

PRODUCT BRIEF

Intel® Optane™ SSD 905P Series
PCIe* (P)



Breakthrough Performance for Demanding Storage Workloads

Intel® Optane™ SSD 905P delivers breakthrough performance to meet the most demanding storage workloads in your desktop or client workstations.



The Intel® Optane™ SSD 905P is designed for the most demanding storage workloads in client systems, delivering high random read/write performance coupled with low latency and industry-leading endurance. Built with Intel® Optane™ technology, a revolutionary class of non-volatile memory, the Intel® Optane™ SSD 905P is empowering professional users, content creators, and enthusiasts to extract greater platform performance.

Breakthrough Performance for Workstations

The Intel® Optane™ SSD 905P delivers read/write performance optimized for client workstations. The performance and responsiveness of the SSD 905P means the processor can spend less time waiting and more time computing, resulting in greatly increased efficiency.

It provides exceptional random storage performance of up to 575K/550K IOPs (4K random reads/writes), and is complemented with low latency of less than 10µs.¹ These key capabilities make the SSD 905P a highly responsive client storage solution. The SSD 905P also enables software developers to optimize applications to take advantage of the unique attributes of Intel® Optane™ technology: low latency, and high throughput at low queue depth.

New Possibilities with Higher Capacity

The Intel® Optane™ SSD 905P introduces larger capacities allowing users to handle larger data sets to better extract the value of Intel® Optane™ technology with workloads that place heavy demands on the storage I/O subsystem.

Industry-Leading Endurance

The ability to deliver these levels of performance with large and demanding workstation workloads also requires high endurance to ensure storage reliability.

The Intel® Optane™ SSD 905P provides an industry-leading 10 DWPD, making it the highest endurance client SSD in the market today.² Professionals with the most demanding storage workloads can now tackle even bigger projects with peace of mind, counting on years of performance without the need for frequent drive replacements.



Features At-a-Glance ¹			
Model Name	Intel® Optane™ SSD 905P Series		
Capacity	Half Height Half Length (HHHL) Add-in-Card: 960GB		
	2.5" x 15mm, Small Form Factor U.2: 480GB		
Memory Media	3D XPoint™ memory media		
Bandwidth: Sustained Sequential Read/Write	Up to 2600 / 2200 MB/s		
IOPS: Random 4KB Random Read/Write	Up to 575,000 / 550,000 IOPs		
Read /Write Latency	<10 μs / < 10 μs		
Interface	PCIe* 3.0 X4, NVMe*		
Form Factors, Height and Weight	HHHL AIC 68.9mm / 17.2mm / 168mm up to 230 grams		
	2.5" U.2 15mm / 70mm / 101mm / up to 140 grams		
Life Expectancy	1.6million hours Mean Time Between Failures (MTBF)		
Lifetime Endurance ³	10 Drive Writes per Day (DWPD)		
Power Consumption Typical	480GB	960GB	
	<i>Active Sequential Read – Average Power:</i>	7.6W	10.7W
	<i>Burst Sequential Read:</i>	7.7W	11.2W
	<i>Active Write – Average Power:</i>	12.4W	14.8W
	<i>Burst Sequential Write:</i>	12.8W	16.4W
	<i>Idle:</i>	3.3W	6.0W
Operating Temperature ⁴	0° C to 85° C		
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives		
Warranty	5-year warranty; warranty void if used in a multi-user data center environment		



1. IOMeter Test and System Configurations: Intel® Core™ i7-6950X @ 3.00GHz, Asus X99 motherboard, NVIDIA GeForce® GTX1080, Chipset: Intel® INF 10.0.20.0, Memory: 64GB (4X16GB) DDR4-2400, Microsoft Windows 10® Enterprise 64-bit, using Intel NVMe* driver 2.0.0.1024. Test done by Intel at Intel labs.
2. Highest endurance as shown in Tom's Hardware comparison of best SSDs in industry, as of Jan 19, 2018. See <https://www.tomshardware.com/reviews/best-ssds,3891.html>
3. Based upon the spec sheet of Intel® Optane™ SSD 900P 480GB with an endurance of 8760GB written.
4. Operating temperature is measured by SMART.

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Benchmark results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as "Spectre" and "Meltdown". Implementation of these updates may make these results inapplicable to your device or system.

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.

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