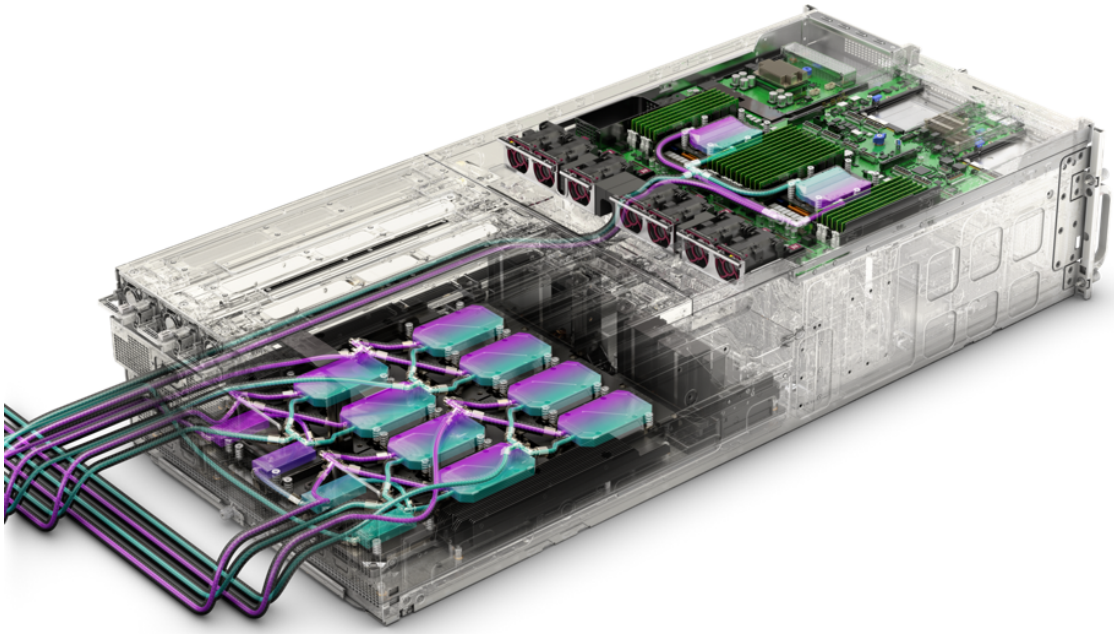
HPE ProLiant Compute XD685



What's new

- Support for eight NVIDIA® Blackwell Ultra (B300 HGX) GPUs, eight NVIDIA Blackwell (B200) GPUs, eight NVIDIA H200 Tensor Core GPUs, or eight AMD Instinct™ MI355X accelerators.
- Direct liquid cooling (DLC) available for all GPU options. Air-cooling available for NVIDIA H200 GPUs.
- Modular 5U chassis for direct liquid cooling environments or 6U chassis for air cooled configurations.
- 24x DDR5 6400 RDIMMs and 12 channels per CPU DDR5 with ECC
- Seamless management and built-in security features from HPE iLO 6
- 2x 5th Generation AMD EPYC™

Overview

Do you need a highly performant, secure, and energy-efficient large AI cluster?

The HPE ProLiant Compute XD685 leverages a purpose-built architecture and is designed to accelerate large, complex AI model training and tuning workloads. Powered by eight of the latest accelerators from NVIDIA® or AMD, this server is optimized for large language model training, natural language processing, and multimodal training. Optional direct liquid cooling (DLC) helps organizations meet escalating power requirements, advance sustainability goals, and lower operational costs. Managed by HPE iLO, the server offers seamless management and robust security.

HPE Services provides expertise for global installation and quick deployment of large AI clusters, offering stability and operational excellence.

Features

Speed and Flexibility to Increase your Competitive Advantage

The HPE ProLiant Compute XD685 provides a choice of eight NVIDIA® Blackwell Ultra (B300 HGX) GPUs, NVIDIA Blackwell (B200) GPUs, NVIDIA H200 Tensor Core GPUs, or AMD Instinct™ MI355X accelerators, delivering leading AI performance for training and tuning tasks.

A 5U direct liquid cooling (DLC) chassis helps you optimize pod deployment by leveraging a compact 8-node-per-rack arrangement.

HPE Performance Cluster Manager expedites initial cluster setup and software deployment and provides continued resilience and reliability.

HPE Factory Express services build, integrate, validate, fully test, and customize your solution in the factory, facilitating quicker on-site deployment.

You get flexibility and agility with a customized IT environment that lets you run the right workload at the right place, at the right time. Whether you want a solution on-premises or deploy a hybrid model, we offer flexible consumption and deployment models to suit your requirements and goals.

Sustainable and Safe AI Clusters to Increase Efficiencies and Protect Against Threats

The HPE ProLiant Compute XD685 offers a DLC option that helps you meet escalating power requirements and advance sustainability goals, leveraging HPE's decades of expertise and market leadership in deploying the world's largest liquid-cooled IT environments.

HPE iLO offers seamless server management with built-in security innovation to protect against escalating security threats.

Silicon root of trust from HPE, our fundamental approach to security, provides a Zero Trust architecture at the silicon level and helps enable completely server-essential firmware that is free from malware or compromised code.

HPE Financial Services allows you to turn aging infrastructure into capital in a secure, globally consistent, and environmentally responsible way, without disrupting your AI production.

Proven Expertise Worldwide to Support your Global Footprint and Growth Ambitions

The HPE ProLiant Compute XD685 is backed by a comprehensive portfolio of HPE Services to build, test, and deploy your solution with ongoing support, entirely available as stand-alone or consumption-based services to accelerate the deployment of your environment.

The robust and secure global supply chain from HPE and our proven ability to deploy massive custom AI clusters anywhere in the world with superior serviceability enable you to establish your presence globally with confidence.

Advisory and Professional Services, offering best-in-class methodologies and tools to enhance performance and increase return on investment (ROI), help you navigate the challenges of a large AI environment.

HPE Tech Care Service combines deep technical expertise with a leading-edge digital experience to provide personalized, prompt, and reliable product support so you can get the most out of your global IT investments.

Technical specifications	HPE ProLiant Compute XD685
Processor type	AMD
Processor family	5th Generation AMD EPYC™ Processors
Processor number	2 processors
Processor core available	32-160 cores, depending on the processor
Processor speed	Up to 5.0 GHz, depending on the processor
Processor cache	128-512 MB, depending on the processor
Memory type	HPE DDR5 Standard Memory
Maximum memory	6.1 TB with 256 GB DDR5
Memory slots	24 DIMM Slots
Accelerators	NVIDIA® Blackwell Ultra (B300 HGX), NVIDIA Blackwell (B200), NVIDIA H200, AMD Instinct™ MI355X
System fan features	Air and DLC
Expansion slots	8x HHHL PCIe Gen5 x16, 3 x FHHL PCIe Gen5 x16
Form factor	5U Rack DLC Chassis, 6U Rack Air Chassis
Network controller	1 HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller
Storage controller	1 HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller
Drive supported	8 E3.S hot-swappable NVMe, additional drives available when storage controller is installed
Optical drive type	N/A
Power supply type	6x 3000W @54V Titanium Plus (N+1), 200-277 VAC input
Infrastructure management	Server: HPE iLO6, BMC, Redfish APIs, 1GbE LAN (for BMC only) Cluster: HPE Performance Cluster Manager
Security	HPE iLO 6

Technical specifications	HPE ProLiant Compute XD685
Warranty	This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners and resellers. Hardware diagnostic support and repair are available for three years from the date of purchase. Support for software and initial setup are available for 90 days from the date of purchase. Enhancements to warranty services are available through HPE Services operational services or customized service agreements. Hard drives have either a one-year or three-year warranty; refer to the specific hard drive QuickSpecs for details. Note: Server warranty includes three-year parts, three-year labor, and three-year on-site support with next-business-day response.

HPE Services

No matter where you are in your transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From strategy and planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

Advisory & Professional services

Experts can help you map out your path to hybrid cloud and optimize your operations.

Managed services

HPE runs your IT operations, giving you unified control, so can focus on innovation.

Support services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources.

— **HPE Complete Care Service:** a modular service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals. All delivered by an assigned team of HPE experts.

— **HPE Tech Care Service:** the operational service experience for HPE products. The service provides access to product specific experts, an AI driven digital experience, and general technical guidance to help reduce risk and search for ways to do things better.

— **HPE Multivendor Services:** Single point of accountability for managing on-site hardware and software support for multivendor products. HPE experts help manage your IT across technologies and platforms for HPE and non-HPE technologies, acting as the single point of contact for your IT operational needs.

Lifecycle Services

Address your specific IT deployment project needs with tailored project management and deployment services.

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options

Defective Media Retention is optional and allows you to retain Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

GreenLake

GreenLake is the cloud to run and manage your entire hybrid landscape—private, public, and edge. It helps you to:

— Streamline IT Operations across compute, storage, and networking without the chaos

— Unify and secure data, as you move faster

— Accelerate AI, from pilot to production

The result: greater operational efficiency, lower TCO, and faster AI delivery—all from one unified, intelligent platform built for today's hybrid enterprise.

For additional technical information, available models and options, please reference the QuickSpecs

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Parts and Materials: HPE will provide HPE-supported replacement parts and materials required to maintain the covered hardware.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

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