



3.5 HARD DRIVE DATA SHEET

Smart. Safe. Secure. Optimised for Surveillance AI Applications



Seagate[®] SkyHawk[™] AI is the world's first, purpose-built drive for artificial intelligence (AI)-enabled surveillance solutions.



Best-Fit Applications

- Network video recorders (NVR)
- Al-enabled NVR systems
- Video-edge NVRs
- NVRs with advanced analytics

Key Advantages

ImagePerfect[™] AI firmware for superior image integrity alongside additional AI workload support in always-on, AI-enabled surveillance systems.

Custom designed to support an additional 16 AI streams while simultaneously and flawlessly recording footage up to 64 HD cameras.

Designed to handle heavy workloads expected in always-on, Al-enabled surveillance systems. At 550 TB/year, SkyHawk Al is designed for more than 3× the workload of standard surveillance drives.

Advanced vibration management for superior and sustained performance in 16+ bay NVR systems.

Improved reliability and reduced total cost of ownership with 2 M-hr. MTBF and 5year limited warranty.

Unparalleled data protection with a complimentary 2-year Rescue Data Recovery Services plan bundled with every SkyHawk Al drive, providing access to Seagate's secure labs with industry-leading data recovery success rates.





Specifications	14 TB	12 TB	10 TB	10 TB	8 TB
Capacity	14 TB	12 TB	10 TB	10 TB	8 TB
Standard Model Numbers	ST14000VE0008	ST12000VE0008	ST10000VE0008	ST10000VE0004	ST8000VE0004
Interface	SATA 6 Gb/s				
Features and Performance					
Drive Bays Supported	16+	16+	16+	16+	16+
AI Streams ¹	16	16	16	16	16
HD Cameras Supported	Up to 64				
RV Sensors	Yes	Yes	Yes	Yes	Yes
Max. Sustained Transfer Rate OD (MB/s)	250MB/s	250MB/s	250MB/s	235MB/s	235MB/s
Cache (MB)	256	256	256	256	256
Reliability/Data Integrity					
Tarnish Resistant	Yes	Yes	Yes	Yes	Yes
Load/Unload Cycles	300,000	300,000	300,000	300,000	300,000
Non-recoverable Read Errors per Bits Read, Max	1 per 10E15				
Power-On Hours per Year (24×7)	8,760	8,760	8,760	8,760	8,760
Workload Rate Limit (WRL) ²	550	550	550	550	550
MTBF	2,000,000 hr				
Warranty, Limited (years) ³	5	5	5	5	5
Power Management		•	·		
Startup Current, Typical (12V, A)	1.8	1.8	1.8	1.8	1.8
Average Operating Power (W)	6.9 W	6.9 W	6.9 W	7.2 W	7.2 W
Idling Average (W)	4.9 W				
Standby Mode/Sleep Mode, Typical (W)	1.2/1.2	1.2/1.2	1.2/1.2	0.8/0.8	0.8/0.8
Voltage Tolerance (5 V)	±5%	±5%	±5%	±5%	±5%
Voltage Tolerance (12 V)	±10%	±10%	±10%	±10%	±10%
Environmental/Temperature					
Operating (ambient, min °C)	5	5	5	5	5
Operating (drive case, max °C) ⁴	70	70	70	70	70
Non-operating (ambient, min °C)	-40	-40	-40	-40	-40
Physical					
Height (mm/in, max)	26.11 mm/1.028 in				
Width (mm/in, max)	101.85 mm/4.01 in				
Depth (mm/in, max)	146.99 mm/5.787				
	in	in	in	in	in
Weight (lb/g)	690 g/1.521 lb	690 g/1.521 lb	690 g/1.521 lb	650 g/1.433 lb	650 g/1.433 lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8	40/8

1 16 AI streams = 8 AI channels.

2 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.

3 Extended warranty options available. Consult your distributor for details.

4 Seagate does not recommend operating at sustained extreme temperatures. Operating at higher temperatures will reduce useful life of the product.





Capacity 6 TB 4 TB Standard Model Numbers ST6000VE001 ST4000VE00 Interface SATA 6 Gb/s SATA 6 Gb/s Features and Performance Drive Bays Supported 16+ 16+ Al Streams ¹ 16 16 DC Cameras Supported Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 2260MB/s 2260MS Cache (MB) 256 256 Reliability/Data Integrity Tarnish Resistant Yes Yes Load/Unload Cycles 3000,000 3000,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 Power Management 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9,5 W 9,5 W Iding Average (W) 7.5 W<		
Interface SATA 6 Gb/s SATA 6 Gb/s Features and Performance 16+ 16+ Drive Bays Supported 16+ 16+ Al Streams ¹ 16 16 HD Cameras Supported Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 226 Reliability/Data Integrity Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ⁵ 5 5 Power Management 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Iding Average (W) 7.5 W 5.5 W Starduy Mode/Steep Mode, Typical (W) 0.6/0.6		
Features and Performance Drive Bays Supported 16+ 16+ Al Streams ¹ 16 16 HD Cameras Supported Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Drower Management 9.5 W 9.5 W Iding Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V)		
Drive Bays Supported 16+ 16+ Al Streams ¹ 16 16 HD Cameras Supported Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity 256 256 Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Worktoad Rate Limit (WRL) ² 550 550 MBF 2,000,000 hr 2,000,000 hr Waranty, Limited (years) ³ 5 5 Power Management 5 5 Starup Current, Typical (12V, A) 1.8 1.8 Varage (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V)		
Al Streams ¹ 16 16 HD Cameras Supported Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity Tarnish Resistant Yes Yes Tarnish Resistant Yes Yes Yes Load/Unload Cycles 300,000 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Varanty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average (Operating Power (W) 9.5 W 9.5 W Iding Average Operating Power (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V)		
Location Up to 64 Up to 64 Up to 64 HD Cameras Supported Up to 64 Up to 64 Up to 64 RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Varranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5%		
RV Sensors Yes Yes Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity 256 256 Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (5 V) ±10% ±10% Environmental/Temperature ±10% ±10%		
Max. Sustained Transfer Rate OD (MB/s) 226MB/s 226MB/s Cache (MB) 256 256 Reliability/Data Integrity Yes Yes Tarnish Resistant Yes 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Iding Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±10% ±10% Environmental/Temperature ±10% ±10%		
Cache (MB) 256 256 Reliability/Data Integrity Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 550 MTBF 2,000,000 hr 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 5 Power Management 5 5 5 Startup Current, Typical (12V, A) 1.8 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W 5 Voltage Tolerance (5 V) ±5% ±5% ±5% Voltage Tolerance (12 V) ±10% ±10% ±10%		
Reliability/Data IntegrityTarnish ResistantYesLoad/Unload Cycles300,000Non-recoverable Read Errors per Bits Read, Max1 per 10E15Power-On Hours per Year (24×7)8,760Workload Rate Limit (WRL)2550S50550MTBF2,000,000 hrWarranty, Limited (years)35Power ManagementStartup Current, Typical (12V, A)1.8Average Operating Power (W)9.5 WIdling Average (W)7.5 WStandby Mode/Sleep Mode, Typical (W)0.6/0.6Voltage Tolerance (5 V)±5%Yes±10%Environmental/Temperature	226MB/s	
Tarnish Resistant Yes Yes Load/Unload Cycles 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Load/Unload Cycles 300,000 300,000 Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Non-recoverable Read Errors per Bits Read, Max 1 per 10E15 1 per 10E15 Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Power-On Hours per Year (24×7) 8,760 8,760 Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management Startup Current, Typical (12V, A) Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Environmental/Temperature 10% ±10%		
Workload Rate Limit (WRL) ² 550 550 MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Environmental/Temperature ±10% ±10%		
MTBF 2,000,000 hr 2,000,000 hr Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Warranty, Limited (years) ³ 5 5 Power Management 5 5 Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Power Management 1.8 Startup Current, Typical (12V, A) 1.8 Average Operating Power (W) 9.5 W Idling Average (W) 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 Voltage Tolerance (5 V) ±5% Voltage Tolerance (12 V) ±10% Environmental/Temperature		
Startup Current, Typical (12V, A) 1.8 1.8 Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Average Operating Power (W) 9.5 W 9.5 W Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10%		
Idling Average (W) 7.5 W 7.5 W Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10% Environmental/Temperature		
Standby Mode/Sleep Mode, Typical (W) 0.6/0.6 0.6/0.6 Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10% Environmental/Temperature		
Voltage Tolerance (5 V) ±5% ±5% Voltage Tolerance (12 V) ±10% ±10% Environmental/Temperature		
Voltage Tolerance (12 V) ±10% Environmental/Temperature	0.6/0.6	
Environmental/Temperature		
Operating (ambient min °C) 5 5		
Operating (drive case, max °C) ⁴ 70 70		
Non-operating (ambient, min °C) -40 -40		
Physical		
Height (mm/in, max) 26.11 mm/1.028 in 26.11 mm/1.028	3 in	
Width (mm/in, max) 101.85 mm/4.01 in 101.85 mm/4.02	101.85 mm/4.01 in	
Depth (mm/in, max) 146.99 mm/5.787 in 146.99 mm/5.78	7 in	
Weight (lb/g) 705 g/1.55 lb 705 g/1.55 lb		
Carton Unit Quantity 20 20		
Cartons per Pallet / Cartons per Layer 40/8 40/8		

1 16 Al streams = 8 Al channels.

2 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.

3 Extended warranty options available. Consult your distributor for details.

4 Seagate does not recommend operating at sustained extreme temperatures. Operating at higher temperatures will reduce useful life of the product.

seagate.com

ASIA/PACIFIC

AMERICAS Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000 Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888 EUROPE, MIDDLE EAST, AND AFRICA Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00

© 2018 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, SkyHawk Al logo are either trademarks or registered trademarks of Seegate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks or registered trademarks or Gegate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks or registered trademarks or Gegate Technology LLC or one of its affiliated companies in the United States and/or other countries. All 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 the 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. DS1960.4-1812GB December 2018

