

CinemaStar™ C5K160

2.5-INCH HARD DISK DRIVES

HITACHI
Inspire the Next

Consumer Electronics storage for digital video applications

Highlights

- > Low-profile 2.5" design – 9.5mm
- > CE hard drive with capacities up to 160GB
- > SmoothStream™ technology
- > Silent-seek acoustics for CE applications
- > SMART Command Transport (SCT) for streaming optimization
- > Best-in-class power utilization and heat emission

Applications

- > Digital Video Recorders/Set-top Boxes
- > Portable Video Players
- > DVR-enabled Televisions
- > DVD/HDD Recorders
- > High-end Audio Systems



160GB and 80GB | 5400 RPM
SATA 1.5Gb/sec

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 160GB of storage 80GB model available	* Capacity equivalence of 160 hours standard video, 57 movies, 40,000 4-min songs or 80 video games
Reliability	IrMnCr read head	Better performance & data reliability
	Thermal Fly-height Control (TFC)	Better soft error rate for improved data integrity
Power	0.85W active idle power Enhanced Adaptive Battery Life Extender™ (ABLE)	Industry-leading power management implementation for low-power and faster spin-up time
Acoustics	Silent-seek	Ultra quiet operation
Interface	SATA	SmoothStream™ Technology

*Actual storage may vary depending on the compression rate applied.

Expanding the CinemaStar family

CinemaStar C5K160, Hitachi's new 2.5-inch consumer electronics hard drive, uses perpendicular recording (PMR) technology to deliver capacities up to 160GB. This drive, based on proven, industry-leading technology, has been customized to support digital video applications. Hitachi SmoothStream technology is enabled to support the ATA-7 streaming command set, and SCT provides time-limited error recovery and thermal monitoring capabilities. CinemaStar C5K160 has been enhanced with silent-seek acoustics to improve the already bedroom-quiet operation. Low power consumption and cool-running operation make the C5K160 an ideal choice for DVR applications.

This new compact CinemaStar drive expands the Hitachi product lineup to provide manufacturers with options for next-generation slim DVR designs.

Reliability leadership

Hitachi has implemented TFC for improved error rates and iridium-manganese-chromium heads (IrMnCr) for enhanced data reliability on the CinemaStar C5K160. Hitachi Design Studios offer customers CE 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 Hitachi is ready to help you deliver a successful video device. The Hitachi CinemaStar product line is optimized for video applications, for any size system.

Specifications

Model(s)	HCC541616J9SA00 HCC541680J9SA00
Configuration	Serial ATA
Interface	Serial ATA 1.5 Gb/s
Capacity (GB) ¹	160 / 80
Sector size (Bytes)	512
Recording zones	24
Data heads (physical)	4 / 2
Data disks	2 / 1
Max. areal density (Gbits/sq. inch)	131.5
Performance	
Data buffer (MB) ²	8
Rotational speed (RPM)	5400
Latency (avg. ms)	5.5
Media transfer rate (Mbits/sec, max)	540
Interface transfer rate (MB/sec, max)	150
Seek time (read, typ.)	
Average (ms)	13
Reliability	
Load/Unload cycle	600,000
Availability ³ (hrs/day x days/wk)	24x7
Power	
Requirement	+5VDC (+-5%)
Dissipation (typ.)	
Startup (peak, max.)	5.0W
Read (avg.)	1.8W
Write (avg.)	1.8W
Active idle (avg.)	0.85W
Low power idle (avg.)	0.65W
Standby (avg.)	0.25W
Sleep	0.2W
Physical Size	
Height (mm)	9.5
Width (mm)	70
Depth (mm)	100
Weight – typical (g)	102 / 95
Environmental characteristics	
Operating	
Ambient temperature	5° to 55° C
Shock (half sine wave)	325G / 2ms, 160G / 1ms
Non-operating	
Ambient temperature	-40° to 65° C
Shock (half sine wave)	1000G / 1ms
Acoustics (A-Weighted Sound Power (Bels))	
Idle (typ.)	2.5 / 2.2
Op (typ.)	2.6 / 2.3

Hitachi quality, support and service

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

How to Read the CinemaStar Model Number

HCC541616J9SA00 = 160GB/8MB buffer

H = Hitachi

C = CinemaStar

C = Compact

54 = 5400 RPM

16 = Full capacity— 160GB

16 = Capacity this model 16 =160GB
(80 = 80GB)

J = Generation code

9 = 9.5mm z - height

SA= Serial ATA interface

0 = Reserved

0 = Reserved

Information and Technical Support

www.hitachigst.com (Main Web site)

www.hitachigst.com/partners (Partner Web site)

North America

support_usa@hitachigst.com

Toll free: 1 888 426-5214,

Direct: 1 507 322-2370

Asia Pacific

support_ap@hitachigst.com / 65 6840 9595

EMEA and UK

support_uk@hitachigst.com / 44 20 7133 0032

Germany

support_uk@hitachigst.com / 49 6929 993601

Program Support

Partners First™ Program

channelpartners@hitachigst.com

¹ GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.

² Portion of buffer capacity reserved for firmware.

³ Low duty cycle, non mission-critical applications requiring up to 20 percent read/write activity per power-on-hour in digital video and consumer electronics applications. Customer environments may vary from application to application.

Hitachi Global Storage Technologies' trademarks are authorized for use in countries and jurisdictions in which Hitachi Global Storage Technologies has the right to use, market and advertise the brands. Contact Hitachi Global Storage Technologies for further information. Hitachi Global Storage Technologies shall not be liable to third parties for unauthorized use of Hitachi Global Storage Technologies trademarks.

References in this publication to Hitachi Global Storage Technologies' products, programs, or services do not imply that Hitachi Global Storage Technologies 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.hitachigst.com/support, for additional information on product specifications. Photographs may show design models.

© 2007 Hitachi Global Storage Technologies

Hitachi Global Storage Technologies
3403 Yerba Buena Road
San Jose, CA 95135 USA

Produced in the United States 8/06. Revised 3/08.
All rights reserved.

Partners First™ and Smooth Stream™ are trademarks of Hitachi Global Storage Technologies.