

## Ambarella and HELLA Aglaia Partner to Enable Advanced Al Features in Front ADAS Cameras

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Ambarella's CV22AQ CVflow™ computer vision processor and HELLA Aglaia's open application software deliver the performance and features required for NCAP and Level 2 automated driving front cameras

SANTA CLARA, Calif.--(BUSINESS WIRE)--Dec. 17, 2018-- Ambarella, Inc. (NASDAQ: AMBA), a leading developer of high-resolution video processing and computer vision semiconductors, and HELLA Aglaia, one of the leading global developers of intelligent visual perception software, today announced that they are partnering to deliver a platform for the next generation of Advanced Driver Assistance Systems (ADAS). The platform is based on Ambarella's CV22AQ CVflow computer vision processor, which offers a powerful Image Signal Processor (ISP) and massive Artificial Intelligence (AI) computing performance with extremely low power consumption, typically below 2.5 watts. Combined with HELLA Aglaia's production-proven software, the platform enables forward-facing, single-box ADAS cameras with advanced AI features and highly-accurate image content recognition, requirements for safety-critical applications.

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Ambarella and HELLA Aglaia Front ADAS camera platform enables forward-facing, single-box ADAS cameras with advanced AI features and highly-accurate image content recognition (Graphic: Business Wire)

"Our OEM and tier-1 customers are demanding an open camera platform which has the flexibility to add software features and that is combined with the performance necessary to run the next generation of deep neural network algorithms," said Kay Talmi, managing director at HELLA Aglaia. "We chose the Ambarella CV22AQ CVflow processor due to its ability to deliver extremely high computer vision processing performance with the low power consumption required for single box ADAS camera designs."

"Together with HELLA Aglaia, we will offer our customers a robust, open, and high performance platform for the next generation of ADAS cameras," said Fermi Wang, CEO of Ambarella. "Our CV22AQ CVflow SoC enables HELLA Aglaia's software to run with maximum performance and efficiency while offering our joint customers the ability to differentiate by adding additional features."

The CV22AQ's CVflow architecture provides computer vision processing at full 4K or 8-Megapixel resolution at 30 frames per second (fps), to enable image recognition over long distances and with high accuracy. Its ISP provides outstanding imaging in low light conditions while High Dynamic Range (HDR) processing extracts

maximum image detail in high-contrast scenes, further enhancing the computer vision capabilities of the chip. CV22AQ includes a suite of advanced security features to protect against hacking, including secure boot, TrustZone<sup>TM</sup>, and I/O virtualization.

HELLA Aglaia's vision software stack scales from field proven perception functions for NCAP applications like Automated Emergency Braking, Lane Keeping, Glare Free High Beam and Speed Assist to camera-based Al functions like Mono-Depth for any object detection or semantic free space for L2/L3 applications like Highway Pilot. Aglaia's software stack is highly modular and allows easy integration with customer- or third-party software.

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**About HELLA Aglaia** 

HELLA Aglaia Mobile Vision GmbH is a full subsidiary of HELLA GmbH & Co. KGaA and is one of the leading global developers of intelligent visual sensor systems. The result of many years of experience, our expertise in mono- and stereo-camera systems, image processing and software programming makes possible the development of innovative industrial solutions and highly effective products for driver-assistance systems, electromobility and people counting. Many of our products set international standards and open completely new application possibilities and future opportunities. For more information please visit, <a href="https://www.aglaia-gmbh.de">www.aglaia-gmbh.de</a>.

## **About Ambarella**

Ambarella's products are used in a wide variety of human and computer vision applications, including surveillance, Advanced Driver Assistance Systems (ADAS), electronic mirror, drive recorder, driver/cabin monitoring, autonomous driving, and robotic applications. Ambarella's low-power and high-resolution video compression, image processing, and deep neural network processors and software enable cameras to become more intelligent by extracting valuable data from high-resolution video streams. For more information, please visit <a href="https://www.ambarella.com">www.ambarella.com</a>.

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