

Discriminative AI for Real-Time Object Detection and Dynamic Tracking



Avalue EMS-ARH



Intel® Core™ Ultra Processor (Series 2) Fanless Rugged Embedded System

The EMS-ARH redefines compact edge computing and leverages integrated AI acceleration. With next-generation Intel® Core™ Ultra Processors (Series 2), integrating CPU, Intel® Arc™ GPU, and a neural processing unit (NPU) in a BGA package, deliver up to 99 TOPS—scaling performance to new heights. This advanced architecture accelerates real-time AI tracking while maintaining outstanding power efficiency, making it an ideal solution for AI-driven applications in and beyond sports venues.

For I/O connectivity, the EMS-ARH features two 2.5GbE RJ45 ports for high-speed networking. It also includes six USB ports (two USB 2.0, four USB 3.0), two HDMI and one DisplayPort outputs, providing versatile interface options for various deployment needs. The system supports expansion capabilities with up to 64GB DDR5 5600MHz memory, two M.2 Key-M slots for storage, one M.2 Key-B slot for WiFi 6E/BT 5.4, and optional LTE/5G support, ensuring robust wireless communication options in compact fanless designs.

**AI-optimized
edge computing
up to 99 TOPS
and ultra-efficient
Intel® Core™ Ultra
processors
(Series 2) power**

Intel Products and Technologies

Accelerating AI and Analytics at the Edge



Intel® Core™
Ultra Processors



Intel® Arc™
Graphics



OpenVINO™

Key Features

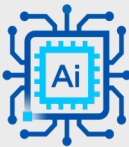
Empowered by Intel.



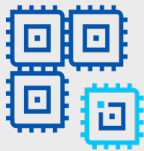
Modular Design



Rugged Reliability



Discriminative AI Acceleration



Multi-Channel AI Processing

Avalue EMS-ARH



Product Specifications

CPU	Intel® Core™ Ultra processors (Series 2), Intel® Core™ Ultra 7 Processor 255H, Intel® Core™ Ultra 5 Processor 225H
Graphics	Intel® Arc™ GPU
Memory	2 x 262-pin SODIMM socket Max. up to 64GB DDR5 6400 MT/s
Storage	1 x M.2 Key-M 2280 (1 x PCIe Gen4x4), support NVMe 1 x M.2 Key-B 2242, support SATA (share with expansion slot)
Wireless Network	1 x M.2 Key-E 2230 for Wi-Fi & BT Module (USB2.0 / PCIe Gen4x1)
LAN	2 x Intel® Ethernet Controller I226-IT
Operating / Storage Temp.	-40°C ~ 50°C / -30°C ~ 70°C
Dimension (W x D x H)	240mm x 150mm x 59 mm (Standard) 240mm x 150mm x 85 mm (w/ IET module)
Weight	2.3 kg
OS	Windows 10/11 / Linux

Learn More

[Avalue EMS-ARH](#)

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