

TOSHIBA



S300 AI Surveillance Hard Drives

For Various Streams

S300 AI HDD is optimized for AI workloads, enabling fast video data access for real-time analytics. Supporting up to 64 camera and 32 AI streams, it offers scalable performance for modern surveillance. With 550 TB/year workload and up to 2.5 million hours MTTF, it ensures 24/7 reliability in critical environments.



Use for

- AI Video Analytics Server and Storage Systems
- Centralized Surveillance Data Storage Systems
- Video Archive and Data Recovery Systems
- Multi-Bay-RAID Storage for Surveillance Data

Top Features

- Designed for 24/7 operation
- Up to 32 AI Streams
- Up to 64 cameras
- Workload 550 TB/year
- MTTF/MTBF up to 2.5 million hours
- 7200 rpm speed with 512 MiB buffer
- CMR technology
- 3.5-inch Form Factor

Capacities

24 TB	22 TB	20 TB	18 TB
14 TB	10 TB	8 TB	



S300 AI

 Surveillance Hard Drives

Capacity *1	24TB	22TB	20TB	18TB	16TB	14TB	10TB	8TB
Parts Number	MG11ACA24TE-V	MG11ACA22TE-V	MG11ACA20TE-V	MG11ACA18TE-V	MG11ACA16TE-V	MG11ACA14TE-V	MG10ADA10TE-V	MG10ADA800E-V

Basic Specifications	
Recording Technology	CMR
Interface	HeAir
Mechanical Design	SATA 6 Gbit/s
Form Factor *2	3.5-inch
Sector Size	512e

Features	
AI Streams	up to 32
Number of Camera *3	up to 64
Drive Bays Supported	up to 24
Tarnish resistant	yes
24 / 7 Operation	yes
Rotational Vibration Safeguard (RVS)	yes
Shock Sensor	yes

Performances	
Rotation Speed	7200 rpm
Sustained data transfer rate *4	309 MB/s (295 MiB/s)299 MB/s (285 MiB/s)295 MB/s (281 MiB/s)281 MB/s (268 MiB/s)
Buffer Size *5	1024 MiB512 MiB

Reliability	
MTTF/MTBF *6	2 500 000 hours2 000 000 hours
Unrecoverable Error Rate	10 per 10 ¹⁶
Maximum rated workload *7	550 TB/year
Load/Unload cycles	600 000 times

Power Requirements	
Supply Voltage	12 V ±10 %, 5 V +10/-7 %
Power Consumption	Operating8.11 W7.89 W7.41 W9.63 W
	Active Idle4.35 W4.16 W3.66 W5.74 W

Environmental	
Temperature	Operating *85 to 60 °C (Surface)
	Non-operating-40 to 70 °C
Vibration	Operating7.35 m/s ² {0.75 G} (5 to 300 Hz)2.45 m/s ² {0.25 G} (300 to 500 Hz)
	Non-operating29.4 m/s ² {3.0 G} (5 to 500 Hz)
Shock	Operating490 m/s ² {50 G} (2 ms duration)686 m/s ² {70 G} (2 ms duration)
	Non-operating1960 m/s ² {200 G} (2 ms duration)2450 m/s ² {250 G} (2 ms duration)
Acoustics (Active Idle)	20 dB (Typ)34 dB (Typ)

Physical	
Dimensions	147 (L) x 101.85 (W) x 26.1 (H) mm (Max)
Weight	730 g (Max)755 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 Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras at 10Mbit/s rate. Actual results may vary based on various factors, including the types of cameras installed, the system's hardware and software capabilities, and the video compression technology used, as well as system variables such as resolution, frames per second, and other settings.

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

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

*6 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.

*7 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.

*8 Operation of high surface temperature will be shortened of the drives useful life. The recommendation operating condition of surface temperature is less than 60°C.

- Product image may represent a design model.
- 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.