



## Features

- Dual Intel LGA4710 Sockets support Intel® Xeon® 6 6500P & 6700P series Processor (Max. TDP at 350W each)
- 16 x DDR5 6400 MHz RDIMM & 8000 MHz MRDIMM up to 4TB
- TPM 2.0 onboard
- IPMI 2.0 with AST 2600 BMC controller onboard
- 2 x Intel I210AT 1GbE controllers
- 1 x Intel E610-XAT2 10GbE controller supports 2 x 10GbE Ethernet ports
- 9 x SATA III (2 x MiniSAS HD 4i (for 4x SATA Only) & 1 x 7 pin SATA connector)
- 1 x RS232 port, 6 x USB 3.2 Gen2 ports at Edge I/O
- 1 x M.2 M-Key slots PCIe 5.0 x4 NVMe SSD, 2242/2260/2280/22110 form factor
- 1 x M.2 M-Key slots PCIe 5.0 x4 NVMe SSD, 2242/2260/2280 form factor



Intel®Xeon® 6  
Processor



16 x DDR5  
RDIMM 6400MHz  
& MRDIMM  
8000MHz



IPMI 2.0  
Supported



10GbE



PCIe Gen5  
Multiple  
Expansion

## Specifications

### System Information

|                    |                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------|
| Processor          | Dual Intel LGA4710 Sockets support Intel® Xeon® 6 6500P & 6700P series Processor (Max. TDP at 350W each) |
| System Memory      | 16 x DDR5 6400 MHz RDIMM & 8000 MHz MRDIMM Up to 4TB                                                     |
| Watchdog Timer     | System reset event 0 ~ 6553 seconds                                                                      |
| BIOS               | AMI UEFI BIOS                                                                                            |
| H/W Status Monitor | CPU temperature<br>Fan speed and voltage monitoring<br>Fan speed control<br>Case open detection          |
| TPM                | TPM 2.0 onboard                                                                                          |
| IPMI               | IPMI 2.0 with AST 2600 BMC controller onboard                                                            |

### Rear I/O

|          |                                                                                                                                                        |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| USB      | 6 x USB 3.2 Gen2 ports                                                                                                                                 |
| COM Port | 1 x RS232 port                                                                                                                                         |
| RJ-45    | 5 x RJ45<br>MGMT port for dedicated IPMI access only<br>LAN1 port for 1GbE shared with IPMI access<br>LAN2 port for 1GbE<br>LAN3 and 4 ports for 10GbE |
| VGA      | 1 x VGA port                                                                                                                                           |

### Display

|                 |                                               |
|-----------------|-----------------------------------------------|
| Graphic Chipset | AST2600 BMC controller                        |
| Resolution      | 1 x VGA port<br>VGA: 1920 x 1200 @ 60Hz 32bpp |

### Expansion

|           |                                                                                                                                                                                                                                                                                                                  |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expansion | 5 x PCIe Gen5 x16 slots & 1 x PCIe Gen5 x8 slot<br>Slot 1, PCIe 5.0 x16 from 1st CPU<br>Slot 2, PCIe 5.0 x16 from 2nd CPU<br>Slot 3, PCIe 5.0 x16 from 2nd CPU<br>Slot 4, PCIe 5.0 x16 from 2nd CPU<br>Slot 5, PCIe 5.0 x16 from 2nd CPU<br>Slot 6, PCIe 5.0 x8 from 1st CPU (Slot 7 is the slot closest to CPU) |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Storage

|     |                                                                                                                                                                                                          |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M.2 | 1 x M.2 M-Key slots to support 1 x PCIe 5.0 x4 NVMe SSD from 1st CPU 2242/2260/2280/22110 form factor<br>1 x M.2 M-Key slots to support 1 x PCIe 5.0 x4 NVMe SSD from 1st CPU 2242/2260/2280 form factor |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### I/O

|              |                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------|
| USB          | 4 x Internal USB 3.2 Gen1 ports<br>1 x Internal USB 3.2 Gen1 type A receptacle                              |
| SATA         | 9 x SATA III<br>(2 x Mini-SAS HD 4i (for 4 x SATA only)<br>& 1 x 7pin SATA connector)                       |
| Serial       | 1 x Internal RS232 port<br>*(S/W disable, only supported Ubuntu 24.02 if enable function)                   |
| Other        | 4 x Slim SAS 8i (SFF-8654) connectors (from 1st CPU)<br>3 x MCIO x8 connectors (SFF-TA-1016) (from 2nd CPU) |
| CMOS Battery | 1 x Horizontal Socket Type CMOS Battery Holder with CR2450                                                  |

### Ethernet

|             |                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAN Chipset | 2 x Intel I210AT 1GbE controllers<br>1 x Intel E610-XAT2 10GbE controller supports 2 x 10GbE Ethernet ports                                            |
| LAN Port    | 5 x RJ45<br>MGMT port for dedicated IPMI access only<br>LAN1 port for 1GbE shared with IPMI access<br>LAN2 port for 1GbE<br>LAN3 and 4 ports for 10GbE |

### Mechanical & Environmental

|                    |                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------|
| Operating Temp.    | 0 ~ 50°C (32 ~ 122°F) to support up to 350W TDP CPU<br>0 ~ 50°C (32 ~ 122°F) to support up to 270W TDP CPU |
| Storage Temp.      | -40 °C to 85 °C                                                                                            |
| Operating Humidity | 40°C 95% non-condensing                                                                                    |
| Power Connector    | 1 x Std. 24 Pin ATX connector<br>4 x 8 Pin SSI 12V connectors                                              |
| Dimension (L x W)  | 12" x 13.974" (304.8mm x354.94mm), PCB thickness is 2.8mm                                                  |

### Software Support

|    |                                                          |
|----|----------------------------------------------------------|
| OS | Windows 11 SAC and LTSC<br>Windows Server 2025<br>Ubuntu |
|----|----------------------------------------------------------|



Singel 3 | B-2550 Kontich | Belgium | Tel.+32(0)3 458 30 33  
info@alcom.be | www.alcom.be  
Rivium 1e straat 52 | 2909 LE Capelle aan den IJssel | The Netherlands  
Tel.+31(0)10 288 25 00 | info@alcom.nl | www.alcom.nl

## Mechanical Drawing



## Ordering Information

| Model Name | P/N            | CPU | Chipset | Memory | PCIe Slot | 10GbE/2.5GbE/1GbE | M.2 | USB 3.2 Gen2/USB 3.2 Gen1/USB 2.0 | TPM 2.0 |
|------------|----------------|-----|---------|--------|-----------|-------------------|-----|-----------------------------------|---------|
| HPM-GNRDE  | HPM-GNRDEA-A1R | 2   | NA      | 16     | 6         | 2/0/2             | 2   | 8/3/0                             | 1       |
| HPM-GNRDE  | HPM-GNRDEL-A1R | 2   | NA      | 16     | 6         | 0/0/2             | 2   | 8/3/0                             | 1       |

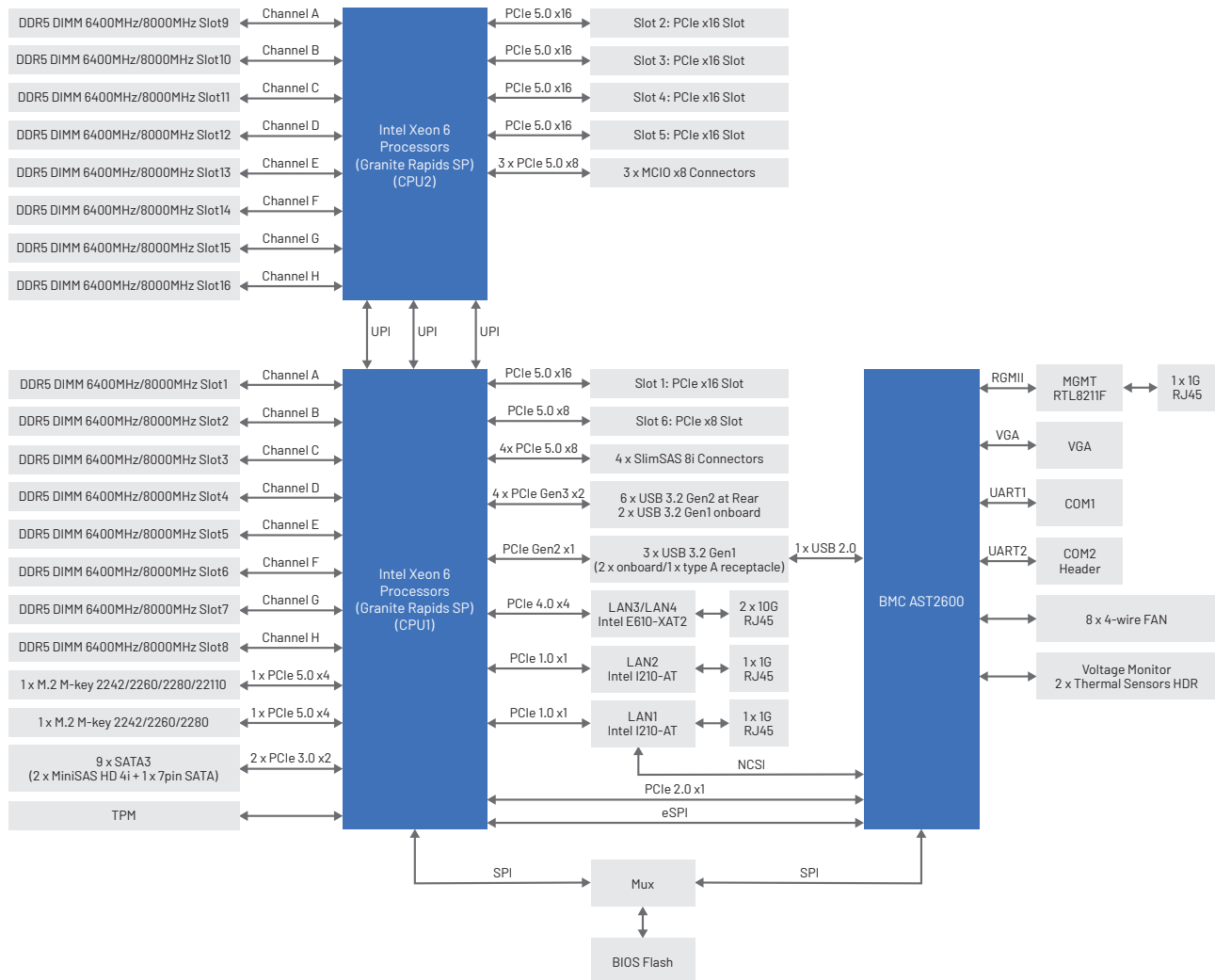
## Packing List

| Item                    | P/N             | Quantity |
|-------------------------|-----------------|----------|
| HPM-GNRDE motherboard   | HPM-GNRDEA-A1R  | 1        |
| HPM-GNRDEA I/O shield   | E195BKHPNRDE00R | 1        |
| LGA4710 CPU carrier-E2B | E199TR00082R    | 2        |

## CPU Support List (HPC Only)

| SKU                                        | Launch Date | # of Cores | # of Threads | Processor Base Frequency | Max Turbo Frequency | TDP (W) |
|--------------------------------------------|-------------|------------|--------------|--------------------------|---------------------|---------|
| Intel® Xeon® 6740P                         | Q1,25       | 48         | 96           | 2.1 GHz                  | 3.8 GHz             | 270     |
| Intel® Xeon® 6781P<br>(Only HPM-GNRUA use) | Q1,25       | 80         | 160          | 2.0 GHz                  | 3.8 GHz             | 350     |
| Intel® Xeon® 6530P                         | Q1,25       | 32         | 64           | 2.3 GHz                  | 4.1 GHz             | 225     |
| Intel® Xeon® 6520P                         | Q1,25       | 24         | 48           | 2.4 GHz                  | 4.0 GHz             | 210     |
| Intel® Xeon® 6731P<br>(Only HPM-GNRUA use) | Q1,25       | 32         | 64           | 2.5 GHz                  | 4.1 GHz             | 245     |
| Intel® Xeon® 6521P<br>(Only HPM-GNRUA use) | Q1,25       | 24         | 48           | 2.6 GHz                  | 4.1 GHz             | 225     |
| Intel® Xeon® 6736P                         | Q1,25       | 36         | 72           | 2.0 GHz                  | 4.1 GHz             | 205     |
| Intel® Xeon® 6517P                         | Q1,25       | 16         | 32           | 3.2 GHz                  | 4.2 GHz             | 190     |
| Intel® Xeon® 6515P                         | Q1,25       | 16         | 32           | 2.3 GHz                  | 3.8 GHz             | 150     |
| Intel® Xeon® 6505P                         | Q1,25       | 12         | 24           | 2.2 GHz                  | 4.1 GHz             | 150     |

## Block Diagram



## I/O Overview

