

# PRODUCT BRIEF

Intel® Solid State Drive 750 Series



# Intel's Fastest Gaming Solid State Drive

## Performance Unleashed

Take your PC to a new level of performance with fast application launches and file loading.



### Uncompromised Performance

Maximize your computing experience with the Intel® Solid State Drive (SSD) 750 Series. By combining four lanes of PCIe® 3.0 with state-of-the-art NVMe Express™ (NVMe™) interface, the Intel SSD 750 Series delivers exceptional throughput performance and latency in a client PC SSD. The Intel SSD 750 Series is truly an industry leader; utilizing NVMe allows the Intel SSD 750 Series to shed the burden of legacy AHCI commands. The Intel SSD 750 Series Add-In-Card (AIC) and 2.5-inch form factors enable performance not currently possible in form factors restricted by size or power.

### NVM Express™

*Industry Leading Storage Interface†*

Introducing Intel's first client-focused NVMe SSD. NVMe Express is a standard specification architected from the ground up for Non-Volatile Memory (NVM). NVMe significantly improves both random and sequential performance over SATA-based drives† by reducing latency, enabling high levels of parallelism, and streamlining the storage command set. NVMe provides a standards-based approach, enabling broad ecosystem adoption for PCIe SSD interoperability.

Intel has worked closely with industry ecosystem partners to bring NVMe to the PC Client and Workstation markets with a bootable, easy to use, plug-n-play solution.

The uncompromising performance of the Intel SSD 750 Series enables you to design and build richer content with larger data sets, textures or assets.

The Intel SSD 750 Series offers increased efficiency for engineering workloads: Computer Aided Drafting and Design (CADD), Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA), and Simulation.

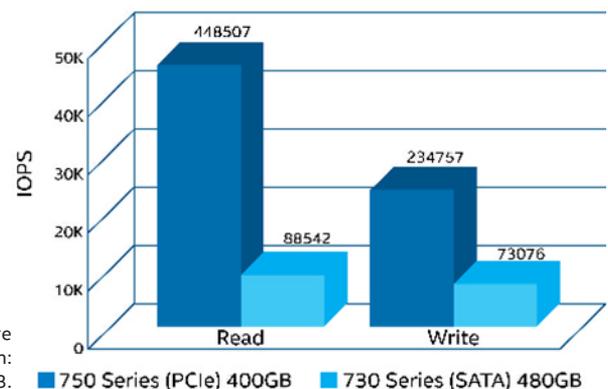
### Don't settle for second best.

For additional performance information go to: [www.intel.com/content/www/us/en/solid-state-drives/solid-state-drives-750-series.html](http://www.intel.com/content/www/us/en/solid-state-drives/solid-state-drives-750-series.html)

### Product Spotlight

- >4X Performance vs. Intel SATA Solid State Drives†
- Excellent Performance per Dollar
- Industry Leading NVMe Express™ Interface
- Exceptional Workload Efficiency
- Outstanding Immersive User Experience
- Faster Game Load Times
- Ultra High Definition (4K) Video Creation

Random Read/Write Performance<sup>1</sup>  
750 Series (PCIe) vs. 730 Series (SATA)



<sup>1</sup>Performance measured by Intel using IOMeter 1.1.0 with queue depth 32. Measurements are performed on 8 GB of Logical Block Address (LBA) range on a full SSD. System configuration: Intel® Core i7-5960X processor, Intel® X99 chipset, 16GB DDR4 2133.

## Add-in-Card and 2.5-inch SFF

*Two Form Factors for Flexibility and Ease of Integration.*

With both Add-in-Card and 2.5-inch form factors, the Intel SSD 750 Series eases migration from an Intel® SATA Solid State Drive to PCIe 3.0 without power or thermal limitations on performance. This allows the SSD to deliver the ultimate in performance in a variety of system form factors and configurations.

**Add-in-Card.** The Intel SSD 750 Series Add-in-Card (AIC) offers a dynamic solution for current and future systems with an accessible PCIe 3.0 slot.

**U.2 2.5-inch Small Form Factor.** The Intel SSD 750 Series U.2 2.5-inch provides a cabled solution where an accessible PCIe 3.0 slot is not available and the motherboard has been provisioned with a U.2 connector

(formerly SFF-8643). This solution is attractive for small form factor and multi-GPU systems where space is a premium. This flexibility also provides a viable direct attach solution for small form designs with a U.2 connector (formerly SFF-8639) on board.

**Solid State Drive Computing Starts with Intel Inside®.** For more information, visit [www.intel.com/ssd](http://www.intel.com/ssd)

### INTEL® SOLID STATE DRIVE 750 SERIES

#### TECHNICAL SPECIFICATIONS<sup>1</sup>

Model Name	Intel® Solid State Drive 750 Series								
Capacities	Half-Height Half-Length (HHHL) Add-in-Card (AIC): 400GB, 800GB, and 1.2TB 2.5-inch Small Form Factor U.2: 400GB, 800GB, and 1.2TB								
NAND Flash Memory	20nm Intel® NAND Flash Memory Multi-Level Cell (MLC)								
<b>SUSTAINED SEQUENTIAL READS / WRITES</b>									
Bandwidth <sup>2</sup>	<b>Add-in Card</b>			<b>2.5-inch (U.2)</b>					
	400GB: up to 2200 / 900 MB/s			400GB: up to 2200 / 900 MB/s					
	800GB: up to 2100 / 800 MB/s			800GB: up to 2100 / 800 MB/s					
	1.2TB: up to 2500 / 1200 MB/s			1.2TB: up to 2500 / 1200 MB/s					
Read /Write Latency	20 µs / 20 µs								
<b>4KB READS / WRITES</b>									
Random I/O Operations/Second <sup>2</sup>	<b>Add-in Card</b>			<b>2.5-inch (U.2)</b>					
	400GB: up to 430,000 / 230,000 IOPs			400GB: up to 430,000 / 230,000 IOPs					
	800GB: up to 420,000 / 210,000 IOPs			800GB: up to 420,000 / 210,000 IOPs					
	1.2TB: up to 460,000 / 290,000 IOPs			1.2TB: up to 460,000 / 290,000 IOPs					
Interface	PCIe 3.0 X4								
Form Factor, Height and Weight	<b>Add-in Card</b>			<b>2.5-inch (U.2)</b>					
	68.9mm / 18.74mm / 168mm up to 195 grams			15mm / 70mm / 101mm / up to 125 grams					
Life Expectancy <sup>3</sup>	1.2million hours Mean Time Between Failures (MTBF)								
Lifetime Endurance <sup>3</sup>	70GB Writes per Day								
Power Consumption Typical	400GB			800GB			1.2TB		
	Active Read:	9W	9W	10W	Active Read:	9W	9W	10W	
	Active Write:	12W	15W	22W	Active Write:	12W	15W	22W	
	Idle:	4W	4W	4W	Idle:	4W	4W	4W	
Operating Temperature	0° C to 70° C								
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives								
Product Health Monitoring	Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) commands								
Product Ordering Information	To order, visit <a href="http://intel.com/ssd">intel.com/ssd</a>								
Software Tools	Intel® Solid State Drive Toolbox at <a href="http://intel.com/ssdtoolbox">intel.com/ssdtoolbox</a>								
	Intel® Data Migration Software at <a href="http://intel.com/ssdinstallation">intel.com/ssdinstallation</a>								

<sup>1</sup> Based on Intel® SSD 750 Series Product Specification: <http://www.intel.com/content/www/us/en/solid-state-drives/ssd-750-spec.html>

<sup>2</sup> Performance measured by Intel using IOMeter\* 1.1.0 with queue depth 32. Measurements are performed on 8 GB of Logical Block Address (LBA) range on a full SSD.

<sup>3</sup> All documented endurance test results are obtained in compliance with JESD218 Standards. See [www.jedec.org](http://www.jedec.org) for detailed definitions of JESD218 Standards.

Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. Consult other sources of information to evaluate performance as you consider your purchase.

**Test and System Configuration:** Processor: Intel Core i7-4790K, Speed: 4.0 GHz, Chipset: Intel Z97, Motherboard: ASUS z97-Deluxe, DRAM capacity: 4GB, DRAM Speed: DDR3 2133 MHz, OS: Windows® 8.1.

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The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order. Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web site at [www.intel.com](http://www.intel.com).

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