



3.5 HARD DRIVE DATA SHEET
Smart. Safe. Secure.
Video Optimised and Edge Ready

Seagate[®] SkyHawk[™] Al 24 TB is a video-optimised drive designed for NVRs, with artificial intelligence (Al) for edge applications.





Best-Fit Applications

- Network video recorders (NVR)
- Al-enabled NVR systems





Key Advantages

ImagePerfect[™] Al firmware delivers zero dropped frames while supporting heavier workloads.

Versatile capabilities intelligently adapt to the scale of your AI environment, supporting up to 64 HD video streams and 32 AI streams.

SkyHawk Health Management actively helps protect your video storage by focusing on prevention, intervention and recovery options.¹

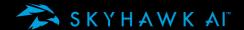
Class-Leading Reliability and Dependability SkyHawk AI drives are rated for up to 2.5M hours MTBF and a 550 TB/year workload rate for more than 3x that of standard surveillance hard drives. Backed by a 5-year limited warranty.

Powerful processing to welcome workload challenges — SkyHawk AI supports video analysis and recording simultaneously with GPU analytics workloads.

Enjoy consistent performance with built-in rotational vibration sensors providing reliable storage for NVR with little lag or downtime.

Unlimited multi-bay support helps you meet your growing storage demands.

1 Contact your Seagate sales representative for further information.





Specifications	24TB	20TB	16TB	12TB
Capacity	24TB	20TB	16TB	12TB
Standard Model Numbers	ST24000VE002	ST20000VE003	ST16000VE004	ST12000VE003
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Recording Technology	CMR	CMR	CMR	CMR
Drive Design	Helium	Helium	Helium	Helium
Features and Performance				
Drive Bays Supported	Unlimited	Unlimited	Unlimited	Unlimited
Al Channels	32	32	32	32
Al Real Time Capture Events/Sec 1,2	Up to 120	Up to 120	Up to 120	Up to 120
Al Real Time Compare Events/Sec 1,2	Up to 96	Up to 96	Up to 96	Up to 96
HD Cameras Supported ³	Up to 64	Up to 64	Up to 64	Up to 64
RV Sensors	Yes	Yes	Yes	Yes
Max Data Transfer Rate (MB/s)	285/272	285/272	285/272	285/272
Cache (MB)	512MB	512MB	512MB	512MB
Reliability/Data Integrity				
Tarnish Resistant	Yes	Yes	Yes	Yes
Load/Unload Cycles	600,000	600,000	600,000	600,000
Non-recoverable Read Errors Rate, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15
Power-On Hours per year	8,760	8,760	8,760	8,760
Workload Rate Limit (WRL) 4	550	550	550	550
Mean Time Between Failures (MTBF) (hours)	2500000 hr	2500000 hr	2500000 hr	2500000 hr
Warranty, Limited (years) 5	5	5	5	5
Rescue Data Recovery Services (years) 6	3	3	3	3
Power Management				
Startup Current, Typical (12V, A)	2.0 A	2.0 A	2.0 A	2.0 A
Average Read/Write Power * (W) 7	7.8	7.8	7.8	7.8
Idling Average (W)	6.3 W	6.3 W	6.3 W	6.3 W
Standby Mode/Sleep Mode, Typical (W)	1.1/1.1 W	1.1/1.1 W	1.1/1.1 W	1.1/1.1 W
Voltage Tolerance (5 V)	±5%	±5%	±5%	±5%
Voltage Tolerance (12 V)	±10%	±10%	±10%	±10%
Environmental/Temperature				
Operating (Ambient, min °C)	5°C	5°C	5°C	5°C
Operating (drive reported, max °C) 8	65°C	65°C	65°C	65°C
Non-operating (ambient, min °C)	-40°C	-40°C	-40°C	-40°C
Physical				
Height (mm/in, max)	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max)	101.85 mm/4.010 in	101.85 mm/4.010 in	101.85 mm/4.010 in	101.85 mm/4.010 in
Depth (mm/in, max)	147.0 mm/5.787 in	147.0 mm/5.787 in	147.0 mm/5.787 in	147.0 mm/5.787 in
Weight (g/lb, typical)	685 g/1.51 lb	685 g/1.51 lb	685 g/1.51 lb	685 g/1.51 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

¹ Events can be human, vehicle or object capture.

² Tested and verified using embedded AI NVR - 64-ch HD recording, 16-ch PB. Average picture size \sim 250 KB

^{3 1080}P, H.265, 25 fps 4 SkyHawk Al surveillance drives are designed for always-on workloads of 550 TB/year. For higher transaction workloads, see Seagate's enterprise-class drive offerings.

⁵⁻year limited warranty applies to product shipped after July 3, 2021. Check with your reseller for more information.
6 From May 1, 2020, 3-year Rescue Data Recovery Services plan may be offered in addition to standard warranty. This is offered for selected regions only. Check with reseller on availability.
7 Based on IDEMA three stream workload

^{8.} Seagate does not recommend operating at sustained extreme temperatures. Operation at high temperatures will shorten product life.

seagate.com



©2023 Seagate Technology LLC. All rights reserved. Seagate, Seagate Technology, and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. ImagePerfect, RAID RapidRebuild, SkyHawk, and the SkyHawk Al logo are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and disk capacity. Seagate reserves the right to change, without notice, product offerings or specifications. DS1960.15C-2310US