

# INTEL<sup>®</sup> OPTANE<sup>™</sup> SSD DC P4800X

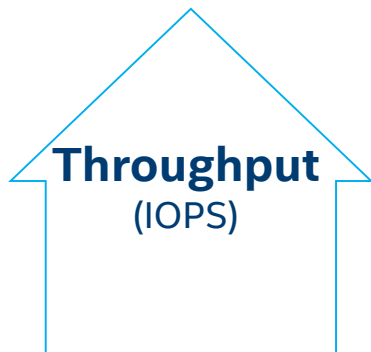
## WORLD'S MOST RESPONSIVE DATA CENTER SSD

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# Intel® Optane™ SSD DC P4800X Series

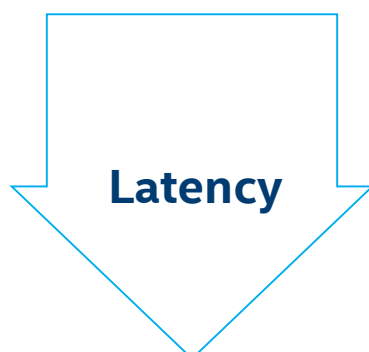
**Breakthrough  
Performance**



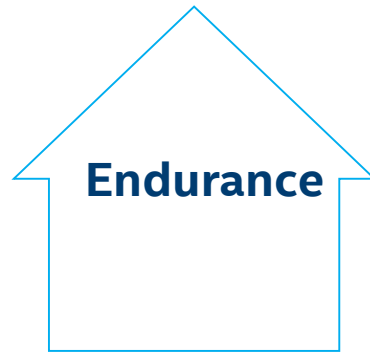
**Predictably  
Fast Service**



**Responsive  
Under Load**



**Ultra  
Endurance**



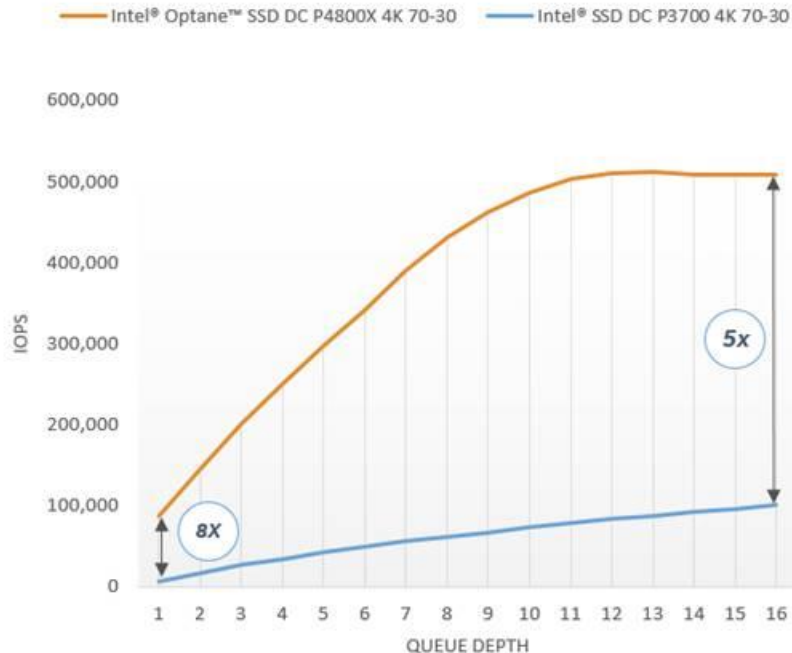
## World's Most Responsive Data Center SSD<sup>1</sup>

1. Responsiveness defined as average read latency measured at queue depth 1 during 4k random write workload. Measured using FIO 2.15. Common configuration - Intel 2U Server System, OS CentOS 7.2, kernel 3.10.0-327.el7.x86\_64, CPU 2 x Intel® Xeon® E5-2699 v4 @ 2.20GHz (22 cores), RAM 396GB DDR @ 2133MHz. Intel drives evaluated - Intel® Optane™ SSD DC P4800X 375GB and Intel® SSD DC P3700 1600GB. Samsung drives evaluated - Samsung\* SSD PM1725a, Samsung\* SSD PM1725, Samsung\* PM963, Samsung\* PM953. Micron drive evaluated - Micron\* 9100 PCIe\* NVMe\* SSD. Toshiba drives evaluated - Toshiba\* ZD6300. Test - QD1 Random Read 4K latency, QD1 Random RW 4K 70% Read latency, QD1 Random Write 4K latency using fio-2.15.

\*Other names and brands may be claimed as the property of others.

# Breakthrough Performance

4K 70/30 RW Performance at Low Queue Depth



Not STAC benchmarks

1. Common Configuration - Intel 2U Server System, OS CentOS 7.2, kernel 3.10.0-327.el7.x86\_64, CPU 2 x Intel® Xeon® E5-2699 v4 @ 2.20GHz (22 cores), RAM 396GB DDR @ 2133MHz. Configuration - Intel® Optane™ SSD DC P4800X 375GB and Intel® SSD DC P3700 1600GB. Performance - measured under 4K 70-30 workload at QD1-16 using fio-2.15.

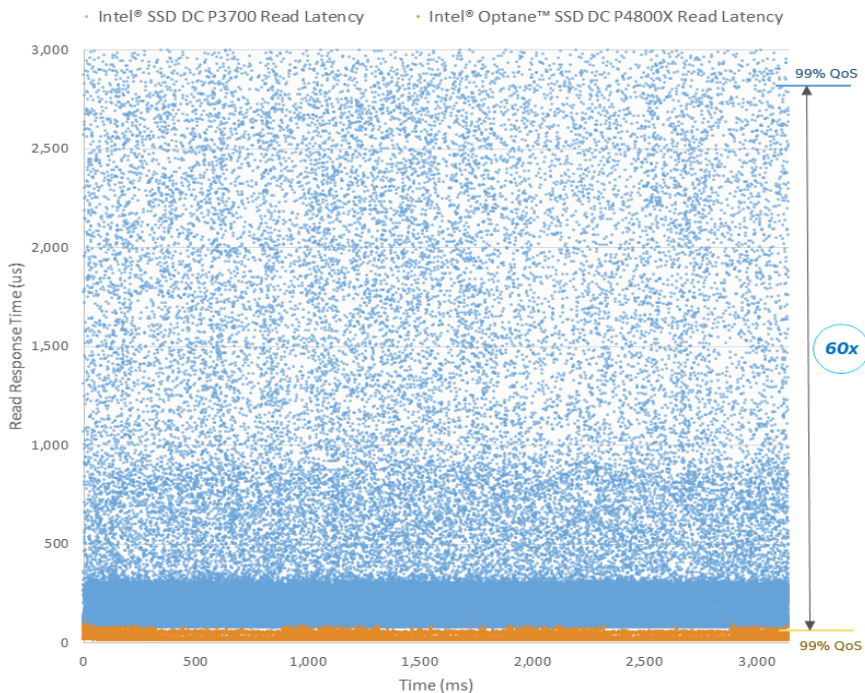
Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance.



- ✓ **5-8x faster** at low Queue Depths<sup>1</sup>
- ✓ Vast majority of **applications generate low QD** storage workloads

# Predictably Fast Service

Read QoS in Mixed Workload



- ✓ up to **60x** better at 99% QoS<sup>1</sup>
- ✓ Ideal for critical applications with aggressive latency requirements

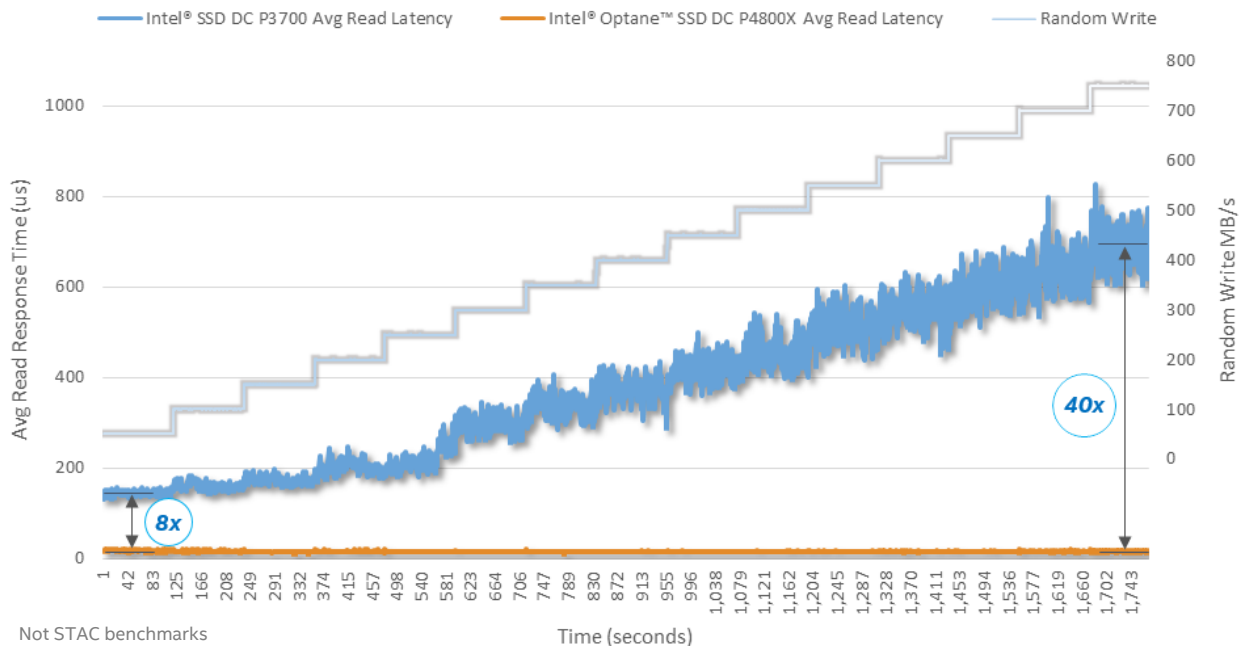
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Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance.

# Responsive Under Load

Average Read Latency under Random Write Workload



Not STAC benchmarks

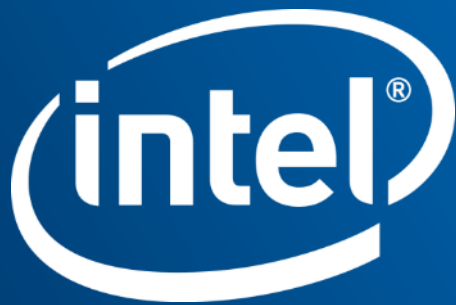
1. Responsiveness defined as average read latency measured at queue depth 1 during 4k random write workload. Measured using FIO 2.15. Common Configuration - Intel 2U Server System, OS CentOS 7.2, kernel 3.10.0-327.el7.x86\_64, CPU 2 x Intel® Xeon® E5-2699 v4 @ 2.20GHz (22 cores), RAM 396GB DDR @ 2133MHz. Configuration - Intel® Optane™ SSD DC P4800X 375GB and Intel® SSD DC P3700 1600GB. Latency - Average read latency measured at QD1 during 4K Random Write operations using fio-2.15.

Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance.



✓ up to **40x faster response time** under workload<sup>1</sup>

✓ Consistently **amazing response time under load**



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