

# HPE PROLIANT DL360 GEN10 4210R 1P 16GB-R P408I-A NC 8SFF 500W PS SERVER (P23578-B21)

### **ProLiant DL Servers**



#### **WHAT'S NEW**

- Support for additional second generation Intel® Xeon® Scalable processors with improved price/performance.
- Networking Choice (NC) server models provide greater flexibility in the primary networking selection.
- Enhanced iLO 5 security features such as Server Configuration Lock, iLO Security

#### **OVERVIEW**

Does your data center need a secure, performance driven dense server that you can confidently deploy for virtualization, database, or high-performance computing?

The HPE ProLiant DL360 Gen10 server delivers security, agility and flexibility without compromise. It supports the Intel® Xeon® Scalable processor with up to a 60% performance gain [1] and 27% increase in cores [2], along with 2933 MT/s HPE

Dashboard and Workload Performance Advisor

- HPE InfoSight provides a cloud-based analytics tool that predicts and prevents problems before your business is impacted.
- HPE Persistent Memory offers the flexibility to deploy as dense memory or fast storage featuring Intel® Optane™ DC Persistent Memory and enables per-socket memory capacity of up to 3.0 TB. [5]

DDR4 SmartMemory supporting up to 3.0 TB [2] with an increase in performance of up to 82% [3]. With the added performance that HPE Persistent Memory [6], HPE NVDIMMs [7] and 10 NVMe bring, the HPE ProLiant DL360 Gen10 means business. Deploy, update, monitor and maintain with ease by automating essential server life cycle management tasks with HPE OneView and HPE Integrated Lights Out 5 (iLO 5). Deploy this 2P secure platform for diverse workloads in space constrained environments.

#### **FEATURES**

#### **Industry-leading Performance with Versatile Compute**

HPE ProLiant DL360 Gen10 Server supports industry-standard technology leveraging the Intel Xeon Scalable processor with up to 28 cores, 12G SAS and 3.0 TB of 2933 MT/s HPE DDR4 SmartMemory.

Supporting the second generation Intel® Xeon® Scalable processor family with up to a 11% per-core performance gain [4] over first generation and with memory speeds up to 2933 MT/s.

HPE Persistent Memory works with DRAM to provide fast, high capacity, cost effective memory and storage to transform big data workloads and analytics by enabling data to be stored, moved, and processed guickly. [6]

Achieve greater capacity with flexible drive configurations with up to 10 SFF and four LFF drives along with an option to support up to 10 NVMe PCle SSDs delivering enhanced performance, capacity, and reliability to meet various customer segments and workload requirements at the right economics.

With support for up to 12 NVDIMMs per chassis and 2X capacity of first-generation HPE NVDIMMs, HPE ProLiant DL360 Gen10 Server delivers up to 192 GB per system. [7]

#### **Innovative Design for Flexibility and Choice**

The premium 10 SFF NVMe chassis backplane provides the ability to mix and match SAS/SATA and NVMe within the same chassis along with 8 + 2 SFF and 4 LFF chassis that supports new uFF and M.2 storage options.

Embedded  $4 \times 1$ GbE (select models) or HPE FlexibleLOM and PCle standup 1GbE, 10GbE, 25GbE, or 100GbE adapters provides flexibility of networking bandwidth and fabric so you can adapt and grow to changing business needs.

Unmatched expandability is packed in a dense 1U rack design with up to three PCIe  $3.0 \; \text{slots}.$ 

#### **Security Innovations**

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 intrusions 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 rollback to the to 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 server and securely stores artifacts used to authenticate the server platforms while the Intrusion Detection Kit logs and alerts when the server hood is removed.

#### **Industry-Leading Serviceability and Deployment**

HPE ProLiant DL360 Gen10 Server comes with a complete set of services offered by HPE Pointnext, delivering confidence, reducing risk, and helping customers realize agility and stability.

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

Services provided under Operational Services include - HPE Flexible Capacity, HPE Datacenter Care, HPE Infrastructure Automation, HPE Campus Care, HPE Proactive Services and multi-vendor coverage.

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

# **Technical specifications**

## HPE ProLiant DL360 Gen10 4210R 1P 16GB-R P408i-a NC 8SFF 500W PS Server

Product Number (SKU)	P23578-B21
Processor Name	Intel® Xeon® Scalable 4210R (10 core, 2.4 GHz, 100W)
Number of processors	2, maximum depending on model
Processor core available	10 core
Processor cache	13.75 MB L3
Processor speed	2.4 GHz
Power supply type	1 HPE 500W Flex Slot Platinum hot-plug power supply
Expansion slots	2 PCIe 3.0, for detailed descriptions reference the QuickSpecs
Memory, standard	16 GB (1 X 16GB) RDIMM
Memory type	HPE DDR4 SmartMemory
Included hard drives	None ship standard, 8 SFF drives supported
Optical drive type	None included
System fan features	5 single rotor hot plug fans
Network controller	HPE Ethernet 1Gb 4-port 366FLR Adapter
Storage controller	HPE Smart Array P408i-a/2 GB and Smart Storage Battery
Minimum dimensions ( H x W x D)	4.29 x 43.46 x 70.7 cm
Weight	13.04 kg minimum, 16.27 kg maximum
Infrastructure management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download) Optional- HPE iLO Advanced, and HPE OneView Advanced (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

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

#### **HPE POINTNEXT**

<u>HPE Pointnextleverages</u> our breadth and depth of technical expertise and innovation to help to accelerate digital transformation. A comprehensive portfolio that includes—Advisory, Professional, and Operational Services is designed to help you evolve and grow today and into the future.

#### **Operational Services**

- HPE Datacenter Careoffers a tailored operational support solution built on core deliverables. It includes hardware and software support, a team of experts to help personalize deliverables and share best practices, as well as optional building blocks to address specific IT and business needs.
- HPE Proactive Careis an integrated set of hardware and software support including an enhanced call experience with start to finish case management helping resolve incidents quickly and keeping IT reliable and stable.
- HPE Foundation Carehelps when there is a hardware or software problem offering several response levels dependent on IT and business requirements.

**Advisory Services** includes design, strategy, road map, and other services to help enable the digital transformation journey, tuned to IT and business needs. Advisory Services helps customers on their journey to Hybrid IT, Big Data, and the Intelligent Edge.

**Professional Services**helps integrate the new solution with project management, installation and startup, relocation services, and more. We help mitigate risk to the business so there is no interruption when new technology is being integrated in the existing IT environment.

#### **HPE GREENLAKE**

<u>HPE Greenlake</u> is an as-a-service offering that delivers on-demand capacity and planning, combining the agility and economics of public cloud with the security and performance of on-premises IT.

- [1] HPE measurements: Up to 60% performance increase of Intel Xeon Platinum vs. previous generation E5-2600 v4 average gains of STREAM, LINPACK, SPEC CPU 2006 & SPEC CPU2017 metrics on HPE servers comparing 2-socket Intel Xeon Platinum 8280 to E5-2699 v4 family processors. Any difference in system hardware or software design or configuration may affect actual performance. April 2019.
- [2] Up to 27% core increase of Intel Xeon Platinum versus previous generation comparing 2-socket Intel Xeon Platinum 8280 (28 cores) to E5-2699 v4 (22 cores). Calculation 28 cores / 22 cores = 1.27 = 27%. April 2019.
- [3] Percentage compare Gen10 vs Gen9: Gen10 = 12 Channels  $\times$  2933 data rate  $\times$  8 bytes = 281 GB/sec. Gen 9 = 8 channels  $\times$  2400  $\times$  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.
- [4] 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.
- [5] 3.0 TB per socket with HPE 512GB 2666 Persistent Memory Kit
- [6] Supported by the 2nd generation Intel Xeon Scalable Processors

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