

Surveillance HDD

Data Sheet

Helps Improve Costs and Data Integrity

- The industry's first surveillance-optimized hard drive platform with capacities up to 6TB improves video streaming, drive performance and data integrity in surveillance applications.
- Seventh-generation Seagate® surveillance drive is tuned for high write-cycle workloads typical in video surveillance storage systems.
- The Surveillance HDD supports higher-resolution cameras and up to 16 drives per system, with up to 32 cameras per drive.
- Reliably performs in multi-drive systems with RAID support from RV sensors
- Supplement your backups with Seagate Recovery Services for data recovery in the event of data loss or accident.
- 24×7 operational capabilities while maintaining high MTBF of 1M hours
- Options for a current-limited startup of less than 2A supports the use of embedded system power supplies.
- Low power consumption options support always-on surveillance systems.
- Never miss a frame with quick time-to-ready.
- Idle3 spin control features enable power-on in standby mode or drive spin-down to conserve power and improve reliability during archival periods.

Best-Fit Applications

- NVR
- Embedded SDVR
- Hybrid SDVR
- Surveillance DVR



Surveillance HDD



Specifications	6TB¹	5TB¹	4TB¹	3TB¹	2TB¹	1TB¹
Marketing Name	Surveillance HDD					
Model Number	ST6000VX0001	ST5000VX0001	ST4000VX000	ST3000VX002	ST2000VX003	ST1000VX001
Seagate Recovery Services Model Number	ST6000VX0011	ST5000VX0011	ST4000VX002	_	_	_
Interface	SATA 6Gb/s					
Cache, MB	128	128	64	64	64	64
Bytes per Sector	4096	4096	4096	4096	4096	4096
Surveillance Performance						
R/V (Rotational Vibration) Sensor	Υ	Υ	Υ	Υ	N	N
Drive Bays Supported	1 to 16	1 to 16	1 to 16	1 to 16	1 to 8	1 to 8
Cameras Supported	up to 32					
Max Sustained Data Rate, OD Read (MB/s)	180	180	180	180	180	180
Voltage						
Voltage Tolerance, Including Noise (5V)	±5%	±5%	±5%	±5%	±5%	±5%
Voltage Tolerance, Including Noise (12V)	±10%	±10%	±10%	±10%	±10%	±10%
Power Management						
Startup Current 12V (A)	1.8	1.8	1.8	1.8	1.8	1.2
Operating Mode, Typical (W)	8	8	5.6	5.6	5.6	5.6
Idle Average (W)	6.7	6.7	4.0	4.0	4	4
Standby Mode (W)	0.5	0.5	0.5	0.5	0.5	0.5
Sleep Mode (W)	0.5	0.5	0.5	0.5	0.5	0.5
Environmental						
Temperature Operating (ambient, min °C) Operating (drive case, max °C) Nonoperating (ambient, min °C) Nonoperating (ambient, max °C)	5 60 -40 70	5 60 -40 70	0 70 –40 70	0 70 –40 70	0 70 –40 70	0 70 –40 70
Reliability						
Load/Unload Cycles	300,000	300,000	300,000	300,000	300,000	300,000
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14					
Mean Time Between Failures (MTBF, hours)	1M	1M	1M	1M	1M	1M
Power-On Hours	8760	8760	8760	8760	8760	8760
Warranty, Limited (years)	3	3	3	3	3	3
Physical						
Height (mm/in)	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	26.11/ 1.028	19.98/0.787
Width (mm/in)	101.85/4.010	101.85/4.010	101.6/4.0	101.6/4.0	101.6/4.2	101.6/4.0
Depth (mm/in)	147.0/5.878	147.0/5.878	146.99/5.787	146.99/5.787	146.99/5.789	146.99/5.787
Weight (g/lb)	780/1.720	780/1.720	610/1.345	610/1.345	610/1.347	400/0.88
Carton Unit Quantity	20	20	20	20	20	25
Cartons per Pallet	40	40	40	40	40	40
Cartons per Layer	8	8	8	8	8	8

¹ One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.





Surveillance HDD



Marketing Name	Specifications	3TB1	2TB¹	1TB¹
Seagate Recovery Services Model Number	Marketing Name	SV35 Series™	SV35 Series	SV35 Series
Interface	Model Number	ST3000VX000	ST2000VX000	ST1000VX000
Cache, MB 64 64 64 Bytes per Sector 4096 4096 4096 Surveillance Performance R/V (Rotational Vibration) Sensor N N N Drive Bays Supported 1 to 8 1 to 8 1 to 8 Cameras Supported up to 32 up to 32 up to 32 Wax Sustained Data Rate, 00 Read (MB/s) 210 210 210 Voltage Voltage Tolerance, Including Noise (5V) ±5% ±5% ±5% Voltage Tolerance, Including Noise (12V) +10%/-7.5% ±10%/-7.5% ±10%/-7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 2.0 Departing Mode, Typical (W) 8.0 8.0 5.90 1dde Average (W) 5.40 8.0 5.90 1dde Average (W) 5.40 3.36 Standby Mode (W) 0.75 0.63 Step Mode (W) 0.75 0.63 Step Mode (W) 0.75 0.63 Environmental Temperatu	Seagate Recovery Services Model Number	ST3000VX004	ST2000VX004	ST1000VX002
Bytes per Sector	Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Surveillance Performance	Cache, MB	64	64	64
R/V (Rotational Vibration) Sensor	Bytes per Sector	4096	4096	4096
Drive Bays Supported	Surveillance Performance			
Cameras Supported up to 32 up to 32 up to 32 Max Sustained Data Rate, OD Read (MB/s) 210 210 210 Voltage Voltage Tolerance, Including Noise (5V) ±5% ±5% ±5% ±5% Voltage Tolerance, Including Noise (12V) ±10%/−7.5% ±10%/−7.5% ±10%/−7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 2.0 Qperating Mode; Typical (W) 8.0 8.0 5.90 1dle Average (W) 5.40 3.36 5.90 1dle Average (W) 5.40 3.36 5.90 1dle Average (W) 0.75 0.75 0.63 3.63	R/V (Rotational Vibration) Sensor	N	N	N
Max Sustained Data Rate, OD Read (MB/s) 210 210 Voltage 25% ±5% ±5% Voltage Tolerance, Including Noise (5V) ±5% ±5% ±5% Voltage Tolerance, Including Noise (12V) ±10%/−7.5% ±10%/−7.5% ±10%/−7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 Operating Mode, Typical (W) 8.0 8.0 5.90 Idle Average (W) 5.40 5.40 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature Operating (ambient, min °C) 0 0 0 Operating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability 2 300,000 300,000 300,000 Reliability Load/Unload Cycles 300,000 300,000 300,000 Reliability <td>Drive Bays Supported</td> <td>1 to 8</td> <td>1 to 8</td> <td>1 to 8</td>	Drive Bays Supported	1 to 8	1 to 8	1 to 8
Voltage Voltage Tolerance, Including Noise (5V) ±5% ±5% ±5% Voltage Tolerance, Including Noise (12V) +10%/-7.5% +10%/-7.5% +10%/-7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 Operating Mode, Typical (W) 8.0 8.0 5.90 Idle Average (W) 5.40 3.36 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature Operating (ambient, min °C) 0 0 0 Operating (ambient, min °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, min °C) 70 70 70 Reliability 2.0 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M	Cameras Supported	up to 32	up to 32	up to 32
Voltage Tolerance, Including Noise (5V) ±5% ±5% ±5% Voltage Tolerance, Including Noise (12V) ±10%/-7.5% ±10%/-7.5% ±10%/-7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 Operating Mode, Typical (W) 8.0 8.0 5.90 Idle Average (W) 5.40 3.36 5.90 Idle Average (W) 5.40 3.36 5.90 Standby Mode (W) 0.75 0.75 0.63 Stardby Mode (W) 0.75 0.75 0.63 Step Mode (W) 0.75 0.75 0.63 Environmental Temperature 0	Max Sustained Data Rate, OD Read (MB/s)	210	210	210
Voltage Tolerance, Including Noise (12V) +10%/-7.5% +10%/-7.5% +10%/-7.5% Power Management Startup Current 12V (A) 2.0 2.0 2.0 Operating Mode, Typical (W) 8.0 8.0 5.90 Idle Average (W) 5.40 5.40 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature 0 0 0 Operating (ambient, min °C) 0 0 0 Operating (ambient, min °C) 70 70 70 Nonoperating (ambient, min °C) 70 70 70 Nonoperating (ambient, min °C) 70 70 70 Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M <td< td=""><td>Voltage</td><td></td><td></td><td></td></td<>	Voltage			
Power Management Startup Current 12V (A) 2.0 2.0 2.0 2.0	Voltage Tolerance, Including Noise (5V)	±5%	±5%	±5%
Startup Current 12V (A) 2.0 2.0 2.0 Operating Mode, Typical (W) 8.0 8.0 5.90 Idle Average (W) 5.40 5.40 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature 0 0 0 Operating (ambient, min °C) 70 70 70 Operating (drive case, max °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760	Voltage Tolerance, Including Noise (12V)	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%
Operating Mode, Typical (W) 8.0 5.90 Idle Average (W) 5.40 5.40 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature Operating (ambient, min °C) 0	Power Management			
Idle Average (W) 5.40 3.36 Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature Operating (ambient, min °C) 0 0 0 Operating (drive case, max °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760	Startup Current 12V (A)	2.0	2.0	2.0
Standby Mode (W) 0.75 0.75 0.63 Sleep Mode (W) 0.75 0.75 0.63 Environmental Temperature Operating (ambient, min °C) 0 0 0 Operating (drive case, max °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability 0 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M 1M Power-On Hours 8760 8760 8760 8760	Operating Mode, Typical (W)	8.0	8.0	5.90
Sleep Mode (W) 0.75 0.75 0.63	Idle Average (W)	5.40	5.40	3.36
Environmental Comperature Comperating (ambient, min °C) Output (drive case, max °C) Output (ambient, min °C) Output (ambient, max °C	Standby Mode (W)	0.75	0.75	0.63
Temperature 0 70 7	Sleep Mode (W)	0.75	0.75	0.63
Operating (ambient, min °C) 0 0 0 Operating (drive case, max °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760	Environmental			
Operating (drive case, max °C) 70 70 70 Nonoperating (ambient, min °C) -40 -40 -40 Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760				
Nonoperating (ambient, min °C) -40 -40 -40 70				
Nonoperating (ambient, max °C) 70 70 70 Reliability Load/Unload Cycles 300,000 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760				
Reliability Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760				
Load/Unload Cycles 300,000 300,000 300,000 Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760			. 0	
Nonrecoverable Read Errors per Bits Read, Max 1 per 10E14 1 per 10E14 1 per 10E14 Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760		300.000	300.000	300,000
Mean Time Between Failures (MTBF, hours) 1M 1M 1M Power-On Hours 8760 8760 8760		·	·	,
	•	·	·	
Warranty, Limited (years) 3 3	Power-On Hours	8760	8760	8760
27 0 7	Warranty, Limited (years)	3	3	3
Physical				
Height (mm/in) 26.11/1.028 26.11/1.028 19.98/0.787	Height (mm/in)	26.11/1.028	26.11/1.028	19.98/0.787
Width (mm/in) 101.6/4.0 101.6/4.0 101.6/4.0		101.6/4.0	101.6/4.0	101.6/4.0
Depth (mm/in) 146.99/5.787 146.99/5.787 146.99/5.787	, ,		146.99/5.787	146.99/5.787
Weight (g/lb) 626/1.38 626/1.38 400/0.88		626/1.38		400/0.88
Carton Unit Quantity 20 20 25	0 10 /	20	20	25
Cartons per Pallet 40 40 40	Cartons per Pallet	40	40	40
Cartons per Layer 8 8 8	Cartons per Layer	8	8	8

¹ One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.





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