



Broadcom's Industry-Leading Data Center SoC Delivers Breakthrough Performance & Efficiency for Smart NIC & Scale-Out Storage

August 3, 2017

News Highlights:

- *Industry's first 100G Smart NIC SoC enabling integration into industry standard server platforms*
- *Industry's first programmable 3GHz ARMv8 100G SoC optimized for NVMe-oF scale-out storage designs*
- *Highly-optimized Smart NIC and storage target SoCs integrating Broadcom's market-leading NetXtreme® Ethernet controller with TruFlow™ packet processing technology*

SAN JOSE, Calif. and SINGAPORE, Aug. 03, 2017 (GLOBE NEWSWIRE) -- Broadcom Limited (NASDAQ:AVGO), a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions, today announced a new family of data center system-on-chip (SoC) devices, the BCM58800, designed for Smart NIC and scale-out storage applications. The BCM58800 provides significant advantages by integrating Broadcom's market-proven 100G NetXtreme® Ethernet NIC, eight high-performance 3GHz 64-bit ARM® v8 Cortex®-A72 cores, 100G encryption / decryption, and PCIe 3.0 connectivity. Using the 16nm FinFET+ process minimizes power consumption and enables the highest CPU performance to deliver breakthrough data plane acceleration and storage performance in a compact form factor.

Key Features & Benefits

- **Advanced Smart NIC Adapter with Highly Efficient Hardware Acceleration Engines**
 - Integrates industry-standard ARM processors, encryption / decryption offload engines, and a 100G full-featured NetXtreme NIC with TruFlow™ connected to high-speed interfaces to accelerate application performance
 - Incorporates RoCEv2 and SR-IOV enhancing network data transfers and I/O performance
 - Fits in industry standard server form factors including a half-height, half-length PCIe form factor for ease of deployment
- **Compact Low-power, High-performance 100G Data Center SoC**
 - Octa-core 3GHz ARMv8 Cortex-A72 CPU architecture with optimal power efficiency and industry leading performance enabled by 16nm FinFET+ process
 - 3 DDR memory channels delivering up to 50% higher memory bandwidth for improved application performance compared to dual-channel implementations
- **Highly-optimized 100G NVMe-over-Fabric (NVMe-oF) Storage Target Controller**
 - High-bandwidth 100G Ethernet connectivity maximizes data access performance and scalability of disaggregated storage
 - Fully integrated NVMe-oF solution with erasure and RAID offload engines minimizes latency to improve overall system performance

"Integrating an industry-leading 3GHz CPU complex with our market-leading NetXtreme Ethernet NIC portfolio in a low power footprint, the BCM58800 sets the bar for SmartNIC and NVMe-oF disaggregation storage solutions," said Ed Redmond, senior vice president and general manager of the Compute and Connectivity Division at Broadcom. "The feature set and performance of this purpose-built data center SoC is unprecedented and will allow our customers to build and deliver innovative SmartNIC and NVMe-oF solutions never before possible."

"As the industry looks for solutions to tackle the challenges of continually and quickly evolving datacenters, SmartNICs with 64-bit ARM support offer a new solution with the flexibility to keep pace," said Leendert Van Doorn, Distinguished Engineer, Microsoft Corp. "Small form factor, low power solutions built with 3GHz ARM processors that conform to industry standards are showing an ability to quickly respond to the continual changes in the datacenter."

"Quanta/QCT is excited to be partnering with Broadcom on next generation server and storage technologies to address the continued need for accelerated data center systems. Enabled by Broadcom's latest data center storage technology in all-flash NVMe drive arrays, we can meet our customers' strictest workload needs," said Mike Yang, president of QCT. "Through this partnership, we are looking forward to our customers enjoying servers with improved data rates."

"Wistron is committed to the NVMe-oF market and believes the BCM588xx will help enable our success in this new and growing storage market," said Peter Tung, chief operation officer of Enterprise Business Group at Wistron. "The combination of Broadcom's expertise in networking and storage SoC along with Wistron's market-leading storage appliances will provide a powerful NVMe-oF solution to our end customers."

"The BCM58800 from Broadcom is an ideal SoC solution for our NVMe over Fabric storage products to directly address the newly developing NVMe-oF market," said Stephen Cheng, senior director of Hardware Platform Solutions at Celestica. "Creating storage solutions that combine Broadcom's BCM58800 and Celestica's market-leading NVMe storage platforms allows our end customers to easily take advantage of all the benefits NVMe-oF has to offer with minimum effort while maximizing performance."

"CNEX Labs is pleased to partner with Broadcom to bring ground-breaking, highly scalable NVMe-oF reference designs to the rapidly growing data center storage market," commented Dr. Alan Armstrong, CEO of CNEX Labs. "Broadcom is a global leader in Ethernet networking and SoCs, and the

combination of Broadcom's BCM58800 data center SoC for NVMe-oF disaggregated storage arrays and CNEX Labs' best-in-class NVMe and Open Channel SSD controllers will bring unprecedented quality-of-service (QoS), throughput, power efficiency, and scalability to meet the increasingly diverse and stringent demands of the cloud and hyper-scale storage market."

"With storage disaggregation and NVMe adoption driving the growth of NVMe-oF, we project Ethernet is well positioned to capture 75% of the NVMe-oF market," said Mike Heumann, managing partner of G2M. "Broadcom is well positioned to capitalize on the quickly evolving NVMe-oF market with its new BCM58800 SoC which provides a 100G fabrics solution in a power efficient design with industry leading 3GHz ARM processing complex. These capabilities should enable end users to meet the increasing demands of this fast growing market."

Availability

Broadcom is currently sampling the compact BCM58802 controller in a production Smart NIC form-factor (half-height, half-length PCIe 3.0 NIC) along with the BCM58808 controller in an ATX-style platform for storage target evaluation. Please contact your local Broadcom sales representative for samples and pricing.

Further information on Broadcom's BCM58800 products is available online at <https://www.broadcom.com/products/ethernet-connectivity/controllers/bcm58800>

About Broadcom Limited

Broadcom Limited is a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions. Broadcom Limited'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.

Broadcom, the pulse logo, Connecting everything, and Avago Technologies are among the trademarks of Broadcom. The term "Broadcom" refers to Broadcom Limited and/or its subsidiaries. Other trademarks are the property of their respective owners.

Press Contact:

Khanh Lam

Corporate Communications

press.relations@broadcom.com

Telephone: +1 408 433 8649



Broadcom Limited