

384-, 230- and 179-megabyte
5.25-inch Disk Drives with
10 Mbit/sec ESDI Interface and
150,000 Hours of Field-Proven MTBF



This reliable family of high-performance 5.25-inch disk drives incorporates the ESDI high-performance standard interface. Fast seek times of 16 through 14 msec provide the performance necessary for today's system applications. A 10 Mbit/sec transfer rate, status and configuration reporting across the interface and NRZ data transfer are among its many benefits. The XT-4000E family offers size and cost reduction opportunities for existing systems using larger-sized, high capacity drives.

Maxtor

THE MAXTOR XT-4000E™ FAMILY

KEY FEATURES

- Capacities of 384, 230 and 179 Mbytes (unformatted).
- High performance with 16 through 14 msec seek times.
- High-performance data transfer rate of 10 Mbits/second.
- Supports hard or soft sectoring, user selectable one byte granularity.
- Spindle motor synchronization option available.
- Drive control and data signals use the same cabling as the ST506/412 disk drives.

- High-performance MAXTORQ™ rotary voice-coil actuator with microprocessor-controlled closed-loop track-following servo system.
- Microprocessor-controlled acceleration profile allows highest performance on all seeks.
- Microprocessor-controlled spindle motor for precise speed control (+0, -0.2%) under all conditions.
- Maxtor (patented) brushless DC spindle motor inside disk hub.
- Advanced Whitney suspension heads.

- Thin film media.
- Dynamic braking during power-down cycle.
- Dedicated landing/shipping zone.
- Fully automatic, positive actuator latch.
- Surface-mounted components allow a single MAXPAK™ printed circuit board for improved reliability.
- Standard power requirements.
- Physical dimensions and mounting holes identical to industry standards.

SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

	XT-4380E	XT-4230E	XT-4170E
Capacity, unformatted			
Per drive (Mbytes)	384.46	230.67	179.41
Per surface (Mbytes)	25.64	25.64	25.64
Per track (bytes, minimum)	20,940	20,940	20,940
Capacity, typical format			
Per drive (Mbytes)	338.40	203.04	157.93
Per surface (Mbytes)	22.56	22.56	22.56
Per track (bytes)	18,432	18,432	18,432
Per sector (bytes)	512	512	512
Sectors/track	35/36	35/36	35/36
Disk transfer rate (Mbits/sec)	10	10	10
Sectoring		Hard or soft, with one byte granularity supported	
Seek* time (msec), typical			
Average	16	16	14
Track-to-track	2.5	2.5	2.5
Maximum	29	29	27
Rotational speed (rpm)	3,600	3,600	3,600
Average latency (msec)	8.33	8.33	8.33

FUNCTIONAL SPECIFICATIONS

Bit density (bpi)	21,064	21,064	21,064
Flux density (fci)	14,043	14,043	14,043
Track density (tpi)	1,070	1,070	1,070
Disks	8	5	5
Data heads	15	9	7
Servo heads	1	1	1
Tracks	18,360	11,016	8,568
Sectors (512 Bytes)	660,960	396,576	308,448
Cylinders	1,224	1,224	1,224

*Includes settling

PHYSICAL SPECIFICATIONS

Dimensions		
Height	3.25 in.	(82.55 mm)
Width	5.75 in.	(146.05 mm)
Depth	8.20 in.	(208.28 mm)
Weight	7.1 lbs.	(3.2 Kg)
Temperature range		
Operating	10°C to 50°C (50°F to 122°F)	
Non-operating	-40°C to 65°C (-6°F to 149°F)	
Maximum gradient	10°C/hr	
Relative humidity range (Non-condensing)		
Operating	8% to 80%	
Maximum wet bulb	26.7°C	
Power dissipating		
Typical	27 watts	
DC power requirements		
+12 VDC ± 5%, 1.57A (typical)	4.5A (maximum)	
+5 VDC ± 5%, 1.7A (typical)	1.9A (maximum)	
Shock		
Operating	5G, 11 msec	
Non-operating	25G, 11 msec	
Vibration		
Operating	5-40 Hz	.006 in., P-P
	40-500 Hz	.5G Peak
Non-operating	5-31 Hz	.02 in., P-P
	31-500 Hz	1.0G Peak
Acoustic noise	45 dBA at 1 meter	

RELIABILITY SPECIFICATIONS

MTBF:	100,000 hours
PM:	Not required
MTTR:	15 minutes
Recoverable error rate:	≤10 in 10 ¹¹
Unrecoverable errors rate:	≤10 in 10 ¹³
Seek error rate:	≤10 in 10 ⁷

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