Data sheet

HPE Synergy 480 Gen12 Compute Module

What's new

- Intel Xeon 6 processors that support up to 86 cores, up to 16 DIMMs or 4TB of DDR5 memory per processor at speeds up to 6400 MHz, and up to 15% faster than previous generations
- Supports high-availability RAID M.2 boot options configured with two NVMe M.2 drives built in that can reside with additional front storage options
- Multiple front storage drive options, including the 4 SFF and 8 EDSFF NVMe E3.S direct connect and OCP controller connected drive cages, and drive-less cage option
- Support for PCIe Gen5, resulting in improved bandwidth, advanced data transfer rates, and higher network

Overview

Are your data centers struggling to consolidate large workloads without compromising performance?
The HPE Synergy 480 Gen12 Compute Module with Intel® Xeon® 6 processors delivers exceptional performance, efficiency, and flexibility in a two-socket, half-height form factor to power demanding workloads. The compute module delivers more of everything with up to 86 cores, faster DDR5 memory, flexible storage controller options, and multiple I/O connectors. Designed to create a pool of flexible compute capacity within a composable infrastructure, the HPE Synergy 480 Gen12 Compute Module is an ideal platform for enterprise workloads now and in the future.

speeds from the PCIe Gen5 serial expansion bus

– HPE iLO 7 server management software with streamlined manageability through a redesigned GUI, Redfish API, and increased security via the patented secure enclave technology.

Features

Next-Level Security

From silicon to software and from factory to cloud, the HPE Synergy 480 Gen12 Compute Module is engineered with a fundamental security approach to defend against increasingly complex threats through an uncompromising commitment to constant security advancements built into our DNA.

With the silicon root of trust from HPE, the HPE Synergy 480 Gen12 Compute Module continuously detects if it is compromised and is prevented from booting if malicious code is found. Additionally, this server is safeguarded with default IDevID certificates.

HPE Synergy 480 Gen12 Compute Module provides automated recovery from a security event, including restoration of validated firmware, and facilitating recovery of operating system, application and data connections, providing the fastest path to bring a server back online and into normal operations.

The HPE Synergy 480 Gen12 Compute Module, powered by Intel Xeon 6 processors, adds hardware- and software-assisted security features, including Intel® Software Guard Extensions (SGX) for application isolation and Trusted Domain Extensions (TDX) for virtual machine (VM) isolation.

HPE iLO 7 supports quantum-resistant (PQC) algorithms and signs HPE Synergy 480 Gen12 Compute Module firmware with algorithms approved by CNSA 2.0, which enhances resilience against potential future attacks by quantum computers.

Optimized Performance for Your Workloads

The HPE Synergy 480 Gen12 Compute Module provides a performance increase over previous generations with support for Intel Xeon 6 processors.

It increases memory speeds with a wide range of memory sizes for registered HPE DDR5 Smart Memory DIMMs.

PCIe 5.0 for improved compute-to-network connectivity speed gets your data where it's needed faster.

It provides system tuning for select cores, smooth performance, and to match customer workloads.

HPE iLO 7 provides real-time operational feedback on server performance plus recommendations for fine-tuning BIOS settings to customize for changing business needs.

Intuitive Cloud Operating Experience

The HPE Synergy 480 Gen12 Compute Module simplifies the way you control compute from edge to cloud with a cloud operating experience. Transform business operations and pivot your team from reactive to proactive with global visibility and insight through a unified console.

Composable compute resource is intelligently auto-discovered, easily provisioned, and seamlessly managed. HPE Synergy composability simplifies IT operations and reduces overprovisioning costs.

The module is a software-defined infrastructure with integrated HPE OneView for simplifying operations and management. RESTful API with an ecosystem of composable infrastructure provides broad options for third-party integration, protecting key existing investments.

The HPE Synergy 480 Gen12 Compute module provides flexible enterprise solutions that allow IT to quickly and confidently implement changes through intelligent template-based operations, reducing downtime and errors from manual operations.

Technical specifications	HPE Synergy 480 Gen12 Compute Module
Processor type	Intel
Processor family	Intel® Xeon® 6
Maximum memory	Support for up to 8 TB of DDR5 memory (processor dependent)
Memory slots	32 DIMM slots (16 per processor)
Memory protection features	Advanced ECC Memory Mirroring Mode
Compute nodes	Half-Height 2 socket compute node
Processor core available	Up to 86 core solutions available, depending on processor
Processor speed	Up to 3.5 GHz Frequency Maximum, depending on processor
Processor number	Up to 2 with Intel processor choice
Processor cache	Up to 336 MB, depending on processor
Memory type	HPE DDR5 Smart Memory 6400 MT/s
Security	HPE Trusted Platform Module 2.0 and silicon root of trust from HPE
Drive description	Multiple drive cage options to cover: 4 SFF SAS/SATA/NVMe, and 8 EDSFF NVMe E3.S Hardware RAID M.2 Boot Option w/ Dual M.2 Boot drive included, or blank no drive cage solutions.
Expansion slots	3 PCIe 5 mezzanine slots for multiple storage and networking solutions.
Infrastructure management	HPE Synergy Composer powered by HPE OneView and HPE iLO Advanced (standard) with all HPE Synergy solutions.
Power supply type	Up to 12, frame based
System fan features	Frame based
Form factor (fully configured)	Frame 12000—10U, holds up to 12 half-height HPE Synergy 480 Compute Module
Warranty	3/3/3 server warranty includes three years of parts, three years of labor, and three years of on-site support coverage. Additional information regarding worldwide limited warranty and technical support is available at www.hpe.com/services/support. Additional HPE support and service coverage for your product can be purchased locally. For information on availability of service upgrades and the cost for these service upgrades, visit www.hpe.com/services/support.
Capacity	8 TB, depending on Memory DIMM
DIMM rank	Single, Dual or Quad, depending on Memory DIMM
DIMM type	HPE DDR5 Smart Memory

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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