

AI TRAINING ♦ 8U HGX™ B200 PLATFORM

AXL Server ZR580

NVIDIA HGX™ B200 8-GPU with NVSwitch™
on dual Intel® Xeon® Scalable processors.

An eight-GPU Blackwell training node with a full NVSwitch fabric and PCIe synthetic-mode switching for GPUDirect storage and RDMA. Delivered, integrated and supported in India by AXL.



AT A GLANCE

- 8U rackmount with **6+6 CRPS**, 80 PLUS® Titanium, 3000 W
- **NVIDIA HGX™ B200 8-GPU** with NVIDIA® NVSwitch™
- PCIe Switch **Synthetic Mode** — optimised GPU-to-CPU, GPUDirect RDMA NIC and GPUDirect Storage
- Dual Socket E (LGA 4677) — 5th and 4th Gen Intel® Xeon® Scalable
- **16+16 DIMM slots** (2 DPC) — DDR5 RDIMM, RDIMM-3DS
- 8 × HHHL PCIe 5.0 ×16 and 2 × FHHL PCIe 5.0 ×16
- **8 × hot-swap 2.5" NVMe** (PCIe 5.0 ×4) via PCIe switch
- 2 × hot-swap NVMe / SATA and 2 × hot-swap SATA bays
- 1 × M.2 (PCIe 3.0 ×4 or SATA 6 Gb/s) and 1 × M.2 (PCIe 3.0 ×4)
- 2 × RJ45 (1 GbE) by Intel® i350-AM2
- Remote management (IPMI) with iKVM-capable BMC

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

WHERE IT IS DEPLOYED

Production AI Training

A full eight-GPU NVSwitch baseboard gives every GPU all-to-all bandwidth — the configuration used to train and fine-tune large models without partitioning the job.

GPUDirect Data Pipelines

Synthetic-mode PCIe switching moves data straight from NVMe and RDMA NICs into GPU memory, keeping accelerators fed on storage-bound and streaming workloads.

Sovereign AI Programmes

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

TECHNICAL SPECIFICATIONS

GPU Platform	NVIDIA HGX™ B200 8-GPU with NVIDIA® NVSwitch™ Eight-GPU baseboard with all-to-all NVSwitch fabric
Switch Fabric	PEX89104 PCIe switch · synthetic mode topology Optimised for GPU-to-CPU, GPUDirect RDMA NIC and GPUDirect Storage
Processor	Dual-socket — supports 5th Gen and 4th Gen Intel® Xeon® Scalable processors · TDP up to 350 W
Socket & Chipset	Dual Socket E (LGA 4677) · Intel® C741 chipset
Memory	16+16 DIMM slots (2 DPC) · DDR5 288-pin RDIMM and RDIMM-3DS Max per DIMM: RDIMM 96 GB · RDIMM-3DS 128 GB (2H) / 256 GB (4H) 5600 MT/s (1 DPC) / 4400 MT/s (2 DPC) on 5th Gen · 4800 MT/s (1 DPC) / 4400 MT/s (2 DPC) on 4th Gen Maximum 8 TB system memory · 1.1 V · speed and capacity vary by CPU SKU
Storage — Front	8 × hot-swap 2.5" NVMe (PCIe 5.0 ×4) via PCIe switch 2 × hot-swap 2.5" NVMe (PCIe 5.0 ×4) [CPU] / SATA [PCH] 2 × hot-swap 2.5" SATA [PCH]
Storage — Internal	1 × M.2 M-key (PCIe 3.0 ×4 or SATA 6 Gb/s), 2280 / 22110 [PCH] 1 × M.2 M-key (PCIe 3.0 ×4), 2280 / 22110 [PCH]
PCIe Expansion	Rear: 8 × HHHL PCIe 5.0 ×16 · 2 × FHHL PCIe 5.0 ×16
Networking	2 × RJ45 1GbE via Intel® i350-AM2
Server Management	ASPEED AST2600 BMC · IPMI remote management Dedicated IPMI LAN via Realtek RTL8211F
Graphics	ASPEED AST2600 · 512 MB DDR4 VRAM · 1 × DB15 (VGA)

TECHNICAL SPECIFICATIONS

Front Panel	Power button with LED · reset button · NMI button · UID button System fault LED · HDD activity LED 4 × USB 3.2 Gen 1 Type-A · 1 × DB15 (VGA) 2 × RJ45 1GbE and 1 × dedicated IPMI (shared with rear I/O)
Rear I/O	1 × UID button · 1 × DB15 (VGA) 2 × USB 3.2 Gen 1 Type-A 2 × RJ45 1GbE and 1 × dedicated IPMI (shared with front panel)
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	29 × PWM 80 × 80 mm fans · 4 × PWM 40 × 40 mm fans
System BIOS	AMI UEFI BIOS · 256 Mb (32 MB) SPI flash ROM ACPI 6.4+ wake events · SMBIOS 3.5.0+ · Plug and Play · instant flash
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]