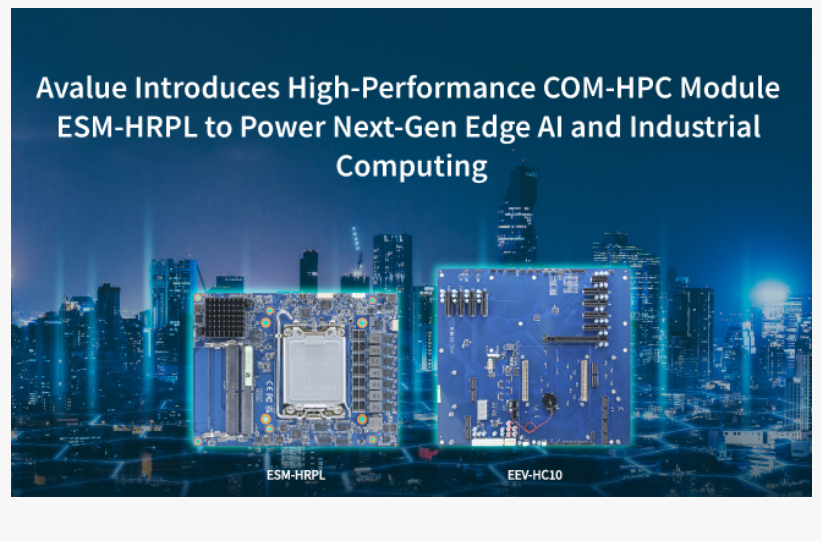# Avalue Introduces High-Performance COM-HPC Module

ESM-HRPL to Power Next-Gen Edge AI and Industrial Computing

TAIPEI, TAIWAN, June 11, 2025 /EINPresswire.com/ -- Avalue Technology Inc. (TPEx: 3479.TWO), a global leader in industrial computing solutions, today announced the release of its next-generation COM-HPC module, ESM-HRPL, along with the high-performance carrier board EEV-HC10. Designed for compute-intensive edge applications such as AI inference, smart healthcare, industrial

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automation, and intelligent energy systems, this solution delivers exceptional performance, modular scalability, and long-term product availability.

Redefining Edge Architecture with Advanced COM-HPC Performance
Compliant with PICMG® COM-HPC® Client Type specification, ESM-HRPL supports Intel® 12th/13th/14th Gen Core™ processors (LGA 1700, up to 65W TDP) and integrates the Intel® R680E chipset. The module features four DDR5 SO-DIMM sockets, supporting up to 128GB memory at max 3600MT/s bandwidth and optional ECC (depending on selected CPU). Equipped with a high-density I/O interface, ESM-HRPL offers PCIe Gen5, dual 2.5GbE (Intel® i226-LM), USB 3.2 Gen2x2, eDP, and three DDI interfaces, ensuring seamless support for high-speed data throughput and multi-device integration. The modular architecture significantly reduces development time across platforms, allowing customers to accelerate time-to-market while retaining proprietary application knowledge via customized carrier board designs—enhancing system security and solution differentiation.

EEV-HC10 Carrier Board Delivers Versatile Expansion for AIoT Integration
Paired with ESM-HRPL, the EEV-HC10 carrier board—built on a standard EATX form factor (305 x 330mm) and compliant with COM-HPC Rev. 1.2—features up to four IET (Interface Expansion Technology) slots for modular upgrades such as display outputs, USB communication, and 2.5G. It also provides one PCIe Gen5 x16 slot, multiple PCIe x4/x1 slots, and supports high-speed

expansion for AI accelerators, GPUs, and other edge computing peripherals. In addition to rich PCIe connectivity, EEV-HC10 supports HDMI/DP/eDP display outputs, USB Type-C, RS-232, GPIO, and other essential industrial I/O interfaces—delivering exceptional deployment flexibility for AIoT systems in diverse verticals.

Purpose-Built for Demanding Edge AI Applications
Engineered to address the demands of high-throughput and low-latency processing at the edge, ESM-HRPL is ideal for scenarios such as medical imaging, real-time AI inference, and smart grid management. Its multi-channel video output and robust data transmission capabilities support advanced diagnostics like MRI and CT scanning. In edge AI environments, ESM-HRPL's powerful CPU and scalable PCIe architecture ensures seamless integration of GPUs and AI accelerators, expediting model inference and decision-making. In energy and utility applications, its reliable I/O and edge processing capabilities enable rapid system response and efficient remote control.

Avalue's innovative semi-modular thermal solution, featuring a copper heat spreader and swappable heatsink design, allows flexible cooling configurations based on CPU TDP—ensuring optimal thermal management and platform compatibility. Combined with structural flexibility, hardware-level security, and professional ODM carrier board services, ESM-HRPL is uniquely positioned to deliver value in high-end embedded deployments.

Long-Term Support and Complete Engineering Assistance
Built on Intel's long-life platform roadmap, Avalue's COM-HPC modules offers longevity support, meeting the needs of industrial, healthcare, and infrastructure deployments. The ESM-HRPL module supports Windows 11 LTSC and a range of mainstream Linux distributions, with full access to documentation, development guides, and user manuals. Supported by local engineering expertise and responsive service, Avalue empowers businesses to streamline system integration and accelerate time-to-market with confidence.

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 global leader 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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