

2 1/2-INCH 270, 344, 405, 540 AND 810 MB DISK DRIVES  
MODELS

DVAA-2810  
DVAS-2810  
DHAS-2270, -2344, -2405,  
DHAA-2270, -2344, -2405, -2540

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AN OEM OFFERING FROM IBM

The latest in IBM's 2.5-inch line features expanded capacity in a notebook product, with 810 MB available in a 3-platter design. IBM's industry-leading Magneto-Resistive (MR) head technology used in these devices offers enhanced performance and value with outstanding reliability

As the key capacity points move up in the desktop PC market, users of notebooks want to replicate their desktop system. These standard setting capacities for 2.5-inch drives offer an outstanding solution.

Helping to store more information on each platter is a technological innovation called No-ID\* sector format, which is used for the first time in IBM/s DxAA and DxAS families. With No-ID sector format, the ID (or header) information necessary to find the exact location of desired data on the disk is stored in solid-state memory instead of on the disk itself. This frees up substantial space for usable data, since the ID information can occupy as much as 10 percent of each track on the disk. Besides increasing storage density, No-ID sector format can also improve disk drive performance and reliability.

Performance is further enhanced by a 64 KB segmented buffer with write-cache and read look ahead.

The drives support both AT (IDC) at 8.3 MB/sec and Fast-SCSI-2 at 10 MB/sec. The AT drives support LBA mode and extended cylinder addressing. In addition to the low power ratings, the drives also support AT and SCSI power management commands for "green PC" applications.

QUALITY AND AVAILABILITY

Advanced worldwide manufacturing facilities provide multi-site, high-volume production capacity.

HIGHLIGHTS

- MR head technology
- 17 mm high
- AT (IDE) and Fast SCSI-2 interfaces
- 3800 RPM
- 14 msec average seek
- 8.3 MB/sec data rate (AT)
- 10.0 MB/sec data rate (SCSI-2)
- 300,000 poh MTBF
- Low power for extended notebook battery life
- MCC compliance

PRODUCT DESCRIPTION

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2 1/2" 270, 344, 405, 540 & 810 MB Drives  
and 810 MB Disk Drives

Configuration		
Interface	AT/Fast SCSI-2	
Device Capacity		
Formatted	270/344/405/540/810 MB (1)	
Sector Size	512 Bytes	
Recording Zones	8	
User Cylinders	2788	
Data Heads	2/3/3/4/6	
Disks	1/2/2/2/3	
Areal Density		
Average	493 Mb/sq in	
Recording Density		
Maximum	93100 BPI	
Track Density	5300 TPI	
Performance		
Rotational Speed	3800 RPM	
Media Transfer Rate	24.9 - 36.0 Mbits/sec	
Data Buffer	Read 32 KB/Write 32 KB	
Interface Transfer Rate (Max)		
AT	8.3 MB/sec	
SCSI	10.0 MB/sec (sync)	
Latency		
Average	7.9 msec	
Seek Time (Typical)		
Average (Read)	14 msec	
Track to Track	4.0 msec	
Full Track	23 msec	
Reliability		
MTBF		
Projected power-on hours	300,000	
Power		
Requirements	+ 5 VDC + or - 5%	
Dissipation (typical)		
Start Up (Maximum Peak)	4.7 Watts	
Seek	2.0 - 2.8 Watts	
Read/Write	2.8 Watts	
Idle	1.2 Watts	
Shutdown	0.4 Watts	
Physical Size		
Height	17 mm	
Width	70 mm	
Depth	100 mm	
Weight	180 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	40 degrees C
Shock		
Half-sine-wave	20 G/3 msec	250 G/2 msec
Vibration		
Random (RMS)	0.67 G (5-500 Hz)	1.04 G (2-200 Hz)

(1) 1 MB=1,000,000 Bytes

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