Blaize and eYs3D Microelectronics Unveil New Reference Design for Enhanced 3D Computer Vision for Edge AI

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Blaize Pathfinder P1600 integrated with the eYs3D Depth Camera product line of 3D cameras

El Dorado Hills, CA — June 28, 2021— Blaize, the AI computing innovator revolutionizing edge and automotive computing solutions, and eYs3D Microelectronics, the image processor solution provider enabling enhanced 3D computer vision for edge AI, today announced a reference design for the Blaize Pathfinder P1600 SoM (system on a module).

The Blaize Pathfinder P1600 is integrated with the eYs3D Depth Camera product line of 3D cameras. The camera line features unique stereo vision capabilities that deliver millimeter-level accuracy of depth at optimal range and are used for indoor and outdoor AI-based autonomous operation, including robotics, security, touchless control, autonomous vehicles and smart retail. As an example, these advanced capabilities eliminate the use of costly Lidar implementations for robotics and other services.

"The Blaize and eYs3D collaboration showcases the power of the Blaize fully programmable GSP architecture and software productivity suite to process both RGB camera data and depth data in a highly efficient manner to provide both high accuracy and high performance for 3D sensor fusion applications at the edge." said Rajesh Anantharaman, Sr. Director Products, Blaize. "The Blaize and eYs3D integration enables faster time-to-market for systems incorporating visual simultaneous location and mapping (VSLAM), facial feature depth recognition, and gesture-based commands."

Taking advantage of the Blaize Graph Streaming Processor (GSP) architecture, the combined design offers better depth and distance sensing via the camera's 3D sensor application that includes a sensor fusion function enabling a combination of two sets of data – RGB camera data and Depth data. Processing efficiency and user-friendly programmability for the entire end-to-end application enables reductions in "performance per watt" system metrics. In addition, the Blaize P1600 can convert the depth camera's USB output to high-speed Ethernet connectivity, for enhanced video processing. Software development kits for the reference design will accommodate a wide range of operating systems, programming languages and development tools.

"We are excited to partner with Blaize to bring advanced computer vision capability to market, such as filtering, depth-sensing fusion, real-time 3D point cloud compression and streaming, that further enhance edge AI capability," said James Wang, eYs3D's Chief Strategy Officer. "Depth-sensing technology has been widely adopted commercially in consumer and industrial applications in the last few years. eYs3D is a leader in 3D-stereo vision and its technology has already been used in popular VR headsets, robot arm visual systems and facial recognition kiosks. We are now seeing growing applications in robotics, 3D scene learning, drones, smart retail and other markets."

Blaize Leadership Focus on Systems & Energy Efficiency, Low latency, Flexibility

The Blaize embedded and accelerator platforms are built on the Blaize Graph Streaming Processor (GSP) architecture designed for the demands of edge computing. The Blaize Pathfinder P1600 embedded Systems on Module (SOM) brings the programmability and efficiency benefits of the GSP to embedded edge AI applications deployed at the sensor edge, or on the network edge. The Blaize AI Software Suite comprised of Blaize Picasso and AI Studio lead the industry with open standards and ease of accessibility reducing the time to get edge applications into production from months to days.

About eYs3D

The company provides a full end-to-end Computer Vision platform and Solution. Ready-to-use hardware and software development kits make product design easy for a wide range of Edge-AI Computer Vision functions, such as touchless control, anti-spoofing facial recognition, object & people recognition, VSLAM and event understanding. Currently eYs3D chip technology is embedded in Valve Index VR HMD, TECHMAN Robotics, and in consumer cleaning robots, among others. eYs3D is located in Taipei, Taiwan. For more information visit their website.

About Blaize

Blaize leads new-generation computing unleashing the potential of AI to enable leaps in the value technology delivers to improve the way we all work and live. Blaize offers transformative edge computing solutions for AI data collection and processing at the edge of network, with focus on smart vision applications including automobility, retail, security, industrial and metro. Blaize is funded by strategic and venture investors DENSO, Daimler, SPARX Group, Magna, Samsung Catalyst Fund, Temasek, GGV Capital, Wavemaker and SGInnovate. With headquarters in El Dorado Hills (CA), Blaize has teams in Campbell (CA), Cary (NC),

and subsidiaries in Hyderabad (India), and Leeds and Kings Langley (UK), with 300+ employees worldwide. www.blaize.com