# Deskstar™ 7K2000
## 3.5-INCH HARD DISK DRIVES

**HITACHI**
*Inspire the Next*

Huge capacity, highest 7200 RPM reliability, plus outstanding performance for desktop storage

## Highlights
> 2TB[1] capacity
> 7200 RPM performance
> Up to 10% idle power savings over previous generation product
> Halogen-free design for eco-friendly footprint
> Built on award-winning proven design

## Applications
> Consumer and commercial computers
> External storage
> PC gaming
> Video editing arrays

## Features and Benefits

|  | Feature / Function | Benefits |
|---|---|---|
| **Capacity** | 2TB | Highest capacity available in a single hard drive |
| **Reliability** | Thermal Fly-height Control (TFC) | Better soft error rate for improved reliability and performance |
|  | Head load/unload | Protects disk during non-operation |
|  | ECC and CRC protection | Data integrity enhanced throughout circuits |
|  | SMART command transport | Adaptive error correction |
|  | Internal thermal sensor | Improves data integrity |
| **Power** | Advanced Power Management | Reduces power during idle periods |
|  | HiVERT™ technology | Best-of-breed power consumption |
| **Performance** | 32MB cache buffer SATA 3Gb/s interface | Faster data processing |

2TB | 7200 RPM | SATA 3Gb/s

## Highest capacity and reliability with a proven design
The Deskstar™ 7K2000 hard drive delivers a colossal two terabytes of storage capacity and 7200 RPM performance in a standard 3.5-inch form factor. Now in its fourth-generation, the 7K2000 is based on a robust mechanical design that continues to set the industry standard for quality and reliability. Through a patented ramp load/unload design, data heads are moved to a ramp away from the disk where they rest during periods of inactivity. This greatly minimizes the risk of shock damage by eliminating direct contact between the heads and disks, reducing wear and heat while improving overall drive reliability and power efficiency. The Deskstar 7K2000 also incorporates thermal fly-height control (TFC) technology which uses an integrated heating element to precisely maintain a constant fly-height throughout read and write operations to enhance overall data integrity, drive performance and reliability. The 7K2000 features industry-standard native 512-byte sector formatting, ensuring compatibility with mainstream computing environments.

## Outstanding energy efficiency
The Deskstar 7K2000 offers an exceptional blend of capacity and power efficiency, with idle power savings over previous generation products up to 10%. On a watts per gigabyte basis, idle power has improved over 120%. Leveraging eighth-generation power management technology, including power-saving innovations like HiVERT™ technology, this drive delivers best-in-class power management and thermal emissions to help manufacturers meet energy compliance targets and extend drive life.

## Innovation for a more sustainable environment
The Deskstar 7K2000 demonstrates Hitachi ecological leadership with its halogen-free design and power-efficient operation. Both these features helped qualify the drive for the Hitachi EcoTrac classification, which identifies products that minimize environmental impact in the areas of product design, manufacturing, operation and disposal.

## Specifications

| Model(s) | HDS722020ALA330 |
| --- | --- |
| **Configuration** | |
| Interface | SATA 3Gb/s |
| Capacity (TB)[1] | 2 |
| Sector size (bytes) | 512 |
| Max. areal density (Gbits/sq. in.) | 285 |
| **Performance** | |
| Data buffer (MB)[2] | 32 |
| Rotational speed (RPM) | 7200 |
| Media transfer rate (Mbits/s, max) | 1621 |
| Interface transfer rate (MB/s, max) | 300 |
| **Reliability** | |
| Error rate (non-recoverable, bits read) | 1 in $10^{14}$ |
| Load/unload cycles (at 40˚C) | 300,000 |
| Availability[3] (hrs/day x days/wk) | 24x7 |
| **Acoustics** | |
| Idle (Bels, typical) | 2.9 |
| **Power** | |
| Requirement | +5 VDC (+/-5%) +12 VDC (+/-10%) |
| Startup current (A, max.) | 1.2 (+5V), 2.0 (+12V) |
| Idle (W) | 7.5 |
| **Physical size** | |
| z-height (mm) | 26.1 |
| Dimensions (width x depth, mm) | 101.6 (+/-0.25) x 146 |
| Weight (typical, g, max.) | 740 |
| **Environmental (operating)** | |
| Ambient temperature | 5º to 60ºC |
| Relative humidity (non-condensing) | 8% to 90% |
| Shock (half-sine wave, G (2ms)) | 70 |
| Vibration, random (G RMS 5 to 500 Hz) | 0.67 (XYZ) |
| **Environmental (non-operating)** | |
| Ambient temperature | -40º to 70ºC |
| Relative humidity (non-condensing) | 5% to 95% |
| Shock (half-sine wave, G (1ms)) | 300 |
| Vibration, random (G RMS 2 to 200 Hz) | 1.04 (XYZ) |

[1] One GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity may be less.

[2] Portion of buffer capacity used for drive firmware

[3] Intended for low duty cycle, non mission-critical applications in PC, gaming and external storage environments, which may vary from application to application. Note that customer environments may vary from application to application.

## Hitachi quality and service

All Hitachi hard drives are designed to the highest quality standards with field-proven components. They are backed by Hitachi's worldwide technical support and integration services, enabling customers around the globe to bring their products to market quickly.

### How to read the Deskstar model number

HDS722020ALA330 = 2TB, 32MB buffer
H  = Hitachi
D  = Deskstar
S  = Series prefix
72 = 7200 RPM
20 = Full capacity—2TB
20 = Capacity this model, 20 = 2TB
A  = Generation code
L  = 26.1mm z-height
A3 = Interface, SATA 3Gb/s
3  = 32MB buffer
0  = Reserved

### Information and Technical Support

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