## 7,200 RPM DT01ACA Series Hard Disk Drive



7,200 RPM drive well suited for power-friendly consumer and commercial desktop computers



DT01ACA050 DT01ACA100 DT01ACA200 DT01ACA300

The DT01ACA series is Toshiba's first 3.5-inch hard drive for use in power-friendly consumer and commercial desktop computers. The 7,200 RPM drive series is engineered for high performance and low power for cooler operation.

The DT01ACA Desktop HDDs feature 1 terabyte-perplatter technology in capacities ranging from 500GB to 3TB¹ (1, 2 or 3 platters). With 64MB cache buffer (2TB, and 3TB models) the DT01ACA drives are designed for faster data processing.

The 3.5-inch DT01ACA drives include Advanced Sector Format technology, which utilizes the industry standard 4K byte-per-sector configuration and improved error-correcting code functionality to enhance data integrity while making more efficient use of the storage surface area.

- Up to 3TB¹ of Storage Capacity
- 7,200 RPM Rotational Speed
- Low Power
- Advanced Format 512e

## Hard Drive

## 7,200 RPM DT01ACA Series Hard Disk Drive



|  | DT01ACA050                               | DT01ACA100           | DT01ACA200           | DT01ACA300       |
|--|--|----------------------|----------------------|------------------|
| Series Overview                            |  |                      |                      |                  |
| Drive Capacity                             | 500GB                                    | 1TB                  | 2TB                  | 3TB              |
| Drive Interface                            | Serial ATA 3.0 / ATA-8                   |                      |                      |                  |
| Transfer Rate to Host                      | 6 Gb/sec                                 |                      |                      |                  |
| Number of user data cylinders              | 16,383                                   |                      |                      |                  |
| Bytes per sector (HOST)                    | 512 byte                                 |                      |                      |                  |
| Bytes per sector(DISK)                     | 4,096 byte                               |                      |                      |                  |
| Logical blocks (LBA)                       | 976,773,168                              | 1,953,525,168        | 3,907,029,168        | 5,860,533,168    |
| Performance                                |  |                      |                      |                  |
| Rotational Speed                           | 7,200 RPM                                |                      |                      |                  |
| Average Latency                            | 4.17ms                                   |                      |                      |                  |
| Buffer Size                                | 32MB                                     | 32MB                 | 64MB                 | 64MB             |
| Single track seek time (read)              | 0.6 ms                                   | 0.6 ms               | 0.5 ms               | 0.5 ms           |
| Single track seek time (write)             | 0.8 ms                                   | 0.8 ms               | 0.6 ms               | 0.6 ms           |
| Power Requirements                         |  |                      |                      |                  |
| Voltage                                    | 5V (+/- 5%), +12VDC ± 10%                |                      |                      |                  |
| Read/Write Power                           | 6.4 watts                                |                      |                      |                  |
| Active Idle Power                          | 3.7 watts                                | 3.7 watts            | 5.2 watts            | 5.2 watts        |
| Standby Power                              | 1.0 watts                                |                      |                      |                  |
| Sleep Power                                | 1.0 watts                                |                      |                      |                  |
| Physical Size                              |  |                      |                      |                  |
| Dimensions (W) x (D) x (H)                 | 101.6 mm x 147 mm x 26.1 mm              |                      |                      |                  |
| Weight                                     | 450 g                                    | 450 g                | 680 g                | 680 g            |
| Environmental                              |  |                      |                      |                  |
|  | 00 to 0000                               |                      |                      |                  |
| Temp - Operating                           | 0° to 60°C<br>-40° to -70°C              |                      |                      |                  |
| Temp - Non-Operating Vibration - Operating | 6.57 m/s² (0.67G) RMS 5 to 500 Hz        |                      |                      |                  |
| Vibration - Non-Operating                  | 10.2 m/s² (1.04G) RMS 2 to 200 Hz        |                      |                      |                  |
| Shock - Operating                          | 686 m/s <sup>2</sup> (70G) 2ms Half Sine |                      |                      |                  |
| Shock - Non-Operating                      | 3430 m/s² (350G) 2ms                     | 3430 m/s² (350G) 2ms | 2940 m/s² (300G) 2ms | 2940 m/s² (300G) |
| 3  | Half Sine                                | Half Sine            | Half Sine            | 2ms Half Sine    |
| Acoustics                                  |  |                      |                      |                  |
| Acoustics (idle)                           | 25 dB                                    | 25 dB                | 27 dB                | 27 dB            |
| Acoustics (idle) Acoustics (seek)          | 26 dB                                    | 25 dB                | 28 dB                | 28 dB            |
|  | 20 00                                    | 20 05                | 20 00                | 20 00            |
| Reliability                                |  |                      |                      |                  |
| Load/Unload                                | 300,000 times                            |                      |                      |                  |
|  |  |                      | it read              |                  |

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 $^{1}$ One Gigabyte (1 GB) means  $10^{9} = 1,000,000,000$  bytes using powers of 10. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB =  $2^{30} = 1,073,741,824$  bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, pre-installed software applications, or media content. Actual formatted capacity may vary.

Limited Warranty

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2 year (from date of purchase)

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