



Ambarella Demonstrates Its Fully Autonomous Vehicle on Silicon Valley Roads

March 28, 2018

Leverages 20 years of autonomous vehicle research and low-power CVflow™ embedded processors

SANTA CLARA, Calif.--(BUSINESS WIRE)--Mar. 28, 2018-- Ambarella, Inc. (NASDAQ:AMBA) a leading developer of low-power, HD and Ultra HD video processing semiconductors, today announced it is demonstrating its fully autonomous EVA (Embedded Vehicle Autonomy) vehicle on Silicon Valley roads to industry analysts and customers. EVA has been trained to deal with the various traffic scenarios presented by Silicon Valley's challenging urban environment. The fully autonomous car combines software and algorithms based on over 20 years of autonomous vehicle research with Ambarella's low-power CV1 embedded computer vision processors based on its CVflow architecture. EVA's high-resolution stereovision cameras deliver the 360-degree short and long distance viewing capability required for advanced perception and precise self-location. EVA includes sensor fusion of the vision information with Radar and map data to provide the information necessary for path planning and merging maneuvers without the need for additional LiDAR systems.

"High resolution 8-Megapixel stereovision combined with superior perception in challenging lighting conditions allows EVA to "see" its surroundings with much higher reliability than was previously possible," said Professor Alberto Broggi, General Manager of Ambarella Italy. "Moving to an implementation based on dedicated Ambarella CVflow processors brings us much closer to making self-driving cars a practical reality."

EVA's CV1-based stereovision cameras provide a perception range of over 150 meters for stereo obstacle detection and over 180 meters for monocular classification. Stereovision processing enables detection of generic obstacles without training, allowing more robust decisions to be made. EVA also uses stereovision to recognize visual landmarks and uses HD map information for high precision localization, even when the GPS signal is weak or not available, for example in dense urban locations. EVA features include automatic calibration, stereo generic obstacle detection, terrain modeling, traffic light detection, 3D free space detection, lane detection, curb and barrier detection, and CNN classification for vehicle, pedestrian, and bicycle/motorcycle.

Ambarella also announced today its next generation CV2 computer vision processor, which will provide up to 20 times the computer vision performance of CV1 in a fully-integrated SoC, delivering higher perception accuracy and further reducing the total number of chips required for a fully autonomous vehicle.

The URL for this news release is www.ambarella.com/about/news-events.html

The URL for the related image is <https://ambarella.com/about/news-events/press-images/EVA-press-image>

About Ambarella

Ambarella, Inc. (NASDAQ: AMBA), is a leading developer of low-power, high-definition (HD) and Ultra HD video compression, image processing and computer vision solutions. The company's products are used in a variety of IP security, sports, wearable, drone and automotive video cameras. Ambarella's solutions leverage over 20 years of pioneering research in computer vision to enable future generations of intelligent cameras, Advanced Driver Assistance Systems and autonomous vehicles. For more information about Ambarella, please visit www.ambarella.com.

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