



AI Server for NVIDIA HGX B300, Liquid Cooled

(Supermicro SYS-422GS-NB3RT-LCC)

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An NVIDIA HGX B300 8-GPU system in 4U with direct liquid cooling, sold and supported by Cisco and managed through Cisco management platforms for AI training and high-density inference.

Product overview

This server brings NVLink-connected training and high-density inference capacity to the Cisco AI compute portfolio. The underlying hardware is the Supermicro SuperServer SYS-422GS-NB3RT-LCC, a 4U liquid-cooled NVIDIA HGX B300 8-GPU system. Cisco handles the selling motion, support through Cisco CX Services. Supermicro handles liquid cooling maintenance and support services. Lifecycle management through Cisco Intersight or Hyperfabric. Supermicro builds the hardware. Customers get Supermicro's liquid-cooled GPU engineering and Cisco's support and operations model in one orderable product.



Figure 1. AI Server for NVIDIA HGX B300, Liquid Cooled (Supermicro SYS-422GS-NB3RT-LCC)



Figure 2. Liquid cooled Cluster of AI Servers for NVIDIA HGX B300 (Supermicro SYS-422GS-NB3RT-LCC)

The system pairs two Intel Xeon processors with an NVIDIA HGX B300 8-GPU baseboard connected over fifth-generation NVLink at 1.8 TB/s per GPU, with 2.3 TB of HBM3e memory across the baseboard. Direct-to-chip liquid cooling moves GPU and CPU heat into facility water and fits the 8-GPU system into 4U instead of the 8U an air-cooled equivalent needs. Target workloads include large-model training, fine-tuning, and high-throughput inference where eight NVLink-connected GPUs per node are required.



Features and benefits

Table 1 summarizes the primary features and benefits of the platform

Table 1. Features and benefits

Feature	Benefit
NVIDIA HGX B300 8-GPU baseboard with NVLink 5 at 1.8 TB/s	Eight GPUs work as one coherent pool for training and long-context inference
2.3 TB HBM3e GPU memory per system	Large models and KV caches stay resident on fewer nodes
Direct-to-chip liquid cooling	GPU and CPU heat leaves through facility water; lower fan power, noise, and cooling energy
4U form factor	Twice the GPU density per rack compared with 8U air-cooled HGX B300 systems
Dual Intel Xeon 6768P processors	Keeps data pipelines fed, with up to 4 TB of DDR5-6400 in the Cisco configuration
8x NVIDIA ConnectX-8 SuperNICs at 800 Gb/s	One NIC per GPU for non-blocking east-west scale-out
NVIDIA BlueField-3 B3240 DPU	Offloads north-south networking and storage from the host CPUs
Cisco Intersight management (future)	One operations model across the Cisco compute estate
Supermicro Services with liquid cooling maintenance	Dedicated support contracts covering the server and the liquid loop



Prominent feature

Eight Blackwell Ultra GPUs, one NVLink domain, four rack units.

Air-cooled HGX B300 servers need 8U and move heat with fans. This system puts the same eight-GPU NVLink domain in 4U by running direct-to-chip cold plates across the GPUs and CPUs. Most system heat leaves through the liquid loop rather than the data center air handlers, which doubles GPU density per rack and reduces cooling energy and noise at the same time.

Scale-out is sized to match: Eight NVIDIA ConnectX-8 SuperNICs give each GPU its own 800 Gb/s east-west port, and an NVIDIA BlueField-3 B3240 DPU carries north-south and storage traffic. In the Cisco offer the platform is deployed with 415 V rack PDUs and an in-rack or in-row coolant distribution unit, so the liquid infrastructure is part of the order, not a separate project.

Platform support

Cisco offers this Supermicro platform in a defined configuration, listed in Table 2.

Table 2. Cisco selected configuration, SYS-422GS-NB3RT-LCC (HGX B300 liquid cooled)

Item	Selected configuration
PID	SYS422GSNB3RTLCC1 SYS422GSNB3RTLCC2
Platform	HGX 4U rackmount liquid-cooled platform
Dimmensions	17.6 in W x 6.85 in H x 39.03 in D
GPU	1x NVIDIA HGX B300 8-GPU baseboard
CPU	2x Intel Xeon 6768P
Memory	16x or 32x 128 GB DDR5-6400 RDIMM (2 TB or 4 TB total)
M.2 boot drives	2x1.9TB NVMe PCIe4x4 M.2 22x110mm (1DWPD)
NVMe storage	Qty 8 3.84TB E1.S drives
East-west NICs	8x NVIDIA ConnectX-8 SuperNICs
North-south NICs	1x NVIDIA BlueField-3 B3240 DPU
Software management	Cisco Nexus One or Cisco Intersight
Rack PDU	415 V
CDU	In-rack or in-row/sidecar



Item	Selected configuration
Support	Cisco CX Services plus Supermicro liquid cooling maintenance
Availability	October 2026

Licensing

This is a hardware product; no platform license is required. Cisco Intersight management requires an Intersight license, listed in Table 3.

Table 3. Licensing

License	Description
Cisco Intersight	License tier appropriate to the deployment, see Cisco sales specialist

Product sustainability

Information about Cisco’s Environmental, Social and Governance (ESG) initiatives and performance is provided in Cisco’s CSR and sustainability [reporting](#).

Table 4. Cisco Environmental Sustainability Information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Information on product takeback and resuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com



Product specifications

Table 5 reflects the Supermicro data sheet for the SYS-422GS-NB3RT-LCC. Product specifications may change without notice.

Table 5. Specifications, Supermicro SuperServer SYS-422GS-NB3RT-LCC

Category	Specification
Form factor	4U rackmount, liquid cooled; enclosure 448 x 174 x 896.8 mm (17.6 in W x 6.85 in H)
GPU	NVIDIA HGX B300 8-GPU baseboard; 8x SXM modules, 2.3 TB total HBM3e
GPU interconnect	NVIDIA NVLink 5 with NVSwitch, 1.8 TB/s GPU-to-GPU
Processor	Dual socket Intel Xeon 6700-series with P-cores, up to 86 cores/172 threads per CPU, up to 350 W, up to 336 MB cache
System memory	32 DIMM slots; up to 8 TB DDR5-5200 (2DPC) or 4 TB DDR5-6400 (1DPC)
Drive bays	8 front hot-swap E1.S NVMe bays; 2x M.2 NVMe with hardware RAID (Broadcom 3808N)
Expansion slots	2x PCIe 5.0 x16 FHHL double-width; 2x PCIe 5.0 x16 LP
Networking	8x 800 Gb/s OSFP ports (NVIDIA ConnectX-8 SuperNICs); 2x RJ45 10GbE (Intel X710)
Cooling	Direct-to-chip (D2C) cold plates plus 4x 80 mm heavy duty fans
Power	4x 6600 W redundant (2+2) Titanium Level
BIOS	AMI 64 MB UEFI
System management	Cisco Intersight (Cisco offer)
Operating environment	10 to 35 C operating
Weight	Net 84.6 kg (186.5 lb); gross 100.7 kg (222 lb)
Motherboard/chassis	Super X14DBG-LC/CSE-GP405LTS-R000NP



System requirements

Table 6 lists what must be in place before installation.

Table 6. System requirements

Requirement	Description
Rack integration	Standard 19-inch rack, 4U, 896.8 mm chassis depth; verify rail and manifold clearance
Facility cooling	Coolant distribution unit, in-rack or in-row/sidecar; facility water loop for the direct-to-chip cold plates
Power	4x 6600 W inputs; 415 V rack PDU
Operating temperature	10 to 35 C (50 to 95 F)
Management	Cisco Intersight account and claimed device connectivity

Ordering information

The base platform is a Supermicro SKU offered through Cisco. Cisco ordering PIDs for the configured system are in progress. To order, contact your Cisco account representative or visit the [Cisco Ordering Home Page](#).

Table 7. Ordering information

Part number	Product description
SRS-48UDLC-B300-M0	Supermicro 48U DLC Rack, HGX B300 NVL8 422GS, no In-Rack CDU
SRS-48UDLC-B300-M1	Supermicro 48U DLC Rack, HGX B300 NVL8 422GS, with In-Rack CDU
LCS-SCDU-1K3LR001	1.8MW In-Row CDU, L2L, N+1 Pumps
LCM-SMLCPM3-3Y	Liquid Cooling Maintenance Service, SMLCPM3, 3-Year
LCS-SCDU-200AR001	200kW L2A Sidecar CDU, N+1 Pumps
SVC-NVSTDSUP-3Y	NVIDIA Enterprise Support Entitlement, 3Yr

Warranty information

Warranty terms for this Cisco-offered Supermicro platform are standard Supermicro warranty terms. Support is delivered through Cisco CX Services under the applicable service contract, contact your Cisco sales specialist for more details.

Cisco and Partner Services

Cisco CX Services covers this platform from planning through deployment and ongoing operations, including liquid cooling maintenance, with a single Cisco support contract even though the hardware is Supermicro-built. For more information, visit <https://www.cisco.com/go/services>.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

Learn more

For more on Cisco AI infrastructure, visit <https://www.cisco.com/go/ai>. Full platform specifications are available on the Supermicro product page for the SYS-422GS-NB3RT-LCC.

Learn more about Cisco and Supermicro partnership:

<https://www.cisco.com/site/us/en/solutions/global-partners/supermicro/index.html>.