

Broadcom Announces New Trident-II+ Series to Deliver Enhanced 10G Ethernet to Enterprise Data Centers

Most Optimized Switch SoC for Network Virtualization Drives Broad Adoption of Merchant Ethernet Silicon

IRVINE, Calif., April 20, 2015 /PRNewswire/ --

News Highlights:

- Economical, efficient, feature-rich platform accelerates enterprise transition to high density 10GbE
- Delivers 30 percent lower power, larger table sizes and double the network virtualization performance¹
- Drop in, hardware-compatible upgrade for Trident-II — the most pervasive switch SoC in the industry²
- 100GbE ports provide optimized connectivity to StrataXGS® Tomahawk™ and StrataDNX™ families

Broadcom Corporation (NASDAQ: BRCM), a global innovation leader in semiconductor solutions for wired and wireless communications, today announced the next-generation of its StrataXGS Trident Ethernet switch portfolio, the Trident-II+ Series. Optimized to meet the bandwidth, scalability and efficiency demands of 10GbE virtualized data centers, the highly integrated devices offer 1.28 terabit per second (Tbps) switching performance, 30 percent lower power and double the performance for data center virtualization overlays, such as VXLAN. For more news, visit Broadcom's [Newsroom](#).

In today's enterprise data centers, more than 60 percent of installed servers continue to run Gigabit Ethernet (1GbE) network connections³. The majority of these server ports are expected to transition to 10GbE over the next four years³. Broadcom's Trident-II+ Series enables networking OEMs to deliver a full portfolio of enterprise-optimized, feature-rich, high-density 10GbE top-of-rack (ToR), blade and aggregation switches to serve this transition. Built on Broadcom's industry-leading StrataXGS architecture, the 28 nanometer (nm) Trident-II+ Series provides a simple, drop-in power and efficiency improvement for the industry's leading switch silicon, with a comprehensive set of feature and performance upgrades.

"Over the past five years, multiple StrataXGS Trident generations have helped drive the adoption of 10GbE in cloud and mega scale data centers with standard, cost-efficient, merchant silicon based platforms," said Ram Velaga, Broadcom Senior Vice President & General Manager, Network Switch. "Our latest Trident-II+ series offers the economics, performance and virtualization capabilities required to lead a similar transition across enterprise data centers worldwide."

Designed for enterprise data centers of all sizes, the Trident-II+ Series delivers the industry's most comprehensive and field-proven feature set for network virtualization. This includes single-pass VXLAN routing that doubles gateway performance in all network topologies, as well as support for pre-standard GENEVE overlays.

"The collaboration between Broadcom and VMware to define and build robust underlay-overlay technologies allows customers today to deploy fully virtualized networks for greater operational efficiency," said Hatem Naguib, vice president, Networking and Security at VMware. "Mainstream enterprises using our VMware NSX™ network virtualization platform on top of a StrataXGS Trident-II+ based physical network get first-class VXLAN support as well as future support for Geneve - enabling efficient, secure and agile data center networks."

Providing an ideal complement to Broadcom's latest StrataXGS Tomahawk and StrataDNX switch SoCs, the Trident II+ Series provides 100GbE connections to the spine layer and between racks, while supporting 10GbE connections to the servers in enterprise and private cloud deployments.

"Enterprise data centers are still in the early stages of a very large upgrade to 10GbE servers and 10GbE top of rack switches," said Seamus Crehan, [Crehan Research](#) President. "At the same time, there is growing demand for cost-

effective 100GbE spine switches. As a result of these two parallel upgrades, we forecast strong enterprise data center demand for optimized high density 10GbE switches with 100GbE uplinks through the end of the decade." Power consumption and cooling is also a top priority in modern data centers. The Trident II+ Series reduces power dissipation of existing Trident-II designs throughout the network - by up to 30 percent for each typical ToR switch chipset. For an enterprise data center hosting 300 ToR switches, this can lead to annual power savings of well over 100 megawatt hours (MWh), resulting in greater IT energy efficiency and lower operating expenses.

StrataXGS Trident-II+ (BCM56860) Series Key Features

- Standards-compliant high-density 10GbE/40GbE/100GbE switch SoC
- Single-pass routing in/out of tunnels (RIOT) at 1.28 Tbps
- High-performance tunneling support for VXLAN, NVGRE, MPLS, SPB, and pre-standard Geneve
- 128 low-power optimized 10Gbps serial interfaces with up to 8 ports of 100GbE
- Broadview™ instrumentation featuring buffer statistics tracking (BST) and flex counters
- Enhanced ContentAware engines with 4x larger ACL rule databases versus previous generation devices
- OpenFlow 1.3.1+ support scaling to several 10,000's of flows using OF-DPA and third-party controllers
- Configurable SmartTable technology to maximize L2 MAC, L3 Host, LPM forwarding database capacities
- Full IPv4 and IPv6 unicast and multicast routing support
- Integrated SmartBuffer for optimal burst absorption, dynamic thresholding and lossless service
- SmartHash™ flexible engine featuring highly scalable ECMP load balancing and network resiliency
- FlexPort technology enables dynamically configurable ports/MACs
- Ethernet Port Multiplier technology supports fine-grained channelization over Ethernet and enterprise fabrics

Availability

Broadcom's StrataXGS Trident-II+ switch SoCs are currently sampling.

For ongoing Broadcom news visit our [Newsroom](#), read our [B-Connected Blog](#), or visit us on [Facebook](#) or [Twitter](#). And to stay connected, subscribe to our [RSS Feed](#).

Resources

¹ As compared to previous generation StrataXGS Trident-II devices

² Linley Group, Ethernet Switch Market, 2014

³ Crehan Research 1GbE versus 10GbE Server-Class Adapter & LOM Port Mix, 2015

About Broadcom

Broadcom Corporation (NASDAQ: BRCM), a FORTUNE 500® company, is a global leader and innovator in semiconductor solutions for wired and wireless communications. Broadcom® products seamlessly deliver voice, video, data and multimedia connectivity in the home, office and mobile environments. With one of the industry's broadest portfolio of state-of-the-art system-on-a-chip solutions, Broadcom is changing the world by connecting everything®. For more information, go to www.broadcom.com.

Broadcom®, the pulse logo, StrataXGS®, StrataDNX™, Broadview™, SmartHash™, Tomahawk™, Connecting everything® and the Connecting everything logo are among the trademarks of Broadcom Corporation and/or its affiliates in the United States, certain other countries and/or the EU. Any other trademarks or trade names mentioned are the property of their respective owners.