SK hynix Launches World-Class Low-Power NVMe Enterprise SSD

- SK hynix launched a low-power NVMe Enterprise SSD that offers best-in-class random read performance for power consumed and world-class Quality of Service
- All core components (controller, NAND, and DRAM) for not only Client SSD but also Enterprise SSD are designed, developed, and mass-produced completely in-house
- The launch will allow SK hynix to bolster its position in the Enterprise SSD market on top of the market for datacenter SSDs for the cloud

Seoul, June 20, 2019 – SK hynix Inc. (or 'the Company', www.skhynix.com) announced today that it launched a new low-power Non-Volatile Memory express (NVMe) Enterprise SSD (eSSD) with the 72-layer TLC 3D NAND flash that offers best-in-class performance for power as well as Quality of Service.

The product features an in-house NVMe controller on top of the 72-layer 3D NAND technology currently in mass production. With the launch, SK hynix has established itself as a memory producer that designs, develops, and mass-produces all key components, from NAND and DRAM to controllers, in-house, for not only Client but also Enterprise applications.

Meanwhile, power consumption of datacenters is an increasingly important concern in terms of energy and environmental preservation, as their footprint grows amid rising enterprise demand for cloud, Artificial Intelligence (AI), and Machine Learning (ML). As datacenters are expected to account for one-fifth of the world's energy consumption in 2025, low-power components that enable datacenter energy efficiency are expected to only grow in importance.

The new NVMe SSD targets the mainstream eSSD market with optimum performance, power and cost. With an eight-channel NAND interface, the drive provides the maximum density of up to 4TB in the M.2 form factor and 8TB in U.2., and delivers sequential read of up to 3.2GB/s and random write of 160K IOPS at 14W or below. Compared to the eSSD with 72-layer 256Gb 3D NAND, announced at the August 2018 Flash Memory Summit (FMS) and qualified with major datacenter companies, the new SSD improves sequential read by 30% and random write by up to 70% at the equal capacity and form factor. It supports both read-intensive and mixed-use applications, such as internet data centers, AI, ML, or Virtual Desktop Infrastructure (VDI).

With this product, SK hynix seeks to secure a leading edge in the eSSD market as it transitions from Serial Advanced Technology Attachment (SATA) to NVMe. The new SSD began its qualification with top-tier global cloud service providers and server makers, with volume production slated to begin in the second half of 2019. The Company also plans to launch a 16TB

eSSD based on 96-layer 4D NAND at the end of this year, with mass production starting next year.

To actively promote the product, the Company also plans to display it at marketing events such as HPE Discover in Las Vegas, U.S.A., which will be held from June 18th to 20th.

“Not only cloud hyperscalers, who already adopt NVMe as the mainstream interface, but also traditional datacenters are planning to make the transition. I hope SK hynix will excel in the eSSD market, thanks to the best-in-class performance of its NVMe offering,” said Vice President Kim Samil, Head of NAND Storage Marketing at SK hynix.

According to market researcher Forward Insights, NVMe SSDs are expected to make up more than half of the Enterprise SSD market in 2019, with the NVMe interface accounting for 90% or more of total SSD gigabytes by 2023.

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[Note] NVMe (Non-Volatile Memory Express) is a communication protocol for the PCIe (Peripheral Component Interconnect Express) interface that enables large-capacity command queuing, high bandwidth (8GT/s on PCIe Gen 3), and extensive parallel processing