Neusoft Reach’s Ambarella-Based Front Advanced Driver Assistance System Achieves Mass Production in Mainstream Passenger Car Models

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SANTA CLARA, Calif. and SHANGHAI, China, April 11, 2023 (GLOBE NEWSWIRE) -- Ambarella, Inc. (NASDAQ: AMBA), an edge AI semiconductor company, and Neusoft Reach Automotive Technology (Shanghai) Co., a subsidiary of Neusoft specializing in intelligent vehicle technology, today announced that the front advanced driver assistance system (ADAS) smart camera products jointly developed by the two companies are currently in mass production inside the mainstream models of leading China car companies, including passenger car models that entered mass production in 2022.

The third generation of Neusoft Reach’s X-Cube 3.0 front view smart camera is based on Ambarella’s CV22 AI vision system-on-chip (SoC), which runs the camera’s L2 AI perception algorithm. The X-Cube 3.0 is currently being implemented in mass production, providing safe and efficient passenger car technologies and solutions for OEMs based on Ambarella’s CV22 platform.

Building on Neusoft’s nearly 20 years of experience in developing AI vision algorithms for autonomous driving, Neusoft Reach’s in-house neural network algorithms fully utilize the high AI performance and powerful image processing capabilities of Ambarella’s CV22 SoC to achieve the simultaneous deployment of multiple models, including detection, segmentation and semantic classification. Optimized training is carried out for the driving environment with localized characteristics in China, including structural road conditions and complex traffic scenarios, such as non-standard vehicles, pedestrians with abnormal posture, obscured pedestrians, fences, roadblocks and special lane lines. Neusoft Reach’s AI models achieved significant performance improvements through the unique unstructured-sparsity capability of Ambarella’s CVflow ® AI architecture, along with the support of tools from their CVflow platform and local technical team. These improvements marked a breakthrough in optimization efficiency and enabled high algorithm accuracy, which provides users with a safer and more comfortable driving experience.

Ambarella’s CV22 SoC is based on its proprietary and highly efficient CVflow AI processing architecture, which enables the industry’s best AI performance per watt. Additionally, this chipset uses a 10nm, automotive-grade process technology to help achieve low power consumption. Having supported mass production for many passenger vehicles in recent years, Ambarella’s CVflow platform toolchain offers proven support for a wide variety of neural networks. Additionally, the platform optimizes model importing, including quantization, sparsification, compilation and operation. In particular, it supports unstructured sparsity, as well as retraining to compensate for quantization accuracy loss, which provides advantages such as high execution efficiency and low memory bandwidth usage when running the same network.

The Ambarella CVflow platform also provides customers with extensive documentation and includes examples of various open-source networks, as well as training videos. The company’s local support teams communicate seamlessly with customers to assist them in maximizing the benefits of their algorithms and systems, while advancing their intelligent innovation.

“The real-world implementation of L2 and above intelligent driving functions requires fine-tuned application algorithms, optimized chip capabilities, functional safety, hardware security and platform-based rapid iterative reuse,” said Liu Wei, Deputy General Manager of Neusoft Reach. “Component suppliers must also have excellent algorithms and a powerful software architecture, along with high-performance and highly reliable automotive-grade chips. This cooperation between Ambarella and Neusoft Reach showcases our effective implementation of autonomous algorithms, providing innovative technology solutions for the industry while helping to create a new ecology of intelligent networked vehicles.”

“It is gratifying to see our work with Neusoft Reach on their L2 front-ADAS smart camera product achieving mass production in a range of OEM passenger cars,” said Fermi Wang, president and CEO of Ambarella. “Our CVflow SoCs provide a high-performance AI processing engine for Neusoft Reach’s advanced neural network algorithms. Additionally, our integrated image signal processor continues to set the industry benchmark for image quality, while our efficient SoC architecture provides the industry’s best AI performance per watt.”

Ambarella and Neusoft Reach plan to continue their cooperation in China, using Ambarella’s next-generation SoCs to continue creating intelligent driving systems with distinct technology advantages. The companies also plan to continue their joint development of L2 ADAS products for passenger cars in China, helping OEMs bring additional models into mass production that provide consumers with a safer and more comfortable driving experience.

About Ambarella
Ambarella’s products are used in a wide variety of human vision and edge AI 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 and radar processing, and powerful deep neural network processing to enable intelligent perception, fusion and planning. For more information, please visit www.ambarella.com.

About Neusoft Reach
Neusoft Reach is a subsidiary of Neusoft. It was founded in October 2015 and specializes in basic software, service-oriented architecture (SOA) middleware, autonomous driving, and cross-domain integrated vehicle cloud technology products and services. With software technology as its core, Neusoft Reach integrates key technologies such as big data and artificial intelligence, focusing on vital areas such as basic software, operating systems, ADAS, and intelligent internet connectivity, providing outstanding and iteratively upgraded core technologies, software and hardware integration products, and software platform products for automotive enterprises that enable future technological innovation and development. The company is committed to becoming a trusted partner for OEMs in the era of software defined vehicles.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/3480fbd9-cd3f-494c-8bbd-fe01a97713b2

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