

Video 3.5 HDD

Data Sheet

Cool. Quiet. Low-Power Video Performance.

- Optimized for high-definition consumer DVR applications
- Low power and fine-tuned for consistent, dependable delivery of multiple high-definition video streams with capacities from 250GB to 4TB
- Designed to meet Energy Star and other strict consumer power consumption standards
- Quiet drive operation to enhance customer viewing and listening experiences
- Easy-to-manage multi-room video delivery of up to 16 simultaneous HD streams
- Qualified for operating temperatures up to 75°C to meet the rigors of the consumer electronics set-top box market
- 24x7 operational profile to meet the always-on demands on the DVR market

Best-Fit Applications

- Consumer digital video recorders
- Media servers and centers
- Home theater PCs and servers
- Cable, satellite and IPTV set-top boxes



Video 3.5 HDD



Specifications	4TB ¹	3TB ¹	2TB ¹	1TB ¹	500GB ¹	320GB ¹	250GB ¹
Model Number	ST4000VM000	ST3000VM002	ST2000VM003	ST1000VM002	ST3500312CS	ST3320311CS	ST3250312CS
Model Name	Video 3.5 HDD	Video 3.5 HDD	formerly Pipeline HD®	formerly Pipeline HD	formerly Pipeline HD	formerly Pipeline HD	formerly Pipeline HD
Interface	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Performance							
Cache, Multisegmented (MB)	64	64	64	64	8	8	8
SATA Transfer Rates Supported (Gb/s)	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	3.0/1.5	3.0/1.5	3.0/1.5
Simultaneous SDTV Streams Supported (Assumes 256K host buffer per stream)	20	20	20	20	10	10	10
Simultaneous HDTV Streams Supported (Assumes 2MB host buffer per stream)	16	16	16	16	10	10	10
Power-On to Ready (typical, sec)	<17	<17	<17	<6	<12	<12	<12
Standby to Ready (typical, sec)	<17	<17	<17	<6	<12	<12	<12
Voltage							
Voltage Tolerance (Including Noise)	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%	5V ± 5% 12V ± 10%
Environmental							
Halogen Free	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ambient Temperature (°C)							
Operating (ambient min)	0	0	0	0	0	0	0
Operating (drive case max)	75	75	75	75	75	75	75
Nonoperating (ambient min)	-40	-40	-40	-40	-40	-40	-40
Nonoperating (ambient max)	70	70	70	70	70	70	70
Temperature Gradient, Operating/Nonoperating (°C per hour max)	20/30	20/30	20/30	20/30	20/30	20/30	20/30
Relative Humidity, Operating/Nonoperating (non-condensing, %)	5 to 90/5 to 95	5 to 90/5 to 95	5 to 95/5 to 95	5 to 95/5 to 95	5 to 95/5 to 95	5 to 95/5 to 95	5 to 95/5 to 95
Wet Bulb Temperature, Operating/Nonoperating (°C)	30/40	30/40	37.7/40.0	37.7/40.0	37.7/40.0	37.7/40.0	37.7/40.0
Shock							
Operating (max, Gs)	80 (@ 10ms)	80 (@ 10ms)	80 (@ 2ms)	80 (@ 2ms)	70 (@ 2ms)	70 (@ 2ms)	70 (@ 2ms)
Nonoperating: @ 2ms (max, Gs)	300	300	300	350	350	350	350
Vibration, Operating							
5Hz to 22Hz (limited displacement) (Gs)	0.25	0.25	0.25	0.25	0.50	0.50	0.50
22Hz to 350Hz (Gs)	0.50	0.50	0.50	0.50	0.50	0.50	0.50
350Hz to 500Hz (Gs)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Vibration, Nonoperating							
5Hz to 350Hz (Gs)	3.0	3.0	3.0	3.0	5.0	5.0	5.0
350Hz to 500Hz (Gs)	3.0	3.0	3.0	3.0	1.0	1.0	1.0
Power Management							
Startup Current (12V typical, A)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Storage Profile (W)	7.50	7.50	5.05	3.7	3.4	3.4	3.4
Idle Average (W)	5.0	5.0	3.74	2.5	3.0	3.0	3.0
Standby/Sleep Mode (typical, W)	0.75	0.75	0.819	0.8	0.7	0.6	0.7
Acoustics							
PVR Profile (typical/max, bels)	2.3/2.5	2.3/2.5	2.3/2.4	1.9/2.1	1.9/2.0	1.9/2.0	1.9/2.0
Reliability							
Load/Unload Cycles (25°C, 50% relative humidity)	300,000	300,000	300,000	300,000	—	—	—
Nonrecoverable Read Errors per Bits Read	1 sector per 10E14	1 sector per 10E14	1 sector per 10E14	1 sector per 10E14	1 sector per 10E14	1 sector per 10E14	1 sector per 10E14
Annualized Failure Rate (AFR)	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%
Power-On Hours	8760	8760	8760	8760	8760	8760	8760
Dimensions							
Height (mm/in)	26.11/1.028	26.11/1.028	26.10/1.028	20.20/0.795	20.20/0.795	20.20/0.795	20.20/0.795
Width (mm/in)	101.6/4.0	101.6/4.0	101.60/4.0	101.60/4.0	101.85/4.010	101.85/4.010	101.85/4.010
Depth (mm/in)	146.99/5.787	146.99/5.787	147.0/5.78	147.0/5.78	146.99/5.787	146.99/5.787	146.99/5.787
Weight (g/lb)	610/1.345	610/1.345	535/1.18	415/0.915	415/0.915	415/0.915	415/0.915
Carton Unit Quantity	20	20	20	25	25	25	25
Cartons per Pallet	40	40	40	40	40	40	40
Cartons per Layer	8	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.

www.seagate.com

AMERICAS
ASIA/PACIFIC
EUROPE, MIDDLE EAST AND AFRICA

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
Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00

© 2013 Seagate Technology LLC. All rights reserved. Printed in USA. Seagate, Seagate Technology and the Wave logo are registered trademarks of Seagate Technology LLC 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. Quantitative usage examples for various applications are for illustrative purposes. Actual quantities will vary based on various factors, including file size, file format, features and application software. Actual data rates may vary depending on operating environment and other factors. Seagate reserves the right to change, without notice, product offerings or specifications. DS1783.3-1309US, September 2013