Overview

HPE ProLiant DX380 Gen10 Plus Server

Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DX380 Gen10 Plus delivers world-class performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency while being backed by a comprehensive warranty make it ideal for multiple environments from Containers to Cloud to Big Data. Standardize on the industry’s most trusted compute platform.

The HPE ProLiant DX380 Gen10 Plus server along with Nutanix provide a global partnership to deliver hyper-converged solutions in an on premise appliance or through the HPE Greenlake consumption model. This offering will leverage Nutanix’s free AHV hypervisor and Nutanix Enterprise Cloud software to provide customers with a pre-integrated and optimized solution that dramatically lowers total cost of ownership and accelerates operational productivity.

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Front View – SFF chassis

1. Optional front display port (Via Universal Media Bay)
2. Quick removal access panel
3. Power On/Standby button and system power LED
4. Health LED
5. NIC status LED
6. UID button/LED
7. iLO Service Port
8. USB 3.0
9. Serial number label pull tab
10. Box 3 - 8 SFF Drive Cage Bay
11. Box 2 - Optional 8 SFF Drive Cage Bay
12. Box 1 - Universal Media Bay (optional)
13. Drive support label
14. Optional USB 2.0 (via Universal Media Bay)
Overview

Front View – 12LFF chassis shown

1. Health Status
2. Power On/Standby button and system power LED button
3. NIC Status
4. UID button/LED
5. 12 x LFF media
6. Drive support label
7. Quick removal access panel
**Overview**

1. 2 Processors, heatsink showing
2. Hot Plug redundant HPE Flexible Slot Power supplies
3. Second (optional) riser (Requires second CPU)
4. Primary riser
5. AROC connector
6. DDR DIMM Slots
7. Hot plug fans (6 single rotor standard)

**Notes:**
- ²Shown fully populated in 32 slots (16 per processor)
- ²High performance temperature fans standard
Overview

Rear View – Standard for all DX380 Gen10 Plus

1. Primary Riser. PCIe 4.0 Slots (Slots 1-3)
2. Secondary Riser. PCIe 4.0 Slots (Slots 4-6)
3. Tertiary Riser (Slots 7-8).
4. Optional serial port
5. Power Supply 1 and 2
6. VGA connector
7. OCP NIC ports (if equipped)¹
8. USB connectors 3.0 (2)
9. Dedicated ILO Management Port
10. Blank cover, not available for use

Notes: ¹ Supports various NICs, up to 100GbE.

What’s New
- New HPE ProLiant DX380 Gen10 Plus Servers with Broadcom controllers
- 3rd Generation Intel® Xeon® Scalable processors

Platform Information

Form Factor
- 2U rack

Chassis Types
- 8SFF (SAS/SATA)
- 24SFF bay (SAS/SATA)
- 12LFF

System Fans
- High Performance Standard – fan types included
Standard Features

Processors – Up to 2 of the following depending on model.
The 2nd digit of the processor model number “x3xx” is used to denote the processor generation (i.e. 3=3rd generation Intel Scalable Series Processors)

Notes: Field upgrades from 1st generation processors (x1xx) and/or 2nd generation processors (x2xx) not supported. “U” processors (i.e. 63xxU) only supported in single-socket configurations.

For more information regarding Intel Xeon processors, please see the following http://www.intel.com/xeon.

This table covers the public Intel offering only.

<table>
<thead>
<tr>
<th>Intel Xeon processor families</th>
<th>Description</th>
<th>Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>NFV Optimized</td>
<td>Targeted at Network Function Virtualization (NFV) workloads. Intel® SST-BF improves performance by directing base frequency to high priority/bottleneck cores. Other workloads may see throttling, more details to be provided in upcoming documentation.</td>
</tr>
<tr>
<td>S</td>
<td>Search Optimized</td>
<td>Optimized base frequency to address ‘search’ workloads. Other workloads may see throttling, more details to be provided in upcoming documentation.</td>
</tr>
<tr>
<td>U</td>
<td>1 Socket Optimized</td>
<td>Focused on single socket (1P) configurations, delivering performance at competitive price points. Does not support two socket (2P) arrangements.</td>
</tr>
<tr>
<td>V</td>
<td>VM Optimized</td>
<td>Fosters enhanced VM density, allowing to support more/largervirtual machines per host.</td>
</tr>
<tr>
<td>Y</td>
<td>Speed Select</td>
<td>Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity.</td>
</tr>
</tbody>
</table>

Notes: More than 1.5 TB memory per socket requires memory higher than 128 GB capacity

3rd Generation Intel® Xeon® Scalable Processor Family

<table>
<thead>
<tr>
<th>Intel Xeon Models</th>
<th>CPU Frequency</th>
<th>Cores</th>
<th>L3 Cache (MB)</th>
<th>Power</th>
<th>UPI</th>
<th>DDR4</th>
<th>SGX Enclave size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum 8352Y Processor</td>
<td>2.2GHz</td>
<td>32</td>
<td>48</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Platinum 8352V Processor</td>
<td>2.1GHz</td>
<td>36</td>
<td>54</td>
<td>195W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Platinum 8352M Processor</td>
<td>2.3 GHz</td>
<td>36</td>
<td>48</td>
<td>185W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Platinum 8358 Processor</td>
<td>2.6GHz</td>
<td>48</td>
<td>54</td>
<td>250W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Platinum 8358 Processor</td>
<td>2.6GHz</td>
<td>36</td>
<td>48</td>
<td>204W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>8GB</td>
</tr>
<tr>
<td>Platinum 8360Y Processor</td>
<td>2.4GHz</td>
<td>57</td>
<td>270W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
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<td></td>
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<tr>
<td>Platinum 8368 Processor</td>
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<td>60</td>
<td>250W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
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<tr>
<td>Platinum 8362 Processor</td>
<td>2.8 GHz</td>
<td>48 MB</td>
<td>265W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
<td></td>
</tr>
<tr>
<td>Platinum 8352S Processor</td>
<td>2.2GHz</td>
<td>32</td>
<td>48</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>512GB</td>
</tr>
</tbody>
</table>

Notes:
- Processors with TDP equal to or greater than 150W require High Performance Heatsink (P27095-B21)
- 8-Channel DDR4 @ 3200 MT/s (lower DDR4 speed may be used in segment optimized processors (i.e. Cloud, NFV, etc).
- 4TB max RAM per socket.Support for Intel Optane Persistent Memory 200 Series, enabling up to 6TB memory per socket (does not work with SGX).
- 2 socket capable, 3 UPI @ 11.2 GT/s.
- 64 Features: Advanced RAS (except 8358P), AVX-512 2 FMA, TME-MT 64 keys.
- Speed Select Performance Profile processors (“Y”) default to values in bold.
- Deterministic base frequency rating only applicable to VM workloads. Other workloads may see throttling.
QuickSpecs
HPE ProLiant DX380 Gen10 Plus Server

Standard Features

− ²Supports Intel® Speed Select Performance Profile (SST-P), even though not being a “Y” processor.
− ²Single socket capable even though not being a “U” processor. No dual socket support.
− ¹Does not support Intel Speed Select Technology – Base Frequency (SST-BF).
− ⁵Does not support Sub-NUMA 2 (SNC2).
− ⁶Default Speed Select Performance Profile value.

3rd Generation Intel® Xeon® Scalable Processor Family

<table>
<thead>
<tr>
<th>Intel Xeon Models</th>
<th>CPU Frequency</th>
<th>Cores</th>
<th>L3 Cache (MB)</th>
<th>Power</th>
<th>UPI</th>
<th>DDR4</th>
<th>SGX Enclave size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold 6354 Processor</td>
<td>3.0 GHz</td>
<td>18</td>
<td>39 MB</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6348 Processor</td>
<td>2.6 GHz</td>
<td>28</td>
<td>42 MB</td>
<td>235W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6346 Processor</td>
<td>3.1 GHz</td>
<td>16</td>
<td>36 MB</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6338 Processor</td>
<td>2.0 GHz</td>
<td>32</td>
<td>48 MB</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6336Y Processor</td>
<td>2.4 GHz, 2.9 GHz, 3.1 GHz</td>
<td>24, 12, 8</td>
<td>36 MB</td>
<td>185W/150W/150W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6330 Processor</td>
<td>2.0 GHz</td>
<td>28</td>
<td>42 MB</td>
<td>205W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6326 Processor</td>
<td>2.9 GHz</td>
<td>16</td>
<td>24 MB</td>
<td>185W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6342 Processor</td>
<td>2.8 GHz</td>
<td>24</td>
<td>36 MB</td>
<td>230W</td>
<td>3 @ 11.2 GT/s</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6334 Processor</td>
<td>3.6 GHz</td>
<td>8</td>
<td>18 MB</td>
<td>165W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6314U Processor</td>
<td>2.3 GHz</td>
<td>32</td>
<td>48 MB</td>
<td>205W</td>
<td>N/A</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 6312U Processor</td>
<td>2.4 GHz</td>
<td>24</td>
<td>36 MB</td>
<td>185W</td>
<td>N/A</td>
<td>3200 MT/s</td>
<td>64GB</td>
</tr>
</tbody>
</table>

Notes:
− Processors with TDP equal to or greater than 150W require High Performance Heatsink (P27095-B21)
− 8-Channel DDR4 @ 3200 MT/s (lower DDR4 speed may be used in segment optimized processors (i.e. Cloud, NFV, etc).
− DIMMs need to be selected in even quantities. Using odd quantity of DIMMs in configurations will cause memory to be unbalanced and may negatively impact system performance.
− Support for Intel Optane Persistent Memory 200 Series, enabling up to 6TB memory per socket (does not work with SGX).
− ²Single socket capable, no dual socket support

3rd Generation Intel® Xeon® Scalable Processor Family

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<th>Power</th>
<th>UPI</th>
<th>DDR4</th>
<th>SGX Enclave size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold 5320 Processor</td>
<td>2.2 GHz</td>
<td>26</td>
<td>39 MB</td>
<td>185W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 5315Y Processor</td>
<td>3.2 GHz¹, 3.2GHz, 3.4GHz</td>
<td>8³, 6, 4</td>
<td>12MB</td>
<td>140W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 5317 Processor</td>
<td>3.0 GHz</td>
<td>12</td>
<td>18 MB</td>
<td>150W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 5318Y Processor</td>
<td>2.1 GHz³, 1.9GHz, 2.0GHz</td>
<td>24³, 24, 22</td>
<td>36MB</td>
<td>165W/150W/150W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>64GB</td>
</tr>
<tr>
<td>Gold 5318S Processor¹</td>
<td>2.1 GHz</td>
<td>24</td>
<td>36 MB</td>
<td>165W</td>
<td>3 @ 11.2 GT/s</td>
<td>2933 MT/s</td>
<td>512MB</td>
</tr>
</tbody>
</table>

Notes:
− Processors with TDP equal to or greater than 150W require High Performance Heatsink (P27095-B21)
− 8-channel DDR4 @ 2933 MT/s (lower DDR4 speed may be used in segment optimized processors (i.e. NFV, etc).
− DIMMs need to be selected in even quantities. Using odd quantity of DIMMs in configurations will cause memory to be unbalanced and may negatively impact system performance.
− Support for Intel Optane Persistent Memory 200 Series, enabling up to 6TB memory per socket (does not work with SGX).
QuickSpecs

HPE ProLiant DX380 Gen10 Plus Server

Standard Features

- 2 sockets capable, 3 UPI @ 11.2 GT/s.
- Advanced RAS, AVX-512 2 FMA, SGX 64GB, TME-MT 64 keys.
- 1Supports Intel® Speed Select Performance Profile (SST-P), even though not being a "Y" processor.
- 2Deterministic base frequency rating only applicable for NFV workloads. Other workloads may see throttling.
- 3Default Speed Select Performance Profile value.

### 3rd Generation Intel® Xeon® Scalable Processor Family

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<tr>
<th>Intel Xeon Models</th>
<th>CPU Frequency</th>
<th>Cores</th>
<th>L3 Cache</th>
<th>Power</th>
<th>UPI</th>
<th>DDR4</th>
<th>SGX Enclave size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver 4316 Processor</td>
<td>2.3 GHz</td>
<td>20</td>
<td>30 MB</td>
<td>150W</td>
<td>2 @ 10.4 GT/s</td>
<td>2667 MT/s</td>
<td>8GB</td>
</tr>
<tr>
<td>Silver 4314 Processor¹</td>
<td>2.4 GHz</td>
<td>16</td>
<td>24 MB</td>
<td>135W</td>
<td>2 @ 10.4 GT/s</td>
<td>2667 MT/s</td>
<td>8GB</td>
</tr>
<tr>
<td>Silver 4310 Processor</td>
<td>2.1 GHz</td>
<td>12</td>
<td>18 MB</td>
<td>120W</td>
<td>2 @ 10.4 GT/s</td>
<td>2667 MT/s</td>
<td>8GB</td>
</tr>
<tr>
<td>Silverv 4309Y Processor</td>
<td>2.8 GHz²</td>
<td>8³</td>
<td>12MB</td>
<td>105W²</td>
<td>2 @ 10.4 GT/s</td>
<td>2667 MT/s</td>
<td>8GB</td>
</tr>
<tr>
<td></td>
<td>2.6GHz</td>
<td>8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>2.3GHz</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

- Processors with TDP equal to or greater than 150W require High Performance Heatsink (P27095-B21)
- 8-channel DDR4 @ 2667 MT/s.
- DIMMs need to be selected in even quantities. Using odd quantity of DIMMs in configurations will cause memory to be unbalanced and may negatively impact system performance.
- 2 sockets capable, 2 UPI @ 10.4 GT/s.
- Standard RAS, AVX-512 2 FMA, SGX 8GB, TME-MT 64 keys.
- 1Supports Intel Optane Persistent Memory 200 Series, enabling up to 6TB memory per socket (does not work with SGX).
- 2Default Speed Select Performance Profile value.

Chipset

Intel C621A Chipset

Notes: For more information regarding Intel® chipsets, please see the following URL:

On System Management Chipset

HPE iLO 5 ASIC
Read and learn more in the iLO QuickSpecs.

Memory

One of the following depending on model.

<table>
<thead>
<tr>
<th>Type</th>
<th>HPE DDR4 Smart Memory, Registered (RDIMM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMM Slots Available</td>
<td>32 16 DIMM slots per processor, 8 channels per processor, 2 DIMMs per channel</td>
</tr>
<tr>
<td>Maximum capacity (LRDIMM)</td>
<td>8.0 TB 32 x 256 GB LRDIMM @ 3200 MT/s</td>
</tr>
<tr>
<td>Maximum capacity (RDIMM)</td>
<td>2.0 TB 32 x 64 GB RDIMM @ 3200 MT/s</td>
</tr>
<tr>
<td>Maximum capacity (Intel Optane Persistent Memory for HPE)</td>
<td>8.0 TB 16 X 512 GB Memory Modules</td>
</tr>
</tbody>
</table>

Notes: The maximum memory speed is limited by the processor selection.
Standard Features

Expansion Slots

Primary Riser

Notes:
- Bus width indicates the number of physical electrical lanes running to the connector.
- There are 3 types of risers supported on Primary Slot

<table>
<thead>
<tr>
<th>Primary Riser1</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,half-length slot</td>
<td>Proc 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary Riser2</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Primary Riser3</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1**</td>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>NA</td>
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<td>1</td>
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<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 1</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,half-length slot</td>
<td>Proc 1</td>
</tr>
</tbody>
</table>

Notes: ** Default Slot1 on the Primary Riser3 is empty and not available. It requires P14600-B21 in conjunction with the Primary Riser3 to add additional x16 PCIe Gen4 in slot1.

Secondary Riser

Notes:
- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There are 3 types of risers support on Secondary Slot

<table>
<thead>
<tr>
<th>Secondary Riser1</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td></td>
<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>6</td>
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<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,half-length slot</td>
<td>Proc 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Riser2</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Riser3</th>
<th>Slots #</th>
<th>Technology</th>
<th>Bus Width</th>
<th>Connector Width</th>
<th>Slot Form Factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4*</td>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
<td>Proc 2</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,half-length slot</td>
<td>Proc 2</td>
</tr>
</tbody>
</table>
**Standard Features**

Notes: * Default Slot4 on the Secondary Riser3 is empty and not available. It requires P14600-B21 in conjunction with the Secondary Riser3 to add additional x16 PCIe Gen4 in slot4.

**Tertiary Riser:**

Notes:
- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There are 2 types of risers support on Tertiary Slot

<table>
<thead>
<tr>
<th>Tertiary Riser1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slots #</td>
<td>Technology</td>
<td>Bus Width</td>
<td>Connector Width</td>
<td>Slot Form Factor</td>
</tr>
<tr>
<td>7</td>
<td>PCIe 4.0</td>
<td>X16</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
</tr>
<tr>
<td>8</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tertiary Riser2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slots #</td>
<td>Technology</td>
<td>Bus Width</td>
<td>Connector Width</td>
<td>Slot Form Factor</td>
</tr>
<tr>
<td>7</td>
<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
</tr>
<tr>
<td>8</td>
<td>PCIe 4.0</td>
<td>X8</td>
<td>X16</td>
<td>Full-height,full-length slot</td>
</tr>
</tbody>
</table>

**Graphics**

**Integrated Video Standard**
- Video modes up to 1920 x 1200@60Hz (32 bpp)
- 16MB Video Memory

**HPE iLO 5 on system management memory**
- 32 MB Flash
- 4 Gbit DDR 3 with ECC protection

**Maximum Internal Storage**

<table>
<thead>
<tr>
<th>Drive</th>
<th>Capacity</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Plug SFF SAS HDD</td>
<td>550.8 TB</td>
<td>24+8+4 x 15.3 TB* (with optional rear SFF drive cage)</td>
</tr>
<tr>
<td>Hot Plug SFF SATA HDD</td>
<td>276.48 TB</td>
<td>24+8+4 x 7.68 TB (with optional SFF drive cage)</td>
</tr>
<tr>
<td>Hot Plug LFF SAS HDD</td>
<td>367.68 TB</td>
<td>12+4+4 x 18 TB + 2 x 3.84 TB (with optional mid-tray and rear LFF drive cage, plus 2 SFF SSD rear)</td>
</tr>
<tr>
<td>Hot Plug LFF SATA HDD</td>
<td>367.68 TB</td>
<td>12+4+4 x 18 TB + 2 x 3.84 TB (with optional mid-tray and rear LFF drive cage, plus 2 SFF SSD rear)</td>
</tr>
<tr>
<td>Hot Plug SFF NVMe PCIe SSD</td>
<td>522.24 TB</td>
<td>24+8+2 x 15.36 TB NVMe</td>
</tr>
</tbody>
</table>

Notes: *UFF drives are also supported.

**Internal Storage Devices**

- **Hard Drives**
  None ship standard
Standard Features

Power Supply

- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  
  **Notes:**
  - Available in 94% and 96% efficiency.
  - Also available in -48VDC and 227VAC/380VDC power inputs.

- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  
  **Notes:** 1 available in 94% efficiency.

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Plus Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

The standard 6-foot IEC C-13/C-14 jumper cord (A0K02A) is included with each standard AC power supply option kit. If a different power cord is required, please check the ProLiant Power Cables web page. To review the power requirements for your selected system, please use the HPE Power Advisor Tool.

For information on power specifications and technical content visit HPE Server power supplies.

Tri-Mode Controller

- HPE MR216i-a Gen10 Plus Controller
  
  **Notes:** PE80xx NVMe drives are not supported.

Interfaces

<table>
<thead>
<tr>
<th>Interface</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial</td>
<td>Optional, rear</td>
</tr>
<tr>
<td>Display Port</td>
<td>1 optional front display port via Universal Media Bay</td>
</tr>
<tr>
<td>VGA Port</td>
<td>1 standard, rear for all chassis</td>
</tr>
<tr>
<td>Network Ports</td>
<td>None standard. Choice of OCP networking card or stand-up networking card required. BTO models will come pre-selected with a primary OCP networking card.</td>
</tr>
<tr>
<td>HPE iLO Remote Management Network Port</td>
<td>1 Gb Dedicated, rear</td>
</tr>
<tr>
<td>Front iLO Service Port</td>
<td>1 standard (Not available on 12 LFF chassis or when SID is ordered, note iLO dongle required. Hewlett Packard Enterprise recommends the HPE USB to Ethernet Adapter (part number Q7Y55A).)</td>
</tr>
<tr>
<td>Micro SD Slot</td>
<td>Optional via HPE 32GB microSD RAID1 USB Boot Device</td>
</tr>
<tr>
<td></td>
<td><strong>Notes:</strong> The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.</td>
</tr>
<tr>
<td>USB 3.0</td>
<td>Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media Bay, or standard on 8LFF chassis</td>
</tr>
<tr>
<td>SID (Systems Insight Display)</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td><strong>Notes:</strong> Not shipping as standard. Available as a CTO option or as a field upgrade (P27096-B21).</td>
</tr>
</tbody>
</table>

Operating Systems and Virtualization Software Support for ProLiant Servers

- 3rd Generation Intel® Xeon® Scalable Processor Family
- Nutanix Acropolis Operating System (AOS) Version 5.10.5 and higherNutanix Acropolis Hypervisor (AHV) Version 2017030.279 and higher
- **VMware vSphere:** Version 6.7 U3, 7.0, 7.0 U1, 7.0 U2
  
  **Notes:** The latest version of AOS and AHV are pre-installed in each server at the factory. vSphere must be installed separately.
Standard Features

**HPE Server UEFI/Legacy ROM**
Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen10 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.

*Notes:* The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit [http://www.hpe.com/servers/uefi](http://www.hpe.com/servers/uefi).

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:
- Secure Boot and Secure Start enable for enhanced security
- Embedded UEFI Shell
- Operating system specific functionality
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- Support for > 2.2 TB (using GPT) boot drives
- PXE boot support for IPv6 networks
- USB 3.0 Stack
- Workload Profiles for simple performance optimization

**UEFI Boot Mode only:**
- TPM 2.0 Support
- iSCSI Software Initiator Support.
- NVMe Boot Support
- HTTP/HTTPPs Boot support as a PXE alternative.
- Platform Trust Technology (PTT) can be enabled.
- Boot support for option cards that only support a UEFI option ROM

*Notes:*
- For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
- UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Plus Server.

**Industry Standard Compliance**
- ACPI 6.3 Compliant
- PCIe 4.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- VGA/Display Port
  *Notes:* This support is on the optional Universal Media Bay.
- USB 3.0 Compliant (internal)
- USB 2.0 Compliant (external ports via SUV)
  *Notes:* This support is on the optional Universal Media Bay.
- Energy Star
- SMBIOS 3.2
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 1.20 and 2.0 Support
- Advanced Encryption Standard (AES)
- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
QuickSpecs

HPE ProLiant DX380 Gen10 Plus Server

Standard Features

- Active Directory v1.0
- ASHRAE A3/A4
  Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit [http://www.hpe.com/servers/ashrae](http://www.hpe.com/servers/ashrae)
- EU Lot9
  Notes: European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements. Please visit: [https://www.hpe.com/us/en/about/environment/msds-specs-more.html](https://www.hpe.com/us/en/about/environment/msds-specs-more.html) for more information regarding HPE Lot 9 conformance.
- UEFI (Unified Extensible Firmware Interface Forum) 2.6
  Notes: UEFI is the default for the DL380 Gen10 Plus. Legacy mode can be selected in the field or as a CTO option (758959-B22); some configuration restrictions apply.

Embedded Management

HPE Integrated Lights-Out (HPE iLO)
Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at [http://www.hpe.com/info/ilo](http://www.hpe.com/info/ilo).

UEFI

Intelligent Provisioning
Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning. Learn more at [http://www.hpe.com/servers/intelligentprovisioning](http://www.hpe.com/servers/intelligentprovisioning).

iLO RESTful API
iLO RESTful API is Redfish API conformance and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at [http://www.hpe.com/info/restfulapi](http://www.hpe.com/info/restfulapi).

Server Utilities

Active Health System
The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at [http://www.hpe.com/servers/ahs](http://www.hpe.com/servers/ahs).

Active Health System Viewer
Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: [http://www.hpe.com/servers/ahsv](http://www.hpe.com/servers/ahsv).

Smart Update
Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP).

iLO Amplifier Pack
Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities. Learn more at [http://www.hpe.com/servers/iLOamplifierpack](http://www.hpe.com/servers/iLOamplifierpack).

HPE iLO Mobile Application
Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices.
Standard Features

devices. For additional information please visit: http://www.hpe.com/info/ilo/mobileapp.

RESTful Interface Tool
RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at http://www.hpe.com/info/resttool.

Scripting Tools
Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at http://www.hpe.com/servers/powershell.

HPE OneView Standard
HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at http://www.hpe.com/info/oneview.

HPE Systems Insight Manager (HPE SIM)
Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at http://www.hpe.com/info/hpesim.

Security
- UEFI Secure Boot and Secure Start support
- Tamper-free updates – components digitally signed and verified
- Immutable Silicon Root of Trust
- Ability to rollback firmware
- FIPS 140-2 validation
- Secure erase of NAND/User data
- Common Criteria certification
- TPM (Trusted Platform Module) 1.2 option
- Configurable for PCI DSS compliance
- TPM (Trusted Platform Module) 2.0 option
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Bezel Locking Kit option
- Support for Commercial National Security Algorithms (CNSA)
- Chassis Intrusion detection option
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware

Warranty
This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Services operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

Notes: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:
Optional Features

Server Management

HPE iLO Advanced
HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality.

HPE OneView Advanced
HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides fullfeatured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers.
To learn more visit http://www.hpe.com/info/oneview.

HPE InfoSight for Servers
HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time and missed business opportunities.
Learn more at https://www.hpe.com/servers/infosight.

HPE Insight Cluster Management Utility (CMU)
HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at http://www.hpe.com/info/cmu.

One Config Simple (SCE)
SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.
https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.

HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°C, include color-coded outlets and load segments and a low-profile design for optimal access to the rack and support for dense rack environments.

HPE Uninterruptible Power Systems are cost-effective power protection for any type workload. Some UPSs include options for remote management and extended runtime modules so you're critical dense data center is covered in power outages.
HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We've got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

Learn more about HPE Racks, KVM, PDUs and UPSs at HPE Rack and Power Infrastructure.
Service and Support

HPE Services
No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services

Consulting Services
No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.
https://www.hpe.com/services/consulting

HPE Managed Services
HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.
HPE Managed Services | HPE

Operational Services
Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational

HPE Complete Care Service
HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:
- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience
https://www.hpe.com/services/completecare

HPE Tech Care Service
HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/services/techcare
HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- **Lifecycle Install and Startup Services**: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- **HPE Firmware Update Analysis Service**: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- **HPE Firmware Update Implementation Service**: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- **Implementation assistance services**: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- **HPE Service Credits**: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

**Notes:** To review the list of Lifecycle Services available for your product go to: [https://www.hpe.com/services/lifecycle](https://www.hpe.com/services/lifecycle)

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](https://www.hpe.com/services/training)

### Other Related Services from HPE Services:

#### HPE Education Services
Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. 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.

[https://www.hpe.com/services/training](https://www.hpe.com/services/training)

#### Defective Media Retention
An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

#### Parts and Materials
HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

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.

### How to Purchase Services
Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at [https://ssc.hpe.com/portal/site/ssc/](https://ssc.hpe.com/portal/site/ssc/)
Service and Support

AI Powered and Digitally Enabled Support Experience
Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience.

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms
HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"


For more information
http://www.hpe.com/services
QuickSpecs

Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

- Factory Integrated Models must start with a CTO Server.
- FIO indicates that this option is only available as a factory installable option.
- All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Step 1: Base Configuration

(choose one (1) of the following three (3) configurable server models from the tables below)

<table>
<thead>
<tr>
<th>CTO Server Models</th>
<th>HPE ProLiant DX380 Gen10 Plus 12LFF CTO Server</th>
<th>HPE ProLiant DX380 Gen10 Plus 8SFF CTO Server</th>
<th>HPE ProLiant DX380 Gen10 Plus 24SFF CTO Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKU Number</td>
<td>P56703-B21</td>
<td>P56704-B21</td>
<td>P56705-B21</td>
</tr>
<tr>
<td>Processor</td>
<td>Not included as standard</td>
<td>Not included as standard</td>
<td>Not included as standard</td>
</tr>
<tr>
<td>DIMM Slots</td>
<td>32-DIMM slots</td>
<td>32-DIMM slots</td>
<td>32-DIMM slots</td>
</tr>
<tr>
<td>Storage Controller</td>
<td>1 x MR216i-a</td>
<td>1 x MR216i-a</td>
<td>1 x MR216i-p + 1 x MR216i-p</td>
</tr>
<tr>
<td>PCIe</td>
<td>Three standard in primary riser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive Cage - included</td>
<td>12 LFF</td>
<td>8 SFF</td>
<td>24 SFF</td>
</tr>
<tr>
<td>Network Controller</td>
<td>Choice of either OCP 3.0 or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters</td>
<td>Notes: No embedded networking</td>
<td></td>
</tr>
<tr>
<td>Fans</td>
<td>6-Performance</td>
<td>6-Performance</td>
<td>6-Performance</td>
</tr>
<tr>
<td>Management</td>
<td>HPE iLO Advance with 3 year support (standard)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td>None as standard</td>
<td>1x 3.0 standard plus iLo front service port</td>
<td>1x 3.0 standard plus iLo front service port</td>
</tr>
</tbody>
</table>

Notes:
- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen10 Plus CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen10 Plus Server is re-branded as a HPE ProLiant DL380T Gen10 Plus to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen10 Plus is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See “HPE Security” section within this document for more detail and learn more at http://www.hpe.com/security
- HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- All CTO servers are Energy Star 3.0 compliant.

Step 2: Choose Required Options

Please select up to two processors required below.

Notes:
- Maximum memory capacity per processor is dependent on processor models. All processors support up to 6 TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
## Step 2a: Choose Processors

### Processor Option Kits (Required Processor)

#### 3rd Generation Intel Xeon-Platinum

**Notes:**
- Field upgrades from 1st generation processors (x1xx) or 2nd generation processors (x2xx) to 3rd generation processors (x3xx) not supported.
- All SKUs below ship with processor only.

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon-Platinum 8380 2.3GHz 40-core 270W Processor for HPE</td>
<td>P36941-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8368 2.4GHz 38-core 270W Processor for HPE</td>
<td>P36940-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8362 2.8GHz 32-core 265W Processor for HPE</td>
<td>P45418-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8360Y 2.4GHz 36-core 250W Processor for HPE</td>
<td>P36939-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8358 2.6GHz 32-core 250W Processor for HPE</td>
<td>P36938-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8358P 2.6GHz 32-core 240W Processor for HPE</td>
<td>P45414-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8352M 2.3GHz 32-core 185W Processor for HPE</td>
<td>P45414-B21</td>
</tr>
<tr>
<td>Intel Xeon-Platinum 8352V 2.1GHz 36-core 195W Processor for HPE</td>
<td>P37599-B21</td>
</tr>
</tbody>
</table>

**Notes:** Requires H DIMM blanks kit (P07818-B21).

#### 3rd Generation Intel Xeon-Gold

**Notes:** Field upgrades from 1st generation processors (x1xx) or 2nd generation processors (x2xx) to 3rd generation processors (x3xx) not supported.

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon-Gold 6330 2.0GHz 28-core 205W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43446-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6338 2.0GHz 32-core 205W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43447-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6346 3.1GHz 16-core 205W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43451-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6354 3.0GHz 18-core 205W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43452-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6348 2.6GHz 28-core 235W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43454-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6342 2.8GHz 24-core 230W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43453-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6336Y 2.4GHz 24-core 185W Processor for HPE</td>
<td>P36926-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6334 3.6GHz 8-core 165W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43450-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6326 2.9GHz 16-core 185W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43449-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 6314U 2.3GHz 32-core 205W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43458-B21</td>
</tr>
</tbody>
</table>

**Notes:** Single socket capable, no dual socket support.

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon-Gold 6312U 2.4GHz 24-core 185W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43459-B21</td>
</tr>
</tbody>
</table>

**Notes:** Single socket capable, no dual socket support.

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon-Gold 5320 2.2GHz 26-core 185W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43445-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 5317 3.0GHz 12-core 150W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43448-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 5318S 2.1GHz 24-core 165W Processor for HPE</td>
<td>P37612-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W Processor for HPE</td>
<td>P36924-B21</td>
</tr>
<tr>
<td>Intel Xeon-Gold 5315Y 3.2GHz 8-core 140W Processor for HPE</td>
<td>P36930-B21</td>
</tr>
</tbody>
</table>

#### 3rd Generation Intel Xeon-Silver

**Notes:**
- All SKUs below ship with processor only.
- 2667 MT/S maximum memory speed.
- 8GB SGX Enclave unless otherwise noted.

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon-Silver 4316 2.3GHz 20-core 150W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43444-B21</td>
</tr>
<tr>
<td>Intel Xeon-Silver 4314 2.4GHz 16-core 135W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43443-B21</td>
</tr>
<tr>
<td>Intel Xeon-Silver 4310 2.1GHz 12-core 120W FIO Processor for HPE DX Gen10 Plus</td>
<td>P43442-B21</td>
</tr>
</tbody>
</table>
**Step 2b: Choose Memory Options**

Please select one or more memory from below.

For new Gen10 Plus memory population rule whitepaper and optimal memory performance guidelines, please go to: [HPE Memory Population Rules](https://www.hpe.com/docs/memory-population-rules)

For Gen10 Plus memory speed table, please go to: [https://www.hpe.com/docs/memory-speed-table](https://www.hpe.com/docs/memory-speed-table)

For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: [http://www.hpe.com/docs/memory-ras-feature](http://www.hpe.com/docs/memory-ras-feature)

**Notes:**
- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- DDR4-3200 Memory Kits are only supported with 3rd Generation Intel Xeon Scalable Series Processors.
- Memory compatibility may vary or be limited within a specific server family depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for a server model or family and yet occasionally not be supported with limited configurations within that server family.
- Please consult with the HPE server Quickspecs or your HPE representative if you have any questions regarding memory compatibility with a specific HPE server configuration.

**Registered DIMMs (RDIMMs)**

- HPE DX 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart FIO Memory Kit
- HPE DX 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart FIO Memory Kit
- HPE DX 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart FIO Memory Kit
- HPE DX 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart FIO Memory Kit
- HPE DX 32GB (1x32GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart FIO Memory Kit

**Notes:**
- 3200 MT/s memory SKUs offer a transfer rate of 3200 MT/s at 1 DIMM per channel and at 2 DIMMs per channel
- Mixing of LRDIMM and RDIMM is not supported
- Mixing of 3DS memory and non-3DS memory is not supported

**Load Reduced DIMMs (LRDIMMs)**

- HPE DX 128GB (1x128GB) Quad Rank x4 DDR4-3200 CAS-22-22-22 Load Reduced Smart FIO Memory Kit
- HPE DX 256GB (1x256GB) Octal Rank x4 DDR4-3200 CAS-26-22-22 3DS Load Reduced Smart FIO Memory Kit

**Memory Blank Kit**

- HPE DDR4 DIMM Blank Kit

**Notes:** Qty 1 of DIMM Blank kit (P07818-B21) Required only when configuration includes the population of a mid tray kit (P26919-B21 or P27193-B21 or P39769-B21) and memory quantity is less than 32.

**Step 2c: Choose Power Supplies**

Select one or two power supplies from below.

**Notes:** Mixing of 2 different power supplies is NOT allowed.

**HPE Flex Slot Power Supplies**

- HPE DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit
- HPE DX 800W Flex Slot Titanium Hot Plug Low Halogen FIO Power Supply Kit
- HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit
- HPE DX 800W Flex Slot -48VDC Hot Plug Low Halogen FIO Power Supply Kit

**Notes:**
- Select a minimum (1), maximum (2) power supplies.
Configuration Information

- 1600W Power supplies only support high line voltage (200VAC to 240VAC).
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: http://www.hpe.com/info/hppoweradvisor.
- All power supplies in a server should match. Mixing Power Supplies is not supported.
- HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit HPE power cords for a full list of optional power cords.

Step 3: Choose Additional Factory Integratable Options
One of the following from each list may be selected if desired at time of factory integration

**HPE Security Options**

HPE iLO Common Password FIO Setting

**Notes:**
- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE DX Trusted Platform Module 2.0 Gen10 Plus FIO Black Rivets Kit

**Step 4: Choose additional options for Factory Integration from Core and Additional Options sections below**
Core Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

HPE Hard Disk Drives

Enterprise - 12G SAS - SFF Drives
HPE DX 2.4TB SAS 12G Mission Critical 10K SFF BC 1-year Warranty 512e FIO HDD P43382-B21

Midline - 12G SAS - SFF Drives
HPE DX 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e ISE FIO HDD P43289-B21

Midline - 12G SAS - LFF Drives
HPE DX 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE FIO HDD P43286-B21
HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 834031-B21
HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD 833928-B21
HPE DX 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware FIO HDD P17963-B21
  • Standalone: 833928-B21
HPE DX 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware FIO HDD P17965-B21
  • Standalone: 834031-B21
HPE DX 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty HE 512e Digitally Signed Firmware FIO HDD P17966-B21
  • Standalone: 881781-B21
HPE DX 16TB SAS 12G Business Critical 7.2K LFF (3.5in) LP 1yr Wty 512e ISE FIO HDD P35152-B21
  • Standalone: P23608-B21

SSD Selection

For SSD selection guidance, please visit https://ssd.hpe.com/

Notes:
- For non-SED SAS4 drives: 24G SAS speeds require U.3 backplane/cage and choice of either SR932i-p, or SR416i-a Tri-Mode controller. Otherwise downclocks to 12G SAS.
- For SED SAS4 drives: SED capability requires choice of either MR416i-a, MR416i-p, MR216i-a or MR216i-p Tri-Mode controller and will run at 12G speeds.

Read Intensive - 24G SAS - SFF - Solid State Drives
HPE DX 3.84TB SAS 24G Read Intensive SFF BC PM1653 FIO SSD P56759-B21
  • Standalone HPE DX 3.84TB SAS Read Intensive SFF BC PM1653 SSD (P57573-B21)
HPE DX 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor FIO SSD P56763-B21
  • Standalone HPE DX 7.68TB SAS Read Intensive SFF BC MV SSD (P57581-B21)

Read Intensive – 6G SATA – SFF Basic Carrier Solid State Drives
HPE DX 1.92TB SATA 6G Read Intensive SFF BC S4520 FIO SSD P56749-B21
  • Standalone HPE 1.92TB SATA Read Intensive SFF BC S4520 SSD (P47320-B21)
HPE DX 1.92TB SATA 6G Read Intensive SFF BC PM893 FIO SSD P56739-B21
  • Standalone HPE 1.92TB SATA Read Intensive SFF BC PM893 SSD (P44009-B21)
HPE DX 3.84TB SATA 6G Read Intensive SFF BC S4520 FIO SSD P56753-B21
  • Standalone HPE 3.84TB SATA Read Intensive SFF BC S4520 SSD (P47322-B21)
HPE DX 3.84TB SATA 6G Read Intensive SFF BC PM893 FIO SSD P56743-B21
  • Standalone: HPE 3.84TB SATA Read Intensive SFF BC PM893 SSD (P44010-B21)
HPE DX 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor FIO SSD P56767-B21
  • Standalone: P57569-B21
## Core Options

### Read Intensive - 24G SAS - LFF - Solid State Drives

- HPE DX 3.84TB SAS 24G Read Intensive LFF LPC PM1653 SSD
  - Standalone HPE DX 3.84TB SAS Read Intensive LFF LPC PM1653 SSD (P57553-B21)
- HPE DX 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor FIO SSD
  - Standalone HPE DX 7.68TB SAS Read Intensive LFF LPC MV SSD (P57561-B21)
- HPE DX 3.84TB SAS 12G Read Intensive SFF BC Self-encrypting FIPS PM6 FIO SSD
  - Standalone: P41398-B21
- HPE DX 15.36TB SAS 24G Read Intensive LFF LPC Multi Vendor FIO SSD
  - Standalone: P57568-B21

### Read Intensive – 6G SATA – LFF Low Profile Carrier Solid State Drives

- HPE DX 1.92TB SATA 6G Read Intensive LFF LPC S4520 SSD
  - Standalone HPE DX 1.92TB SATA Read Intensive LFF LPC S4520 SSD (P57541-B21)
- HPE DX 1.9TB SATA 6G Read Intensive LFF LPC PM893 SSD
  - Standalone HPE DX 1.9TB SATA Read Intensive LFF LPC PM893 SSD (P57533-B21)
- HPE DX 3.84TB SATA 6G Read Intensive LFF LPC S4520 SSD
  - Standalone: P57546-B21

### Mixed Use - 24G SAS - SFF - Solid State Drives

- HPE DX 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor FIO SSD
  - Standalone HPE DX 3.2TB SAS Mixed Use SFF BC MV SSD (P57637-B21)
- HPE DX 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor FIO SSD
  - Standalone HPE DX 6.4TB SAS Mixed Use SFF BC MV SSD (P57641-B21)

### Mixed Use - 6G SATA - SFF - Solid State Drives

- HPE DX 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor FIO SSD
  - Standalone HPE DX 1.92TB SATA Mixed Use SFF BC PM897 SSD (P44013-B21)
- HPE DX 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor FIO SSD
  - Standalone: P57635-B21

### Mixed Use - 12G SAS - LFF - Solid State Drives

- HPE DX 1.6TB SAS 12G Mixed Use LFF LPC Multi Vendor FIO SSD
  - Standalone HPE DX 1.6TB SAS Mixed Use LFF LPC MV SSD (P57629-B21)
- HPE DX 3.2TB SAS 24G Mixed Use LFF LPC Multi Vendor FIO SSD
  - Standalone HPE DX 3.2TB SAS Mixed Use LFF LPC MV SSD (P57613-B21)
- HPE DX 6.4TB SAS 24G Mixed Use LFF LPC Multi Vendor FIO SSD
  - Standalone: P57609-B21

### Mixed Use - 6G SATA - LFF - Solid State Drives

- HPE DX 960GB SATA 6G Mixed Use LFF LPC PM897 SSD
- HPE DX 1.92TB SATA 6G Mixed Use LFF LPC S4620 SSD
  - Standalone HPE DX 1.92TB SATA Mixed Use LFF LPC S4620 SSD (P57525-B21)
- HPE DX 1.92TB SATA 6G Mixed Use LFF LPC PM897 SSD
  - Standalone: P57517-B21
Core Options

Read Intensive – NVMe U.3 – SFF Basic Carrier Solid State Drives

**Notes:** Mixing of HDD and NVMe drives not allowed.

**Notes:** DX380 Gen10 plus 8SFF does not support NVMe

- HPE DX 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a FIO SSD • Standalone: P50216-B21
- HPE DX 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a FIO SSD • Standalone: P50219-B21
- HPE DX 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a FIO SSD • Standalone: P50222-B21
- HPE DX 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a FIO SSD • Standalone: P50224-B21

Mixed Use – NVMe U.3 – SFF Basic Carrier Solid State Drives

**Notes:** Mixing of HDD and NVMe drives not allowed.

**Notes:** DX380 Gen10 plus 8SFF does not support NVMe

- HPE DX 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a FIO SSD • Standalone: P50230-B21
- HPE DX 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a FIO SSD • Standalone: P50233-B21

HPE Networking

1 Gigabit Ethernet adapters

- Intel i350-T4 Ethernet 1Gb 4-port BASE-T FIO Adapter for HPE DX

10 Gigabit Ethernet adapters

**Notes:** Unless otherwise noted, one of the below 10Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen10 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either a FlexibleLOM or select PCIe networking adapter.

- Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T FIO Adapter for HPE DX

25 Gigabit Ethernet adapters

**Notes:** Unless otherwise noted, one of the below 10/25Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen10 Plus NC CTO chassis does not come with embedded networking, hence the requirement to configure with either an OCP3 or select PCIe networking adapter.

- Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 FIO Adapter for HPE DX
- DX BCM S7414 10/25GbE 2p SFP28 FIO Adapter for HPE DX • Standalone: P26262-B21

100 Gigabit Ethernet Adapters

- Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 FIO Adapter for HPE DX
Core Options

Recommended System Ambient Temperature

<table>
<thead>
<tr>
<th>System Config</th>
<th>P31246-B21</th>
<th>P25960-B21</th>
</tr>
</thead>
<tbody>
<tr>
<td>8LFF</td>
<td>25C</td>
<td>25C</td>
</tr>
<tr>
<td>24SFF</td>
<td>25C</td>
<td>25C</td>
</tr>
<tr>
<td>8SFF</td>
<td>30C</td>
<td>30C</td>
</tr>
</tbody>
</table>

Other Restrictions
1. These cards are not supported with 12LFF CTO config.
2. These cards are not supported with mid-tray drive cages for both LFF/SFF chassis.
3. Required to use Max Performance Fan Kit
4. Only supported on 1/4/5 PCIe slots

Notes:
- A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
- Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information:
  Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE

Other Restrictions
1. These cards are not supported with 12LFF CTO config.
2. These cards are not supported with mid-tray drive cages for both LFF/SFF chassis.
3. Required to use Max Performance Fan Kit
4. Only supported on 1/4/5 PCIe slots

OCP 3.0 Adapters

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 FIO Adapter for HPE DX
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 FIO Adapter for HPE DX
Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 FIO Adapter for HPE DX
DXBCM 57414 10/25G 2p SFP28 OCP3 FIO Adapter for HPE DX
- Standalone: P10115-B21
Mellanox MCX63142AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Standalone: P10115-B21

Notes: Adapter operates in either x8 or x16 mode. If x16 is desired, must select the HPE ProLiant DL300 Gen10 Plus OCP x16 Enablement Kit (P36661-B21)

OCP 3.0 Enablement

HPE ProLiant DL300 Gen10 Plus OCP x16 Enablement Kit

HPE I/O Expansion Options

Notes:
- The Primary Riser shipping default in the chassis is a x8 FH, FL, x16 FH, FL and x8 FH, HL.
- For a Secondary/Tertiary riser, the second processor is required.

HPE DX Gen10 Plus x8/x16/x8 Secondary FIO Riser Kit
- Standalone: P24345-B21

Notes: Requires selection of a 2nd processor

HPE DX Gen10 Plus x2x2/x16 Tertiary FIO Riser Kit
- Standalone: P24344-B21

Notes: Requires selection of a 2nd processor

HPE DL38X Gen10 Plus x16 Tertiary Riser Kit
- Standalone: P42680-B21

Notes: Requires selection of a 2nd processor
Core Options

HPE ProLiant DX38x Gen10 Plus x16/x16 Slot 1/2 Secondary FIO Riser Kit
   • Standalone HPE DL38X Gen10+ 2x16 Slot 1/2 Riser Kit (P14589-B21)

Notes: Requires selection of a 2nd processor

HPE ProLiant DX38x Gen10 Plus x16/x16 Slot 2/3 FIO Riser Kit
   • Standalone HPE DL38X Gen10+ 2x16 Slot 2/3 Riser Kit (P14590-B21)

Notes: Requires selection of a 2nd processor

HPE DL38X Gen10 Plus Primary/Secondary Riser Cage without Retainer Clip
   P38771-B21

HPE DL38X Gen10 Plus Tertiary Riser Cage without Retainer Clip
   P38774-B21

HPE DL38X Gen10 Plus x8/x16/x8 Secondary Riser Kit
   P14587-B21

Notes: Requires selection of a 2nd processor

HPE Power Supplies

HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit
   865438-B21

Notes: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.

HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit
   865434-B21

Notes: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit
   865428-B21

Notes: Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
   P38995-B21

Notes: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE DX 1000W Flex Slot Titanium Hot Plug FIO Power Supply Kit
   P44807-B21

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
   P38997-B21

Notes: Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).

HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit
   P17023-B21

Notes: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

HPE 1600W -48VDC Power Cable Lug Kit
   P36877-B21

HPE Computation and Graphics Accelerators

NVIDIA Tesla T4 16GB FIO Computational Accelerator for HPE DX
   P17819-B21

Notes:
   − If more than one GPU is selected, the GPU SKU numbers must match; Mixing of GPUs is not allowed.
   − This option requires the High Performance Fan Kit (P14608-B21) to be selected.
   − If this option is being configured into a 12LFF Model-X or 24SFF Model-X, this rule does not apply as these models already come standard with the High Performance Fans.
   − This option requires the selection of the High Performance Heatsink (P27095-B21)
   − Max of 8 NVMe Drives allowed for selection with this Graphics Option (All NVMe Drives selected must be below 11W).
Core Options

- If NVMe Drive is selected with this Graphics Option then it can be populated in front cage only. Please consider this limitation while selecting Drives and Drive Cage.
- This Graphics option and SAS4 Drives cannot be selected together
- Graphics Option and 100Gb or above PCIe Networking/ Infiniband/ Smart IO (HW) Cards cannot be selected together.

GPU Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Card</th>
<th>Qty</th>
<th>PCIe</th>
<th>8 SFF</th>
<th>24 SFF if &gt;1 SFF if &gt;1 SFF is NVMe storage</th>
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<td>NVIDIA A100 80GB PCIe NonCEC Accelerator</td>
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Notes:

- 1Supported on CPUs with 270W TDP or below.
- 2Temperatures shown in column are for ambient temperature in degrees Celsius.
- 3Requires DL300 Gen10 Plus GPU 2x8p Cable Kit (P39100-B21)
- 4Could observe sub-optimal performance if installed in x8 slot.
- 5Requires HPE DL300 Gen10 Plus GPU 8p Keyed Cable Kit (P39102-B21)
- System memory should be 2x GPU memory.
- There is no Energy Star certification with Graphic cards.
Additional Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

Embedded Management

**HPE iLO Common Password FIO Setting**
HPE iLO Common Password FIO Setting

P08040-B21

**HPE Security**
HPE iLO Common Password FIO Setting

P08040-B21

**Notes:**
- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE DX Gen10 Plus Chassis Intrusion FIO Detection Kit

P24373-B21

**Notes:** This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit

P13771-B21

**Notes:** HPE Trusted Platform Module 2.0 option works with Gen10 Plus servers with UEFI Mode not Legacy Mode. It is not compatible with earlier generation HPE ProLiant server variants.

**HPE Boot Controllers**
HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device

P12965-B21

**HPE Smart Array Controllers**
The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the [HPE Smart Array Gen10 Controllers Data Sheet](#).

**HPE Flexible Smart Array Essential Controllers**
HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller

804326-B21

**HPE Tri-Mode Controllers**
Microchip SmartRAID SR416i-a x16 Lanes 4GB Cache NVMe/SAS 24G Controller for HPE Gen10 Plus

P12688-B21

**Notes:**
- Requires x16 riser slot
- MegaRAID tools cannot be used to script and configure SmartRAID controllers
Additional Options

Easy Install Rail Kits
Easy Install rail kits contain telescoping rails which allow for in-rack serviceability. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative.

Notes: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

HPE ProLiant DX38x Gen10 Plus 2U SFF Easy Install FIO Rail Kit
  • HPE DL38x Gen10 Plus 2U SFF Easy Install Rail Kit

Notes: Does not include CMA (P22020-B21).

HPE DX38X Gen10 Plus 2U LFF Easy Install FIO Rail Kit
  • Standalone HPE DL38X Gen10+ 2U LFF Easy Install Rail Kit (P22019-B21)

Notes: Does not include CMA (P22020-B21).
Memory Population guidelines

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<td></td>
</tr>
</tbody>
</table>

Notes:
- Omitted DIMM counts/socket not qualified by Intel.
- Required by Sub-NUMA Cluster (SNC) configurations, must be ordered with 12 DIMM SNC2 FIO Enable Kit (P26933-B21).

General Memory Population Rules and Guidelines:
- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, and the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit: [https://www.hpe.com/docs/intel-population-rules-Gen10plus](https://www.hpe.com/docs/intel-population-rules-Gen10plus)
- To realize the performance memory capabilities listed in this document, HPE DDR4 Smart Memory is required.
- For additional information, please see the [HPE DDR4 Smart Memory QuickSpecs](https://www.hpe.com/docs/intel-population-rules-Gen10plus).
Memory

**DDR4 memory options part number decoder**

**Notes:**
- Capacity references are rounded to the common gigabyte (GB) values.
  - 8GB = 8,192 MB
  - 16GB = 16,384 MB
  - 32GB = 32,768 MB
  - 64GB = 65,536 MB
  - 128GB = 131,072 MB
  - 256GB = 262,144 MB
  - 512GB = 524,288 MB

For more information on memory, please see the Memory Quickspecs: [HPE DDR4 Smart Memory](https://www.hpe.com/psnow/doc/a00019564enw)

**Memory Speed Table for HPE ProLiant DL380 Gen 10 Plus**

For details on the HPE Server Memory speed, please visit: [https://www.hpe.com/psnow/doc/a00019564enw](https://www.hpe.com/psnow/doc/a00019564enw)
Storage

8LFF chassis with Universal media bay and optional 2SFF and optical drive shown

12 LFF chassis

24 SFF + rear 2 SFF drives
Technical Specifications

System Unit

Dimensions
- **SFF Drives:**
  8.75 x 44.54 x 71. cm / 3.44 x 17.54 x 28 in
- **LFF Drives:**
  8.75 x 44.54 x 74.9 cm / 3.44 x 17.54 x 29.5 in

Weight (approximate)
- **Maximum:** 8 SFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed
  - **Maximum:** 28.77 kg / 63.43 lbs
  - **Minimum:** 16.12 kg / 35.54 lbs
- **Maximum:** 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed
  - **Maximum:** 33.99 kg / 74.94 lbs
  - **Minimum:** 22.48 kg / 49.56 lbs

Input Requirements (per power supply)

Rated Line Voltage
- For 1600W (Platinum) Power Supply: 200-240 VAC
- For 1000W (Titanium) Power Supply: 100-240 VAC
- For 800W (Titanium) Power Supply: 200-240 VAC
- For 800W (Platium) Power Supply: 100-240 VAC
- For 800W (Universal) Power Supply: 200-277 VAC
- For 800W (-48VDC) Power Supply: -40 Vdc to -72 Vdc

BTU Rating

Maximum
- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)
- For 1000W (Titanium) Power Supply: 3764 BTU/hr (at 100 VAC), 3629 BTU/hr (at 200 VAC), 3616 BTU/hr (at 240 VAC)
- For 800W (Titanium) Power Supply: 2905 BTU/hr (at 200 VAC), 2899 BTU/hr (at 220 VAC), 2893 BTU/hr (at 240 VAC)
- For 800W (Platinum) Power Supply: 3067 BTU/hr (at 100 VAC), 2958 BTU/hr (at 200 VAC), 2949 BTU/hr (at 240 VAC)
- For 800W (Universal) Power Supply: 2964 BTU/hr (at 200 VAC), 2951 BTU/hr (at 230 VAC), 2936 BTU/hr (at 277 VAC)
- For 800W (-48VDC) Power Supply: 2983 BTU/hr (at -40 Vdc), 2951 BTU/hr (at -48Vdc), 2912 BTU/hr (at -72Vdc)

Relative Humidity (non-condensing)
- **Operating**
  8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
- **Non-operating**
  5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Power Supply Output
(per power supply)

**Rated Steady-State Power**
- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1000W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)

**Maximum Peak Power**
- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1000W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)

System Inlet Temperature

- **Standard Operating Temperature**
  10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

  System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

- **Extended Ambient Operating Temperature**
  For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: [http://www.hpe.com/servers/ashrae](http://www.hpe.com/servers/ashrae)

  For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: [http://www.hpe.com/servers/ashrae](http://www.hpe.com/servers/ashrae)

  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

- **Non-operating**
  -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

Altitude

- **Operating**
  3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

- **Non-operating**
  9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Technical Specifications

Acoustic Noise
Listed are the declared A-Weighted sound power levels ($L_{WAd}$) and declared average bystander position A-Weighted sound pressure levels ($L_{pAm}$) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

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<th>Idle</th>
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<tr>
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<td>4.8 B Entry</td>
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<td>4.4 B Base</td>
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<td>31 dBA Perf</td>
<td>31 dBA Perf</td>
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Notes:
- Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.
- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
- The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Emissions Classification (EMC) – Regulatory Information
To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:
http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

HPE Smart Array
For latest information on HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

Environment-friendly Products and Approach End-of-life Management and Recycling
Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.
## Summary of Changes

<table>
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<td>Changed</td>
<td>HPE Services Rebranding</td>
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<td>05-Sep-2023</td>
<td>Version 9</td>
<td>Changed</td>
<td>Updated GPU information</td>
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<tr>
<td>24-Jul-2023</td>
<td>Version 8</td>
<td>Changed</td>
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<td>New QuickSpecs</td>
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