

# ESC N8-E11

ASUS 1<sup>st</sup> NVIDIA HGX Architecture: The Best Choice for Heavy AI Workloads



7U



2



32

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

- 4<sup>th</sup>/5<sup>th</sup> Gen Intel® Xeon® Scalable Processors
- PCIe 5.0 Ready
- Powerful Performance
- Enhanced IT-infrastructure management

### 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

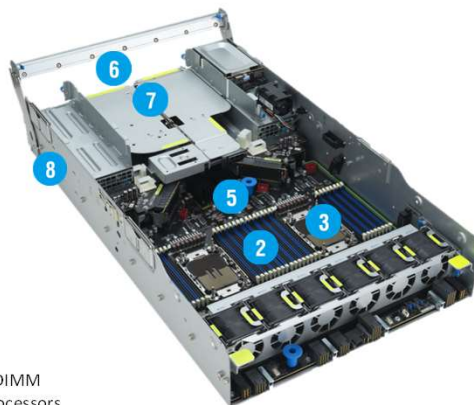
Support NVIDIA HGX H100 8-GPUs and connected with latest NVSwitch design. NIC and storage are placed close to the GPUs, use a ratio of up to 1:1 GPUs to network interface card and have GPU Direct Storage design could reduce read/write latency.

### 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

## Target market

- High Performance Computing
- Generative AI
- Deep Learning/Machine Learning
- Data Analysis
- Scientific Research



1. Asset Tag
2. 32 x DIMM, DDR5 4400 RDIMM/ 3DS RDIMM
3. 2 x 4<sup>th</sup>/5<sup>th</sup> 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) HHHH
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 x8 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

# SPECIFICATION

<b>Processor Support</b>		2 x Socket  4th Gen Intel® Xeon® Scalable Processors 5th Gen Intel® Xeon® Scalable Processors
<b>Memory</b>	<b>Total Slots</b> <b>Capacity</b> <b>Memory Type</b>  <b>Memory Size</b>	32 (8-channel per CPU, 16 DIMM per CPU) Maximum up to 4 + 8 TB (DDR5 + Crow Pass) DDR5 4400 RDIMM/RDIMM 3DS (2DIMM per Channel) *Please refer to <a href="http://www.asus.com">www.asus.com</a> for latest memory AVL update 512GB, 256GB, 128GB Intel® Optane™ persistent memory 300 series * Refer to <a href="http://www.asus.com/support">www.asus.com/support</a> for more information
<b>Expansion Slots</b>	<b>Total PCI/PCI-X/PCI-E/PIKE Slots</b> <b>Slot Type</b>	11 or 12  <u>SKU1:</u> 10 + 1 x PCIe Gen5 slots (1 x internal RAID card)  [PCIe Switch directly] - 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)*  *Support DPU please choose SKU2  <u>SKU2</u> (Launch in Dec. 2023) 12 x PCIe Gen5 slots  [PCIe Switch directly] - 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 Gen5 x8 link (FH, HL) + 1 x PCIe Gen5 x8 link (FH, HL)  **Support PCIe x16 link for DPU
	<b>M.2</b>	2 x M.2 Gen5x4 (CPU1) & 2 x M.2 Gen3x2 (PCH)
<b>Disk Controller</b>	<b>SATA Controller</b> <b>SAS Controller</b>	Intel PCH Integrated  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
<b>Storage Bays</b>	<b>I = internal</b> <b>A or S will be hot-swappable</b>	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.
<b>Networking</b>	<b>LAN</b>	2 x 10 Gigabit LAN ports (Intel X710-AT2 Controller) 1 x Management Port
<b>Graphic</b>	<b>VGA</b>	Aspeed AST2600 64MB
<b>Front I/O Ports</b>		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
<b>Rear I/O Ports</b>		1 x locate button 1 x power button

SPECIFICATION

<b>Switch/LED</b>		<p>Front :</p> <ul style="list-style-type: none"> <li>1 x Power Button/LED</li> <li>1 x Location Button/LED</li> <li>1 x Message LED</li> <li>1 x Q-Code/Port 80 LED</li> </ul> <p>Rear :</p> <ul style="list-style-type: none"> <li>1 x Location LED</li> <li>1 x Power Button/LED</li> </ul>
<b>OS Support</b>		<p>Windows Server RedHat® Enterprise Linux Rocky Ubuntu VMware</p> <p>*Please find the latest OS support from <a href="https://www.asus.com/event/Server/OS_support_list/OS.html">https://www.asus.com/event/Server/OS_support_list/OS.html</a></p>
<b>Management Solution</b>	<b>Software</b>	ASUS Control Center
	<b>Out of Band Remote Management</b>	On-Board ASMB11-iKVM
<b>Dimension</b>		885mm x 447mm x 306.65mm
<b>Net Weight Kg (CPU, DRAM &amp; HDD not included)</b>		99 kg
<b>Gross Weight Kg (CPU, DRAM &amp; HDD not included, Packing include)</b>		154 kg
<b>Power Supply (following different configuration by region)</b>		4+2 or 3+3 3000W 80 PLUS Titanium Power Supply
<b>Environment</b>		<p>Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C Non operation humidity: 20% ~ 90% ( Non condensing)</p>



ESC N8-E11 with Front Bezel (Optional)