

# Penguin Computing Announces New Penguin Tundra Open Compute Servers Featuring Cavium's 48 core ARMv8-A ThunderX™ Processors

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Server Platforms Optimized for HPC and Hyperscale Workloads

Frankfurt, Germany; ISC 15; July 13, 2015 – Penguin Computing, the leader in developing open, Linux-based Data Center solutions for cloud and HPC, today announced the availability of Penguin's Open Compute Project (OCP) compliant "Tundra" server family based on Cavium, Inc.'s (NASDAQ: CAVM) 64-bit ARMv8 ThunderX workload optimized processors. Penguin provides customized build-to-order server solutions for customers with specialized hardware requirements in enterprise, financial, federal government, bioinformatics and Internet segments. Penguin has successfully delivered hundreds of data center deployments, from departmental HPC clusters to TOP500 class supercomputers and scale-out server farms powering some of the largest web properties. The development of ThunderX-based servers enables Penguin to provide best-in-class ARMv8 performance with reduced TCO, using SOCs optimized for specific workloads, in platforms customized for financial, bioinformatics, Internet and federal government market segments. Penguin Tundra server platforms featuring Cavium ThunderX will focus on highly-scalable Hyperscale and HPC-type workloads including big data, large-scale graph analytics, molecular dynamics, and Ceph / cloud storage. Performance will be driven by ThunderX ARMv8 SOCs optimized for these workloads, with up to 48 high performance custom cores, very high memory bandwidth, and large memory capacity. Adding to these high-performance features are integrated accelerators for storage, networking or security, offloading from the main ARMv8 CPU cores and enabling best-in-class performance. In addition, integration of Ethernet fabric interfaces and storage controllers reduces both power and cost, driving outstanding reductions in TCO. "For well over a decade Penguin has been the leader in developing open, Linux-based cloud and HPC solutions," said Jussi Kukkonen, Director of Product Management, Penguin Computing. "By introducing Cavium's 64-bit ARMv8 CPUs in our Penguin Tundra family of Open Compute servers we again step up our leadership position. Our customers get outstanding value from the efficiency and flexibility enabled by OCP infrastructure combined

with workload-optimized performance of Cavium's ThunderX architecture." "At Cavium we focus on best-in-class performance and TCO for targeted market segments. ThunderX based platforms will enable Penguin to further customize their platforms by delivering fully optimized solutions for target workloads," said Steve Cumings, Director, Market Development, Cavium. "We are delighted to be working with Penguin on their Tundra server family, and enable HPC and Hyperscale systems with outstanding performance and TCO." Availability Penguin Tundra servers featuring Cavium ThunderX CPUs are available for customer evaluation starting in September 2015, with general availability in the fourth calendar quarter of 2015. Penguin Computing welcomes interested parties to contact the company regarding the early access program. Visit <https://www.penguincomputing.com/products/ocp-hpc-ai-systems/ocp-servers-storage/> for more information