HPE ProLiant DL580 Gen10 server



What's new

- Supporting the second generation Intel® Xeon® Scalable processor family with up to a 7% per-core performance gain [3] over first generation and with memory speeds up to 2933 MT/s. [7]
- Intel® Optane™ persistent memory 100 series for HPE offers the flexibility to deploy as dense memory or fast storage and enables per-socket memory capacity of up to 3.0 TB. [6]

Overview

Looking for a highly scalable, workhorse server to address your database, storage, and graphics intensive applications?

The HPE ProLiant DL580 Gen10 server is a secure, highly expandable, 4P server with high-performance, scalability and availability in a 4U chassis. Supporting the Intel® Xeon® Scalable processors with up to a 45% [1] performance gain, the HPE ProLiant DL580 Gen10 server delivers greater processing power than previous generations. This provides up to 6 TB of 2933 MT/s memory with up to 82% greater memory bandwidth [2], up to 16 PCIe 3.0 slots, plus the simplicity of automated

- Support for HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply.
- Enhanced iLO 5 security features such as Server Configuration Lock, iLO Security Dashboard and Workload Performance Advisor.
- HPE InfoSight provides a cloud-based analytics tool that predicts and prevents problems before your business is impacted.
- Segment-optimized processors that offer flexibility and improved performance for specific workloads.

management with HPE OneView and HPE Integrated Lights Out 5 (iLO 5). Intel® Optane™ persistent memory 100 series for HPE offers unprecedented levels of performance and better business outcomes for data-intensive workloads. The HPE ProLiant DL580 Gen10 server is the ideal server for business-critical workloads and general 4P data-intensive applications where the right performance is paramount.

Features

Scalable Performance In An Expandable 4U Form Factor

The HPE ProLiant DL580 Gen10 server provides 4P computing in an expandable 4U form factor and supports up to four Intel Xeon Platinum and Gold processors which provide up to 11% per-core performance gain [5] over the first generation of Intel® Xeon® Scalable processors.

Up to 48 DIMM slots which support up to 6 TB for 2933 MT/s HPE DDR4 SmartMemory. HPE DDR4 SmartMemory improves workload performance and power efficiency while reducing data loss and downtime with enhanced error handling.

Up to 12 TB of HPE Persistent Memory [6] that works with DRAM to provide fast, high capacity, cost effective memory and enhances compute capability for memory intensive workloads such as structured data management and analytics.

Support for processors with Intel® Speed Select technology that offer configuration flexibility and granular control over CPU performance and VM density optimized processors that enable support of more virtual machines per host.

HPE enhances performance by taking server tuning to the next level. Workload Performance Advisor adds real-time tuning recommendations driven by server resource usage analytics and builds upon existing tuning features such as Workload Matching and Jitter Smoothing.

Remarkable Expandability and Availability For Multiple Workloads

HPE ProLiant DL580 Gen10 server has a flexible processor tray allowing it to scale up from one to four processors as needed, saving on upfront costs and the flexible drive cage design supports up to 48 Small Form Factor (SFF) SAS/SATA drives and a maximum of 20 NVMe drives.

Supports up to 16 PCIe 3.0 expansion slots including up to four full length/full height graphics processing units (GPUs), as well as networking cards or storage controllers offering increased expandability.

Up to four, 96% efficient HPE 800W or 1600W [4] Flex Slot Power Supplies which enable higher power redundancy with 2+2 configurations and flexible voltage ranges.

Choice of HPE FlexibleLOM Adapters offers a range of networking speeds (1GbE to 25GbE) and fabrics so you can adapt and grow to changing business needs.

Secure and Reliable

HPE iLO 5 enables the world's most secure industry standard servers with HPE Silicon Root of Trust technology to protect your servers from attacks, detect potential intrusion and recover your essential server firmware securely.

New features include Server Configuration Lock that ensures secure transit and locks server hardware configuration, iLO Security Dashboard helps detect and address possible security vulnerabilities and Workload Performance Advisor provides server tuning recommendations for better server performance.

With Runtime Firmware Verification the server firmware is checked every 24 hours verifying validity and credibility of essential system firmware. Secure Recovery allows server firmware to roll back to the last known good state or factory settings after detection of compromised code.

Additional security options are available with, Trusted Platform Module (TPM), to prevent unauthorized access to the server and safely stores artifacts used to authenticate the server platforms while the Intrusion Detection Kit logs and alerts when the server hood is removed.

Agile Infrastructure Management for Accelerating IT Service Delivery

HPE ProLiant DL580 Gen10 server combined with the HPE OneView software provides infrastructure management for automation simplicity across servers, storage and networking.

HPE InfoSight brings artificial intelligence to HPE Servers with predictive analytics, global learning and recommendation engine to eliminate performance bottlenecks.

A suite of embedded and downloadable tools is available for server lifecycle management including Unified Extensible Firmware Interface (UEFI), Intelligent Provisioning; HPE iLO 5 to monitor and manage; HPE iLO Amplifier Pack, Smart Update Manager (SUM), and Service Pack for ProLiant (SPP).

Services from HPE Pointnext Services simplify all stages of the IT journey. Advisory and Transformation Services professionals understand customer challenges and design an better solution. Professional Services enable rapid deployment of solutions and Operational Services provide ongoing support.

HPE IT investment solutions help you transform to a digital business with IT economics that align to your business goals.

Technical specifications — HPE ProLiant DL580 Gen10 server

Processor name	Intel® Xeon® Scalable processors
Processor family	Intel® Xeon® Scalable 8200 series Intel® Xeon® Scalable 6200 series Intel® Xeon® Scalable 5200 series Intel® Xeon® Scalable 8100 series Intel® Xeon® Scalable 6100 series Intel® Xeon® Scalable 5100 series
Processor core available	28 or 26 or 24 or 22 or 20 or 18 or 16 or 14 or 12 or 10 or 8 or 6 or 4, per processor, depending on model
Processor cache	13.75 MB L3 or 16.50 MB L3 or 19.25 MB L3 or 22.00 MB L3 or 24.75 MB L3 or 27.50 MB L3 or 30.25 MB L3 or 33.00 MB L3 or 35.75 MB L3 or 38.50 MB L3, per processor, depending on model
Processor speed	3.6 GHz, maximum depending on processor
Expansion slots	16 maximum, for detailed descriptions reference the QuickSpecs
Maximum memory	6.0 TB with 128 GB DDR4, depending on processor model 12.0 TB with 512 GB Persistent Memory, depending on processor model
Memory, standard	6.0 TB (48 X 128 GB) LRDIMM; 12.0 TB (24 X 512 GB) Intel® Optane™ persistent memory 100 series for HPE
Memory slots	48 DIMM slots maximum
Memory type	HPE DDR4 SmartMemory and Intel® Optane™ persistent memory 100 series for HPE
Included hard drives	None ship standard
System fan features	12 (11+1) Hot plug redundant standard
Network controller	Optional FlexibleLOM
Storage controller	HPE Smart Array S100i or HPE Smart Array Controllers, depending on model
Product dimensions (imperial)	6.88 x 17.54 x 29.60 in
Weight	114 lb
Infrastructure management	HPE iLO Standard with Intelligent Provisioning (embedded) and HPE OneView Standard (requires download) are included Optional: HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (optional require licenses)
Warranty	3/3/3 - Server Warranty includes three years of parts, three years of labor, three years of onsite support coverage. Additional information regarding worldwide limited warranty and technical support is available at: http://h20564.www2.hpe.com/hpsc/wc/public/home. 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, refer to the HPE website at http://www.hpe.com/support
Drive supported	48 maximum

[1] HPE measurements: Up to 45% performance increase of Intel Xeon Platinum vs. previous generation E7-4800 v4 average gains of STREAM, Linpack, SPEC2006 & SPEC CPU2017 metrics on HPE servers comparing 4-socket Intel Xeon Platinum 8280 to E5-8994 v4 family processors. Any difference in system hardware or software design or configuration may affect actual performance. April 2019.

[2] Percentage compare Gen10 vs Gen9: Gen10 = 12 Channels x 2933 data rate x 8 bytes = 281 GB/sec. Gen 9 = 8 channels x 2400 x 8 bytes = 154 GB/Sec. 281/154 = 1.82 or Gen10 is 82% greater bandwidth. Any difference in system hardware or software design or configuration may affect actual performance. April 2019.

[3] Up to 17% performance increase of Intel Xeon Platinum versus previous generation comparing 4-socket Intel Xeon Platinum 8280 (28 cores) to E7-8890 v4 (24 cores). Calculation 28 cores/24 cores= 1.167 = 17%. April 2019.

[4] HPE 1600W Flex Slot Power supplies only support high line voltage (200V AC to 240V AC)

[5] HPE measurements: Up to 11% performance increase of Intel Xeon Platinum vs. previous generation average gains of STREAM, Linpack, & SPEC CPU2017 metrics on HPE servers comparing 2-socket Intel Xeon Platinum 8280 to Intel Xeon Platinum 8180 family processors. Any difference in system hardware or software design or configuration may affect actual performance. April 2019.

[6] 3.0 TB per socket with HPE 512GB 2666 Persistent Memory Kit

[7] HPE DDR4 SmartMemory LRDIMM on HPE ProLiant DL580 Gen10 server can support 2933 MT/s @ 2DPC

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

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.

Consulting 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.

Operational 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.

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.

HPE GreenLake

HPE GreenLake edge-to-cloud platform is HPE's market-leading as-a-Service offering that brings the cloud experience to apps and data everywhere – data centers, multi-clouds, and edges – with one unified operating model, on premises, fully managed in a pay per use model.

If you are looking for more services, like **IT financing solutions**, please explore them here.

Explore **HPE GreenLake**

Make the right purchase decision. Contact our presales specialists.

Chat now (sales)

Call now

Buy now

Share now

Get updates

Hewlett Packard Enterprise

© Copyright 2023 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

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.

Intel Xeon and Intel are trademarks of Intel Corporation in the U.S. and other countries. All other third-party trademark(s) is/are property of their respective owner(s).

Image may differ from the actual product
PSN1010192779USEN, June, 2023.