

NEAR-LINE APPLICATIONS

*3.5" ATA Drives
for 24/7 power-on
applications*

MaXLine Plus II

- 7200 RPM
- Capacities up to 250GB
- SATA or PATA interface
- Data transfer rates up to 54MB/sec
- <9.3 ms seek time
- 150MB/sec max bus speed
- Large 8MB cache buffer

MaXLine II

- 5400 RPM
- Capacities up to 300GB
- ATA/133 interface
- Data transfer rates up to 44 MB/sec
- <12ms seek time
- 150MB/sec max bus speed
- 2MB cache buffer

Exceptional Reliability

- 3-year warranty
- Rated to exceed 1 million hours MTTF for near-line and other low-I/O secondary storage applications
- Proven in OEM NAS appliances
- S.M.A.R.T. compliance features

Applications

- Instant archive
- File recovery
- Network attached storage
- Offsite recovery
- Mirroring snapshots
- Email archive
- Transaction logs
- Daily backup
- Partial backup
- Data warehousing
- Data mining

MaXLine™ ATA

Industry-leading Capacity, Performance, And Reliability for Near-line Applications

A Better Choice than Tape or Optical Solutions

Introducing MaXLine™ ATA drives from Maxtor—innovative large-capacity disk storage so reliable, so fast and so cost-effective, it leaves traditional near-line tape and optical solutions in the dust.

At prices about the same as tape and optical, but with far greater capacity and faster access times, ATA drives are moving into the near-line corporate storage market at an ever-increasing rate. At 200GB to 300GB, MaXLine ATA drives provide greater storage capacity than regular ATA drives, and they offer the added benefit of ultra-reliability. For near-line and other low-I/O secondary storage applications, they're rated at better than 1 million hours MTTF.

MaXLine drives aren't intended to replace SCSI in high-I/O applications, but they are ideal for 24x7-duty situations where the slow access time of optical and tape solutions simply isn't good enough. Situations where you may not need stored data all the time, but when you do need it, you need it now.

Whether you're a data center manager, a systems integrator or a white box manufacturer, your customers' varying storage requirements require flexible and creative solutions.

The more you can tailor those solutions to the best balance of performance and cost, the happier everyone will be.

Maxtor provides a broad range of storage products—from value desktop drives to the world's

200GB

250GB

300GB



MaXLine Features

- **Fast access to data**
- **Large capacities**
- **Cost effectiveness**
- **Easy integration into existing storage systems**
- **Exceptional reliability**
- **Complete interoperability**



fastest SCSI drives—and MaXLine drives, the world's largest-capacity ATA drives, further enrich your options. Consider these benefits:

Ultra-reliable—a proprietary manufacturing process ensures the reliability of MaXLine II and MaXLine Plus II drives for near-line storage applications. Maxtor stands behind MaXLine drives with a 3-year limited warranty. These drives are already proven as the heart

of network attached storage systems from major original equipment manufacturers. And data availability can be further enhanced with RAID configurations.

Big and Fast—available with parallel or serial ATA interfaces, capacities up to 300GB, data transfer rates up to 54MB/sec, and a choice of spin speeds, MaXLine drives are an obvious better choice for many applications that have historically utilized tape or optical media. These 3.5-inch drives are also easy to integrate into existing storage systems, with complementary hardware controller and software solutions available that emulate tape-based near-line libraries.

Active Recall Archiving—the cost of disk-based near-line storage is about the same as that of tape, but consider the value MaXLine drives add by increasing the speed and reliability of data retrieval and restoration. Time is money, and the ability to find archived data quickly,

recover it immediately and get back on line, is critical to productivity.

Your customers have to accomplish more with less these days—in less time. MaXLine drives let them do just that.

Best Fit for Many Corporate Applications

A wide variety of users will appreciate the performance, value and reliability of MaXLine drives. With data access and transfer rates vastly superior to current tape and optical technologies, MaXLine drives enable significantly faster data backup and restore functions. They're the ideal media for many data storage applications, including NAS, data warehousing and data mining, commercial audio and video, and numerous other applications that demand nearly

Backing up data with MaXLine drives can reduce back-up time by up to 500% versus many tape-based systems.



The Choice is Yours

- **Maxtor offers a choice of storage solutions with MaXLine ATA drives, high-performance SCSI drives, and desktop ATA drives.**
- **Each product family offers unique features for different applications.**
- **MaXLine ATA Drives are ideal for demanding, full-time low I/O applications where drive level cost per GB and storage density (GB/ cubic inch) are critical parameters.**
- **Applications that require significantly faster access times, higher duty cycles and maximum data reliability are supported by Maxtor's branded Atlas™ SCSI drives.**
- **For desktop PC and other applications that do not have such rigorous performance and duty cycles, use Fireball™, DiamondMax® and/or DiamondMax Plus ATA products.**

instantaneous access to large amounts of data and numerous files, such as:

- The last 24 hours' worth of executives' email
- Legal documents from the past month
- Yesterday's schedule rotations
- Contracts and purchase orders
- CAD designs
- Geophysical—geological data
- Biomedical—genome data

Other candidates for near-line storage are data that doesn't require instant transaction access, such as a manufacturer's market research data. Or large files that are too expensive to store in an online environment, but are accessed too frequently to store offline, such as a publishing company's photo archives. Users might not need access to this information on a daily basis, but when they do need it, retrieval should be simple and quick.

Ease of recall is at least as critical as the information itself.

From Fast to Very Fast

Parallel ATA MaXLine products do more—and do it better and faster—

than traditional tape-based near-line solutions, with similar reliability. Serial ATA drives provide even higher performance. At 150 MB/sec maximum data transfer rate, they can keep pace with the demands of data-intensive applications.

New and exciting complementary SATA hardware controllers and software on the horizon will enable creative integrators to build and sell entirely new and cost-effective near-line data storage solutions for their customers. MaXLine drives—fully compliant and compatible with a wide variety of existing and emerging parallel and serial ATA software and hardware technologies—will be at the heart of these solutions.

Competitive Advantage

Your ability to develop next-generation storage solutions, using MaXLine drives that offer significant competitive advantage to your customers, is limited only by your imagination. To find out more about MaXLine drives, talk to your Maxtor representative, or visit www.maxtor.com today.



Serial ATA technology-based drives provide even higher performance than parallel ATA models. Maxtor's serial ATA hard drives are designed to increase the available bandwidth from the disk drive to the computer system. At 150MB per second maximum data transfer rate, serial ATA devices can better keep pace with the demands of data-intensive applications.

At the system level, compact serial cables and point-to-point interface of serial ATA eliminate system design and manufacturing complications that currently exist with the bulky cable structure of parallel ATA, leaving more room in the chassis for better system airflow and design flexibility. Direct connections from each drive to the host allow dedicated bandwidth for each device and enable hot-plug connection capability. Serial ATA is also fully backward-compatible with existing parallel ATA software and drivers.

When Time is of the Essence

	File size	Maximum transfer rate (MB/sec)	Minimum Time (hours)
Time needed to back up a database with one super DLT drive	100GB	11	2.5
Time needed to back up a database with one MaXLine drive	100GB	44	.63
Time needed to restore 1TB database with one super DLT library (1 drive, 10 tapes)	1TB	11	25.3
Time needed to restore 1TB database with one 4-drive 1U box with ATA RAID 1	1TB	90	3.1

MaXLine II

	Capacity	Model number
Parallel ATA—ATA/133 2MB Buffer	250GB	5A250J0
	300GB	5A300J0

MaXLine Plus II

	Capacity	Model number
PATA 133 8MB Buffer	200GB	7Y200P0
	250GB	7Y250P0
SATA 150 8MB Buffer	200GB	7Y200M0
	250GB	7Y250M0

Performance Specifications	MaXLine II	MaXLine Plus II
Rotational Speed	5400 RPM	7200 RPM
Buffer (Cache) Size	2MB	8MB
Maximum External Transfer Rate	150MB/sec	150MB/sec
Maximum Internal Transfer Rate	44MB/sec	54MB/sec
Average Seek (ms)	<12	<9.3

Drive Configuration

Discs/Heads (Max)	4/8	3/6
Bytes per Sector/Block	512	512
Logical CHS	16,383/16/63	16,383/16/63

Reliability Specifications

Start/Stop Cycles (min)	>50,000	>50,000
Component Design Life (min)	5 years	5 years
Data Errors (non-recoverable)	<1 per 10E 15 bits read	<1 per 10E 15 bits read
Annualized Return Rate (ARR)	<1.0%	<1.0%
Warranty Period	3 Years	3 Years

Specifications subject to change without notice. GB means 1 billion bytes. Total accessible capacity varies depending on operating environment. Seek times and acoustics are average values. ©2002 Maxtor Corporation. Maxtor and DiamondMax are registered trademarks of Maxtor Corporation. MaXLine, Atlas and Fireball are trademarks of Maxtor Corporation. All other trademarks are the property of their respective owner. Printed in the USA. Maxtor Corporation, 500 McCarthy Boulevard, Milpitas, CA, 95035. 10/02 CL/PDF

Power Requirements	MaXLine II		MaXLine Plus II	
Mode	5V	12V	5V	12V
Seek (mA)	593	594	921	666
Idle (mA)	590	269	675	454
Standby (mA)	149	36	114	37

Environmental Limits

Acoustics

Idle (sound power: bel)	2.6	2.5
Performance Seek (sound power: bel)	3.8	3.5

Temperature

Operating (°C)	5 to 55	5 to 55
Non-operating (°C)	-40 to 71	-40 to 71

Shock

Operating Mechanical Shock 2msec (G)	60	60
Non-operating Mechanical Shock 2msec (G)	300	300

Physical Dimensions

Height (max mm)	26.1	26.1
Width (typical mm)	101.6	101.6
Length (max mm)	146.1	146.1
Weight (Max LB/g)	1.34/610	1.38/630



For more information on Maxtor storage products, visit www.maxtor.com

All Maxtor products are backed by our leading service and support staff.

Warranty services include:

- Advance replacement in 2 business days
- 24-hour on-line troubleshooting tools and e-mail
- 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 5 a.m. to 5 p.m. (PST).

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 +61 2 9369 3662. In Japan, call 00531653616. And in Singapore, call 65-6852-0220 or 1-800-481-6788.

