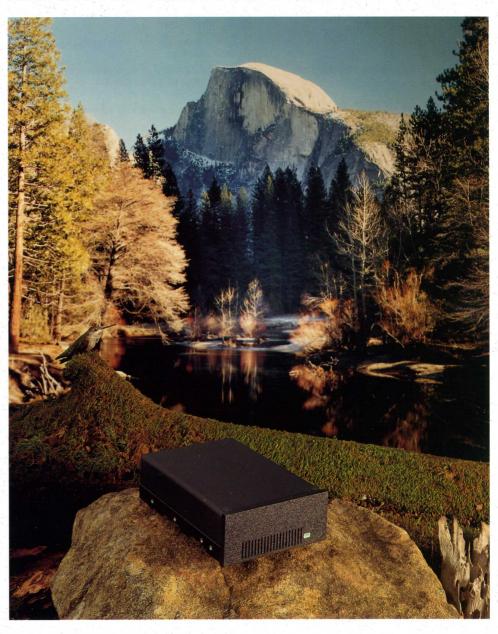
LXT-340[™] AT® AND SCSI FAMILY



340-Megabyte
3.5-inch Disk Drives
with Embedded SCSI
or AT* Controller
and 13 msec Seek Time

The LXT-340's industry-leading transfer rate, fast seek time and very low command overhead provide the best time-to-data performance of any available 3.5-inch drive. The innovative mechanical design features a sealed HDA and an eight-point shock mounting system. High reliability is provided by a thermally and mechanically-isolated head-disk environment. Maxtor's compatibility-tested embedded AT and SCSI interfaces simplify integration and reduce the time required to bring new systems to market.



LXT-340™ AT® AND SCSI FAMILY

340-Megabyte 3.5-inch Disk Drives with Embedded SCSI or AT® Controller and 13 msec Seek Time

KEY FEATURES

- 13 msec average seek time
- Supports zone = cylinder defect management
- SCSI command overhead of ≤ 600 µsec
- AT overhead of ≤ 300 µsec
- Synchronous SCSI transfer rates to 6 Mbytes/sec, buffer to disk
- Disk transfer rate to 20.5 Mbits/sec, buffer to disk
- Advanced buffer implementation
 - -LRU algorithm
 - -Read-ahead cache
 - -Supports through parity
- · SCSI II compliance
- · Proven AT compatibility
- SCSI implementation allows 15-byte offset

Reliability

- Power-down braking with positive head parking
- Surface mounted components with high degree of integration for high reliability
- Brushless in-hub spindle motor
- · Sealed HDA
- · 8-point shock mounting system.
- · 56-bit ECC for high data reliability
- · No sway space required
- · Self-test diagnostics
- Mechanically and thermally isolated head-disk environment

Advanced Design

- · Exceptionally quiet operation
- Synchronized spindle capability for disk array applications

- Balanced low-mass rotary voice-coil actuator
- Self calibration and built-in diagnostics
- Mounts in any orientation
- · Allows variable sector sizes
- Firmware downloadable via SCSI interface
- AT defect list maintained after low-level format
- 16-bit/24-Mhz processor
- · Hard sectored zoned density recording
- 8-zone recording format
- 1, 7 RLL data encoding for improved window margins

SPECIFICATIONS

PERFORMANCE

Capacity,	typical	format
Per dri	ve (Mh	vtes

Ter drive (111b) tes/	
Per sector (bytes)512	
Spare capacity (Mbytes)7	

SynchronousUp to 6.0
AT-bus transfer rate (Mbytes/sec)6.0
Disk transfer rate (Mbits/sec) 13.27-20.46

Seek*	time	(msec),	typical
Do	ad .		

Track-to-track	3
Maximum	30
Command overhead (µs	sec)**
SCSI	600
AT	300
Rotational speed (rpm)	3,600 ± .5%
Average latency (msec)	8.33

FUNCTIONAL

Data zones	8
Bit density (Kbpi)	32 - 44
Track density (tpi)	
Disks	
Data heads	
Servo heads	1
Physical tracks	10,920
Sectors/track	
Physical cylinders	

PHYSICAL

Dimensions

340

Height 1.625 in. (41.3 mm)
Width 4.000 in. (101.6 mm)
Depth 5.750 in. (146 mm)
Weight 2.2 lb. (1 kg)

Temperature limits

Operating 5° to 50° C Non-operating -40° to 65° C Temperature gradient/hr 20°C

Relative humidity limits

(Non-condensing)
Operating 5 to 80%
Non-operating 5 to 90%
Maximum gradient/hr 10%
Maximum wet bulb 27.6°C

Shock (G's)

Non-operating 50 Operating (no errors) 3 Operating (recoverable errors) 10 Power dissipation (typical) 11 watts

25 dBA

Audible noise @ 1 foot Power requirements

+12 VDC ± 5%, .75A (typical) 2.0A (instantaneous) +5 VDC ± 5%, .75A (typical)

* Includes settling

** Includes arbitration, message transfer, command transfer, command interpretation, status interpretation, and the posting of status.

RELIABILITY

 $\begin{array}{lll} \textbf{MTBF} & 150,000 \text{ hours} \\ \textbf{PM} & \text{Not required} \\ \textbf{MTTR} & 20 \text{ minutes} \\ \textbf{Component design life} & 5 \text{ years} \\ \textbf{Recoverable error rate} & \leq 10 \text{ in } 10^{11} \\ \textbf{Unrecoverable error rate} & \leq 10 \text{ in } 10^{15} \\ \textbf{Seek error rate} & \leq 10 \text{ in } 10^7 \end{array}$

SCSI-BUS COMMAND SET

Format Unit Reserve Rezero Unit Inquiry Mode Select Seek Mode Sense Seek (Extended) Send Diagnostics Read Read Capacity Start/Stop Unit Read Data Buffer Test Unit Ready Read Defect Data Verify Read (Extended) Write Read Long Write and Verify Reassign Block Write Data Buffer Write (Extended) Release

AT-BUS COMMAND SET

Request Sense

Assign Drive Read Sector
Parameters Read Sector Buffer
Diagnostic Recal Drive
Format Track Seek
Format Unit Verify Sector
Request Configuration
Parameters Write Sector Buffer

Write Long

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