



Endurastar® J4K320

Highlights

- Industry-leading 320GB¹ 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"> • -30° C to +85° C operating temperature • Shock sensor technology • Perpendicular Magnetic Recording (PMR) technology with Thermal Fly-height Control (TFC) | <ul style="list-style-type: none"> • Performs well in extreme temperature environments • Cushions the drive in poor shock or vibration conditions • Improved soft error rate and performance • Wide operating range for temperature and altitude |
| 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) ¹ | 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) ² | 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 ¹⁴ bits transferred |
| Load/Unload cycle | 600,000 |
| Availability (hrs/day x days/wk) ³ | 24x7 |

| | |
|-------------------------------------|----------------|
| Power | |
| Requirement | +5 VDC (+/-5%) |
| Startup (W, peak, max) ⁴ | 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 Edurastar 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

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. Service life of the drive is approximately 5 years or 15,000 power-on hours, which ever comes first.

⁴ Power requirements shown apply to average operating temperatures. For power requirements at low temperatures, see OEM specification at www.hgst.com/support.