







CLOUD INSPIRED. STORAGE OPTIMIZED.

Intel® SSD DC P4500 Series


2.5 SSD







FEATURES

-  Built on Intel® 3D NAND TLC, and available in 1, 2, or 4TB capacities
-  Support for NVM Express-Management Interface (NVMe-MI), NVMe SMART / Health and Log Pages
-  Based on PCIe 3.1 x4, NVMe 1.2 Interface
-  Form factor flexibility for more implementation options—U.2 2.5in x 15mm (for serviceability, hot-plug, and density) Add-in-card: half-height, half-length, low-profile (for legacy and mainstream server compatibility)


PERFORMANCE

-  Random 4K Read⁴:
Up to 710K IOPS
- Random 4K Write⁴:
Up to 68K IOPS
- Sequential 64K Read⁴:
Up to 3290 MB/s
- Sequential 64K Write⁴:
Up to 1890 MB/s


INTEGRITY

-  End-to-end data protection from silent data corruption, uncorrectable bit error rate <1 sector per 10 bits read
-  Endurance—Random/JEDEC up to 0.7 DDPD/4.6 PBW, sequential workload up to 4.62 DDPD/19.8 PBW
-  Power—Max read/write 10.9w/18.3w
-  5 year warranty

TARGET APPLICATIONS

 Virtualization for enterprise IT

 Big Data

 Streaming high-bandwidth content

 Cloud content delivery

Contact your Intel representative or visit intel.com/ssd to modernize your data center.





- 1 Source - Intel. Results have been estimated or simulated using internal Intel analysis or architecture simulation or modeling, and provided to you for informational purposes. Comparing 2TB Intel® SSD DC P3520 with 1.6TB Intel® SSD DC S3520. Any differences in your system hardware, software or configuration may affect your actual performance.
- 2 Source – Intel. Measured performance of Intel® SSD DC S3710 and DC P3700 on 4K Mixed (70/30) workload. Device measured using Iometer. Quality of Service measured using 4 KB (4,096 bytes) transfer size on a random workload on a full Logical Block Address (LBA) span of the drive once the workload has reached steady state but including all background activities required for normal operation and data reliability. Based on Random 4KB QD=1, 32 workloads, measured as the time taken for 99.9 (or 99.9999) percentile of commands to finish the round-trip from host to drive and back to host.
- 3 Source – Intel. Data collected on Intel SSD for Data Center for PCIe family on a standard endurance offering. Performance data collected on cycled drives using short stroke approach adhering to JESD218 method. Data collected on Intel SSD for Data Center for SATA family on a standard endurance offering. Configuration – Windows 2012 Server, DDR4-32GB, Xeon DP Haswell-EP E5-2699 v3 LGA2011 2.3GHz 45MG 145 W 18 core, G60T0045 firmware. Workload flow Sequence - Prefill seq WR, Seq WR highest QD BS -> lowest, Seq RD highest QD BS ->lowest, RND WR highest QD BS ->70WR highest QD BS->30WR highest QD BS -> RND RD highest QD BS
- 4 Source – Intel. Any differences in your system hardware, software or configuration may affect your actual performance. System Configuration: Supermicro 2U SuperServer® 2028U-TNR4T+, Dual Intel® Xeon® Processor E5-2699 V3 (45M Cache, 2.30 GHz), 192 GB DDR4 DRAM, Boot Drive – Intel® SSD Data Center S3710 Series (200GB), NVMe – Intel® SSD Data Center P3520 Series (2TB), SATA – Intel® SSD Data Center S3510 Series (1.6TB). Running VMware ESXi 6.0 with two identical Windows Server VMs running various workloads housed on two different SSD-backed Datastores.
- 5 Source - Intel. Test performed on Intel® SSD S3x00 drives, Samsung* PM853T and SM843T, Micron* P400e, Seagate* 600 Pro and SanDisk* Lightning drives. Drives were exposed to increasing amounts of radiation. After a drive “hang”, a power cycle was performed to determine whether the drive would re-boot. If a drive re-booted it was read, and data was compared to the tester’s master copy of the up-to-date data that the drive was expected to contain based on writes the drive had acknowledged as completed prior to the “hang” event. If the drive returned data that differed from the expected data, it was recorded as failing for silent errors. The annual rate of silent errors was projected from the rate during accelerated testing divided by the acceleration of the beam (see JEDEC* standard JESD89A).
- 6 Source: Intel. Intel SSD Annualized Fail Rate Report for all of 2015. Intel® SSD DC S3500, S3700, P3700.
- 7 Data Corruption is Worse than You Know. <http://www.zdnet.com/article/data-corruption-is-worse-than-you-know>. ZDNet (September, 2007).