Broadcom Enhances Industry's First NVMe RAID Solution with New Software, Drive Topology and Management Capabilities

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Industry-leading server OEMs now offering unified server RAID solution for SAS, SATA and NVMe devices

SAN JOSE, Calif., Nov. 15, 2018 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO) today announced the broader deployment of its NVMe hardware RAID solutions with new capabilities. As a long-trusted supplier of silicon, chips, adapters, and software to server OEMs and device manufacturers, Broadcom continues its commitment to invest in Tri-Mode product development, which includes the development of new industry standards, leading the ecosystem enablement, and SAS/SATA/NVMe device compatibility testing.

The Broadcom NVMe RAID family further extends its NVMe portfolio launched in 2016, comprised of 32 NVMe hardware RAID adapters and the 7th generation of MegaRAID® software. Additional benefits of the Broadcom investment in NVMe include:

- Compliance to the latest Storage Industry standards (U.3, SFF-TA-1001) and (UBM, SFF-TA-1005)
- x1, x2 and x4 direct attached device support
- NVMe drive interoperability; completed qualification with 7 drive vendors

"Broadcom's investment in NVMe is backed by a commitment to next-generation server RAID silicon and software, industry standards, and robust compatibility; further enabling the ecosystem with the critical NVMe building blocks they demand," said Jas Tremblay, vice president and general manager, Data Center Solutions Group, Broadcom. "For several applications, data centers depend on Broadcom RAID and have started deployment with NVMe drives."

The Broadcom storage test team has been helping storage vendors harden SAS/SATA drives for 12 years. The storage test team works with third party drive vendors to qualify enterprise-ready devices, giving customers confidence when selecting which components to integrate with Broadcom storage devices. The team has developed many test cases for NVMe drives, including Mixed Mode, Hot Add/Remove and Stress tests while testing more than 50 drive models to date.

Industry-leading server and drive providers are now deploying Broadcom's NVMe hardware RAID. This cutting-edge technology enables customers to build flexible, high-performing, low-latency enterprise systems across a range of applications and industries.

Supporting Industry Quotes:

"NVMe-based storage servers, rack and flash arrays are becoming a necessity in the rapidly changing data center and cloud computing market, especially for those building mixed-drive hybrid solutions for hyper-scale and big data applications," said CT Sun, CTO and vice president of engineering, at AIC. "Broadcom's NVMe Hardware RAID solutions allows us to accommodate small footprint requirements where high-bandwidth, high-density, and reliability is essential."

"The addition of Broadcom NVMe RAID technology to our data storage servers allows us to continue to enable customers to scale their data center and cloud infrastructure at their optimal performance-price requirements," said James Huang, sr. product manager at AMAX. "NVMe hardware RAID offers value to the ecosystem, to help streamline and simplify data management for today's constantly growing data demands."

"NVMe technology allows us to deliver high-performance, high-dense storage to a wide range of applications, from graphic-heavy, data-intensive workloads, to military deployments where rapid deployment is critical," said Gene Lee, president of Echostreams. "The Broadcom family of NVMe Hardware RAID adapters enables us to build solutions where capacity and throughput is sustained and improved as data requirements increase."

"FUJITSU Dual and Quad Server systems Generation M4 when combined with Broadcom NVMe Hardware RAID helps to expand PRIMERGY servers to broad application scenarios and will enable customers to build expandable, cost-efficient large-scale and versatile systems across a range of industries and applications," said Armin Kumpf, head of server product management and development at FUJITSU.

"Huawei has partnered with Broadcom to release the new NVMe SSD hardware RAID solution, which enables a high reliability and more flexible NVMe SSD solution. This solution can support RAID 1/5/6 and pass-through mode, hot-swap and has better main stream OS compatibility," said Qiu Long, president of the Intelligent Computing Product Line at Huawei. "An early mover in the PCIe SSD industry since 2005, Huawei has a 13-year deposit of experience with enterprise SSDs. Huawei has been constantly inspired by the notion of 'Faster, Smarter, and Simpler' and built the ES3000 V5 series around this mindset."

"As storage performance requirements evolve, the ecosystem has an increased need to provide customers with flexibility and scalability for a wider range of NVMe, SAS and SATA solutions," said Sherman Tang, CTO for Jabil Compute and Storage. "Broadcom's Tri-Mode technology and NVMe Hardware RAID solutions are key enabling components for versatility in adapting to provide a solution for any customer's applications or storage demands."

"QCT continues to work with Broadcom enterprise storage solutions to provide our hyperscale customers with the cutting-edge technologies they require," said Mike Yang, president of Quanta Cloud Technology (QCT). "Broadcom's NVMe hardware RAID solutions enable the data center to build faster, flexible applications requiring high-performance connectivity, scalability and mixed topology support."

"Design flexibility, especially in Hyper-V and VMware applications, are critical for building next-generation storage and server appliances," said David Lebov, vice president of sales at Source Code. "Broadcom's Tri-Mode technology allows us to deliver customized computer solutions to customers beginning to transition to NVMe technology."

"The UBM and U.3 standards help simplify the server and drive bay infrastructure for customers, making it easy to deploy any type of SSD, and particularly to accelerate the migration away from the legacy 6Gb/s SATA protocol," said Jeremy Werner, general manager and senior vice president, SSD business unit, Toshiba Memory America Inc. "By collaborating with Broadcom to ensure our SAS and NVMe devices are part of a stringent testing process, we can confidently deliver a high performing and innovative solution to our customers."

Two industry standards that are helping to enable the deployment of Broadcom's Tri-Mode family of adapters include:

- SFF-TA-1001 (U.3), which defines a common bay type for SAS, SATA and NVMe
- SFF-TA-1005, or Universal Backplane Management (UBM), which defines a common backplane control and management framework for SAS, SATA and NVMe drives.

Tri-Mode, together with U.3 and UBM, will define the ingredient capabilities to easily deploy SAS/SATA and NVMe in next-generation server storage systems.

Broadcom is the #1 trusted market leader in storage connectivity and continues to innovate and invest in the industry's broadest products portfolio including PCIe & NVMe Switches, SAS/SATA Controllers and Expanders, HBAs, RAID Adapters, Fibre Channel, HDD SoCs and PreAmps and SSD SoCs. With a 25-year history delivering high quality silicon, advanced firmware, innovative board design, and extensive HDD/SSD validation processes, Broadcom is the leading supplier of choice for server and external storage OEMs, system builders and Hyperscale customers.

For more information about the Broadcom Tri-Mode 9400 family of 12Gb/s MegaRAID solutions, visit https://www.broadcom.com/products/storage/

About Broadcom
Broadcom Inc. (NASDAQ:AVGO) is a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions. Broadcom Inc.'s extensive product portfolio serves four primary end markets: wired infrastructure, wireless communications, enterprise storage and industrial & other. Applications for our products in these end markets include: data center networking, home connectivity, set-top box, broadband access, telecommunications equipment, smartphones and base stations, data center servers and storage, factory automation, power generation and alternative energy systems, and electronic displays. For more information, go to www.broadcom.com.

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