

HP Apollo 6000 System



Performance for your budget

Rack-scale solutions with better density, performance, power efficiency, and cost of ownership.



“We are seeing up to a 35 percent performance increase in our EDA workloads; we have deployed more than 5,000 of these servers, achieving better rack density and power efficiency, while delivering higher application performance to Intel silicon design engineers.”

— Kim Stevenson, Intel CIO

To address the growing demand for high-performance computing (HPC), and the relentless pursuit for efficiency, HP has taken the lead on a new approach: thinking beyond just the server and designing a rack-level solution that gives you the right compute at the right economics so you can get the most out of your infrastructure—and your budget.

Better performance per core, watt, and square foot

HP Apollo 6000 System gives you flexibility that leads to savings:

- Per core—The ProLiant XL220a Server tray has two 1P servers per tray with Intel® Xeon® E3-1200 v3 series processors with up to four cores, increasing performance per core up to 35 percent for single threaded applications over a 2P blade.
- The ProLiant XL230a Gen9 Server tray has one 2P server per tray with high performance Intel® Xeon® E5-2600 v3 series processors with up to 70 percent more processor performance and up to 36 percent more efficiency than the previous generation.¹
- Per watt—The HP Apollo 6000 Power Shelf supports up to six chassis, and the HP Advanced Power Manager dynamically monitors and manages power to save on energy.
- Per square foot—With 10 slots for server, storage, and/or accelerator trays per 5U chassis, you can fit up to 160 servers in one 48U rack, using 60 percent less space than competing blades.
- With flexibility—The HP Apollo 6000 System accommodates up to 20 servers in the space of five traditional servers (5U), powering up to 120 servers with a single power shelf. The HP Innovation Zone also allows for FlexibleLOM options to fit your workload needs.

¹intel.com/performance

- With savings—The HP ProLiant XL220a Server is a great fit for single-threaded workloads such as electronic design automation (EDA), while the new HP ProLiant XL230a Server is a great fit for workloads such as seismic processing or virtualized hosting. Take advantage of compute, storage, and accelerator tray options as they become available in the same modular HP Apollo a6000 Chassis.

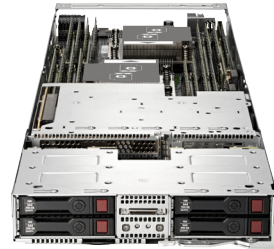
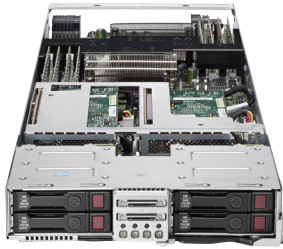
To round out your solution, HP has a global team of award-winning, [HPC services experts](#) available to help design, deploy, manage, and support your HPC environment and processes, including consulting, integration, outsourcing, and support. For example, [HP Datacenter Care](#) is ideal for HPC environments, giving large-scale IT environments the flexibility and economies of scale to manage HP and non-HP hardware and software environments effectively.

Technical specifications



	HP Apollo a6000 Chassis	HP Apollo 6000 Power Shelf
Form factor	5U (H) x 44.81 cm (W) x 86.23 cm (D) 5U (H) x 17.64 in (W) x 33.95 in (D) Supports 10 single-slot trays max	1.5U (H) x 44.81 cm (W) x 78.44 cm (D) 1.5U (H) x 17.64 in (W) x 30.88 in (D) Supports six power supplies max
System fans	Five hot-plug, double rotor, redundant fans	N/A
Power supply type	N/A	HP 2,650 W Platinum hot-plug power supply HP 2,400 W Platinum hot-plug power supply
Max power	N/A	15.9 kW (6 x 2,650 W power supply) 14.4 kW (6 x 2,400 W power supply)
AC input	N/A	Single-phase or three-phase AC input
Redundancy	N/A	N, N+1, and N+N

Technical specifications



HP ProLiant XL220a Gen8 v2 Server
Two nodes per tray, spec below is per node

HP ProLiant XL230a Gen9 Server

Form factor	5U (H) x 4.33 cm (W) x 70.79 cm (D) 5U (H) x 1.70 in (W) x 27.87 in (D)	5U (H) x 4.33 cm (W) x 70.79 cm (D) 5U (H) x 1.70 in (W) x 27.87 in (D)
Processor family	Intel Xeon E3-1200 v3 series	Intel Xeon E5-2600 v3 series
Processor cores available	4	6/8/10/12/14/16
Chipset	Intel C222 series chipset	Intel C612 series chipset
Number of processors	1	2
Max processor speed	3.7 GHz (Turbo 4.1 GHz)	2.6 GHz
Drive description	2 SFF SAS/SATA/SSD	4 SFF SAS/SATA/SSD
Supported drives	Hot-plug 2.5-inch SAS/SATA/SSD	Hot-plug 2.5-inch SAS/SATA/SSD
Memory slots	4 DIMM slots	16 DIMM slots
Memory max	32 GB (4 x 8 GB)	512 GB (16 x 32 GB)
Memory type, ECC	DDR3; U-DIMM; 1,280 MT/s	DDR4; R-DIMM; 2133 MT/s
Network options	Network module supporting various FlexibleLOMs: 1 GbE and/or 10 GbE	Network module supporting various FlexibleLOMs: 1 GbE, 10 GbE, and/or InfiniBand
Expansion slots	One HP Dynamic Smart Array B140i SATA controller HP Smart Array P430/2G and 4G controller HP H220 Host Bus Adapter	One HP Dynamic Smart Array B140i SATA controller HP Smart Array P440/4G Controller HP H240 Host Bus Adapter
USB ports/SD	2 PCIe: 1 PCIe x 8 Gen3, low profile slot 1 PCIe x 8 Gen3, low profile FlexibleLOM slot	One PCIe x16 Gen3, half-height
Management	One serial/USB/video port, MicroSD	One serial/USB/video port, MicroSD
OS support	HP iLO (Firmware: HP iLO 4) Advanced Power Manager	HP iLO (Firmware: HP iLO 4) Advanced Power Manager
OS support	Microsoft® Windows® Server Red Hat Enterprise Linux SUSE Linux Enterprise Server	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise Server

HP Financing for HP Apollo Systems

Having access to technology on terms that align to your business needs is critical, and HP Financial Services is uniquely positioned to help accelerate your move to the data center of the future with a broad portfolio of flexible investment and transition solutions.

Get started today

Solving complex scientific, engineering, and data analysis problems starts by partnering with HP to get the solution for your most complex challenges.

Learn more at
hp.com/go/apollo

Sign up for updates
hp.com/go/getupdated



Share with colleagues



Rate this document

© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP 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. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Intel Xeon are trademarks of Intel Corporation in the U.S. and other countries. Microsoft and Windows are U.S. registered trademarks of the Microsoft group of companies.

4AA5-3038ENW, September 2014, Rev. 1

