

Vertiv™ SmartIT for NVIDIA GB300 NVL72

Pre-engineered rack infrastructure for AI workload aligned with NVIDIA MGX™ architecture



Key features

- Pre-engineered and pre-validated for NVIDIA MGX™ architecture
- Up to 142 kW per rack, with approximately 85% liquid and 15% air cooling
- 19-inch EIA, 48RU standard format for existing and new-build data centers
- DC power train with up to eight Vertiv™ PowerDirect shelves, rated at 33 kW and 50 VDC each, and a 1,400 A, 50 VDC busbar
- Supports direct-to-chip liquid cooling when paired with a compatible Vertiv™ CoolChip CDU
- Configurable rack types: Vertiv™ SmartRun, Network and IT Support

Deployment environments and use cases

Environments

- Enterprise data centers using 19-inch EIA rack formats
- AI factories with single-rack or multi-rack configurations
- High-density colocation and cloud-extension environments

Use cases

- AI training, high-density inference and generative AI
- High-performance computing, machine learning, and AI networking and storage
- Large language model training and simulation workloads

Overview

Vertiv™ SmartIT for NVIDIA GB300 NVL72 is a pre-engineered, single-rack infrastructure solution based on the NVIDIA MGX™ 1.1 19-inch EIA architecture. It integrates rack-level power, liquid and air cooling, and monitoring and is pre-validated for NVIDIA DGX GB300 NVL72 systems with NVIDIA Grace CPUs and 72 Blackwell GPUs per rack.

One vendor, one order, and one pre-validated system help simplify deployment planning and coordination. The common infrastructure approach supports deployment from a single rack to multi-rack AI environments.

Technical specifications

Parameter	Specification
Rack platform	NVIDIA MGX™ [BK11]11, 19-inch EIA
Rack dimensions	600 mm (W) × 2,286 mm (H) × 1,200 mm (D)
Rack units	48RU
Load capacity	3,000 lb dynamic / 3,500 lb static
Maximum IT load	Up to 142 kW
DC busbar	1,400 A / 50 VDC
DC power shelves	33 kW per shelf, 1RU; up to eight per Smart Run rack
Power whips	1 × 63 A IEC 60309 per shelf
Cooling split	Approximately 85% liquid / 15% air
In-rack manifold	44RU, blind-mate; UQD804 quick connector; 2 × 1-inch FD83 supply / 2 × 1-inch FD83 return; top or bottom feed
Compatible CDU options	Vertiv™ CoolChip CDU 121, 121 kW in-rack; CDU1350 or CDU2300 external; ordered separately
Platform validation	NVIDIA Blackwell GB300 NVL72
Warranty	1-year limited warranty

Components by rack type

Component	Function	Compute	Network	IT support
Vertiv™ Open Rack for NVIDIA MGX	NVIDIA MGX™-compliant enclosure	1	1	1
Vertiv™ PowerDirect	DC power conversion	8	2	—
DC busbar	In-rack DC distribution	1	1	—
Vertiv™ rPDU	AC power distribution	—	—	2
In-rack manifold	Coolant distribution	1 pair	—	—
Vertiv™ CoolChip CDU 121	Direct-to-chip liquid cooling	Ordered separately	—	—
Vertiv™ Avocent® ACS	Monitoring and control management	Optional	Optional	Optional
Leak detection sensor	Water-leak monitoring	Optional	Optional	Optional

SKU configurations

IRM692-36B-VQ000-N00

Vertiv™ SmartIT for NVIDIA GB300 NVL72, Integrated rack. Up to 142 kW DC with eight power shelves and a busbar. Includes an in-rack manifold.

IRM692-366-V0000-N00

Vertiv™ SmartIT for NVIDIA GB300 NVL72, Network rack. Includes DC power shelves; Cooling components are not included in this configuration.

SKU availability is pending in the CPQ configurator. Contact your Vertiv representative for current ordering information.

Vertiv lifecycle services

Vertiv provides deployment, commissioning, and maintenance services for Vertiv™ SmartIT solutions. Trained specialists use standardized processes to support the infrastructure throughout its lifecycle.

- Installation and commissioning
- Preventive maintenance
- Remote monitoring
- Spare parts management
- On-site technical support



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