Press Release

KIOXIA Demonstrates Next Generation NVMe™ SSD Form Factor for Cloud and Enterprise Data Centers

EDSFF[1] (Enterprise and Data Center SSD Form Factor) E3.S form factor enables higher density and performance driving data center scalability

Caption: The image shows SSDs mounted on a 2U-size rack mounted server prototype that installs max. 48 units of major server vendor's prototype. With the combination of E3.S evaluation model + 2U rack mounted server evaluation model, KIOXIA has been performing target device evaluations such as system performance evaluation, heat dissipation verification, etc. with server vendors.

Düsseldorf, Germany, 30th June 2020 – KIOXIA Europe GmbH developed and started shipment of engineering samples of next-generation Enterprise & Datacenter SSD Form Factor (EDSFF) E3.S, and which is being standardized by the SNIA SFF TA Technical Work Group.

E3.S is a new form factor standard for NVMe™ SSDs in cloud and enterprise data centers, especially targeting PCIe® 5.0 and beyond. The E3.S will contribute to the design and development of next-generation systems, such as cloud, hyper-converged and general-purpose servers and all-Flash Array (AFA) systems in cloud and enterprise data centers.

The E3.S specification allows for size, power and capacity options, all with a common connector. Designed for future PCIe generations that offer higher power budgets, EDSFF E3.S delivers improved performance, cooling and flexibility over other form factors.

KIOXIA's E3.S engineering samples, based on KIOXIA's CM6 Series PCIe 4.0 NVMe 1.4 SSD in a 2.5-inch form factor, demonstrated approximately 35% greater performance

with the same controller and BiCS FLASH™ 3D TLC flash memory in the EDSFF E3.S form factor with x4 lanes and 28W (+40%) of power.

EDSFF E3.S benefits include:
- Higher density of flash storage for more efficient use of power, storage footprint and system rack deployments
- Supports PCIe 5.0 and beyond through improved signal integrity
- Better cooling and thermal characteristics
- Performance and benefits beyond the 2.5-inch form factor version
- Drive status can be shown by LED indicators
- Supports x8 PCIe lane configurations

Notes

[1] EDSFF Working Group promoters include enterprise server system and cloud-service providers such as Dell EMC, Facebook, HPE, Lenovo and others. KIOXIA participates as a working group contributor.

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* PCIe is a registered trademark of PCI-SIG.

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About KIOXIA Europe GmbH

KIOXIA Europe GmbH (formerly Toshiba Memory Europe GmbH) is the European based subsidiary of KIOXIA Corporation, a leading worldwide supplier of flash memory and solid state drives (SSDs). From the invention of flash memory to today's breakthrough BiCS FLASH 3D technology, KIOXIA continues to pioneer cutting-edge memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative 3D flash memory technology, BiCS FLASH, is shaping the future of storage in highdensity applications, including advanced smartphones, PCs, SSDs, automotive and data centers.

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