Seagate®

Data Sheet

Cheetah® 15K.6

Highest capacity and reliability in mission-critical storage

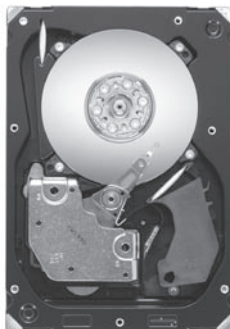## 450, 300 and 146 GB • 15K RPM • 3-Gb/s Serial Attached SCSI (SAS) and 4-Gb/s FC

Key Advantages

- Second-generation perpendicular recording delivers up to 450-GB capacity

- Unprecedented performance with a 30 per cent increase in sustained data rate of up to 171 MB/s

- Industry's highest 3.5-inch drive reliability at 1.6 million hours MTBF

- Seagate proprietary PowerTrim™ technology provides a 62 per cent improvement in GBs/watt at idle

- Advanced read/write technology delivers non-recoverable error rate of 1×10^{16}

- Available in FC or SAS interfaces

Best-fit Applications

All mainstream enterprise applications, such as:

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

Seagate
5-Year
Warranty

Cheetah® 15K.6

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Lowest Cost of Ownership

- Sixth-generation Seagate® Cheetah 15K drive is the fastest, highest capacity and most reliable ever
- Cheetah 15K.6 drive performance and reliability enable lower TCO for enterprise applications
- Lower watts/GB ratio helps achieve reduced power and cooling costs while optimising capacity requirements
- Higher performance with fewer drives — reducing support infrastructure, physical space requirements and storage management costs
- The highest reliability of any 3.5-inch drive, with increased system reliability due to the need for fewer drives

MTBF Improvement

- Seagate continues to focus on reliability and data protection MTBF is increased to 1.6 million hours
- 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 proactively scans the media for potential defects during drive idle time, enabling incipient errors to be corrected before data is lost
- Our new Quick and Robust Download feature loads new firmware in less than two seconds and built-in protection ensures no corruption in the event of a power failure during firmware switch

Seagate Global Customer Support

- Get pre-sales and technical support at support.seagate.com
- Visit our knowledge base for answers to common support questions
- Find documentation for current and legacy drives
- Use our online troubleshooting and diagnostic tools

Specifications	450 GB[1]	300 GB[1]	146 GB[1]
Model Number	ST3450856SS/FC	ST3300656SS/FC	ST3146356SS/FC
Capacity			
Formatted 512 Kbytes/Sector (GB)	450	300	146.3
External Transfer Rate (MB/s)			
Fibre Channel	400	400	400
3-Gb/s Serial Attached SCSI	300	300	300
Performance			
Spindle Speed (RPM)	15,000	15,000	15,000
Average Latency (ms)	2.0	2.0	2.0
Seek Time			
Average Read/Write (ms)	3.4/3.9	3.4/3.9	3.4/3.9
Track-to-Track Read/Write (ms)	0.2/0.4	0.2/0.4	0.2/0.4
Transfer Rate			
Internal (Mb/s)	1,051 to 2,225	1,051 to 2,225	1,051 to 2,225
Sustained (MB/s, 1000 x 1000)	171 to 110	171 to 110	171 to 110
Cache, Multi-segmented (MB/s)	16	16	16
Configuration/Organisation			
Discs	4	3	2
Heads	8	6	3
Non-recoverable Read Errors per Bits Read	1 sector per 10^{16}	1 sector per 10^{16}	1 sector per 10^{16}
Reliability Rating at Full 24x7 Operation (AFR)	0.62%	0.62%	0.62%
Power Management			
Typical (W)			
Fibre Channel	17.0	16.1	15.0
SAS	17.3	15.8	14.4
Power Idle (W)			
Fibre Channel	12.0	11.2	9.7
SAS	12.4	11.1	9.6
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)	1.56/0.709	1.53/0.694	1.49/0.674
Warranty			
Limited Warranty (years)	5	5	5

[1] One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to hard drive capacity.

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