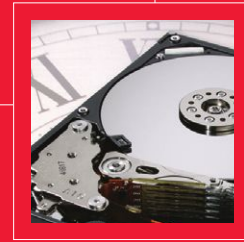


## Hitachi Deskstar® E7K500

### 3.5-INCH HARD DISK DRIVES



500GB & 400GB | 7200 RPM | Serial ATA 3.0Gb/s

#### Seemingly Infinite Enterprise Storage

##### Highlights

- > Up to 500 GB of capacity with SATA 3.0Gb/s
- > 1,000,000 hour MTBF reliability<sup>4</sup>
- > Native Command Queuing (NCQ) for superior performance
- > Rotational Vibration Safeguard for high density storage configurations
- > Iridium Manganese Chromium head sensor technology for high reliability
- > Low-power mode

##### Applications

- > Nearline storage
- > Disk-to-disk back-up
- > Digital video surveillance
- > RAID arrays
- > Tiered storage

#### Rotational Vibration Safeguard (RVS) Feature

The Deskstar E7K500 hard drive is optimized for use in nearline/low duty cycle enterprise environments with capabilities such as Rotational Vibration Safeguard (RVS), which maintains the hard drive's performance in high rotational vibration environments where multiple drives reside in a single enclosure.

#### Advanced Serial ATA 3.0Gb/s Support

- > 3.0 Gb/s (300 MB/s) interface data rate
- > NCQ (native command queuing)
- > Staggered (delayed) spin-up
- > Hot-swap capability

The E7K500 provides all of these enhancements to enable faster data access, better power management to the system and higher performance.

##### Features and Benefits

|             | Feature / Function             | Benefits                                       |
|-------------|--------------------------------|------------------------------------------------|
| Capacity    | 500GB & 400GB models           | High capacity storage solutions                |
| Cache       | 16 MB Buffer                   | Improved transfer performance                  |
| Performance | High interface transfer rates  | Faster system boot-up                          |
|             | SATA 3.0 Gb/s interface        | 300MB/s burst data rate for faster data access |
|             | Rotational Vibration Safeguard | Optimum performance in multi-drive systems     |
| Reliability | ECC and CRC protection         | Data integrity enhanced throughout circuits    |
|             | Low-power mode                 | Reduces system heat/cooling requirements       |
|             | Load / unload ramp             | Protects user data when power is removed       |
|             | Internal thermal sensor        | Improves data integrity at high temperatures   |

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

#### Hitachi 5-year Warranty Provides Superior Quality and Service

The Hitachi Deskstar E7K500 extends the company's long-standing tradition of performance and reliability leadership. Hitachi's enterprise features for storage applications enable high capacity, fast transfers, low power and high reliability. These features combine to make the Deskstar E7K500 ideal for nearline/low duty cycle, disk-to-disk back-up and other enterprise storage solutions.

The Deskstar E7K500 carries the industry's most comprehensive 5-year warranty with product replacement values throughout the life of the warranty that exceed those available from other hard drive suppliers.

## Hitachi Deskstar® E7K500

**Product**  
Model numbers  
**Deskstar E7K500**  
HDS725050KLA360  
HDS725050KLA361

### Specifications Configuration

|                            |              |
|----------------------------|--------------|
| Interface                  | SATA 3.0Gb/s |
| Capacity (GB) <sup>1</sup> | 500; 400     |
| Disks / heads              | 5 / 10       |

### Performance

|                                                      |                         |
|------------------------------------------------------|-------------------------|
| Data buffer <sup>2</sup> (MB)                        | 16                      |
| Rotational speed (RPM)                               | 7,200                   |
| Media transfer rate (max. Mbits/sec)                 | 817                     |
| Interface transfer rate (max. MB/sec)                | 300                     |
| Sustained data rate (MB/sec)                         | 64.8 - 31 (zone 0 - 29) |
| Seek time, average (read, typical (ms)) <sup>3</sup> | 8.5                     |

### Reliability

|                              |                 |
|------------------------------|-----------------|
| Error rate (non-recoverable) | 1 in 10E14      |
| Start/stops (at 40° C)       | 50,000          |
| Availability <sup>4</sup>    | 24x7            |
| MTBF <sup>4</sup>            | 1,000,000 hours |

### Acoustic

|             |     |
|-------------|-----|
| Idle (Bels) | 3.1 |
|-------------|-----|

### Power

|                          |                                        |
|--------------------------|----------------------------------------|
| Requirement              | +5 VDC (+/- 5%)<br>+12 VDC (+10 %/-8%) |
| Dissipation              |                                        |
| Startup current (max. A) | 2.0 (+12V) & 1.2 (+5V)                 |
| Idle (W)                 | 9.6                                    |

### Physical Size

|                 |       |
|-----------------|-------|
| Height (mm)     | 25.4  |
| Width (mm)      | 101.6 |
| Depth (mm)      | 146   |
| Weight (max. g) | 700   |

### Environmental Characteristics

|                                    |                                          |
|------------------------------------|------------------------------------------|
| Operating                          |                                          |
| Ambient temperature                | 5° to 55° C                              |
| Relative humidity (non-condensing) | 8% to 90%                                |
| Shock (half sine wave, 2ms) (G)    | 55                                       |
| Vibration (random (RMS)) (G)       | 0.67 for horizontal<br>0.56 for vertical |

### Non-operating

|                                    |               |
|------------------------------------|---------------|
| Ambient temperature                | -40° to 65° C |
| Relative humidity (non-condensing) | 5% to 95%     |
| Shock (half sine wave, 2ms) (G)    | 225           |
| Vibration (random (RMS)) (G)       | 1.04 (XYZ)    |

|                             |     |
|-----------------------------|-----|
| RoHS compliant <sup>5</sup> | Yes |
|-----------------------------|-----|

<sup>1</sup> GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.

<sup>2</sup> Buffer capacity includes 271 KB used for drive firmware.

<sup>3</sup> Includes 0.3ms command overhead.

<sup>4</sup> Low duty cycle, non mission-critical applications in PC, nearline and consumer electronics customer environments are different from application to application. An MTBF measurement is based on a sample population and is estimated by statistical measurements and acceleration algorithms under nearline / low duty cycle workload. MTBF ratings are not intended to predict an individual drive's reliability. MTBF is not a warranty measurement.

<sup>5</sup> RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment.

Specific application environments such as temperature and duty cycle will affect the overall reliability rates. For specific application environment reliability rates, please consult Hitachi technical support.

## Hitachi Global Storage Technologies



### For more information:

Internet:

- > [www.hitachigst.com](http://www.hitachigst.com) (Main Web site)
- > [www.hitachigst.com/vpp](http://www.hitachigst.com/vpp) (Reseller Web site)

Technical Support E-mail:

- > [support\\_usa@hitachigst.com](mailto:support_usa@hitachigst.com) (N. America)
- > [support\\_ap@hitachigst.com](mailto:support_ap@hitachigst.com) (Asia Pacific)
- > [support\\_uk@hitachigst.com](mailto:support_uk@hitachigst.com) (EMEA and UK)

Technical Support Phone Numbers:

- > 1 888 426-5214 (N. America)
- > 65 6840 9595 (Asia Pacific)
- > 44 20 7133 0032 (EMEA and UK)
- > 49 6929 993601 (Germany)

### How to Read the Deskstar Model Number

**Example:**

**HDS725050KLA360** = 500GB/16MB

**H** = Hitachi

**D** = Deskstar

**S** = Standard (vs T for Two-disk for example)

**72** = 7200 RPM

**50** = full capacity = 500GB

**50** = model capacity = 500GB (unless 1 in last position)

**K** = generation code

**L** = height

**A3** = SATA 3.0Gb/s

**6** = 16MB buffer

**0** = 500GB model (1=400GB mode)

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