CinemaStar™ C5K500

2.5-Inch 5400 RPM
CE Hard Disk Drives

Highlights

- Fourth generation CE design
- Video hard drive with capacities up to 500GB[1]
- 24x7 availability[2]
- Best-in-class 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

Expanding the CinemaStar Family

CinemaStar™ C5K500 is a HGST 5400 RPM, 2.5-inch consumer electronics hard drive with capacities from 160GB to 500GB. The 250GB/platter one- and two-disk models have been customized to support digital video and surveillance applications. Mainstream capacities of 160GB and 250GB are supported with one-disk models. HGST SmoothStream technology supports the ATA-7 streaming command set, and SCT provides time-limited error recovery and thermal monitoring capabilities. CinemaStar C5K500 is offered with silent-seek acoustics for improved sound quality. The C5K500 demonstrates HGST's ecological leadership with its halogen-free production and focus on low power consumption, and carries the EcoTrac classification. With a 22% reduction of read/write power over previous models, HGST continues to provide low-power leadership and cool-running operation to make the C5K500 an ideal choice for surveillance systems and home DVR applications. This fourth generation compact CinemaStar drive delivers the balance of capacity, low power and ruggedness to provide manufacturers with more eco-friendly options for next-generation slim video systems.

Reliability Leadership

CinemaStar C5K500 elevates hard drive reliability with the new Iterative Detection Read Channel for improved signal processing. HGST also has enhanced TFC for improved error rates and tunneling magneto-resistive (TMR) read heads for enhanced data reliability on the CinemaStar C5K500. HGST offers customers system design and integration services including, but not limited to hard drive selection, optimization, software compatibility assessment, performance profiling and 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 for any size system.

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 500GB of storage	Up to 125 hours of high-definition video, 500 hours standard video, 178 movies, 125,000 4-min songs or 160 video games*
Reliability	TMR-IrMnCr read head	Better performance and data reliability
	Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability
	Media Maintenance	Prevent track wear-out
Performance	SMART Command Transport (SCT) ERP Control	Fewer streaming disruptions and improved error ERP Control recovery timing for optimum A/V performance
Eco-friendly	1.4W read and write power Halogen-free design	22% lower than previous model to help reduce energy costs Smaller carbon footprint
Acoustics	Silent seek	Ultra-quiet operation for improved sound quality
Interface	SATA 3Gb/s	Improved performance

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

500GB, 320GB, 250GB & 160GB
5400 RPM | SATA 3Gb/s

EcoTrac

HGST
a Western Digital company

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

HCC545050B9A300 = 500GB, SATA 3Gb/s

H	=	HGST
C	=	CinemaStar
C	=	Compact
54	=	5400 RPM
50	=	Full capacity — 500GB
5	=	Capacity this model, 50 = 500GB (32 = 320GB, 25 = 250GB, 16 = 160GB)
B	=	Generation code
9	=	9.5mm z-height
E3	=	Interface, SATA 3Gb/s
8	=	8MB cache
0	=	Feature code, 0 = None

Information and Technical Support
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Specifications

Models	HCC545050B9A300
	HCC545032B9A300
	HCC545025B9A300
	HCC545016B9A300

Configuration	
Interface	SATA 3Gb/s
Capacity (GB)[1]	500 / 320 // 250 / 160
Sector size (variable, bytes/sector)	512
Recording zones	24
Data heads (physical)	4 / 3 // 2 / 2
Data disks	2 / 2 // 1 / 1
Max. areal density (Gbits/sq. in.)	375

Performance	
Data buffer (MB)[3]	8
Rotational speed (RPM)	5400
Latency average (ms)	5.5
Media transfer rate (Mbits/s, max)	875
Interface transfer rate (MB/s, max)	300
Seek time (ms, typical)[4]	15

Reliability	
Load/Unload cycles	600,000
Power on Hours (POH per month)	730
Availability[2] (hrs/day x days/wk)	24x7

Power	
Requirement	+5 VDC (+/-5%)
Startup (W, peak, max)	4.5
Read / Write (W, average)	1.4
Low power idle (W, average)	1.3

Physical size	
z-height (mm)	9.5
Dimensions (width x depth, mm)	70 x 100
Weight (g, typical)	102 // 95

Environmental (operating)	
Shock (half-sine wave)	400G (2ms), 225G (1ms)
Operating temperature[5]	5° to 65° C

Environmental (non-operating)	
Shock (half-sine wave)	1000G, (2ms)
Ambient temperature	-40° to 65° C

Acoustics (A-weighted sound power)	
Idle (Bels, typical)	2.4
Seek (Bels, typical)	2.5

[1] One MB is equal to on 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] Designed for low duty cycle, non mission-critical digital video and surveillance applications. Note that customer environments may vary from application to application.
[3] Upper 736KB out of 8MB used for firmware
[4] Excludes command overhead
[5] Temperature measurement at center of top cover

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