

Press Release

## **Socionext Expands Agentic AI to Advanced, Large-Scale SoC Physical Design**

Cadence® InnoStack™ AI Super Agent to support Socionext's AI-driven physical design for large-scale 3nm SoCs

**[Langen/Germany, Yokohama/Japan & San Jose/California, October 20, 2026]** --- Socionext Inc., a global leader in custom SoC design and development, is actively advancing its SoC design and development capabilities through agentic AI and expanding the application of AI-driven design to the physical design of large-scale system-on-chip (SoCs) using advanced process technologies. For the expansion into physical design, Socionext is collaborating with Cadence (Nasdaq:CDNS).

### **Actively Advancing Agentic AI Initiatives in SoC Design and Development**

Socionext has been integrating agentic AI into front-end design to improve the efficiency of design and verification tasks, support engineering analysis and decision-making, and leverage accumulated design knowledge and expertise. Beyond improving the efficiency of individual tasks with AI, Socionext is also integrating AI agents into its design and development processes to further enhance engineering productivity and design quality. Through these initiatives, Socionext aims to create a development environment that enables engineers to focus on higher-value design decisions and innovation.

### **Expanding AI-Driven Design into SoC Physical Design**

Socionext is expanding its AI-driven design approaches into physical design. As physical design becomes increasingly complex for large-scale SoCs using advanced process technologies, effectively integrating AI agents with advanced EDA tools and design flows is critical to addressing these challenges and further improving design efficiency. Through its collaboration with Cadence, Socionext is advancing these efforts and is applying AI-driven design to the physical design of a large-scale 3nm SoC. As part of these efforts, Socionext is applying the Cadence InnoStack AI Super Agent and plans to expand its use across SoC development projects.

### **Integrating Engineering Knowledge into Physical Design Workflows**

Through retrieval-augmented generation (RAG), Model Context Protocol (MCP) support, customized AI skills, and AI agents, Socionext integrates internal design knowledge into practical physical design workflows. Current and planned applications include floorplanning, custom timing-analysis checks, and future checklist automation, helping make proprietary expertise more accessible and reusable across projects and teams.

*"As semiconductor design complexity grows, engineering organizations need better ways to capture and reuse expertise across projects and teams," said **Chin-Chi Teng, senior vice president and general manager of the Digital and Signoff Group at Cadence.** "Socionext's implementation demonstrates how the open and extensible InnoStack AI Super Agent enables customers to integrate their own methodologies and proprietary engineering knowledge into AI-assisted design environments. Together, Cadence's technology and Socionext's engineering expertise make valuable design knowledge more accessible and actionable across the organization."*

*"Socionext has already incorporated AI into front-end design activities and is applying AI-driven design to the physical design of a large-scale 3nm SoC," said **Hisato Yoshida, President and COO of Socionext.***

*"Building on these efforts, we are advancing our AI-driven design capabilities through our collaboration with*

*Cadence and applying the Cadence InnoStack AI Super Agent to SoC development projects. We expect to achieve up to 5X overall productivity gains through Cadence's agentic AI workflow. By combining our accumulated design knowledge, methodologies, and engineering experience with Cadence technology, we aim to improve design quality and enable engineers to focus on higher-value innovation across the entire SoC development flow."*

### **Expanding AI-driven Design Across SoC Development**

Beyond automation, Socionext aims to preserve and reuse valuable engineering know-how as a shared organizational asset across projects, teams, and future generations of engineers. This approach supports ongoing design transformation while maintaining the quality and reliability customers expect from Socionext. Looking ahead, Socionext plans to connect its front-end design AI initiatives with its expanding AI-driven physical design capabilities, creating a more integrated approach across the SoC development flow. In physical design, Socionext will continue its collaboration with Cadence and apply the resulting capabilities to additional SoC development projects. The company is also developing custom AI agents and engineering assistants that leverage internal expertise to strengthen productivity and knowledge reuse across the organization.

### **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/>.

### **About Cadence**

Cadence is a market leader in AI and digital twins, pioneering the application of computational software to accelerate innovation in the engineering design of silicon to systems. Our design solutions, based on Cadence's Intelligent System Design™ strategy, are essential for the world's leading semiconductor and systems companies to build their next-generation products from chips to full electromechanical systems that serve a wide range of markets, including hyperscale computing, mobile communications, automotive, aerospace, industrial, life sciences and robotics. In 2025, Cadence was recognized by Fortune as one of the world's top 100 best companies to work for. Cadence solutions offer limitless opportunities.

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