

Data Sheet

Cheetah® 15K.5

Mainstream enterprise hard drive storage

**300, 146 and 73 GB • 15K RPM • Ultra320 SCSI,
3-Gb/s Serial Attached SCSI (SAS) and 4-Gb/s FC**

Key Advantages

- Perpendicular recording is fundamentally superior, enabling 300-GB capacity with 30 percent higher sustained data rate.
- The Seagate® Cheetah® 15K.5 drive is the first drive to break the 100-MB sustained transfer rate barrier, delivering up to 125 MB/s.
- Fastest and most reliable Cheetah 15K drive ever
- 30 percent more IOPS and more than 20 percent faster response times than 3.5-inch 10K drives
- Enables higher performance with fewer drives, reducing supporting infrastructure, maintenance and space needs, while increasing system reliability
- Highest reliability of any 3.5-inch drive in the industry, designed for demanding 24x7 enterprise applications
- Reduces RAID rebuild times while minimizing reliability risks
- Nonrecoverable error rate has been improved by a factor of 10.



Best-Fit Applications

All mainstream enterprise applications, such as:

- Email
- Business processing
- Transaction processing
- Decision support
- Storage area networks (SAN)
- Networked attached storage (NAS)
- Internet and e-commerce

Cheetah® 15K.5

Mainstream enterprise hard drive storage



Lowest Cost of Ownership

- Fifth-generation Cheetah 15K drive is the fastest, highest capacity and most reliable ever.
- Cheetah 15K.5 drive performance and reliability enable lower TCO for enterprise applications.
- 15K RPM and fast seek times deliver the fastest time-to-data, resulting in 30 percent more IOPS and over 20 percent faster response times than 3.5-inch 10K drives.
- Higher performance with fewer drives—reducing support infrastructure, physical space requirements and storage management costs
- The highest reliability of any 3.5-inch drive, and increased system reliability due to the need for fewer drives

Highest Reliability

- Seagate continues to focus on reliability and data protection. New features in this generation have improved the nonrecoverable error rate by a factor of 10.
- Seagate-exclusive IRAW (Idle Read After Write) enhances data protection by verifying—during drive idle time—that data in the drive buffer was properly written.
- Seagate-exclusive enhanced Error Correction Code better maintains performance throughout the life of the drive and reduces the probability of lost data.
- The second generation of Seagate-exclusive Background Media Scan (BMS) proactively scans the media for potential defects during drive idle time. It enables incipient errors to be corrected before data is lost.
- The Cheetah 15K.5 drive is designed and manufactured by the same teams that successfully delivered the past four award-winning generations.

Seagate Service Centers—Worldwide Support

- Presales and technical support at 1-800-SEAGATE
- Expert email support and complete historical web content available online
- Experienced support staff
- Seagate Design Service Centers (DSC) help companies transform innovative ideas into viable products.

Specifications	300 GB ¹	146.8 GB ¹	73.4 GB ¹
Model Number	ST3300655LW/LC/FC/SS	ST3146855LW/LC/FC/SS	ST373455LW/LC/FC/SS
Capacity			
Formatted 512 Kbytes/Sector (GB)	300	146.8	73.4
External Transfer Rate (MB/s)			
Ultra320 SCSI	320	320	320
4-Gb/s Fibre Channel	400	400	400
3-Gb/s Serial Attached SCSI	300	300	300
Performance			
Spindle Speed (RPM)	15K	15K	15K
Average Latency (ms)	2.0	2.0	2.0
Seek Time			
Average Read/Write (ms)	3.5/4.0	3.5/4.0	3.5/4.0
Track-to-Track Read/Write (ms)	0.2/0.4	0.2/0.4	0.2/0.4
Transfer Rate			
Internal (Mb/s)	960 to 1607	960 to 1607	960 to 1607
Internal Formatted (MB/s)	89 to 150	89 to 150	89 to 150
Sustained (MB/s)	73 to 125	73 to 125	73 to 125
Cache, Multisegmented (MB/s)	16	16	16
Configuration/Organization			
Discs	4	2	1
Heads	8	4	2
Nonrecoverable Read Errors per Bits Read	1 sector per 10E16	1 sector per 10E16	1 sector per 10E16
Annualized Failure Rate (AFR)	0.62%	0.62%	0.62%
Power Management			
Typical (W)			
SCSI	17.6	14.2	13.6
Fibre Channel	18.8	16.5	14.7
SAS	17.4	14.9	13.7
Power Idle (W)			
SCSI	12.5	9.6	8.1
Fibre Channel	13.7	10.7	9.2
SAS	13.2	11.2	8.4
Environmental			
Temperature, Operating (°C)	5 to 55	5 to 55	5 to 55
Temperature, Nonoperating (°C)	-40 to 70	-40 to 70	-40 to 70
Shock, Operating: 2 ms (Gs)	60	60	60
Shock, Nonoperating: 2 ms (Gs)	250	250	250
Acoustics Idle (bels—sound power)	3.6	3.6	3.6
Vibration, Operating: <400 Hz (Gs)	1.0	1.0	1.0
Vibration, Nonoperating: <400 Hz (Gs)	2.0	2.0	2.0
Physical			
Height (in/mm)	1.0/25.4	1.0/25.4	1.0/25.4
Width (in/mm)	4.0/101.6	4.0/101.6	4.0/101.6
Depth (in/mm)	5.75/146.05	5.75/146.05	5.75/146.05
Weight (lb/kg)	1.5/0.771	1.5/0.771	1.5/0.771
Warranty			
Limited Warranty (years)	5	5	5

¹One gigabyte, or GB, equals one billion bytes when referring to hard drive capacity.

www.seagate.com

1-800-SEAGATE (1-800-732-4283)

AMERICAS Seagate Technology LLC 920 Disc Drive, Scotts Valley, California 95066, United States, 831-438-6550
 ASIA/PACIFIC Seagate Technology International Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888
 EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 130-136, rue de Silly, 92773, Boulogne-Billancourt Cedex, France 33 1-4186 10 00

Copyright © 2007 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. Cheetah is either a trademark or registered trademark of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. One gigabyte, or GB, equals one billion bytes when referring to hard drive capacity. Accessible capacity may vary depending on operating environment and formatting. Seagate reserves the right to change, without notice, product offerings or specifications. Publication Number: DS1594.4-0712US, December 2007