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## THE MAXTOR PANTHER<sup>®</sup> SCSI FAMILY



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

The Panther 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 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 SCSI disk drives provide faster job processing, faster terminal response time and a wider range of new application possibilities.

**Maxtor<sup>®</sup>**

# THE MAXTOR PANTHER® SCSI FAMILY

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

## KEY FEATURES

- Formatted capacity of 1.5 and 1.0 Gbytes
- 13-msec average seek time
- Drive data transfer rates up to 29.7 Mbytes/sec
- Spindle motor synchronization for use in arrays
- 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  $<500 \mu\text{sec}$
- 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

### Options

- SCSI differential within form factor

### SCSI Features

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

## SPECIFICATIONS

PERFORMANCE	MODEL		PHYSICAL
	P0-12S	P1-17S	
<b>Capacity, unformatted</b>			<b>Dimensions</b>
Per drive (Mbytes) .....	1,202	1,759	Height 3.25 in. (82.55 mm)
Per surface (Mbytes) .....	80	92.6	Width 5.75 in. (146.05 mm)
Per track (bytes, minimum) .....	36,341	41,650	Depth 8.20 in. (208.28 mm)
Per track (bytes, maximum) .....	61,800	60,095	Weight 7.4 lb. (3.4 kg)
<b>Capacity, typical format</b>			<b>Temperature limits</b>
Per drive (Mbytes) .....	1,029	1,503	Operating 10° to 50° C (50° to 122° F)
Per surface (Mbytes) .....	68.6	79.1	<b>Relative humidity (non-condensing)</b>
Per track (bytes, minimum) .....	31,242	35,840	Operating 8% to 80%
Per track (bytes, maximum) .....	52,736	51,712	Maximum gradient/hr 10%
Per Sector (bytes) .....	512	512	<b>Power dissipation</b>
Sectors per track .....	61-103	70-101	Typical 26 watts
<b>Disk transfer rate (Mbytes/sec)</b> .....	17.4-29.7	20.1-28.9	Maximum 29 watts
<b>Seek* time (msec), typical</b>			<b>Power requirements</b>
Average .....	13	13	+12VDC $\pm 5\%$ Typical 1.6 amps
Track-to-track .....	2	2	Maximum 4.5 amps
Full stroke .....	26	26	+5VDC $\pm 5\%$ Typical 1.3 amps
<b>Rotational speed (rpm)</b> .....	3,600	3,600	(Differential) 1.5 amps
<b>Average latency (msec)</b> .....	8.33	8.33	Maximum 1.5 amps
			(Differential) 1.7 amps
<b>FUNCTIONAL</b>			<b>RELIABILITY</b>
Bit density (bpi) .....	36,466-36,548	36,013-42,981	MTBF (100% duty cycle) 100,000 hours
Flux density (fci) .....	27,350-27,411	27,009-32,235	PM Not required
Track density (tpi) .....	1,376	1,498	MTTR 30 minutes
Disks .....	8	10	Unrecoverable error rate $\leq 10$ in $10^{15}$
Data heads .....	15	19	
Servo heads .....	1	1	
Tracks .....	24,480	33,782	
Sectors (512 bytes) .....	2,018,175	2,947,261	
Cylinders .....	1,632	1,778	

\* Includes settling

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