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THE MAXTOR PANTHER® 1 SCSI FAMILY



.8, 1.2 and 1.7 Gigabyte
5.25-inch Magnetic Disk Drive
with SCSI-2 Command Set
and 100,000 Hour MTBF

The Panther 1 SCSI family of drives offers a low SCSI command overhead of <math><500 \mu\text{sec}</math>, synchronous data transfers of 5 Mbytes/sec, and a differential interface option. The Panther 1 SCSI family of drives sets a new level of SCSI capability, with significant systems performance advantages, including more I/O per second at lower service request times. In the systems environment, Panther 1 SCSI disk drives provide faster job processing, faster terminal response time and a wider range of new application possibilities.

Maxtor®

THE MAXTOR PANTHER® 1 SCSI FAMILY

.8, 1.2 and 1.7 Gigabyte 5.25-inch Magnetic Disk Drive with SCSI-2 Command Set and 100,000 Hour MTBF

KEY FEATURES

- Capacity of 1.71, 1.24 and .81 Gbytes (unformatted)
- 10.5- and 13-msec average seek time
- Drive data transfer rates of 24.3 to 32.0 Mbits/sec
- Spindle motor synchronization
- Balanced low mass rotary voice-coil actuator
- Microprocessor-controlled acceleration profile that supports the industry's best short seek performance plus low acoustic noise
- Precise spindle speed control ($\pm 0.1\%$ under all conditions)
- 100,000 power-on hours MTBF
- Quiet and reliable brushless in-hub DC spindle motor
- Thin film heads
- Thin film media
- Power-down dynamic braking, automatic return to dedicated landing zone and lock
- Self-calibration and adaptive seek optimization for lifetime high performance
- Self-test to support system diagnostics
- Surface mounted components and high degree of integration for high reliability
- Single printed circuit board
- Standard power requirements
- Mounts on any plane
- Continuous operation
- SCSI command overhead of <500 μ sec
- SCSI-2 command set
- 256-Kbyte dual-ported data buffer
- Command queuing
- Disconnect/Reconnect
- Read Look-ahead
- Zero latency read
- Segmented buffer
- 56-bit ECC
- Terminator plugs into PCB

SCSI Features

- Down-loadable firmware
- Asynchronous or synchronous transfer rate of 3 and 5 Mbytes/sec

Options

- SCSI differential within form factor

SPECIFICATIONS

PERFORMANCE	MODEL			PHYSICAL
	P1-08S	P1-12S	P1-17S	
Capacity, unformatted				Dimensions
Per drive (Mbytes)	811	1,171	1,712	Height 3.25 in. (82.55 mm)
Per surface (Mbytes)	90.1	61.6	90.1	Width 5.75 in. (146.05 mm)
Per track (bytes, minimum)	50,646	50,646	50,646	Depth 8.20 in. (208.28 mm)
Capacity, typical format				Weight 7.1 lb. (3.2 Kg) (P1-08S)
Per drive (Mbytes)	696	1,005	1,470	7.4 lb. (3.4 kg) (P1-12S)
Per surface (Mbytes)	77.38	52.92	77.38	7.4 lb. (3.4 kg) (P1-17S)
Per track (bytes)	43,520	43,520	43,520	Temperature limits
Per Sector (bytes)	512	512	512	Operating 10° to 50° C
Sectors per track	85	85	85	(50° to 122° F)
Disk transfer rate (Mbits/sec)	24.33	24.33	24.33	Relative humidity (non-condensing)
Seek* time (msec), typical				Operating 8% to 80%
Average	12.5	10.5	13	Maximum gradient/hr 10%
Track-to-track	2	2	2	Power dissipation
Maximum	26	21	26	Typical 27 watts
Rotational speed (rpm)	3,600	3,600	3,600	Maximum 35 watts
Average latency (msec)	8.33	8.33	8.33	Power requirements
FUNCTIONAL				+12VDC $\pm 5\%$ Typical 1.6 amps
Bit density (bpi)	52,088	39,985	52,088	Maximum 4.5 amps
Flux density (fci)	39,066	29,989	39,066	+5VDC $\pm 5\%$ Typical 1.34 amps
Track density (tpi)	1,498	1,498	1,498	(Differential) 1.5 amps
Disks	5	10	10	Maximum 1.55 amps
Data heads	9	19	19	(Differential) 2.00 amps
Servo heads	1	1	1	RELIABILITY
Tracks	16,002	23,104	33,782	MTBF (100% duty cycle) 100,000 hours
Sectors (512 bytes)	1,360,170	1,963,840	2,871,470	PM Not required
Cylinders	1,778	1,216	1,778	MTTR 30 minutes
				Recoverable error rate ≤ 10 in 10^{11}
				Unrecoverable error rate ≤ 10 in 10^{13}

* Includes settling

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