



Product Fact Sheet: Intel's New Memory and Storage Products

Dec. 16, 2020

Intel Optane Products

- **Intel[®] Optane™ SSD P5800X:** Intel's next-gen Optane media solution brings outstanding quality of service for predictable performance, leading input/output-operations-per-second performance across workloads, and the best endurance value in the industry. Being Intel's first PCIe 4.0 Solid State Drive (SSD), this drive performs over three times faster than the previous generation, the Intel[®] Optane™ SSD P4800X, which has already carved out an important niche in data center storage thanks to its excellent endurance and overall performance.
- **Intel[®] Optane™ Memory H20 with SSD:** The H20 is Intel's next-gen performance and capacity storage for thin-and light notebooks and other space constrained PC platforms. By combining Intel Optane Memory with Intel[®] quad-level-cell (QLC) 3D NAND, customers can accelerate PCs with breakthrough responsiveness to search and find files faster, launch applications quicker and transfer data at PCIe speeds.
- **3rd gen Intel[®] Optane™ persistent memory:** To address the ever-increasing need for memory and storage, Intel revealed its intent to deliver the 3rd generation of Intel Optane persistent memory, code-named "Crow Pass," in future Intel[®] Xeon[®] Scalable processors (code-named "Sapphire Rapids").

What Is Optane? Getting data to where it is needed, when it is needed, has always been a key challenge for main memory and storage, which serve as the data supply chain to the CPU. Memory is fast but holds relatively small amounts of data that can be lost when power is removed. Storage devices, like hard drives and SSDs, permanently hold large amounts of data, but are much slower than memory, which in turn slows down performance.

Intel 3D XPoint delivers both memory and storage. This novel memory material retains data not by building structures out of silicon - as done with the more familiar DRAM and NAND technology - but rather by storing data 'bits' within the molecular structure of the material itself.

Intel Optane products using 3D XPoint make it possible for organizations to take a new, innovative approach to storage and memory as they build out solutions from edge to cloud. Optane SSDs alleviate data supply bottlenecks, and the more recent Optane persistent memory modules are beginning to deliver the long-awaited promise of an affordable, large capacity memory that never loses data.

NAND Products

- **Intel[®] SSD 670p:** On the client side, this is Intel's next-gen 144-layer quad-level-cell (QLC) 3D NAND SSD for mainstream computing. It offers end-to-end data protection with Pyrite 2.0 security and power-loss notification support to help improve IT efficiency and drive manageability for real-world uses and applications in the PC client.
- **Intel[®] SSD D7-P5510:** The world's first-to-market 144-layer triple-layer-cell NAND design helps to accelerate a wide range of cloud data center workloads. Designed as a high-capacity replacement for cloud storage, the Intel SSD D7-P5510 is a U.2 form factor with 3.84 terabytes (TB) or 7.68 TB of space. It features improved device health monitoring, greater flexibility for multi-tenant and virtualized environments, and new algorithms and features tuned specifically to address cloud workloads. Available this quarter, Q4' 20.
- **Intel[®] SSD D5-P5316:** The industry's first 144-layer QLC design optimizes and accelerates legacy capacity storage and is available in the first half of 2021. With 128 gigabytes per die, it provides up to 200% better read performance, 38% better random read performance and 48% better latency over hard drives. This drive will come in 15.36 terabyte (TB) and 30.72 TB capacities and will be available in a U.2 and E1.L form factors. It's the first 30.72 TB PCIe SSD that enables a full petabyte (PB) in one rack unit- or 1 PB in 1U.

About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to newsroom.intel.com and intel.com.

© Intel Corporation. Intel, the Intel logo and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.