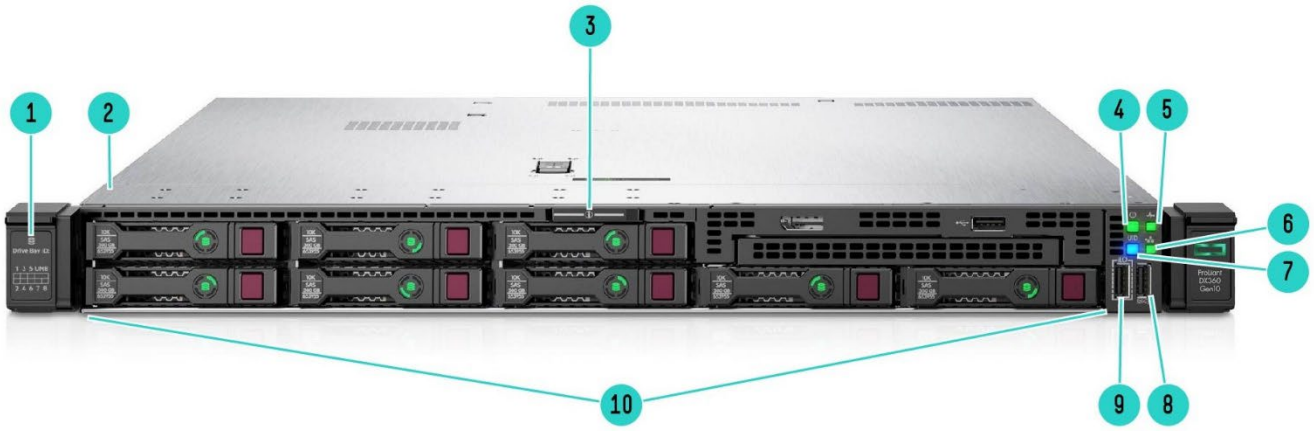
Overview

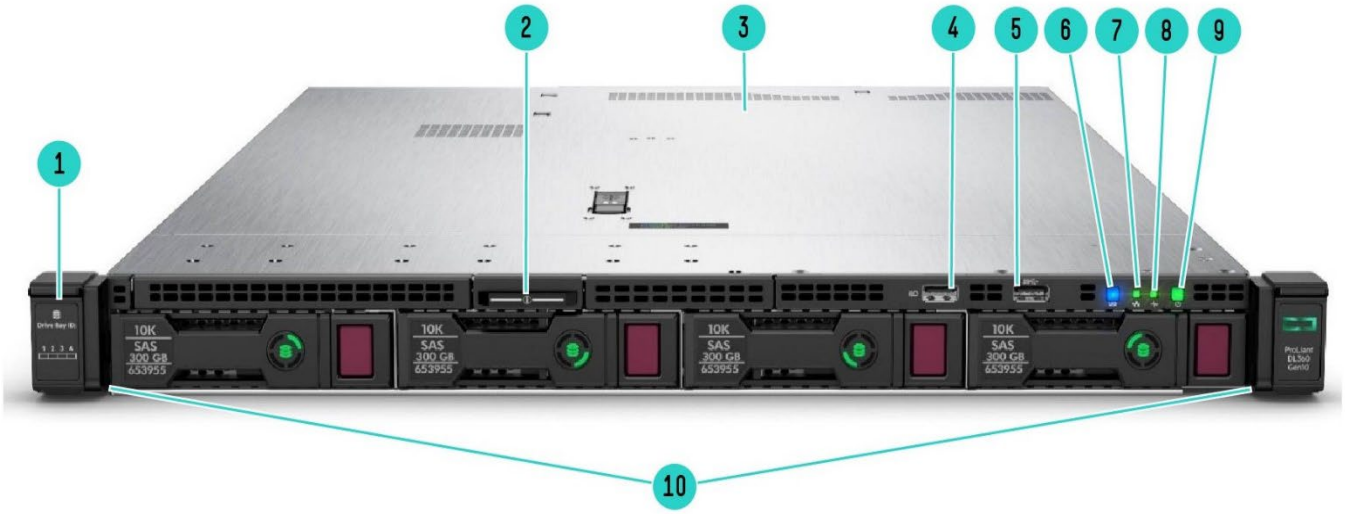
HPE ProLiant DX360 Gen10 server



8 SFF Front View

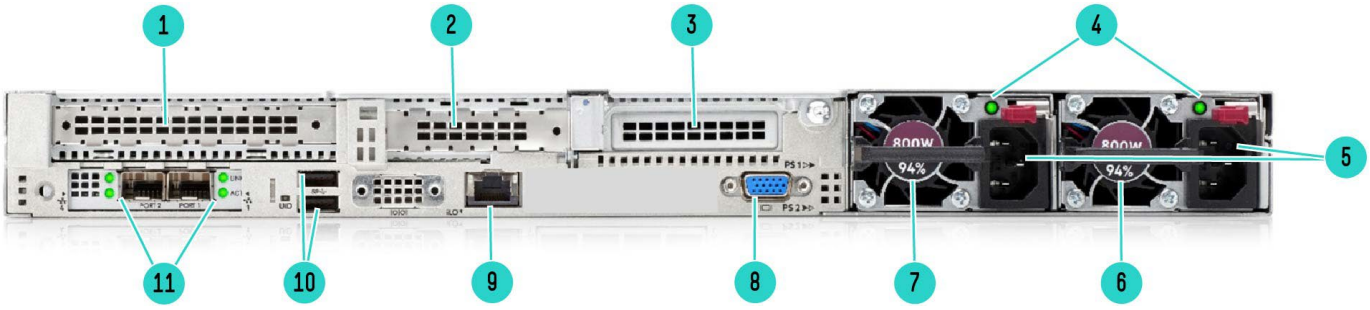
1. Drive support label
2. Quick removal access panel
3. Serial no. label pull tab
4. Power On/Standby button and system power LED
5. Health LED
6. NIC status LED
7. UID button/LED
8. USB 3.0 port
9. iLO service port
10. Standard 8 SAS/SATA drive bays

Overview



4 LFF Front View

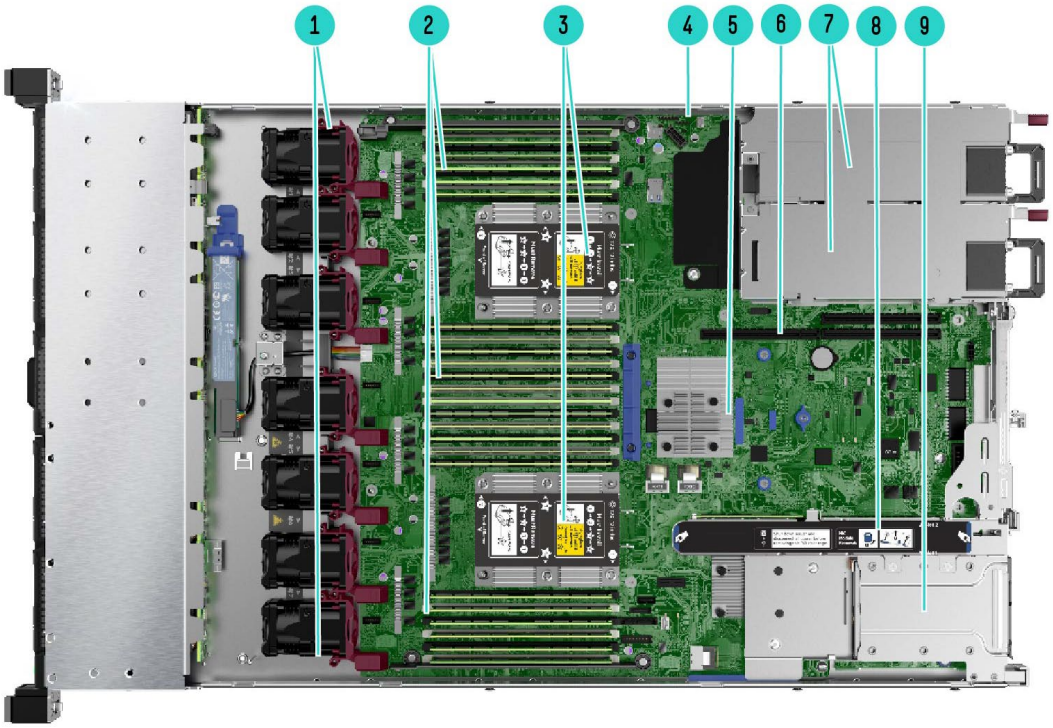
1. Drive support label
2. Serial no. label pull tab
3. Quick removal access panel
4. iLO Service Port
5. USB 3.0 Port
6. UID button/LED
7. Power On/Standby button and system power LED
8. Health LED
9. NIC status LED
10. SAS/SATA drive bays



Rear View – Standard for all DX360 Gen10

1. Slot 1 PCIe 3.0
2. Slot 2 PCIe 3.0
3. Option: Slot 3 PCIe 3.0 (Requires 2nd processor)
4. Power supply LED
5. Power supply connectors
6. Power Supply 1
7. Power Supply 2
8. VGA port
9. iLO Management Port
10. USB 3.0 Ports
11. Option: FlexibleLOM (Shown: 2 x 10GbE)

Overview



Internal View - Standard for all DX360 Gen10

1. Fan cage shown with 7 standard Hot-plug fans (High Performance temperature fans are included)
2. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
3. Two (2) Processors, heatsink showing
4. Chassis intrusion detection connector
5. HPE Smart Array Controller
6. Connection for second (optional) riser (Requires second CPU)
7. (Under) Hot Plug redundant HPE Flexible Slot Power supplies
8. Primary PCIe riser, standard
9. Optional Flexible LOM slot

What's New

- Additional Vmware ESXi support
- New additional processors in the second generation Intel Xeon family that provide an improved price performance
- New ProLiant DX360 Gen10 10NMVMe Platform
- HPE DX TPM 2.0 Kit
- New ProLiant DX360 Gen10 Platform
- Qualified platforms / configs recognized by both HPE & Nutanix
- Factory tuned & optimized HW settings for Nutanix environments
- Factory pre-installed Nutanix AHV & AOS

Overview

Form Factor

- 1U rack

Chassis Types

- 10 SFF NVMe
- 8 SFF
- 4 LFF

System Fans

- The 4 LFF,8 SFF and 10 NVMe chassis ship with 7 high performance fans as standard.

Notes: The DX360 Gen10 will support up to 7 fans with fan redundancy built in. One fan rotor failure will place server in degraded mode but fully functional. Two fan rotor failures could provide warning and imminent server shutdown.

Standard Features

Notes:
- This table covers the public Intel offering only.
- For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon**.
- All HPE DX360 processors come with the High Performance Heatsink included.

Processor Suffix	Description	Offering
L	Large memory tier	Up to 4.5 TB addressable memory per socket
N	NFV Optimized	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.
S	Search Optimized	Optimized base frequency to address 'search' workloads. Other workloads may see throttling, more details to be provided in upcoming documentation.
V	VM Density Optimized	Fosters enhanced VM density, allowing to support more/larger virtual machines per host.
U	1 Socket Optimized	Focused on single socket (1P) configurations deliver performance at competitive price points. Does not support two socket (2P) arrangements.

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

2nd Generation Intel® Xeon® Scalable Processor Family

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4	Memory per socket
Platinum 8280 Processor	2.7 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8280L Processor	2.7 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8276 Processor	2.2 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8276L Processor	2.2 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8270 Processor	2.7 GHz	26	35.75 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8268 Processor	2.9 GHz	24	35.75 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8260 Processor	2.4 GHz	24	35.75 MB	165W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8260L Processor	2.4GHZ	24	35.75 MB	165W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8253 Processor	2.2 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB

Notes:
- 6-Channel DDR4 @ 2933 MT/s. 2TB max RAM per socket on select SKUs
- Support for: Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS

Standard Features

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Gold 6209U Processor	2.1GHz	20	27.50 MB	125W	N/A	2933 MT/s	1TB
Gold 6210U Processor	2.5GHz	20	27.50 MB	150W	N/A	2933 MT/s	1TB
Gold 6212U Processor	2.4GHz	24	35.75 MB	165W	N/A	2933 MT/s	1TB
Gold 6262V Processor	1.9 GHz	24	33.00 MB	135W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6254 Processor	3.1 GHz	18	24.75 MB	200W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6252 Processor	2.1 GHz	24	35.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6248 Processor	2.5 GHz	20	27.5 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6244 Processor	3.6 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6242 Processor	2.8 GHz	16	22 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6240 Processor	2.6 GHz	18	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6240L Processor	2.6 GHz	18	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Gold 6238 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6238L Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Gold 6234 Processor	3.3 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6230 Processor	2.1 GHz	20	27.5 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6226 Processor	2.7 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6222V Processor	1.8 GHz	20	27.50 MB	115W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6212U Processor	2.4 GHz	24	35.75 MB	165W	N/A	2933 MT/s	1TB
Gold 6210U Processor	2.5 GHz	20	27.50 MB	150W	N/A	2933 MT/s	1TB
Gold 6209U Processor	2.1 GHz	20	27.50 MB	125W	N/A	2933 MT/s	1TB
Gold 5220 Processor	2.2 GHz	18	24.75 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5220S Processor	2.7 GHz	18	24.75 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5218 Processor	2.3 GHz	16	22 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5218B Processor [1]	2.3 GHz	16	22 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5217 Processor	3.0 GHz	8	11 MB	115W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5215 Processor	2.5 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2666 MT/s	1TB

Notes:

- [1] 5218B has consistent features with the 5218 processor but from a different die. Mixing both 5218B & 5218 in a system is not supported
- 6-Channel DDR4 @ 2933 MT/s (Gold 6200 & 5222 skus only), 2666 MT/s on all Gold 5200 skus (except 5222 @ 2933 MT/s).
- 2TB max RAM per socket on select SKUs
- Support for: Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS

Standard Features

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4216 Processor	2.1 GHz	16	22 MB	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215 Processor	2.5 GHz	8	11 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214 Processor	2.2 GHz	12	16.5 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4208 Processor	2.1 GHz	8	11 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB

Notes:

- 6-Channel DDR4 @ 2400 MT/s.
- Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration.
- 2 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 9.6 GT/s.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS

Chipset

Intel C621 Chipset

Notes: For more information regarding Intel® chipsets, please see the following URL:
https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets.html

System Management Chipset

HPE iLO 5 ASIC

Notes: Read and learn more in the **iLO QuickSpecs**.

Memory

HPE DDR4 Smart Memory

Type

Registered (RDIMM), Load Reduced (LRDIMM)

DIMM Slots Available	24	12 DIMM slots per processor, 6 channels per processor, 2DIMMs per channel
Maxium capacity (LRDIMM)	3.0 TB	24 x 128 GB LRDIMM @ 2933 MT/s
Maximum capacity (RDIMM)	1.54 TB	24 x 64 GB RDIMM @ 2933 MT/s

Notes:

- Maximum memory per socket is dependent on processor selection. 2nd generation processors supporting 4.5 TB per CPU are indicated by the “L” in the processor model names (i.e. 8276L).
- Mixing of RDIMM and LRDIMM memory is not supported.
- For General Server Memory Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**

Memory Protection

Advanced ECC

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

Online Spare

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

Notes: For more information see our **Memory RAS feature technical whitepaper**.

Standard Features

Expansion Slots

Primary GPU Riser					
Expansion Slots #	**Technology**	**Bus Width**	**Connector Width**	**Processor**	**Slot Form Factor**
1	PCIe 3.0	x16	x16	CPU1	Full-height, 3/4 length (up to 9.5in)
2	PCIe 3.0	x8	x8	CPU1	Low Profile

Primary SATA M.2 Riser					
Expansion Slots #	**Technology**	**Bus Width**	**Connector Width**	**Processor**	**Slot Form Factor**
1	PCIe 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5in)
2	PCIe 3.0	x16	x16	CPU 1	Low Profile

Primary NVMe Riser					
Expansion Slots #	**Technology**	**Bus Width**	**Connector Width**	**Processor**	**Slot Form Factor**
1	PCIe 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5")
2	PCIe 3.0	x8	x8	CPU 1	Low Profile

Secondary Riser*					
Expansion Slots #	**Technology**	**Bus Width**	**Connector Width**	**Processor**	**Slot Form Factor**
3	PCIe 3.0	x16	x16	CPU 2	Low Profile or Full-height; 3/4 length (up to 9.5")

Storage Controllers

- HPE Smart Array E208i-a SR Gen10 Controller
- HPE Smart Array E208i-p SR Gen10 Controller

Notes: The appropriate controllers are included with the server models P18229-B21 and P18230-B21. The number of available PCI slots are reduced by 1 for both models.

Internal Storage Devices

Hard Drives

None ship standard

HPE ProLiant DX360 8SFF Hard Drive Configurations

- **Hybrid SSD/HDD**
  SSDs, 2
  HDDs, 4 or 6
- **All SSD**
  SSDs, 4, 6, or 8

HPE ProLiant DX360 4LFF Hard Drive Configurations

- **Hybrid SSD/HDD**
  SSDs, 2
  HDDs, 2
- **All SSD**
  SSDs, 2 or 4

Standard Features

HPE ProLiant DX360 10NVMe Hard Drive Configurations

- **All SSD**
  SSDs, 2, 4, 6, 8, 10

Power Supply

- HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: Available in 94% efficiency.
- 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: 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 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.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also 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**.

Interfaces

Video	Rear - VGA port (standard on all chassis types)
Network Ports	1 FlexibleLOM slot available on all chassis types (supporting various NICs adapters)
iLO Remote Mgmt Port	1 Gb Dedicated
USB 3.0	Up to 5 total: 1 front, 2 rear, 2 internal (standard on all chassis types) +1 optional USB 2.0 front (on 8 SFF and 4 LFF only)

Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.
Access the certified and supported servers for each of the OS and Virtualization software: **HPE Servers Support & Certification Matrices**

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**.

Standard Features

Graphics

Integrated video standard

- Video modes up to 1920 x 1200 @ 60 Hz (32 bpp)
- 16 MB Video Memory
- HPE iLO 5 on system management memory
- 32 MB Flash
- 4 Gbit DDR3 with ECC protection

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**.
Notes: iLO Advanced license with 3 years support is included with the server models P18229-B21 and P18230-B21

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). Learn more at **https://www.hpe.com/us/en/servers/smart-update.html**.

Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant
- USB 2.0 Compliant (only on optional Universal Media Bay)
- SMBIOS 3.1
- UEFI 2.6 (Unified Extensible Firmware Interface Forum)
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- Advanced Encryption Standard (AES)
- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
- Energy Star

Notes: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: **http://www.hpe.com/servers/ashrae**.

Standard Features

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**.

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:
https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-c05384171&docLocale=en_US.

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

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**.

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:
https://www.hpe.com/support/ProLiantServers-Warranties

Standard Features

Security

- Immutable Silicon Root of Trust
- FIPS 140-2 validation
- Common Criteria certification
- Configurable for PCI DSS compliance
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Support for Commercial National Security Algorithms (CNSA)
- iLO Security Modes
- Granular control over iLO interfaces
- Smart card (PIV/CAC) and Kerberos based 2-factor Authentication
- Tamper-free updates – components digitally signed and verified
- Secure Recovery – recover critical firmware to known good state on detection of compromised FW
- Ability to rollback firmware
- Secure erase of NAND
- Bezel Locking Kit
- Chassis Intrusion detection option

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.

Notes: An HPE iLO Advanced license with 3 years support is included with the server models P18229-B21 and P18230-B21

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 full-featured 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.

https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

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

Service and Support

HPE Lifecycle Services

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

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

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

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/**

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"
https://www.hpe.com/us/en/contact-hpe.html

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

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.
- All DX360 options are 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 of the following configurable models)

Base configuration includes select options as noted below

CTO Server	4 LFF	8 SFF	10 NVMe
SKU Number	P18229-B21	P18230-B21	P18231-B21
Processor	Not included as standard	Not included as standard, 2 required	Not included as standard, 2 required
DIMM Slots	24-DIMM slots		
PCIe	2 PCIe slots (1 x16 FH / 1 x8 LP) Optional: 1 x16 FH or LP	2 PCIe slots (1 x16 FH / 1 x8 LP) Optional: 1 x16 FH or LP	2 PCIe slots (1 x16 FH / 1 x8 LP)
Drive Cage - included	4 LFF - SAS/SATA	8 SFF - SAS/SATA	10 SFF - NVMe
Network Controller	Optional HPE FlexibleLOM or stand up card		
USB	Front: 1 USB 3.0 + iLO service port Rear: 2 USB 3.0 Internal: 2 USB 3.0 Optional: 1 USB 2.0 (lose iLO serv. Port)		
Boot Drive	1 x HPE Universal SATA Half Height M.2 Kit 1 x HPE 240GB SATA MU M.2 DS SSD	1 x HPE Universal SATA Half Height M.2 Kit 1 x HPE 240GB SATA MU M.2 DS SSD	1 x HPE Universal SATA Half Height M.2 Kit 1 x HPE 240GB SATA MU M.2 DS SSD
Storage Controller	1 x HPE Smart Array E208i-a SR Gen10 Controller		
Cooling	7 - High Performance Fans	7 - High Performance Fans	7 - High Performance Fans
Security	HPE Gen10 1U Security Bezel	HPE Gen10 1U Security Bezel	HPE Gen10 1U Security Bezel
Management	iLO Advanced with 3 year support	iLO Advanced with 3 year support	iLO Advanced with 3 year support
Services	Foudation Care Next Business Day 3 year support service	Foudation Care Next Business Day 3 year support service	Foudation Care Next Business Day 3 year support service

Notes:

- 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 2.1 compliant.
- All HPE DX360 processors come with the High Performance Heatsink included.

Step 2: Choose Required Options

Please select one –L21 processor required below.
For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section.
For example: first processor, select P02679-L21 then for second processor, select P02679-B21.

Notes:

- Mixing of 2 different processor models is not supported.
- When 2nd Generation Intel Xeon Scalable Processor is selected, then only DDR4-2933 Memory Kit can be selected
- All HPE DX360 processors come with the High Performance Heatsink included.

Configuration Information

Step 2a: Choose Processor Options

Processor Option Kits (Required Processor)

Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18292-L21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18290-L21
Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18288-L21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18284-L21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18282-L21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DX360 Gen10	P18280-L21

Notes: All HPE DX360 processors come with the High Performance Heatsink included.

Step 2b: Choose Memory Options

Please select one or more memory from below.
For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to:
For Gen10 memory speed table, please go to: **https://www.hpe.com/psnow/doc/a00019564enw**
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**.

Notes:

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors

Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series

HPE DX 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P18453-B21
HPE DX 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P18450-B21
HPE DX 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P18449-B21
HPE DX 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P18448-B21

Load Reduced DIMMs (LRDIMMs) for 2nd Generation Intel Xeon Scalable Series

HPE DX 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced Smart FIO Memory Kit	P18454-B21

Step 2c: Choose Power Supplies

Please select one or two power supplies from below.
Notes: Mixing of 2 different power supplies is NOT supported.

HPE Flex Slot Power Supplies

HPE DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18222-B21
HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18223-B21
HPE DX 800W Flex Slot Titanium Hot Plug Low Halogen FIO Power Supply Kit	P18224-B21
HPE DX 500W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18226-B21

Notes: 1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

Configuration Information

Step 3: Choose Additional (FIO) Factory Integratable Options

Each of the following may be selected if desired at time of factory integration

HPE Security Options

HPE Chassis Intrusion Special Detection Kits	P18357-B21
HPE DX Trusted Platform Module 2.0 Gen10 FIO Option Kit	P17811-B21

HPE Unique Options Risers

Risers

HPE DX360 Gen10 Low Profile FIO Riser Kit	P18356-B21
HPE DX Gen10 x8/x16/x8 FIO Riser Kit	P17803-B21

Step 4: Choose Additional Options for Factory Integration from Core and Additional Option sections below

Additional Options

HPE Processors

Please select one –L21 processor required above.
For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section below.
For example: first processor, select P02679-L21 then for second processor, select P02679-B21.

Notes:

- Mixing of 2 different processor models is not supported.
- When 2nd Generation Intel Xeon Scalable Processor is slected, then only DDR4-2933 Memory Kit can be selected
- All HPE DX360 processors come with the High Performance Heatsink included.

HPE Memory

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: **https://www.hpe.com/docs/memory-population-rules**
For Gen10 memory speed table, please go to: **https://www.hpe.com/psnow/doc/a00019564enw**
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**

Notes:

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors

HPE DDR4 Memory

Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series

HPE DX 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit P18453-B21

- Standalone P00930-B21

HPE DX 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit P18450-B21

- Standalone P00924-B21

HPE DX 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit P18449-B21

- Standalone P00922-B21

HPE DX 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit P18448-B21

- Standalone P00920-B21

Load Reduced DIMMs (LRDIMMs) for 2nd Generation Intel Xeon Scalable Series

HPE DX 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced Smart FIO Memory Kit P18454-B21

- Standalone P11040-B21

Additional Options

HPE Drives

Midline - 12G SAS - SFF Drives

HPE DX 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware FIO HDD P22713-B21

- Standalone 881457-B21

SSD Selection

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

Read Intensive - SATA - LFF - Solid State Drives

HPE DX 1.9TB SATA 6G Read Intensive LFF SCC PM893 FIO SSD P56741-B21

HPE DX 3.84TB SATA 6G Read Intensive LFF SCC PM893 FIO SSD P56745-B21

HPE DX 3.84TB SATA 6G Read Intensive LFF SCC PM893 SSD P56748-B21

HPE DX 1.9TB SATA 6G Read Intensive LFF SCC PM893 SSD P57537-B21

HPE DX 1.92TB SATA 6G Read Intensive LFF SCC S4520 FIO SSD P56751-B21

- Standalone P57545-B21

HPE DX 3.84TB SATA 6G Read Intensive LFF SCC S4520 FIO SSD P56755-B21

- Standalone P56758-B21

Read Intensive - SATA - SFF - Solid State Drives

HPE DX 1.9TB SATA 6G Read Intensive SFF SC PM893 FIO SSD P56740-B21

- Standalone P47812-B21

HPE DX 3.84TB SATA 6G Read Intensive SFF SC PM893 FIO SSD P56744-B21

- Standalone P47813-B21

HPE DX 1.92TB SATA 6G Read Intensive SFF SC S4520 FIO SSD P56750-B21

- Standalone P47319-B21

HPE DX 3.84TB SATA 6G Read Intensive SFF SC S4520 FIO SSD P56754-B21

- Standalone P47321-B21

Read Intensive - SAS - LFF - Solid State Drives

HPE DX 3.84TB SAS 24G Read Intensive LFF SCC PM1653 FIO SSD P56761-B21

HPE DX 7.68TB SAS 24G Read Intensive LFF SCC Multi Vendor FIO SSD P56765-B21

Read Intensive - SAS - SFF - Solid State Drives

HPE DX 3.84TB SAS 24G Read Intensive SFF SC PM1653 FIO SSD P56760-B21

- Standalone P57577-B21

HPE DX 7.68TB SAS 12G Read Intensive SFF SC Multi Vendor FIO SSD P56764-B21

- Standalone P57585-B21

Mixed Use - SAS - LFF - Solid State Drives

HPE DX 3.2TB SAS 24G Mixed Use LFF SCC Multi Vendor FIO SSD P57593-B21

HPE DX 6.4TB SAS 24G Mixed Use LFF SCC Multi Vendor FIO SSD P57605-B21

HPE DX 1.6TB SAS 12G Mixed Use LFF SCC Multi Vendor FIO SSD P58746-B21

- Standalone P57633-B21

Additional Options

Multi Use - SAS - SFF - Solid State Drives

HPE DX 1.6TB SAS 12G Mixed Use SFF SC Multi Vendor FIO SSD P57621-B21

- Standalone P57625-B21

Read Intensive - NVMe - Solid State Drives

HPE DX 1.92T NVMe Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD P57766- B21

- Standalone P50214-B21

HPE DX 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a FIO SSD P57768-B21

- Standalone P50217-B21

HPE DX 7.68TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a FIO SSD P57770-B21

- Standalone P50220-B21

Mixed Use - SATA - LFF - Solid State Drives

HPE DX 1.92TB SATA 6G Mixed Use LFF SCC S4620 FIO SSD P56737-B21

HPE DX 960GB SATA 6G Mixed Use LFF SCC PM897 SSD P57513-B21

Mixed Use - SATA - SFF - Solid State Drives

HPE DX 1.92TB SATA 6G Mixed Use SFF SC PM897 FIO SSD P56732-B21

- Standalone P47816-B21

HPE DX 1.92TB SATA 6G Mixed Use SFF SC S4620 FIO SSD P56736-B21

- Standalone P47325-B21

Mixed Use NVMe - Solid State Drives

HPE DX 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a FIO SSD P57761-B21

- Standalone P50225-B21

HPE DX 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a FIO SSD P57763-B21

- Standalone P50228-B21

Notes: (supported on DX360 NVMe model only. 10 drives required)

HPE Networking

100 Gigabit Ethernet adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 FIO Adapter for HPE DX P43273-B21

- Standalone: P25960-B21

25 Gigabit Ethernet adapters

HPE DX Ethernet 10/25Gb 2-port 640SFP28 FIO Adapter P18462-B21

- Standalone: 817753-B21

10 Gigabit Ethernet adapters

HPE DX Ethernet 10Gb 2-port 562SFP+ FIO Adapter P18455-B21

- Standalone: 727055-B21

HPE DX Ethernet 10Gb 2-port 562T FIO Adapter P18456-B21

- Standalone: 817738-B21

1 Gigabit Ethernet adapters

HPE DX Ethernet 1Gb 4-port 366T FIO Adapter P18460-B21

- Standalone: 811546-B21

Additional Options

FlexibleLOM Adapters

HPE DX Ethernet 10/25Gb 2-port 640FLR-SFP28 FIO Adapter P18461-B21

- Standalone: 817749-B21

HPE DX Ethernet 10Gb 2-port 562FLR-T FIO Adapter P18458-B21

Standalone: 817745-B21

HPE DX Ethernet 10Gb 2-port 562FLR-SFP+ FIO Adapter P18457-B21

- Standalone: 727054-B21

HPE DX Ethernet 1Gb 4-port 366FLR FIO Adapter P18459-B21

- Standalone: 665240-B21

HPE Graphic Options

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

- Standalone: Q0V80C

HPE Boot Controllers

HPE DX NS204i-p Gen10 Plus x2 Lanes NVMe PCIe3 x8 FIO Boot Device P35837-B21

- Standalone: P12965-B21

Notes:

- UEFI supported only
- "LTS" SW trigger SKU cannot be selected when P35837-B21 is selected.

HPE Power Supplies

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 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.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also 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**.

HPE Flex Slot Platinum Hot-plug Power supplies

HPE DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18222-B21
HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18223-B21
HPE DX 800W Flex Slot Titanium Hot Plug Low Halogen FIO Power Supply Kit	P18224-B21
HPE DX 500W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18226-B21
HPE DX 800W Flex Slot -48VDC Hot Plug Low Halogen FIO Power Supply Kit	P25214-B21

Notes: 1600W Power supplies only support high line voltage (200 VAC to 240 VAC).

Additional Options

HPE Hard Drives			
HPE DX SKU	**HPE DX Description**	**HPE SKU**	**HPE Description**
P17956-B21	HPE DX 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e FIO HDD	765466-B21	HPE 2TB SAS 12G Business Critical 7.2K SFF SC 1-year Warranty 512e HDD
P17957-B21	HPE DX 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware FIO HDD	872485-B21	HPE 2TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD
P17958-B21	HPE DX 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware FIO HDD	872487-B21	HPE 4TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD
P17959-B21	HPE DX 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e FIO HDD	861754-B21	HPE 6TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD
P17960-B21	HPE DX 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware FIO HDD	819201-B21	HPE 8TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD
P17961-B21	HPE DX 12TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware FIO HD	881779-B21	HPE 12TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD

HPE DX SKU	**HPE DX Description**	**HPE SKU**	**HPE Description**
P18142-B21	HPE DX 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P35136-B21	HPE DX 3.2TB NVMe MU SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P18145-B21	HPE DX 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P18149-B21	HPE DX 4TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P35137-B21	HPE DX 6.4TB NVMe MU SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P26124-B21	HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF SC U.3 PM1735 SSD
P35138-B21	HPE DX 1.9TB NVMe RI SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P16501-B21	HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SC U.3 PM1733 SSD
P35139-B21	HPE DX 3.8TB NVMe RI SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P35140-B21	HPE DX 7.6TB NVMe RI SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P35156-B21	HPE DX 1.92TB SATA RI LFF (3.5in) SCC DS 3yr Wty Digitally Signed Firmware FIO SSD		
P22713-B21	HPE DX 2.4TB SAS 10K SFF (2.5in) SC 512e 1yr Wty Helium 512e Digitally Signed Firmware FIO HDD	881457-B21	HPE 2.4TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD
P35165-B21	HPE DX 3.84TB SAS RI LFF (3.5in) SCC DS 3yr Wty Digitally Signed Firmware FIO SSD		

Additional Options

HPE DX SKU	HPE DX Description	HPE SKU	HPE Description
P35168-B21	HPE DX 3.84TB SAS RI LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware FIO SSD		
P35164-B21	HPE DX 3.84TB SAS RI SFF (2.5in) SC DS 3yr Wty Digitally Signed Firmware FIO SSD	P10444-B21	HPE 3.84TB SAS 12G Read Intensive SFF SC Value SAS RM5 SSD
P35167-B21	HPE DX 3.84TB SAS RI SFF (2.5in) SC 3yr Wty Digitally Signed Firmware FIO SSD	P19907-B21	HPE 3.84TB SAS 12G Read Intensive SFF SC PM1643a SSD
P35142-B21	HPE DX 3.8TB NVMe Prf RI SFF (2.5in) 3yr Wty Digitally Signed Firmware FIO SSD	P20019-B21	HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 CM6 SSD
P35133-B21	HPE DX 7.68TB SAS RI LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware FIO SSD		
P35132-B21	HPE DL 7.68TB SAS RI SFF (2.5in) SC 3yr Wty Digitally Signed Firmware FIO SSD	P19909-B21	HPE 7.68TB SAS 12G Read Intensive SFF SC PM1643a SSD
P35143-B21	HPE DX 7.6TB NVMe Prf RI SFF (2.5in) 3yr Wty Digitally Signed Firmware FIO SSD	P20021-B21	HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 CM6 SSD
P35155-B21	HPE DX1.92TB SATA RI SFF (2.5in) SC DS 3yr Wty Digitally Signed Firmware FIO SSD	P05938-B21	HPE 1.92TB SATA 6G Read Intensive SFF SC S4510 SSD
P35151-B21	HPE DX16TB SAS 7.2K LFF (3.5in) SC 512e 1yr Wty Helium 512e Digitally Signed Firmware FIO HDD	P23863-B21	HPE 16TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD
P56733-B21	HPE DX 1.92TB SATA 6G Mixed Use SCC PM897 FIO SSD	P57521-B21	HPE DX 1.92TB SATA 6G Mixed Use LFF SCC PM897 SSD
P56748-B21	HPE DX 3.84TB SATA Read Intensive LFF (3.5in) SCC PM893 3yr Wty Digitally Signed Firmware FIO SSD		
P57537-B21	HPE DX 1.9TB SATA Read Intensive LFF (3.5in) SCC PM893 3yr Wty Digitally Signed Firmware FIO SSD		
P56740-B21	HPE DX 1.9TB SATA Read Intensive SFF (2.5in) SC PM893 3yr Wty Digitally Signed Firmware FIO SSD	P47812-B21	HPE 1.92TB SATA Read Intensive SFF SC PM893 SSD
P56744-B21	HPE DX 3.84TB SATA Read Intensive SFF (2.5in) SC PM893 3yr Wty Digitally Signed Firmware FIO SSD	P47813-B21	HPE 3.84TB SATA Read Intensive SFF SC PM893 SSD
P56750-B21	HPE DX 1.92TB SATA Read Intensive SFF (2.5in) SC S4520 3yr Wty Digitally Signed Firmware FIO SSD	P47319-B21	HPE 1.92TB SATA Read Intensive SFF SC S4520 SSD
P56751-B21	HPE DX 1.92TB SATA Read Intensive LFF (3.5in) SCC S4520 3yr Wty Digitally Signed Firmware FIO SSD	P57545-B21	HPE DX 1.92TB SATA Read Intensive LFF SCC S4520 SSD
P56754-B21	HPE DX 3.84TB SATA Read Intensive SFF (2.5in) SC S4520 3yr Wty Digitally Signed Firmware FIO SSD	P47321-B21	HPE 3.84TB SATA Read Intensive SFF SC S4520 SSD
P56755-B21	HPE DX 3.84TB SATA Read Intensive LFF (3.5in) SCC S4520 3yr Wty Digitally Signed Firmware FIO SSD	P56758-B21	HPE DX 3.84TB SATA Read Intensive LFF SCC S4520 SSD
P57593-B21	HPE DX 3.2TB SAS Mixed Use LFF (3.5 in) SCC MV 3yr Wty Digitally Signed Firmware FIO SSD		
P57605-B21	HPE DX 6.4TB SAS Mixed Use LFF (3.5 in) SCC MV 3yr Wty Digitally Signed Firmware FIO SSD		

Additional Options

HPE DX SKU	HPE DX Description	HPE SKU	HPE Description
P58746-B21	HPE DX 1.6TB SAS Mixed Use LFF (3.5 in) SCC MV 3yr Wty Digitally Signed Firmware FIO SSD	P57633-B21	HPE DX 1.6TB SAS 12G Mixed Use LFF SCC Multi Vendor SSD
P57621-B21	HPE DX 1.6TB SAS Mixed Use SFF (2.5in) SC MV 3yr Wty Digitally Signed Firmware FIO SSD	P57625-B21	HPE DX 1.6TB SAS 12G Mixed Use SFF SC Multi Vendor SSD
P57766-B21	HPE DX 1.92T NVMe Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P50214-B21	HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a SSD
P57768-B21	HPE DX 3.84T NVMe Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P50217-B21	HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733a SSD
P57770-B21	HPE DX 7.68T NVMe Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD		
P56732-B21	HPE DX 1.92TB SATA Mixed Use SFF (2.5in) SC 2yr Wty Digitally Signed Firmware FIO SSD		
P56736-B21	HPE DX 1.92TB SATA Mixed Use SFF (2.5in) SC 2yr Wty Digitally Signed Firmware FIO SSD		
P57761-B21	HPE DX 1.6TB NVMe Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P50225-B21	HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a SSD
P57763-B21	HPE DX 3.2TB NVMe Mixed Use SFF (2.5inc) SCN 3yr Wty Digitally Signed Firmware FIO SSD	P50228-B21	HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735a SSD
P57513-B21	HPE DX 960GB SATA Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware FIO SSD		

HPE DX SKU	HPE DX Description	HPE SKU
P56737-B21	HPE DX 1.92TB SATA 6G Mixed Use SCC S4620 FIO SSD	
P56741-B21	HPE DX 1.9TB SATA 6G Read Intensive SCC PM893 FIO SSD	
P56761-B21	HPE DX 3.84TB SAS 24G Read Intensive SCC PM1653 FIO SSD	
P56765-B21	HPE DX 7.68TB SAS 24G Read Intensive LFF SCC MV FIO SSD	
P56760-B21	HPE DX 3.84TB SAS 24G Read Intensive SC PM1653 FIO SSD	
P56764-B21	HPE DX 7.68TB SAS 12G Read Intensive SFF SC MV FIO SSD	
P56745-B21	HPE DX 3.84TB SATA 6G Read Intensive SCC PM893 FIO SSD	

Additional Options

Common Configurable Options - Memory			
P18448-B21	HPE DX 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P00920-B21	HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit
P18449-B21	HPE DX 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P00922-B21	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit
P18450-B21	HPE DX 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P00924-B21	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit
P18451-B21	HPE DX 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart FIO Memory Kit	P00926-B21	HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit
P18452-B21	HPE DX 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced 3DS Smart FIO Memory Kit	P00928-B21	HPE 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced 3DS Smart Memory Kit
P18453-B21	HPE DX 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart FIO Memory Kit	P00930-B21	HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit
P18454-B21	HPE DX 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced Smart FIO Memory Kit	P11040-B21	HPE 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit

Common Configurable Options - Networking			
P18455-B21	HPE DX Ethernet 10Gb 2-port 562SFP+ FIO Adapter	727055-B21	HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter
P18456-B21	HPE DX Ethernet 10Gb 2-port 562T FIO Adapter	817738-B21	HPE Ethernet 10Gb 2-port BASE-T X550-AT2 Adapter
P18457-B21	HPE DX Ethernet 10Gb 2-port 562FLR-SFP+ FIO Adapter	727054-B21	HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter
P18458-B21	HPE DX Ethernet 10Gb 2-port 562FLR-T FIO Adapter	817745-B21	HPE Ethernet 10Gb 2-port FLR-T X550-AT2 Adapter
P18459-B21	HPE DX Ethernet 1Gb 4-port 366FLR FIO Adapter	665240-B21	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter
P18460-B21	HPE DX Ethernet 1Gb 4-port 366T FIO Adapter	811546-B21	HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter

HPE DX SKU	HPE DX Description	HPE SKU	HPE Description
P18461-B21	HPE DX Ethernet 10/25Gb 2-port 640FLR-SFP28 FIO Adapter	817749-B21	HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter
P18462-B21	HPE DX Ethernet 10/25Gb 2-port 640SFP28 FIO Adapter	817753-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter
P43273-B21	Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 FIO Adapter for HPE DX	P25960-B21	Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE

HPE Boot Controllers			
P35837-B21	HPE DX NS204i-p Gen10 Plus x2 Lanes NVMe PCIe3 x8 FIO Boot Device	P12965-B21	HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device

Additional Options

Common Configurable Options - Power Supplies			
P18222-B21	HPE DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	830272-B21	HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
P18223-B21	HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	865414-B21	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
P18224-B21	HPE DX 800W Flex Slot Titanium Hot Plug Low Halogen FIO Power Supply Kit	865438-B21	HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit
P18225-B21	HPE DX 800W Flex Slot Universal Hot Plug Low Halogen FIO Power Supply Kit	865428-B21	HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit
P18226-B21	HPE DX 500W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	865408-B21	HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
P25214-B21	HPE DX 800W Flex Slot 48V Hot Plug Low Halogen FIO Power Supply Kit	865434-B21	HPE 800W FS 48VDC Ht Plg LH Pwr Sply Kit
Common Configurable Options - Transceivers			
P18412-B21	HPE DX 10Gb SFP+ SR FIO Transceiver	455883-B21	HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver
P18413-B21	HPE DX 25Gb SFP28 SR 100m FIO Transceiver	845398-B21	HPE 25Gb SFP28 SR 100m Transceiver
P18414-B21	HPE DX 100Gb QSFP28 MPO SR4 100m FIO Transceiver	845966-B21	HPE 100Gb QSFP28 MPO SR4 100m Transceiver
P18415-B21	HPE DX Virtual Connect 1G SFP SX FIO Transceiver	453151-B21	HPE BladeSystem c-Class Virtual Connect 1G SFP SX Transceiver
P18416-B21	HPE DX Virtual Connect 1G SFP RJ-45 FIO Transceiver	453154-B21	HPE BladeSystem CClass Virtual Connect 1G SFP RJ45 Transceiver

HPE Security

HPE DX Gen10 Chassis Intrusion FIO Detection Kit P17812-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 Rack Options

Rail Kits

Notes: HPE rail kits are designed to work with HPE racks in compliance with industry standard EIA-310-E. In the event a customer elects to purchase a third-party rack for use with an HPE rail kit, any such use is at customer's own risk. HPE makes no express or implied warranties with respect to such third-party racks and specifically disclaims any implied warranties of merchantability and fitness for a particular purpose. Furthermore, HPE has no obligation and assumes no liability for the materials, design, specifications, installation, safety, and compatibility of any such third-party racks with any rail kits, including HPE rail kits.

HPE DX 1U Cable Management Arm for Easy Install FIO Rail Kit P18353-B21

HPE DX 1U Gen10 SFF Easy Install FIO Rail Kit P21955-B21

Notes: Does not include CMA (P18353-B21).

HPE DX 1U Gen10 LFF Easy Install FIO Rail Kit P23849-B21

Notes: Does not include CMA (P18353-B21).

HPE DX 1U Gen10 SFF Ball Bearing FIO Rail Kit P21956-B21

HPE DX 1U Gen10 LFF Ball Bearing FIO Rail Kit P23850-B21

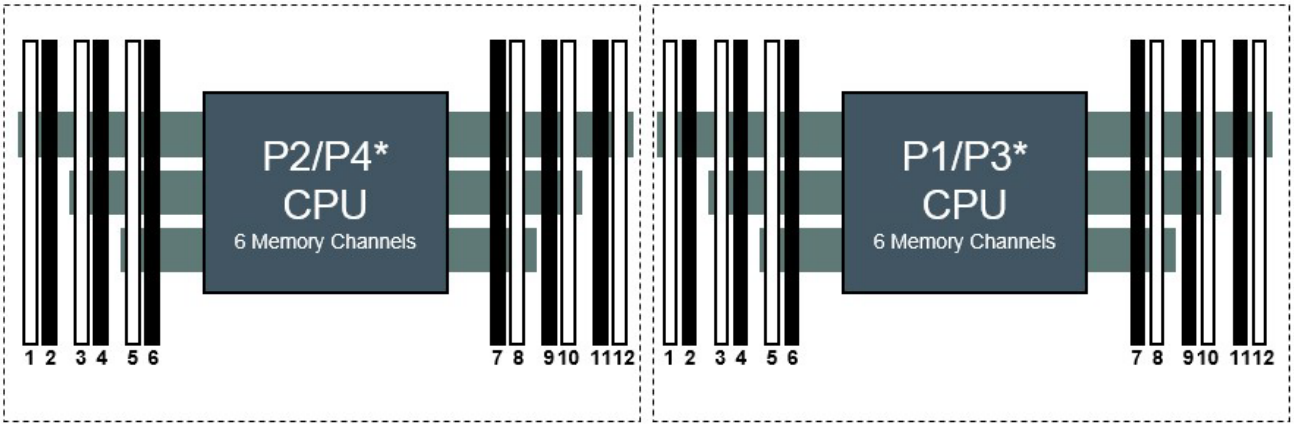
Additional Options

HPE Support Services

HPE 3 Year Next Business Day with Defective Media Retention DX360 Gen10 Hardware Service	HN4Y9E
HPE 3 Year 24x7 DX360 Gen10 Hardware Service	HN4Z0E
HPE 3 Year 24x7 with Defective Media Retention DX360 Gen10 Hardware Service	HN4Z1E

Memory

Memory Population Guidelines



HPE Gen10 DX360 / DX380 / DX560

Notes: Servers Front Server2 Slots per Channel

1 DIMM							8				
2 DIMMs							8		10		
3 DIMMs							8		10		12
4 DIMMs			3		5		8		10		
5 DIMMs			3		5		8		10		12
6 DIMMs	1		3		5		8		10		12
7 DIMMs	1		3		5		7 8		10		12
8 DIMMs			3	4	5	6	7 8	9	10		
9 DIMMs	1		3		5		7 8	9	10	11	12
10 DIMMs	1		3	4	5	6	7 8	9	10		12
11 DIMMs	1		3	4	5	6	7 8	9	10	11	12
12 DIMMs	1	2	3	4	5	6	7 8	9	10	11	12

HPE ProLiant Gen10 12 slot per CPU DIMM population order

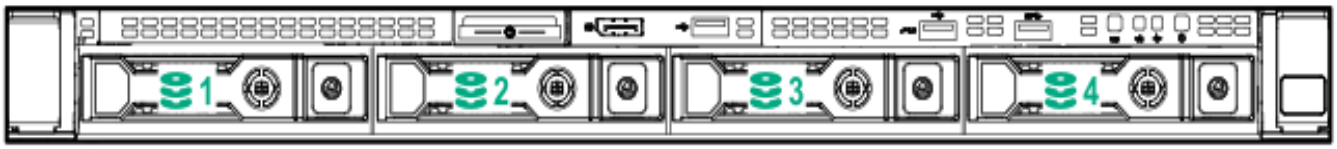
General Memory Population Rules and Guidelines:

- 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, the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit: **http://www.hpe.com/docs/memory-population-rules**
- 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.**

Notes: The maximum memory speed is a function of the memory type, memory configuration, and processor model.

For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**

Storage



4 LFF device bay numbering

8 SFF device bay numbering

Technical Specifications

System Unit

Dimensions (Height x Width x Depth)

- **SFF Drives**
  4.29 x 43.46 x 70.7 cm
  1.69 x 17.11 x 27.83 in
- **LFF Drives**
  4.29 x 43.46 x 74.98 cm
  1.69 x 17.11 x 29.5 in

Weight (approximate)

- **13.04 kg**
  28.74 lb
  SFF minimum: One drive, one processor, one power supply, two heatsinks, one Smart Array controller, and five fans.
- **16.27 kg**
  35.86 lb
  SFF maximum: 10 drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.
- **13.77 kg**
  30.36 lb
  LFF minimum: one drive, one processor, one power supply, two heatsinks, one Smart Array controller and five fans.
- **16.78 kg**
  37 lb
  LFF maximum: Four drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.

Input Requirements (per power supply)

Rated Line Voltage

- For 1600W (Platinum): 200-240 VAC
- For 800W (Titanium) Power Supply: 200-240 VAC
- For 800W (Platinum): 100-240 VAC
- For 800W (Universal) Power Supply: 200-277 VAC
- For 800W (-48VDC): -40 Vdc to -72 Vdc
- 500W (Platinum) Power Supply: 100-240 VAC

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 800W (Titanium) Power Supply: 2905 BTU/hr (at 200 VAC), 2899 BTU/hr (at 220 VAC), 2893 BTU/hr (at 240 VAC)
- For 800W (Platium) 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)
- For 500W (Platinum) Power Supply: 1902 BTU/hr (at 100 VAC), 1840 BTU/hr (at 200 VAC), 1832 BTU/hr (at 240 VAC)

Technical Specifications

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 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)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only

Maximum Peak Power

- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) 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)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only

System Inlet Temperature

- **Standard Operating Support**
  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). 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**

- **Extended Ambient Operating Support**
  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
  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

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.

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 (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) 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.

Configuration SKU	Entry	Base	Performance
IDXe			
LWAd	5.1 B	5.1 B	5.2 B
LpAm	35 dBA	35 dBA	36 dBA
Operating			
LWAd	5.3 B	5.2 B	5.9 B
LpAm	36 dBA	38 dBA	45 dBA

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.

Emissions Classification (EMC)

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 DX, ML and Apollo Servers** please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

Environment-frienDXy 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

Date	Version History	Action	Description of Change
16-Sep-2024	Version 14	Changed	Standard Features (Operating Systems and Virtualization Software Support for HPE Servers) and Additional Options sections were updated.
18-Mar-2024	Version 13	Changed	Standard Features and Additional Options sections were updated
20-Nov-2023	Version 12	Changed	HPE Services Rebranding
03-Apr-2023	Version 11	Changed	Standard Features, Configuration Information, Core Options and Additional Options sections were updated. Obs SKUs were removed
12-Sep-2022	Version 10	Changed	Core Options, Additional Options and support sections were updated
01-Nov-2021	Version 9	Changed	Core Options and Additional Options sections were updated. Obs SKUs were removed
06-Jul-2021	Version 8	Changed	Overview, Configuration Information, Core Options and Additional Options sections were updated. Obs SKUs were removed.
18-Jan-2021	Version 7	Changed	Overview section was updated. Obs SKUs were removed
03-Aug-2020	Version 6	Changed	Overview and Core options sections were updated.
16-Mar-2020	Version 5	Changed	Standard Features section was updated.
24-Feb-2020	Version 4	Changed	Overview, Core Options, and Configuration Information sections were updated. Obs SKUs were removed
02-Dec-2019	Version 3	Changed	Overview, Configuration Information, Core Options and Additional Options sections were updated.
07-Oct-2019	Version 2	Changed	Overview, and Configuration Information sections were updated.
30-Jul-2019	Version 1	New	New QuickSpecs

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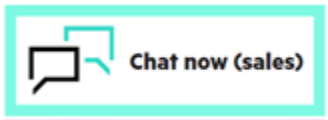

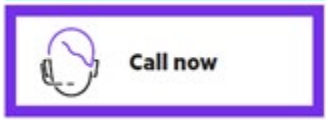

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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