

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 percent 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 percent improvement in GBs/watt at idle.
- Advanced read/write technology delivers nonrecoverable error rate of 1x10E16
- 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



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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.5 drive performance and reliability enable lower TCO for enterprise applications.
- Lower watts/GB ratio helps achieve reduced power and cooling costs while optimizing 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. It enables incipient errors to be corrected before data is lost.
- Our new Quick and Robust Download feature loads new firmware in less than 2 seconds and built-in protection ensures no corruption in the event of a power failure during firmware switch.

Seagate Global Customer Support

- Get presales and technical support at support.seagate.com.
- Visit our knowledge base for answers to common support questions.
- Find documentation for current and legacy drives.
- Utilize 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)	15K	15K	15K
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)	1051 to 2225	1051 to 2225	1051 to 2225
Sustained (MB/s, 1000 x 1000)	171 to 110	171 to 110	171 to 110
Cache, Multisegmented (MB/s)	16	16	16
Configuration/Organization			
Discs	4	3	2
Heads	8	6	3
Nonrecoverable Read Errors per Bits Read	1 sector per 10E16	1 sector per 10E16	1 sector per 10E16
Reliability Rating at Full 24x7 Operation (AFR)	0.55%	0.55%	0.55%
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, 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)	1.56/0.709	1.53/0.694	1.49/0.674
Warranty			
Limited Warranty (years)	5	5	5

¹One 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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