Data Sheet

Endurastar™ J4K100 and N4K100

2.5-Inch Automotive 4200 RPM Hard Disk Drives

Highlights

- Industry-leading 100GB[1] capacity optimized for automotive applications
- High operating altitude range of up to 5500 meters
- Wide operating temperature range from -30°C to +85°C
- 5th generation product, based on proven technology
- PATA and SATA interfaces

Applications/Environments

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

Large Capacity, Robust Features for Extreme Environments

HGST delivers an industry-leading 100GB capacity in its latest Endurastar line of 2.5-inch hard drives designed especially for extreme environments. The Endurstar J4K100 and N4K100 models provide twice the capacity of their predecessors and are built to operate at altitudes of up to 5500 meters. The Endurastar J4K100 is designed for the most severe conditions, with an operating temperature range of -30ºC to +85ºC. For milder conditions, the Endurastar N4K100 provides an operating temperature range of -20ºC to +75ºC. The drives are offered in SATA and PATA interface options for design configuration flexibility.

Right Choice for the Road

Endurastar hard drives are built to meet the rigors of the automotive environment, including navigation, telematics, in-car entertainment and vehicle relational management. The drives have been designed using a proven 5th generation platform.

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. Already in use across its other product lines, perpendicular magnetic recording (PMR) technology has been implemented on Endurastar J4K100 and N4K100 to deliver 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	100GB maximum capacity	25,000 4-minute MP3 songs, 35 movies. or 50 interactive games (2GB per game) *
Acoustics	Fluid Dynamic Bearing (FDB) motors	Quiet operation
Reliability	-30° C to +85° C operating temperature	Performs well in extreme temperature environments
	High-endurance FDB motor	Supports 24x7 applications
	Shock sensor technology	Cushions the drive in poor shock or vibration conditions
	Perpendicular Magnetic Recording (PMR) technology with Thermal Fly-height Control (TFC)	Improved soft error rate and performance Wide operating range for temperature and altitude
Interface	PATA and SATA	Configuration flexibility

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

100GB, 80GB and 40GB
4200 RPM I PATA and SATA

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Endurastar™ J4K100 and N4K100

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

HEJ421010G9SA00 = 100GB, SATA interface

H = HGST
E = Endurastar
J = J4K100 model (N = N4K100)
42 = 4200 RPM
10 = Full capacity — 100GB
10 = Capacity this model, 10 = 100GB (80 = 80GB, 40 = 40GB)
G = Generation code
9 = 9.5mm z-height
SA = Serial interface (AT = ATA interface)
0 = Feature code
0 = Reserved

Information and Technical Support

www.hgst.com (Main Web site)
www.hgst.com/partners (Partner Web site)

North America

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Toll free: 1 888 426-5214, Direct: 1 408 717-8087

Asia Pacific

support_ap@hgst.com / 65 6840 9595

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support_uk@hgst.com / 44 20 7133 0032

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Program Support

Partners First Program
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[1] 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.
[2] Portion of buffer used for firmware
[3] Intended for less than 20% duty cycle industrial applications and other non-mission critical applications at operational temperature 5°C to 55°C.
[4] Power requirements shown apply to average operating temperatures. For power requirements at low temperatures, see OEM specification at www.hgst.com/support.

Specifications	J4K100	N4K100
Models	HEJ421010G9SA00 / HEJ421010G9AT00 HEJ421080G9SA00 / HEJ421080G9AT00 / HEJ421040G9AT00	HEN421010G9AT00 HEN421080G9AT00 HEN421040G9AT00
Configuration		
Interface	SATA 1.5Gb/s / ATA-6	←
Capacity (GB)[1]	100 / 80 // 100 / 80 / 40	←
Sector size (variable, bytes/sector)	512	←
Recording zones	24	←
Data heads	2	←
Disks	1	←
Aerial density (Gbit/sq.in, max)	172 / 171	←
Performance		
Data buffer (MB)[2]	8	←
Rotational speed (RPM)	4260	←
Latency average (ms)	7.04	←
Media transfer rate (Mbits/s, max)	559 / 554	←
Interface transfer rate (MB/s, max)	150 / 100 Ultra DMA mode-5 16.6 PIO mode-4	←
Seek time (read, typical) (avg, ms)[3]	13	←
Reliability		
Error rate (non-recoverable	< 1 per 10^{13} bits transferred	←
Load/Unload cycle	600,000	←
Availability[3] (hrs/day x days/wk)	24x7	←
Power		
Requirement	+5 VDC (+/-5%)	←
Startup (W, peak, max)[4]	6.5	←
Read/Write (W, average)	2.5	←
Low power idle (W, average)	0.8	←
Standby (W, average)	0.15	←
Sleep (W)	0.1	←
Physical size		
Height (mm, max)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, max)	97	←
Environmental (operating)		
Ambient temperature	-30° to 85° C	-20° to 75° C
Altitude (m)	-300 to 5,500	-300 to 3,000
Shock (half-sine wave)	250G (2ms)	←
Vibration (sine-wave)	Up to 3G (10-500Hz)	←
Environmental (non-operating)		
Ambient temperature	-40° to 95° C	←
Altitude (m)	-300 to 15,000	←
Shock (half-sine wave)	800G (1ms)	←
Ambient temperature	-40° to 65° C	←
Vibration (sine-wave)	Up to 5G (10-500Hz)	←
Acoustics (A-weighted sound power)		
Idle (Bels, typical)	2.4	←
Op (Bels, typical)	3.0	←

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DSEJ4210009EN-02