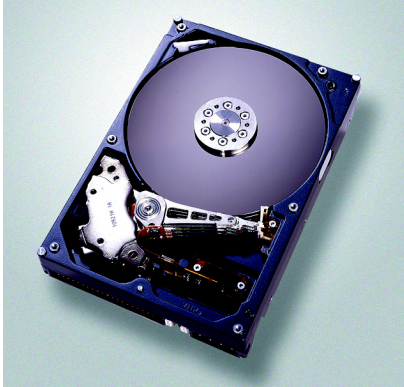


IBM Deskstar™ 180GXP hard disk drives



Highlights

- **Capacity: 60, 80, 120, 180GB**
- **The 8MB buffer enables faster data processing, especially for long block transfers.**
- **Fluid Dynamic Bearing (FDB) motors enhance idle and operating acoustic operation**
- **Thermal monitor helps provide accurate data read/write over the full system temperature range**
- **Differential read channel enhances data reliability**

Announcing the IBM Deskstar 180GXP; latest generation of hard drives from IBM's award-winning Deskstar family. The new family of drives incorporates both new and proven technologies to boost system performance. The Deskstar 180GXP provides the capacity and performance required to handle a wide range of advanced desktop and audio/video applications.

IBM has standardized features in their desktop drives to supply lower acoustics, faster transfer rates and low-power utilization to make the Deskstar 180GXP drive ideal for non-PC, high-performance computing requirements.

Technology for capacity and performance

- *Three-disk design provides a higher capacity with 180GB at 7200rpm performance.*
- *IBM-designed onboard processor provides faster speeds than the previous generation.*
- *Tagged Command Queuing (TCQ) brings SCSI-like performance to ATA server applications.*
- *Enhanced servo system provides fast, reliable head positioning.*

The superior areal density combines with the faster processor and streamlined cache buffer to enable award-winning performance for both the Deskstar hard drive and your system. Enhancements to the servo system and thermal monitor help to enable accurate data storage and retrieval.

Combined together, these technologies enable popular capacity points and are designed to increase reliability.

Technology for reliability

- *Load/unload head ramps*
- *Fluid Dynamic Bearing (FDB) motors*
- *Differential read channel*
- *Internal thermal monitor*
- *Drive Fitness Test (DFT)*
- *S.M.A.R.T Self Test*
- *True-Track Servo*
- *No-ID sector formatting*

Fluid Dynamic Bearing motors provide improved acoustics over traditional ball bearing spindle motors. FDB motors will continue to be used more frequently in hard disk drive designs, particularly in applications requiring very high spindle speeds, high areal densities, and low acoustic noise.

The IBM Deskstar 180GXP matches the drive capacity and performance guidelines for Microsoft® Windows® XP- (40GB minimum and 7200rpm performance).

IBM Deskstar 180GXP at a glance

Product name

Deskstar 180GXP

Model names	IC35L180AVV207-1 IC35L120AVV207-0 or 1 IC35L090AVV207-0 or 1 IC35L060AVV207-0
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Configuration

Interface	ATA-6
Capacity (GB)	180/120/80/60
Sector size (bytes)	512
Recording zones	27
Data heads (physical)	6/4/3/2
Data disks	3/2/2/1
Max. areal density (Gbits/sq. inch)	45.5
Max. recording density (BPI)	632,000
Track density (TPI)	72,000

Performance

Data buffer ⁴	8 MB / 2 MB (3D-8M, 1D-2M, 2D-2M/8M)
Rotational speed (rpm)	7,200
Latency average (ms)	4.17
Media transfer rate (max. Mbits/sec)	699
Interface transfer rate (max. MB/sec)	100
Sustained data rate (MB/sec)	56 to 29

Seek time (read, typical) ³	
Average (ms)	8.5/8.8
Track to track (ms)	1.1
Full track (ms)	15.0/15.4

Reliability

Error rate (non-recoverable)	1 in 10E14
Start/stops (at 40° C)	40K

Acoustic

Idle (Bels)	2.6 (1 disk) 2.8 (2 disks) 3.0 (3 disks)
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Power

Requirement	+5 VDC (+/- 5%), +12 VDC (+10%/-8%)
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Dissipation	
Startup current (max. A)	2.0 (+12V) & 0.83A (+5V)
Idle (W)	5.0 (1 disk) 5.9 (2 disks) 7.0 (3 disks)

Height (mm)	25.4
Width (mm)	101.6
Depth (mm)	146
Weight (max. g)	640

Environmental characteristics

Operating	
Ambient temperature	5° to 55° C
Relative humidity (non-condensing)	8% to 90%
Max. wet bulb (non-condensing)	29.4° C
Shock (half sine wave, 2ms)	55G
Vibration (random (RMS))	0.67G for horizontal 0.56G for vertical

Non-operating	
Ambient temperature	-40° to 65° C
Relative humidity (non-condensing)	5% to 95%
Max. wet bulb (non-condensing)	35° C
Shock (half sine wave, 2ms)	350G (1 or 2 disks); 300G (3 disks)
Vibration (random (RMS))	1.04G rms (XYZ)

¹ This product data does not constitute a warranty. Questions regarding IBM warranty terms or the methodology used to derive this data should be referred to an IBM representative.

² GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.

³ Includes command overhead.

⁴ Upper 227 KB is used for firmware.

For more information

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