

# High Performance Computing Solution

Powering the Future of IoT & AI with Unprecedented Speed, Immediate Analysis and Unmatched Reliability

| Server Board      |  |  |   |
|-------------------|--|--|---|
| Model Number      | HPM-ERSUA  | HPM-ERSDE  | HPM-SIEUA   |
| Processor         | Intel LGA4677 Socket Supports 5th Generation Intel® Xeon® Scalable Processor (Max. TDP at 270W)  | Dual Intel LGA4677 Sockets Support 5th Generation Intel® Xeon® Scalable Processor (Max. TDP at 270W Each)  | AMD SP6 Socket Supports 4th Generation AMD EPYC Processor (Max. TDP at 225W)  |
| System Chipset    | Intel® C741 Chipset  | Intel® C741 Chipset  | N/A   |
| System Memory     | 6 x DDR5 5600MHz RDIMM up to 1.5TB   | 12 x DDR5 5600MHz RDIMM up to 3TB  | 6 x DDR5 4800/ 4400MHz RDIMM up to 1.5TB  |
| Expansion         | 4 x PCIe Gen5 x16 Slots and 3 x PCIe Gen5 x4 Slots<br>Slot 1, PCIe 5.0 x16<br>Slot 2, PCIe 5.0 x4<br>Slot 3, PCIe 5.0 x16<br>Slot 4, PCIe 5.0 x4<br>Slot 5, PCIe 5.0 x16<br>Slot 6, PCIe 5.0 x4<br>Slot 7, PCIe 5.0 x16<br>(Slot 7 is the Slot Closest to CPU) | 7 x PCIe Gen5 x16 Slots<br>Slot 1, PCIe 5.0 x16 from CPU2<br>Slot 2, PCIe 5.0 x16 from CPU1<br>Slot 3, PCIe 5.0 x16 from CPU2<br>Slot 4, PCIe 5.0 x16 from CPU1<br>Slot 5, PCIe 5.0 x16 from CPU2<br>Slot 6, PCIe 5.0 x16 from CPU1<br>Slot 7, PCIe 5.0 x16 from CPU2<br>(Slot 7 is the Slot Closest to CPU) | 3 x PCIe Gen5 x16 Slots and 4 x PCIe Gen5 x8 Slots<br>Slot 1, PCIe 5.0 x8<br>Slot 2, PCIe 5.0 x16<br>Slot 3, PCIe 5.0 x8<br>Slot 4, PCIe 5.0 x16<br>Slot 5, PCIe 5.0 x8<br>Slot 6, PCIe 5.0 x16<br>Slot 7, PCIe 5.0 x8<br>(Slot 7 is the Slot Closest to CPU) |
| Display           | AST 2600 BMC Controller  | AST 2600 BMC Controller  | AST 2600 BMC Controller   |
| Resolution        | 1 x VGA Port<br>VGA: 1920 x 1200 @ 60Hz 32bpp  | 1 x VGA Port<br>VGA: 1920 x 1200 @ 60Hz 32bpp  | 1 x VGA Port<br>VGA: 1920 x 1200 @ 60Hz 32bpp   |
| Ethernet          | 1 x Intel® I210AT Giga-bit Ethernet<br>1 x Intel® I226-LM 2.5Giga-bit Ethernet<br>1 x Intel® X550-AT2 10Giga-bit Ethernet  | 1 x Intel® I210AT Giga-bit Ethernet<br>1 x Intel® I226-LM 2.5Giga-bit Ethernet<br>1 x Intel® X550-AT2 10Giga-bit Ethernet  | 1 x Intel® I210AT Giga-bit Ethernet<br>1 x Intel® I226-LM 2.5Giga-bit Ethernet<br>1 x Intel® X550-AT2 10Giga-bit Ethernet   |
| USB/SATA/COM/LAN  | 10/5/2/5   | 12/5/2/5   | 4/4/2/5   |
| Power Requirement | 1 x Std. 24 Pin ATX Connector<br>3 x 8 Pin SSI 12V Connectors  | 1 x Std. 24 Pin ATX Connector<br>3 x 8 Pin SSI 12V Connectors  | 1 x Std. 24 Pin ATX Connector<br>3 x 8 Pin SSI 12V Connectors   |
| IPMI              | IPMI 2.0   | IPMI 2.0   | IPMI 2.0  |
| Operating Temp.   | 0 ~ 55°C (32 ~ 131°F) to Support up to 250W TDP CPU<br>0 ~ 45°C (32 ~ 113°F) to Support up to 270W TDP CPU   | 0 ~ 50°C (32 ~ 122°F) to Support up to 250W TDP CPU<br>0 ~ 40°C (32 ~ 104°F) to Support up to 270W TDP CPU   | 0 ~ 60°C (32 ~ 140°F) (without Intel X550)<br>0 ~ 55°C (32 ~ 131°F) (with Intel X550)   |
| Dimension (L x W) | 12" x 9.6" (304.8 x 243.84 mm)<br>PCB Thickness is 2.54 mm   | 12" x 16.452" (304.8 x 417.88 mm)<br>PCB Thickness is 2.86 mm  | 12" x 9.6" (304.8 x 243.84 mm)<br>PCB Thickness is 2.0 mm   |
| Weight            | 2.62 lbs (1.19 kg)   | 4.85 lbs (2.2 kg)  | 2.14 lbs (0.97 kg)  |

| Rackmount & Tower Workstation |   |   |
|-------------------------------|---|---|
| Model Number                  | HPS-ERSU4A  | HPS-ERSUTA  |
| Processor (CPU Type)          | Intel LGA4677 Socket Supports 5th Generation Intel® Xeon® Scalable Processor (Max. TDP at 270W)   |   |
| Chipset                       | Intel® C741 Chipset   |   |
| Memory                        | 6 x DDR5 5600MHz RDIMM up to 1.5TB  |   |
| Storage                       | 3 x Front Accessible 2.5" Storage Bays  |   |
| IPMI                          | IPMI 2.0  |   |
| Expansion Slots               | 4 x PCIe Gen5 x16 Slots<br>3 x PCIe Gen5 x4 Slots<br>Slot 1, PCIe 5.0 x16<br>Slot 2, PCIe 5.0 x4<br>Slot 3, PCIe 5.0 x16<br>Slot 4, PCIe 5.0 x4<br>Slot 5, PCIe 5.0 x16<br>Slot 6, PCIe 5.0 x4<br>Slot 7, PCIe 5.0 x16<br>(Slot 7 is the Slot Closest to CPU) |   |
| LAN                           | 5 x RJ45<br>MGMT Port for Dedicated IPMI Access Only<br>LAN1 Port for 1GbE Shares with IPMI Access<br>LAN2 Port for 2.5GbE<br>LAN3 and 4 Ports for 10GbE  |   |
| USB                           | Front: 2 x USB 3.2 Gen1 Ports<br>Rear: 4 x USB 3.2 Gen1 Ports + 2 x USB 2.0 Type A Ports  |   |
| Display                       | AST 2600 BMC Controller   |   |
| Display Resolution            | 1 x VGA Port<br>VGA: 1920 x 1200 @ 60Hz 32bpp   |   |
| Cooling Fan                   | 1 x 120 x 25mm Front Fan<br>2 x 80 x 25mm Rear Fans   |   |
| Power Supply                  | 1 x 1300W PS2 ATX PSU   |   |
| Operating Temp.               | 0°C ~ 35°C (32°C ~ 95°F)  |   |
| Dimension (W x H x D)         | 482.6 x 174.8 x 528 mm with Ear Mount   | 340 x 488 x 528 mm with External Handles & Pedestal Stand |
| Form Factor                   | 19" 4U Rackmount  | Tower Chassis   |
| OS                            | Windows 10 IoT Enterprise LTSC 2021, Windows 11<br>Windows Server 2019, Windows Server 2022<br>Ubuntu 21.1, 22.04 LTS or Later<br>Red Hat Enterprise Linux (RHEL) 8.2 and Later   |   |

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Avalue's HPC products are built with superior performance, bandwidth, and connectivity to meet the needs of demanding applications such as AI, graphics processing, cloud computing, and data analysis. Renowned for its lightning-fast data processing and ability to handle complex computations with ease, our HPC series represents the next generation of computing power. Experience real-time analysis with unwavering reliability.

## All High Performance Computing products



### Mainboard

- IPMI enabled server board with server grade manageability.
- 7-year product availability with revision control.



### Barebone system

- Key parts selection flexibility on customers' requirement.
- Optimized thermal design with maximum I/O Flexibility



### Fully-integrated system

- Fully tested system.
- No hardware related efforts or experience needed.

## Advantages of Avalue HPC Solution



### Seamless Upgradability

Painless upgrade to in the existing server rack, cabinet or inside system chassis.



### Real-time Management

Integrated IPMI2.0 and BMC technology for system monitoring and preventive maintenance.



### Extended Lifecycle

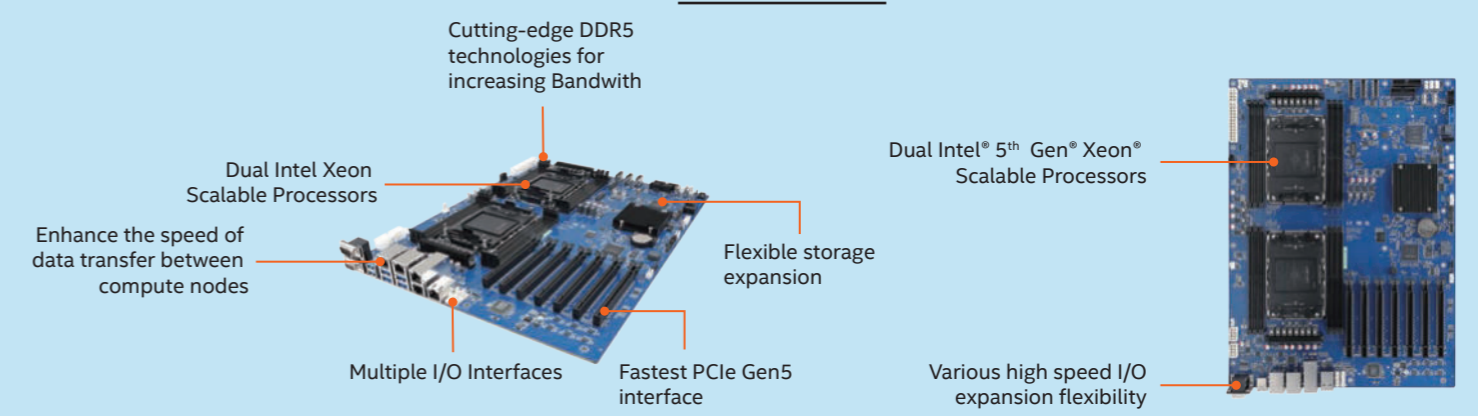
At least 7 years product life cycle. Intel IOTG roadmap products provide 15 years availability.



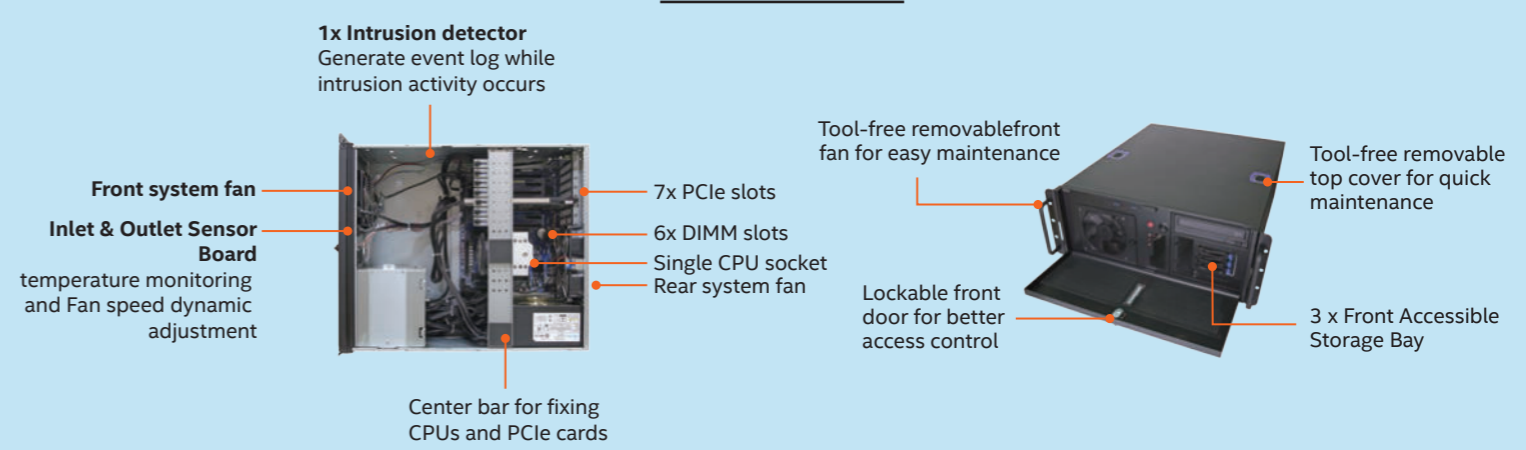
### Quality Reliability

robust and wide operating temperature design. 50,000 hours system level MTBF and 100% MP test coverage with traceability

## HPC-ERSDE



## HPC-ERSU4A



## Industry applications

