



## **531DX**

The Maxtor 531DX is the first in a new family of Maxtor 5400 RPM hard drives designed for higher reliability. It has the world's first inner diameter load/unload ramp that locks the recording head into a protective carrier to cradle the head during shipment and any other time the drive is not in operation. The Maxtor 531DX is the industry's first true single head/single platter hard drive with an Ultra ATA/100 interface. These drives offer up to 15 GB of storage and data transfer speeds up to 100 megabytes per second. Because they combine value and performance, these drives are excellent choices for entry-level systems and consumer electronics applications. The 531DX drives provide field-proven quality and reliability, and include Maxtor Silent Store™ technology for whisper-quiet acoustic performance and Maxtor Adaptive ATA Control™ for unsurpassed data integrity. When your application calls for a cost-effective, high-performance storage solution, select the 531DX series by Maxtor.

**5400 RPM**

**3.5-INCH  
DX ENTRY LEVEL  
HARD DRIVES**

*Capacities up to  
15 GB*

*Designed for  
Entry-level Systems  
and Consumer  
Electronics Applications*

**HIGHLIGHTS:**

*Fast ATA/Enhanced  
IDE compatible*

*Digital Signal Processor  
(DSP)-Based Architecture*

*Ultra ATA/100  
Data Transfer Speed*

*2 MB SDRAM  
Cache Buffer*

*No Quibble  
Service® and Support*



**Best of the Best: Hardware**  
DiamondMax 80 (80 GB)  
*Smart Business*, January 2001



**Kick Ass Product**  
DiamondMax Plus 40 (40 GB)  
*Maximum PC*, April 2000



**Best Buy**  
DiamondMax Plus 60 and VL 40  
*PC World*, March 2001



**Recommended List**  
DiamondMax Plus 60 (60 GB)  
*Winmag.com*, December 2000

## 531DX

The Maxtor 531DX delivers unbeatable reliability including:

- Up to 15 GB of data storage
- Fast data transfer speed (up to 100 MB/sec)
- 5400 RPM spin rate
- 2 MB cache buffer
- 3-year warranty

MODEL	2R015H1	2R010H1
CAPACITY	15.0 GB	10.2 GB
HEADS	1	1
PLATTERS	1	1

### PERFORMANCE SPECIFICATIONS

Seek Times (typical read, ms)	
Track to Track	1.0
Average (normal seek)	15.0
Full Stroke (normal seek)	24.5
Average Latency	5.55
Controller Overhead	< 0.3
Drive Ready Time (typical, sec)	5

### DATA TRANSFER SPEED (MBYTE/SEC, MAX)

To/From Interface	100
To/From Media	49.75
Sustained at OD	34.0
Sustained at ID	21.5

### DRIVE CONFIGURATION

Integrated Controller	Ultra ATA/100
Buffer Size	2 MB
Buffer Type	SDRAM
Data Zones per Surface	16
Bytes per Sector/Block	512
Rotation Speed (RPM ± 0.1%)	5400

### RELIABILITY SPECIFICATIONS

Start/Stop Cycles (min)	> 50,000
Component Design Life (min)	5 years
Data Errors (non-recoverable)	< 1 per 10E15 bits read
Annualized Failure Rate (AFR)	< 0.5%

### POWER REQUIREMENTS (RMS AVERAGE)

MODE	12V (MA)	5V (MA)	POWER (W)
Spin-up (peak)	2050	350	—
Seek	260	350	6.0
Read/Write	260	350	5.4
Idle	190	250	4.0
Standby	30	125	1.4
Sleep	30	90	1.2

### ENVIRONMENTAL LIMITS

#### ACOUSTICS<sup>1</sup> (SOUND POWER: BEL)

Idle mode (track following at speed)	3.1 avg
	3.5 max
Normal seek mode	3.1 avg
	3.5 max

#### TEMPERATURE

Operating	5° C to 55° C
Non-operating, Storage	-40° C to 71° C

#### RELATIVE HUMIDITY (NON-CONDENSING)

Operating, Non-operating, Storage	5% to 95%
Maximum Wet Bulb, Operating	27° C

#### VIBRATION

Operating, random, no errors <sup>2</sup>	10 to 300 Hz at 0.004 G <sup>2</sup> /Hz
	301 to 500 Hz at 0.00005 G <sup>2</sup> /Hz
Non-operating, random	10 to 2,000 Hz at 4.08 Grms, no damage
Operating, swept sine (1 octave/minute, peak amplitude)	
10 to 300 Hz	1.0 G
301 to 400 Hz	0.25 G
401 to 500 Hz	0.0625 G

#### SHOCK

Operating Mechanical Shock	30 Gs, 2 ms, no errors <sup>2</sup>
Non-operating Mechanical Shock	300 Gs, 2 ms, no damage <sup>2</sup>

### PHYSICAL DIMENSIONS

Height (max mm)	17.5 mm
Width (typical mm)	101.6 mm
Length (max mm)	146.6 mm
Weight (max kg)	0.453 kg



All Maxtor products are backed by the *No Quibble Service*<sup>®</sup> policy, the benchmark for service and support in the industry. *No Quibble* includes:

- **Advance replacement in 2 business days**
- **MaxFax<sup>®</sup> 24-hour automated technical support**
- **Maxtor's commitment to total customer satisfaction**
- **Phone technicians available Monday–Friday**

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Specifications subject to change without notice. GB means 1 billion bytes. Total accessible capacity varies depending on operating environment. <sup>1</sup>Acoustics measured at sea level. <sup>2</sup>Without non-recoverable errors. Adaptive ATA Control™, DualWave™, MaxSafe™, Silent Store™ and ShockBlock™ are trademarks of Maxtor. Maxtor®, MaxFax® and No Quibble Service® are registered trademarks of Maxtor Corporation. Copyright © 2001 Maxtor Corporation. Printed in the U.S.A. 30°/01 Stock #531DX/5080 Rev. B

