

OCZ Synapse Cache Solid State Drives accelerate workstation and desktop computing applications with an innovative hardware-meets-software design and advanced caching feature-set.

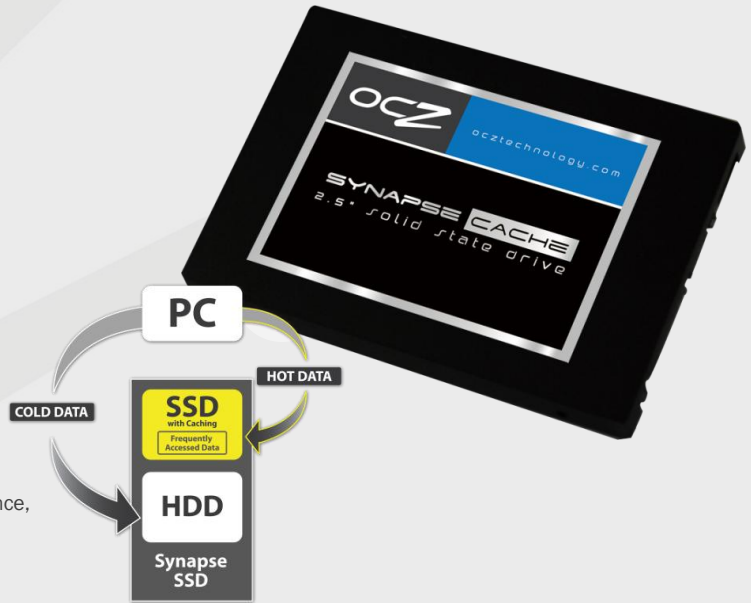
- Delivers up to 80,000 IOPS
- Bandwidth up to 550 MB/s
- SSD Cache capacity up to 64GB
- Manages and accelerates full HDD capacity

High Performance SSD Architecture

- Maximizes performance with SATA 6 Gb/s interface
- Unleashes the full potential of today's leading platforms
- TRIM support
- Easy-to-deploy 2.5" solution for multiple drive bays

Integrated Dataplex™ Caching Software

- Intelligently manages HDD and SSD simultaneously
- "Hot" data managed on Synapse SSD for highest performance, access, and bandwidth
- "Cold" data routed to HDD for highest capacity usage
- No data migration or OS installation required



Give Your Hard Drive what it's Been Missing... Performance The new Synapse Series is optimized for caching applications and integrates Dataplex™ cache software to dynamically manage the Synapse SSD in conjunction with standard hard disk drives (HDDs), to provide users with SSD-level performance across the entire capacity of the HDD. The OCZ Synapse Series leverages the latest and most advanced hardware and software technology to deliver superior storage performance without sacrificing HDD capacity. For users craving the performance advantages of SSDs combined with the high capacities associated with HDDs, OCZ offers the first no-compromise approach to enabling high-performance and high-capacity storage for virtually any PC platform.

Performance

64GB

128GB

Max Read ¹	up to 550 MB/s	up to 550 MB/s
Max Write ¹	up to 490 MB/s	up to 510 MB/s
Max 4KB Random Read ²	10,000 IOPS (40 MB/s)	19,000 IOPS (75 MB/s)
Max 4KB Random Write ²	75,000 IOPS (300 MB/s)	80,000 IOPS (320 MB/s)
Sequential Read AS-SSD ³	up to 200 MB/s	up to 200 MB/s
Sequential Write AS-SSD ³	up to 70 MB/s	up to 130 MB/s
4KB Random Read AS-SSD ³	13,000 IOPS (50 MB/s)	24,000 IOPS (90 MB/s)
4KB Random Write AS-SSD ³	18,000 IOPS (70 MB/s)	33,000 IOPS (130 MB/s)

¹ Maximum sequential speeds are determined using ATTO

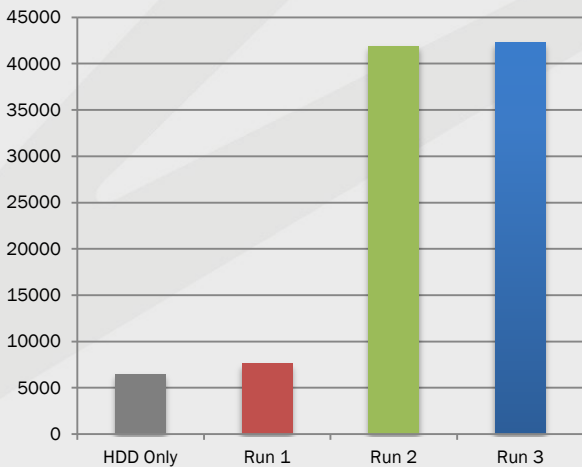
² Small file I/O performance is measured using Iometer 2010, Queue Depth 64, 4KB Aligned; Logical Block Address (LBA) range: 8GB

³ Incompressible data performance is measured using AS-SSD; 64 thread for 4K specs

Keep the capacity. Let go of the Lag. The OCZ Synapse Series integrates the benefits of SSD performance and HDD capacity with Dataplex™ caching software to dynamically manage the use of both SSD and HDD for superior overall storage performance. This combination creates an environment where the most frequently used "hot" data stays on the ultra-fast SSD, while the "cold" data remains on the larger capacity HDD (sold separately). Advanced caching algorithms learn user behavior and adapt storage policies to ensure optimal performance for each individual user, maximizing productivity for the most demanded programs and applications. Synapse Series integrates seamlessly within any modern PC platform, ensuring optimal compatibility along with performance gains.

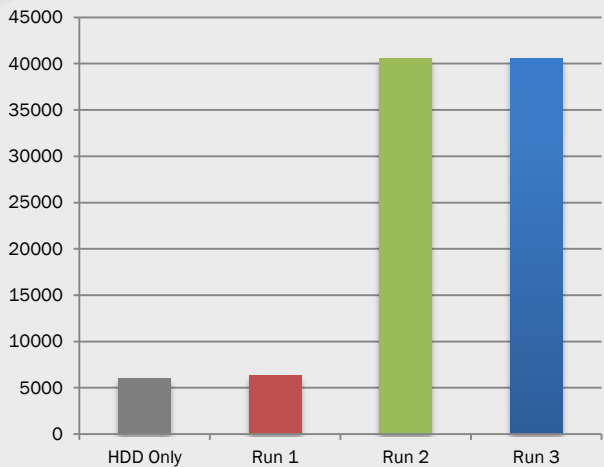
Synapse 128GB

PC Mark Vantage - HDD Test Suite



Synapse 64GB

PC Mark Vantage - HDD Test Suite



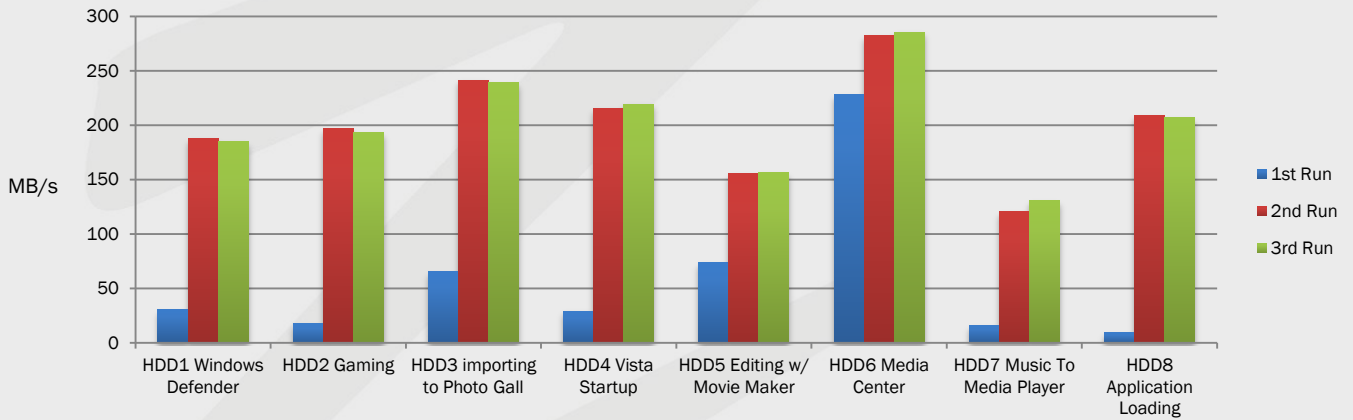
After three runs the Synapse has now cached the "hot" data resulting in significantly improved application performance and system responsiveness

PC Mark Vantage	1TB HDD	Synapse 128GB SSD + 1TB HDD *	Synapse 64GB SSD + 1TB HDD *
HDD TEST SUITE - Overall Score	6,935	42,083	40,525
HDD1 Windows Defender	31 MB/s	186 MB/s	207 MB/s
HDD2 Gaming	18 MB/s	195 MB/s	204 MB/s
HDD3 Importing to Photo Gallery	67 MB/s	240 MB/s	154 MB/s
HDD4 Vista Startup	22 MB/s	217 MB/s	217 MB/s
HDD5 Editing w/ Movie Maker	71 MB/s	157 MB/s	155 MB/s
HDD6 Media Center	186 MB/s	284 MB/s	297 MB/s
HDD7 Music To Media Player	14 MB/s	125 MB/s	131 MB/s
HDD8 Application Loading	7 MB/s	208 MB/s	189 MB/s

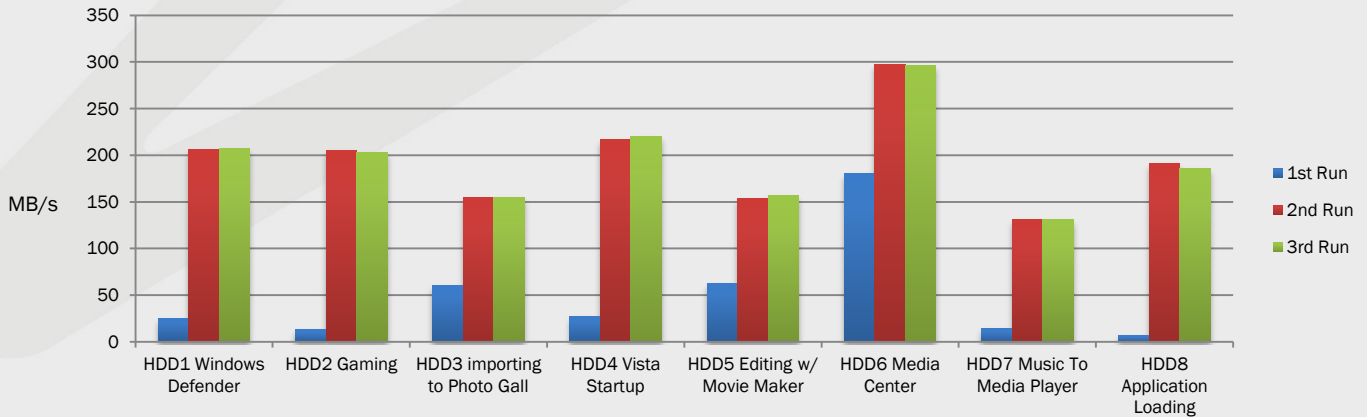
Test Setup: ASUS P8P67 Pro, PC Mark Vantage Suite, Synapse 128GB (64GB cache) with 1TB HDD, Synapse 64GB (32GB cache) with 1TB HDD

(*) average of 2nd and 3rd runs to demonstrate cache effect.

Synapse 128GB PC Mark Vantage - HDD Test Suite



Synapse 64GB PC Mark Vantage - HDD Test Suite



PC Mark Vantage with Synapse 128GB	First Run	Second Run	Third Run
HDD TEST SUITE - Overall Score	7,635	41,914	42,252
HDD1 Windows Defender	31 MB/s	187 MB/s	185 MB/s
HDD2 Gaming	17 MB/s	197 MB/s	193 MB/s
HDD3 Importing to Photo Gallery	65 MB/s	241 MB/s	239 MB/s
HDD4 Vista Startup	29 MB/s	215 MB/s	219 MB/s
HDD5 Editing w/ Movie Maker	74 MB/s	155 MB/s	158 MB/s
HDD6 Media Center	228 MB/s	282 MB/s	285 MB/s
HDD7 Music To Media Player	16 MB/s	120 MB/s	130 MB/s
HDD8 Application Loading	9 MB/s	209 MB/s	206 MB/s

PC Mark Vantage with Synapse 64GB	First Run	Second Run	Third Run
HDD TEST SUITE - Overall Score	6,338	40,543	40,506
HDD1 Windows Defender	25 MB/s	206 MB/s	207 MB/s
HDD2 Gaming	13 MB/s	205 MB/s	202 MB/s
HDD3 Importing to Photo Gallery	60 MB/s	154 MB/s	154 MB/s
HDD4 Vista Startup	27 MB/s	216 MB/s	218 MB/s
HDD5 Editing w/ Movie Maker	63 MB/s	153 MB/s	156 MB/s
HDD6 Media Center	180 MB/s	298 MB/s	296 MB/s
HDD7 Music To Media Player	14 MB/s	131 MB/s	131 MB/s
HDD8 Application Loading	7 MB/s	191 MB/s	186 MB/s

SPECIFICATIONS

Physical

Cache Capacities (IDEMA)	64GB, 32GB
NAND Components	2Xnm Multi-Level Cell (MLC)
Interface	SATA III / 6Gbps (backwards compatible with SATA II / 3Gbps)
Form Factor	2.5 Inch
NAND Controller	SandForce® 2281
Dimensions (L x W x H)	98 x 69.9 x 9.1 mm
Weight	79g

Reliability/Protection/Security

MTBF	2 million hours
ECC Recovery	Up to 55 bits correctable per 512-byte sector (BCH) *varies depending on exact configuration
Data Encryption	128-bit & 256-bit AES-compliant
Product Health Monitoring	Self-Monitoring, Analysis and Reporting Technology (SMART) Support

Environmental

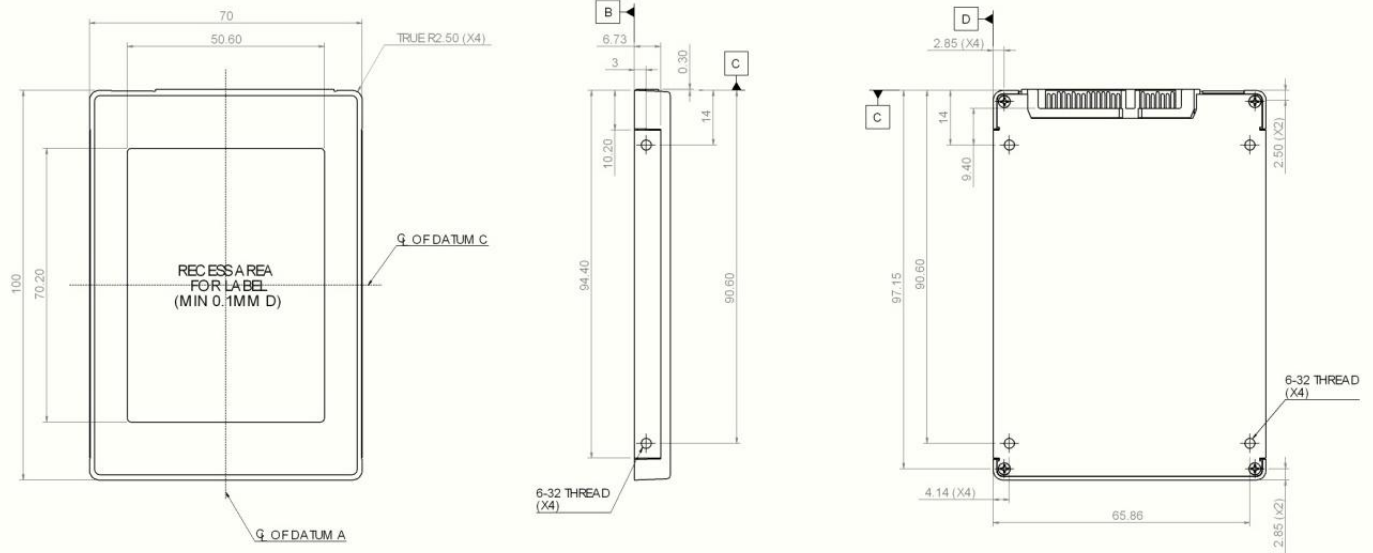
Power Consumption	Idle: 1.5 W Active: 2.7 W
Operating Temperature	0°C ~ 70°C
Ambient Temperature	0°C ~ 55°C
Storage Temperature	-45°C ~ 85°C
Shock Resistance	1500G
Certifications	RoHS, CE, FCC

Compatibility

Serial ATA (SATA)	Fully compliant with Serial ATA International Organization: Serial ATA Revision 3.0. Fully compliant with ATA/ATAPI-8 Standard Native Command Queuing (NCQ)
Operating System	Windows 7 32-bit and 64-bit
Power Requirements	Standard SATA Power Connector
System Integration	Bundled with 3.5" desktop adapter bracket

Additional Features

Performance Optimization	TRIM (requires OS support), Drivers
Software	Dataplex™ Caching Software
Service & Support	3-Year Warranty, Toll-Free Tech Support, 24 Hour Forum Support

MECHANICAL SPECIFICATIONS

NOTE:

1. THIS DRAWING MUST BE USED TO IDENTIFY CRITICAL DIMENSIONS, TOLERANCES AND REFERENCE.
2. INTERPRET DIMENSION AND TOLERANCE PER ANSI 14.5M-1994
3. UNLESS OTHERWISE SEPCIFIED: DIMENSIONS ARE IN MILLIMETERS


PACKAGING SPECIFICATIONS

Dimensions (L x W x H) 152.4 x 127 x 14.5mm

Weight 220g

ORDERING INFORMATION

PRODUCT	RAW CAPACITY	CACHE CAPACITY (IDEMA)	PART NUMBER	UPC
Synapse 2.5" SSD	64GB*	32GB	SYN-25SAT3-64G	842024028796
Synapse 2.5" SSD	128GB*	64GB	SYN-25SAT3-128G	842024028802

*NOTE: Synapse Series features 50% NAND flash overprovisioning to accommodate performance and software features