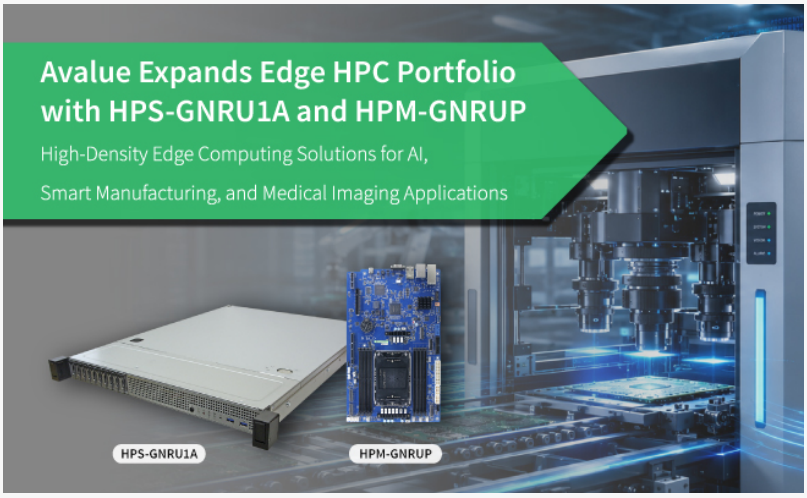
Avalue Expands Edge HPC Portfolio with HPS-GNRU1A and HPM-GNRUP

High-Density Edge Computing Solutions for AI, Smart Manufacturing, and Medical Imaging Applications



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TAIPEI, TAIWAN, TAIWAN, May 18, 2026 /EINPresswire.com/ -- As artificial intelligence (AI) and data-intensive applications continue to drive demand for real-time processing and low-latency computing, high-performance computing (HPC) is rapidly expanding beyond traditional data centers to the edge. Addressing this growing trend, Avalue Technology has launched the HPS-GNRU1A 1U high-density server system and the HPM-GNRUP industrial server board, combining the latest Intel® Xeon® 6 platform, PCIe Gen5 architecture, and high-density NVMe storage to deliver flexible and high-performance solutions for emerging Edge HPC applications.

Unlike conventional HPC platforms primarily designed for centralized data centers, Avalue's latest Edge HPC portfolio is optimized for on-site computing environments. In smart manufacturing, AOI inspection systems require real-time image processing to improve production yield and process stability. In healthcare, image-guided therapy depends on precise and low-latency image analysis, while smart city applications such as airport security screening demand rapid processing of high-frequency imaging data. In life sciences, next-generation sequencing (NGS) workloads also require intensive computing performance for large-scale data analysis. These applications share common challenges, including massive data throughput, real-time processing requirements, and deployment in space-constrained environments, making Edge HPC a critical market focus.

The HPS-GNRU1A features a compact 1U rackmount design that combines high-performance computing, high-density storage, and flexible GPU expansion within limited rack space. Powered by a single Intel® Xeon® 6 processor with support for up to 350W TDP, the system integrates PCIe Gen5 architecture and dual 10GbE LAN interfaces to meet the demands of high-speed data

transfer and low-latency computing demands. For expansion flexibility, the HPS-GNRU1A supports either one double-wide FHFL GPU or two single-wide FHFL GPUs with one HHHL add-on card, without compromising critical storage bays or system connectivity. This optimized 1U design delivers a rare combination of high-density GPU computing and flexible I/O expansion. In addition, the system supports up to ten hot-swappable E1.S NVMe drives or four U.2 NVMe drives, enhancing real-time data processing and high-frequency write performance for data-intensive workloads.

The HPM-GNRUP industrial-grade server board, built on Intel® Xeon® 6 processors (6500P/6700P/6700E), is the core computing platform. It supports DDR5 high-bandwidth memory and PCIe Gen5 technology, delivering high scalability and high-throughput computing performance. The platform also integrates IPMI 2.0 remote management and multiple high-speed I/O interfaces, as well as a tool-less maintenance design, all of which improve system management efficiency and simplify deployment and maintenance. Thanks to their high-density computing architecture and flexible expansion capabilities, the HPS-GNRU1A and HPM-GNRUP are ideal for data-intensive applications such as AI inference, AOI visual inspection, medical imaging, smart manufacturing and Edge HPC environments.

From a market strategy perspective, Avalue's vertically integrated approach — combining both system-level and board-level solutions — enables the company to address the needs of both system integrators and OEM/ODM customers. Customers seeking rapid deployment can adopt the complete HPS-GNRU1A system platform, while those requiring customized development can leverage the HPM-GNRUP board for flexible design integration. This dual-product strategy strengthens Avalue's competitive positioning in the rapidly evolving Edge HPC market.

To learn more, please visit www.avalue.com or contact us via our online contact form.

About Avalue Technology
Avalue Technology was founded in 2000 and is a provider specializing in industrial computer solutions. Avalue Technology has a proven track record of success in the industrial control industry, and we leverage that experience to provide reliable and trustworthy customized products and services. Our primary products are embedded and industrial computer solutions, with a focus on smart healthcare, smart manufacturing, smart transportation, smart retail, and Internet of Things (IoT) applications. Avalue is committed to the sustainable growth of our company. We are guided by the business philosophy of "stability, innovation, diligence, and enthusiasm, and enjoyment of work and life." We are dedicated to leveraging the power of intelligence and sustainability to disrupt the future of digital blueprints and to drive positive, long-term change in the smart industry.

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