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Press Release

Socionext Collaborates with Arm to Advance AI Data Center Infrastructure with Arm Total Design

Ecosystem-Driven Design with Socionext Flexlets Enables Flexible, High-Performance Silicon Platforms for Advanced Automotive, Compute, and AI Systems

[Yokohama, Japan and Milpitas, California, March 27, 2026] --- Socionext, a global leader in advanced custom System-on-Chip (SoC) solutions, today announced a set of chiplet and Flexlets™ capabilities to address customers' applications for hyperscale data centers, AI/Agentic AI compute, physical AI, and autonomous automotive platforms. Developed through the company's strategic collaboration across Arm® compute subsystems (CSS) and Arm AGI CPU, Socionext is enabling customers to take advantage of Flexlets to build custom memory and IO expansion chiplets.

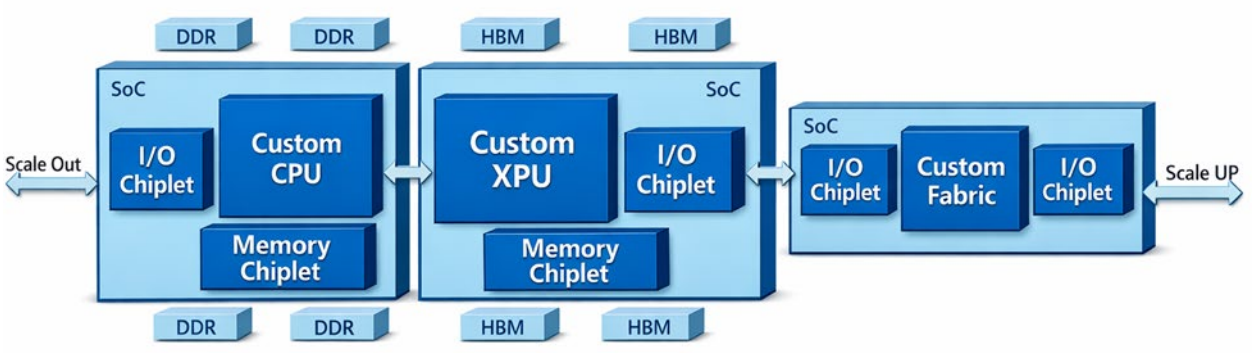
The data center infrastructure is evolving to scale from AI training to inference and agentic deployment. The demands of training and inference workloads are driving growth in the development of custom XPUs. To maximize workload performance by increasing on-chip functionality, these custom silicon designs are approaching physical size limits of manufacturability. This often results in moving the IO and Memory interconnect onto other dedicated silicon chiplets.

"The Arm AGI CPU demonstrates the power of an ecosystem-driven approach to accelerating silicon innovation, and is an indication of Socionext's strong collaboration and trusted relationship with Arm," said Masahiro Koezuka, CEO at Socionext. "Through our strategic collaboration spanning Arm Total Design, chiplet-based architectures, and AI data center silicon platforms, Socionext is opening new pathways for customers to build advanced compute systems."

System-level functionality is achieved by packaging multiple chiplets into a single SoC, incorporating the required number of XPUs and IO chiplets. The IO chiplets enable the SoC to be deployed in scale-up or scale-out configurations.

AI Workload-based Silicon Optimization - Market moving from ASSPs to ASICs

The AI applications and required workload performance are driving the industry to move beyond ASSPs to purpose-built silicon. By using the custom silicon approach, AI system architects are able to maximize performance for their target workload while optimizing the workload performance for the lowest power and best TCO.



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The figure above illustrates custom CPU and XPU developed and supplied by Socionext in the context of the data center architectures. Multiple chiplet instances are integrated into a single rack unit, with local interconnect to scale up within the rack and remote/data center interconnect to scale out for hyperscale deployments.

Socionext's investment in Flexlets enabled our customers to reduce CPUs and XPUs development cycle time. Like software subroutines, Flexlets are proven hardware building blocks that engineers can draw from an extensive library of composable RTL subsystems to design SoCs with confidence.

Socionext customers have validated Flexlets' time-to-market advantages by rapidly configuring existing designs to meet the targeted SoC requirements. Flexlets allow customers to mix-and-match process nodes and quickly adopt new industry-standard interfaces. Socionext offers a scalable portfolio of UCIe-based Flexlets enabling high-bandwidth memory, 224G I/O, and next-generation PCIe Gen7 connectivity.

Socionext uses advanced custom silicon development methodologies and a platform approach to create low-power, high-performance custom solutions. Flexlets embody the company's commitment to help customers achieve time-to-market advantage and reduce development risks of complex chiplet-based SoCs.

About Socionext America Inc.

Socionext America Inc. (SNA) serves as the US arm of Socionext Inc., a global leading fabless semiconductor supplier specializing in SoCs. Headquartered in Milpitas, California, SNA delivers cutting-edge technologies and a diverse array of customizable solutions. The company meets customer demands by providing high-quality semiconductor products, leveraging proven design methodologies and state-of-the-art implementation expertise. Additionally, SNA collaborates closely with industry-leading partners across manufacturing, IP, EDA, and software.
For product information, visit our website, e-mail sna_inquiry@us.socionext.com or call 1-844-868-1795. For company news and updates, connect with us on LinkedIn, YouTube, Facebook, and X.

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/.