

CorEdge Networks Introduces Cavium Networks' OCTEON Option for its CEN-RL20(TM) 20Gbps AMC

20Gbps of Packet Processing Plus FPGA Flexibility and Customizable IP Support Integrated Into a Single AMC for advanced MicroTCA/ATCA applications

BARCELONA, Spain – Feb. 11 (SEND2PRESS NEWSWIRE) – At the Mobile World Congress show, CorEdge Networks Inc., the industry's leading developer of essential building blocks for MicroTCA solutions, introduces a Cavium Networks' OCTEON(TM) Multicore MIPS64 processor powered daughter card option for its CEN-RL20(TM) 20Gbps AdvancedMC (AMC) line card. This daughter card adds encryption/decryption and deep packet inspection capabilities to the CEN-RL20's 20Gbps reconfigurable Xilinx(R) Virtex(TM)-5 FPGA (field programmable gate array) base card – all in a standard single-width AMC form factor.



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With this unique combination of packet processing power, high speed I/O and flexible IP support, the CEN-RL20-CAVM(TM) supports a broad set of applications for next generation wired and wireless networks including security encryption/decryption, packet compression/decompression, TCP, traffic management, and pattern matching.

Equipped with the new Cavium Networks' OCTEON-powered daughter card and the flexibility provided by the Xilinx Virtex-5 FPGA, the CEN-RL20 becomes an ideal building block for developing next-generation architectures like Carrier Grade Ethernet, GPON (Gigabit Passive Optical Network) or IMS (IP Multimedia Systems). In these architectures, there is a need to handle heterogeneous packets and support unique end customer software requirements, along with encryption/decryption – all at wirespeed. No other AMC card provides the range of capabilities available using the CEN-RL20-CAVM.

“When we first developed the CEN-RL20(TM) 20Gbps line card,” said Will Chu, President of CorEdge Networks, “we recognized that system integrators would want to use different co-processors in conjunction with our basic CEN-RL20 functions. Accordingly, we developed an AMC architecture that would support dual SPI4.2 interfaces, allowing us to incorporate high performance processors on daughter boards, and to enhance our functionality while remaining in a single AMC form factor.

“This vision of supporting leading-edge co-processors was validated almost immediately,” said Chu, “when CorEdge Networks was asked by a tier 1 telecom

equipment manufacturer to develop a Cavium Networks' OCTEON Multicore MIPS64-based daughter card for the CEN-RL20, for their Carrier Grade Ethernet application. We are now making it available generally to the industry and we are pleased to have partnered with industry leaders, Cavium and Xilinx, are the first company to deliver a modular AMC architecture that delivers superior performance along so many dimensions."

"Cavium Networks' OCTEON processors provide leading performance with very low power and are being used by Multiple Tier-1 vendors building 3G, 4G, WiMax infrastructure equipment, secure networking routers, switches, gateways and storage equipment," said YJ Kim, Director of OCTEON Marketing at Cavium Networks. "We are happy to work with CorEdge Networks to provide our common customers with a high-performance, intelligent and innovative solution."

"CorEdge Networks was the first company to implement a Virtex-5 FPGA based AMC in 2007 and Xilinx is pleased to see the CEN-RL20 product line grow to include a Cavium daughter card option," said Andy DeBaets, Sr. Director of Systems and Application Engineering at Xilinx. "CorEdge is now also the first company to implement dual SPI4.2 interfaces between a Cavium processor and Xilinx FPGA in an AMC, creating a tremendously flexible platform that can fully exploit the power, configurability, and performance of the Virtex-5. We congratulate them on this impressive achievement."

The CEN-RL20 with Cavium Networks' OCTEON daughter card will be sold as a bundled offering, the CEN-RL20-CAVM. It will be generally available in Q2 2008.

CEN-RL20-CAVM(TM)

Introduced in June 2007 at NXTComm and now shipping for general availability, the CEN-RL20 is the industry's first working 20 Gbps CEN-RL20 reconfigurable AMC line card, using a Xilinx Virtex-5 LX110T FPGA.

By leveraging the substantially higher logic density of the Virtex-5 device, CorEdge Networks is able to allow third parties to port their custom software onto the same FPGA with CorEdge's Bitstream Processor core. The result is a highly flexible platform that facilitates both rapid AMC development as well as cost-effective production boards.

The CEN-RL20-CAVM with the Xilinx Virtex-5 LX110T FPGA is unique in several important ways:

* The Cavium Networks' OCTEON Multicore MIPS64 processor and Xilinx Virtex-5 devices share two (2) SPI4.2 (System Packet Interface) links for 10Gbps full duplex chip-to-chip communications. The implementation of single or dual SPI4.2 interfaces in an AMC is another industry first achieved by CorEdge Networks. Up till now, the SPI4.2 interface has only been implemented on much larger high performance ATCA boards. These dual 10Gbps interfaces provides enormous bandwidth (zero bottlenecks) to leverage the full processing power of the Cavium and Xilinx FPGA chipsets to support the most demanding packet processing and bandwidth intensive applications.

* To compliment the Cavium Networks' OCTEON Multicore MIPS64 processor functions, the Xilinx Virtex-5 LX110T FPGA can also be programmed with off-

the-shelf IP, customized design IP and CorEdge Networks Bitstream Processor technology. The CorEdge Networks Bitstream Processor supports multiprotocol bridging between serial (1GbE, 10GbE, Serial RapidIO, PCI Express, etc) and/or parallel (SPI4.2, PCI, GMII, RGMII, QDR, DDR, LA1, LA2, etc) data types augmented with wirespeed packet processing functions such as encryption/decryption, packet filtering, traffic management, etc.

* The CEN-RL20-CAVM supports 10GbE CX-4 and USB front panel I/O interfaces. The Xilinx Virtex-5 LX110T FPGA provides multiple programmable redundant or non-redundant backplane interfaces options including 1GbE, 10GbE (XAUI), Serial RapidIO and PCI Express to meet any system level requirements.

Cavium Networks' OCTEON Multicore MIPS64 Processor and Cavium Daughter Card
Packaged as a single-width full size AMC, the CEN-RL20-CAVM delivers 10Gbps full duplex performance at multiple levels. The Cavium daughter card is available in a number of performance options and supports both the Cavium OCTEON 58XX or 38XX family of processors. The OCTEON processor family offers 4 to 16 MIPS64 processors with advanced security and intelligent application hardware acceleration and up to 10Gbps full-duplex application performance. The initial version of the CEN-RL20-CAVM delivers the Cavium 58xx or 38xx processor with up to 2GB DDR2 SDRAM, two (2) 36MB RLDRAM and 64MB Flash of memory.

Xilinx Virtex-5 LX110T FPGA

The base CEN-RL20 supports a Xilinx Virtex-5 LX110T FPGA matched with two (2) 18Mbit QDR, 64MB DDR2 SDRAM and 64MB Flash memories. The Xilinx Virtex-5 FPGA enabled CEN-RL20 supports multiple flexible backplane I/O options and can also be programmed with off-the-shelf IP, customized design IP and CorEdge Networks Bitstream Processor technology.

CorEdge Networks Bitstream Processor Technology

Leveraging Xilinx Virtex-5 FPGA technology, CorEdge Networks' Bitstream technology supports multiprotocol bridging between serial (1GbE, 10GbE, Serial RapidIO, PCI Express, etc) and/or parallel (SPI4.2, PCI, GMII, RGMII, QDR, DDR, LA1, LA2, etc) data types augmented with wirespeed packet processing functions such as packet filtering, encryption/decryption, traffic management, etc.

About CorEdge Networks

CorEdge Networks is a leading supplier of ATCA/MicroTCA/AMC/IPMI compliant systems and infrastructure products, including the industry's first MicroTCA Carrier Hub (MCH), 10GbE MCH, MicroTCA Power Module, PicoTCA development platform, 10Gbps and 20Gbps FPGA-based AMCs and full ATCA Cutaway Carrier. CorEdge Networks customers include a number of leading telecom, military and embedded systems companies. Most MicroTCA working deployments use one or more CorEdge Networks components. For more detailed information on CorEdge Networks products, see www.coredgenetworks.com.

About Cavium Networks

Cavium Networks (NASDAQ: CAVM) is a leading provider of highly integrated semiconductor products that enable intelligent processing in networking, communications, and storage and security applications. Cavium Networks offers

a broad portfolio of integrated, software compatible processors ranging in performance from 10 Mbps to 10 Gbps that enable secure, intelligent functionality in enterprise, data-center, broadband/consumer and access & 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 and India. For more information, please visit: www.caviumnetworks.com.

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