China Daily (2026-10-21)

SpacemiT unveils new product for data centers

Chinese computing company SpacemiT unveiled its V100 server CPU at the 2026 RISC-V China Summit in Shenzhen, alongside three server systems for general-purpose computing, AI acceleration and data storage.

Industry observers regard the V100, a general-purpose processor compliant with the RISC-V server specification, as a marker of the architecture's expansion from terminal and edge applications into data centers and a significant advance in China's efforts to extend its open-source chip industry into advanced computing.

The launch points to a broader shift in the role of processor architectures. An instruction set is the collection of instructions a CPU can understand and execute. It provides the rules that allow software to issue instructions the hardware can interpret, enabling the two to work together.

The x86 instruction set and Windows operating system underpin the Wintel ecosystem, while ARM and Android form the basis of the AA ecosystem. The two have established strong positions in personal computers and mobile devices, respectively.

As open-source hardware and software, as well as open-source large language models, continue to develop, RISC-V is emerging as a new direction for the global computing industry.

In April, China's Ministry of Industry and Information Technology called for faster development of the RISC-V industry, upgrades to AI terminals, and coordinated advances in complete systems and components.

Chen Zhijian, founder and CEO of SpacemiT, said the V100 is a key step in the company's expansion "from terminals to the cloud" and signals that RISC-V is moving toward data-center applications that can be deployed and scaled.

Large models are driving a profound change in computing, he said. In the future, a "full-scenario, homogeneous" model built on a common architecture for chips at the edge, in terminals and in the cloud, could substantially reduce software development costs across society and spur industrial innovation.

The V100 implements the RISC-V server specification across the chip's hardware, firmware and operating system, the company said.

Earlier embedded RISC-V chips typically required a customized operating system for each product. The V100, by contrast, natively supports mainstream Linux distributions in China and abroad, moving toward a general-purpose model similar to x86 and lowering the barriers to data-center deployment and adaptation.

The processor uses a 46-core hybrid microarchitecture that combines high-performance cores with the company's in-house energy-efficient cores. It supports high-speed memory and expansion interfaces for devices such as AI accelerator cards and high-speed network cards.

To support the fast-growing use of AI agents, hardware-level isolation creates lightweight virtual-machine sandboxes. This design provides security at the virtual-machine level and helps reduce the risk of AI programs escaping their sandbox.

The three server systems unveiled with the V100 target general-purpose computing, AI acceleration and large-scale data storage. The AI server supports up to eight full-height, full-length accelerator cards and has been adapted to work with several domestic AI accelerator chips.

Third-party estimates put China's RISC-V main-control chip market at about 1.1 billion yuan ($164.72 million) in 2021 and 37.7 billion yuan in 2025.

The market is projected to reach about 219.4 billion yuan by 2030. Industry observers say RISC-V applications are expanding across multiple areas and moving toward scale, supporting the development of computing industries in China and globally.