POLYSTACK TECHNOLOGIES

IronPeak™

POLYSTACK'S AI SERVER
POWERED BY NVIDIA H200 NVL GPUS

IP-AR-845-AN

AMD EPYC | NVIDIA

Accelerate AI. Scale Without Limits.
Unlock the full potential of enterprise AI with the Polystack IronPeak AI Series (8th Generation Server), powered by NVIDIA H200 NVL. Designed to accelerate generative AI, LLMs, deep learning, and data-intensive HPC workloads, this high-performance 4U platform combines industry-leading GPU acceleration with scalable architecture to deliver faster training, lower inference latency, and exceptional operational efficiency for modern AI environments.

EFFICIENCY MEETS POWER

- **Advanced AMD EPYC Processors**
  Up to 192 cores with dual AMD EPYC 9005 Series processors, delivering balanced performance and power efficiency for any workload.

- **Exceptional GPU Capacity**
  Powered by NVIDIA H200 NVL, Polystack's IronPeak Server is designed to provide 141 GB HBM3e memory per GPU, 4.8 TB/s memory bandwidth, PCIe Gen5 connectivity, and support for up to four-way NVLink, making it ideal for inference, fine-tuning, RAG, and scientific computing.

BUILT TO EMPOWER MODERN ENTERPRISES

- **Flexible Storage and Expansion**
  - Support for a range of storage options, including SATA and NVMe drives, to meet the demands of complex data operations.
  - Expandability with PCIe Gen5 slots ensures readiness for future technology upgrades.

- **Robust Design for Enterprise Applications**
  - Redundant hot-swappable power supplies ensures reliable operations and minimize downtime.
  - Optimized airflow and thermal management for sustainable high performance.

Scalable Workload Support !

Ideal for :

- Enterprise AI
- Sovereign AI
- LLM Inference
- HPC
- Generative AI

RoHS

MAKE IN INDIA

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TECHNICAL SPECIFICATION

FEATURES	PARAMETER	DESCRIPTION
Processor	Supported CPU Series	Supports dual Socket SP5 processors compatible with AMD EPYC™ 9005/9004 Series
	Processor Configuration	Dual processor architecture
	Thermal Design Power (TDP)	Up to 500W per processor
Platform	System Architecture	High-performance System-on-Chip (SoC) platform
Memory	DIMM Slots	24 × DDR5 ECC RDIMM/RDIMM-3DS slots (12 DIMMs per processor)
	Memory Capacity	Supports up to 128GB per DIMM
	Memory Speed	Up to 6400 MT/s
Storage	Front Drive Bays	20 × 2.5" Hot-Swap SATA/SAS drive bays
	NVMe Storage	4 × Hot-Swap U.2 NVMe PCIe SSD bays
	Internal Storage	2 × M.2 PCIe/SATA SSD slots
	RAID Support	Dual Hardware RAID Controllers with 8GB Cache supporting RAID 0, 1, 5, 6, 10, 50 & 60 with CacheVault protection
Expansion	PCIe Expansion	8 × PCIe Gen5 x16 FHFL expansion slots
	Additional Expansion	1 × PCIe Gen5 x8 FHHL slot
	OCP Expansion	1 × OCP NIC 3.0 (PCIe Gen5 x8)
I/O Interfaces	Front I/O	4 × USB 3.2 Gen1 Type-A, 1 × VGA
	Rear I/O	2 × USB 3.2 Gen1 Type-A, 2 × RJ45 LAN, 1 × Dedicated Management LAN, 1 × VGA, UID Button
Video	BMC	Integrated in ASPEED® AST2600
Networking	High-Speed Fabric	2 × 400Gb/s NDR VPI ConnectX-7 Single-Port adapters
	High-Speed Ethernet	2 × 200Gb/s Dual-Port Ethernet adapters (QSFP112)
	LAN Connectivity	2 × 10GbE RJ45 Ethernet ports
	Management Network	Dedicated 10/100/1000 Management Ethernet port
GPU Support	Installed Configuration	4 × NVIDIA H200 NVL GPU accelerators
	Platform Capability	Supports up to 8 dual-slot GPU accelerators (up to 600W each)
Power Supply	Power Configuration	3+1 Redundant CRPS
	Input Voltage	200–240VAC
	Maximum Output	Up to 8100W
	Power Efficiency	80 PLUS Titanium Certified
Cooling System	System Cooling	10 × Hot-swappable PWM cooling fans (5 middle + 5 rear, 80 × 80 mm)
	Airflow Design	Optimized front-to-rear airflow for high-density GPU workloads

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FEATURES	PARAMETER	DESCRIPTION
Platform Management	Secure Remote Management	Remote Power Control, Remote Power Cycling, Secure remote management over LAN/WAN through dedicated Gigabit Management Port with SSL encryption
	Monitoring	Real-time monitoring of processors, memory, fans, temperatures, voltages and power consumption
	Management Protocols	HTML5 Web Interface, KVM Remote Access,IPMI 2.0 and Redfish API
	Lifecycle Management	Remote firmware updates, diagnostics, Server health monitoring and Server event logging
	Virtual Media Licensing	Virtual Media support with all required licenses
Security	Platform Security	Secure Boot (Firmware and BIOS Level Security), Hardware Root of Trust / Dual Root of Trust, Policy-Based Security
	Firmware Protection	Cryptographically Signed Firmware Updates with Secure Firmware Validation
	System Recovery	Automatic BIOS Recovery and Firmware Rollback Protection following a predefined security breach
	Network Security	Secure Network Adapter Firmware Boot
Operating Environment	Operating Temperature	10°C to 35°C
	Storage Temperature	-40°C to 70°C
	Operating Humidity	20% to 90% RH (Non-condensing)
Operating System & Hyperv	Operating System Support	Ubuntu Server LTS
	Enterprise Linux	Red Hat Enterprise Linux (RHEL)
	Hypervisor Support	VMware ESXi, Proxmox
Physical Characteristics	Chassis Form Factor	4U Rack Mount Chassis with Rail Kit Included
	Dimensions (D × W × H)	867 mm × 438 mm × 176.5 mm

KEY DIFFERENTIATORS

- **Scalability Redefined:** Adapt to increasing workloads with ease.
- **Efficient Performance:** DDR5 memory and AMD EPYC processors for optimal energy usage.
- **Future-Ready Design:** PCIe Gen5 compatibility for next-gen upgrades.
- **Versatility at Its Core:** Ideal for a wide range of enterprise applications, from virtualization to database management.

The **IP-AR-845-AN** is the ideal solution for businesses that demand flexible, scalable, and powerful infrastructure to meet today's and tomorrow's challenges.

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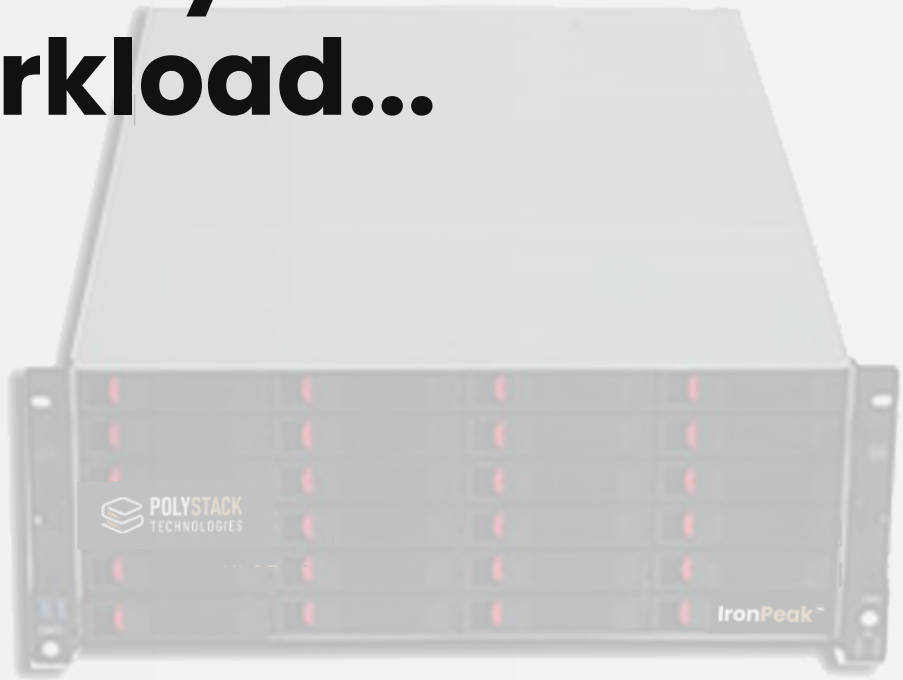
Adaptability Meets **Performance in Every Workload...**



APPLICATIONS

- Artficial Intelligence
- High Performance Computing
- Data Centers
- Cloud Computing

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