

Pipeline HD®

Data Sheet

Cool - Quiet - Low Power

- Optimised for high-definition consumer DVR applications
- Low power, quiet hard drives fine tuned for consistent, dependable delivery of multiple high-definition video streams with capacities from 250GB to 2TB
- 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 rigours of the consumer electronics set-top box market
- 24×7 operational profile to meet the always-on demands of the DVR market

Best-fit Applications

- Consumer digital video recorders
- · Media servers and centres
- · Home cinema PCs and servers
- Cable, satellite and IPTV set-top boxes



Pipeline HD[®]



Specifications	2TB1	1.5TB1	1TB ¹	500GB1	320GB1	250GB1
Model Number	ST2000VM003	ST1500VM002	ST1000VM002	ST3500312CS	ST3320311CS	ST3250312CS
Interface	SATA 6Gb/s NCQ	SATA 3Gb/s NCQ	SATA 6Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Performance						
Cache, Multi-segmented (MB)	64	64	64	8	8	8
SATA Transfer Rates Supported (Gb/s)	6.0/3.0/1.5	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	10	20	10	10	10
Simultaneous HDTV Streams Supported	16	10	16	10	10	10
(Assumes 2MB host buffer per stream) Power-on to Ready (typical, sec)	<17	<15	<6	<12	<12	<12
Standby to Ready (typical, sec)	<17	<15	<0	<12	<12	<12
Maximum External Transfer Rate (MB/s)	600	300	600	300	300	300
Voltage	000	300	000	500	500	300
voitage	5V ± 5%	5V ± 5%				
Voltage Tolerance (including noise)	$12V \pm 10\%$	12V ± 10%	12V ± 10%	12V ± 10%	12V ± 10%	$12V \pm 10\%$
Environmental						
Halogen-free	Yes	Yes	Yes	Yes	Yes	Yes
Ambient Temperature (°C)						
Operating (ambient min)	0	0	0	0	0	0
Operating (drive case max) Non-operating (ambient min)	75 40	75 40	75 40	75 -40	75 -40	75 40
Non-operating (ambient max)	-40 70	-40	-40	70	70	70
Temperature Gradient, Operating/Non-operating	-		-	-	-	
(°C per hour max)	20/30	20/30	20/30	20/30	20/30	20/30
Relative Humidity, Operating/Non-operating (non-condensing, %)	5 to 95/5 to 95	5 to 95/5 to 95				
Net Bulb Temperature, Operating/Non-operating (°C)	37.7/40.0	37.7/40.0	37.7/40.0	37.7/40.0	37.7/40.0	37.7/40.0
Shock						
Operating: 2ms (max, Gs)	80	80	80	70	70	70
Non-operating: 2ms (max, Gs) Vibration, Operating	300	300	350	350	350	350
5Hz to 22Hz (limited displacement) (Gs)	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
350Hz to 500Hz (Gs)	0.25	0.25	0.25	0.25	0.25	0.25
Vibration, Non-operating 5Hz to 350Hz (Gs)	3.0	3.0	3.0	5.0	5.0	5.0
350Hz to 500Hz (Gs)	3.0	3.0	3.0	1.0	1.0	1.0
Power Management						
Start-up Current (12V typical, A)	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Storage Profile (W)	5.05	4.93	3.7	3.4	3.4	3.4
Idling, Average (W)	3.74	4.5	2.5	3.0	3.0	3.0
Standby/Sleep Mode (typical, W)	0.819	0.5	0.8	0.7	0.6	0.7
Acoustics						
PVR Profile (typical/max, bels)	2.3/2.4	2.0/2.2	1.9/2.1	1.9/2.0	1.9/2.0	1.9/2.0
Reliability						
Contact Start-Stop Cycles (25°C, 50% relative humidity)	—	—	—	50,000	50,000	50,000
Load/Unload Cycles (25°C, 50% relative humidity)	300,000	300,000	300,000		_	
Non-recoverable Read Errors per Bits Read	1 sector per 10 ¹⁵	1 sector per 1015				
Annualised Failure Rate (AFR)	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%
Power-on Hours	8,760	8,760	8,760	8,760	8,760	8,760
Dimensions						
Height (mm/in)	26.10/1.028	26.10/1.028	20.20/0.795	20.20/0.795	20.20/0.795	20.20/0.795
Width (mm/in)	101.60/4.0	101.60/4.0	101.60/4.0	101.85/4.010	101.85/4.010	101.85/4.010
Depth (mm/in)	147.0/5.79	147.0/5.79	147.0/5.79	146.99/5.787	146.99/5.787	146.99/5.787
Weight (g/lb)	535/1.18	630.5/1.39	415/0.915	415/0.915	415/0.915	415/0.915
Carton Unit Quantity	20	20	25	25	25	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.

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AMERICAS ASIA/PACIFIC EUROPE, MIDDLE EAST AND AFRICA Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, +1 408 658 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 41 86 10 00

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