ESC N8-E11
ASUS 1st NVIDIA HGX Architecture: The Best Choice for Heavy AI Workloads

7U NVIDIA HGX H100 8-GPU server with dual 4th Gen Intel Xeon Scalable processors that designed for large scale of AI and HPC, 10+1 or 12 PCIe slots, 32 DIMM, 10 NVMe, dual 10G LAN and optional OCP 3.0 socket (SKU2 only). 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 N8-E11 is optimal for cultivating AI advancements for enterprise applications.

FEATURE
• 4th/5th Gen Intel® Xeon® Scalable Processors
• PCIe Gen5.0 Ready
• Powerful Performance
• Enhanced IT-infrastructure management

Target market
• High Performance Computing
• Generative AI
• Deep Learning/Machine Learning
• Data Analysis
• Scientific Research

5th Gen Intel® Xeon® Scalable Processors
Powered by 5th Gen Intel® Xeon® Scalable Processors with 8-channel, up to 4400 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 H100 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. Asset Tag
2. 32 x DIMM, DDR5 4400 RDIMM/ 3D5 RDIMM
3. 2 x 4th/5th Gen Intel® Xeon® Scalable Processors
4. 8 x HGX H100 GPUs 80G with NVLink NVSwitch
5. 2 x M.2 Gen5x4 (CPU1) & 2 x M.2 Gen3x2 (PCH)
6. 8 x PCI-E x16 (Gen5 x16 link) HHHL
7. SKU1: 1 x PCI-E x16 (Gen5 x16 link) or OCP socket FHHL + 1 x PCI-E x16 (Gen5 x16 link) FHHL
   SKU2: SKU1+ 1 x PCI-E x16 (Gen5 x16 link) FHHL + 1 x PCI-E x16 (Gen5 x8 link) FHHL
8. 4+2 or 3+3 Redundant 3000W 80 PLUS Titanium Power Supply
9. 10 x 2.5” hot-swap drive bays (8 x NVMe, 2 x NVMe/SATA/SAS*)
## ESC N8-E11

### Processor Support
- 2 x Socket
  - 4th Gen Intel® Xeon® Scalable Processors
  - 5th Gen Intel® Xeon® Scalable Processors

### Memory
| Total Slots | 32 (8-channel per CPU, 16 DIMM per CPU) |
| Capacity | Maximum up to 4 x 8 TB (DDRS5 + Crow Pass) |
| Memory Type | DDR5 4400 RDIMM/RDIMM 3DS (2DIMM per Channel) |
*Please refer to www.asus.com for latest memory AVL update
- 512GB, 256GB, 128GB 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 | 11 or 12 |
| Slot Type |
**SKU1:**
- 10 x PCIe Gen5 slots (1 x internal RAID card)
  
| [PCIe Switch directly] |
- 8 x PCIe Gen5 x16 link (LP, HL)  
- 1 x PCIe Gen5 x16 link (FH, HL)* + 1 x PCIe Gen5 x16 link (FH, HL)*  
*Support DPU please choose SKU2

**SKU2** (Launch in Dec. 2023)
- 12 x PCIe Gen5 slots
  
| [PCIe Switch directly] |
- 8 x PCIe Gen5 x16 link (LP, HL)  
- 1 x PCIe Gen5 x16 link (FH, HL)** + 1 x PCIe Gen5 x16 link (FH, HL)**  
- 1 x PCIe Gen5 x8 link (FH, HL) + 1 x PCIe Gen5 x8 link (FH, HL)

**Support PCIe x16 link for DPU**

### M.2
- 2 x M.2 Gen5x4 (CPU1) & 2 x M.2 Gen3x2 (PCH)

### Disk Controller
| SATA Controller | Intel PCH Integrated |
| SAS Controller | Optional Kits:  
  - Broadcom MegaRAID 9560-16i  
  - Broadcom RAID CARD 9540-8i  
  - ASUS PIKE II 3008 8-port HBA Card  
  - ASUS PIKE II 3108 8-port HW RAID Card |

### Storage Bays
- I = internal  
  A or S will be hot-swappable  
  10 x 2.5" hot-swap drive bays (8 NVMe, 2 NVMe/SATA/SAS*)
  
| [PCIe Switch directly] |
- Front: 8 NVMe  
- [CPU directly]  
- Rear: 2 NVMe(CPU2)/SATA(PCH)/SAS*  

* SAS support required an HBA/RAID card.

### Networking
| LAN | 2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller)  
| Management Port |
| Graphic | Aspeed AST2600 64MB |

### 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

- Windows Server
- RedHat® Enterprise Linux
- Rocky
- Ubuntu
- VMware

*Please find the latest OS support from [https://www.asus.com/event/Server/OS_support_list/OS.html](https://www.asus.com/event/Server/OS_support_list/OS.html)

### Management Solution

<table>
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<tr>
<th>Software</th>
<th>Out of Band Remote Management</th>
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<tr>
<td>ASUS Control Center</td>
<td>On-Board ASMB11-iKVM</td>
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### Dimension

- 885mm x 447mm x 306.65mm

### Net Weight Kg (CPU, DRAM & HDD not included)

- 99 kg

### Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)

- 154 kg

### Power Supply (following different configuration by region)

- 4+2 or 3+3 3000W 80 PLUS Titanium Power Supply

### Environment

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

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ESC N8-E11 with Front Bezel (Optional)