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Enterprise Inspired. Performance Optimized.

Designed to meet today's increasingly I/O-intensive requirements across a wide range of workloads while improving IT efficiency.

Architected with 96-layer TLC, Intel® 3D NAND technology, Intel® SSD D7-P5500 and Intel® SSD D7-P5600 Series offer optimized performance and capacity for all-TLC arrays and are designed to advance IT efficiency and data security. The Intel® SSD D7-P5500 and Intel® SSD D7-P5600 include an all new Intel PCIe Gen4 controller and firmware that bring low latency, enhanced management capabilities, scalability and critical new NVMe features for Enterprise and Cloud environments.

Available in the U.2 15mm form factor, these SSDs offer 1.92 TB, 3.84 TB, and 7.68 TB at 1 Drive Write per Day (DWPD) and 1.6 TB, 3.2 TB, and 6.4 TB at 3 DWPD.

Unlock the Value of Stored Data

The Intel SSD D7-P5500 and Intel SSD D7-P5600 deliver predictably fast, high performance and can greatly accelerate all-TLC storage arrays. Compared to previous-gen Intel® SSDs, the capacity-optimized D7-P5500 delivers up to 2x sequential performance[1] and the performance-optimized D7-P5600 brings up to 44% higher random mixed-workload performance.[2] Both drives also offer improvements to tail latencies, including up to 80% lower 4KB Random Read Quality of Service (QoS) for 99.99999% (7 9s) of transactions.[3]

Firmware enhancements such as prioritizing host workloads and enabling updates without reset further elevate application performance.

Advanced Features for Drive Performance, IT Efficiency, and Data Security

The Intel SSD D7-P5500 and Intel SSD D7-P5600 include numerous firmware enhancements specifically designed to improve IT efficiency and data security in an increasingly data-centric world.

- **Dynamic namespace management** delivers the flexibility to enable more users and scale deployment.

- Additional security features like **TCG Opal 2.0** and a built-in **AES-XTS 256-bit encryption engine**, which are required by some secure platforms.

- Enhanced **SMART monitoring**, which reports drive health status without disrupting I/O data flow using an in-band mechanism and out-of-band access.

- **Telemetry 2.0** makes a wide range of stored data accessible and includes intelligent error tracking and logging. This increases the reliability of finding and mitigating issues and supports accelerated qualification cycles — all of which can result in increased IT efficiency.

- **Optimized TRIM architecture** now runs as a background process without interference to workloads, improving performance and QoS during concurrent TRIMs. The TRIM process is improved for high-density drives, with reduced write amplification that helps drives meet their endurance goal.

- A **Power-Loss imminent (PLI)** protection scheme with built-in self-testing, guards against data loss if system power is suddenly lost. Coupled with end-to-end data path protection scheme, PLI features also enable ease of deployment into resilient data centers where data corruption from system-level glitches is not tolerated.

Extending NAND Technology Leadership

Intel's 96-layer 3D NAND technology delivers industry-leading areal density and data retention[4], enabling enterprise customers to confidently scale storage arrays to meet their growing needs. The swift adoption of software-defined and hyperconverged infrastructures increases the requirement to maximize efficiency, revitalize existing hardware, and increase server agility—all while maintaining operational reliability.

Meeting the demand of increasingly I/O-intensive workloads, including AI and Analytics, has become a core element for any enterprise strategy. Top enterprise server manufacturers have responded by embracing PCIe/NVMe-based SSDs with scalable performance, low latency, and continuous innovation.

Features At-a-Glance		
Model	Intel® SSD D7-P5500	Intel® SSD D7-P5600
Capacity and Form Factor	U.2 15mm: 1.92 TB, 3.84 TB, 7.68 TB	U.2 15mm: 1.6 TB, 3.2 TB, 6.4 TB
Interface	PCIe 4.0 x4, NVMe 1.3c	PCIe 4.0 x4, NVMe 1.3c
Media	Intel® 3D NAND Technology, 96-layer, TLC	Intel® 3D NAND Technology, 96-layer, TLC
Performance	128K Sequential R/W up to 7,000/4,300 MB/s	128K Sequential R/W up to 7,000/4,300 MB/s
	Random 4KB R/W up to 1M/130K IOPS	Random 4KB R/W up to 1M/260K IOPS
Endurance	1 DWPD (up to 14 PBW)	3 DWPD (up to 35 PBW)
Reliability	UBER: 1 sector per 10^{17} bits read MTBF: 2 million hours	UBER: 1 sector per 10^{17} bits read MTBF: 2 million hours
Power	Max Avg. Active Write: 20W Idle: 5W	Max Avg. Active Write: 20W Idle: 5W
Warranty	5-year limited warranty	5-year limited warranty

Learn more now at intel.com/ssd

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