Ambarella and Autobrains Collaborate on Scalable Range of AI Solutions From Front ADAS to Higher Levels of Autonomy for the Automotive Mass Market

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Highly Efficient, Compact, Low Power Solution Scales From Current Regulatory Requirements to 2025 Five Star NCAP Standards and Beyond

SANTA CLARA, Calif., and TEL AVIV, Israel, Dec. 15, 2021 (GLOBE NEWSWIRE) -- Ambarella, Inc. (NASDAQ: AMBA), an AI vision silicon company, and Autobrains, developer of first-of-its-kind self-learning artificial intelligence technology for assisted and autonomous driving, today announced a collaboration to develop a scalable range of advanced driver assistance system (ADAS) solutions for the automotive mass market that will be demonstrated during CES in Las Vegas. Currently, the companies have developed an 8MP front ADAS solution targeting a uniquely compact, single-box form factor. The companies are also working on solutions for the future, including a centralized domain control unit that can utilize multiple cameras and a variety of additional sensors, such as radar, lidar and others.

Autobrains' self-learning AI is a radical paradigm shift from traditional deep learning systems that does not rely on labeled data. Instead, it creates a unique representation of space and an understanding of the contextual elements of driving scenarios, leading to superior performance in the most challenging corner cases. With its unique representation of data and self-learning AI, Autobrains' technology requires far less computing power, which can further enhance the industry-leading efficiency provided by Ambarella's portfolio of CVflow $^®$ edge AI perception SoCs.

The automotive industry is continuing to accelerate its adoption of ADAS to meet regulatory mandates as well as consumer demand for increased safety and automated driving features. The first offering in this collaboration provides an 8MP front ADAS solution to directly address that trend, including compliance with today's regulations and the five star NCAP standards that will go into effect in 2023. Automatic emergency braking, lane-keep assist, adaptive cruise control, and traffic signal recognition are just some of the top front-ADAS applications that this joint solution will address.

At the same time, the industry is beginning the transition toward a centralized and modular ADAS computing architecture to support higher L2+ and L3 levels of autonomy. Autobrains' technology can derive information from all sensor modalities and fuse them for more complete and accurate perception that enables advanced automated driving features in a modular fashion. This ability, combined with Ambarella's modern and broad SoC product portfolio, make an excellent match for creating a scalable solution that best serves the future of mobility.

"The industry-leading AI performance per watt of Ambarella's edge AI perception SoCs, in combination with Autobrains' self-learning AI software, provides a compelling solution for the many ADAS regulatory requirements across the globe," said Fermi Wang, president and CEO of Ambarella. "Building on this initial offering for ADAS and L2+ semi-autonomous capabilities, our companies are developing additional joint solutions to address the trend toward increasing levels of vehicle autonomy. Ambarella is uniquely positioned to support this trend, as we offer the only AI perception SoC platform that scales from front ADAS to L4."

"Autobrains' self-learning AI technology bridges the gap toward the promise of fully autonomous vehicles," said Igal Raichelgauz, CEO of Autobrains. "By reducing the burden of manually labeling data that feed systems, which causes the misinterpretation of the most challenging scenarios, our technology enables far more features with increased accuracy. Running our extremely efficient software on Ambarella's modern and efficient AI perception SoCs creates a cost efficiency leap in increased levels of autonomy. The resulting solution differs greatly from competitors' systems not only in features and quality, but also in its approach of equipping our customers with an open-box solution that can be explained, controlled and customized. Autobrains is excited to collaborate with Ambarella, a company that shares our passion for innovation and our focus on algorithms that create products with value for the automotive industry."

Autobrains and Ambarella's first joint project, which will be demonstrated during CES in Las Vegas, integrates an 8MP CMOS image sensor with Ambarella's CV2 AI SoC family, running Autobrains' AI perception software capable of supporting the detection required for NCAP-2023 five-star compliance. Additional features include video-based ACC and traffic sign recognition, housed in a compact form factor with extremely low power consumption. This project is the first step toward demonstrating the scalability and modularity of the companies' joint solutions, including future SoCs from Ambarella with more advanced features capable of supporting additional sensor information while enabling far richer feature sets.

About Ambarella

Ambarella's products are used in a wide variety of human and computer vision applications, including video security, advanced driver assistance systems (ADAS), electronic mirror, drive recorder, driver/cabin monitoring, autonomous driving and robotics applications. Ambarella's low-power systems on chip (SoCs) offer high-resolution video compression, advanced image processing and powerful deep neural network processing to enable intelligent cameras to extract valuable data from high-resolution video streams. For more information, please visit www.ambarella.com

About Autobrains

Autobrains (formerly Cartica AI) is a leading Israeli AI mobility company, radically reimagining AI for the safest route to autonomy. Revolutionizing how we apply deep learning, self-learning AI is a new approach to perception that drives the transition to the safest human-driven and autonomous car possible. Autobrains offers solutions for the next generation of vehicles and mobility – providing safer, superior performance at lower energy consumption and less cost. Strategic investors include BMW, Continental AG and Knorr-Bremse AG. Learn more at https://autobrains.ai/.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/42b25e67-340c-490d-a615-17684835c718

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