

DiamondMax™ 6800 Specifications

MAXTOR 3.5-INCH 5,400 RPM DISK DRIVES WITH ATA-4/UDMA 66 INTERFACE AND < 9.0 MS SEEK PERFORMANCE

Drive Configuration

Formatted Capacity (LBA Mode)	
92720U8	27,226 MB
92040U6	20,419 MB
91700U5	17,020 MB
91360U4	13,613 MB
91020U3	10,209 MB
90845U3	8,455 MB
90650U2	6,500 MB
Integrated Controller	ATA-4/UDMA 66
Buffer Size	2 MB
Buffer Type	SDRAM
Heads/Disks	
92720U8	8/4
92040U6	6/3
91700U5	5/3
91360U4	4/2
91020U3	3/2
90845U3	3/2
90650U2	2/1
Sectors per Track	266 - 462
Tracks per Surface (Cylinders)	17,549
Areal Density	4,970 Mb per in ²
Track Density	17,305 tpi
Flux Density	236 - 306 kfci
Recording Density	222 - 288 kbp
Data Zones per Surface	16
Bytes per Sector/Block	512

Performance Specifications

Seek Times (typical)	
Track to Track	1.0 ms
Average	< 9.0 ms
Maximum	< 20 ms
Average Latency	5.55 ms
Rotation Speed (±0.1%)	5,400 RPM
Controller Overhead	< 0.3 ms
Data Transfer Rate	
To/from Interface	up to 66.7 MB/sec
To/from Media	up to 27.8 MB/sec
Start Time (0 - drive ready)	7.3 sec typical

Power Requirements (average)

Mode	12V ±8%	5V ±5%	Power
Spin-up (peak)	2200 mA	390 mA	
Seek (avg)	780 mA	360 mA	11.2 W
Read/Write (avg)	310 mA	420 mA	5.8 W
Idle (avg)	305 mA	320 mA	5.3 W
Standby (avg)	20 mA	165 mA	1.1 W
Sleep (avg)	20 mA	55 mA	0.52 W

Reliability Specifications

Annual Return Rate	< 1.0%
Start/Stop Cycles	50,000 minimum
Component Design Life	5 years minimum
Data Reliability	
Data Errors (non-recoverable) ¹	< 1 per 10 ¹⁴ bits read
¹ - Average data error rate allowed with all recovery features activated.	

Physical Dimensions

Height	1.02 in	25.9 mm
Length	5.78 in	146.7 mm
Width	4.00 in	102.1 mm
Weight	1.30 lbs	0.59 kg

Environmental Limits

Temperature	
Operating	5° C - 55° C
Non-operating/Storage	-40° C - 71° C
Thermal Gradient	
Operating, Non-operating/Storage	25° C per hour maximum
Relative Humidity (non-condensing)	
Operating, Non-operating/Storage	5% - 95%
Wet Bulb	27° C maximum
Altitude (relative to sea level)	
Operating	-200 - 10,000 feet
Non-operating	-200 - 40,000 feet
Shock*	
Operating Mechanical Shock	30 Gs, 2 ms, no errors
Non-operating Mechanical Shock	250 Gs, 2 ms, no damage
Non-operating Rotational Shock	18,000 Rad/sec, 0.5 - 1.0 ms, no damage
Vibration*	
Operating, random (no errors)	10 - 45 Hz at 0.004 G ² /Hz 48 - 62 Hz at 0.008 G ² /Hz 65 - 300 Hz at 0.004 G ² /Hz 301 - 500 Hz at 0.0006 G ² /Hz
Non-operating, random (no damage)	10 - 2,000 Hz at 2.15 Grms
Operating, swept sine (1 octave/minute)	
5 - 20 Hz	0.049" double amplitude
21 - 300 Hz	1.0 G peak amplitude
* Without non-recoverable errors	
Acoustics	
Idle mode	3.3 bel (average sound power)

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