

# Apogean Server with Dual AMD EPYC™ 9005/9004 (with AMD 3D V- Cache™ Technology) and 97x4 Series Processors

AD41U-E4-A / AD82U-E4-A / AD122U-E4-A /  
AD242U-E4-A / AD163U-E4-A / AD244U-E4-A /  
AD364U-E4-A



## Features

- Supports Dual AMD EPYC™ 9005/9004 (with AMD 3D V-  
Cache™ Technology) and 97x4 series processors
- 8+8 DIMM slots (1DPC), supports DDR5 RDIMM, RDIMM-3DS
- 2 PCIe5.0 / CXL2.0 x16 and 3 PCIe4.0 x16 Slots
- 2 MCIO (PCIe5.0 / CXL2.0 x8 or 8 SATA 6Gb/s), 1 MCIO (PCIe5.0  
/ CXL2.0 x8)
- Supports 1 M.2 (PCIe4.0 x4)
- 2 RJ45 (10GbE) by Intel® X710-AT2
- Remote Management (IPMI)

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## Specifications:

### Physical Status

Form Factor Rackmount 1U/2U/3U/4U Rackmount  
(As per the Drive Slots)

### Processor System

CPU Supports AMD EPYC™ 9005\*/9004 (with  
AMD 3D V-Cache™ Technology) and 97x4  
series processors

Socket Dual Socket SP5 (LGA 6096)

Thermal Design Up to 400W

Power

Chipset System on Chip

### System Memory

Supported DIMM 8+8 DIMM slots (1DPC)

Quantity

Supported Type Supports DDR5 288-pin RDIMM, RDIMM-3DS

Max. Capacity per RDIMM: 128GB (2Rx4)

DIMM RDIMM-3DS: 256GB (2Rx4)

Max. DIMM Frequency 6400 MHz

Voltage 1.1V

### PCIe Expansion Slots (SLOT7 close to CPU)

PCIe x16 SLOT5: PCIe5.0 / CXL2.0\* x16 [CPU2]

SLOT4: PCIe5.0 / CXL2.0\* x16 [CPU2]

SLOT3: PCIe4.0 x16 [CPU2]

SLOT2: PCIe4.0 x16 [CPU1]

SLOT1: PCIe4.0 x16 [CPU1]

\*Supports CXL1.1 while installing AMD EPYC  
9004 (with AMD 3D V-Cache™ Technology)  
and 97x4 series processors

### Other PCIe Expansion Connectors

M.2 slot 1 M-key (PCIe4.0 x4), supports 22110/2280  
form factor [CPU1]

2 MCIO (PCIe5.0 / CXL2.0\* x8 or 8 SATA  
6Gb/s) [CPU1]

Others 1 MCIO (PCIe5.0 / CXL2.0\* x8) [CPU1]

### SATA/SAS Storage

Drive Slots 4 x 3.5/2.5" Drive Slots - 1U Rack  
8/12 x 3.5/2.5" Drive Slots - 2U Rack  
24 x 2.5" Drive Slots - 2U Rack  
16 x 3.5/2.5" Drives Slots - 3U Rack  
24 x 3.5/2.5" Drives Slots - 4U Rack  
36 x 3.5/2.5" Drives Slots - 4U Rack  
Note: Additional RAID/HBA Card is required  
for 12 and above drive slots SKUs..

### Ethernet

Additional GbE Controller Intel® X710-AT2: 2 RJ45 (10GbE)

### Server Management

BMC Controller ASPEED AST2600

IPMI Dedicated GLAN 1 Realtek RTL8211F for dedicated  
management GLAN

### Graphics

Controller ASPEED AST2600: 1 DB15 (VGA), 1  
(15-pin) header

### Rear I/O

UID Button/LED 1 UID button w/ LED  
Video Port 1 DB15 (VGA)  
USB 3.2 Gen1 Port 2 Type-A (USB3.2 Gen1)  
2 RJ45 (10GbE)  
1 dedicated IPMI

### InternalConnector/Headers

Power Connector 1 (24-pin, ATX main power), 5 ( 8-pin, ATX 12V)  
Auxiliary Panel Header 1 (18-pin): chassis intrusion, system fault LED,  
LAN1/LAN2 activity LED, locate, SMBus  
System Pane 1 (9-pin): power switch, reset switch, system  
power LED, HDD activity LED

COM Header 1

VGA header 1

Fan Header 6 (6-pin)

TPM Header 1 (13-pin, SPI)

SGPIO Header 2

HSBP 1

SMBus header 1

PMBus header 1

IPMB Header 1

Clear CMOS 1 (contact pads)

Front Lan LED Connector 1

USB 3.2 (Gen1) Header 1 (19-pin, 2 USB3.2 Gen1)

NMI Header 1

### LED Indicators

Standby PWR LED 1 (5VSB)

80 Debug Port LED 1

Fan Fail LED 6

BMC heartbeat LED 1

### System BIOS

BIOS Type AMI 256Mb SPI Flash ROM

BIOS Features Instant Flash, ACPI 6.4 and above compliance  
wake up events, SMBIOS 3.5.0 and above, Plug  
and Play(PnP)

### Hardware Monitor

Temperature CPU, MB, Card side Temperature sensing  
CPU/Rear/Front Fan Tachometer  
Fan CPU Quiet Fan (Allow Chassis Fan Speed Auto-  
Adjust by CPU Temperature)  
CPU/Rear/Front Fan Multi-Speed Control  
Voltage VDDCR\_CPU1, VDDCR\_CPU2, VDDCR\_SOC,  
VDDIO, VDD\_11\_S3, +3V, +5V, +12V, +BAT, +3VSB,  
+5VSB  
Power Supply Single/Dual : 500W, 800W, 1200W, 1600W,  
2000W, 2400W

### Environment

Temperature Operation temperature: 10°C ~ 35°C / Non  
operation temperature: -40°C ~ 70°C  
Humidity Non operation humidity: 20% ~ 90% ( Non  
condensing)

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## Supported OS

OS

### Microsoft® Windows: (for EPYC 9004)

- Server 2019 (64bit)
- Server 2022 (64bit)

### Microsoft® Windows: (for EPYC 9005)

- Server 2019 (64bit)
- Server 2022 (64bit)
- Server 2025 (64bit)

### Linux: (for EPYC 9004)

- RedHat Enterprise Linux Server 8.6 (64bit) / Server 8.7 (64bit) / Server 9.0 (64bit) / Server 9.1 (64bit)
- SUSE SLES 15.4 (64bit)
- Ubuntu 20.04.5 (64bit) / 22.04 (64bit) / 22.10 (64bit)
- Rocky Linux 8 (64bit) / Rocky Linux 9 (64bit)

### Linux: (for EPYC 9005)

- RedHat Enterprise Linux Server 8.10 (64bit) / Server 9.4 (64bit)
- SUSE SLES 15.6 (64bit)
- Ubuntu 22.04.5 (64bit) / 24.04.2 (64bit)
- Rocky Linux 8 (64bit) / Rocky Linux 9 (64bit)

### Hypervisor: (for EPYC 9004)

- VMWare® ESXi 7.0 U3i / 8.0
- CITRIX Hypervisor 8.2.1

