



## GENOAD8X-2T/BCM

- EEB (12.63" x 13")
- Single Socket SP5 (LGA 6096), supports AMD EPYC™ 9005\*/9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
- 8 DIMM slots (1DPC), supports DDR5 RDIMM, RDIMM-3DS
- 4 PCIe5.0 / CXL2.0 x16\*, 3 PCIe5.0 x16, 1 PCIe5.0 x8\*\*
- 2 MCIO\*\* (PCIe5.0 x4 or 4 SATA 6Gb/s), 1 MCIO (PCIe5.0 x4 or 4 SATA 6Gb/s), 1 MCIO\* (PCIe5.0 x4)
- Supports 1 M.2 (PCIe5.0 x4 or SATA 6Gb/s), 1 M.2\* (PCIe5.0 x4)
- Up to 16 SATA 6Gb/s
- 2 RJ45 (10GbE) by Broadcom BCM57416
- Remote Management (IPMI)



### SPECIFICATIONS

<b>Physical Status</b>	
Form Factor	EEB
Dimensions	12.63" x 13"
<b>Processor System</b>	
CPU	Supports AMD EPYC™ 9005*/9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors *A BIOS update is required to support AMD EPYC™ 9005 series processors
Socket	Single Socket SP5 (LGA 6096)
Thermal Design Power	Up to 400W
Chipset	System on Chip
<b>System Memory</b>	
Supported DIMM Quantity	8 DIMM slots (1DPC)
Supported Type	Supports DDR5 288-pin RDIMM, RDIMM-3DS
Max. Capacity per DIMM	RDIMM: 96GB (2R) RDIMM-3DS: 512GB (2S8Rx4)
Max. DIMM Frequency	4800 MHz
Voltage	1.1V
<b>PCIe Expansion Slots (SLOT7 close to CPU)</b>	
PCIe x 16	SLOT6: PCIe5.0 / CXL2.0* x16□ SLOT5: PCIe5.0 x16 SLOT4: PCIe5.0 / CXL2.0* x16□ SLOT3: PCIe5.0 x16 SLOT2: PCIe5.0 / CXL2.0* x16□ SLOT1**: PCIe5.0 x16 SLOT0: PCIe5.0 / CXL2.0* x16  *Supports CXL1.1 while installing AMD EPYC 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors **SLOT1 shared lanes with 1 MCIO and 1 M.2. SLOT1 auto-switch to PCIe5.0 x8 when either 1 MCIO or 1 M.2 populated.
PCIe x 8	SLOT7***: PCIe5.0 x8  ***SLOT7 share lanes with 2 MCIO. When SLOT7 occupied, 1 MCIO will not function and 1 MCIO can be enabled by jumper setting. When selecting 1 MCIO, SLOT7 will switch to PCIe4.
<b>Other PCIe Expansion Connectors</b>	
M.2 slot	1 M-key (PCIe5.0 x4 or 4 SATA 6Gb/s), supports 22110/2280 form factor 1 M-key** (PCIe5.0 x4), supports 22110/2280 form factor
Others	2 MCIO*** (PCIe5.0 x4 or 4 SATA 6Gb/s) 1 MCIO (PCIe5.0 x4 or 4 SATA 6Gb/s) 1 MCIO** (PCIe5.0 x4)
<b>SATA/SAS Storage</b>	

PCH Built-in Storage	AMD EPYC 9005/9004 (16 SATA 6Gb/s): 3 M.2, 4 SATA via optional M2U2_HD_G4 M.2 device
<b>Ethernet</b>	
Additional GbE Controller	Broadcom BCM57416: 2 RJ45 (10GbE)
<b>Server Management</b>	
BMC Controller	ASPEED AST2600
IPMI Dedicated GLAN	1 Realtek RTL8211F for dedicated management GLAN
<b>Graphics</b>	
Controller	ASPEED AST2600
VRAM	DDR4 512MB
<b>Rear I/O</b>	
UID Button/LED	1 UID button w/ LED
VGA Port	1 DB15 (VGA)
Serial Port	1 DB9 (COM)
USB 3.2 Gen1 Port	2 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (10GbE) 1 dedicated IPMI
<b>Internal Connector/Headers</b>	
Power Connector	1 (24-pin, ATX main power), 3 (8-pin, ATX 12V)
Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
COM Header	1
VGA header	1
Speaker Header	1 (4-pin)
Fan Header	8 (6-pin)
Thermal Sensor Header	1
TPM Header	1 (13-pin, SPI)
SMBus header	1
PMBus header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
NMI Header	1
<b>LED Indicators</b>	
Standby PWR LED	1 (5VSB)
80 Debug Port LED	1
Fan Fail LED	8
BMC heartbeat LED	1
<b>System BIOS</b>	
BIOS Type	AMI UEFI BIOS; 256 Mb (32MB) SPI Flash ROM
BIOS Features	ASRock Rack Instant Flash, ACPI 6.4 and above compliance wake up events, SMBIOS 3.5.0 and above, Plug and Play(PnP)
<b>Hardware Monitor</b>	
Temperature	CPU, MB, TR1 Temperature sensing
Fan	CPU/Rear/Front Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) CPU/Rear/Front Fan Multi-Speed Control
Voltage	VCORE,VCCSA,VCCM,3V, 5V, 12V, +1.05V_PCH_AUX,+BAT, 3VSB, 5VSB,VCCIO,+2.5V_VPP
<b>Supported OS</b>	



OS	<p>Microsoft® Windows:</p> <ul style="list-style-type: none"> <li>- Server 2019 (64 bit)</li> <li>- Server 2022 (64 bit)</li> </ul> <p>Linux:</p> <ul style="list-style-type: none"> <li>- RedHat Enterprise Linux Server 8.6 (64 bit) / Server 8.7 (64 bit) / Server 9.0 (64 bit) / Server 9.1 (64 bit)</li> <li>- SUSE SLES 15.4(64 bit)</li> <li>- Ubuntu 20.04.5 (64 bit) / 22.04 (64 bit) / 22.10 (64 bit)</li> </ul> <p>Hypervisor::</p> <ul style="list-style-type: none"> <li>- VMWare® ESXi/ 7.0 U3i / 8.0</li> <li>- CITRIX Hypervisor 8.2.1</li> </ul>
<b>Environment</b>	
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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