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®

Seagate®

Specifications	2TB[1]	1.5TB[1]	1TB[1]	500GB[1]	320GB[1]	250GB[1]
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 (Assumes 2MB host buffer per stream)	16	10	16	10	10	10
Power-on to Ready (typical, sec)	<17	<15	<6	<12	<12	<12
Standby to Ready (typical, sec)	<17	<15	<6	<12	<12	<12
Maximum External Transfer Rate (MB/s)	600	300	600	300	300	300
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%
Environmental						
Halogen-free	Yes	Yes	Yes	Yes	Yes	Yes
Ambient Temperature (°C) Operating (ambient min) Operating (drive case max) Non-operating (ambient min) Non-operating (ambient max)	 0 75 –40 70	 0 75 –40 70	 0 75 –40 70	 0 75 –40 70	 0 75 –40 70	 0 75 –40 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	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/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) Non-operating: 2ms (max, Gs)	 80 300	 80 300	 80 350	 70 350	 70 350	 70 350
Vibration, Operating 5Hz to 22Hz (limited displacement) (Gs) 22Hz to 350Hz (Gs) 350Hz to 500Hz (Gs)	 0.25 0.50 0.25	 0.25 0.50 0.25	 0.25 0.50 0.25	 0.50 0.50 0.25	 0.50 0.50 0.25	 0.50 0.50 0.25
Vibration, Non-operating 5Hz to 350Hz (Gs) 350Hz to 500Hz (Gs)	 3.0 3.0	 3.0 3.0	 3.0 3.0	 5.0 1.0	 5.0 1.0	 5.0 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 10^{15}	1 sector per 10^{15}	1 sector per 10^{15}	1 sector per 10^{15}	1 sector per 10^{15}
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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Think Green™

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