

Powerful solutions and innovations in desktop storage for the workplace and home



IBM Deskstar 25GP and Deskstar 22GXP hard disk drives

Highlights

The IBM Deskstar* family provides industry-leading capacity and performance. The Deskstar 25GP leads in capacity with a maximum of 25.0 GB at 5400 RPM. The Deskstar 22GXP leads the industry in both capacity and performance with a maximum of 22.0 GB at 7200 RPM.

Average seek times of 9.0 milliseconds, with sustained data rates of up to 15.5 MB/sec (Deskstar 25GP) and 17.9 MB/sec (Deskstar 22GXP), a maximum of 2.0 MB cache, and high internal data rates enable benchmark-winning performance.

Giant magnetoresistive (GMR) head technology enables one of the industry's highest areal densities and 5.1 GB of capacity per disk.

An Ultra ATA/66 interface supports transfer rates of up to 66.7 MB/sec in Ultra DMA Mode-4. All models ensure data reliability across the interface with cyclic redundancy checking (CRC).

The IBM Drive Fitness Test* (DFT) helps the user to isolate system failures by providing status about drive functionality, thus reducing the possibility of unnecessary return of a functional drive.

Leading drive technology

With the IBM Deskstar 25GP and Deskstar 22GXP, IBM provides the capacity and performance to handle a wide range of advanced desktop applications. The IBM Deskstar 25GP offers the industry's largest capacity of 25.0 GB in an ATA interface drive. With a maximum capacity of 5.1 GB per disk, the IBM Deskstar 25GP packs significant amounts of data onto a one-inch high disk drive. The IBM Deskstar 22GXP features a maximum capacity of 22.0 GB at 7200 RPM, giving users high capacity and fast access to information.

These drives use IBM giant magnetoresistive (GMR) advanced head technology, which enables increased areal density. S.M.A.R.T. 3 improves reliability as it provides background reassignment of defective sectors. Further circuit integration reduces power requirements and increases reliability. No-ID* sector formatting increases capacity by helping to eliminate the overhead caused by duplicate storage of data sector ID fields. An Ultra ATA/66 interface provides superior data performance. In addition, partial response maximum likelihood (PRML) digital data channel increases media-to-buffer and buffer transfer rates.

Advanced desktop systems

As the company that pioneered disk drive technology, IBM once again is setting new standards for today's data storage technology by designing innovative hard disk drives that help meet the evolving requirements of high-performance desktop users. The IBM Deskstar 25GP and Deskstar 22GXP provide the industry's highest storage

capacities for desktop systems. The fast speeds and high capacities translate directly into higher quality video pictures, superior CAD/CAM performance, and significantly faster turnaround for the emerging wave of data-intensive multimedia applications.

IBM quality and service

IBM drives are backed by an array of technical support and services, which may include customer and qualified support and integration assistance. The support package is designed to help ensure that IBM customers can continue to develop and manufacture high-quality, cost-effective systems.



Deskstar 25GP 3.5-inch 25.0, 20.3, 15.2, and 10.1 GB low-profile ATA disk drive



Deskstar 22GXP 3.5-inch 22.0, 18.0, 13.5, and 9.1 GB low-profile ATA disk drive

IBM Deskstar 25GP and Deskstar 22GXP at a glance

Model	Deskstar 25GP	Deskstar 22GXP
	DJNA-352500/352030/ 351520/351010	DJNA-372200/371800/ 371350/379100

Configuration

Interface	ATA-4	ATA-4
Capacity (GB)	25.0/20.3/15.2/10.1	22.0/18.0/13.5/9.1
Sector size (bytes)	512	512
Recording zone	12	12
User cylinders (physical)	15,302	15,012
Data heads (physical)	10/8/6/4	10/8/6/4
Data disks	5/4/3/2	5/4/3/2
Max. areal density (Mbits/sq. inch)	3740	3432
Max. recording density (BPI)	233.8k	218.6k
Track density (TPI)	16,000	15,700

Performance

Data buffer (KB)	2000 ¹ /2000 ¹ /512 ¹ /512 ¹	2000 ¹ /2000 ¹ /2000 ¹ /2000 ¹
Rotational speed (RPM)	5400	7200
Latency (average ms)	5.56	4.17
Media transfer rate (max Mbits/sec)	195.6	223.4
Interface transfer rate (max MB/sec)	66.7	66.7
Sustained data rate (MB/sec)	15.5 to 8.7	17.9 to 10.7
Seek time (read typical)		
Average (ms)	90	90
Track-to-track (ms)	2.2	2.2
Full-track (ms)	15.5	15.5

Reliability

Error rate (nonrecoverable)	1 in 10E13	1 in 10E13
Contact start stop (at 40° C)	40,000	40,000

Power

Requirement	+5 VDC (± 5 %), +12 VDC (+10 %/-8%)	
Dissipation (typical)		
Startup current (max A)	0.65(5V), 2.00(12V), 0.64(5V), 1.58(12V)	0.72(5V), 2.04(12V), 0.71(5V), 1.94(12V)
Idle (W)	4.9/3.4	6.9/5.2
Power consumption efficiency (watts/MB)	0.0002/0.0002/ 0.0002/0.0003	0.0003/0.0004 0.0004/0.0006

Physical size

Height (mm)	25.4	25.4
Width (mm)	101.6	101.6
Depth (mm)	146	146
Weight (max g)	630/630/560/560	630/630/560/560

Environmental characteristics	Operating	Nonoperating
Ambient temperature	5 to 55° C	-40 to 65° C
Relative humidity (noncondensing)	8 to 90%	5 to 95%
Maximum wet bulb (noncondensing)	29.4° C	35° C
Shock (half sine wave)	10 G/11 ms or 65 G/2 ms	75 G/11 ms or 175 G/2 ms
Vibration (random [RMS])	0.67 for horizontal, 0.56 for vertical	1.04

¹ Upper 82 KB used for firmware.

For more information

Internet and e-mail:

- www.ibm.com/harddrive
- drive@us.ibm.com

IBM TECHFAX document server:

- 408-256-5418 (requires touch-tone phone)
- International callers must call from a fax machine

IBM hard disk drive product information:

- 1 888-IBM-5214 (United States)
- 507-253-4110 (outside of the United States)



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