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Press Release

Socionext Joins imec's Autonomous Edge Chiplet Program (AECP)

Accelerating the Standardization and Practical Adoption of Chiplet Technology for Autonomous Applications

[Yokohama, Japan, August 3, 2026] --- Socionext Inc. today announced that it has joined the Autonomous Edge Chiplet Program (AECP), an initiative led by imec, the world-leading research and innovation center for advanced semiconductor technologies. Through its participation in imec's core partner program, Socionext has been advancing research activities in leading-edge logic semiconductor technologies and 2.5D/3D/5.5D packaging technologies. By joining AECP, Socionext will further strengthen its efforts toward the practical adoption of chiplet technology in the autonomous field and contribute to the delivery of high-performance, high-quality leading-edge SoCs.

In the automotive industry specifically, demand for in-vehicle computing performance is rapidly increasing amid the advancement of software-defined vehicle (SDV), advanced driver-assistance systems (ADAS), and autonomous driving (AD). To meet these requirements, semiconductors are expected to deliver higher functionality and larger-scale integration. Chiplet technology, which integrates multiple function-specific chips using advanced packaging technologies, is gaining attention as a next-generation semiconductor architecture that can improve performance, enable flexible functional expansion, and enhance development efficiency. At the same time, addressing the increasing complexity of large-scale designs, maintaining high design quality, and ensuring product quality in mass production remain key challenges.

Originally launched as the "Automotive Chiplet Program", imec has expanded its chiplet technologies and architectures developments into the Autonomous Edge Chiplet Program (AECP), broadening the focus on applications beyond automotive systems to areas such as robotics and aerospace. Imec's AECP is a collaborative research program involving automakers, robotics companies, semiconductor companies, EDA vendors, and other industry participants. The program promotes the verification of chiplet architectures and advanced packaging technologies that meet autonomous system requirements for performance, functional safety, reliability, and long-term supply. It also aims to accelerate the widespread adoption and practical implementation of chiplet technology through standardization and the establishment of reference designs. Through its participation in AECP, Socionext will further enhance its next-generation chiplet technology platform while preparing for the evolving opportunities enabled by autonomous edge and chiplet-based computing.

Socionext is advancing its Flexlets™ concept, enabling customers to seamlessly combine optimized IP and functional blocks tailored to their specific requirements. Through this flexible approach, the company is driving the development of next-generation SoC architectures built on chiplet technology.

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Participation in AECP will further accelerate the evolution of Flexlets and broaden the adoption of chiplet-based solutions across the automotive and Physical AI industries.

The stringent technical requirements of automotive semiconductors, including high performance, functional safety, reliability, and low power consumption, are expected to extend beyond the automotive sector into applications such as robotics and Edge AI, where real-time performance and high reliability are essential. This trend is being accelerated by the emergence of Physical AI.

"As the transition to SDV progresses, automotive semiconductors are required to deliver even higher performance, flexibility, and scalability," said **Hisato Yoshida, President and COO of Socionext Inc.** *"Chiplet technology is an innovative approach that can combine silicon optimized for each function to achieve both higher performance and improved development efficiency, and we expect it to become an important foundation for next-generation automotive computing.*
Through our participation in AECP, Socionext will contribute to the practical adoption of chiplet architectures and the development of the ecosystem, leveraging its long-standing expertise in advanced SoC and automotive semiconductor development, as well as our Solution SoC business model that addresses the unique needs of each customer."

"We welcome Socionext to AECP. To bring chiplet technology into practical use, it is essential for the semiconductor, automotive and other Physical AI industries to work together to build interoperable standards and ecosystems," said **Bart Placklé, Vice President of Autonomous Edge Chiplet at imec.** *"Socionext's extensive experience in automotive SoC development and system design will play an important role in accelerating the development of next-generation chiplet-based automotive platforms."*

About Socionext Inc.

Socionext Inc., a leading global System-on-Chip (SoC) supplier, is a pioneer of the 'Solution SoC' business model. This innovative approach encompasses Socionext's 'Entire Design' capabilities and offering of 'Complete Service'. As a trusted silicon partner, Socionext fuels global innovation, providing superior features, performance, and quality that set its customers' products and services apart in diverse domains ranging from automotive and data centers to networking, smart devices, and industrial equipment.
Socionext Inc., based in Yokohama, operates offices across Japan, Asia, the United States, and Europe for development and sales. For more information, visit https://www.socionext.com/en/.