

# Endurastar™ J4K30 and N4K30

2.5-INCH HARD DISK DRIVES

**HITACHI**  
Inspire the Next

Extreme hard drives for extreme environments

## Highlights

- > 30GB and 20GB capacity in a 2.5-inch form factor
- > Operating temperature range from -20° C to +85° C
- > Built-in shock sensor enhances data integrity
- > Enhanced moisture control system ensures corrosion control in extreme environments

## Applications

- > Automotive
- > GPS navigation systems
- > Applications running in hot and humid climates



30 and 20GB | 4200 RPM | ATA-5

## Features and Benefits

	Feature / Function	Benefits
<b>Capacity</b>	30GB maximum capacity 20GB also available	* 7,500 4-minute MP3 songs, or * 2.7 hours of DV25 video, or * 15 interactive games
<b>Acoustics</b>	Fluid Dynamic Bearing (FDB) motors	Quiet operation
<b>Reliability</b>	-20° C to +85° C operating temperature (J4K30)	Performs well in extreme temperature environments
	High-endurance FDB motor	Supports 24x7 applications
	Load/unload technology	Reduces disk wear and helps protect user data
	Built-in shock sensor	Enhances data integrity

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

## Turn up the heat

Hitachi delivers a 50-percent storage capacity increase in its line of “extreme” hard disk drives. The Endurastar™ J4K30 and Endurastar N4K30 are both offered in capacities of up to 30GB, and are designed specifically to perform in extreme temperature environments. With an operating temperature range as wide as -20°C to +85°C, the new Endurastar models are built to perform in the harshest environments—from the desert heat to the Antarctic chill.

## Ideal for automotive applications

Endurastar hard drives are the preferred solution for automotive applications or other environments which require high robustness and wider operating temperatures than standard hard drive applications. In fact, the Endurastar J4K30 is already being used in car entertainment and navigation applications—and 30GBs of storage means users can store more than 5,000 audio files, four hours of MPEG2 video and enough navigation data to cover the entire planet!

## Reliability and performance

The new Endurastar models feature glass media and load/unload technology in addition to shock sensor technology which cushions the drive in less than ideal shock or vibration conditions. Endurastar drives incorporate fluid dynamic bearings (FDB) in the spindle motor, allowing the same quiet operations and improved shock characteristics as with PC models, but offers even higher reliability for automotive environments and around-the-clock applications in industrial environments. These features enable the Endurastar drives to achieve a non-operating shock tolerance of 800G/1ms and an operating shock tolerance of 250G/2ms.

## Specifications

### Endurastar J4K50

### Endurastar N4K50

Model(s)	HEJ423030F9AT00 HEN423030F9AT00	HEJ423020F9AT00 HEN423020F9AT00
Interface	ATA-5 (IDE)	←
Capacity (GB) <sup>1</sup>	30 / 20	←
Sector size (variable, Bytes/sector)	512	←
Recording zones	16	←
Data heads (physical)	2	←
Data Disks	1	←
Max. areal density (Gbits/sq. in.)	56.5	←
<b>Performance</b>		
Data buffer (MB) <sup>2</sup>	8	←
Rotational speed (RPM)	4172	←
Latency average (ms)	7.19	←
Media transfer rate (Mbits/sec, max)	361	←
Interface transfer rate (MB/sec, max)	100 Ultra DMA mode-5 16.6 PIO mode-4	←
Seek time (read, typical) (avg. ms)	13	←
Maximum (typical, ms)	24	←
Minimum (typical, ms)	3	←
<b>Reliability</b>		
Error rate (non-recoverable)	< 1 per 10 <sup>13</sup> bits transferred	←
Load/unload	300,000	←
Availability <sup>3</sup> (hrs/day x days/wk)	24x7	←
<b>Power</b>		
Requirement	+5 VDC (+/-5%)	←
Startup (W, peak, max.)	6.5	←
Read / Write (W, avg.)	2.15	←
Low power idle (W, avg.)	0.6	←
Standby (W, avg.)	0.15	←
Sleep (W)	0.1	←
<b>Physical size</b>		
z-height (mm)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, typ.)	107	←
<b>Environmental (operating)</b>		
Ambient temperature	-20° to 85° C	0o to 60o C
Relative humidity (non-condensing)	5% to 90%	←
Shock (half-sine wave)	250G (2ms)	←
Vibration (sine wave)	1G (22-500Hz)	←
<b>Environmental (non-operating)</b>		
Ambient temperature	-40° to 85° C	←
Relative humidity (non-condensing)	5% to 90%	←
Shock (half-sine wave)	800G (1ms)	←
Vibration (sine wave)	5G (22-500Hz)	←
<b>Acoustics (A-weighted sound power)</b>		
Idle (Bels, typ.)	2.4	←
Op (Bels, typ.)	3.0	←

## Hitachi quality and service

Hitachi Endurastar 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.

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

### How to read the Travelstar model number

HTJ423030F9AT00 = 30GB/8 MB buffer

H = Hitachi

E = Endurastar

J = J4K50 model (N = N4K50)

42 = 4200 RPM

30 = Full capacity — 30GB

30 = Capacity this model, 30 = 30GB  
(20 = 20GB)

F = Generation code

9 = 9.5mm z-height

AT = ATA interface

0 = Feature code

0 = Reserved

### Information and Technical Support

[www.hitachigst.com](http://www.hitachigst.com) (Main Web site)

[www.hitachigst.com/partners](http://www.hitachigst.com/partners) (Partner Web site)

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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 may be less.
- 2 Portion of buffer capacity used for drive firmware.
- 3 Intended for less than 20 percent duty cycle industrial applications and other non mission critical applications.

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