

CinemaStar® C5K1000

**2.5-Inch 5400 RPM
CE Hard Disk Drives**

Highlights

- Video hard drive with capacities up to 1TB¹
- Advanced Format, 512 byte emulation
- 6Gb/s SATA interface
- 24x7 availability⁵
- Low power utilization to help reduce energy costs
- SmoothStream™ technology
- Silent-seek acoustics for quiet operation
- SMART Command Transport (SCT) for streaming optimization
-

Applications/Environments

- Digital Video Recorders (DVR)
- Set-top Boxes
- Portable Video Players
- DVR-enabled Televisions
- High-end Audio Systems
- Video Surveillance Systems

1TB of storage capacity for video platforms

CinemaStar® C5K1000 is the sixth generation 5400 RPM, 2.5-inch digital video hard drive that delivers an enormous 1TB capacity. This standard 9.5mm, two-disk design, also available in 640GB and 750GB models, leverages Advanced Format, which increases the physical sector size on hard drives from 512 bytes to 4096 (4K) bytes to increase drive capacities and improve error correction capabilities. Consult the HGST Advanced Format Technology Brief for more information on using these hard drives. CinemaStar C5K1000 is the first 1TB 2.5-inch CE drive with a 6Gb/s SATA interface and delivers excellent streaming performance. The C5K1000 continues to demonstrate HGST's ecological leadership with its halogen-free design and power-efficient operation, and carries the EcoTrac classification. CinemaStar C5K1000 delivers massive capacity with low power and quiet acoustics to meet the needs of digital video recorders and surveillance systems in an eco-friendly, rugged design.

Designed for digital video solutions

An exceptional blend of audio/visual (AV) features fine tunes the CinemaStar C5K1000 for video storage applications. HGST SmoothStream technology supports the ATA-7 streaming command set, and SCT provides time-limited error recovery and thermal monitoring capabilities. CinemaStar C5K1000 is offered with silent-seek acoustics for excellent sound quality. HGST continues to provide near silent operation to make the C5K1000 an ideal choice for home DVR applications and surveillance systems. The CinemaStar C5K1000 carries the HGST EcoTrac classification due to its low power consumption and eco-friendly, halogen-free production. This sixth generation 2.5-inch CinemaStar drive, with its superior performance, balanced capacity and power-management delivers greater design flexibility for next-generation video systems.

Reliability leadership

CinemaStar C5K1000 elevates hard drive reliability to new levels with an improved protection scheme for power fluctuation and enhanced TFC for improved error rates. HGST offers customers system design and integration services including, but not limited to hard drive selection, optimization, software compatibility assessment, performance profiling, problem analysis and reliability consultation. Team HGST is ready to help you deliver a successful video device. The HGST CinemaStar product line is optimized for video applications on any size system.

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 1TB of storage	Up to 370 hours of high-definition video, 1000 hrs of standard video, 350 movies or 250,000 4-min songs*
	Thermal Fly-height Control (TFC)	Improved reliability
	Media Maintenance	Extends recording life and capabilities
Performance	SMART Command Transport (SCT) ERP Control	Smoother streaming and improved error recovery
Interface	SATA 6Gb/s	Higher data throughput
Eco-friendly	1.5W operating power	Helps reduce energy costs in A/V applications
	Halogen-free design	Smaller carbon footprint
Acoustics	Silent seek	Ultra-quiet operation for improved sound quality

*Actual storage may vary depending on the compression rate applied. Capacities may not be combined.



1TB, 750GB and 640GB
5400 RPM | SATA 6Gb/s



HGST Quality and Service

HGST mobile hard drives are designed to the highest quality standards and contain field-proven components. HGST provides worldwide technical support and integration services to enable global customers to bring their products to market quickly.

How to read the Ultrastar model number

HCC541010A9E680 = 1TB, SATA 36Gb/s

H = HGST
C = CinemaStar
C = Compact
54 = 5400 RPM
10 = Full capacity — 1TB
10 = Capacity this model, 10 = 1TB
(75 = 750GB, 64 = 640GB)
A = Generation code
9 = 9.5mm z-height
E3 = SATA 3Gb/s with 512-byte emulation
8 = 8MB cache (3 = 32MB Cache)
0 = Feature code, 0 = None

Information and Technical Support

www.hgst.com (Main Web site)
www.hgst.com/support (Support Web site)

Program Support

Partners First Program: channelpartners@hgst.com
www.hgst.com/partners (Partners Web site)

Specifications

Models	HCC541010A9E680 HCC541075A9E680 HCC541064A9E680	HCC541010A9E630
Configuration		
Interface	SATA 6Gb/s	←
Capacity (GB) ¹	1TB / 750 / 640	1TB
Sector size ² (bytes)	512e	←
Recording zones	30	←
Max. areal density (Gbits/sq. in.)	694	←
Performance		
Data buffer ³ (MB)	8	32
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/s, max)	998	←
Interface transfer rate (MB/s, max)	600	←
Seek time ⁴ (ms, typical)	15	←
Reliability		
Load/Unload cycles	600,000	←
Power on Hours (POH per month)	732	←
Availability ⁵ (hrs/day x days/wk)	24x7	←
Power		
Requirement	+5 VDC (+/-5%)	←
Startup (W, peak, max)	3.0	←
Operating ⁶ (W, average)	1.5	←
Low power idle ⁷ (W, average)	0.5	←
Physical size		
z-height (mm)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, typical)	102	←
Environmental (operating)		
Shock (half-sine wave)	325G/2ms	←
Operating temperature ⁶ (top cover)	0° to 70° C	←
Environmental (non-operating)		
Shock (half-sine wave)	350G/2ms	←
Ambient temperature	-40° to 65° C	←
Acoustics (A-weighted sound power)		
Idle (Bels, typical)	2.4	←
Operating (Bels, typical, IDEMA 3-stream)	2.5	←

¹ One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.

² Advanced Format drive: 4K physical sectors with 512 byte emulation

³ Portion of buffer capacity used for drive firmware

⁴ Excludes command overhead

⁵ Designed for low duty cycle, non mission-critical digital video. Note that customer environments vary from application to application.

⁶ Assumes CE operational conditions (IDEMA 3-streams)

⁷ 10 minutes from last command



© 2014 HGST, Inc. 3403 Yerba Buena Road, San Jose, CA 95135 USA. Produced in the United States 5/12, revised 3/14. All rights reserved.

CinemaStar and SmoothStream are trademarks of HGST, Inc. and its affiliates in the United States and/or other countries. Other trademarks are property of their respective companies.

The EcoTrac symbol identifies HGST hard drives that deliver on the principles of lower operating costs, safer product disposal and a more sustainable environment.

HGST trademarks are intended and authorized for use only in countries and jurisdictions in which HGST has obtained the rights to use, market and advertise the brand. Contact HGST for additional information. HGST shall not be liable to third parties for unauthorized use of this document or unauthorized use of its trademarks.

References in this publication to HGST's products, programs, or services do not imply that HGST intends to make these available in all countries in which it operates.

Product specifications provided are sample specifications and do not constitute a warranty. Information is true as of the date of publication and is subject to change. Actual specifications for unique part numbers may vary.

Please visit the Support section of our website, www.hgst.com/support, for additional information on product specifications. Photographs may show design models.

DSCC5410A14EN-02