

Avalue Launches ATX Industrial Motherboard EAX-R680BP

Highly Expandable PCIe Gen5 Platform Addresses Dual Demands for Performance and Flexibility in AI and Edge Computing

TAIPEI, TAIWAN, TAIWAN, March 11, 2026 /EINPresswire.com/ -- [Avalue](https://www.avalue.com) Technology Inc. (TPEX: 3479.TWO) has officially launched the new [EAX-R680BP](https://www.avalue.com/products/eax-r680bp) ATX industrial motherboard, which is centered around a highly expandable platform architecture. Supporting the next-generation Intel® Core™ Series 2 processor, it offers flexible dual PCIe Gen5 card configuration capabilities. Designed for AI inference, high-performance computing and data-intensive storage applications, the EAX-R680BP empowers system integrators and enterprise users to build computing platforms that balance performance, scalability and long-term stability.



As edge AI, smart manufacturing and data-driven applications continue to grow, the need for high-bandwidth expansion and computational acceleration in system architectures becomes ever more apparent. The EAX-R680BP industrial-grade motherboard from Avalue features an ATX form factor design that fully leverages the advantages of expansion flexibility and versatility. When combined with the Intel Core Series 2 processors, the EAX-R680BP motherboard provides a stable and scalable hardware foundation for a variety of applications. Thanks to its PCIe Gen5 high-speed channel design, the motherboard can support the simultaneous operation of multiple GPUs or high-performance expansion cards, meeting the performance density demands of next-generation AI and edge computing.

The Avalue ATX industrial motherboard (EAX-R680BP) supports flexible configurations, including 1× PCIe Gen5 x16 or 2× PCIe Gen5 x8. This can be adjusted to either a single high-bandwidth slot or a dual-slot architecture, depending on the application. In addition to GPU-accelerated computing, it can serve as an expansion interface for high-speed storage or dedicated acceleration modules. The motherboard supports up to four DDR5 U-DIMM slots, offering a

maximum memory capacity of 192 GB. It integrates NVMe and SATA RAID storage architectures to achieve a balanced trade-off between performance density, data access efficiency and system stability. This makes it suitable for deployment in lightweight AI and small form factor server applications. The EAX-R680BP also provides comprehensive I/O support for a variety of industrial applications. For lightweight AI and enterprise internal server deployments, the motherboard offers six PCIe expansion slots and 14 USB interfaces to facilitate the integration of accelerator cards, storage devices and various peripherals, enhancing system deployment flexibility. In industrial computing and smart manufacturing environments, multiple serial communication interfaces are built in, including RS-232 and switchable RS-232/422/485 ports. These enable direct connection to PLCs, sensors and existing industrial equipment, thus simplifying system integration and enhancing long-term operational reliability.

In terms of platform compatibility and investment continuity, the Avalue ATX motherboard EAX-R680BP supports the latest Intel Core Series 2 processor and Intel® 12th, 13th and 14th Gen Core™ processors. This allows businesses to upgrade sequentially within existing system architectures while retaining the flexibility to expand performance in the future. Balancing multi-generation processor compatibility with new platform integration capabilities helps businesses to effectively control the total cost of ownership (TCO) while maintaining consistent system architecture and long-term availability.

In enterprise and industrial application environments, a stable supply and long-term availability of platforms are often more important than improvements in performance in a single generation. The EAX-R680BP is based on a mature and sustainable Intel platform roadmap. This helps customers to maintain consistent hardware architecture and supply cadence after system deployment, thereby reducing the operational risks associated with platform transitions. With an ATX architecture offering high expandability, the EAX-R680BP combines PCIe Gen5 high-speed expansion capabilities, ample memory capacity and flexible storage configurations. Balancing platform compatibility with long-term supply planning, it delivers a stable, continuously scalable computing foundation for lightweight AI, compact servers and industrial applications demanding high expansion flexibility.

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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