesses
- RAID-optimized NAS systems with up to 24 bays[4]

Product image may represent a design model.

Operate Around the Clock
Designed for commercial and enterprise NAS systems in 24/7 operating environments[10].

Grow Your Business
Scalable up to 24 drive bays[4] for medium or large-sized business. CMR technology for broad compatibility[13].

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

Enhanced Reliability
Workload rate up to 550 TB/yr[6,10]. MTTF up to 2.5 million hours[7].

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

Capacity for More
Store and access your critical data and important documents with up to 24TB[1] storage capacity.

Peace of Mind
Toshiba Five-year limited warranty[8].

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

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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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

	18TB	16TB	14TB
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]	12TB	10TB	8TB
Model Number (Retail Packaging)	HDWG51CXZSTB	HDWG71AXZSTB	HDWG780XZSTB
Model Number (Bulk)	HDWG51CUZSVB	HDWG71AUZSVB	HDWG780UZSVB

Basic Specifications

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

	12TB	10TB	8TB
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

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 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 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 disjoined (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.

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