



# AV800-H32

IP65 MILITARY XEON® 6 GRANITE RAPIDS D, 32C,  
100G QSFP28 MXM RTX5000M GPU SERVER



- Intel® Xeon® 6 Granite Rapids D Processor
  - 6546P-B, 32Cores 2.3/3.5 GHz, 195W
- DDR5 up to 6400MT/s , 64GB RDIMM, up to 512GB
- 4 x 2TB U.2 NVMe SSD Storage
- Nvidia RTX 5000m GPU 9728 CUDA cores
- 18-36 VDC PSU
- 1x QSFP28 100GbE, 1x SFP28 50GbE 2 x SPF28 25GbE , 1GbE-T share with IPMI
- Operating Temperature Support -20°C to 60°C
- IP65 Sealed with External Cooling Blade

## INTRODUCTION

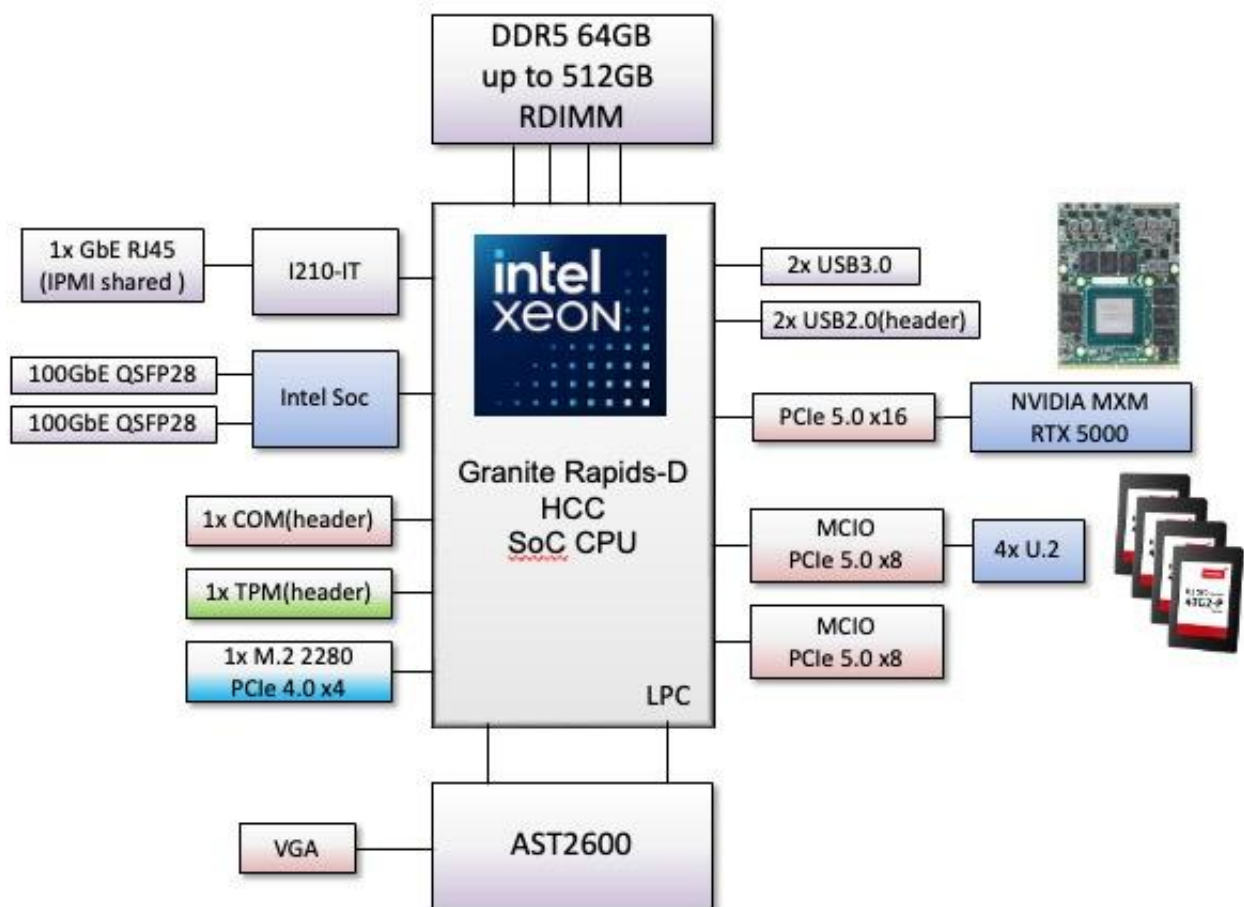
The AV800-H32 is a ruggedized, AI-powered server purpose-built for the Intel® Xeon® 6 Granite Rapids D 6546P-B processor (32 cores, 2.3 GHz base, up to 3.5 GHz turbo), featuring an NVIDIA MXM RTX 5000m GPU and dual 100GbE QSFP28 (SoC) connectivity.

With built-in acceleration from Intel® Deep Learning Boost, the AV800-H32 delivers high-performance computing for rugged IoT environments. Combining exceptional inference capabilities with high-bandwidth 200 Gb/s networking, it serves as an ideal HPC platform for a wide range of edge AI applications.

Designed with the NVIDIA MXM RTX 5000m GPU (Ada Lovelace architecture, 9,728 CUDA cores, 76 RT cores, and 304 Tensor cores), the AV800-H32 delivers powerful performance for data-intensive industries such as defense and transportation.

With dual 100GbE QSFP28 (SoC) ports, the AV800-H32 supports high-speed 100 Gb/s Ethernet connectivity and integrates a secure, intelligent SmartNIC. This enhances performance, security, virtualization, SDN/NFV, big data analytics, and machine learning for modern data center applications.

## Block Diagram



# Specifications

## SYSTEM

|             |  |
|-------------|--|
| CPU         | Intel® Xeon® 6 SoC 6546P-B, 32 Cores, 2.3GHz/3.5GHz TDP 195W |
| Memory type | Up to 512GB RDIMM, 4CH DDR5 6400 MHz in 4 Slots              |
| Chipset     | SoC  |
| IPMI        | ASPEED AST2600   |
| GPU         | Nvidia RTX5000m GPU 9728 CUDA 16GB GDDR6                     |

## STORAGE

|         |                      |
|---------|----------------------|
| HDD/SSD | 4 x 2TB U.2 NVMe SSD |
|---------|----------------------|

## ETHERNET

|                 |   |
|-----------------|---|
| Ethernet        | 2 x 100GbE QSFP28 (SoC)+ x IPMI shared LAN 1x GbE RJ45  |
| MCIO            | 1x PCIe 5.0 x8 via MCIO Connector slots   |
| OS Support List | Windows 11, RHEL 9.4 64bit, RHEL 9.5 64bit, Oracle 9.4 64bit, Oracle 9.5 64bit, Rocky Linux 9.4 64bit, Rocky Linux 9.5 64bit, SLES 15 SP6 64bit, Ubuntu 24.04.1 64bit Server, VMWare ESXi 8.0U2 |

## POWER

|                   |   |
|-------------------|---|
| Power Requirement | 18~36V 500W DC Power Supply   |
| Dimensions        | 410 x 400 x 195 mm (W x D x H)<br>final size is dependent on specific configuration |
| Weight            | ≤ 12 kg final size is dependent on specific configuration                           |

## FRONT I/O

|                 |                           |
|-----------------|---------------------------|
| X1 (DC-In)      | 1 x D38999 connector      |
| X2 (USB3.0)     | 1 x D38999 connector      |
| X3 (25GbE LAN)  | 1 x D38999 connector      |
| X4 (25GbE LAN)  | 1 x D38999 connector      |
| X5(1GbE IPMI)   | 1 x D38999 connector      |
| X6 (50GbE LAN)  | 1 x D38999 connector      |
| X7 (100GbE LAN) | 1 x D38999 connector      |
| Display         | 1 x VGA (DB15 with cover) |

## ENVIRONMENT

|                 |               |
|-----------------|---------------|
| Operating Temp. | -20°C to 60°C |
| Storage Temp.   | -30°C to 70°C |

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|-------------------|---------------------------|
| Relative Humidity | 5% to 95%, non-condensing |
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## MIL-STD-810 ENVIRONMENT TESTING STANDARDS

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| Method 501,<br>Operational<br>Temperature, high: | Procedure II: +60°C, two-hour dwell, four cycles |
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| Method 501, Storage<br>Temperature, high: | Procedure I: +70°C, two-hour dwell, four cycles |
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| Method 502,<br>Operational<br>Temperature, low: | Procedure II: -20°C, two-hour dwell, four cycles |
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| Method 502, Storage<br>Temperature, low: | Procedure I: -30°C, two-hour dwell, four cycles |
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|---------------------------|---|
| Method 514,<br>Vibration: | Category 24/Non-Operating (Category 20 & 24, Vibration) |
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|---------------------------|---|
| Method 514,<br>Vibration: | Category 20/Operating (Category 20 & 24, Vibration) |
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|                    |  |
|--------------------|--|
| Method 516, Shock: | Procedure V Non-Operating (Mechanical Shock) |
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| Method 516, Shock: | Procedure I Operating (Mechanical Shock) |
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| Method 507,<br>Humidity: | Procedure II: exposure to 10 cycles of 95% relative humidity at temperatures of 30 °C to 60 °C with conformal coating (optional) |
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|                       |  |
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| Method 509, Salt fog: | Each cycle consists of 24 hours in salt-fog conditions of 5%NaCl, 95% relative humidity and 35 °C followed by 24 hours of drying in an environment with less than 50% relative humidity (optional) |
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| Method 500, Altitude<br>(Low Pressure): | 15,000 feet transport, -200÷2500[m] ground operation and exposed to +55°C and -20°C operation (optional) |
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| Method 510,<br>Sand-Dust: | Procedure I: Blasting dust, 12 hours (optional) |
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| Method 508, Fungus: | 28 days, mixed spore, 30°C 95% RH (optional) |
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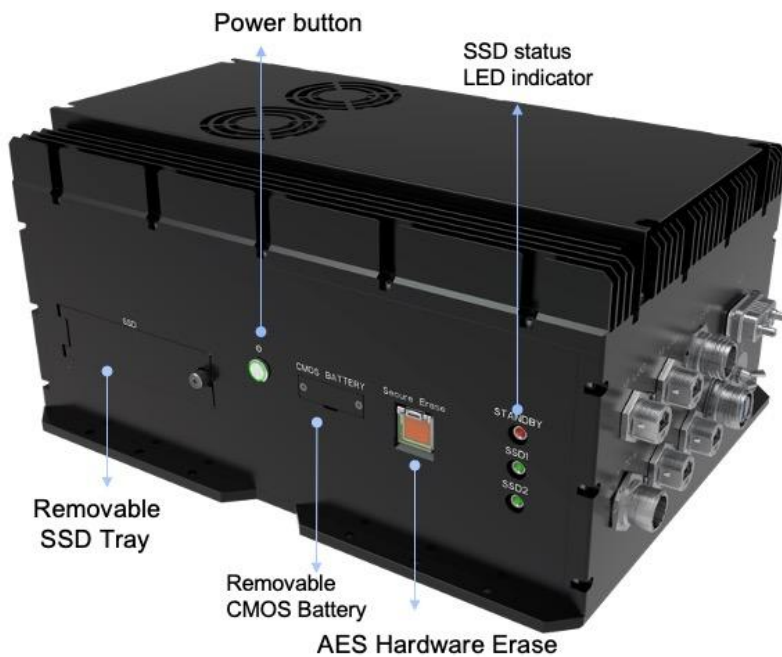
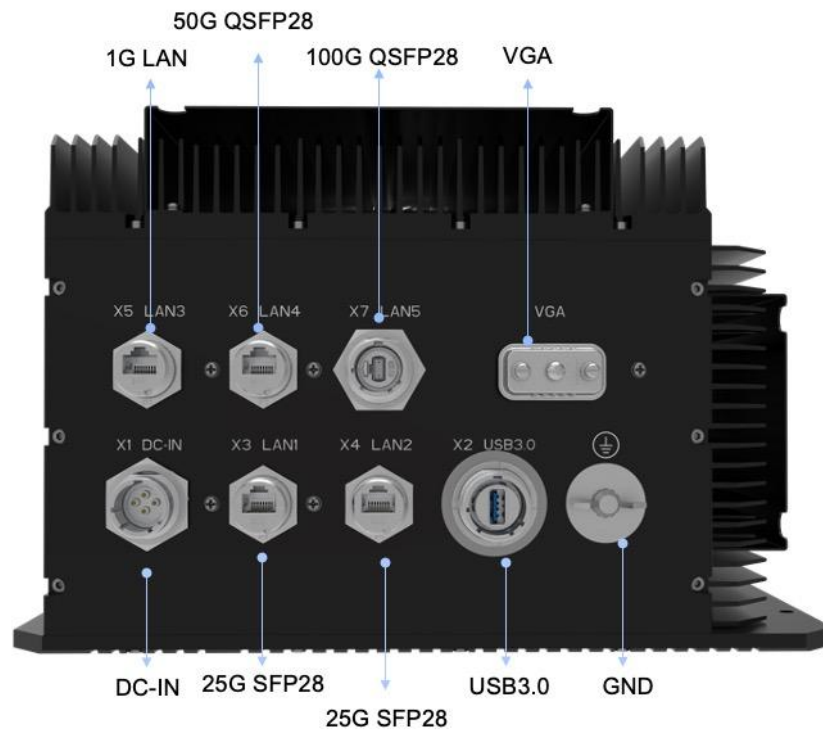
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## MIL-STD-461 ELECTROMAGNETIC TESTING STANDARDS

|       |   |
|-------|---|
| CE102 | Conducted emissions, power leads, 10KHz to 10MHz  |
| RE102 | Radiated emissions, electric field, 30MHz to 5GHz   |
| RS103 | Radiated susceptibility, electric field, 80MHz to 3GHz  |
| CS101 | Conducted susceptibility, power leads, 30Hz to 150KHz (Figure CS101-1: Curve #2) (optional)   |
| CS114 | Conducted susceptibility, bulk cable injection, 10KHz to 200MHz, curves 3&4 (10 kHz to 2 MHz: Curve #3 2MHz to 200MHz: Curve #4) (optional) |
| CS115 | Conducted susceptibility, bulk cable injection, impulse excitation (5A) (optional)  |
| CS116 | Conducted susceptibility, damped sinusoidal transients, cables and power leads, 10KHz to 100MHz (10A) (optional)                            |
| CS118 | Personnel borne electrostatic discharge (optional)  |



## Appearance



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