Broadcom Ships Jericho2, Industry's Highest Bandwidth Ethernet Switch-Router at 10 Terabits per Second

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Jericho2 Accelerates the Merchant Silicon Revolution in Carrier and Cloud Networks

SAN JOSE, Calif., March 06, 2018 (GLOBE NEWSWIRE) -- Broadcom Limited (NASDAQ:AVGO), today announced the immediate availability of Jericho2® and FE9600 - the next generation of the StrataDNX family of system-on-chip (SoC) Switch-Routers. Shipping within 24 months from its predecessor Jericho+, Jericho2 delivers 5X higher bandwidth at 70% lower power per gigabit.

Supporting high-density industry standard 400GbE, 200GbE, and 100GbE interfaces, Jericho2 offers 10 Terabits per second of Switch-Router performance. Coupled with groundbreaking innovations such as Elastic Pipe™ packet processing and large scale buffering with integrated High Bandwidth Memory (HBM), Jericho2 is designed to meet the most challenging needs of carrier networks while offering disruptive economics.

In addition to Jericho2, Broadcom is shipping FE9600, the new fabric switch device with 192 links of the industry's best performing and longest-reach 50G PAM-4 SerDes. At 9.6 Terabits per second fabric capacity, FE9600 offers over 50% reduction in power per gigabit compared to its predecessor FE3600.

These new SoCs provide a complete solution for service provider, cloud data center, and large enterprise networks.

"The Jericho franchise is the industry's most innovative and scalable silicon used today in various Switch-Routers by leading carriers," said Ram Velaga, Broadcom senior vice president and general manager, Switch Products. "I am thrilled with the 5X increase in performance Jericho2 was able to achieve over a single generation. Jericho2 will accelerate the transition of carrier grade networks to merchant silicon based systems with best-in-class cost/performance."

"The router market was dominated for years by OEM-ASIC companies with merchant silicon falling short in functionality and flexibility required for this challenging market," said Bob Wheeler, principle analyst at the Linley Group. "Jericho opened the door for merchant silicon to take some of this market. With the introduction of the new 10Tbps, feature rich, and highly flexible Jericho2, it will be even more challenging to justify the resources needed for continued OEM-ASIC development."

Carriers will upgrade their routed network infrastructure to address the major growth in bandwidth, driven by new services and the increased number of users, which coincides with the introduction of 5G mobile networks. Jericho2 opens service providers to a cost optimized, high-bandwidth, and low power choice for their router systems, thus revolutionizing the economics of building and maintaining edge, aggregation, and core networks.

Carrier networks require a high level of flexibility to address emerging use cases, standards, and protocols. Jericho2 introduces the innovative Elastic Pipe™ technology, an evolution of the StrataDNX field-proven programmable pipe architecture. The Elastic Pipe future-proofs Jericho2 Switch-Routers by enabling new services while avoiding costly hardware replacements. In addition, the innovative Modular Centralized Database capability of Jericho2's Elastic Pipe enables flexible deployments across different networks and in multiple locations within the same network.

StrataDNX Family Key Features

- **Jericho2 (BCM88690)**
  - Future-proofing via Elastic Pipe™
    - Flexible binding of a centralized database to any stage of the pipe
    - Extending Jericho2 pipe via reserved general purpose stages
  - High bandwidth, low power, and in-package HBM packet memory offering up to 160X more traffic buffering compared with on-chip memory, eliminating packet drops
  - Up to 10Tb/s switching capacity per device
  - High-speed, high-density port interfaces up to 400GE leveraging best-in-class 50Gb/s PAM-4 SerDes
  - Carrier grade Hierarchical Traffic Manager
  - Large scale, hardware-accelerated instrumentation and telemetry
- **FE9600 (BCM88790)**
  - Chassis switch fabric supporting 9.6 Tb/s per device
  - Interconnect for up to 192 BCM88690 devices providing total system capacity of 900 Tb/s
  - One generation of backward and forward compatibility

Availability

Broadcom is now shipping Jericho2 (BCM88690) and FE9600 (BCM88790) devices to qualified customers.

Industry Quotes

End Customers

Chris Rice, senior vice president of Domain 2.0 Architecture and Design, AT&T

"At AT&T we are fully committed to leading the industry towards a new networking paradigm, one that delivers faster networks, quicker innovation cycles and lower CAPEX and OPEX, while most importantly - staying ahead of our customer needs. Merchant Silicon, as well as hardware/software

disaggregation, are instrumental to this future. Broadcom's Jericho2 10Tb/s Router chip is in line with this vision and could enable AT&T to accelerate this transition."

Dr. Han Li, director of Network Research Institute, China Mobile Communications Corporation

"China Mobile is leading the 5G revolution that will provide a new level of connectivity, speed, and user scale. Jericho2 availability will drive a new wave of high-bandwidth solutions with best-in-class flexibility that could serve as the cornerstone for future 5G carrier networks."

Dr. Chengbin Shen, AVP of Shanghai Research Institute, China Telecom

"Our Large-scale carrier-grade networks require the most scalable and flexible traffic engineering to address unexpected and bursty end-user traffic. The Jericho2 in-package deep buffer contributes to a smooth, drop-free operation with zero tuning. The advanced and flexible instrumentation and telemetry infrastructure introduced by Jericho2 will enable us to work with our suppliers to design visibility tools that will help us further improve our network efficiency."

Mr. Guangquan Wang, director of Network Research Institute, China Unicom

"Jericho2 and FE9600 introduce innovative silicon architecture for modular systems. Perfect load-balancing within the chassis, virtual output queueing with deep-buffering and low-latency hardware based fault recovery are key attributes for a modular routing system deployed in the carrier network. Jericho2 pipe elasticity will enable simple, software-based upgrades to support future changes in the carrier network requirements without the need to perform a hardware upgrade."

Wade Shao, director, Network Architecture Center, Tencent:
"Tencent's network needs to provide high-quality services and programmability to meet massive requirements from our mission critical businesses and new applications. Broadcom's new Jericho2 platform allows for rolling out new network features quickly and responding to network anomalies and failures with global views and deep insights in real time."

OEMS

John McCool, chief platform officer, Arista Networks

"We are looking forward to Broadcom's next generation Jericho2 merchant silicon enabling a very significant performance increase and a smooth transition from 100G to 400G Ethernet for our market-leading 7500R Universal Spine and 7280R Leaf platforms."

Leon Wang, general manager, Data Center Network Product Line, Huawei Technologies

"Huawei switching and routing solutions based on Broadcom's silicon are successfully deployed in a vast number of data centers and carrier networks. We are excited with the availability of Jericho2 and its ground-breaking innovative Elastic Pipe. We look forward to working with the Broadcom team upgrading our CloudEngine 12800 portfolio with new 100GE and 400GE line cards that leverage the advanced capabilities and scale Jericho2 delivers."

Liu Zhongdong, president and CEO, Ruijie Networks

"Ruijie Networks has built and successfully deployed modular switching solutions using Jericho and FE3600. The availability of Jericho2 and FE9600 paves the way for a new generation of cost effective 100GE and 400GE high-scale modular solutions for the data-center that will further enhance networks visibility and improve application-performance through the use of their flexible, versatile, and large scale analytics."

David Chen, vice general manager, Ethernet Switching, ZTE Corporation:
"The introduction of the Elastic Pipe™ in the Jericho 2 switching architecture is noteworthy as it extends the lifespan and versatility of the merchant switch silicon solution. ZTE's growing portfolio of high-performance Ethernet solutions will benefit from the pipe elasticity and modular data bases in Jericho 2 and drive the adoption of software-defined, economical, low-power 100GbE connectivity in the data center market."

Third Party NoS provider

Ido Susan, co-founder and CEO, DriveNets

"Jericho2 is going to change the game for DriveNets and for our customers. With high density 100GE and 400GE port connectivity, we will be able to build network clouds that satisfy even the most demanding service provider routing applications. Our current Network Cloud solution already transforms the economics and operational models of tier-1 global providers. With Jericho2 we will extend it to the entire service provider infrastructure, simplify its building blocks and unify it, end-to-end. Broadcom's advances in merchant silicon switches allow us to deliver Webscale agility, scalability, and the right cost structure, with telco-grade performance."

ODMS

CC Lee, president, Accton Technology Corporation

"Jericho2 is a 10 Terabit switching ASIC and significant step in the disaggregation revolution in the carrier routed-networks. Accton/Edgecore is main contributor to the networking disaggregation revolution in data centers and is using Broadcom's merchant silicon in many cost-effective switching solutions. After deploying our Jericho2 solutions, our customers will benefit from the innovative Elastic Pipe, and will address the rapid requirement changes in the most economical way."

Jeff Chen, CEO, Delta Networks Inc.

"With the availability of Jericho2, Delta Networks will be able to create carrier-grade routing solutions addressing the most challenging carrier-networks requirements. Jericho2's high 400GE port-density, combined with carrier grade feature richness, provide an impressive building block for the next-generation of routers, based on merchant silicon in high scale for rapidly evolving service provider clouds."

Mike Yang, senior vice president, Quanta Computer Inc. and President, Quanta Cloud Technology (QCT)

“For many years, QCT has helped transform carrier networks to maximize technology integration and innovation in the large-scale deployment of servers, storage, and networking. QCT is a key driving force in creating cost-effective data center switching solutions using Broadcom's advanced networking silicon solutions. The impressive innovation brought by Jericho2 will enable QCT to continue driving the disruptive wave of networking disaggregation in the routing domain. Carriers will enjoy the freedom of choosing high-end routers hardware and software from multiple vendors with no compromise over functionality while significantly reducing the solutions CAPEX and OPEX.”

About Broadcom

Broadcom Limited (NASDAQ: AVGO) 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.

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