Marketing Bulletin

7,200 RPM Drive Specification Comparison

Selecting the right hard drive is best done when the decision is based on application usage, technology requirements and drive design considerations. The specification information here works in conjunction with the *Drive Selection Guide* (MB538) to help you get a clear understanding of why a particular hard drive works most effectively in the customer's environment. Additionally, our customers and partners need to understand that there is more to a hard drive than just the initial acquisition cost. That is only the starting point of the total ownership cost model.

Choosing the right hard drive means that you are purchasing a product that is optimised, tested, serviced and supported for your specific usage environment. Consideration must be made for ongoing operational and maintenance costs that include power usage and overall drive reliability that impacts service costs such as return processing, diagnostics, customer downtime, goodwill, etc. The bottom line: Seagate is in the unique position of having the breadth, experience and infrastructure derived from industry-leading partnerships in all business segments.

If the application is digital video surveillance, recommending Seagate SV35 Series™ drives offers high-capacity, surveillance-optimised solutions for both indoor and outdoor 24x7 digital video and metadata usage. If a customer is looking for a desktop drive, the Seagate Barracuda® products will exceed their expectations. These drives are unlike any others on the market today; they have the highest benchmark performance scores and the lowest power consumption. They are optimised for PC and personal storage environments. If customers are looking for enterprise-optimised solutions, considering total cost of ownership, enterprise-class service and support, and Tier-2/capacity-optimised nearline features, the answer is found in the Seagate Constellation® and Seagate Constellation ES product families.

For more information, see the Drive Selection Guide on our partner website to make sure your customers are purchasing the best drives for their unique environments.

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Specifications	Barracuda®	Constellation®	Constellation ES	SV35 Series™
Primary Applications	Optimised for PC and personal external storage	Optimised for 2.5-inch business server and external storage arrays	Optimised for 3.5-inch business server and external storage arrays	Optimised for video surveillance applications
Capacity (GB)	250, 320, 500, 750, 1,000 1,500, 2,000, 3,000	250, 500, 1,000	500, 1,000, 2,000, 3,000	1,000, 2,000, 3,000
Spin Speed (RPM)	7,200	7,200	7,200	7,200
SATA interface (Gb/s)	1.5/3.0/6.0	1.5/3.0/6.0	1.5/3.0/6.0	1.5/3.0/6.0
SAS interface (Gb/s)	—	3.0/6.0	3.0/6.0	—
Rotational vibration (RV) (radians/s/s)	5.5 narrow spectrum up to 300Hz	16 broad spectrum up to 1,800Hz	12.5 broad spectrum up to 1,500Hz	5.5 narrow spectrum up to 300Hz
Seek time, average read/write (ms)	<8.5/<9.5	8.5/9.5	8.5/9.5	<8.5/<9.5
Cache (MB)[1]	16, 64	Up to 64	Up to 64	64
Non-recoverable read errors per bits read	1 sector per 10^{14}	1 sector per 10^{15}	1 sector per 10^{15}	1 sector per 10^{14}
Power-on hours (POH)	2,400 – 8x5	8,760 - 24x7	8,760 - 24x7	8,760- 24x7
Streaming capabilities	—	Multiple sequential streams	Multiple sequential streams	Up to 20 simultaneous HD streams[3]
POH usage profile	8x5 – On as needed	24x7 – Always on	24x7 – Always on	Up to 64 cameras 24x7 – Always on
MTBF (hours)	700,000	1.4 million	1.2 million	1 million
Power, average – idle (W)[2]	4.6	2.25 to 3.85	>3.74	—
Power, average – Idle2 (W)[2]	3.4 to 5.4	—	—	3.4 to 5.4
Acoustics, typical – idling (bels)	2.2 to 2.4	2.2	1.9 to 2.7	2.2 to 2.4
Shock, operating/non-operating (Gs)	70 to 80/300 to 350	70/400	40 to 70/300	80/300 to 350
Ambient temperature, operating/ non-operarting (°C)	0 to 60/–40 to 70	5 to 60/–40 to 70	5 to 60/–40 to 70	0 to 70/–40 to 70
RAID support	0, 1	0, 1, 3, 4, 5, 6, 10	0, 1, 3, 4, 5, 6, 10	0, 1, 3, 4, 5, 6, 10
RAID Rebuild™ support		•	•	
Enterprise expert support		•	•	•

[1] Cache size availability varies by capacity points and interface.
[2] Power consumption varies by capacity points and interface.
[3] Streaming capabilities for video surveillance are dependent on customer configuration.

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