

# Avalue Launches EMS-ARH Modular Fanless Embedded System with Triple AI Engines, Empowering Edge Intelligence

*The new EMS-ARH, powered by Intel® Arrow Lake-H Core™ Ultra 7/5 processors and featuring integrated Intel® Arc™ GPU and NPU AI engines.*

NEW TAIPEI CITY, TAIWAN, August 26, 2025 /EINPresswire.com/ -- As AI computing demand continues to surge, edge device performance and scalability have become key drivers of industrial transformation. [Avalue Technology](#) (TPEX: 3479.TWO), a global leader in industrial computing solutions, proudly introduces the new

[EMS-ARH](#) modular fanless embedded system. Powered by Intel® Arrow Lake-H Core™ Ultra 7/5 processors and featuring integrated Intel® Arc™ GPU and NPU AI engines, EMS-ARH delivers up to 99 TOPS of total AI performance — providing a robust and scalable platform for diverse edge AI applications.



**EMS-ARH Fanless Embedded System**  
Pioneering Edge AI Computing

Equipped with two DDR5 SODIMM slots supporting up to 64GB 6400MT/s memory and built-in GPU and NPU, EMS-ARH excels in media processing and AI inference. Compared to the NVIDIA Jetson AGX Orin, real-world benchmarks show EMS-ARH delivers up to 5.8x multitasking performance and 3.4x video analytics acceleration, with superior power efficiency and cost-effectiveness — ideal for smart manufacturing, automated optical inspection (AOI), intelligent surveillance, smart traffic, autonomous vehicles, and energy monitoring.

## Modular I/O Design for Industrial Versatility

EMS-ARH adopts Avalue's proprietary IET (Intelligent Expansion Technology) modular architecture, offering over 10 expansion modules to meet various application requirements. These modules can provide additional LAN, USB, COM, PoE, or even M.2 interfaces, with no minimum order quantity (MOQ). Avalue also offers custom IET development services, with sample delivery available within 6 to 8 weeks. The modular IET structure enables highly flexible and application-specific I/O customization, helping customers rapidly validate solutions in their

target deployment environments.

### Rugged Design for Harsh Environments

With rich I/O including four USB 3.2, two USB 2.0, two COM ports, two 2.5GbE LAN, one DP++, two HDMI, and one 8-bit GPIO, the EMS-ARH also supports 5G (Sub-6G) wireless modules and M.2 NVMe Gen4x4 storage. The fanless and cableless architecture meets IP50 dust protection, and passes IEC-compliant shock (55Grms) and vibration (2Grms) tests. The system supports a wide operating temperature (-40°C to 50°C) and wide voltage input (+9~36V DC), ensuring reliable performance in industrial settings.

### Compact and Flexible Deployment

With a compact footprint of 240 x 150 x 59 mm, the EMS-ARH supports both wall and DIN rail mounting, and runs Windows 10/11 or Linux OS. It is well-suited for AI edge gateways, AMR (Autonomous Mobile Robot) platforms, smart factory equipment, energy management systems, transport control, and unmanned kiosks — accelerating enterprise digital transformation.

### Key Features of EMS-ARH:

- Intel® Arrow Lake-H Core™ Ultra 7/5 Processor
- 2 x 262-pin SODIMM, up to 64GB DDR5 6400MT/s
- Rich I/O: 4x USB 3.2, 2x USB 2.0, 2x COM, 2x LAN, 1x DP, 2x HDMI, 1x 8-bit GPIO
- 5G (Sub-6G) support, M.2 NVMe Gen4x4 SSD expansion
- IET modular expansion support
- Fanless design, operating temp -40°C ~ 50°C
- Wide-range DC input from +9V to +36V
- CE and FCC Class B certified

For more information, visit Avalue Website, or contact us using 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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