



Ambarella's Automotive AI SoC Achieves ASIL C Certification, Exceeding Functional Safety Levels of Competing Front ADAS Solutions

June 7, 2022

CVflow® SoC Combines High Certification Level With Best-in-Class AI Performance Per Watt for Safety Critical Automotive Perception Systems From ADAS to L4 Autonomous Driving

SANTA CLARA, Calif., June 07, 2022 (GLOBE NEWSWIRE) -- [Ambarella, Inc.](#) (NASDAQ: AMBA), an edge AI semiconductor company, today announced that its CV2FS automotive AI perception system-on-chip (SoC) achieved ASIL C certification from external auditor exida. This functional safety level is more stringent than the ASIL B certifications typically found in this class of AI SoCs for front ADAS to Level 4 systems. As a result, automotive and robotics Tier-1s and OEMs can achieve significant levels of safety with a far less complex system architecture, accelerating time to market while lowering system cost and power consumption.

exida is a leading global product certification and knowledge company specializing in automotive and automation system safety, alarm management, cybersecurity and availability. It provides companies with help and guidance related to functional safety standards implementation, among other standards. exida certified that the CV2FS meets the ASIL C requirements of the ISO 26262 automotive functional safety standard, for both ASIL C Systematic Capability, which is based, among other things, on an ISO 26262 compliant SoC development process; and ASIL C Diagnostic Coverage, which evaluates the design's capability to detect and control random hardware failures based on safety mechanisms that are integrated into the SoC.

"Congratulations to Ambarella for achieving this ISO 26262 ASIL C functional safety certification for their CV2FS SoC," said Alexander Griessing, COO of exida. "Ambarella took a comprehensive approach in designing this device to achieve ASIL C certification, which was enabled in part by the large amount of integrated IP developed by the company."

"Ambarella builds automotive functional safety into our CVflow® AI SoCs from the ground up, rather than retrofitting them afterwards as many competitors do, which allowed us to achieve this high certification level for the CV2FS," said Chan Lee, COO of Ambarella. "This approach, in combination with our focus on in-house development—including our industry-leading ISP pipeline and AI engine—gives Ambarella an advantage in creating an SoC architecture optimized for the highest ASIL levels."

The Automotive Safety Integrity Level (ASIL) is a risk classification system defined by the ISO 26262 - Functional Safety for Road Vehicles standard. This standard includes four ASIL levels, from A to D, where D has the highest product integrity requirements and A the lowest. ASIL certification levels are determined through a risk analysis of potential hazards by evaluating the severity, exposure and controllability of those hazards during a variety of vehicle operating scenarios. The letter level is then assigned based on how well those hazards were addressed in relationship to the standard's defined safety goals for each ASIL level.

The CV2FS was designed with Ambarella's algorithm-first approach to provide an AI SoC that is tailored for forward-facing monocular and stereovision ADAS cameras, as well as computer vision ECUs for L2+ and higher levels of autonomy, AI acceleration in automotive domain controllers, electronic mirrors with blind spot detection (BSD), and interior driver and cabin monitoring (DMS and OMS) systems. In addition to helping customers achieve their safety goals with ASIL C certification, Ambarella provides a unified software architecture across its entire CVflow SoC portfolio. This enables automotive Tier-1s and OEMs to preserve software development investments while expanding their product lines with additional safety features.

Availability

Ambarella's [CV2FS edge AI SoC](#) is available now for sampling and mass production. For more information, contact Ambarella: <https://www.ambarella.com/contact-us/>.

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 perception, fusion and central processing systems to extract valuable data from high-resolution video and radar streams. For more information, please visit www.ambarella.com.

Ambarella Contacts

- Media contact: Eric Lawson, elawson@ambarella.com, +1 480-276-9572
- Investor contact: Louis Gerhardy, lgerhardy@ambarella.com, +1 408-636-2310
- Sales contact: www.ambarella.com/about/contact/inquiries

All brand names, product names, or trademarks belong to their respective holders. Ambarella reserves the right to alter product and service offerings, specifications, and pricing at any time without notice. © 2022 Ambarella. All rights reserved.

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/cd3edd36-0c24-453d-be91-7baaecfcecfd>



Ambarella's CV2FS automotive AI perception system-on-chip (SoC) achieved ASIL C certification from external auditor exida.



exida certified that Ambarella's CV2FS SoC meets the ASIL C requirements of the ISO 26262 automotive functional safety standard.