

## Exceptional Performance and Reliability for Servers, Workstations, and Subsystems

### The Market

With the explosive growth of enterprise-wide computing, the demand is increasing for larger and faster departmental and enterprise servers and performance workstations. In this market, the award-winning Quantum Atlas™ 3.5-inch hard disk drive is the leader. Now the new Quantum Atlas 10K II hard disk drive continues the tradition with huge capacity, incredibly fast performance, and solid reliability.

### The Industry's Highest Performance: 10,000 RPM and More

With its blazing-fast 4.7 millisecond (ms) seek time coupled with a 3.0 ms rotational latency, large 8 megabytes (MB) cache buffer, and 41 megabyte-per-second (MB/sec) peak sustained throughput, the Atlas 10K II drive delivers the random I/O performance and sequential throughput capability demanded by data-intensive applications.

Available in capacities of 73.4 gigabytes (GB), 36.7 GB, 18.4 GB, and 9.2 GB, the Atlas 10K II drive is the optimum choice for Windows NT or UNIX enterprise and departmental servers, as well as high-performance workstations running 2D graphics, 3D video, and other high I/O applications.

### Quantum Quality and Reliability

To ensure flawless performance the first time, and every time, the Atlas 10K II drive features Quantum's breakthrough Shock Protection System II (SPS II) that protects against mistreatment during handling and integration. For systems integrators, SPS II means fewer returns, lower total cost of ownership, and more satisfied customers. For customers, it means one less thing to worry about. In addition, we confidently back every Atlas 10K II drive with a five-year warranty. All are good reasons why Quantum means quality.

### Key Features and Benefits

- **Exceptional performance**—10,000 RPM, 4.7 ms seek time, 41 MB/sec sustained throughput, large 8 MB cache buffer
- **Leading capacities**—73.4 GB, 36.7 GB, 18.4 GB, and 9.2 GB in a 3.5-inch form factor
- **Advanced interfaces**—Ultra160 SCSI interface with Fairness, Cyclical Redundancy Check (CRC), Asynchronous Information Protection (AIP), Domain Validation, and Ultra2 and Ultra SCSI compatibility
- **Superior reliability**—Quantum Shock Protection System, Data Protection System, 352-bit Reed Solomon double-burst ECC on-the-fly, thermal sensing, S.M.A.R.T.
- **Superior manageability**—Active LVD bus hot-pluggable design, intelligent SCSI bus management, and automatic SCSI mode configuration for Ultra160, Ultra2, Ultra, and Fast SCSI interfaces



Specifications	9.2	18.4	36.7	73.4
Form Factor	3.5"	3.5"	3.5"	3.5"
Interface	Ultra160, Ultra2, Ultra SCSI 68-pin Wide Ultra160, Ultra2, Ultra SCSI 80-pin SCA-2			
Formatted Capacity (MB <sup>1</sup> )	9,200	18,400	36,700	73,400

#### Disk Drive Configuration

Disks	2	3	5	10
Head/Recording Surfaces	3	6	10	20
Bytes per Sector	512			
Maximum Areal Density (Gb/sq. in.)	7.7			
Encoding/Detection Method	50/52 RLL PRML			

#### Performance Specifications

Typical Seek Times <sup>2</sup> (ms)				
Average	4.7	4.7	4.7	5.2
Track-to-Track	0.6	0.6	0.6	0.6
Full Stroke	12	12	12	13
Average Rotational Latency (ms)	3.0			
Rotational Speed (RPM)	10,000			
Internal Data Rate (Mb/sec)	280 to 478			
Sustained Throughput (MB/sec)	25 to 41			
Data Transfer Rates (Buffer Host)				
Ultra160 SCSI (MB/sec)	160			
Ultra2 SCSI (MB/sec)	80			
Ultra SCSI (MB/sec)	40			
Buffer Size (MB)	8			

9.2/18.4 36.7 73.4

#### Reliability Specifications

Data Errors (per bits read)	
Recoverable	10 per 10 <sup>12</sup>
Nonrecoverable	1 per 10 <sup>14</sup>
Error-Correction Method	352-bit Reed Solomon
Warranty <sup>3</sup> (years)	5

#### Physical Specifications

Dimensions—inches (mm)			
Width	4.00 (101.6)	4.00 (101.6)	4.00 (101.6)
Length	5.76 (146.5)	5.76 (146.5)	5.76 (146.5)
Height	1.00 (25.8)	1.00 (25.8)	1.64 (41.6)
Weight—pounds (kg)	1.4 (0.64)	1.5 (0.68)	2.4 (1.10)

#### Environmental Limits

Operating			
Temperature (°C)	5 to 50		
Non-Condensing Humidity (%)	5 to 85		
Vibration (G, 5 to 500 Hz)	0.5		
Sound Power (bels, Idle)	3.7	3.8	4.2
Non-Operating			
Temperature (°C)	-40 to 70		
Non-Condensing Humidity (%)	5 to 95		
Shock (G, 2 ms, 1/2 sine)	230	230	150
Vibration (G, 5 to 500 Hz)	2.0		

#### Power Specifications

Voltage Requirements (V)	+5V DC±5% +12V DC ±5%		
Typical Power Draw (W, Idle)			
SCSI	9.7	10.0	14.3
Peak Current (A on +5V/+12V)			
SCSI	0.80/2.70	0.80/2.80	0.80/3.00

1. Quantum defines a megabyte (MB) as 10<sup>6</sup> or 1,000,000 bytes. 2. Seek times are at nominal conditions and include settling. 3. This warranty is standard when products are purchased directly through authorized Quantum distributors/dealers. End-user warranties provided by computer manufacturers may vary.



**Quantum**  
**Atlas 10K II**

For more information about Quantum's quality products,  
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