

ESC NB8-E11 NVIDIA HGX[™] B200

ASUS NVIDIA HGX Architecture: The Best Choice for Heavy AI Workloads



10U NVIDIA HGX B200 8-GPU server with dual 4th/5th Gen Intel Xeon Scalable processors that designed for large scale of AI and HPC, 10+1 PCIe slots, 32 DIMM, 10 NVMe, dual 10G LAN. NIC and storage are placed close to the GPUs, use a ratio of up to 1:1 GPUs to network interface card and have GPU Direct Storage design could reduce read/write latency. ESC NB8-E11 is optimal for cultivating AI advancements for enterprise applications.

FEATURE

- 4th/5th Gen Intel[®] Xeon[®] Scalable Processors
- PCIe 5.0 Ready
- **Powerful Performance**
- Enhanced IT-infrastructure management

Target market

- **High Performance Computing**
- Generative AI
- Deep Learning/Machine Leaning
- Data Analysis

Asset Tag

2 x M.2 Gen3x2 (PCH)

1.

2.

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5.

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7.

Scientific Research

5th Gen Intel® Xeon® Scalable Processors

Powered by 5th Gen Intel® Xeon® Scalable Processors with 8-channel, up to 5600 MHz DDR5 and support for a maximum TDP of up to 350 watts per socket

PCIe Gen5.0 Ready

PCI Express® (PCIe®) 5.0 delivers 32 GT/s bandwidth, which is double the speed of PCIe 4.0, offering lower power consumption, better lane scalability and backwards compatibility.

Powerful Performance

Support NVIDIA HGX B200 8-GPUs and connected with latest NVSwitch design. NIC and storage are placed close to the GPUs, use a ratio of up to 1:1 GPUs to network interface card and have GPU Direct Storage design could reduce read/write latency.

Enhanced IT-infrastructure management

ASUS ASMB11-iKVM remote control with ASPEED AST2600, ASUS Control Center IT management software and hardware-level Root-of-Trust solution





+ 1 x PCI-E x16 (Gen4 x8 link) FHHL

8 x PCI-E x16 (Gen5 x16 link) HHHL

8 5+1 Redundant 3000W 80 PLUS Titanium Power Supply

ESC NB8-E11



SPECIFICATION

Ath Gen Intel* Xeon* Scalable Processors Sth Gen Intel* Xeon* Scalable Processors Memory Total Slots 32 (8-hannel per CPU, 16 DIMM per CPU) Memory Type DDRS 4400 RDIMM/RDIMM 3DS (2DIMM per Channel) *Please refer to www.asus.com for latest momory AVL update #mory Size 128GB, 96GB, 6GG Intel® Optine** persistent memory 300 series * Refer to www.asus.com/support for more information Expansion Slots Total PCI/PCI-X/PCI-E/PIKE Slots Slot Type 10+1 Slot Type 10+1 x PCIe Gen5 Slots Proceeds and the information 10+1 x PCIe Gen5 X16 link (FH, HL)* + 1 x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (IP, HL) - x PCIe Gen5 X16 link (FH, HL)* + 1 x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FD, HL) - x PCIe Gen5 X16 link (FH, HL)* + 1 x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FD, HL) - x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FD, HL) - x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FH, HL)* - x PCIe Gen5 X16 link (FD, HL) - x PCIe Gen5 X16 link (FH, HL)* - x PCIE Gen5 X16 link (FD, HL) - x PCIE Gen5 X16 link (FH, HL)* - x PCIE Gen5 X16 link (FD, HL)* - x PCIE Gen5 X16 link (FH, HL)* - x PCIE Gen5 X16 link (FD, HL)* - x PCIE Gen5 X16 link (FH, HL)* - x PCIE Gen5 X16 link (FD, HL)*	Processor Support		2 x Socket
Capacity Memory TypeMaximum up to 4 TB per CPU DDR5 4400 RDIMM/RDIMM 3DS (ZDIMM per Channel) *Please refer to www.asus.com for latest momory AVL update 			
Memory TypeDDRS 4400 RDIMM/RDIMM 3DS (2DIMM per Channel) *Please refer to www.asus.com for latest momory AVL update Memory SizeExpansion SlotsTotal PCI/PCI-X/PCI-E/PIKE Slots Slot Type10+1 10+1 x PCIe Gen5 slots (PCIe Switch directly) - 1 x PCIe Gen5 slots Slot Gen6 xL6 link (FH, HL) + 1 x PCIe Gen5 xL6 link (FH, HL) + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen7 xL6 link (FCH)Disk ControllerSATA ControllerInternal SAS ControllerDisk ControllerSATA ControllerInternal PCIe Cen6 xL6 link (FCH)Storge BaysL=internal Aro S will be hot-swappable (FCU directly) Front: 8 NVMe (PCU directly) Front: 8 NVMeInternal (PCU directly) Front: 8 NVMeNetworkingLANLANS 10 Giglabit LAN ports (Intel X10-ATZ Controller) 1 x Management Port	Memory	Total Slots	32 (8-channel per CPU, 16 DIMM per CPU)
Memory Size *Please refer to www.asus.com for latest momory AVL update 128GB, 96GB, 64GB Intel® Optane™ persistent memory 300 series * Refer to www.asus.com/support for more information Expansion Slots Total PCI/PCI-X/PCI-E/PIKE Slots 10-1 Slot Type 10+1 x PCIe Gen5 slots 10+1 PCIe Switch directly] - 8 x PCIe Gen5 x16 link (IP, HL) - 8 x PCIe Gen5 x16 link (IP, HL) - 1 x PCIe Gen4 x8 link from CPU2 DMI (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* - 1 x PCIe Gen4 x8 link from CPU2 DMI (FH, HL)* - 1 x PCIe Gen4 x8 link for DPU **for Raid card to connect storage [BF3 operation temperture 30°C when using transceiver] Disk Controller SATA Controller Intel PCH Integrated Optional Kits: -Broadcom MegaRAID 9560-16i -Broadcom MegaRAID 9560-16i -Broadcom MRAID CARD 9540-8i Storage Bays I = internal A or S will be hot-swappable [PCIe Switch directly] Front: 8 NVMe [CPU directly] Front: 8 NVMe; 2 NVMe/SATA) Front: 8 NVMe [CPU directly] Front: 8 NVMe; Refer to WU 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) Networking LAN 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller)		Capacity	Maximum up to 4 TB per CPU
Expansion Slots Total PCI/PCI-X/PCI-E/PIKE Slots Slot Type 10-1 10-1 x PCIe Gen5 slots IPCIE Switch directly] - 8 x PCIe Gen5 x16 link (EP, HL) - 8 x PCIe Gen5 x16 link (EP, HL) - 8 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* - 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* - 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* - 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* - 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* PCIE Gen5 x16 link (FH, HL)* - 1 x PCIe Gen5 x16 link (FH, HL)* YSupport PCIe x16 link for DPU **For Raid card to connect storage [BF3 operation temperture 30°C when using transceiver] Disk Controller ATA Controller SA Controller Intel PCH Integrated Shordor Main Kits: -Broadcom MagaRAID 9560-16i -Broadcom RAID CARD 9540-8i Storage Bays I internal Aro S will be hot-swappable or S will be hot-swappable will be hot-swappable 10 x 2.5" hot-swap drive bays (8 NVMe, 2 NVMe/SATA) [PCIe Switch directly] Front: 8 NVMe [CPU directly] Rear: 2 NVMe(CPU2)/SATA(PCH) [CPU directly] Rear: 2 NVMe(CPU2)/SATA(PCH)		Memory Type	
Slot Type10+1 x PCle Gen5 slotsPCle Gen5 x16 link (LP, HL) - 3 x PCle Gen5 x16 link (LP, HL) (CPU directly) - 1 x PCle Gen5 x16 link (LP, HL) + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* <b< td=""><td></td><td>Memory Size</td><td></td></b<>		Memory Size	
Image: Property in the property	Expansion Slots	Total PCI/PCI-X/PCI-E/PIKE Slots	10+1
-8 x PCle Gen5 x16 link (LP, HL) ICPU directly] -1 x PCle Gen5 x16 link (FH, HL)* + 1 x PCle Gen5 x16 link (FH, HL)* -1 x PCle Gen4 x8 link from CPU2 DMI (FH, HL)** *Support PCle x16 link for DPU **For Raid card to connect storage [BF3 operation temperture 30°C when using transceiver] Disk Controller SATA Controller SAS Controller SAS Controller Optional Kits: -Broadcom RalD CARD 9540-36i Storage Bays L= internal Aor S will be hot-swappable [PCle Switch directly] Front: 8 NVMe		Slot Type	10+1 x PCle Gen5 slots
M.22 x M.2 Gen3 x2 link (PCH)Disk ControllerSATA ControllerIntel PCH IntegratedSAS ControllerOptional Kits: -Broadcom MegaRAID 9560-16i -Broadcom RAID CARD 9540-8iStorage BaysI = internal A or S will be hot-swappable10 x 2.5" hot-swap drive bays (8 NVMe, 2 NVMe/SATA)[PCIe Switch directly] Front: 8 NVMe [CPU directly] Rear: 2 NVMe(CPU2)/SATA(PCH)Intel PCH IntegratedNetworkingLAN2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) 1 x Management Port			 8 x PCIe Gen5 x16 link (LP, HL) [CPU directly] 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)* 1 x PCIe Gen4 x8 link from CPU2 DMI (FH, HL)** *Support PCIe x16 link for DPU **For Raid card to connect storage
SAS Controller Optional Kits: -Broadcom MegaRAID 9560-16i -Broadcom RAID CARD 9540-8i Storage Bays I = internal A or S will be hot-swappable 10 x 2.5" hot-swap drive bays (8 NVMe, 2 NVMe/SATA) [PCle Switch directly] Front: 8 NVMe [PCle Switch directly] Rear: 2 NVMe(CPU2)/SATA(PCH) Networking LAN 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) 1 x Management Port		M.2	
Storage Bays I = internal A or S will be hot-swappable 10 x 2.5" hot-swap drive bays (8 NVMe, 2 NVMe/SATA) [PCIe Switch directly] Front: 8 NVMe [PCIe Switch directly] Front: 8 NVMe [CPU directly] Rear: 2 NVMe(CPU2)/SATA(PCH) Networking LAN 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) 1 x Management Port	Disk Controller	SATA Controller	Intel PCH Integrated
A or S will be hot-swappable [PCIe Switch directly] Front: 8 NVMe [CPU directly] Rear: 2 NVMe(CPU2)/SATA(PCH) 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) Networking LAN 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller)		SAS Controller	-Broadcom MegaRAID 9560-16i
1 x Management Port	Storage Bays		[PCIe Switch directly] Front: 8 NVMe [CPU directly]
Graphic VGA Aspeed AST2600 64MB	Networking	LAN	
	Graphic	VGA	Aspeed AST2600 64MB





SPECIFICATION

Front I/O Ports		4 x USB3.2 Gen1 ports 1 x VGA port 2 x 10Gb RJ45 LAN module (Intel-x710 Based) 1 x Mgmt LAN 1 x locate button 1 x power button
Rear I/O Ports		1 x locate button 1 x power button
Switch/LED		Front : 1 x Power Button/LED 1 x Location Button/LED 1 x Message LED 1 x Q-Code/Port 80 LED Rear : 1 x Location LED 1 x Power Button/LED
OS Support		RedHat [®] Enterprise Linux Rocky Ubuntu VMware *Please find the latest OS support from https://www.asus.com/event/Server/OS_support_list/OS.html
Management Solution	Software Out of Band Remote Management	ASUS Control Center On-Board ASMB11-iKVM
Dimension		885mm x 447mm x 435.95mm
Net Weight Kg (CPU, DRAM & HDD not included)		121 kg
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)		173 kg
Power Supply (following different configuration by region)		5+1 3000W 80 PLUS Titanium Power Supply
Environment		Operation temperature: 10℃ ~ 35℃ Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing)