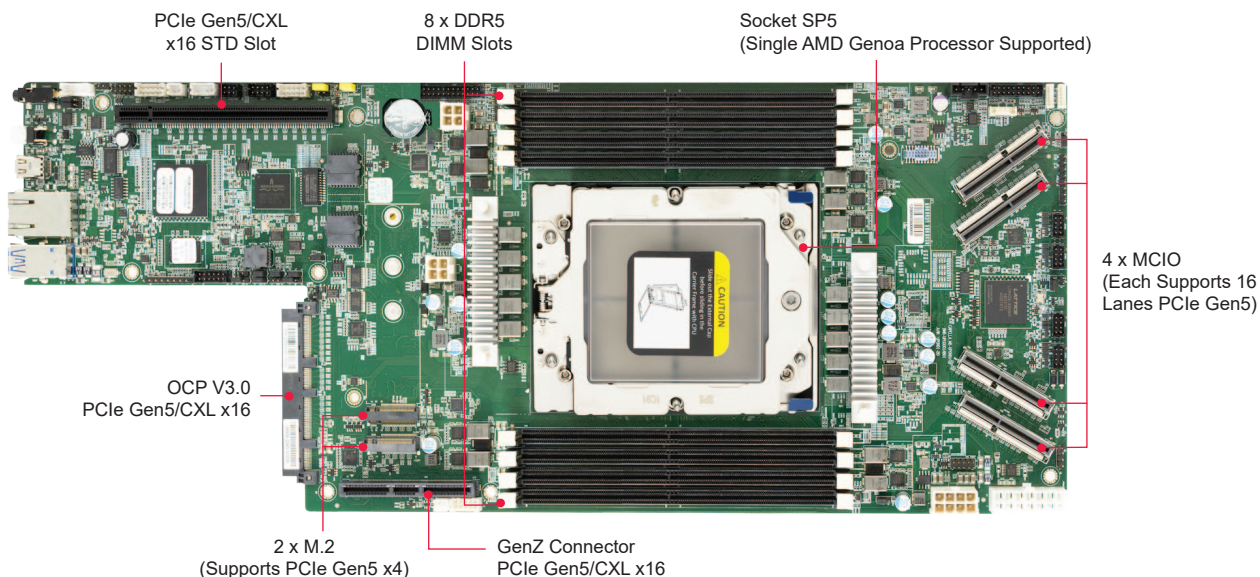
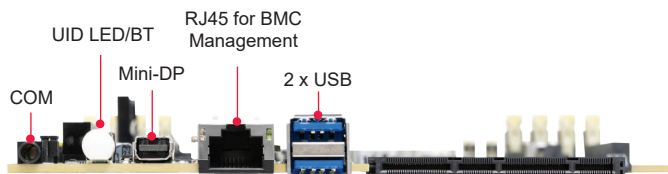




## I/O View



## Dimensions

mm : 431.8 x 172.7 / inches : 17 x 6.8

The Capella server board offers the latest AMD EPYC™ SoC technology which can support the highest core count in an x86-architecture with AMD EPYC™ 9005/9004 Series processor, more main memory capacity and bandwidth with greater efficiency and greatest I/O density.

Capella has I/O bandwidth that matches the capability of the CPU cores to move data to and from the network, spinning disks, NVMe storage, and graphics acceleration devices. By offering the parallelism to speed high performance computing environments, machine learning and predictive analysis benefit from the capability to process more data in memory and to accelerate computation with more direct GPU connectivity.

## Features

- Supports AMD EPYC™ 9005/9004 Series processor Genoa based on the AMD "Zen4" microarchitecture for highest server performance
- Supports 8 DDR5 DIMM slots for maximum memory performance
- Supports one OCP Mezzanine V3.0 up to PCI Express Gen5 x16 extension
- Supports four MCIO x16 total 64 PCI Express Gen5 lanes
- Onboard Baseboard Management Controller for system management and IPMI control
- Embedded components for 5+ year long life
- Rackmount Technology Extension (RTX) form factor utilizes full internal chassis volume for optimum I/O configurations
- 2 Gen5 capable x4 M.2 slots

## Specifications

|             |                   |                                                                                                                                                                                                                                                                                                                                            |
|-------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System      | Processor Support | Single AMD EPYC™ 9005/9004 Series Processor                                                                                                                                                                                                                                                                                                |
|             | CPU TDP           | 400W                                                                                                                                                                                                                                                                                                                                       |
|             | Socket Type       | Socket SP5                                                                                                                                                                                                                                                                                                                                 |
|             | System Memory     | <ul style="list-style-type: none"> <li>• DDR5 6000(Turin only)/4800/3600MHz RDIMM</li> <li>• Total 8 memory slots</li> <li>• Supports up to 4TB</li> </ul>                                                                                                                                                                                 |
| System BIOS | Expansion Slots   | <ul style="list-style-type: none"> <li>• Total support 120 lanes of PCIe Gen5</li> <li>- 4 x MCIO x16 (PCIe Gen5)</li> <li>- 1 x PCIe Gen5/CXL X16 slot</li> <li>- 1 x OCP Mezzanine V3.0 supports PCIe Gen5/CXL X16</li> <li>- 1 x GenZ PCIe Gen5/CXL X16 slot</li> <li>- 2 x NGFF (M.2) M-Key (2280) support PCIe Gen5/CXL X4</li> </ul> |
|             | BIOS Type         | AMI UEFI BIOS                                                                                                                                                                                                                                                                                                                              |
|             | BIOS Features     | <ul style="list-style-type: none"> <li>• ACPI</li> <li>• PXE</li> <li>• AC loss recovery</li> <li>• IPMI KCS interface</li> <li>• SMBIOS</li> <li>• Serial console redirection</li> <li>• SRIOV</li> <li>• TPM</li> <li>• PCIe hotplug</li> </ul>                                                                                          |
|             | On-board Devices  | Aspeed AST2600 Advanced PCIe Graphics & Remote Management Processor<br>• Baseboard Management Controller<br>• Intelligent Platform Interface 2.0 (IPMI 2.0)<br>• iKVM, Media Redirection, IPMI over LAN, Serial over LAN<br>• SMASH support<br>• HTML5<br>• Redfish                                                                        |

|                  |                    |                                                                                                                                                                                                                                                                                  |
|------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On-board Devices | Network Controller | <ul style="list-style-type: none"> <li>• Realtek RTL8211FS GbE Ethernet for BMC dedicated management port</li> <li>• Broadcom BCM5720 GbE for BMC shared NIC and data transfer by onboard header (NCSI shared NIC - reserved for OCP &amp; BCM5720 by jumper setting)</li> </ul> |
|                  | Graphics           | Aspeed AST2600 Advanced PCIe Graphics & Remote Management Processor<br>• PCIe VGA/2D Controller<br>• 1920x1200@60Hz 32bpp                                                                                                                                                        |
| Input/Output     | LAN                | 1 x GbE RJ45 dedicated to BMC management                                                                                                                                                                                                                                         |
|                  | USB                | 2 x USB3.2 Gen1 (5Gbps) double-stack Type-A connectors                                                                                                                                                                                                                           |
|                  | Video Output       | 1 x Mini-DP                                                                                                                                                                                                                                                                      |
|                  | Serial Port        | <ul style="list-style-type: none"> <li>• 1 x external COM (by Audio Jack)</li> <li>• 1 x internal COM1 header + rear IO COM by phone jack + LCM header</li> </ul>                                                                                                                |
|                  | Others             | <ul style="list-style-type: none"> <li>• 1 x external UID/switch button</li> <li>• 1 x TPM 2.0 onboard</li> </ul>                                                                                                                                                                |

CAPELLA

## Ordering Information

| SKU Number   | Description                                                                                                   |
|--------------|---------------------------------------------------------------------------------------------------------------|
| BMB-UPG0001B | PCBA/MOTHERBOARD/MB-UPGN01/CAPELLA AMD CPU*1/GENOA/PCIE X16 STD*1/OCP3.0*1/GENZ 4C*1/MCIO*4/M.2 22110*2/8 DDR |