# Quantum. Atlas V



### **Key Features and Benefits**

- Exceptional value—36.7 GB, 18.3 GB, and 9.1 GB in a 1-inch-high, 3.5-inch form factor
- Outstanding performance—7,200 RPM, 6.3 ms average seek time, 29 MB/sec maximum sustained throughput, up to 160 MB/sec bus transfer rate
- Proven reliability—Shock Protection System II (300 Gs non-op shock), Data Protection System, Shock Sensor, Thermal Sensor, 352-bit double-burst ECC on-the-fly, S.M.A.R.T., 5-year warranty
- Industry-leading acoustics—drive idle acoustics as low as 3.2 Bels
- Advanced SCSI interface for superior manageability—Ultra160 SCSI interface with Fairness, Cyclical Redundancy Check (CRC), Asynchronous Information Protection (AIP), Domain Validation, Ultra2 and Ultra SCSI compatibility, Active LVD bus hot-pluggable design, intelligent SCSI bus management

# Exceptional Value for Servers, Workstations, and Subsystems

#### The Market

In today's non-stop, Web-reliant world, the demand is skyrocketing for costeffective, enterprise-level data storage that doesn't compromise performance or reliability. Quantum meets the need with the new Atlas<sup>™</sup> V disk drive family—the premier solution for entrylevel workstations, departmental servers, and storage subsystems running applications from mechanical CAD, digital video, and medical imaging to e-mail, e-commerce, and ERP.

#### Exceptional Performance and Value

The Atlas V provides outstanding performance with a 7,200 RPM rotational speed, lightning-fast 6.3 millisecond (ms) average seek time, and 29 MB/sec maximum sustained data throughput. All this performance is packaged in an economical 9.1 GB-per-platter design, with up to 36 GB of storage capacity in a 1-inch-high form factor, making the Atlas V a truly exceptional value.

Quantum Quality and Reliability The Atlas V drive incorporates Quantum's leadership Shock Protection System II, which guards against nonoperating shocks of up to 300 Gs. It also includes Quantum's innovative Data Protection System, which lets users easily verify that all vital drive operations are functioning properly. The drive is also extremely quiet, allowing its use in noise-sensitive environments. For added confidence, the Atlas V is backed with a five-year warranty.

#### Enhanced Data Integrity, System Performance, and Manageability

The Ultra160 SCSI interface on Atlas V disk drives provides features that enhance data integrity and increase subsystem manageability. Cyclical Redundancy Check (CRC) protects data transfers during drive hot plugging, and Domain Validation ensures optimal SCSI operation through intelligent network testing. Atlas V improves data reliability further with a new feature-Asynchronous Information Protection (AIP), which extends CRC protection to asynchronous transfers, such as SCSI commands and messages. It also includes the new "Fairness" feature, which improves system performance in multi-drive configurations by ensuring equitable command execution across all SCSI devices on the bus.

| Specifications  | 9.1 GB   | 18.3 GB   | 36.7 GE                                | 3  |   |
|---|--|---|--|--|---|
| Form Factor   | 3.5"   | 3.5"  | 3.5"                                   |  |   |
| Interface <sup>1</sup> /Connectors  | Ultra160, Ultra2, Ultra SCSI/68-pin Wide, 80-pin SCA-2 |   |  |  |   |
| Formatted Capacity (MB <sup>2</sup> )   | 9,100  | 18,300  | 36,700                                 |  |   |
| Disk Drive Configuration  |  |   |  |  |   |
| Disks<br>Head/Recording Surfaces<br>Bytes per Sector<br>Maximum Areal Density (Gb/sq. in.)<br>Encoding/Detection Method | 1<br>2<br>512<br>6.8<br>24/25 RLL PRML                 | 2<br>4<br>512<br>6.8<br>24/25 RLL PRML  | 4<br>8<br>512<br>6.8<br>24/25 RLL PRML |  |   |
| Performance Specifications  |  | Physical Specifications   | 9.1 GB                                 | 18.3 GB  | 36.7 GB   |
| Typical Seek Times <sup>3</sup> (ms)<br>Average<br>Track-to-Track<br>Full Stroke<br>Average Rotational Latency (ms)     | 6.3<br>0.8<br>15.0<br>4.17                             | Dimensions—inches (mm)<br>Width<br>Length<br>Height<br>Weight—pounds (kg)                                 |  | 4.00 (101.6)<br>5.75 (146.1)<br>1.00 (25.4)<br>1.3 (0.6) | 4.00 (101.6)<br>5.75 (146.1)<br>1.00 (25.4)<br>1.4 (0.63) |
| Rotational Speed (RPM)  | 7,200  |   |  |  |   |
| Internal Data Rate (Mb/sec)   | 194 to 340   | Environmental Limits  |  |  |   |
| Sustained Throughput (MB/sec)   | 17 to 29   | Operating   |  |  |   |
| Data Transfer Rates -burst (Buffer-to-Host)<br>Ultra160 SCSI<br>Ultra2 SCSI   | ) (MB/sec)<br>160<br>80                                | Temperature (°C)<br>Non-Condensing Humidity (%)<br>Vibration (G, 5 to 500 Hz)<br>Sound Power (Bels, Idle) | 5 to 55<br>10 to 90<br>1.0<br>3.2      | 5 to 55<br>10 to 90<br>1.0<br>3.3                        | 5 to 55<br>10 to 90<br>1.0<br>3.5                         |
| Ultra SCSI<br>Buffer Size (MB)  | 40 4   | Non-Operating<br>Temperature (°C)<br>Non-Condensing Humidity (%)  | -40 to 65<br>5 to 95                   | -40 to 65<br>5 to 95                                     | -40 to 65<br>5 to 95                                      |
| Reliability Specifications  |  | Shock (G, 2 ms, 1/2 sine)<br>Vibration (G, 5 to 500 Hz)   | 300<br>2.0                             | 300<br>2.0   | 280<br>2.0  |
| Data Errors (per bits read)<br>Recoverable<br>Nonrecoverable  | 10 per 10 <sup>11</sup><br>1 per 10 <sup>14</sup>      | Power Specifications  |  |  |   |
| Error-Correction Method   | 352-bit Reed Solomon                                   | Voltage Requirements (V)  | +5V DC±5% +12V DC ±10%                 |  |   |
| Warranty <sup>4</sup> (years)   | 5  | Typical Power Draw (W)<br>Idle<br>Typical Current Draw (A. BoadAM/rite                                    | 7.5                                    | 8.7  | 9.9   |
|   |  | Typical Current Draw (A, Read/Write<br>5V<br>12V  | )<br>0.3<br>0.79                       | 0.4<br>0.79  | 0.5<br>0.79   |
|   |  | Peak Start-up Current<br>(A on +5V/+12 V)   | 0.65/2.2                               | 0.65/2.2   | 0.65/2.2  |

1. SPI-3 compliant. 2. Quantum defines a megabyte (MB) as 10<sup>6</sup> or 1,000,000 bytes. 3. Seek times are at nominal conditions and include settling. 4. This warranty is standard when products are purchased directly through authorized Quantum distributors/dealers. End-user warranties provided by computer manufacturers may vary.

JetWare



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