

# Endurastar™ J4K50 and N4K50

2.5-INCH HARD DISK DRIVES

**HITACHI**  
Inspire the Next

Industrial strength drives built for extreme environments

## Highlights

- > Highest capacity Automotive HDD at 50GB; 67% more than prior model
- > Expanded operating temperature range from -30° C to +85° C
- > Highest operating altitude range of up to 5000 meters
- > 4th generation product, based on proven technology

## Applications

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

## Features and Benefits

	Feature / Function	Benefits
<b>Capacity</b>	50GB maximum capacity 40GB and 30GB also available	* 12,500 4-minute MP3 songs, or * 17 movies * 50 interactive games
<b>Acoustics</b>	Fluid Dynamic Bearing (FDB) motors	Quiet operation
<b>Reliability</b>	-30° C to +85° C operating temperature -300m to +5,000m altitude on J4K50	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
	Thermal Fly-height Control (TFC)	Improved soft error rate and performance

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



50, 40 and 30GB | 4200 RPM | ATA-6

## Built like a tank

Hitachi is first to deliver a 50GB per platter Endurastar hard drive for use in extreme environments. The Endurastar J4K50 and N4K50 are offered in capacities of 30 to 50GB. Along with the increased capacity, comes a wider temperature range and improved altitude range. Endurastar J4K50 is designed to operate in the most severe conditions, at temperatures of -30°C to +85°C and altitudes of -300 to +5000 meters. Endurastar N4K50 offers a temperature range of -16°C to +70°C at altitudes of -300 to 3000 meters. The new Endurastar models continue to leverage shock sensor technology for enhanced reliability and the proven technology of Hitachi HDDs for notebook PCs to deliver quiet acoustics and excellent performance. Hitachi Endurastar drives are designed to guard and deliver your data under the harshest environmental conditions.

## Made for the road

Hitachi Endurastar hard drives deliver the one-two punch of operating at the highest altitude and the most extreme temperatures. These drives are designed to meet the rigors of the automotive environment, including traditional navigation, telematics, in-car entertainment and vehicle relational management. This time-proven design supports around-the-clock applications in industrial environments.

The implementation of TFC, which enables direct control of the read/write element using heat, provides more consistent spacing between the read/write element and the media, thereby improving robustness and performance. These new Endurastar models are preferred for applications in the most radical environments ranging from desert heat to Antarctic chill.

## Specifications

Model(s)	Endurastar J4K50 HEJ425050F9AT00 HEJ425040F9AT00 HEJ425030F9AT00	Endurastar N4K50 HEN425050F9AT00 HEN425040F9AT00 HEN425030F9AT00
Interface	ATA-6	←
Capacity (GB) <sup>1</sup>	50 / 40 / 30	←
Sector size (variable, Bytes/sector)	512	←
Recording zones	24	←
Data heads (physical)	2	←
Data Disks	1	←
Max. areal density (Gbits/sq. in.)	86.1	←
<b>Performance</b>		
Data buffer (MB) <sup>2</sup>	8	←
Rotational speed (RPM)	4260	←
Latency average (ms)	7.04	←
Media transfer rate (Mbits/sec, max)	388	←
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	600,000	←
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.)	0.8	←
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.)	95	←
<b>Environmental (operating)</b>		
Ambient temperature	-30° to 85° C	-16o to 70o C
Altitude (m)	-300 to 5,000	-300 to 3,000
Shock (half-sine wave)	250G (2ms)	←
Vibration (sine wave)	Up to 3G (10-500Hz)	←
<b>Environmental (non-operating)</b>		
Ambient temperature	-40° to 95° C	←
Altitude (m)	-300 to 15,000	←
Shock (half-sine wave)	800G (1ms)	←
Vibration (sine wave)	Up to 5G (10-500Hz)	←
<b>Acoustics (A-weighted sound power)</b>		
Idle (Bels, typ.)	2.4	←
Op (Bels, typ.)	3.0	←

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## 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

HTJ425050F9AT00 = 50 GB/8 MB buffer

H = Hitachi

E = Endurastar

J = J4K50 model (N = N4K50)

42 = 4200 RPM

50 = Full capacity — 50 GB

50 = Capacity this model, 50 = 50 GB  
(40 = 40 GB, 30 = 30 GB)

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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<sup>1</sup> One GB is equal to one billion bytes when referring to hard drive capacity. Accessible capacity may be less.  
<sup>2</sup> Portion of buffer capacity used for drive firmware.  
<sup>3</sup> Intended for less than 20 percent duty cycle industrial applications and other non mission critical applications.