Algo-Logic Systems Demonstrates End-to-End Solution for Acquiring, Fusing, and Visualizing Real-time Data at Xilinx Developer Forum

Black Diamond and Key Value Store (KVS) collect, share, and feed real-time data to dashboards and immersive three-dimensional environments

SAN JOSE, Calif., Oct. 2, 2018 (Xilinx Developer Forum) - Algo-Logic Systems, Inc., a recognized leader of Gateware Defined Networking (GDN) accelerated applications, products, and solutions announces three new products at the Xilinx Developer Forum (XDF) 2018. Algo-Logic's newest Field Programmable Gate Array (FPGA) offerings and dashboards together provide a complete solution for acquiring, fusing, analyzing, and visualizing live data. XDF connects software developers and system designers to the deep expertise of Xilinx engineers, partners, and industry leaders.

The 3rd generation Black Diamond Rackmount (BDR-3) acquires data from all types of analog sensors to record motion (acceleration), power (voltage, currents), pressure (air, water), and other inputs by recording and streaming precisely synchronized channels with high resolution over Gigabit Ethernet. The system reads data from multiple types of sensors, performs advanced signal processing, and time-stamps data with GPS precision using FPGA logic.

Algo-Logic's new Key Value Store (KVS) on UltraScale+ architecture provides in-memory object store with the record-breaking latency and throughput performance to enable sensor fusion, real-time analytics and scale out machine learning. Implemented on the new Xilinx Alveo U200 Data Center accelerator card, the KVS merges live data from multiple sources, shares data with algorithms that perform inference and scale-out machine learning, and sources data for actuators and live visualization. The Alveo U200 accelerator cards with the Algo-Logic KVS can be installed in a standard PCIe slots, deployed in data centers, and/or accessed over the AlgoCentral cloud as a service.

Key Benefits – KVS + BDR-3 Integrated System:

- Key Value Store (KVS) for real-time data fusion and scalable analytics
    - In memory database providing fully associative object store
    - UltraScale+ FPGA implementation provides sub-microsecond latency
    - Achieves over 100 million IOPS per second using on-chip and off-chip RAM
- Black Diamond Rackmount (BDR-3) for real-time data acquisition from sensors
    - Collects data from a wide range of sensors (accelerometers, strain, energy, etc.)
    - Zynq SoC precisely records, time-stamps, and streams GPS-synchronized data
    - Runs from multiple power sources such as: DC, AC, battery, or solar power
- Real-time Analytics Dashboards
    - Integrates live data from KVS into immersive, 3D visualizations
    - Charts and graphs live data from KVS to a lightweight, 2D web dashboard
    - AlgoCentral cloud-hosted service provides views and analytics of data

"We are excited to demonstrate Algo-Logic's newest products providing an end-to-end solution for acquiring, processing, and visualizing real-time data," said John Lockwood CEO of Algo-Logic Systems.

"It is exciting to see Algo-Logic launch the in-memory object-store on the new Xilinx Alveo U200 FPGA platform and deploy it into the cloud," said Dan Mansur, vice president of product planning at Xilinx. *"Algo-Logic's newest KVS and Black Diamond products provide industry-leading capabilities for collecting and sharing real-time data in the FPGA platform."*

Please visit Algo-Logic Systems on October 2nd at the Fairmont Hotel, downtown San Jose, to see the new products in action and learn more about this world-class solution for processing real-time data. Algo-Logic will be showing the BDR-3 running on a Zynq SoC, the KVS on the new Alveo U200 accelerator card, and multiple dashboards. The BDR-3 collects live data from sensors in a connected city to monitor traffic conditions, wind and solar power generation, electric vehicle charging, infrastructure vibrations, thermal conditions, and drone control.   The KVS fuses this live data and feeds it to multiple dashboards where it is charted and rendered to display the status and health of city-wide infrastructure in real-time.

More information about XDF is available at: https://www.xilinx.com/products/design-tools/developer-forum/silicon-valley.html. For additional updates from XDF, follow Xilinx on Twitter at @XilinxInc or via the hashtag #XDF2018.

About Algo-Logic Systems:
Algo-Logic Systems Inc., is a recognized leader of Gateware Defined Networking® (GDN) products and solutions. More information about Algo-Logic is available at https://Algo-Logic.com/ For additional updates, follow Algo-Logic on Twitter at @Algo_Logic_Inc.

Price and availability: Email: sales@algo-logic.com , Call: (408) 707-3747, or visit www.Algo-Logic.com.
- Datasheet for KVS on Ultrascale+: http://algo-logic.com/kvs/Alveo
- Datasheet for BDR-3 on Zynq :   http://algo-logic.com/bdr/bdr-3
- Connected city demonstration with KVS and BDR-3: http://algo-logic.com/news-page

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