

AI TRAINING ♦ 8U HGX™ B300 PLATFORM

AXL Server ZR590

NVIDIA HGX™ B300 NVL8 with NVLink™
on dual Intel® Xeon® 6 processors.



AXL's highest-density AI training platform — eight Blackwell Ultra GPUs on an NVLink fabric, paired with 800 Gb/s ConnectX-8 networking for multi-node scale-out. Delivered, integrated and supported in India by AXL, with a single point of accountability.

AT A GLANCE

- 8U rackmount with **6+6 CRPS**, 80 PLUS® Titanium, 3000 W
- **NVIDIA HGX™ B300 NVL8** with NVIDIA® NVLink™
- Dual Socket E2 (LGA 4710) — Intel® Xeon® 6700P, 6500P and 6700E series
- **16+16 DIMM slots** (2 DPC) — DDR5 RDIMM, RDIMM-3DS, MRDIMM
- 4 × FHHL PCIe 5.0 ×16
- **12 × hot-swap 2.5" NVMe** (PCIe 5.0 ×4) drive bays
- 1 × M.2 (PCIe 5.0 ×2) and 2 × M.2 (PCIe 5.0 ×4)
- **8 × OSFP at 800 Gb/s** via NVIDIA® ConnectX-8 SuperNIC
- 2 × RJ45 (1 GbE) by Intel® i350-AM2
- Remote management (IPMI 2.0 with iKVM and vMedia)

DIMENSIONS 930 × 448 × 353.6 mm (36.6" × 17.6" × 13.9")

WHERE IT IS DEPLOYED

Foundation Model Training

HGX B300 NVL8 with NVLink shared memory is the platform class used to train and fine-tune large language and multimodal models at production scale.

Multi-Node AI Clusters

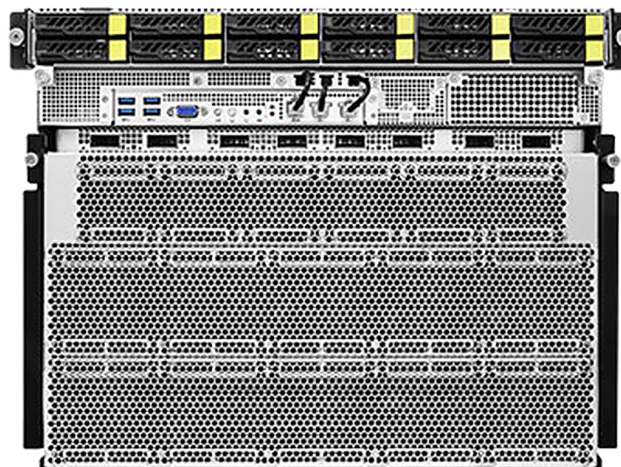
Eight OSFP ports at 800 Gb/s via ConnectX-8 SuperNIC give the east-west bandwidth required to scale training across racks without fabric bottlenecks.

Sovereign AI Programmes

National and state AI compute facilities under IndiaAI and equivalent initiatives, where workloads and data must remain within Indian jurisdiction.

TECHNICAL SPECIFICATIONS

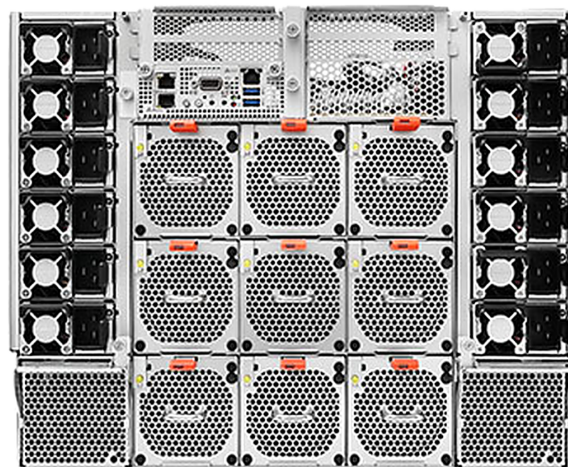
GPU Platform	NVIDIA HGX™ B300 NVL8 with NVIDIA® NVLink™ Eight-GPU baseboard with NVLink shared-memory fabric
Processor	Dual-socket Intel® Xeon® 6 — supports 6700P-series, 6500P-series and 6700E-series processors
Socket	1+1 Socket E2 (LGA 4710) · System-on-Chip
Memory	16+16 DIMM slots (2 DPC) · DDR5 RDIMM, RDIMM-3DS and MRDIMM (1 DPC only) Max per DIMM: RDIMM 128 GB · RDIMM-3DS 256 GB · MRDIMM 64 GB Frequency: 6400 MT/s (1 DPC) / 5200 MT/s (2 DPC) · MRDIMM 8000 MT/s (1 DPC) Maximum 8 TB system memory · 1.1 V
Storage — Front	12 × hot-swap 2.5" NVMe (PCIe 5.0 ×4) drive bays via PCIe switch
Storage — Internal	1 × M.2 M-key (PCIe 5.0 ×2) from CPU0 · 22110 / 2280 2 × M.2 M-key (PCIe 5.0 ×4) from CPU1 · 22110 / 2280
Networking	8 × OSFP at 800 Gb/s via NVIDIA® ConnectX-8 SuperNIC 2 × RJ45 1GbE via Intel® i350-AM2
PCIe Expansion	Rear: 4 × FHHL PCIe 5.0 ×16 via PCIe switch
Server Management	ASPEED AST2600 BMC · IPMI 2.0 with iKVM and vMedia Dedicated IPMI LAN via Realtek RTL8211F
Graphics	ASPEED AST2600 · 512 MB DDR4 VRAM · 1 × DB15 (VGA)



FRONT VIEW — 12 × NVMe BAYS, FRONT I/O AND GPU INTAKE

TECHNICAL SPECIFICATIONS

Front Panel	UID button with LED · power button with LED · reset button · NMI button System fault LED · HDD activity LED 4 × USB 3.2 Gen 1 Type-A · 1 × DB15 (VGA) · dedicated IPMI (shared with rear)
Rear I/O	UID button with LED · power, reset and NMI buttons · HDD activity and system fault LEDs 2 × USB 3.2 Gen 1 Type-A · 1 × DB15 (VGA) 2 × RJ45 1GbE (shared with front I/O) · 1 × dedicated IPMI
Power Supply	6+6 CRPS redundant configuration · 80 PLUS® Titanium 3002.4 W at 220–240 VAC · 2900 W at 200–220 VAC AC input 200–240 Vrms, 50/60 Hz
Cooling	26 × PWM 80 × 80 mm fans · 6 × PWM 60 × 56 mm fans
System BIOS	AMI UEFI BIOS · 512 Mb SPI flash ROM Plug and Play · ACPI 4.0+ wake events · SMBIOS 3.4+
Hardware Monitor	CPU, motherboard and card-side temperature sensing Fan tachometer, auto speed adjust and multi-speed control Full rail voltage monitoring including +12 V, +3VSB, +5VSB
Environment	Operating temperature 10 °C to 35 °C Non-operating temperature –40 °C to 70 °C Non-operating humidity 20 % to 90 %, non-condensing
Form Factor	8U rackmount · 448 (W) × 930 (D) × 353.6 (H) mm 17.6" × 36.6" × 13.9"
Supply & Support	Supplied by AXL under ODM agreement with the platform manufacturer · India-based warranty, spares and escalation through AXL's service network [VERIFY: local content declaration — see note]



REAR VIEW — 6+6 CRPS MODULES AND FAN WALL

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