

# The world's best-selling consumer electronics hard drive



## U SERIES CE

BEST COMBINATION OF PERFORMANCE, ACOUSTICS AND RELIABILITY

### BEST-FIT APPLICATIONS

SET-TOP BOX

PERSONAL VIDEO  
RECORDER

AUDIO/VIDEO JUKEBOX

GAME CONSOLE

INTERNET APPLIANCE



- Available in 20, 40, 60, 80 Gbyte capacities
- Virtually silent operation—as low as 2.7 bels
- 2-Mbyte cache and fast data transfer for top streaming performance
- Supported by CETEC testing and integration services

UP TO 80 GBYTES • 5,400 RPM • ULTRA ATA/100

# THE HIGHEST-VALUE SOLUTION FOR CONSUMER ELECTRONICS APPLICATIONS

## U SERIES™ CE

**CETEC**—The hard drive industry's only dedicated consumer electronics testing and integration center

Bring products to market faster, increase reliability and improve the bottom line at Seagate's Consumer Electronics Testing and Engineering Center (CETEC). Our experienced team of CE engineers and comprehensive testing facilities can help solve technical challenges when designing and building hard drive-capable devices for the consumer market.

Use the testing and integration services at CETEC to help improve all aspects of your new product:

- Acoustics
- Chassis design
- Thermal performance
- System robustness/shock and vibration
- Software performance
- Packaging

CETEC's engineers can evaluate products at any stage of development—whether at prototype, production, even at the blueprint stage. You will be provided reports containing specific, actionable information helping to improve the quality of your product.

Contact your Seagate representative for more information on CETEC services.

### Seagate's 3D Defense System— Nobody does more to protect your drives

Every Seagate disc drive comes with drive, data, and diagnostic defense to reduce returns and save you money. Some 3D Defense features include:

- SeaShell drive packaging protects the drive against 1,000 Gs of nonoperating shock, reducing returns caused by accidental handling damage.
- Soft SeaShield protects the board against accidental handling damage, dissipates ESD and displays installation instructions.
- G-Force Protection, a combination of electro-mechanical enhancements, protects the drive from operating and nonoperating shock.
- SeaTools Suite of diagnostic software reduces the expense and hassle of No-Problem-Found returns with a fast, easy test of the drive.

Find out more at [reliability.seagate.com](http://reliability.seagate.com) and [seatools.seagate.com](http://seatools.seagate.com).

| U SERIES™ CE   | 80 GB <sup>1</sup>    | 60 GB <sup>1</sup>    | 40 GB <sup>1</sup>    | 20 GB <sup>1</sup>    | SEAGATE ADVANTAGES  |
|--|-----------------------|-----------------------|-----------------------|-----------------------|---|
| <b>Model Number</b>  | ST380020ACE           | ST360020ACE           | ST340810ACE           | ST320410ACE           |   |
| <b>Formatted Capacity (Gbytes)</b>   | 80                    | 60                    | 40                    | 20                    |   |
| <b>Recording Hours (approx)<sup>2</sup></b>  |                       |                       |                       |                       |   |
| <b>MP3 (33.3 Mbytes/hour)</b>  | 2,400                 | 1,800                 | 1,200                 | 600                   | A wide variety of capacity points gives CE manufacturers the option to offer a selection of products—from entry level to high end.  |
| <b>SDTV (1.0 Gbytes/hour)</b>  | 80                    | 60                    | 40                    | 20                    |   |
| <b>HDTV (4.0 Gbytes/hour)</b>  | 20                    | 15                    | 10                    | 5                     |   |
| <b>Interface</b>   | Ultra ATA/100         | Ultra ATA/100         | Ultra ATA/100         | Ultra ATA/100         |   |
| <b>PERFORMANCE</b>   |                       |                       |                       |                       |   |
| <b>Simultaneous video streams<sup>3</sup></b>  |                       |                       |                       |                       | Multiple data streams allow simultaneous reading and writing for time-shifting applications such as recording multiple programs, rewinding and pausing live programs, and fast-forwarding recorded programming.   |
| <b>SDTV</b>  | Up to 8               | Up to 8               | Up to 8               | Up to 8               |   |
| <b>HDTV</b>  | Up to 4               | Up to 4               | Up to 4               | Up to 4               |   |
| <b>Internal transfer rate (Mbytes/sec)</b>   | 54.5                  | 54.5                  | 54.5                  | 54.5                  | Fast throughput rates enable high-quality viewing and avoid dropped frames.   |
| <b>Startup/standby-to-ready (sec)</b>  | 6.5                   | 6.5                   | 6.5                   | 6.5                   |   |
| <b>ACOUSTICS</b>   |                       |                       |                       |                       |   |
| <b>Idle (sound power, bels), typ</b>   | 2.8                   | 2.8                   | 2.7                   | 2.7                   | Seagate's SoftSonic™ fluid dynamic bearing (FDB) motors, standard on U Series CE drives, combine with "sound barrier technology" (SBI) for quiet acoustics in any application.  |
| <b>Seek (sound power, bels), typ</b>   | 3.0                   | 3.0                   | 2.9                   | 2.9                   |   |
| <b>Startup (sound power, bels), max</b>  | 2.8                   | 2.8                   | 2.7                   | 2.7                   |   |
| <b>POWER REQUIREMENTS</b>  |                       |                       |                       |                       |   |
| <b>+12 VDC ± 10% (amps max)</b>  | 2.5                   | 2.5                   | 2.5                   | 2.5                   | Low power requirements help CE systems achieve good heat dissipation, easy system cooling, and smaller power supplies.  |
| <b>+5 VDC ± 5% (amps max)</b>  | 1.0                   | 1.0                   | 1.0                   | 1.0                   |   |
| <b>Power Management Startup current (amps)</b>   | 2.0                   | 2.0                   | 2.0                   | 2.0                   |   |
| <b>Seek/read/write (watts typ)</b>   | 7.5                   | 7.5                   | 7.5                   | 7.5                   |   |
| <b>Idle/standby (watts typ)</b>  | 5.5/1.2               | 5.5/1.2               | 5.5/1.2               | 5.5/1.2               |   |
| <b>RELIABILITY/ROBUSTNESS</b>  |                       |                       |                       |                       |   |
| <b>Nonoperating shock (Gs @ 2 msec)</b>  | 350                   | 350                   | 350                   | 350                   | Seagate's disc drives are the most robust in the industry, making them ideally suited for consumer electronics applications. Their high shock tolerance withstands everyday bumps and knocks the system might encounter, and their long life provides years of service. |
| <b>Operating shock (Gs @ 2 msec)</b>   | 63                    | 63                    | 63                    | 63                    |   |
| <b>3D Defense System</b>   | Yes                   | Yes                   | Yes                   | Yes                   |   |
| <b>Contact Start-Stops (cycles @ 40°C)</b>   | 50,000                | 50,000                | 50,000                | 50,000                |   |
| <b>Mean Time Between Failure (hours)</b>   | 600,000               | 600,000               | 600,000               | 600,000               |   |
| <b>Supports full security mode features</b>  | Yes                   | Yes                   | Yes                   | Yes                   |   |
| <b>ENVIRONMENTAL</b>   |                       |                       |                       |                       |   |
| <b>Operating temperature (°C)</b>  | 0 to 60               | 0 to 60               | 0 to 60               | 0 to 60               | U Series CE drives are designed to perform well in a variety of ambient environmental conditions.   |
| <b>Nonoperating temperature (°C)</b>   | -40 to 70             | -40 to 70             | -40 to 70             | -40 to 70             |   |
| <b>EMI/EMC</b>   | FCC Class B compliant | FCC Class B compliant | FCC Class B compliant | FCC Class B compliant |   |
| <b>PHYSICAL/CONFIGURATION</b>  |                       |                       |                       |                       |   |
| <b>Number discs/heads</b>  | 2/4                   | 2/3                   | 1/2                   | 1/1                   | Standard drive size easily integrates into popular system bays.   |
| <b>Height (in/mm)</b>  | 1/26.1                | 1/26.1                | 1/26.1                | 1/26.1                |   |
| <b>Width (in/mm)</b>   | 4/101.85              | 4/101.85              | 4/101.85              | 4/101.85              |   |
| <b>Depth (in/mm)</b>   | 5.75/147.0            | 5.75/147.0            | 5.75/147.0            | 5.75/147.0            |   |
| <b>Weight (lb/g)</b>   | 1.2/550               | 1.2/550               | 1.2/550               | 1.2/550               |   |
| 1. Formatted capacity in Gbytes, 512 bytes/sector. Capacity calculated as 1 Gbyte = 10 <sup>9</sup> bytes.<br>2. Recording times are estimates and may vary due to quality and compression levels.<br>3. Assumes at least 2 Mbytes of available host buffer per stream. One-year limited warranty when sold through distributor. |                       |                       |                       |                       |   |

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