Ambarella Debuts Next-Generation Edge GenAI Technology at ISC West, Including Reasoning Models Running on its CVflow® Edge AI SoCs

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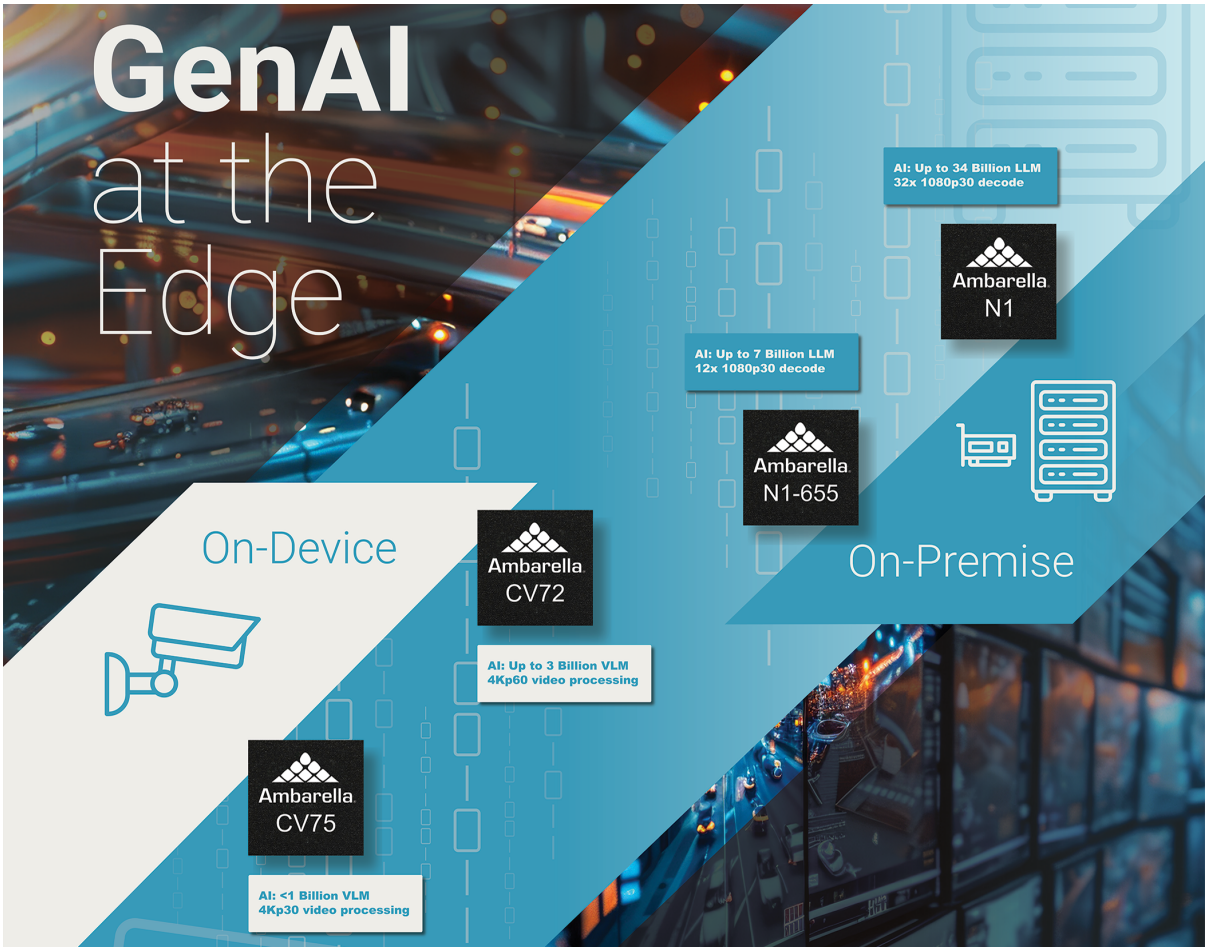
With Over 30 Million Edge AI Systems-on-Chip Shipped, Ambarella is Driving Innovation for a Broad Range of On-Device and On-Premise Generative AI Applications

SANTA CLARA, Calif., March 31, 2025 (GLOBE NEWSWIRE) -- Ambarella, Inc. (NASDAQ: AMBA), an edge AI semiconductor company, today announced during the ISC West security expo that it is continuing to push the envelope for what is possible with generative AI at the edge. As a leading supplier of edge AI systems-on-chip (SoCs), Ambarella recently achieved the milestone of 30 million cumulative units shipped. The company is reinforcing that business and technology leadership with live demonstrations at this week's show of its latest cutting-edge GenAI and vision AI capabilities.



The new demonstrations highlight Ambarella's ability to enable scalable, high-performance reasoning and vision AI applications across its ultra-efficient, edge-inference CVflow® 3.0 AI SoC portfolio, which now supports most of the leading GenAI models from 0.5 to 34 billion parameters. In particular, the company will debut live demonstrations of the DeepSeek GenAI models running on three different price/performance levels of its SoC portfolio. These new demos, along with its advanced multi-stream video analysis demonstrations, exemplify how Ambarella is pushing the boundaries of real-time, AI-powered security and analytics by running state-of-the-art (SOTA) vision language models (VLMs), for both on-device and centralized on-premise AI hub applications with exceptional multimodal video intelligence.

These demonstrations further illustrate how Ambarella is bringing advanced reasoning capabilities to real-world applications without requiring cloud processing. Additionally, the scalable AI performance across its large portfolio of edge AI SoCs ensures that customers can deploy the same AI models across different product tiers, from high-performance computing to ultra-low-power inference.

"In addition to providing the industry's best AI performance per watt, Ambarella stands apart from most competitors, which offer impractical

stand-alone AI accelerators that act as add-ons to a main processor," said Fermi Wang, President and CEO of Ambarella. "While we are continuing to enable advancements in GenAI processing at the edge, we also remain steadfast in our hallmark differentiators of not merely providing the proprietary CVflow AI accelerator, now in its third generation. Instead, we also integrate image processing, encoding and system-level functions into all of our AI SoCs, which is why our customers have been able to so rapidly deploy 30 million-plus Ambarella edge AI SoCs in the market, to date."

Another area of focus for Ambarella is on making it easy for edge AI developers to get started. As the latest example of those investments, the company will demonstrate at ISC West its complete AI Model Garden—a vital and growing component of its Cooper™ Developer Platform. Additionally, several companies from Ambarella's robust developer ecosystem will provide hardware and software demonstrations of what can be achieved with Ambarella's SoCs, by taking full advantage of their superior AI performance per watt.

The following are additional highlights from some of Ambarella's key demonstrations at ISC West this week:

- **DeepSeek 3-in-1 GenAI Reasoning:** This demonstration runs the DeepSeek R1 QWen 1.5B model on the CV7 SoC family and DeepSeek R1 QWen 7B on the N1 SoC family, showcasing Ambarella's seamless scalability for processing reasoning models across its CVflow 3.0 edge AI SoC portfolio.
- **Multi-stream, Multi-channel Video Decoding with Visual Analytics Powered by CLIP & LLaVA One-Vision Models on Cooper Kits:** As an example of on-premise centralized AI processing, this set of AI-box demonstrations run real-time CLIP models on multiple video streams in parallel, as well as SOTA VLMs, which enable in-depth video analysis via a chat-based interface, allowing users to query specific insights on any of the multiple streams.
- **On-Device Generative AI in a Camera, Along with Deeper Insights in an AI Box: A multi-agent, multi-chip demonstration** supporting VLMs and reasoning models with up to 1.5B parameters on-device, as well as deeper insights locally on an AI box, providing visual insights and event alerts in real-time without needing the cloud, thereby preserving privacy and keeping TCOs lower.

To put these demonstrations in context, smart security and surveillance can use their capabilities for real-time video analysis, anomaly detection and AI-driven event monitoring. Retail and commercial analytics applications can take advantage of the AI-powered vision insights to understand customer behavior, optimize store layouts and improve loss-prevention strategies. Public safety and law enforcement can use these technologies to rapidly search and analyze surveillance footage, reducing investigation times and improving responses to security threats. Additionally, industrial-monitoring applications can implement AI-driven tracking of operational efficiency and safety compliance, while gaining predictive maintenance insights that reduce downtime and optimize workflows.

To schedule a tour of these demonstrations during Ambarella's invitation-only exhibition at ISC West in Las Vegas this week, please contact your Ambarella representative.

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.

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https://www.globenewswire.com/NewsRoom/AttachmentNg/ef414b67-7f61-4236-96c8-875f0bf7c3eb

Ambarella
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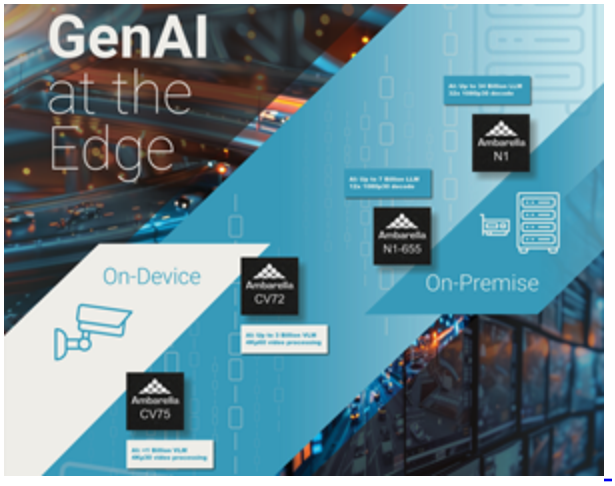

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