3 1/2-INCH
540 MB and 720 MB LOW PROFILE DISK DRIVES
MODELS
DSAA-3540, 3720
DSAS-3540, 3720

AN OEM OFFERING FROM IBM

This family of drives brings IBM's industry-leading Magneto-Resistive head technology to the desktop computer marketplace, offering superior performance and outstanding reliability. IBM's well-proven advanced head and disk technology delivers higher capacities--up to 365 MB per disk on these models--with fewer components.

Today's desktop PC users are demanding more performance and higher capacities to effectively manage database, spreadsheet, desktop publishing, and graphic applications in multitasking environments. The mainstream market is embracing 540 MB and larger disk drives at an accelerating pace. IBM is already there with this family of drives. The higher areal density (358 b/sq in) gives a higher average data rate with reduced "tail-off" on the inner bands.

These 3.5" drives spin at 4500 RPM and operate at an average access time of 12 ms. The high linear recording density provides an outstanding minimum sustained data rate of 2.5 MB/sec. Performance is further enhanced by a 128 KB segmented buffer (256 KB option) with write cache and read look-ahead.

The drives are available with either ATA-2 (11.1 MB/sec) or Fast SCSI-2 (10.0 MB/sec) interfaces. The AT* drives support LBA mode and extended cylinder addressing in addition to low power dissipation, AT and SCSI power management commands for "Green PC" applications are also supported.

QUALITY AND RELIABILITY

In line with IBM's outstanding commitment to quality, reliability is again improved to over 300,000 power-on hours MTBF.

These drives undergo extensive testing to ensure compatibility across a broad spectrum of hardware platforms and operating systems.

HIGHLIGHTS

- 540 MB and 720 MB capacities
- 12 ms average seek
- 4500 RPM spin rate
- Low power--2.7 W at idle
- ATA-2 and SCSI-2 F interfaces
- AT interface data rate of 11.1 MB/sec (P10 Mode-3)
- SCSI-2 F interface data rate of 10.0 MB/sec
- 300,000 power-on hours MTBF

- 128 KB segmented data buffer (256 KB option)
- Write cache
- ECC on-the-fly
- MR head technology

PRODUCT DESCRIPTION

3 1/2" 540 MB and 720 MB Disk Drive	DSAA-3540/ 3270	DSAS-3540/ 3720
Configuration		
Interface	ATA-2 (IDE)	Fast SCSI-2
Device Capacity		
Formatted	548/730 MB (1)	
Sector Size	512 Bytes	
Recording Zones	8	
User Cylinders	3875	
Data Heads	3/4	
Disks	2/2	
Areal Density		
Maximum	358 Mb/sq in	
Recording Density		
Maximum	83,200 BPI	
Track Density	4300 TPI	
Performance		
Rotational Speed	4500 RPM	
Media Data Rate	32.5-44.6 Mbits/sec	
Interface Transfer Rate		
Maximum	11.1 MB/sec (P10 Mode-3)	10.0 MB/sec (sync)
Data Buffer		
Read Look-Ahead and Write	128 (2) KB (256 KB option)	
Latency		
Average	6.67 ms	
Seek Time (Typical Read)		
Average	12 ms	
Track to Track	4 ms	
Full Track	25 ms	
Reliability		
MTBF		
Projected power-on hours	300,000	
Error Rates		
Non-Recoverable Errors	< 1 per 1.0E13 Bits Transfer	
Power		
Requirements	+5 VDC +/- 5%, +12 VDC + 10% - 8%	
Dissipation (typical)		
Start-up (Maximum Peak	15.7 Watts	
Seek (Average)	4.8 Watts	
Idle (Average)	2.7 Watts	
Physical Size		
Height	25.4 mm	
Width	101.6 mm	
Depth	146 mm	
Weight		
Maximum	530 g	
	Operating	Non-Operating

Environmental Characteristics		
Ambient Temperature	5 to 55 degrees C	-40 to 65 degrees C
Relative Humidity		
Non-Condensing	8% to 90%	5% to 95%
Maximum Wet Bulb		
Non-Condensing	29.4 degrees C	35 degrees C
Shock		
Half-sine-wave	30 G/4 ms	75 G/11 ms
Vibration		
Random (RMS)	0.67 G (5-500Hz)	1.04 G (2-200 Hz)

(1) 1 MB=1,000,000 Bytes
(2) Upper 32 KB used for firmware

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