

**REFERENCE STORAGE
AND DATA PROTECTION****FEATURES**

- Large capacity—500GB
- 7200 RPM
- 3.0Gb SATA and PATA interfaces
- Large 16MB cache buffer
- SATA II features
- Native Command Queuing
- Rotational Vibration Compensation
- Accelerated Error Recovery
- Internal EDC
- Fly Height Adjust technology
- Easy Code Load
- Pattern Fill
- Expanded Drive Self Test
- RoHS compliant

EXCEPTIONAL RELIABILITY

- 5 year warranty
- Rated to 1 million hours MTTF* for nearline workloads
- Improved S.M.A.R.T. features

MaXLine® Pro 500**SATA/PATA HARD DRIVE****500GB****Native 3.0Gb SATA, large capacity, highly reliable hard drives for reference storage and data protection**

MaXLine Pro 500 drives are designed to serve the capacity-sensitive portion of the enterprise market. These drives deliver the best value on a per gigabyte basis while offering advanced features, placing the MaXLine Pro 500 drive at the forefront in secondary online storage applications.

The advanced features designed into the MaXLine Pro 500 drive separate it from other drives built for nearline storage. With rotational vibration protection up to 25 radians/sec² and accelerated error recovery, the MaXLine Pro 500 drive delivers the capacity, performance, and data integrity required by the most demanding nearline applications.

Users are implementing enhanced data protection solutions such as disk-to-disk backup, point-in-time copies, snapshot clones and remote replication or managing reference data, MaXLine Pro 500 drives are an ideal choice. They offer 500GB of storage capacity, 3.0Gb SATA and ATA/133 interfaces, and have been designed for a mean time to failure of 1 million hours in nearline workload applications.

MaXLine Pro 500 drives provide new features to better serve the enterprise ATA market, such as:

- Rotational Vibration Compensation—enables the drive to withstand higher rotational vibration (25 rads/sec²) from adjacent drives, minimizing performance degradation caused by excessive vibration in multi-drive environments.
- Accelerated Error Recovery, for improved performance in RAID environments, without reduction in data integrity.
- Internal EDC that protects data integrity within the drive.
- Fly Height Adjust Technology—optimizes performance by maintaining an ideal head-to-disk clearance across the drives' specified operating temperatures.
- Easy Code Load, which provides a simple firmware download process with compatibility safeguards and ease of use.
- Pattern Fill, is a RAID initialization feature which allows a known data pattern to be written to the drive.
- Expanded Drive Self Test is a more extensive self-test to help customers eliminate false failures and validate good drives

SATA II features

- Native command queuing
- Hot plug
- Staggered spin up
- Asynchronous signal recovery
- Presence Detect
- Identify Device / Set Features
- Host Initiated Power Management

RoHS Compliant

Maxtor supports the EU Directive for Restriction of Hazardous Substances.†

Best-fit enterprise applications:

- Reference Storage Applications
- Email Archive
- Data Warehousing
- Point in time copy
- Snapshot clones
- Remote replication
- Disk to Disk to Tape Backup
- Video Security



†Directive 2002/95/EC of the European Parliament and of the Council of 27 January, 2003.

ORDER INFORMATION

Model Number

7H500F0

7H500R0

Interface

SATA 3.0Gb

ATA/133

SPECIFICATIONS

Formatted Capacity (GB)	500
Bytes per Sector	512
Interface	Parallel ATA/133
	SATA 3.0Gb
	(Fully backward compatible with SATA 1.5Gb)

Disk Drive Configurations

Disks	4
Heads	8
Bytes per Sector/Block	512

Performance Specifications

Spindle Speed (RPM)	7200
Seek Time:	
Average Read (ms)	8.5
Track-to-Track Read/Write (ms)	0.9
Average Rotational Latency (ms)	4.17
Full Stroke (ms)	17
Transfer Rate:	
Parallel ATA Maximum Burst Transfer Rate (MB/s)	133
Serial ATA (MB/s)	300
Buffer (Cache) Size (MB)	16MB

Reliability Specifications

MTTF (Mean Time To Failure) in nearline (low duty cycle) workloads	1,000,000 Hours
Contact Start Stop (CSS) Cycles	50,000
Data Error Rate per Bits Read	
Nonrecoverable	<1 per 10 ¹⁵
Limited Warranty (years)	5

Operating

Temperature (°C) base casting	0–60
Non-Condensing Humidity (%)	5 to 95
Rotational Shock (rad/sec ² , 2ms)	2000
Random Vibration 10–2000 Hz (GRMS)	0.86
Rotational Sine Vibration 10–800 Hz (rad/sec ²)	25
Altitude (ft)	-650 to 10,000
Acoustics, Idle (bels)	3.1

Non-Operating

Temperature (°C)	-40 to 71
Non-Condensing Humidity (%)	5 to 95
Shock 2 msec (Linear half sign G)	300, 200, 200
Vibration 7–800 Hz (GRMS)	1.5
Altitude (ft)	-1,000 to 10,000

Power Specifications

Voltage Requirements	5V+/-5% 12V+/-5%
Idle Mode (W)	9.97

Physical Dimensions

Width max (mm)	101.85
Length max (mm)	146.35
Height max (mm)	26.10
Weight typical (grams)	≤ 718



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Service includes:

- 24-hour on-line troubleshooting tools and email
- Maxtor's commitment to total customer satisfaction
- Product support representatives available Monday-Friday

To speak with a Maxtor product support representative:

In the U.S. and Canada, call 1-800-2MAXTOR,
Mon.–Fri. from 8:00 a.m. to 5 p.m. (MST).

In Europe, call +353 1 204 1111
Mon.–Thur. from 8:30 a.m. to 5 p.m. (GMT)
and Fri. 8:30 a.m. to 4 p.m. (GMT)

In Australia, call 800-124-328

In Asia, call +65 6 481 6788
Mon.–Fri. from 7:00 a.m. to 3:00 p.m. (Singapore GMT +7)

For purposes of measuring storage capacity, a gigabyte (GB) equals 1,000,000,000 bytes. Total accessible capacity varies depending on operating environment. Seek times are at nominal conditions and include settling.

* MTTF refers to the estimated mean time to failure based upon a statistical sample.
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