

Press Release

Socionext Begins Development of SoCs for Advanced ADAS and AD Using 3nm Automotive Process

[Yokohama/Japan. October 23, 2023] --- Socionext Inc., today announced it is developing custom SoCs for advanced ADAS (Advanced Driver Assistance Systems) and AD (Autonomous Driving) using N3A, TSMC's latest 3nm automotive process technology. Target production of the SoCs will be in 2026.

TSMC's 3nm technology enables high volume production with significant improvements in power, performance, and area (PPA) when compared to previous technology nodes. TSMC's N3E process offers up to 18% speed improvement at the same power, or 32% power reduction at the same speed, with up to 60% increase in logic density compared to N5. These PPA improvements are a key ingredient for future EV and vehicle deployments, where computing and workload requirements for next generation ADAS and AD applications often compete with the need for longer battery life and driving range.

The SoCs being developed are designed specifically for advanced driving assistance systems and autonomous driving applications, achieving exceptional performance and low-power consumption. By combining TSMC's N3A process technology with Socionext's experience to support ISO26262 functional safety product development, AEC-Q100 and IATF-16949 automotive quality and reliability requirements, Socionext is addressing the performance and safety demands of the rapidly evolving automotive electronic systems required by Automotive OEMs.

"We are excited to announce that we are continuing our history of adopting TSMC's leading-edge process technologies for automotive chip development" said Hisato Yoshida, Corporate Executive Vice President and the Head of Global Development Group at Socionext. "As the advanced ADAS and AD segment continues to grow, our customers are investing in custom SoC solutions to provide product differentiation and optimization of their hardware compute and software platforms. With customers' requirements for high levels of integration with multi-core CPU clusters, AI acceleration, image and video processing, high-speed interfaces, as well as security and functional safety support, Socionext's experience enables our customers to deliver next-generation automotive platforms. TSMC is a key silicon manufacturing partner for Socionext, not only for automotive developments, but for a wide range of applications ranging from consumer and industrial to datacenter and networking"

"Socionext has been an early adopter of TSMC's leading-edge technologies for automotive applications," said Dr. Cliff Hou, Senior Vice President of Europe and Asia Sales at TSMC. "With our comprehensive automotive technology platform, Socionext can quickly harness the power of 3nm for the computing needed for ADAS and AD without compromising safety and reliability, and we are excited to see the innovations they will bring to life"

Socionext will start designing with the early release of N3A process known as N3AE, to enable an accelerated schedule to mass production of automotive-grade products. Through early and close collaboration with TSMC, Socionext aims to be one of the first suppliers of high-performance and energy-efficient automotive products built on the most advanced N3A technology.

Press Inquiry:

Socionext Inc. <https://www.socionext.com/en/contact/>

About Socionext Inc.

Socionext Inc. is a global SoC (System-on-Chip) supplier and a pioneer of a unique “Solution SoC” business model through decades of industry experience and expertise. Socionext contributes to global innovation in advanced technologies including automotive, data center, networking, and smart devices. As a trusted silicon partner, Socionext delivers superior features, performance, and quality that differentiate its customers’ products and services from their competition.

Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its development and sales activities. For more information, visit <https://www.socionext.com/en/>.

About TSMC

TSMC pioneered the pure-play foundry business model when it was founded in 1987, and has been the world’s leading dedicated semiconductor foundry ever since. The Company supports a thriving ecosystem of global customers and partners with the industry’s leading process technologies and portfolio of design enablement solutions to unleash innovation for the global semiconductor industry. With global operations spanning Asia, Europe, and North America, TSMC serves as a committed corporate citizen around the world.

TSMC deployed 288 distinct process technologies, and manufactured 12,698 products for 532 customers in 2022 by providing broadest range of advanced, specialty and advanced packaging technology services. The Company is headquartered in Hsinchu, Taiwan. For more information please visit <https://www.tsmc.com>.

All company or product names mentioned herein are trademarks or registered trademarks of their respective owners. Information provided in this press release is accurate at time of publication and is subject to change without advance notice.