

Apogean Server with Single Socket AMD EPYC 9005/9004 Processors

AS41U-E4-A / AS82U-E4-A / AS122U-E4-A /
AS242U-E4-A / AS163U-E4-A / AS244U-E4-A /
AS364U-E4-A



Key Features

- Single Socket SP5 (LGA 6096), supports AMD EPYCTM 9005/9004 (with AMD 3D V-Cache Technology) and 97x4 series processors
- 8 DIMM slots (1DPC), supports DDR5 RDIMM, RDIMM-3DS
- 2 PCIe5.0 / CXL2.0 x16, 2 PCIe5.0 x16, 2 PCIe5.0 / CXL2.0 x8
- Supports 2 M.2 (PCIe5.0 x4 or SATA 6Gb/s)
- 2 RJ45 (10GbE) by Intel® X710-AT2
- 2 RJ45 (1GbE) by Intel® i210
- Remote Management (IPMI)

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Specifications:

• Processor System

CPU	Supports AMD EPYCTM 9005/9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
Socket	Single Socket SP5 (LGA 6096)
Power	Up to 400W
Chipset	System on Chip

• Memory

Supported DIMM Qty	8 DIMM slots (1DPC)
Supported Type	Supports DDR5 288-pin RDIMM, RDIMM-3DS
Max. Capacity per DIMM	RDIMM: 128GB (2Rx4) RDIMM-3DS: 256GB (2Rx4)
Max. DIMM Frequency	6400 MHz
Memory voltage	1.1V

• PCIe Expansion Slots (SLOT7 close to CPU)

PCIe x16	SLOT6: PCIe5.0 / CXL2.0* x16 SLOT5: PCIe5.0 x16 SLOT4: PCIe5.0 x16 SLOT2: PCIe5.0 / CXL2.0* x16 SLOT3: PCIe5.0 / CXL2.0* x8 SLOT1: PCIe5.0 / CXL2.0* x8 *Supports CXL1.1 while installing AMD EPYC 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
PCIe x8	

• Other PCIe Expansion Connectors

M.2 slot	1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 2280 form factor 1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor
Others	1 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) 4 MCIO (PCIe5.0 x8)

• Storage

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

Additional GbE Controller	Intel® X710-AT2: 2 RJ45 (10GbE) Intel® i210: 2 RJ45 (1GbE)
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• Server Management

BMC Controller	ASPEED AST2600
IPMI Dedicated GLAN	1 Realtek RTL8211F for dedicated management GLAN

• Graphics

Controller	ASPEED AST2600
VRAM	DDR4 512MB

• Rear I/O

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

• LED Indicators

Standby PWR LED	1 (5VSB)
80 Debug Port LED	1
Fan Fail LED	8
BMC heartbeat LED	1

• System BIOS

BIOS Type	AMI UEFI BIOS; 256 Mb (32MB) 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, TR1 Temperature sensing
Fan	Fan Tachometer Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control
Voltage	VCORE0, VCORE1, VDDIO, VCCD, 3V, 5V, 12V, BAT, 3.3VSB, 5VSB, VSOC, VDD_11, VDD_33, VDD_18, 1P88V, 1P0V

• Environment and Power Supply

OS	Microsoft® Windows: (for EPYC 9004) - Server 2019 (64 bit) - Server 2022 (64 bit) Microsoft® Windows: (for EPYC 9005) - Server 2019 (64 bit) - Server 2022 (64 bit) - Server 2025 (64 bit) Linux: (for EPYC 9004) - RedHat Enterprise Linux Server 8.6 (64bit) / Server 8.7 (64 bit) / Server 9.0 (64 bit) / Server 9.1 (64 bit) - SUSE SLES 15.4 (64 bit) - Ubuntu 20.04.5 (64 bit) / 22.04 (64 bit) / 22.10 (64 bit) Linux: (for EPYC 9005) - RedHat Enterprise Linux Server 8.10 (64bit) / Server 9.4 (64 bit) - SUSE SLES 15.6 (64 bit) - Ubuntu 22.04.5 (64 bit) / 24.04.2 (64 bit) Hypervisor: (for EPYC 9004) - VMWare® ESXi 8.0 Hypervisor: (for EPYC 9005) - VMWare® ESXi 9.0
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• Environment and Power Supply

Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	Non-operation humidity: 20% ~ 90% (Non-condensing)
Power Supply	Single : 750W, 850W, 950W, 1000W, 1200W, 1500W, 1600W, 2000W Redundant : 800W, 1200W, 1600W, 2000W, 2400W, 2700W