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Product Brief

Marvell® NVMe-oF SSD Converter Controller

Supports scalable, high-performance disaggregation of storage from compute

Overview

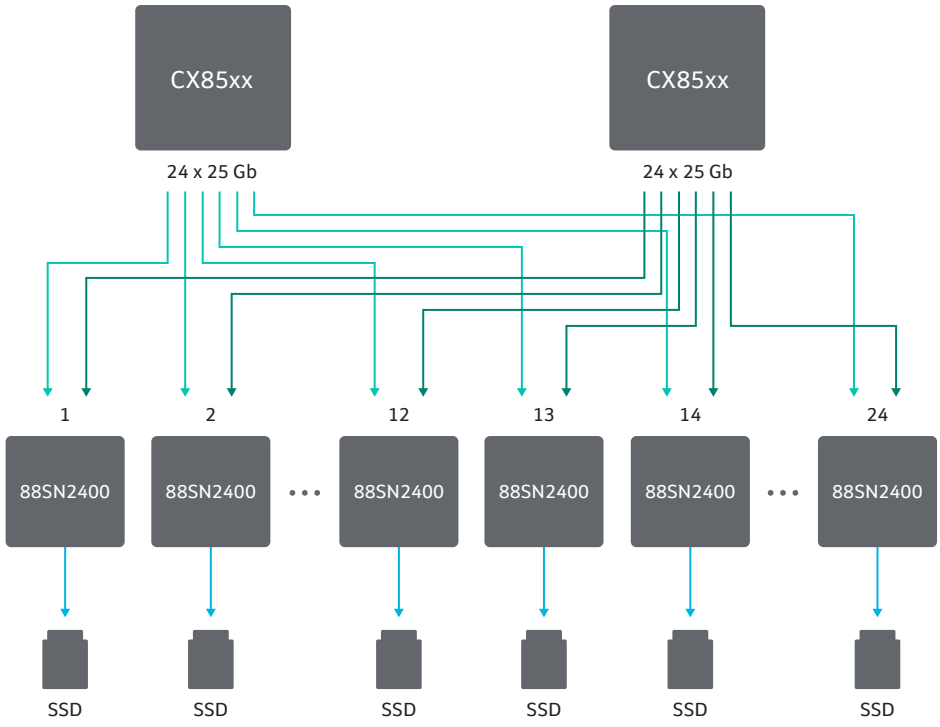
The Marvell® 88SN2400 is the industry's first NVMe over Fabric (NVMe-oF™) SSD converter controller. Designed and optimized to convert any NVMe solid state drive (SSD) into an NVMe-oF-SSD, the 88SN2400 provides an innovative architecture that increases utilization and scalability of SSDs within the data center to ultimately lower total cost of ownership.

A drive-attached solution, the 88SN2400 enables a revolutionary architecture that supports true scalable high-performance disaggregation of storage from compute by bringing low latency access over the fabric and exposing the entire SSD bandwidth to the network. It does this by using an Ethernet fabric instead of a PCIe fabric controlled and managed by a high-power CPU.

The 88SN2400 can also be architected in Ethernet Bunch of Flash (EBOF) storage appliances. In a typical high-end 2U24 shelf with Gen3x4 SSDs, the solution can support up to 18M IOPS. Utilizing a Marvell Ethernet switch that supports 2Tb/s and the 88SN2400, data center operators can benefit from a 150GB/s pipe of pooled storage, and better power consumption per IO compared to general purpose architectures.

The Marvell NVMe-oF 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. It can also be designed into future Marvell SSD and emerging storage class memory (SCM) controllers.

Application Diagram



Shared Accelerated Storage Architecture for the Enterprise Data Center

Target Applications

- NVMe-oF NAND SSDs
- NVMe-oF SCM SSDs
- NVMe-oF SAS/SATA JBODs
- SAS JBOF replacement – Ethernet Bunch of Flash (EBOF) using dual-ported NVMe-oF SSDs
- Storage disaggregation

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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, networking and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial, and consumer markets. For more information, visit www.marvell.com.

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