HPE SERVERS AND STORAGE: PORTFOLIO AT A GLANCE

April 2020

OVERVIEW

• View the HPE server and storage portfolio at a high level
• Find the right products to drive infrastructure transformation
• Compare key specifications across the product line

TRANSFORM IT WITH SOFTWARE-DEFINED INFRASTRUCTURE

Cloud is not a destination; it’s a model for a better way of doing things. To ensure your private cloud experience mirrors that of the public cloud, you need a partner who can help you build private clouds and manage hybrid cloud successfully, with the flexibility to adapt to changing business needs, by transforming your technology, people, and processes and economics. HPE is uniquely positioned to accelerate your hybrid cloud strategy through a world-class software-defined IT solutions, proven hybrid cloud expertise, and flexible consumption and economic options—all supporting your choice of clouds, workloads, and tools.


HPE SYNERGY

Gain efficiency and control, and deploy IT resources quickly for any workload through a single interface. HPE Synergy, a powerful software-defined solution, enables you to compose pools of physical and virtual compute, storage, and fabric resources into any configuration for any application. Learn more at hpe.com/synergy.

THE HPE SERVER FAMILY (hpe.com/servers)

Innovation based on standards

Fundamental to establishing a converged infrastructure are your underlying platform choices. Whether it’s a departmental server, an enterprise data center, or anything in between, HPE is committed to meeting your exact needs. Only HPE has the breadth of innovation, open partnerships, and depth of expertise to bring it all together.

Our portfolio includes:

HPE ProLiant servers—The world's most secure industry standard servers.

HPE ProLiant Gen10 servers coupled with HPE OneView, HPE Infinitight, and HPE OneSphere deliver software-defined compute to accelerate application performance, infrastructure and application deployment, and improve server operations. Our wide selection of multicore, multiprocessor servers, and server blades meet needs ranging from those of cost-sensitive growing businesses to the performance and scalability demands of global enterprises. ProLiant servers support the industry's leading operating system and application software. The software platform for ProLiant servers includes Windows, UNIX, Linux, and more.

HPE BladeSystem—HPE BladeSystem lets you transform legacy infrastructure and scale business performance while optimizing costs. With the powerful HPE OneView management, BladeSystem puts your business on an agile, secure foundation and on the path to a composable experience.

HPE BladeSystem (hpe.com/infobladesystem)

HPE Apollo—The HPE Apollo high-density server family is built for the highest levels of performance, scale, and efficiency. They are rack-scale compute, storage, networking, power and cooling—massively scale-up and scale-out solutions, ideal for your Big Data analytics, object storage, high-performance computing (HPC), and artificial intelligence (AI) workloads.

hpe.com/info/apollo

HPE MOONSHOT SYSTEMS

HPE Moonshot is an integrated, workload-optimized, software-defined server system, delivered in a compact, energy-efficient form factor. Moonshot infrastructure design delivers breakthrough efficiency and scale by replacing general purpose computing with more energy-efficient System-on-Chip (SoC) containing integrated accelerators tailored for specific workloads. This enables better resource efficiency, while reducing operational cost and improving IT set up and maintenance simplicity.

For more information: hpe.com/info/moonshot

HPE EDGELEN CONVERGED EDGE SYSTEMS

HPE Edgeline Converged Edge Systems is the industry first product category that combines uncompromised IT systems (Intel® Xeon® compute, storage and management) with Operational Technology (OT) Systems (control systems, data capture and industrial networks) in a ruggedized form factor capable to run analytics in virtually any edge environment. HPE Edgeline enable new applications and deliver dramatic improvements in operating cost, speed, reliability and security, while saving time, space, and energy.

For more information: hpe.com/info/edgeline

HPE POINTNEXT SERVICES

Achieve maximum return from your IT investment

Get the expertise you need at every step of the IT journey with HPE Pointnext Services and Support. We help you lower your risks and costs using proven best practices, automation, and methodologies that have been tested and refined by HPE experts through thousands of implementations and deployments globally. With Advisory Services, we focus on your business outcomes and goals, partnering with you to design your transformation and build a road map tuned to your unique challenges. Our professional, operational and technical services can be leveraged to speed up time-to-production, boost performance, and accelerate your business.

HPE Pointnext Services specializes in flawless and on-time implementation, on-budget execution, and executive configurations that get the most out of software and hardware alike. We collaborate with your IT team from technical design to implementation, build to migration, distribution, and finally to operational consulting and service.

• Integration and performance services provide resources to help you get your systems up and running quickly and augment your IT staff for projects.
• HPE Foundation Care provides fast problem resolution with comprehensive coverage and access to experts.
• HPE Proactive Care provides proactive problem prevention and an enhanced support experience for your systems.
• HPE Datacenter Care helps businesses run their IT operations by optimizing day-to-day tasks, integrating technology management and streamlining to a more agile cloud-like model.

Consume IT services on your terms, getting the specific value that you need for your business. HPE GreenLake enables you to scale easily by adding capacity in minutes, not months. You pay only for what you actually need, creating true pay-per-use outcomes. Simplify your IT planning, capacity forecasting, and cost allocation with HPE GreenLake.

Learn more about HPE Pointnext Services and Solutions for your business.
<table>
<thead>
<tr>
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<td>2 MB L3</td>
<td>Up to 3 MB L3</td>
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<td>AMD Opteron X3216</td>
<td>Intel Xeon E-2100 Series</td>
<td>Intel Xeon E-2100 Series</td>
<td>Intel Xeon E-2100 Series</td>
<td>Intel Xeon E-2100 Series</td>
<td>Intel Xeon E-2100 Series</td>
<td>Intel Xeon Scalable processor 5200, 6200, 5200, 4200, 3200, and 3200 series</td>
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<td>Management</td>
<td>Optional: HPE Insight</td>
<td>Optional: HPE Insight</td>
<td>Optional: HPE Insight</td>
<td>Optional: HPE Insight</td>
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<td>Optional: HPE Insight</td>
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<td>Form factor/depth</td>
<td>Ultra Micro Tower/9.65”</td>
<td>Ultra Micro Tower/10”</td>
<td>Micro ATX Tower/4U/18.71”</td>
<td>Back (3U)/15.05”</td>
<td>Back (1U)/10”</td>
<td>Back (3U)/15”</td>
<td>Back (2U)/19”</td>
<td>Back (2U)/19”</td>
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<td>Number of processors</td>
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<td>1, 2, or 4</td>
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<td>Cores per processor</td>
<td>4/8/16/24/32/64</td>
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<td>4/8/16/24/32/64</td>
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<td>Intel Xeon Scalable processor 8200, 6200, 5200, 4200, 3200 series</td>
<td>Intel Xeon Scalable processor 8200, 6200, 5200, 4200, 3200 series</td>
<td>AMD EPYC 7000 series</td>
<td>AMD EPYC 7000 series</td>
<td>AMD EPYC 7000 series</td>
<td>Intel Xeon Scalable processor 8200, 6200, 5200, 4200, 3200 series</td>
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<td>Maximum processor frequency</td>
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<td>2.7 GHz</td>
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<td>3.4 GHz</td>
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<td>Cache</td>
<td>Up to 36.5 MB</td>
<td>Up to 36.5 MB</td>
<td>Up to 38.5 MB</td>
<td>Up to 38.5 MB</td>
<td>Up to 36.5 MB</td>
<td>Up to 36.5 MB</td>
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<td>Maximum memory</td>
<td>2 TB</td>
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<td>Parity memory</td>
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<td>N/A</td>
<td>N/A</td>
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<td>N/A</td>
<td>N/A</td>
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<td>Maximum internal storage</td>
<td>18 TB</td>
<td>18 TB</td>
<td>18 TB</td>
<td>18 TB</td>
<td>18 TB</td>
<td>18 TB</td>
<td>18 TB</td>
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<tr>
<td>I/O slots</td>
<td>8 PCIe 3.0</td>
<td>8 PCIe 3.0</td>
<td>8 PCIe 3.0</td>
<td>8 PCIe 3.0</td>
<td>8 PCIe 3.0</td>
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<td>8 PCIe 3.0</td>
<td>8 PCIe 3.0</td>
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<tr>
<td>GPU</td>
<td>FL/Fly double-width and single-width active (1)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Operating systems and virtualization software supported</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), VMware, Hyper-V, and Cloud OS</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
<td>Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware</td>
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<tr>
<td>Management</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
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<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
<td>HPE iLO 5, HPE OneView Standard, Intelligent Processing, Smart Update Manager, RESTful Interface Tool, LD Amplifier Pack, Optional HPE IO Advanced, HPE OneView Advanced, HPE Insight</td>
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<tr>
<td>Form factor/depth</td>
<td>Tower (4U)/22.5&quot; or Rack (4U)/25.5&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
<td>Rack (2U)/22&quot;</td>
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### Computer Modules

<table>
<thead>
<tr>
<th>SY660 Gen10*</th>
<th>SY660 Gen12*</th>
</tr>
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<tbody>
<tr>
<td><strong>Number of processors</strong></td>
<td>2 or 4</td>
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<tr>
<td><strong>Processors supported</strong></td>
<td>Intel® Xeon Scalable processors family—1st Generation</td>
</tr>
<tr>
<td><strong>Processors—Cores available</strong></td>
<td>4 to 28</td>
</tr>
<tr>
<td><strong>Processors—Frequency</strong></td>
<td>1.7 to 3.6 GHz</td>
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<tr>
<td><strong>Memory slots</strong></td>
<td>24</td>
</tr>
<tr>
<td><strong>Memory speed</strong></td>
<td>DDR4 @ 2666 MT/s***</td>
</tr>
<tr>
<td><strong>Memory capacity—Per socket</strong></td>
<td>Up to 2.5 TB***</td>
</tr>
<tr>
<td><strong>Memory power</strong></td>
<td>DDR4 @ 2666 MT/s***</td>
</tr>
<tr>
<td><strong>Parity memory</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Operating systems supported</strong></td>
<td>MS Windows, Linux, SLES*</td>
</tr>
<tr>
<td><strong>Network ports</strong></td>
<td>Up to 2 Mezzanine Slots for SAS, Ethernet or Fibre Channel depending on configuration</td>
</tr>
<tr>
<td><strong>Drives supported</strong></td>
<td>2 SFP SAS/SATA or 2 SFP Fibre Channel depending on model</td>
</tr>
<tr>
<td><strong>Maximum internal storage</strong></td>
<td>Up to 2 Drives + 40 w/ D3940 (up to 4 storage modules per frame)</td>
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<tr>
<td><strong>U/O slots</strong></td>
<td>Up to 2 available</td>
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<tr>
<td><strong>Management</strong></td>
<td>HPE OneView</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Half-height, 12 per enclosure (mixing allowed)</td>
</tr>
<tr>
<td><strong>Warranty—years (parts/labor/on-site)</strong></td>
<td>3/3/3</td>
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### Storage Modules

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<tr>
<th>D3660 Storage Module</th>
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<tbody>
<tr>
<td><strong>Max. Drives quantity supported</strong></td>
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<tr>
<td><strong>Fabric</strong></td>
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<tr>
<td><strong>Controller model</strong></td>
</tr>
<tr>
<td><strong>Controller RAID options</strong></td>
</tr>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
</tr>
<tr>
<td><strong>Management/ Appliances</strong></td>
</tr>
<tr>
<td><strong>Height</strong></td>
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### Frames

<table>
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<th>HPE Synergy 12000 Frame</th>
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</thead>
<tbody>
<tr>
<td><strong>Device bays</strong></td>
</tr>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
</tr>
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</table>
| **Management/ Appliances** | Composer, powered by OneView Single or Dual redundant appliances for managing up to 250 Compute Modules over multiple racks through a central management server

### BladeSystem

<table>
<thead>
<tr>
<th>BL460c Gen10*</th>
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<tbody>
<tr>
<td><strong>Number of processors</strong></td>
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<td><strong>Processors supported</strong></td>
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<tr>
<td><strong>Processors—Cores available</strong></td>
</tr>
<tr>
<td><strong>Processors—Frequency</strong></td>
</tr>
<tr>
<td><strong>Memory slots</strong></td>
</tr>
<tr>
<td><strong>Memory speed</strong></td>
</tr>
<tr>
<td><strong>Memory capacity—Per socket</strong></td>
</tr>
<tr>
<td><strong>Parity memory</strong></td>
</tr>
<tr>
<td><strong>Operating systems supported</strong></td>
</tr>
<tr>
<td><strong>Network ports</strong></td>
</tr>
<tr>
<td><strong>Drives supported</strong></td>
</tr>
<tr>
<td><strong>Maximum internal storage</strong></td>
</tr>
<tr>
<td><strong>U/O slots</strong></td>
</tr>
<tr>
<td><strong>Management</strong></td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
</tr>
<tr>
<td><strong>Warranty—years (parts/labor/on-site)</strong></td>
</tr>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
</tr>
<tr>
<td><strong>Management/ Appliances</strong></td>
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<tr>
<td><strong>Height</strong></td>
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** For more information on HPE's certified and supported ProLiant servers for OS and Virtualization software and latest listing of software drivers available for your server, please visit our Support Matrix at hpe.com/v2/GetDocument.aspx?docname=a00008520enw

** Capacity and Speed of Memory is highly dependent on version A, number of slots occupied and processor selected. See Memory Population Tables in individual Compute QuickSpecs for details.

*** Intel Xeon Scalable Family 100 Series (1U) ProLiant, Bronze, Silver, Gold, and Platinum servers. 

**** Intel Xeon Scalable Family 200 Series (2U) ProLiant, Bronze, Silver, Gold, and Platinum servers.
## HPE Apollo Compute Systems

### HPE Apollo 70

| Density/Scale | Support up to 3U 3/2 half width trays |
| Processor | Xeon E-2100/3100 series (2 or 4 cores, 45W or 75W) |
| Memory (type, channels, slots) | 2666-MHz DDR4, 24 slots |
| Storage | Up to 12 LFF hot-plug drives, 2 internal 2280 M.2 |
| GPU Support | N/A |
| OS Support | SUSE Linux Enterprise Server (SLES), Red Hat Enterprise Linux (RHEL), Windows Server 2012 R2/2016/2019 (Most Recent Version), VMware ESXi™ 6.0 U3/6.5 U2/6.7 U1, Red Hat Enterprise Linux (RHEL) 7.6, SUSE Linux Enterprise Server (SLES) 12 SP5/15 SP6, CentOS, Ubuntu, Citrix XenServer |
| Power Supply—Hot Plug | Two 1600W platinum power supplies |
| Interconnect | 10 Gigabit, InfiniBand, flexible OM |
| Cooling | Single rotor fans (standard) |
| Security | N/A |
| Warranty (parts, labor, on-site support) | 3/3/3 |
| QuickSpecs URL | h20195.www2.hpe.com/v2/gethtml.aspx?docname=a00020978enw |

### HPE Apollo 2000 Gen10 System

| Density/Scale | Support up to 2U 2/1 half width trays |
| Processor | Up to two Intel Xeon Scalable Processors per server node, up to 150W; -F support on CPU 0 |
| Memory (type, channels, slots) | Supports up to 2666/2933 MT/s DDR4 SmartMemory; 6 channels, 16 slots |
| Storage | Internal storage up to 4 LFF hot-plug drives, 2 internal 2280 M.2 |
| GPU Support | N/A |
| OS Support | Windows Server 2012 R2/2016/2019, VMware ESXi 6.0 U3/6.5 U2/6.7 U1, Red Hat Enterprise Linux (RHEL) 7.6, SUSE Linux Enterprise Server (SLES) 12 SP5/15 SP6, CentOS, Ubuntu, Citrix XenServer |
| Interconnect | 1 Gigabit, 10 Gigabit, 25 Gigabit, InfiniBand, Omni-Path or FlexibleL0M |
| Cooling | Single rotor fans (standard) and an additional 2 rotor fans can be added for redundancy |
| Security | 6.0.5 Secure Boot of Trust, 6.0.6 Advanced (Optional) |
| Warranty (parts, labor, on-site support) | 3/3/3 |
| QuickSpecs URL | h20195.www2.hpe.com/v2/gethtml.aspx?docname=a00022816enw |

### HPE Apollo 2000 Gen10 Plus System

| Density/Scale | Support up to 3U 3/2 half width trays |
| Processor | Two AMD EPYC 7002 series Processors per server node, up to 200W+ |
| Memory (type, channels, slots) | Supports up to 3200 MT/s DDR4 SmartMemory; 8 channels, 16 slots |
| Storage | Internal storage up to 8 LFF hot-plug SATA, 2 internal 2280 M.2 |
| GPU Support | N/A |
| OS Support | Windows Server 2012 R2/2016/2019, VMware ESXi 6.0 U3/6.5 U2/6.7 U1, Red Hat Enterprise Linux (RHEL) 7.6, SUSE Linux Enterprise Server (SLES) 12 SP5/15 SP6, CentOS, Ubuntu, Citrix XenServer |
| Power Supply—Hot Plug | Two 1600W/3000W |
| Interconnect | 10 Gigabit, InfiniBand HDR or 200 Gb HDR |
| Cooling | Single rotor fans (standard) and an additional 2 rotor fans can be added for additional cooling |
| Security | 6.0.5 Secure Boot of Trust, 6.0.6 Advanced (Optional) |
| Warranty (parts, labor, on-site support) | 3/3/3 |
| QuickSpecs URL | h20195.www2.hpe.com/v2/gethtml.aspx?docname=a00056110enw |

### HPE Apollo 2000 Gen10 Plus System

| Density/Scale | Support up to 3U 3/2 half width trays |
| Processor | Two Intel Xeon Scalable Processors per server node, up to 150W; -F support on CPU 0 |
| Memory (type, channels, slots) | Supports up to 2666/2933 MT/s DDR4 SmartMemory; 6 channels, 16 slots |
| Storage | Internal storage up to 4 LFF hot-plug drives, 2 internal 2280 M.2 |
| GPU Support | N/A |
| OS Support | Windows Server 2012 R2/2016/2019, VMware ESXi 6.0 U3/6.5 U2/6.7 U1, Red Hat Enterprise Linux (RHEL) 7.6, SUSE Linux Enterprise Server (SLES) 12 SP5/15 SP6, CentOS, Ubuntu, Citrix XenServer |
| Power Supply—Hot Plug | Two 1600W/3000W |
| Interconnect | 10 Gigabit, InfiniBand HDR or 200 Gb HDR |
| Cooling | Single rotor fans (standard) and an additional 2 rotor fans can be added for additional cooling |
| Security | 6.0.5 Secure Boot of Trust, 6.0.6 Advanced (Optional) |
| Warranty (parts, labor, on-site support) | 3/3/3 |
| QuickSpecs URL | h20195.www2.hpe.com/v2/gethtml.aspx?docname=a00019876enw |
### HPE Apollo 4200 Gen10 System
- **Form factor**: 2U rack server
- **Storage capacity**: Up to 2 SFF SATA HDD/SSD
- **Storage controller**: (1) HPE Smart Array SAS/i optional
- **Processor family**: Intel Xeon Scalable Processors (8100, 6100/6200, 5100/5200, and 4100/4200 series)
- **Processor number**: One or two per server
- **Processor cores available**: Up to 28 cores
- **Memory**: Supports up to 2666/2933 MT/s DDR4
- **Power Supply—Hot Plug**: 2650W Platinum hot-plug (15.9 kW non-redundant) or 2400W Platinum hot-plug (14.4 kW non-redundant); power can be managed from the server chassis power level
- **Cooling**: Single rotor fan on bottom. 80 mm dual rotor fan on top, one 60 mm fan serviceable N + 1 redundant dual fan module
- **Operating systems and virtualization SW**: Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware
- **Management Recommended for Management at scale**: HPE LSI SM (standard); LSI dedicated management ports (intelligent Provisioning (standard), LSI Advanced (optional), HPE OneView Advanced (optional))
- **Chassis (series)**: HPE Apollo 4200
- **Warranty**: 3/3/3
- **QuickSpecs URL**: [QuickSpecs](https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00016641enw)

### HPE Apollo 6000 Gen10 System
- **Form factor**: 4U shared infrastructure chassis
- **Storage capacity**: Up to 7.8 PB per 42U rack
- **Storage controller**: (1) HPE Smart Array SAS/i optional
- **Processor family**: Intel Xeon Scalable Processors (8100, 6100/6200, 5100/5200, and 4100/4200 series)
- **Processor number**: One or two per server
- **Processor cores available**: Up to 28 cores
- **Memory**: Supports up to 2933 MT/s DDR4
- **Power Supply—Hot Plug**: 2400W Platinum hot-plug (13.7 kW non-redundant) or 2400W Platinum hot-plug (12.5 kW non-redundant); power can be managed by an HPE Advanced Power Manager (APM) option in the server chassis power level
- **Cooling**: An cooled Single 5.5 fans per server; one 80 mm dual rotor fan on top, one 60 mm fan serviceable N + 1 redundant dual fan module
- **Operating systems and virtualization SW**: Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware
- **Management Recommended for Management at scale**: HPE LSI SM (standard); LSI dedicated management ports (intelligent Provisioning (standard), LSI Advanced (optional), HPE OneView Advanced (optional))
- **Chassis (series)**: HPE Apollo 6000
- **Warranty**: 3/3/3
- **QuickSpecs URL**: [QuickSpecs](https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00039976enw)
ProLiant m700p Blade

- ProLiant m710d Server Blade
- ProLiant m510 Server Blade

Switches

- 4-port 10GBASE-T uplink and 4-port 10GbE-RS ports
- 4-port 10GbE-RS ports

Networking

- 1Gbps Ethernet
- 10Gbs Ethernet
- 40Gbps Ethernet
- 100Gbps Ethernet

Server blade

- Intel Xeon D 2185W, 16-core (2.1 GHz)
- Intel Xeon D 2185W, 16-core (2.1 GHz)
- Intel Xeon D 2185W, 16-core (2.1 GHz)

Supported OS

- Windows 7/8.1/10
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- Ubuntu

Other interfaces

- iSCSI
- FC
- iSCSI with iSER acceleration

Security

- Trusted Platform Module (TPM)
- Security

Storage

- Up to 48 TB on four compute blades and four extended storage adapters
- Up to 48 TB on four compute blades and four extended storage adapters

Performance

- Up to 48 TB on four compute blades and four extended storage adapters
- Up to 48 TB on four compute blades and four extended storage adapters
<table>
<thead>
<tr>
<th>Processor Supported</th>
<th>HPE Integrity BL860c i6 blade</th>
<th>HPE Integrity BL870c i6 blade</th>
<th>HPE Integrity BL895c i6 blade</th>
<th>HPE Integrity cx3200 i6 blade</th>
<th>Superdome 2–8s</th>
<th>Superdome 2–16s</th>
<th>Superdome 3–32x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of processors</td>
<td>4–8 processors</td>
<td>4–8 processors</td>
<td>4–8 processors</td>
<td>4–8 processors</td>
<td>2–16 processors</td>
<td>2–16 processors</td>
<td>2–16 processors</td>
</tr>
<tr>
<td>Maximum number of cores</td>
<td>4</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>2–16</td>
<td>2–16</td>
<td>2–16</td>
</tr>
</tbody>
</table>

For more information on HPE's Mission Critical Integrity servers, please visit hpe.com/info/integrity.
HPE delivers an intelligent data platform that predicts and prevents issues across your full IT stack with the ability to learn and self-adjust in real time. Hybrid by design, it makes your data accessible and usable across all cloud environments, turning your data challenges into business opportunities.

The Intelligent Data Platform by HPE is AI-driven, built for the cloud and delivered as a service:

**AI-driven:** Reduce the burden of managing infrastructure and gain context-awareness of your data throughout its lifecycle.

**Built for cloud:** Run any workload, anywhere you need it with seamless data mobility and native integration to public cloud.

**As a service:** Pay-per-use elastic capacity that grows ahead of your business, delivered as a service on-premises.

Explore how your enterprise might take advantage of intelligent storage to meet the dynamic challenges ahead.

- **(New) HPE Primera:** The world’s most intelligent storage for mission-critical apps that delivers extreme resiliency and performance with the agility of the cloud. Powered by the intelligence of HPE InfoSight, HPE Primera delivers instant access to data with storage that sets up in minutes, upgrades transparently, and is delivered as a service. Plus, it’s backed by a 100% availability guarantee.

- **(New) HPE Nimble Storage dHCI:** HPE Nimble Storage dHCI is an intelligent platform with the flexibility of converged and the simplicity of HCI. Built with HPE ProLiant and HPE Nimble Storage, this platform provides the flexibility to scale compute and storage independently for unpredictable growth and the data resiliency and performance needed for business-critical apps.

- **Hardware consists of HPE Nimble Storage AF and HF platforms, and HPE ProLiant DL360 and DL 380. Please refer to the HPE Nimble Storage and HPE ProLiant sections for more information.**

- **HPE MSA Storage:** Flash-enabled arrays that raise the entry storage bar, making application acceleration possible for a wide range of budgets.

- **HPE StoreEasy:** A leading NAS product family under $15K USD, which is an easy-to-manage centralized, space for securely storing documents, images, audio, and video files.

- **HPE Nimble Storage:** HPE Nimble Storage leverages flash storage and predictive analytics to eliminate the gap and guarantee 99.99999% availability, delivering the best all-flash capacity per TB in the industry—and future-proofing design for value today and tomorrow.

- **HPE SimpliVity:** An enterprise-grade hyperconverged platform that speeds application performance, improves efficiency and resiliency, and restores VMs in seconds.

- **HPE 3PAR StoreServ Storage:** Tier 1 all-flash data storage array that can scale from midsize to the largest enterprises and service providers, enabling high service levels and instant application provisioning.

- **HPE XP8:** Designed for applications requiring 100% data availability, the HPE XP8 Storage combines a seven-nines platform (99.99999%) of fully online, scalable, and redundant hardware, with ultra-high-performance, and advanced data replication, and disaster recovery (DR) along with online data migration capabilities.

- **HPE StoreOnce:** Intelligently transforms your hybrid cloud data protection with greater simplicity, performance and agility at lower cost than traditional solutions.

- **HPE StoreEver:** As your business’s data continues to grow, trust HPE proven tape solutions to retain your valuable data for longer and for less.

- **HPE StoreFabric:** HPE StoreFabric modernizes your storage network with a broad selection of trusted products focused on performance, SAN automation, and resiliency solutions.

**THE HPE STORAGE FAMILY**

All-flash and hybrid storage with intelligence that makes it smarter and simpler to use.

Flash storage-integrated, built-for-cloud data protection delivering unparalleled backup, archive, and disaster recovery for your enterprise apps.

Secure, tailored, and economic solutions to address storage requirements for NAS and file-based storage.

A superior storage networking experience with a broad selection of trusted HPE StoreFabric products focused on performance, SAN automation, and resiliency solutions.
The HPE Primera 600 series redefines what's possible in mission-critical storage by delivering the agility of the cloud while raising the bar on resiliency and performance. Built upon proven resiliency and powered by HPE Insight, HPE Primera delivers instant access to data with storage that sets up in minutes, upgrades transparently, and is delivered as a service.

### Hardware summary

<table>
<thead>
<tr>
<th>Feature</th>
<th>HPE Primera A630</th>
<th>HPE Primera A650</th>
<th>HPE Primera A670</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Controller Nodes</td>
<td>2</td>
<td>2 or 4</td>
<td>2 or 4</td>
</tr>
<tr>
<td>CPUs per node</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Maximum Host Ports</td>
<td>16 ports</td>
<td>48 ports</td>
<td>48 ports</td>
</tr>
<tr>
<td>16-Gb or 32-Gb Fibre Channel Host Ports</td>
<td>0–36 ports</td>
<td>0–48 ports</td>
<td>0–48 ports</td>
</tr>
<tr>
<td>Built-in 10 GbE Ports per node</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Max. number of SSDs</td>
<td>144</td>
<td>156</td>
<td>516</td>
</tr>
<tr>
<td>Max. Raw Capacity (SSD only)</td>
<td>250 TiB</td>
<td>800 TiB</td>
<td>1600 TiB</td>
</tr>
<tr>
<td>Max. number of Add-on Drive Enclosures</td>
<td>5 enclosures (A630)</td>
<td>14 enclosures (A650)</td>
<td>22 enclosures (A670)</td>
</tr>
<tr>
<td>Capacity</td>
<td>250 TiB (SSD only)</td>
<td>800 TiB (SSD only)</td>
<td>1600 TiB (SSD only)</td>
</tr>
<tr>
<td>Cache</td>
<td>128 GB</td>
<td>256 GB</td>
<td>512 GB</td>
</tr>
<tr>
<td>Storage Controller</td>
<td>HPE Primera A630 Controller</td>
<td>HPE Primera A650 Controller</td>
<td>HPE Primera A670 Controller</td>
</tr>
<tr>
<td>Minimum dimensions</td>
<td>HPE Primera 630: 483 x 839 x 87.5 cm (W/D/H)</td>
<td>HPE Primera 650: 483 x 839 x 174 cm (W/D/H)</td>
<td>HPE Primera 670: 483 x 839 x 174 cm (W/D/H)</td>
</tr>
<tr>
<td>Weight (weight includes chassis, controllers, and PCBM, no drives or adapters)</td>
<td>HPE Primera 630: 33.6 kg</td>
<td>HPE Primera 650: 74.5 kg</td>
<td>HPE Primera 670: 74.5 kg</td>
</tr>
<tr>
<td>Product number (SKU)</td>
<td>N9Z46A (2-way Storage Base)</td>
<td>N9Z47A (4-way Storage Base)</td>
<td>N9Z86A (4-way Storage Base)</td>
</tr>
<tr>
<td>Drive description</td>
<td>SAS SFF 128 Gb Encrypted SSD</td>
<td>SAS SFF 256 Gb SSD</td>
<td>SAS SFF 512 Gb SSD</td>
</tr>
<tr>
<td>Enclosures</td>
<td>HPE Primera 2U4 SFF SASS Drive Enclosure</td>
<td>HPE Primera 4U4 SFF SASS Drive Enclosure</td>
<td>HPE Primera 4U4 SFF SASS Drive Enclosure</td>
</tr>
<tr>
<td>Maximum drives per enclosure</td>
<td>HPE Primera 600 2-way Storage Base: 24;</td>
<td>HPE Primera 650 4-way Storage Base: 48;</td>
<td>HPE Primera 670 4-way Storage Base: 48;</td>
</tr>
<tr>
<td>Host interface</td>
<td>16 GbE Fibre Channel; 16 GbE Fibre Channel</td>
<td>32 GbE Fibre Channel; 32 GbE Fibre Channel</td>
<td>64 GbE Fibre Channel; 64 GbE Fibre Channel</td>
</tr>
<tr>
<td>Availability features</td>
<td>Redundant power and cooling modules with battery and fans.</td>
<td>A minimum of dual redundant controllers, max. of four controllers for added resiliency.</td>
<td>RAID 6 for data protection</td>
</tr>
<tr>
<td>Compatible operating systems</td>
<td>Microsoft Windows Server 2012, Microsoft Windows Server 2012 R2, Microsoft Windows Server 2016, Microsoft Windows Server 2019, Microsoft Hyper-V (VHP-32), SUSE Linux Enterprise Server (SLES), Red Hat Enterprise Linux (RHEL), VMware ESX and ESXi, Oracle Solaris, Oracle UEM, Oracle Linux, Citrix XenServer, IBM AIX</td>
<td>HPE OpenVMS, Apple OS X, HPE OpenVMS is a registered trademark only</td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>3 years (parts only);</td>
<td>5 years (parts only);</td>
<td>5 years (parts only);</td>
</tr>
</tbody>
</table>

**HPE PRIMERA**

The HPE Primera 600 series redefines what's possible in mission-critical storage by delivering the agility of the cloud while raising the bar on resiliency and performance. Built upon proven resiliency and powered by HPE Insight, HPE Primera delivers instant access to data with storage that sets up in minutes, upgrades transparently, and is delivered as a service.
The HPE MSA 1050 SAN Storage brings affordable flash storage close to the most price-sensitive customers.

**Triple+ Parity**

850/0.944

6–46/5

4, 8, 12, 16, 20, 24

1968

AF60

The HPE MSA 2050 SAN Storage is a flash ready system designed for affordable application acceleration for small and remote office deployments.

**Storage controller**

2 UPE MSA 2050 2-port FC Controllers or 2 UPE MSA 1050 2-port FC Controllers or 2 UPE MSA 1050 2-port iSCSI Controllers depending on model

Two HPE MSA 2050 SAN controllers or HPE MSA 2050 SAS controllers, depending on model

**Storage expansion options**

HPE MSA 2050 LFF Disk Enclosure or HPE MSA 2050 2050 SFF Disk Enclosure

HPE MSA 2050 LFF Disk Enclosure or HPE MSA 2050 SFF Disk Enclosure

**HPE NIMBLE STORAGE**

**Dimensions (W x D x H)**

8.9 x 49.5 x 44.7 cm

**Weight**

17.55 lbs

16 kg

**Warranty**

3-year limited warranty, parts exchange next business day delivery. For more warranty information, visit h20564.www.hpe.com/warranty/data-sheet.
The HPE 3PAR StoreServ 8000 Storage: Enterprise Tier 1 storage at a manageable price. HPE 3PAR StoreServ 8000 Storage delivers the performance advantages of a purpose-built, flash-optimized architecture without compromising readiness, efficiency, or data mobility.

- **File Cache**: 832 GiB
- **Flash Cache**: 768 GiB
- **Total Cache per node pair**: 832 GiB
- **Maximum Host Ports**: 24 ports
- **Number of Hard Disk Drives**: 6–240
- **Max. Raw Capacity (SSD only)**: 838 TiB
- **Processor/Cache Memory**: Intel Xeon E5-2609 v3 (1.9 GHz/6-core/15 MB/85W) Processor
- **Power Supply**: 2 x 800W Platinum hot plug Power Supply
- **RAID Support**: RAID 0, 1, 5, 6, 10, 50, 60, 100, 500
- **Controller v3**: HPE 3PAR StoreServ File Controller v3 Single Node—2U single slot tray (one or two nodes per chassis)
- **HPE 3PAR Gen5 ASICs**: 2 or 4
- **Processors**: 2 x 6-core
- **Controller v3 System chassis**
- **Cache**: 2 x 3.84 TB SSD, 7.68 TB SSD, 400 GB SSD, 1.92 TB SSD
- **Memory**: 32 GB DDR4 SDRAM (registered (RDIMM) standard 32 GB (x 8 GB)
- **Built-in 10GbE Ports**: N/A
- **Flash Cache per node pair**: N/A
- **HPE 3PAR StoreServ 8000 Storage delivers the performance advantages of a purpose-built, flash-optimized architecture without compromising readiness, efficiency, or data mobility.

**HPE 3PAR StoreServ 9000 Storage**: Enterprise-class class-secures the function and provides an efficient, bulletproof, and scalable solution for massive consolidation of demanding workloads with greater than 3 million IOPS, sub-millisecond latencies, a 4x density advantage, and scalability to 24 PB of usable capacity.

- **Number of Add-on Drive Enclosures**: 12 enclosures
- **Number of Solid State Drives**: 6–120
- **Useful Drive Capacity**: 2–256 TB
- **Drive Capacity**: 400 GB SSD, 920 GB SSD, 1.84 TB SSD, 7.68 TB SSD, 15.36 TB SSD
- **HPE 3PAR StoreServ 20000 Storage**: Enterprise flash arrays for massive data mobility.

- **Number of Hard Disk Drives**: 6–2304
- **Max. Raw Capacity (SSD only)**: 1.925–8043 TiB
- **Controller v3**: HPE 3PAR StoreServ File Controller v3 Single Node—2U single slot tray (one or two nodes per chassis)
- **HPE 3PAR Gen5 ASICs**: 2 or 4
- **Processors**: 2 x 6-core
- **Controller v3 System chassis**
- **Cache**: 2 x 3.84 TB SSD, 7.68 TB SSD, 400 GB SSD, 1.92 TB SSD
- **Memory**: 32 GB DDR4 SDRAM (registered (RDIMM) standard 32 GB (x 8 GB)
- **Built-in 10GbE Ports**: N/A
- **Flash Cache per node pair**: N/A
- **HPE 3PAR StoreServ 20000 Storage delivers the performance advantages of a purpose-built, flash-optimized architecture without compromising readiness, efficiency, or data mobility.

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- **Number of Hard Disk Drives**: 6–2304
- **Max. Raw Capacity (SSD only)**: 1.925–8043 TiB
- **Controller v3**: HPE 3PAR StoreServ File Controller v3 Single Node—2U single slot tray (one or two nodes per chassis)
- **HPE 3PAR Gen5 ASICs**: 2 or 4
- **Processors**: 2 x 6-core
- **Controller v3 System chassis**
- **Cache**: 2 x 3.84 TB SSD, 7.68 TB SSD, 400 GB SSD, 1.92 TB SSD
- **Memory**: 32 GB DDR4 SDRAM (registered (RDIMM) standard 32 GB (x 8 GB)
- **Built-in 10GbE Ports**: N/A
- **Flash Cache per node pair**: N/A
- **HPE 3PAR StoreServ 20000 Storage**: Enterprise flash arrays for massive data mobility.

- **Number of Hard Disk Drives**: 6–2304
- **Max. Raw Capacity (SSD only)**: 1.925–8043 TiB
- **Controller v3**: HPE 3PAR StoreServ File Controller v3 Single Node—2U single slot tray (one or two nodes per chassis)
- **HPE 3PAR Gen5 ASICs**: 2 or 4
- **Processors**: 2 x 6-core
- **Controller v3 System chassis**
- **Cache**: 2 x 3.84 TB SSD, 7.68 TB SSD, 400 GB SSD, 1.92 TB SSD
- **Memory**: 32 GB DDR4 SDRAM (registered (RDIMM) standard 32 GB (x 8 GB)
- **Built-in 10GbE Ports**: N/A
- **Flash Cache per node pair**: N/A
- **HPE 3PAR StoreServ 20000 Storage delivers the performance advantages of a purpose-built, flash-optimized architecture without compromising readiness, efficiency, or data mobility.

**HPE 3PAR StoreServ 8000 Storage**: Enterprise Tier 1 storage at a manageable price. HPE 3PAR StoreServ 8000 Storage delivers the performance advantages of a purpose-built, flash-optimized architecture without compromising readiness, efficiency, or data mobility.

- **Number of Add-on Drive Enclosures**: 12 enclosures
- **Number of Solid State Drives**: 6–120
- **Useful Drive Capacity**: 2–256 TB
- **Drive Capacity**: 400 GB SSD, 920 GB SSD, 1.84 TB SSD, 7.68 TB SSD, 15.36 TB SSD
- **HPE 3PAR StoreServ 9000 Storage**: Enterprise-class class-secures the function and provides an efficient, bulletproof, and scalable solution for massive consolidation of demanding workloads with greater than 3 million IOPS, sub-millisecond latencies, a 4x density advantage, and scalability to 24 PB of usable capacity.

- **Number of Hard Disk Drives**: 6–2304
- **Max. Raw Capacity (SSD only)**: 1.925–8043 TiB
- **Controller v3**: HPE 3PAR StoreServ File Controller v3 Single Node—2U single slot tray (one or two nodes per chassis)
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- **Processors**: 2 x 6-core
- **Controller v3 System chassis**
- **Cache**: 2 x 3.84 TB SSD, 7.68 TB SSD, 400 GB SSD, 1.92 TB SSD
- **Memory**: 32 GB DDR4 SDRAM (registered (RDIMM) standard 32 GB (x 8 GB)
**HPE StoreOnce**

**HPE StoreOnce 5210** delivers disk-based backup with deduplication for larger enterprises that need high performance and scalability for large datasets.

**HPE StoreOnce 5210 features**:
- Disk-based backup with deduplication for larger enterprises.
- High performance for large datasets.
- Scalability and performance for larger enterprises.

**Specifications**:
- **Form factor**: 4U Scalable Rack
- **Total capacity (raw)**: 5200 TB
- **Effective local usable capacity**: 5200 TB
- **Maximum write performance**: 243 TB/hour (with 20:1 deduplication)
- **Maximum Cloud Bank Storage usable capacity**: 3268 TB
- **Effective Cloud Bank Storage capacity**: 17.3 PB
- **LTO Ultrium**: HPE LTO-7 Ultrium 15 TB RW 20, Data Cartridges, 20 Pk
- **New**: Yes
- **Product No. with Option**: 454982127191

**Performance**:
- **Local capacity**: 4 TB
- **Cloud Bank Storage capacity**: 17.3 PB
- **Max concurrency**: 24 streams
- **Max backup performance**: 243 TB/hour
- **Max read rate**: 24 streams
- **Max read rate per stream**: 1.74 TB/hour
- **Max read rate per stream (with 20:1 deduplication)**: 1.77 TB/hour

**Resource Requirements**:
- **Unit Weight (lbs)**: 5200
- **Unit Dimensions (cm)**: L 23.5 x W 12.7 x H 5.6
- **Form factor**: 4U Scalable Rack
- **Capacity**: To 155.52 TB/hour with 21 LTO-8 drives
- **Maximum concurrency**: 24 streams
- **5650**: New
- **5747.00**: New
- **24 GB vRAM per stream**
- **8 sources**: 8 streams
- **LTO Ultrium**: LTO-5 Ultrium 3 TB RW 20, Data Cartridges, 20 Pk
- **1 GB vRAM per store**
- **3640**: New
- **12.67**: New

**HPE StoreOnce VSA Backup**:
- A software defined backup target that can be configured to provide the capacity and performance needed to meet the data protection requirements.
- Can be configured to provide the capacity and performance needed to meet the data protection requirements.

**Category**:
- **Product Line**: HPE StoreOnce VSA Backup
- **Product Name**: HPE StoreOnce VSA Backup
- **Product No. with Option**: Q0TAA
- **SAP** (if included): Yes
- **Dedicated hard drives**: 4
- **3640**: New
- **12.67**: New

**HPE StoreOnce VSA Backup**:
- A software defined backup target that can be configured to provide the capacity and performance needed to meet the data protection requirements.
- Can be configured to provide the capacity and performance needed to meet the data protection requirements.

**Category**:
- **Product Line**: HPE StoreOnce VSA Backup
- **Product Name**: HPE StoreOnce VSA Backup
- **Product No. with Option**: Q0TAA
- **SAP** (if included): Yes
- **Dedicated hard drives**: 4
- **3640**: New
- **12.67**: New

**HPE StoreOnce VSA Backup**:
- A software defined backup target that can be configured to provide the capacity and performance needed to meet the data protection requirements.
- Can be configured to provide the capacity and performance needed to meet the data protection requirements.

**Category**:
- **Product Line**: HPE StoreOnce VSA Backup
- **Product Name**: HPE StoreOnce VSA Backup
- **Product No. with Option**: Q0TAA
- **SAP** (if included): Yes
- **Dedicated hard drives**: 4
- **3640**: New
- **12.67**: New
HPE StoreEasy 1660 Storage: Whether you are a small medium, or large distributed organization with remote offices, you need reliable, cost-efficient storage that can keep pace with users and growing volumes of file data without getting in the way of how your organization operates.

### Processor/Cache Memory

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Cache Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>StoreEasy 1660 (all models)</td>
<td>Intel Xeon Bronze 3104 (1.7 GHz/6-core/85W)</td>
<td>DDR4–2666 CAS–19–19–19 Registered (RDIMM) 16 GB–32 GB (1 x 16 GB or 1 x 32 GB)</td>
</tr>
<tr>
<td>StoreEasy 1660 Performance Model only</td>
<td>Intel Xeon Silver 4112 (2.6 GHz/4-core/85W)</td>
<td>DDR4–2666 CAS–19–19–19 Registered (RDIMM) 8 GB (1 x 8 GB)</td>
</tr>
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</table>

### Memory

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>24 TB (WSS2016)</td>
</tr>
<tr>
<td>DIMM Sockets</td>
<td>24</td>
</tr>
</tbody>
</table>

### Network Controller

<table>
<thead>
<tr>
<th>Controller</th>
<th>NIC ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gb Ethernet 4-port</td>
<td>4 x 4Gb ports plus Flexible IOM expansion</td>
</tr>
</tbody>
</table>

### Storage Controller

<table>
<thead>
<tr>
<th>Hard Drives</th>
<th>RAID</th>
<th>Storage Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATA SFF 2.5”</td>
<td>RAID 0, 1, 5, 6, 10, 50, 60</td>
<td>HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2 GB Cache) Modular for data and non-data drives</td>
</tr>
</tbody>
</table>

### Power Supply

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Power Cords</th>
<th>System Fans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 500 watts Platinum, hot plug (2nd redundant power supply optional)</td>
<td>One high voltage power cords (BC C15 to C14) standard; two if second power supply added</td>
<td>Single processor system includes 5 hot plug, redundant fans, standard dual processor system includes 7 hot plug, redundant fans</td>
</tr>
<tr>
<td>2 x 800 watts Platinum, hot plug</td>
<td>Two high voltage power cords (BC C15 to C14) standard</td>
<td>2 non-hot plug redundant fans, standard</td>
</tr>
</tbody>
</table>

### Form Factor

<table>
<thead>
<tr>
<th>Form Factor</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>2U rack mount (includes rail kit)</td>
<td>Tower (4U, 3U)</td>
</tr>
</tbody>
</table>

**Note:** Sliding Shelf—876578-B21 is optional to support rack form factor.
<table>
<thead>
<tr>
<th>Product name</th>
<th>HPE StoreFabric SN6600B 8-Port Power Pack+ SAN Director Switch</th>
<th>HPE StoreFabric SN6600B 6-Port Power Pack+ SAN Director Switch</th>
<th>HPE StoreFabric SN6650C 8-Port SAN Director Switch</th>
<th>HPE StoreFabric SN6650C 4-Port SAN Director Switch</th>
<th>HPE StoreFabric SN6600B 32 Gb FC Switch</th>
<th>HPE StoreFabric SN6650C 32 Gb FC Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port speed/Performance</td>
<td>Up to 32 Gb FC</td>
<td>Up to 32 Gb FC</td>
<td>Up to 64 Gb FC</td>
<td>Up to 64 Gb FC</td>
<td>32 Gb FC</td>
<td>32 Gb FC</td>
</tr>
<tr>
<td>Ports</td>
<td>Up to 36 ports (equivalent to 512 with ICLs)</td>
<td>Up to 192 ports (equivalent to 256 with ICLs)</td>
<td>Up to 384 ports (equivalent to 512 with ICLs)</td>
<td>Up to 192 ports (equivalent to 256 with ICLs)</td>
<td>B-24 FC device ports—25 max</td>
<td>B-32 FC enabled device ports—32 max</td>
</tr>
<tr>
<td>Aggregate switch bandwidth</td>
<td>3.2 Tbps aggregate chassis bandwidth 12.2 Tbps FC port bandwidth 36 ports x 32 Gb 4.096 Tbps FC port bandwidth (256 ports x 16 Gb) 6.4 Tbps FC port bandwidth (128 ports x 32 Gb) 1.5 Gbps slot bandwidth</td>
<td>8.1 Tbps aggregate chassis bandwidth 21.2 Tbps FC port bandwidth (192 ports x 32 Gb) 2.048 Tbps FC port bandwidth (128 ports x 32 Gb) 3.15 Tbps slot bandwidth</td>
<td>Up to 24 Tbps front-panel Fibre Channel switching bandwidth and 21 Tbps FCoE bandwidth per chassis. Up to 384 2/4/8 Gbps, 4/8/16 Gbps, 8/16/32 Gbps or 10 Gbps Fibre Channel ports</td>
<td>Up to 12 Tbps front-panel Fibre Channel, line-rate, non-blocking system-level switching capacity</td>
<td>12–24 FC device ports depending on model (12 downlinks, 24 uplinks)</td>
<td>16–28 FC device ports depending on model (16 downlinks, 12 uplinks)</td>
</tr>
<tr>
<td>Encryption capability</td>
<td>AES 256-bit, data at rest and in flight</td>
<td>AES 256-bit, data at rest and in flight</td>
<td>AES 256-bit, data at rest and in flight</td>
<td>AES 256-bit, data at rest and in flight</td>
<td>12–28 Gbps maximum depending on model</td>
<td>448 Gbps depending on model</td>
</tr>
<tr>
<td>Protocol support</td>
<td>FC, FCIP</td>
<td>FC, FCIP</td>
<td>FC, FCIP</td>
<td>FC, FCIP</td>
<td>FC, FCIP</td>
<td>FC, FCIP</td>
</tr>
<tr>
<td>Frames/Enclosure supported</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Availability</td>
<td>Supports “five nines” availability (i.e., 99.999%), redundant hot-swappable components</td>
<td>Supports “five nines” availability (i.e., 99.999%), redundant hot-swappable components</td>
<td>Fully redundant components, including fabric modules, supervisors, and power supplies</td>
<td>Fully redundant components, including fabric modules, supervisors, and power supplies</td>
<td>Integrated dual power supply and 2 built-in cooling fans</td>
<td>Integrated dual power supply and 2 built-in cooling fans</td>
</tr>
<tr>
<td>Power factor</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Media types</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
</tr>
<tr>
<td>Form factor</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
</tr>
</tbody>
</table>

**Mid-level switches**

<table>
<thead>
<tr>
<th>HPE StoreFabric SN6600B 32 Gb FC Switch</th>
<th>HPE StoreFabric SN6600B 32 Gb FC Switch</th>
<th>HPE StoreFabric SN6650C 32 Gb FC Switch</th>
<th>HPE StoreFabric SN6650C FC Switch</th>
<th>Brocade 16 Gb FC Switch Module for HPE Synergy</th>
<th>Brocade 16 Gb SAN Switch for HPE BladeSystem c-Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port speed/Performance</td>
<td>32 Gb FC</td>
<td>32 Gb FC</td>
<td>32 Gb FC</td>
<td>32 Gb FC</td>
<td>32 Gb FC</td>
</tr>
<tr>
<td>2 Gbps maximum</td>
<td>3.15 Tbps</td>
<td>3.15 Tbps</td>
<td>3.15 Tbps</td>
<td>3.15 Tbps</td>
<td>3.15 Tbps</td>
</tr>
<tr>
<td>In-Flight encryption</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>4/8/16/32/64 Gbps FC port bandwidth</td>
<td>1.5 Gbps</td>
<td>1.5 Gbps</td>
<td>1.5 Gbps</td>
<td>1.5 Gbps</td>
<td>1.5 Gbps</td>
</tr>
<tr>
<td>Embedded</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Two integrated redundant, hot-swappable power supplies</td>
<td>Integrated single power supply and 2 built-in cooling fans</td>
<td>Integrated single power supply and 2 built-in cooling fans</td>
<td>Integrated dual power supply and 2 built-in cooling fans</td>
<td>Integrated dual power supply and 2 built-in cooling fans</td>
<td>Hot-pluggable, non-disruptive upgrades, redundant switches</td>
</tr>
<tr>
<td>B-series 16 Gb SFP+, 32 Gb SFP+</td>
<td>C-series 16 Gb, 16 Gb SFP+, 32 Gb, 32 Gb SFP+</td>
<td>B-series 32 Gb, 32 Gb SFP+</td>
<td>C-series 16 Gb, 16 Gb SFP+, 32 Gb, 32 Gb SFP+</td>
<td>B-series 16 Gb SFP+ and 8 Gb SFP+ optical transceivers, Quad Small Form Pluggable (QSFP)</td>
<td>B-series 16 Gb SFP+ and 8 Gb SFP+ optical transceivers</td>
</tr>
<tr>
<td>Form factor</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
<td>1U</td>
</tr>
</tbody>
</table>

**Entry-level switches**

<table>
<thead>
<tr>
<th>HPE SN6500B 32 Gb FC Switch</th>
<th>HPE SN6500C 32 Gb FC Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port speed/Performance</td>
<td>32 Gb FC</td>
</tr>
<tr>
<td>Ports</td>
<td>B-24 FC enabled device ports—25 max</td>
</tr>
<tr>
<td>Aggregate switch bandwidth</td>
<td>256–768 Gbps end-to-end full duplex</td>
</tr>
<tr>
<td>Encryption capability</td>
<td>N/A</td>
</tr>
<tr>
<td>Frames/Enclosure supported</td>
<td>N/A</td>
</tr>
<tr>
<td>Availability</td>
<td>Integrated single power supply and 4 built-in cooling fans</td>
</tr>
<tr>
<td>Media types</td>
<td>B-series 16 Gb, 32 Gb SFP+</td>
</tr>
<tr>
<td>Form factor</td>
<td>1U</td>
</tr>
<tr>
<td>Warranty</td>
<td>(3–3–3 hardware warranty)</td>
</tr>
</tbody>
</table>

**Note:** Some models come pre-bundled with Brocade-branded 32 Gb SFP+ transceivers, Quad Small Form Pluggable (QSFP) at 32 Gb. It can accommodate up to 4 HPE 48-port blades.