Xilinx Launches the World's Fastest Data Center and AI Accelerator Cards

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Delivering 4X performance vs GPUs, 90X vs CPUs, AND unprecedented adaptability across workloads

SAN JOSE, Calif., Oct. 2, 2018 /PRNewswire/ -- **Xilinx Developer Forum (XDF) –**Xilinx, Inc. (NASDAQ: XLNX) the leader in adaptive and intelligent computing, today launched Alveo, a portfolio of powerful accelerator cards designed to dramatically increase performance in industry-standard servers across cloud and on-premise data centers. With Alveo, customers can expect breakthrough performance improvement at low latency when running key data center applications like real-time machine learning inference as well as video processing, genomics, and data analytics, among others. The Alveo™U200 and Alveo U250 are powered by the Xilinx® UltraScale+™ FPGA and are available now for production orders. And like all Xilinx technology, customers can reconfigure the hardware, enabling them to optimize for shifting workloads, new standards and updated algorithms without incurring replacement costs.

Alveo accelerator cards deliver significant performance advantages over a broad set of applications. For machine learning, the Alveo U250 increases real-time inference throughput by 20X versus high-end CPUs, and more than 4X for sub-two-millisecond low-latency applications versus fixed-function accelerators like high-end GPUs*. Moreover, Alveo accelerator cards reduce latency by 3X versus GPUs, providing a significant advantage when running real-time inference applications.** And some applications like database search can be radically accelerated to deliver more than 90X, versus CPUs.***

Alveo is supported by an ecosystem of partners and OEMs who have developed and qualified key applications in AI/ML, video transcoding, data analytics, financial risk modeling, security, and genomics. Fourteen ecosystem partners have developed applications for immediate deployment. They are Algo-Logic Systems Inc, Bigstream, BlackLynx Inc., CTAccel, Falcon Computing, Maxeler Technologies, Mipsology, NGCodec, Skreens, SumUp Analytics, Titan IC, Vitesse Data, VYUsync and Xelera Technologies. Additionally, top OEMs are collaborating with Xilinx to qualify multiple server SKUs with Alveo accelerator cards including Dell EMC, Fujitsu Limited and IBM with more to come.

"The launch of Alveo accelerator cards further advances Xilinx's transformation into a platform company, enabling a growing ecosystem of application partners that can now innovate faster than ever before," said Manish Muthal, vice president, data center, Xilinx. "We are seeing strong customer interest in Alveo accelerators and are delighted to partner with our application ecosystem to deliver production-deployable solutions based on Alveo to our customers."

OEM Quotes

"FPGA-based acceleration solutions in modern data centers are gaining popularity as accelerators that can be programmed and reprogrammed easily as users see fit," said Ravi Pendekanti, senior vice president, product management and marketing, Dell EMC Servers & Infrastructure Systems. "Our collaboration with Xilinx to create best-in-class acceleration solutions will benefit customers in a range of applications from video content streaming to risk management and financial services."

"Fujitsu congratulates Xilinx on the announcement of its new board level products and solutions. With 5G use cases for applications such as autonomous driving, telemedicine, and virtual reality, the range of vRAN applications based on the COTS servers is expected to expand considerably in the future," said Mr. Masaki Taniguchi, vice president, deputy head of Network Products, Fujitsu Limited. "Fujitsu Limited and Fujitsu Laboratories Ltd. have been collaborating with Xilinx to jointly validate 3X performance on critical software functions in the 4G vRAN system. Fujitsu looks forward to creating powerful solutions by combining its x86 servers and Xilinx adaptable acceleration boards."

"The launch of Xilinx's standard acceleration board products is an exciting addition to a rapidly emerging technology arena focused on fueling performance-hungry applications," said Keith McAuliffe, Vice President and Chief Technologist, Servers Global Business Unit, HPE. "We look forward to collaborating with Xilinx to bring their technology to market and enable our customers to create breakthrough business value."

"With the IBM Power Systems AC922 server, IBM has already demonstrated that we have the best platform for enterprise AI training," said Steve

Sibley, vice president of IBM Cognitive Systems. "IBM sees inference as a key component of a complete, end-to-end AI platform, and POWER9's leadership I/O bandwidth for data movement makes it an ideal pairing with Xilinx's new Alveo U200 accelerator card to bring inference to the enterprise."

Xilinx® Alveo™ U200 and U250 accelerator cards are available today starting at $8,995 (USD) and can be purchased today. Alternatively, you can try it out first in the Nimbix cloud.

More details on Alveo and the full spec sheets are available on our website. The latest list of Alveo application developers is available on the application directory. For more information on Xilinx and its breakthrough technologies, please visit www.xilinx.com. Follow us on Twitter, LinkedIn, and Facebook.

About Xilinx

Xilinx develops highly flexible and adaptive processing platforms that enable rapid innovation across a variety of technologies – from the endpoint to the edge to the cloud. Xilinx is the inventor of the FPGA, hardware programmable SoCs and the ACAP, designed to deliver the most dynamic processor technology in the industry and enable the adaptable, intelligent and connected world of the future. For more information, visit www.xilinx.com.

Footnotes:

*20x running GoogLeNet V1, Batch=1 | Alveo U250 vs Intel Xeon Platinum Skylake CPU (c5.18xlarge instance; 4x running GoogLeNet V1, Batch=1 | Alveo U250 vs Nvidia V100 GPU

**3x running CNN+BLSTM speech-to-text latency | Alveo U250 or U200 + Intel Xeon CPU E5-2686 v4 vs Nvidia P4 + Xeon CPU E5-2690 v4

***90x running RYFT Elasticsearch | Alveo vs EC2 C4.8xlarge instance

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