

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 per cent 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 per cent more IOPS and more than 20 per cent 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 minimising reliability risks
- Non-recoverable 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)
- Network attached storage (NAS)
- Internet and e-commerce



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Lowest Cost of Ownership

- Fifth-generation Cheetah 15K drive has the highest capacity and is the fastest 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 per cent more IOPS and over 20 per cent 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 non-recoverable 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 Centres—Worldwide Support

- Pre-sales and technical support at 00-800-6890-8282
- Expert email support and complete historical web content available online
- Experienced support staff
- Seagate Design Service Centres (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 1,607	960 to 1,607	960 to 1,607
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, Multi-segmented (MB/s)	16	16	16
Configuration/Organisation			
Discs	4	2	1
Heads	8	4	2
Non-recoverable Read Errors per Bits Read	1 sector per 10E16	1 sector per 10E16	1 sector per 10E16
Annualised 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, Non-operating (°C)	-40 to 70	-40 to 70	-40 to 70
Shock, Operating: 2 ms (Gs)	60	60	60
Shock, Non-operating: 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, Non-operating: <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

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

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