



# Endurastar® J4K320

## Highlights

- Industry-leading 320GB<sup>1</sup> capacity optimized for automotive applications
- High operating altitude range of up to 5500 meters
- Wide operating temperature range from -30°C to +85°C
- 6th generation product, based on proven technology
- SATA interface

## Applications/ Environments

- Automotive
- GPS navigation systems
- Surveillance applications
- Industrial applications



320GB, 250GB, 200GB, 100GB and 80GB  
4200 RPM | SATA 1.5Gb/s



## Large Capacity, Robust Features for Extreme Environments

HGST delivers an industry-leading 320GB capacity in its latest Endurastar® line of 2.5-inch hard drives designed especially for extreme environments. The Endurastar J4K320 models provide up to three times the capacity of their predecessors and are built to operate at altitudes of up to 5500 meters. The Endurastar J4K320 is designed for the most severe conditions, with an operating temperature range of -30°C to +85°C. The drives are offered in a SATA 1.5Gb/s interface and leverage 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.



## Right Choice for the Road

Endurastar hard drives are built to meet the rigors of the automotive environment and are ideal to support automotive applications including navigation, telematics, in-car entertainment and vehicle relational management. Leveraging a proven 6th generation platform, the Endurastar J4K320 delivers the right blend of capacity and performance to meet the needs of extreme conditions found in automotive environments.



## Rugged, Durable Design

These new Endurastar drives leverage time-proven technologies pioneered on HGST hard drives for notebook PCs to deliver quiet acoustics and robust performance. FDB motors provide quiet operation, and Thermal Fly-height Control (TFC) enhances reliability by maintaining more consistent spacing between the read/write head and the disk and compensates for variations caused by altitude and temperature changes. Perpendicular magnetic recording (PMR) technology on Endurastar J4K320 delivers excellent soft error rates for improved reliability and performance under even the harshest environmental conditions. All models come standard with proven shock sensor technology and enhanced humidity absorption for superior reliability.

## Features and Benefits

	Feature / Function	Benefits
Capacity	320GB maximum capacity	Up to 80 hours of high-definition video, 320 hours of standard video, 114 movies, 80,000 4-min songs or 160 games (2GB per game) *
Acoustics	Fluid Dynamic Bearing (FDB) motors	Quiet operation
Reliability	<ul style="list-style-type: none"><li>• -30° C to +85° C operating temperature</li><li>• Shock sensor technology</li><li>• Perpendicular Magnetic Recording (PMR) technology with Thermal Fly-height Control (TFC)</li></ul>	<ul style="list-style-type: none"><li>• Performs well in extreme temperature environments</li><li>• Cushions the drive in poor shock or vibration conditions</li><li>• Improved soft error rate and performance</li><li>• Wide operating range for temperature and altitude</li></ul>
Interface	SATA 1.5Gb/s	Design configuration flexibility

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



# Endurastar® J4K320

## Specifications

Models	HEJ423232H9E300	HEJ423225H9E300
	HEJ423220H9E300	HEJ423210H9E300
	HEJ423280H9E300	

Configuration	
Interface	SATA 1.5Gb/s
Capacity (GB) <sup>1</sup>	320 / 250 / 200 / 100 / 80
Sector size (bytes)	512e
Recording zones	31
Data heads (physical)	2
Disks	1
Areal density (max, Gbit/sq.in)	425

Performance	
Data buffer (MB) <sup>2</sup>	8
Rotational speed (RPM)	4260
Latency average (ms)	7.04
Media transfer rate (max, Mbits/s)	750
Interface transfer rate (MB/s)	150
Seek time, read (ms, typical)	13

Reliability	
Error rate (non-recoverable)	< 1 per 10 <sup>14</sup> bits transferred
Load/Unload cycle	600,000
Availability (hrs/day x days/wk) <sup>3</sup>	24x7

Power	
Requirement	+5 VDC (+/-5%)
Startup (W, peak, max) <sup>4</sup>	4.5
Read/Write (W, average)	1.7
Low power idle (W, average)	0.8
Standby (W, average)	0.2
Sleep (W)	0.14

Physical size	
Height (max, mm)	9.5
Dimensions (width x depth, mm)	69.85 x 100.2
Weight (max, g)	97

Environmental (operating)	
Ambient temperature	-30° to 85° C
Altitude (m)	-450 to 5,500
Shock (half-sine wave)	300G (2ms)
Vibration (sine-wave)	Up to 3G (10-500Hz)

Environmental (non-operating)	
Ambient temperature	-40° to 95° C
Altitude (m)	-450 to 15,000
Shock (half-sine wave)	800G (1ms)
Vibration (sine-wave)	Up to 5G (10-500Hz)

Acoustics (A-weighted sound power)	
Idle (Bels, typical)	2.4
Operating (Bels, typical)	3.0

## HGST Quality and Service

HGST Endurastar hard disk 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.

HGST drives are backed by an array of technical support and services, which may include customer and integration assistance. HGST is dedicated to providing a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs.

### How to read the Endurastar model number

HEJ423232H9E300 = 320GB, SATA 1.5Gb/s interface  
H = HGST  
E = Endurastar  
J = J4K320  
42 = 4200 RPM  
32 = Full capacity — 320GB  
32 = Capacity this model, 320 = 320GB  
(25 = 250GB, 20 = 200GB,  
10 = 100GB, 80 = 80GB)  
H = Generation code  
9 = 9.5mm z-height  
E3 = Interface, SATA 1.5Gb/s with 512 emulation  
0 = Feature code  
0 = Reserved

<sup>1</sup> One GB is equal to one billion bytes when referring to hard drive capacity. Accessible capacity will vary depending on the operating environment and formatting.

<sup>2</sup> Portion of buffer used for firmware.

<sup>3</sup> Intended for less than 20% duty cycle industrial applications and other non-mission critical applications at operational temperature 5°C to 55°C. Service life of the drive is approximately 5 years or 15,000 power-on hours, whichever ever comes first.

<sup>4</sup> Power requirements shown apply to average operating temperatures. For power requirements at low temperatures, see OEM specification at [www.hgst.com/support](http://www.hgst.com/support).