

# Marvell Introduces Industry's First NVMe-OF SSD Converter Controller

## **Marvell 88SN2400 Converts an NVMe SSD into an NVMe-oF SSD to Enable Optimal High-Performance Disaggregated Storage Resulting in Lower TCO for Cloud and Enterprise Data Centers**

SANTA CLARA, Calif., Aug. 7, 2018 /PRNewswire/ -- Marvell (NASDAQ: MRVL) today announced the industry's first NVMe over Fabric™ (NVMe-oF™) SSD converter controller, the 88SN2400, for cloud and enterprise data centers. The 88SN2400 controller is designed and optimized to convert an NVMe™ solid state drive (SSD) into an NVMe-oF SSD, providing a revolutionary architecture that increases utilization and scalability of SSDs within the data center to ultimately lower total cost of ownership (TCO). By bringing low latency access over the fabric and exposing the entire SSD bandwidth to the network, the Marvell® controller supports true scalable, high-performance disaggregation of storage from compute. The 88SN2400 utilizes a simple, low-power and compute-less Ethernet fabric instead of a traditional PCIe® fabric controlled and managed by an enterprise-class server SoC with integrated 100GE controllers.

Experience the interactive Multichannel News Release here: <https://www.multivu.com/players/English/8207257-marvell-nvme-of-ssd-converter-controller/>

As data growth continues to soar, data centers are grappling with the increasing power consumption, complexity, and costs associated with the demand for greater storage bandwidth and capacity. However, compute and storage continue to be underutilized, with storage servers typically oversubscribed, resulting in increased capital expenditure and operational expenditure. The Marvell SSD converter controller allows greater flexibility for data center operators and designers to develop their infrastructure and enables them to meet evolving workload demands with optimized scalable units of disaggregated flash storage and storage class memory (SCM).

The SSD converter controller is powering an innovative class of low-power, low-latency and high-performance Ethernet Bunch of Flash (EBOF) storage appliances. In a typical high-end 2U24 shelf with Gen3x4 SSDs, the 88SN2400 can support up to 18M input/output operations per second (IOPS). Utilizing a Marvell Ethernet switch that supports 2Tb/s and the Marvell 88SN2400, data center operators will be able to benefit from a 150GB/s pipe of pooled storage, and better power consumption per IO compared to general purpose architectures. The SSD converter controller is optimized for a small footprint and can be attached to existing backplanes providing ease of service and eliminating single point of failure. The technology can also be designed into future Marvell SSD and emerging SCM controllers.

"As cloud and enterprise data centers increase their deployments of flash storage and emerging storage class memories to address growing and diversifying workloads such as AI and analytics, it is paramount they optimize the utilization, efficiency and scale of these costly resources," said Nigel Alvares, vice president of SSD and Data Center Storage Solutions at Marvell. "Our converter controller enables disruptive disaggregated NAND and SCM SSD architectures that can be composed, provisioned and assigned real-time to lower cloud and enterprise data centers total cost of ownership."

"Through our longstanding relationship with Marvell, we have shared a strong commitment to storage technology innovation," said Shigeo (Jeff) Ohshima, Technology Executive, SSD Application Engineering at Toshiba Memory Corporation. "The development of our Ethernet direct-attached NVMe-oF SSD prototype with the new Marvell 88SN2400 is built on our collaborative vision to help our data center customers achieve higher performance, lower cost and lower power consumption."

"The Marvell 88SN2400 is the industry's first NVMe-oF SSD converter controller technology providing an innovative solution to enabling NVMe-oF architectures with existing NVMe SSDs," said John Chen, vice president of TRENDFOCUS. "The ability to expose the full SSD bandwidth to the network will enhance operational efficiencies and reduce costs in the data center. Leveraging the solution's Ethernet feature will provide access to remote storage nodes with minimum added latency as compared to direct attached storage, making this solution a very interesting proposition for the industry."

Marvell is showcasing its new NVMe-oF SSD converter controller at booth 511 at the Flash Memory Summit, Santa Clara Convention Center, August 7-9. At the Summit, Nigel Alvares will present a keynote, "Optimizing Storage Solutions for Data Center Applications" on August 8 at 1:30 p.m. Shahar Noy, senior director of product marketing at Marvell, will present "Scale-Out Architecture Using SSD Attached NVMe-oF Controllers," during the NVMe-oF track on August 9 at 8:30 a.m.

Samples of the Marvell 88SN2400 are available now. For more information on the 88SN2400 and how it can help

architect new solutions for the data center, please visit:

<https://www.marvell.com/storage/system-solutions/nvme-controllers/>.

## 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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