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Cavium Networks Unveils OCTEON II CN68XX - Industry's Highest-Performance Multi-Core Processors for Energy-Efficient Data Center, Mobile Internet and the Borderless Enterprise

Single chip 8 to 32-core OCTEON II™ MIPS64 Processors provide up to 48 GHz of 64-bit compute with unmatched L3-L7 Data and Security Acceleration to deliver 40Gbps of throughput while slashing power consumption for next generation Internet infrastructure applications

MOUNTAIN VIEW, Calif., May 11, 2010 – Cavium Networks (NASDAQ: CAVM), a leading provider of semiconductor products that enable intelligent processing for networking, communications, and the digital home, today unveiled a new family of processors which deliver unprecedented compute performance and application acceleration for borderless enterprise, mobile internet infrastructure and secure data center and cloud computing applications. The OCTEON II CN68XX/67XX processor families integrate 8 to 32 enhanced MIPS64 cores with up to 48GHz of 64 bit compute power in a single chip combined with over 85 L3-L7 application and security acceleration engines, virtualization features, 100Gbps of connectivity, and a revolutionary new Real Time Power Optimizer™ that dynamically adjusts power depending upon the application-level processing requirement. This level of compute is greater than 3x of next-generation alternative processors and enables OEM customers to achieve the highest level of rich, secure services with very low latency and power consumption at up to 40Gbps using a single OCTEON II chip and up to 100Gbps using multiple chips. The new OCTEON II processors also deliver up to 4x higher performance over the market-leading OCTEON Plus processors in a fully software compatible fashion enabling OEM customers to re-use existing software and system designs to easily upgrade their existing systems for higher performance. The OCTEON product line is the industry's #1 embedded multi-core processor line designed into enterprise, data center and service provider equipment including routers, switches, appliances, 3G/4G wireless base stations, RNCs, xGSNs, evolved packet core, services gateways, DPI equipment, storage switches and intelligent server adapters.

Rapid adoption of data center and cloud computing initiatives coupled with dramatic traffic growth in both wired and mobile networks demands an unprecedented level of application security, compute and services at line rates up to 40Gbps. Concurrently, energy usage is becoming a dominant factor driving data-center and enterprise cost and capacity, requiring next generation networking solutions to fit in the smallest and most energy efficient footprint. Additionally, with the explosive increase in multi-media/video and real-time, interactive content and transactions, it is imperative to ensure low-latency, low-jitter delivery of applications and services across all

networks. These critical inflection points in today's hyper networks require highly advanced technology with a tremendous amount of compute and application specific acceleration at very high line rates.

The OCTEON II CN68XX and CN67XX 8 to 32 core MIPS64 processors deliver up to a 4x performance increase and up to 3x improvement in performance/watt over OCTEON Plus processors, enabling Cavium's OEM customers to deliver breakthrough next generation solutions which address these critical inflection points, in an optimized, energy efficient manner. Additionally, the OCTEON II processors are supported by Cavium's 3rd generation multi-core software development kit (SDK) and the broadest embedded multi-core ecosystem with over 50 vendors delivering OSs, tools, application software and stacks, hardware sub-systems, complementary silicon as part of the Multicore Partnership for Accelerated Customer End-solutions (PACE).

Supporting Analyst, Customer and Company Quotes

"Through its OCTEON processor line and an impressive set of customer wins, Cavium has been the fastest growing embedded processor vendor over the last few years," said Linley Gwennap, Principal Analyst at The Linley Group. "Cavium's track record of delivering three generations of multicore products within five years, all with market-leading performance, assures customers that their R&D investment will be protected and enables them to benefit from the significantly increased performance, power efficiency, and powerful acceleration capabilities of these processors."

"RadiSys customers are facing increasing processing requirements to meet their next-generation performance needs, so we are pleased to see the significant increase in compute density, throughput and service features of the new Cavium CN68XX OCTEON II processors," said Anthony Ambrose, Vice President and General Manager, Communication Networks, RadiSys. "As the leader in ATCA solutions, we are at the forefront of delivering innovative 4G solutions with our Promentum ATCA 4.0 platform. The OCTEON CN68XX will help RadiSys continue to provide our customers with cutting-edge solutions."

"SonicWALL's recently announced technology, Project SuperMassive, uses Cavium's OCTEON Plus to deliver unmatched performance and scalability up to 384 cores and 40Gbps for full DPI and security processing in a compact, energy efficient architecture," said Matt Medeiros, CEO of SonicWALL. "The OCTEON II CN68XX will enable us to scale to 1024 cores and achieve well over 100Gbps of full malware protection so customers no longer have to compromise performance for security."

"This new family of products defines a new performance, features and cost paradigm for equipment vendors targeting the massive upgrade cycle of the network infrastructure for 3G/4G wireless, cloud computing and data center applications. With over twice the per-core control plane performance, new hardware acceleration and a dramatic increase in overall throughput, the OCTEON II CN68XX significantly enhances our competitive position and increases the breadth of applications that we address while reducing cost and power consumption," said Syed Ali, President and CEO, Cavium Networks. "These capabilities are essential to support the rapid growth in voice, video and data traffic and enable new classes of innovative applications that were simply not possible previously."

OCTEON II™ CN68XX and CN67XX Family Highlights

- **New cnMIPS64 v2 Cores with up to 48GHz of Compute** – 8, 16, 24, or 32 superscalar MIPS64 cores, each with 37KB I-cache, 32KB D-cache operating at up to 1.5GHz for up to 48GHz of standard-ISA based processing. This level of processing is 3x to 4x of that available in highest-end alternative next gen solutions and is a new record. The cnMIPS v2 cores also deliver up to 2.5x control plane performance per-core vs. OCTEON Plus, significantly increasing applicability in high-end control plane applications.
- **HyperConnect™ Cross-Bar with Independent I/O and Coprocessor Networks:** The OCTEON II cores are coupled with up to 4MB partition-able, low latency L2 cache using a HyperConnect™ cross-bar with over 6Tbps throughput. The overall architecture is optimized to deliver lower-latency and deterministic performance compared to ring or mesh architectures. Independent I/O and Coprocessor networks enable superior performance for a wide range of application workloads.
- **Most Advanced Data and Security Services Application Hardware Acceleration**
 - 40+ Gbps of Packet processing and TCP performance.
 - 40+ Gbps IPsec, SSL Security performance. OCTEON II adds WAPI support in encryption/decryption engines to support China-specific WLAN deployments. Additionally, it includes Snow3G hardware acceleration, to address security requirements of 4G mobile networks.
 - Enhanced Compression/decompression acceleration – Up to 20Gbps.
 - Third generation HFA Deep Packet Inspection engines deliver deterministic throughput up to 15Gbps independent of number of rules and number of flows, a new and essential capability not available in existing solutions.
 - Multicore hardware load balancing, scaling and packet ordering allowing linear performance scalability across 32 cores.
- **High Bandwidth, Integrated Memory, System and Networking Interfaces**
 - Interfaces include up to four 72-bit ECC-protected DDR3 interfaces with 400+Gbps of bandwidth
 - SGMII, RXAUI, XAUI and double-rate XAUI interfaces for up to 12x GbE, 4x 10GbE and 2x 20GbE Ethernet connectivity
 - Interlaken or Interlaken-LA controller with up to x8 lane widths, providing a channelized interface up to 40Gbps or coprocessor connectivity
 - Two PCIe Gen2 controllers, width up to x8 lanes
- **Innovative new Real Time Power Optimizer™**
 - Ability to dynamically adjust per-core effective-frequency resulting in lower power consumption on a real time basis based on application or network-level workload. Additionally fine-grained auto power-down capability for unutilized coprocessors and I/O interfaces.

Software

The OCTEON II Software Development Kit (SDK) is fully compatible with the existing OCTEON SDK and includes Linux SMP, GNU Toolchain, powerful profiling, simulation, and optimization tools, a Simple Executive for fast-path or bare-metal applications, feature rich APIs for hardware acceleration and an extensive set of example software.

To accelerate customer development Cavium also offers production ready software toolkits and multi-core architecture and design consulting services.

Multicore Partnership to Accelerate Customer End-Solutions (PACE)

The OCTEON II product line is supported by the most comprehensive embedded multicore ecosystem with over 50 partners providing operating systems and tools, software applications and stacks, debuggers, complementary silicon, ATCA and hardware appliances, hardware and software consulting, and other products and services. These include 6WIND, ATS, Abatron, Advantech, Aricent Technologies, Bayside Designs, Continuous Computing, D2 Technologies, Emerson Network Power, embedUR, Enea, Fulcrum Microsystems, GDA Technologies, GE Intelligent Platforms, Green Hills Software, Interface Masters, Interphase, Kaspersky Lab, Kontron, L&T Infotech, Lanner Electronics, Lattice Semiconductor, Lauterbach, Macraigor Systems, Mentor Graphics, MIPS Technologies, MontaVista Software, PLX Technology, picoChip, QOSMOS, RadiSys, Renesas, Tata Elxsi, TeamF1, Wind River, Wipro, Wistron, and Zarlink.

Availability

The CN68XX will sample in Q4 2010. The CN68XX will be offered in 16, 24, and 32-core options and is software compatible with the OCTEON II CN63XX 2 to 6 core processors. Various members of the CN68XX processor family will be offered with different hardware acceleration options, speed grades and price points. The CN67XX is pin and software compatible with the CN68XX and will be offered in 8, 12, and 16-core options, and will also sample in Q4 2010. Please contact your Cavium sales representative for additional details.

About Cavium Networks

Cavium Networks is a leading provider of highly integrated semiconductor products that enable intelligent processing for networking, communications, and the digital home. Cavium Networks offers a broad portfolio of integrated, software-compatible processors ranging in performance from 100 Mbps to 40 Gbps that enable secure, intelligent functionality in enterprise, data-center, broadband/consumer and access and service provider equipment. Cavium Networks processors are supported by ecosystem partners that provide operating systems, tool support, reference designs and other services. Cavium Networks principal offices are in Mountain View, CA with design team locations in California, Massachusetts, India and Taiwan. For more information, please visit: <http://www.caviumnetworks.com>.

Note on Forward-Looking Statements

This press release may contain forward-looking statements regarding future events that involve risks and uncertainties. These forward-looking statements involve risks and uncertainties, as well as assumptions that if they do not fully materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The risks and uncertainties that could cause our results to differ materially from those expressed or implied by such forward-looking statements include but are not limited to features, schedules and performance associated with new product introductions; and other risks and uncertainties described more fully in our documents filed with or furnished to the Securities and Exchange Commission. More information about these and other risks that may impact Cavium's business are set forth in the "Risk Factors" section of our Form 10K filed with the Securities and Exchange Commission on March 1, 2010. All forward-

looking statements in this press release are based on information available to us as of the date hereof and qualified in their entirety by this cautionary statement, and we assume no obligation to revise or update these forward-looking statements.