Marvell Collaborates With Foxconn-Ingrasys, Accton And KIOXIA To Accelerate End-To-End Ethernet Storage Adoption

Key Industry Players Offer Innovative Ethernet Bunch of Flash Solutions that Bring New Levels of Storage Scalability, Performance and Efficiency from Edge to Cloud

SANTA CLARA, Calif., March 3, 2020 /PRNewswire/ -- Marvell (NASDAQ: MRVL) today announced that it is working with leading SSD vendor KIOXIA and original design manufacturers (ODMs) Foxconn-Ingrasys and Accton to bring its groundbreaking Ethernet Bunch of Flash (EBOF) technology solutions to market. As data growth continues to soar, data centers are faced with demand for greater storage bandwidth and capacity as well as lower latency. The EBOF architecture provides an innovative approach to address these challenges by offering an Ethernet fabric to scale flash and optimally disaggregate storage from compute. This results in significantly greater performance and lower total cost of ownership (TCO) for edge, enterprise and cloud data centers.

Today's announcement marks a milestone in helping accelerate the adoption of EBOF platforms that incorporate Marvell's NVMe™ over Fabrics (NVMe-oF™) Ethernet solid state drive (SSD) controllers, NVMe-oF Ethernet SSD converter controllers and Prestera® CX 8500 family of switches with Storage Aware Flow Engine technology. Marvell's EBOF technology provides greater flexibility for data center operators to develop their infrastructure and enables them to meet evolving workload demands with optimized scalable units of disaggregated storage.

In currently deployed and shipping Just a Bunch of Flash (JBOF) architectures, which are comprised of server-class CPUs, DRAM and the PCIe® fabric, compute and storage continue to be underutilized, with storage servers typically oversubscribed, resulting in increased capital and operational expenditures. Marvell's EBOF technology is designed to replace Just a Bunch of Flash (JBOF) architecture by integrating the Ethernet network interface directly into the flash drive. Compared to the existing JBOF architecture, Marvell's EBOF architecture can deliver 3X the performance while consuming lower power and enabling greater than 65%* TCO savings.

"Marvell's innovative EBOF architecture is poised to revolutionize edge to cloud data centers by addressing the growing needs for increased storage efficiencies and lower overall TCO," said Nigel Alvares, vice president of Solutions Marketing at Marvell. "We are excited to be collaborating with industry leaders KIOXIA, Foxconn-Ingrasys and Accton to proliferate the unique and game-changing disaggregation values of Ethernet storage to cloud data center operators, software-defined storage providers, server and storage system OEMs."

"It is clear that EBOF has the potential to be highly advantageous by enabling optimal storage disaggregation, eliminating costly CPU and DRAM components and increasing overall data center storage efficiencies," said Benjamin Ting, vice president of Ingrasys, Inc. a subsidiary of Foxconn Technology Group. "The ecosystem that we are establishing with Marvell will have far-reaching implications, making it much easier for our customer base to incorporate this technology into their next-generation data storage systems."

"We have great confidence in EBOF technology and its ability to disrupt the global data storage market," said C.C. Lee, president of Accton Technology Corporation. "Through this collaboration, our customers will have direct access to everything they need to begin storage infrastructure deployments using EBOF, and this is certain to be pivotal in accelerating its widespread adoption."

"KIOXIA's collaboration with Marvell, Foxconn-Ingrasys and Accton is pioneering the Ethernet-attached storage ecosystem. Our work together will realize what has, up until now, remained a dream of storage architects — the ability to deliver direct-attached performance from network-attached devices," stated Alvaro Toledo, vice president of SSD marketing and product planning at KIOXIA America, Inc. "This EBOF concept is a significant leap forward in enabling the true potential of NVMe over fabrics, eliminating network bottlenecks, and driving efficiency gains to a wide range of industry segments."

Key EBOF Platform Highlights

- The Foxconn-Ingrasys EBOF platform is a 2U chassis with 24 SSDs in a U.2 form factor and 48 SSDs in an EDSFF E1.S form factor.
- The Accton EBOF platform is a 2U chassis that can accommodate 24 SSDs in a U.2 or EDSFF E1.S and EDSFF E1.L (9.5 mm) form factor.
- Fully compliant to SNIA SFF-9639 standards
- Marvell's EBOF SDK version 1.0, leveraging the SONiC network operating system
- Latest generation of enterprise NVMe SSDs from KIOXIA

Customer samples are available in early Q2 of 2020.

*Excludes SSD costs for each architecture

About Marvell
Marvell first revolutionized the digital storage industry by moving information at speeds never thought possible. Today, that same breakthrough innovation remains at the heart of the company's storage, processing, networking, security and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell's semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial, and consumer markets. To learn more, visit: https://www.marvell.com/

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