The WD Ultrastar DC SS540 SAS SSDs

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Western Digital (WD) launches the Ultrastar DC SS540 SAS SSD range aimed at mission critical applications, including OLTP, OLAP, hyperconverged infrastructure (HCI) and software-defined storage (SDS) workloads.

Designed for mixed and write intensive workloads, the SSDs are based on the 6th generation dual-port SAS 12Gbps platform co-developed with Intel, and carry 96-layer 3D TLC NAND memory in the 2.5-inch form factor. As such, the drives are drop-in compatible with existing servers with support for 9, 11 and 14W per drive power options, and support extended error correction code (ECC with a 1×10^{-17} bit error rate) to ensure high performance and data integrity, exclusive-OR (XOR) parity in case a whole NAND die fails and parity-checked internal data paths.

The Ultrastar SS540 is also compliant with the T10 Data Integrity Field (DIF) standard, meaning all interconnect buses have parity protection on the system level and the power loss data management feature does no use supercapacitors. The drives are available in different SKUs, with capabilities such as instant secure erase and/or TCG+FIPS encryption to conform with various security requirements.

Performance is rated at up to 2130MB/s sequential read/write, up to 470K IOPS random read and up to 240K random write IOPS, depending on the model. WD says the drives are also rated at 1 or 3 drive writes per day (DWPD) to target different workloads. Drives with 1 DWPD come

in capacities between 960GB and 15.36TB, while the 3 DWPD drives are in capacities from 800GB to 6.4TB.

The Ultrastar DC SS540 drives are currently in sampling with select customers, before mass production starts on Q1 2020.

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