

Cheetah 15K.5

Mainstream enterprise disc drive storage



The Best
Price/Performance,
Cost of Ownership
Disc Drive

300, 146 and 73GB—15K RPM—Ultra320 SCSI, 3 Gbit/sec Serial Attached SCSI (SAS) and 4 Gbit/sec FC

Key Advantages

- Perpendicular recording is fundamentally superior, enabling 300GB capacity with 30 percent higher performance.
- Cheetah® 15K.5 is the first drive to break the 100-Mbyte sustained transfer rate barrier, delivering up to 125 Mbyte/sec.
- Fastest and most reliable Cheetah 15K 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 minimising reliability risks
- Non-recoverable Error Rate has been improved by a factor of 10.

Best-Fit Applications

All mainstream enterprise applications, such as:

- E-mail
- Business processing
- Transaction processing
- Decision support
- Storage Area Networks (SAN)
- Networked Attached Storage (NAS)
- Internet and e-commerce





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Lowest Cost of Ownership

- Fifth-generation Cheetah 15K is the fastest, highest capacity and most reliable ever.
- Cheetah 15K performance and reliability enable lower TCO for a wide variety of enterprise applications.
- Cheetah 15K RPM and fast seek times deliver the fastest time-to-data, resulting in 30% more IOPS and >20% faster response times than 3.5-inch 10K drives.
- Cheetah 15K enables higher performance with fewer drives—reducing support infrastructure, physical space requirements and storage management costs.
- Cheetah 15K drives have the highest reliability of any 3.5-inch drive in the industry, and further increase system reliability due to the need for fewer drives.

Highest Reliability

- Optimal reliability and data protection continues to be a focus of Seagate enterprise drives. Adding several new features in this generation of Cheetah 15K has 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 is designed and manufactured by the same teams that successfully delivered the past four award-winning generations of Cheetah 15K.

World-Class Technical Support

- Certified, experienced support staff
- Rated “Above Average to Excellent” by 95% of our customers
- Support lines with the shortest wait times in the industry
- Individually archived case histories for quick reference
- Web-based Q&A forum and autoreply e-mail
- Seagate Design Service Centres (DSC) help companies transform innovative ideas into viable products.

www.seagate.com
00-800-6890-8282

Specifications	300GB ¹	146.8GB ¹	73.4GB 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 (Mbytes/sec)				
Ultra320 SCSI	320	320	320	
4-Gbit/sec FibreChannel	400	400	400	
3-Gbit/sec Serial Attached SCSI	300	300	300	
Performance				
Spindle Speed (RPM)	15K	15K	15K	
Average Latency (msec)	2.0	2.0	2.0	
Seek Time				
Average Read/Write (msec)	3.5/4.0	3.5/4.0	3.5/4.0	
Track-to-Track Read/Write (msec)	0.2/0.4	0.2/0.4	0.2/0.4	
Transfer Rate				
Internal (Mbits/sec)	960 to 1607	960 to 1607	960 to 1607	
Internal Formatted (Mbytes/sec)	89 to 150	89 to 150	89 to 150	
Sustained (Mbytes/sec)	73 to 125	73 to 125	73 to 125	
Cache, Multisegmented (Mbytes)	16	16	16	
Configuration/Organisation				
Discs	4	2	1	
Heads	8	4	2	
Non-recoverable Read Errors per Bits Read	1 sector per 10 ¹⁶	1 sector per 10 ¹⁶	1 sector per 10 ¹⁶	
Annualised Failure Rate (AFR) (%)	0.62	0.62	0.62	
Power Management				
Typical (watts)	SCSI	17.6	14.2	13.6
	Fibre Channel	18.8	16.5	14.7
	SAS	17.4	14.9	13.7
Power Idle (watts)	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 msec (Gs)	60	60	60	
Shock, Non-operating: 2 msec (Gs)	250	250	250	
Acoustics Idle (bels—sound power)	3.6	3.2	3.0	
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.