TOSHIBA

HDD

MG04ACAxxxN SERIES
ENTERPRISE CAPACITY HDD

The Enterprise Capacity HDD 512 native, 7,200 rpm SATA models (MG04ACA-N) come in a robust design providing 1, 2 and 4TB[1] in a 3.5-inch[2] form factor. Features of MG04ACA-N series include a SATA 6Gbit/s[3] interface, and industry-standard 512 native format sector technology for environments and applications that require 512 native. Model options supporting Sanitize Instant Erase (SIE)[4] are also available. This feature randomizes data instantly in case of unintended disclosure in the event that drives are re-purposed or moved outside of data center environments.

Product image may represent a design model.

KEY FEATURES

- Large-Capacity (4 / 2 / 1 TB models) in an industry standard 3.5-inch Form-Factor
- 7,200 rpm Performance
- SATA 6Gbit/s Interface
- Designed for 24 × 7 workloads of up to 550 total TB[5] Transferred per Year
- 512 Native Sector Technology
- Rotational Vibration Technology
- Sanitize Instant Erase (SIE) Option Available

APPLICATIONS

- Engineered for Mid-line / Nearline Business Critical Workloads
- Tier 2 Business-Critical Servers and Storage Systems
- Servers Supporting Workloads that Benefit from High Capacity per Spindle
- Capacity-Optimized Data Center Storage Systems
- Applications and hypervisors that require legacy 512 Native Sector Technology

SPECIFICATIONS

Model Number		MG04ACA400N	MG04ACA200N	MG04ACA100N
Interface		SATA (6.0 Gbit/s , 3.0 Gbit/s , 1.5 Gbit/s)		
Formatted Capacity		4 TB	2 TB	1 TB
Performance	Interface Speed	6.0 Gbit/s Max.		
	Rotation Speed	7,200 rpm		
	Average Latency Time	4.17 ms		
	Buffer Size	128 MiB[6]		
	Data Transfer Speed (Sustained)	195 MiB/s		
Logical Data Block Length		Host 512B Disk 512B		
Supply Voltage	Allowable Voltage	12 V [7] ± 5% / 5 V [7] ± 5% [8]		
Power Consumption	Read / Write	11.3 W Typ.		
	Active Idle	7.5 W Typ.		

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❯ ENVIRONMENTAL LIMITS

Item		Specification
Temperature	Operating	5 °C to 55 °C
	Non-Operating	- 40 °C to 70 °C
Humidity	Operating	5 % to 90 % R.H.
	Non-Operating	5 % to 95 % R.H.
Shock [9]	Operating	686 m/s^2 { 70 G } (2 ms duration)
	Non-Operating	2,940 m/s^2 { 300 G } (2 ms duration)
Vibration [9]	Operating [10]	7.35 m/s^2 { 0.75 G } (5 to 300Hz) 2.45 m/s^2 { 0.25 G } (300 to 500Hz)
	Non-Operating [11]	49 m/s^2 { 5.0 G } (5- 500Hz)
Altitude	Operating	- 305 m to 3,048 m
	Non-Operating	- 305 m to 12,192 m

❯ RELIABILITY

Item	Specification
MTTF[12]	1,400,000 hours
Non-recoverable Error Rate	10 error per 10^{16} bits read
Load / Unload	600,000 times
Availability	24 hours/day, 7 days/week
Rated Annual Workload (Total TB Transferred per Year, R/W)	550 TB/year

❯ MECHANICAL SPECIFICATIONS

Item	Specification
Width	101.85 mm Max
Height	26.1 mm Max
Length	147.0 mm Max
Weight	720 g Max.

[1] Definition of capacity: A terabyte (TB) is 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 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/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] SIE: Sanitize Instant Erase. SIE is a function to invalidate the data recorded on the magnetic disks at a blink.
[5] 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.
[6] A mebibyte (MiB) means 2^{20}, or 1,048,576 bytes.
[7] Input voltages are specified at the HDD connector side, during HDD ready state.
[8] Make sure the value is not less than -0.3V DC (less than -0.6V, 0.1ms) when turning on or off the power.
[9] Vibration applied to the HDD is measured at near the mounting screw hole on the frame as much as possible.
[10] At random seek write/read and default on retry setting with log sweep vibration
[11] At power-off state after installation
[12] 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.

Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant TOSHIBA information and the instructions for the application that Product will be used with or for.