



## Broadcom Breaks New Ground with Trident SmartToR, Converging Switching, Routing, and L4-L7 Services

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### Delivers 100x the Performance Compared to Current Industry Solutions

SAN JOSE, Calif., Dec. 02, 2020 (GLOBE NEWSWIRE) -- [Broadcom Inc.](#) (NASDAQ:AVGO) announced today an industry first with Trident SmartToR (Smart Top-of-Rack), expanding the reach of merchant silicon to software-defined, fully-programmable switching, routing, and L4-L7 services at unprecedented scale. The Trident SmartToR architecture empowers a new generation of smart networking products with orders of magnitude better performance than solutions currently available in the market.

Over the last decade, merchant silicon has evolved from basic L2 switching to the world's highest-performance switching and routing solutions. Trident SmartToR takes this to the next level with support for high-performance, advanced network services.

"Truly revolutionary, Trident SmartToR delivers unmatched performance and scale, along with merchant-silicon economics, to disrupt the L4-L7 network services market, which until now has relied on low-performing and expensive processors and FPGAs— this new offering is a true game changer," said Ram Velaga, senior vice president and general manager, Core Switching Group, Broadcom.

Trident SmartToR enables a 100x performance increase with massive capacity: tracking 3 million connections with 3 million connection-level policies, as well as 1 million tunnels and over 1 million stateful counters for metering and telemetry.

Trident SmartToR uses a software-defined pipeline that covers switching, routing, and advanced L4-L7 network services. In addition, this pipeline enables user-defined instrumentation and analytics at the packet and connection level with nanosecond resolution. Trident SmartToR can also perform essential analytics filtering functions such as deduplication, categorization, and summarization to provide specific and actionable insights.

A leading-edge solution, Trident SmartToR also has integrated line-rate MACSec/ IPsec for pervasive security, powered by a programmable encryption engine, which maintains operational flexibility while securing network traffic.

The unparalleled breadth of Trident SmartToR's capabilities expands its reach far beyond that of a standard top-of-rack switch, enabling merchant silicon to cover applications such as:

- Stateful L4 load balancer
- NAT/NAPT appliance with zero latency addition for new addresses
- VxLAN gateway
- High-performance DDoS attack mitigation
- High-scale, line-rate packet broker

Trident SmartToR is now shipping. Please contact Broadcom for further details. To learn more about the Broadcom Trident SmartToR click [here](#). For more information on all Broadcom solutions please visit [www.broadcom.com](http://www.broadcom.com).

### Industry Quotes

#### Yiqun Cai, VP of Networking, Alibaba Intelligent Cloud:

"Alibaba has had a long and successful history of collaboration with Broadcom. The new Trident SmartToR family comes with enhanced programmability, state-aware processing, and extensive table and tunnel expansion. These new SmartToR features will enable Alibaba to deliver a new generation of high-performance and high throughput data center network infrastructure."

#### John McCool, Chief Platform Officer, Senior Vice President of Engineering and Operations, Arista Networks:

"The Arista 7050X and 7300X Series running EOS<sup>®</sup> provide a best-of-breed switching for enterprise data center environments, powered by multiple generations of the Broadcom Trident architecture. We are enthusiastic about the new Trident SmartToR for an expanded set of networking roles and features such as flow state and visibility across client to cloud enterprise. Our customers continue to value the benefits of innovative merchant based silicon, versus the complexity of legacy solutions."

#### Devesh Garg, CEO, Arrcus Inc.:

"We are excited to leverage the massive scale and compiler-programmable instrumentation of the new Trident SmartToR to open up new use cases. ArcOS, our network operating system solution, with unparalleled performance and low latency along with its support of advanced protocols such as SRv6, enables the new Trident SmartToR capabilities to meet customer requirements— from the data center to the 5G Edge to the multi-cloud."

#### Andy Athreya, EVP and Chief Development Officer, Juniper Networks:

"Juniper Networks utilizes Trident architecture to provide higher-density and higher-performance systems for data center and campus networks. We look forward to the introduction of the Trident SmartToR family to expand the reach of our industry-leading Junos OS to deliver flexible, yet simple-to-operate solutions at scale for our cloud, service provider and enterprise customers."

#### David Maltz, Technical Fellow, Microsoft:

"This new Trident device is an innovative addition to Broadcom's switching portfolio supporting SONiC. We commend Broadcom for taking advantage of the advanced 7nm process node to deliver policy flexibility and complex packet transformations at scale expressed via extensions to SAI. This addresses high performance use cases like Appliances, Edge and 5G applications."

#### Liu Zhongdong, President and CEO, Ruijie Networks:

"Ruijie is a recognized and trusted partner, delivering advanced networking solutions to the Cloud customers. The newly introduced Trident SmartToR switch silicon enables a new generation of versatile, power-optimized, and extremely high performance Cloud networking devices. Trident SmartToR enables both Ruijie and Broadcom to continue our leadership position in the Cloud market."

**Andrew Qu, Chief Network Architect, Tencent:**

"Trident SmartToR provides Tencent a tremendous opportunity to consolidate our data center ToR, load balancer, NAT, firewall, and gateway appliances into a single, unified platform. This unified system design greatly reduces our R&D investment, while significantly improving our time-to-market for introduction of new technologies. Furthermore, Broadcom has solidified their 7nm leadership with a broadened portfolio to complement the existing Tomahawk4 and Trident4 products."

**About Broadcom**

Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops and supplies a broad range of semiconductor and infrastructure software solutions. Broadcom's category-leading product portfolio serves critical markets including data center, networking, enterprise software, broadband, wireless, storage and industrial. Our solutions include data center networking and storage, enterprise, mainframe and cyber security software focused on automation, monitoring and security, smartphone components, telecoms and factory automation. For more information, go to [www.broadcom.com](http://www.broadcom.com).

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