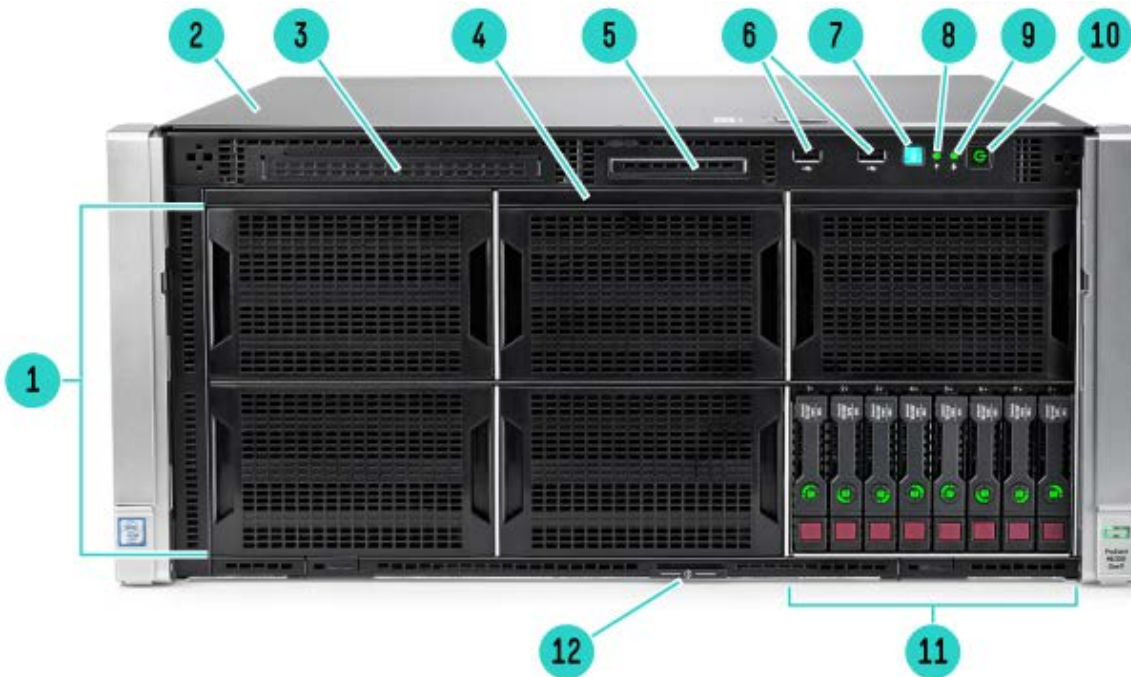


Overview

HPE ProLiant ML350 Generation9 (Gen9)

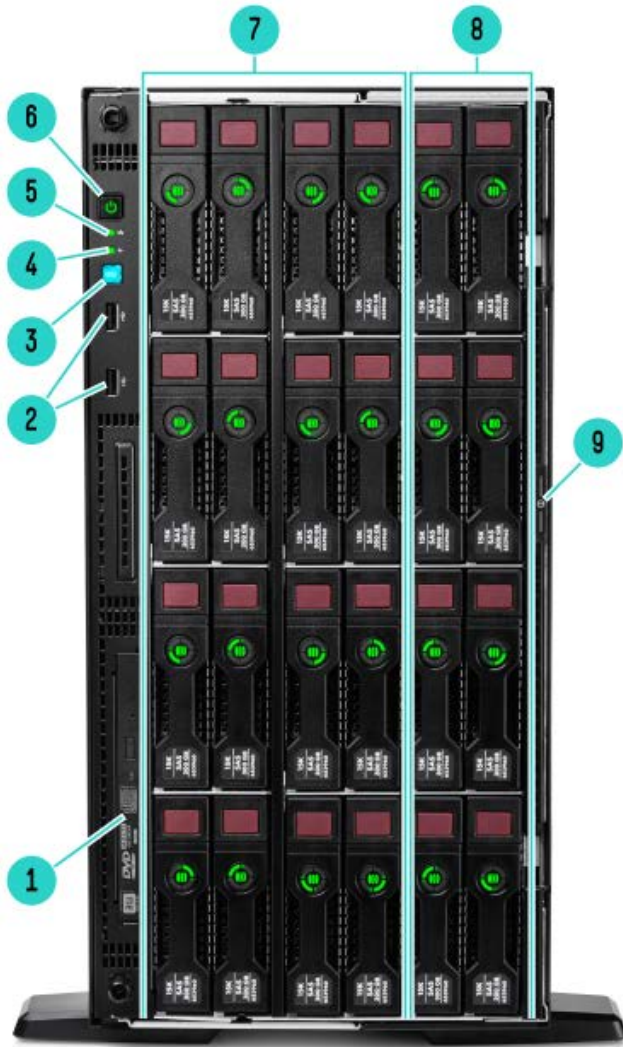
The ML350 Gen9 is the 2P premium server which delivers a class-leading combination of performance, availability, expandability, manageability, reliability and serviceability making it the choice for remote offices, growing businesses and data centers.



Front View Rack Model (SFF)

- | | | | |
|----|--|----|--|
| 1 | Optional HDD cage Drive Cage Bays (Rack shown with blanks. Tower shown with 16 LFF Optional drives) | 2 | Quick removal access panel |
| 3 | Slim Height Drive Bay for Optional Slim Height SATA DVD-ROM or DVD RW Optical Drive (shown on Tower) | 4 | Media Drive Cage Bays – (Rack supports two half height or one full height device; Tower supports one half height device) |
| 5 | Systems Insight Display Bay for Optional SID (Rack models only) | 6 | Two (2) USB 2.0 connectors |
| 7 | Unit ID LED button | 8 | Health LED |
| 9 | NIC Activity LED | 10 | Power On /Standby button & system power LED button |
| 11 | Eight (8) SFF (Rack)/LFF (Tower) SAS/SATA HDD cage | 12 | Serial label pull tab |

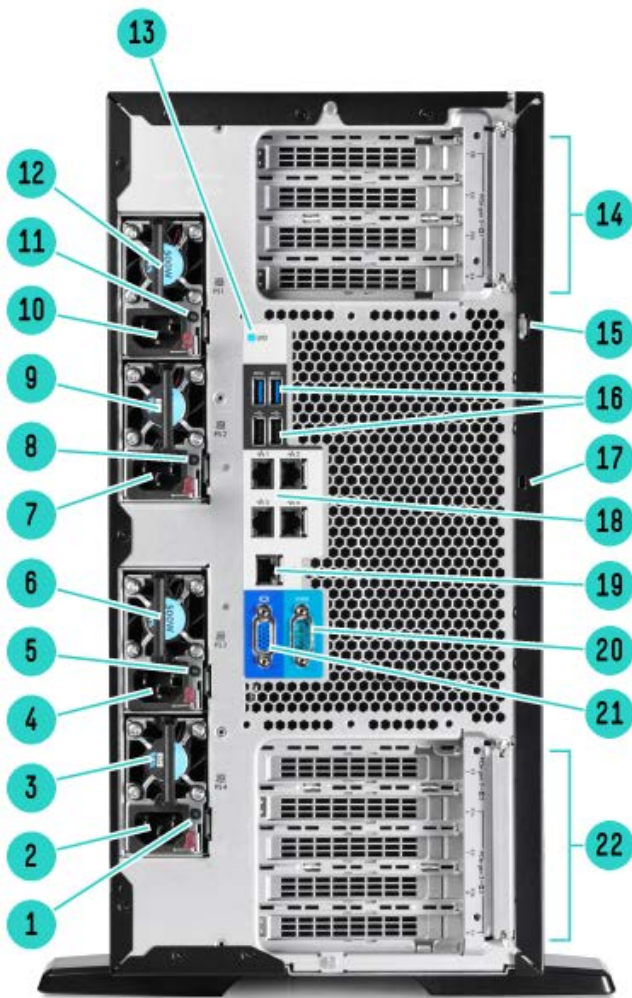
Overview



Front View Tower Model (LFF)

- | | | | |
|---|---|---|--|
| 1 | Slim Height Drive Bay for Optional Slim Height SATA DVD-ROM or DVD RW Optical Drive | 2 | Two (2) USB 2.0 connectors |
| 3 | Unit ID LED button | 4 | Health LED |
| 5 | NIC Activity LED | 6 | Power On /Standby button & system power LED button |
| 7 | Optional HDD cage Drive Cage Bays (Rack shown with blanks. Tower shown with 16 LFF Optional drives) | 8 | Eight (8) SFF (Rack)/LFF (Tower) SAS/SATA HDD cage |
| 9 | Serial label pull tab | | |

Overview



Rear View (Tower Model)

- | | | | |
|----|--|----|--|
| 1 | Power supply Power LED | 2 | Power supply Power connection |
| 3 | HPE Flexible Slot 4 Power Supply (Optional - 500w Power Supply shown) | 4 | Power supply Power connection |
| 5 | Power supply Power LED | 6 | HPE Flexible Slot 3 Power Supply (Optional - 500w Power Supply shown) |
| 7 | Power supply Power connection | 8 | Power supply Power LED |
| 9 | HPE Flexible Slot 2 Power Supply (Optional - 500w Power Supply shown) | 10 | Power supply Power connection |
| 11 | Power supply Power LED | 12 | HPE Flexible Slot 1 Power Supply (Standard Entry Model - 500w Power Supply shown) |
| 13 | Unit ID LED | 14 | PCI Slots (Slots 1-4) Slot 1 and 3 can support Optional GPU |
| 15 | Padlock | 16 | USB 3.0 Connectors (2) top & USB 2.0 Connectors (2) bottom |
| | NOTE: Chassis mechanical feature only to support Padlock. | 18 | Embedded 4 x 1GbE Network Adapter |
| | NOTE: HPE do not offer padlock options or provide qualified part numbers. Customers will need to source from other 3rd party vendors to get this Hardware security feature enabled. | 20 | Serial Connector |
| | | 22 | PCI Slots (Slots 5-9) requires Optional second processor-Slot 6 and 8 can support Optional GPU |

Overview

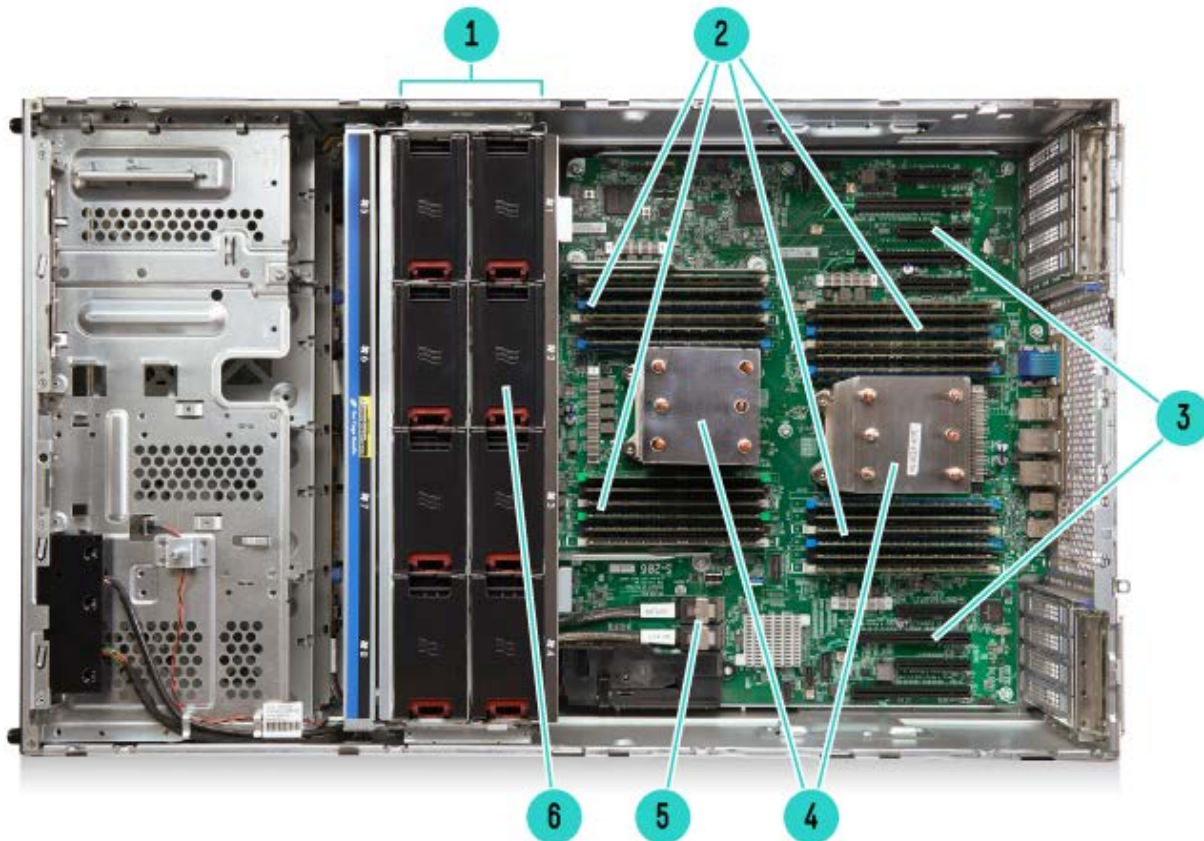
17 Kensington Security Lock

NOTE: Chassis mechanical feature only to support Kensington Security lock.

NOTE: HPE do not offer Kensington security lock options or provide qualified part numbers. Customers will need to source from other 3rd party vendors to get this Hardware security feature enabled.

19 Dedicated iLO Connector

21 Video Connector



Internal View (Rack Model)

- | | | | |
|---|--|---|--|
| 1 | System fans: Three (3) fans are standard Optional Five (5) systems fans are shown. | 2 | Twenty four DIMM slots: DDR4 Registered (RDIMM) or Load Reduced Registered (LRDIMM) memory |
| 3 | Nine (9) PCIe expansion slots (8 PCIe Gen3 and 1 PCIe Gen2) | 4 | Two (2) processors and heatsinks (Second Processor is Optional) |
| 5 | Optional HPE Flexible Smart Array or Smart HBA (not shown here) | 6 | Optional HPE Smart Storage Battery is under the system fans |

What's New

- HPE DDR4 2400MHz SmartMemory RDIMM/LRDIMM offering 8/16/32/64/128 GB, maximum HOST memory capacity support up to 3 TB
- Support for Intel® Xeon® E5-2600 v4 processor offering
- New HPE 25GbE network adapter option offering, providing breakthrough performance at 2.5X increase over previous generation 10GbE
- New 10 TB SATA LFF HDD option offering, maximum internal storage capacity up to 240 TB

Overview

- Six SFF Express Bay option supports up to six NVMe PCIe SSDs for application workloads that demand highest read/write access to storage
- TPM 2.0 module
- Graphic support of NVIDIA® M2000, M4000 and M5000
- New 16Gb and 32Gb 1-port and 2-port Fiber Channel HBA option offering

Standard Features

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

Processor
One of the following
depending on model

| Model | CPU frequency | Cores | L3 Cache | Power | QPI | DDR4 Hz |
|------------|---------------|-------|----------|-------|---------|---------|
| E5-2699v3 | 2.3GHz | 18 | 45MB | 145W | 9.6GT/s | 2133 |
| E5-2698v3 | 2.3GHz | 16 | 40MB | 135W | 9.6GT/s | 2133 |
| E5-2697v3 | 2.6GHz | 14 | 35MB | 145W | 9.6GT/s | 2133 |
| E5-2695v3 | 2.3GHz | 14 | 35MB | 120W | 9.6GT/s | 2133 |
| E5-2690v3 | 2.6GHz | 12 | 30MB | 135W | 9.6GT/s | 2133 |
| E5-2683v3 | 2.0GHz | 14 | 35MB | 120W | 9.6GT/s | 2133 |
| E5-2680v3 | 2.5GHz | 12 | 30MB | 120W | 9.6GT/s | 2133 |
| E5-2670v3 | 2.3GHz | 12 | 30MB | 120W | 9.6GT/s | 2133 |
| E5-2667v3 | 3.2GHz | 8 | 20MB | 135W | 9.6GT/s | 2133 |
| E5-2660v3 | 2.6GHz | 10 | 25MB | 105W | 9.6GT/s | 2133 |
| E5-2650v3 | 2.3GHz | 10 | 25MB | 105W | 9.6GT/s | 2133 |
| E5-2650Lv3 | 1.8GHz | 12 | 30MB | 65W | 9.6GT/s | 2133 |
| E5-2643v3 | 3.4GHz | 6 | 20MB | 135W | 9.6GT/s | 2133 |
| E5-2640v3 | 2.6GHz | 8 | 20MB | 90W | 8.0GT/s | 1866 |
| E5-2637v3 | 3.5GHz | 4 | 15MB | 135W | 9.6GT/s | 2133 |
| E5-2630v3 | 2.4GHz | 8 | 20MB | 85W | 8.0GT/s | 1866 |
| E5-2630Lv3 | 1.8GHz | 8 | 20MB | 55W | 8.0GT/s | 1866 |
| E5-2623v3 | 3.0GHz | 4 | 10MB | 105W | 8.0GT/s | 1866 |
| E5-2620v3 | 2.4GHz | 6 | 15MB | 85W | 8.0GT/s | 1866 |
| E5-2609v3 | 1.9GHz | 6 | 15MB | 85W | 6.4GT/s | 1600 |
| E5-2603v3 | 1.6GHz | 6 | 15MB | 85W | 6.4GT/s | 1600 |
| E5-2699v4 | 2.2GHz | 22 | 55MB | 145W | 9.6GT/s | 2400 |
| E5-2698v4 | 2.2GHz | 20 | 50MB | 135W | 9.6GT/s | 2400 |
| E5-2697v4 | 2.3GHz | 18 | 45MB | 145W | 9.6GT/s | 2400 |
| E5-2697Av4 | 2.6GHz | 16 | 40MB | 145W | 9.6GT/s | 2400 |
| E5-2695v4 | 2.1GHz | 18 | 45MB | 120W | 9.6GT/s | 2400 |
| E5-2690v4 | 2.6GHz | 14 | 35MB | 135W | 9.6GT/s | 2400 |
| E5-2683v4 | 2.1GHz | 16 | 40MB | 120W | 9.6GT/s | 2400 |
| E5-2680v4 | 2.4GHz | 14 | 35MB | 120W | 9.6GT/s | 2400 |
| E5-2667v4 | 3.2GHz | 8 | 25MB | 135W | 9.6GT/s | 2400 |
| E5-2660v4 | 2.0GHz | 14 | 35MB | 105W | 9.6GT/s | 2400 |
| E5-2650v4 | 2.2GHz | 12 | 30MB | 105W | 9.6GT/s | 2400 |
| E5-2650Lv4 | 1.7GHz | 14 | 35MB | 65W | 9.6GT/s | 2400 |
| E5-2643v4 | 3.4GHz | 6 | 20MB | 135W | 9.6GT/s | 2400 |
| E5-2640v4 | 2.4GHz | 10 | 25MB | 90W | 8.0GT/s | 2133 |
| E5-2637v4 | 3.5GHz | 4 | 15MB | 135W | 9.6GT/s | 2400 |
| E5-2630v4 | 2.2GHz | 10 | 25MB | 85W | 8.0GT/s | 2133 |
| E5-2630Lv4 | 1.8GHz | 10 | 25MB | 55W | 8.0GT/s | 2133 |
| E5-2623v4 | 2.6GHz | 4 | 10MB | 85W | 8.0GT/s | 2133 |
| E5-2620v4 | 2.1GHz | 8 | 20MB | 85W | 8.0GT/s | 2133 |
| E5-2609v4 | 1.7GHz | 8 | 20MB | 85W | 6.4GT/s | 1866 |
| E5-2603v4 | 1.7GHz | 6 | 15MB | 85W | 6.4GT/s | 1866 |

Standard Features

| | | |
|-------------------------------------|---|--|
| Chipset | Intel® C610 Series Chipset Intel® E5-2600v3 Processor Family Intel® E5-2600v4 Processor Family NOTE: For more information regarding Intel® chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/ | |
| On System Management Chipset | HPE iLO (Firmware HPE iLO4 2.0 or later) 4GB NAND NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the iLO QuickSpecs . | |
| Memory | Type: One of the following HPE SmartMemory depending on model | |
| | DDR4 Registered (RDIMM) or Load Reduced (LRDIMM) NOTE: The following shows the support with E5-2600v3 processors. | |
| | DIMM Slots Available | 24 (12 DIMM slots per processor, 4 channels per processor, 3 DIMMs per channel) |
| | Maximum Capacity (LRDIMM) | 1.5TB (24 x 64GB LRDIMM) |
| | Maximum Capacity (RDIMM) | 768GB 24 x 32GB RDIMM |
| | NOTE: Refer to the Memory section in this document for more memory support detail. | |
| | Type: NOTE: The following shows the support with E5-2600v4 processors. | |
| | DIMM Slots Available | 24 (12 DIMM slots per processor, 4 channels per processor, 3 DIMMs per channel) |
| | Maximum Capacity (LRDIMM) | 3TB (24 x 128GB LRDIMM) |
| | Maximum Capacity (RDIMM) | 768GB 24 x 32GB RDIMM |
| | NOTE: Refer to the Memory section in this document for more memory support detail. | |
| | NOTE: Mixing of 2133 and 2400MHz memory is not supported. | |
| 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. |
| Network Controller | HPE 1Gb Ethernet 4-port 331i Adapter | |

Expansion Slots

| Expansion Technology | Expansion Slots # | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|----------------------|-------------------|-----------|-----------------|------------|-------------------------------|-----------------|
| PCIe 3.0 | 9 | x4 | x8 | | Full-height, full-length slot | For processor 2 |
| PCIe 3.0 | 8 | x16 | x16 | | Full-height, full-length slot | For processor 2 |
| PCIe 3.0 | 7 | x4 | x8 | | Full-height, full-length slot | For processor 2 |
| PCIe 3.0 | 6 | x16 | x16 | | Full-height, full-length slot | For processor 2 |

Standard Features

| | | | | | | |
|---|----------|-----|-----|---|-------------------------------|-----------------|
| 5 | PCIe 2.0 | x4 | x8 | | Full-height, half-length slot | For processor 2 |
| 4 | PCIe 3.0 | x4 | x8 | 0 | Full-height, full-length slot | For processor 1 |
| 3 | PCIe 3.0 | x16 | x16 | 0 | Full-height, full-length slot | For processor 1 |
| 2 | PCIe 3.0 | x4 | x8 | 0 | Full-height, full-length slot | For processor 1 |
| 1 | PCIe 3.0 | x8 | x16 | 0 | Full-height, full-length slot | For processor 1 |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

NOTE: Nine total expansion slots. Three PCIe 3.0 x16 (x16 speed); One PCIe 3.0 x16 (x8 speed); Four PCIe 3.0 x8 (x4 speed); One PCIe 2.0 x8 (x4 speed).

| | | |
|--|--------------------|---|
| Storage Controller One of the following depending on model | Entry Models | HPE Dynamic Smart Array B140i Embedded SATA controller |
| | Base Models | HPE Flexible Smart Array P440ar/2GB |
| | Performance Models | HPE Flexible Smart Array P440ar/2GB |

| | | |
|--|-----------------|--|
| Internal Storage Devices One of the following depending on model | Optical Drive | Optional SATA 9.5mm DVD-ROM Optical Drive Optional SATA 9.5mm DVD RW Optical Drive NOTE: Optical is optional in entry, base and performance models. |
| | Hard Drive Bays | 8 Hot plug SFF SAS/SATA HDD bays; upgradable to 48 8 Hot plug LFF SAS/SATA HDD Bays; upgradable to 24 NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HPE SFF HDD Blank Kit or P/N 666986-B21: HPE LFF HDD Blank Kit. These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server. |
| | Hard Drives | None ship standard |

| Maximum Internal Storage | CAPACITY | CONFIGURATION | |
|---|----------------------------|---------------|-------------|
| One of the following depending on model | Hot Plug LFF SAS | 240TB | 24 x 10TB |
| | Hot Plug LFF SATA | 240TB | 24 x 10TB |
| | Hot Plug LFF SAS SSD | 38.4TB | 24 x 1.6TB |
| | Hot Plug LFF SATA SSD | 92.16TB | 24 x 3.84TB |
| | Hot Plug SFF SAS | 96TB | 48 x 2TB |
| | Hot Plug SFF SATA | 96TB | 48 x 2TB |
| | Hot Plug SFF SAS SSD | 184.32TB | 48 x 3.84TB |
| | Hot Plug SFF SATA SSD | 184.32TB | 48 x 3.84TB |
| | Hot Plug SFF NVMe PCIe SSD | 7.2TB | 6 x 1.2TB |

| | | |
|--|--|--|
| Power Supply One of the following depending on model | HPE 500W Flex Slot Platinum Hot Plug Power Supply | NOTE: The 500W Flex Slot PSU was not qualified or supported with the X4 RPS Enablement Kit. |
| | HPE 800W Flex Slot Platinum Hot Plug Power Supply | |
| | HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply | |
| | 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 Gen9 Performance Servers. Flex Slot power supplies | |

Standard Features

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.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool located at [HPE Power Advisor Online](#).

Power specifications and technical content for all HPE Server power supplies can be found at <https://www.hpe.com/us/en/servers/server-power-supplies.html>.

System Fans

One of the following depending on model

| | Non-redundant | Redundant |
|---|---------------|-----------|
| 1P model | 3 fans | 6 fans |
| NOTE: Fan Redundancy is standard in performance model. ML350 Gen9 Redundant Fan option kit (725878-B21) consists of four system fans and two PCIe air baffles. | | |
| 2P model | 4 fans | 8 fans |
| NOTE: Refer to ML350 Gen9 User Guide for fan configuration rules. | | |

Interfaces

| | |
|--|---------------------------------|
| Serial | 1 |
| Video | 1 (rear) |
| Network RJ-45 (Ethernet) | 4 |
| HPE iLO Remote Management Network Port | 1 Gb Dedicated |
| SD Slot | 1 (internal) |
| NOTE: The Micro-SD slot is not a hot-pluggable device. Customers should not attempt to plug a Micro-SD card into the Micro-SD slot while the server is powered. | |
| USB 2.0 Ports | 5 (2 front, 2 rear, 1 internal) |
| USB 3.0 | 3 (2 rear, 1 internal) |

Operating Systems and Virtualization

Software Support for ProLiant Servers

[Microsoft Windows Server](#)
[Canonical Ubuntu](#)
[Red Hat Enterprise Linux \(RHEL\)](#)
[SUSE Linux Enterprise Server \(SLES\)](#)
[VMware](#)
[Citrix XenServer](#)

NOTE: For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix

at: <http://www8.hp.com/us/en/products/servers/management/operating-environments/os-support-matrix.html> and our driver download page <http://h20565.www2.hpe.com/hpsc/swd/public/readIndex?sp4ts.oid=7271260>.

Upgradeability

Upgradeable to 2 processors (up to 22 cores)
NOTE: Total 4, 6, 8, 10, 12, 14, 16, 18, 20 & 22 cores.

Up to 24 DIMM slots available for higher Memory capacity
 Up to 48 SFF Hard Drive Bays; Or 24 LFF Hard Drive Bays
 Up to 6 SFF NVMe PCIe SSD drives

NOTE: The ML350 Gen9 6SFF Express Bay kit MUST be installed and it takes up one SFF drive cage space. For detail, refer to Express Bay kit and NVMe SSD section.

8 PCIe 3.0 and 1 PCIe 2.0 I/O slots for additional communications and storage expansion

Standard Features

4 redundant hot-plug power supplies
 Redundant Fan
 Optional optical drive (up to 1)
NOTE: Support of 9.5mm DVD-RW or DVD-ROM.
 Optional SFF or LFF media bay kit to support RDX or tape device(s)
 Tower to rack conversion
 Optional System Insight Display
NOTE: Rack model only.

Industry Standard Compliance

- ACPI 2.0b Compliant
- PCIe 3.0 Compliant
- PXE Support
- WOL Support
- Novell Certified
- IPMI 2.0, SMASH CLP, DCMI 1.0 compliant
- Microsoft® Logo certifications
- USB 3.0 Support
- SMBIOS 2.7.1
- ASHRAE A3/A4
- Energy Star

Graphics

- 16 bit color: maximum resolution of 1920 x 1200
- Integrated Matrox G200 video standard
- 32 bit color: maximum resolution of 1280 x 1024
 - 16 MB Flash
 - 256 MB DDR3

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 Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode.

NOTE: The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit <http://www.hpe.com/servers/uefi>.

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:

- Secure Boot
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using RESTful API for iLO 4
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM
- Network Stack configurations

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Standard Features

NOTE: UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen9 Server.

| | |
|----------------------------|--|
| Form Factor | Tower or Rack (5U) |
| Embedded Management | <p>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.</p> <p>UEFI Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at http://www.hpe.com/servers/uefi.</p> <p>RESTful API RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at http://www.hpe.com/info/restfulapi.</p> <p>Intelligent Provisioning Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at http://www.hpe.com/servers/intelligentprovisioning.</p> <p>Embedded Remote Support The Hewlett Packard Enterprise embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at http://www.hpe.com/info/insightonline/explore.</p> |
| Server utilities | <p>Smart Update Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at http://www.hpe.com/servers/smartupdatemanager.</p> <p>HPE Systems Insight Manager (HPE SIM) HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and 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/servers/hpsim.</p> <p>Scripting Tool Kit and Windows PowerShell Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at http://www.hpe.com/servers/proliant/stk or http://www.hpe.com/servers/powershell.</p> <p>RESTful Interface Tool RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale. Learn more at http://www.hpe.com/info/resttool.</p> <p>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.</p> |

Standard Features

HPE Insight Online HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at <http://www.hpe.com/info/insightonline/explore>.

NOTE: The Service Pack for ProLiant (which includes SUM) can be downloaded from <http://www.hpe.com/servers/spp/download>. More information can be found on: <http://www.hpe.com/info/smartupdate>, <http://www.hpe.com/servers/spp> and <http://www.hpe.com/servers/hpsum>.

Security

Power-on password
 Setup password
 Serial interface control
 Power switch security
 Administrator's password
 UEFI
 TPM 1.2

NOTE: Refer to Additional Options section in this document for detail.

TPM 2.0
NOTE: Need to upgrade BIOS before using the TPM 2.0. Refer to Additional Options section in this document for detail.

Security Front Bezel

NOTE: Refer to Additional Options section in this document for detail.

Chassis mechanical support of padlock and Kensington Security lock (located at system rear)

NOTE: HPE do not offer padlock or Kensington security lock options or provide qualified part numbers. Customers will need to source from other 3rd party vendors to get these Hardware security features enabled.

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE 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 Care Pack 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.

NOTE: 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 HPE replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: <http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/>.

Optional Features

| | | |
|--------------------------------------|---|---|
| Embedded Management | 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. Learn more about HPE iLO Advanced at http://www.hpe.com/servers/iloadvanced . |
| Server Management | HPE Insight Control | HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see http://www.hpe.com/info/insightcontrol . |
| | 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 . |
| Rack and Power Infrastructure | HPE Rack and Power Infrastructure products and services create highly efficient and intelligent solutions for existing or new IT data centers. HPE Rack and Power infrastructure solutions – rack infrastructure, power protection and management, performance optimized data centers (PODs) – are the foundation you are looking for to help secure your long-term IT success. These products are designed to help you react to changes in the industry. They deliver efficient, easy-to-use capabilities to manage, monitor, deploy and provision infrastructure from entry to enterprise. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access. Learn more at HPE Rack and Power Infrastructure . | |
| High Performance Clusters | HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. HPE Cluster Platforms . HPE Insight Cluster Management Utility (CMU) is a Hewlett Packard Enterprise licensed and supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. HPE CMU . | |
| HPC Interconnects | NOTE: High Performance Computing (HPC) interconnect technologies are available for this server under the HPE Cluster Platform product portfolio. These high-speed interconnects are fully supported by Hewlett Packard Enterprise when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPEC Clusters with InfiniBand Interconnects: Unified Cluster Portfolio . | |
| Storage Software | Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than Hewlett Packard Enterprise storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities. Storage software that gets the job done: <ul style="list-style-type: none">• Data Protection and Recovery Software Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data | |

Optional Features

protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.

- **Data Archive and Migration Software**

Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.

- **Storage Resource Management Software (SRM)**

Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.

- **Data Replication Software**

Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.

- **Storage Device Management Software**

Maximize your investment in Hewlett Packard Enterprise storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.

- **HPE StoreVirtual VSA**

Make the move to virtualized storage with HPE StoreVirtual VSA. Transform unused capacity inside your servers into a virtual storage array. Add StoreVirtual VSA to multiple servers, manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3-year limited license for HPE software-defined storage at no extra cost. You have the option to install free 1TB-capacity StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free management software are available at <http://www.hpe.com/storage/tryVSA>.

NOTE: For more information about Storage Software including QuickSpecs, please see: <http://www8.hp.com/us/en/products/data-storage/software-portfolio.html>.

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.hp.com/SimplifiedConfig/Index>.

Service and Support

HPE Support Services HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support for need for your IT and business.

Connect your devices Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%¹ reduction in down time, near 100%² diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7 monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to Hewlett Packard Enterprise support.

1- IDC 2 - HP CSC reports 2014 - 2015

Recommended Support **Standard: HPE Proactive Care* with 24x7 coverage, three year Support Service**
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

Optimized HPE Proactive Care* with 6 hour call-to-repair commitment, three year Support Service
HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years' proactive reporting and advice with our highest level of hardware support – Hewlett Packard Enterprise 24x7, six hour hardware call-to-repair. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

Parts and Materials Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-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 QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Related Services **HPE Server Hardware Installation**
Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

<https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf>

HPE Installation and Startup Service

Provides for the installation and startup of Hewlett Packard Enterprise technology including BladeSystems, C-Class enclosure, HPE ProLiant c-Class and Integrity server blades, storage blades, SAN switch blades, HPE Virtual Connect modules (Ethernet and Fibre Channel), Ethernet network interconnects, and InfiniBand, as well as the installation of one supported operating system type (Windows® or Linux).

Service and Support

HPE Technology Services Support Credits

Offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <http://www.hpe.com/ww/learn>

HPE Support Center The HPE Support Center is a personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more <http://www.hpe.com/support/hpesc>

The Hewlett Packard Enterprise Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

*HPE Support Center Mobile App is subject to local availability.

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

Pre-configured Models

For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
3. If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HPE SFF Hard Drive Blank Kit or P/N 666986-B21: HPE LFF Hard Drive Blank Kit.

NOTE: 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.

CAUTION: 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.

| | Entry Models | | Base Models | |
|-----------------------------|---|--|--|--|
| [SKU Number] | 765819-001 | 835262-001 | 765820-001 | 835263-001 |
| Model Name | HPE ProLiant ML350 Gen9 E5-2609v3 8GB-R B140i 8LFF 500W PS Entry Tower Server | HPE ProLiant ML350 Gen9 E5-2609v4 1P 8GB-R B140i 8LFF 500W PS Entry Server | HPE ProLiant ML350 Gen9 E5-2620v3 16GB-R P440ar 8SFF 500W PS Base Tower Server | HPE ProLiant ML350 Gen9 E5-2620v4 16GB-R P440ar 8SFF 500W PS Base Server |
| Processor | Intel® Xeon® E5-2609v3 | Intel® Xeon® E5-2609v4 | Intel® Xeon® E5-2620v3 | Intel® Xeon® E5-2620v4 |
| Number of Processors | One | | | |
| Memory | 8GB (1x8GB Registered DIMMs, 2133 MHz) | 8GB (1x8GB Registered DIMMs, 2400 MHz) | 16GB (1x16GB Registered DIMMs, 2133 MHz) | 16GB (1x16GB Registered DIMMs, 2400 MHz) |
| Network Controller | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | | |
| Storage Controller | HPE Dynamic Smart Array B140i | | HPE Smart Array P440ar/2G Controller | |
| Hard Drive | None ship standard; includes 6 LFF hard drive blanks | | None ship standard; includes 6 SFF hard drive blanks | |
| Internal Storage | 8 LFF HDD Bays (upgradable to 24) | | 8 Hot plug SFF SAS/SATA HDD Bays; upgradeable to 48 | |
| Optical Drive Bay | Optional LFF Media Cage Kit (726561-B21) | | Optional SFF Media Cage Kit (726545-B21) | |
| Optical Drive | Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive) | | | |
| PCI-Express Slots | 9 PCIe slots | | | |
| Power Supply | (1) HPE 500W Flex Slot Platinum Power Supply | | | |
| Fans | 3 hot swap fans, non-redundant | | | |
| Management | iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional) | | | |
| Energy Star | | Meets Energy Star requirements | | Meets Energy Star requirements |
| Form Factor | Tower (5U) | | | |
| Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | |

Pre-configured Models

| | Performance Rack Models | | Performance Models | |
|-----------------------------|---|---|---|---|
| [SKU Number] | 765821-001 | 835264-001 | 765822-001 | 835265-001 |
| Model Name | HPE ProLiant ML350 Gen9 2xE5-2630v3 2P 32GB-R P440ar 8SFF 2x800W PS ES Rack Server | HPE ProLiant ML350 Gen9 2xE5-2630v4 2P 32GB-R P440ar 8SFF 2x800W PS Perf ES Rack Server | HPE ProLiant ML350 Gen9 2xE5-2650v3 2P 32GB-R P440ar 8SFF 2x800W PS ES Tower Server | HPE ProLiant ML350 Gen9 E5-2650v4 2P 32GB-R P440ar 8SFF 2x800W PS Perf Server |
| Processor | Intel® Xeon® E5-2630v3 | Intel® Xeon® E5-2630v4 | Intel® Xeon® E5-2650v3 | Intel® Xeon® E5-2650v4 |
| Number of Processors | Two | | | |
| Memory | 32GB (2x16GB Registered DIMMs, 2133 MHz) | 32GB (2x16GB Registered DIMMs, 2400 MHz) | 32GB (2x16GB Registered DIMMs, 2133 MHz) | 32GB (2x16GB Registered DIMMs, 2400 MHz) |
| Network Controller | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | | |
| Storage Controller | HPE Smart Array P440ar/2G Controller | | | |
| Hard Drive | None ship standard; includes 6 SFF hard drive blanks | | | |
| Internal Storage | 8 Hot plug SFF SAS/SATA HDD Bays; upgradeable to 48 | | | |
| Optical Drive Bay | Optional SFF Media Cage Kit (726545-B21) | | | |
| Optical Drive | Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive) | | | |
| PCI-Express Slots | 9 PCIe slots | | | |
| Power Supply | (2) HPE 800W Flex Slot Platinum Power Supply | | | |
| Fans | 8 hot plug fans, redundant | | | |
| Management | iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional) | | | |
| Energy Star | Meets Energy Star requirements | | | |
| Accessories | Rack Kit included | | | |
| Form Factor | Rack (5U) HPE Easy Install Rails with CMA | | Tower (5U) | |
| Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | | |

Smart Buy Models

| | E5-2600v4 Smart Buy Models | | |
|----------------------|--|--|--|
| [SKU Number] | 835850-S01 | 835851-S01 | 835852-S01 |
| Model Name | HPE ProLiant ML350 Gen9 E5-2609v4 LFF US Svr/S-B | HPE ProLiant ML350 Gen9 E5-2620v4 SFF US Svr/S-B | HPE ProLiant ML350 Gen9 E5-2640v4 SFF US Svr/S-B |
| Processor | Intel® Xeon® E5-2609v4 | Intel® Xeon® E5-2620v4 | Intel® Xeon® E5-2640v4 |
| Number of Processors | one | | |
| Memory | 8GB (1x8GB Registered DIMMs, 2400MHz) NOTE: DIMMs will operate at 1866MHz with this processor. | 8GB (1x8GB Registered DIMMs, 2400MHz) NOTE: DIMMs will operate at 2133MHz with this processor. | 16GB (1x16GB Registered DIMMs, 2400MHz) NOTE: DIMMs will operate at 2133MHz with this processor. |
| Network Controller | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | |
| Storage Controller | HPE Smart Array P440ar/2G Controller + Smart Storage Battery | | |
| Hard Drive | None ship standard | | |
| Internal Storage | Up to 8 LFF | Up to 8 SFF | |
| Optical Drive | HP 9.5mm SAS DVD ROM Jb Kit | | |
| PCI-Express Slots | 9 PCIe slots | | |
| Power Supply | (1) HPE 500W Flex Slot Platinum Power Supply | | (2) HPE 800W Flex Slot Platinum Power Supplies |
| Fans | 3 hot plug fans, non-redundant | | |
| Management | Standard: iLO Management Optional: iLO Advanced, Insight Control, HP OneView | | |
| Energy Star | Meets Energy Star requirements | | |
| Form Factor | Tower (5U) | | |
| Warranty | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | |

| | E5-2600v3 Smart Buy Models | | | |
|----------------------|---|---|---|---|
| [SKU Number] | 792467-S01 | 776976-S01 | 776977-S01 | 776978-S01 |
| Model Name | HP ProLiant ML350 Gen9 E5-2609v3 1.9GHz 6-core 8GB-R H240ar 8SFF 2x300GB 500W PS Server/S-Buy | HP ProLiant ML350 Gen9 E5-2609v3 1.9GHz 6-core 1P 8GB-R P440ar 8LFF 500W PS Server/S-Buy | HP ProLiant ML350 Gen9 E5-2620v3 2,4 GHz 6-core 1P 8GB-R P440ar 8SFF 500W PS Server/S-Buy | HP ProLiant ML350 Gen9 E5-2640v3 2,4 GHz 6-core 1P 16GB-R P440ar 8SFF 800W RPS Server/S-Buy |
| Processor | Intel® Xeon® E5-2609v3 | Intel® Xeon® E5-2609v3 | Intel® Xeon® E5-2620v3 | Intel® Xeon® E5-2640v3 |
| Number of Processors | one | | | |
| Memory | 8GB (1x8GB Registered DIMMs, 2133 MHz) NOTE: DIMMs will operate at 1600MHz with this processor. | 8GB (1x8GB Registered DIMMs, 2133 MHz) NOTE: DIMMs will operate at 1866MHz with this processor. | 8GB (1x8GB Registered DIMMs, 2133 MHz) NOTE: DIMMs will operate at 1866MHz with this processor. | 16GB (1x16GB Registered DIMMs, 2133 MHz) NOTE: DIMMs will operate at 1866MHz with this processor. |
| Network Controller | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | | |
| Storage Controller | HPE H240ar Smart Host Bus Adapter | HPE Smart Array P440ar/2G Controller + Smart Storage Battery | | |
| Hard Drive | (2) HPE 300GB 6G SAS 10K SFF SC ENT Hard Drives | None ship standard | | |

Smart Buy Models

| | | | |
|--------------------------|---|-----------------------------|--|
| Internal Storage | Up to 8 SFF | Up to 8 LFF | Up to 8 SFF |
| Optical Drive | None included | HP 9.5mm SAS DVD ROM Jb Kit | |
| PCI-Express Slots | 9 PCIe slots | | |
| Power Supply | (1) HPE 500W Flex Slot Platinum Power Supply | | (2) HPE 800W Flex Slot Platinum Power Supplies |
| Fans | 3 hot plug fans, non-redundant | | |
| Management | Standard: iLO Management Optional: iLO Advanced, Insight Control, HP OneView | | |
| Energy Star | Meets Energy Star requirements | | |
| Form Factor | Tower (5U) | | |
| Warranty | 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response | | |

Configuration Information - Factory Integrated Models

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.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
4. 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)

| | | | |
|---------------------------|--|---|---|
| CTO Server | HPE ProLiant ML350 Gen9 Hot Plug 8SFF Configure-to-order Rack Server | HPE ProLiant ML350 Gen9 Hot Plug 8SFF Configure-to-order Tower Server | HPE ProLiant ML350 Gen9 Hot Plug 8LFF Configure-to-order Tower Server |
| SKU Number | 754534-B21 | 754536-B21 | 754537-B21 |
| Processor | 2 (optional) x HPE Smart Socket Guide | | |
| DIMM Slots | 24 DIMM slots for RDIMM, LRDIMM DDR4 Memory | | |
| Storage Controller | HPE Dynamic Smart Array B140i | | |
| PCIe | 9 Standard (8 FH/FL, 1 FH/HL) | | |
| Drive Cage | 8SFF Hot Plug | 8LFF Hot Plug | |
| Network Controller | HPE Embedded 1Gb Ethernet 4-port 331i Adapter | | |
| Fans | 3 hot swap fans, non-redundant | | |
| Management | iLO Management (standard), Intelligent Provisioning (standard) | | |
| USB | 2 front, 2 internal, 4 rear | | |

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

| HPE Processors | E5-2600v4 series Processors | |
|----------------|--|------------|
| | HPE ML350 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit | 801232-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit | 801233-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit | 801234-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit | 801250-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) FIO Processor Kit | 801251-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) FIO Processor Kit | 801255-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) FIO Processor Kit | 801256-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit | 801258-L21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) FIO Processor Kit | 801225-L21 |

Configuration Information - Factory Integrated Models

| | |
|---|------------|
| HPE ML350 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit | 801226-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2660v4 (2GHz/14-core/35MB/105W) FIO Processor Kit | 801228-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit | 801229-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit | 801230-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit | 801252-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit | 801253-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) FIO Processor Kit | 801254-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit | 801257-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) FIO Processor Kit | 801259-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) FIO Processor Kit | 801271-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) FIO Processor Kit | 839989-L21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit | 801231-L21 |
| E5-2600v3 series Processors | |
| HP ML350 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit | 726661-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit | 726664-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit | 726651-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit | 726654-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit | 726658-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit | 726671-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit | 779834-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit | 726686-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit | 726636-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 726639-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit | 726642-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit | 726645-L21 |

Configuration Information - Factory Integrated Models

| | |
|---|------------|
| HP ML350 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit | 726648-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit | 726668-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit | 726674-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit | 726677-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2667v3 (3,2GHz/8-core/20MB/135W) FIO Processor Kit | 726680-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2643v3 (3,4GHz/6-core/20MB/135W) FIO Processor Kit | 726683-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit | 765794-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit | 781828-L21 |
| HP ML350 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit | 781830-L21 |

NOTE: If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.

NOTE: Up to 2 processors supported. Mixing different processor models is not supported.

NOTE: DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

NOTE: When v4 Processor is selected, then only PC4-2400T Memory Kit can be selected.

NOTE: When v3 Processor is selected, then only PC4-2133P Memory Kit can be selected.

NOTE: For the Intel® C600 Chipset E5-2600 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x v#, 2= number of CPUs in a Node, 6 is socket/segment designation, 00= Processor SKU, x= L for low power SKUs and v# (not yet designated)= version number.

HPE Memory

NOTE: Select one or more memory kits from below.

NOTE: LRDIMM, RDIMM are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM

NOTE: HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.

NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: <http://www.hp.com/go/proliant-energy-efficient>

NOTE: Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: [Online Memory Configuration Tool](#)

Registered DIMMs (RDIMMs) for E5-2600v4 Series

| | |
|--|------------|
| HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805347-B21 |
| HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805349-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805351-B21 |
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 836220-B21 |

Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series

| | |
|--|------------|
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit | 805353-B21 |
|--|------------|

Configuration Information - Factory Integrated Models

HP 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit 805358-B21

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726717-B21

HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726718-B21

HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 759934-B21

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726719-B21

HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 728629-B21

Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit 726720-B21

HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit 726722-B21

HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit 726724-B21

HPE Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

NOTE: Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HP Power Advisor Tool to determine the right size power supply for your server configuration. The HP Power Advisor is located at: [HPE Power Advisor Online](#)

HPE Flex Slot Hot-Plug Power Supplies

HP 500W Flex Slot Platinum Hot Plug Power Supply Kit 720478-B21

HP 800W Flex Slot Platinum Hot Plug Power Supply Kit 720479-B21

HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit 720620-B21

HP 800W Flex Slot -48VDC Hot Plug Power Supply Kit 720480-B21

HP 800W Flex Slot Titanium Hot Plug Power Supply Kit 720482-B21

HP 800W Flex Slot Universal Hot Plug Power Supply Kit 720484-B21

Enablement Kit

HP ML350 Gen9 X4 Redundant Power Supply Enablement FIO Kit 725870-B21

NOTE: If more than quantity two of 800W or 1400W Power Supplies are ordered, then X4 Redundant Power Supply FIO Kit must be selected. This kit does not support the 500W Power Supply.

Step 3: Choose Additional Factory Integratable Options (only one from each category unless otherwise noted)

HPE Storage Controllers

NOTE: The embedded B140i controller will be used as the primary controller if no controller has been selected from the list below. Embedded SATA controller can support up to 8 SATA hard drives.

HPE Smart Array Controllers

HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller 749974-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: Includes the HP Smart Storage Battery

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller 761872-B21

NOTE: Includes the HP Smart Storage Battery

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller 761874-B21

NOTE: Includes the HP Smart Storage Battery

HPE Smart Host Bus Adapters

Configuration Information - Factory Integrated Models

| | | |
|---------------------------------------|--|------------|
| | HP H240ar 12Gb 2-ports Int FIO Smart Host Bus Adapter | 749976-B21 |
| | NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot. | |
| | HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter | 761873-B21 |
| | Expander Kits | |
| | HP 12Gb SAS Expander Card for ML350 Gen9 | 769635-B21 |
| | NOTE: Does not support H240ar or P440ar. It contains three cables from expander card to HDD backplanes, and one cable from Smart Array or HBA to expander card. | |
| | HP ML350 Gen9 Second Expander FIO Kit | 769637-B21 |
| | NOTE: Cannot be selected when P/N: 769635-B21 is not in order. If P/N: 761637-B21 is selected, then 2 nd processor and X4 RPS Enablement FIO Kit (P/N: 725870-B21) and P840 controller must also be ordered. | |
| | HPE Cable Options | |
| | HP ML350 Gen9 Host Bus Adapter Mini-SAS Cable Kit | 765648-B21 |
| | NOTE: If P/N: 761873-B21 is selected then this option kit must be selected. One card per kit. | |
| | HP ML350 Gen9 Smart Array Cable Kit | 765650-B21 |
| | NOTE: If P/N: 761872-B21 or P/N: 749976-B21 is selected then this option kit must be selected. One card per kit. | |
| | HP ML350 Gen9 Flexible Smart Array Controller Mini-SAS Cable Kit | 765652-B21 |
| | NOTE: If P/N: 749974-B21 or P/N: 749976-B21 is selected then this option kit must be selected. | |
| | HP ML350 Gen9 Mini-SAS Cable FIO Kit | 765654-B21 |
| | NOTE: If no SAS controller is selected and using B140i as primary, this option kit is required. | |
| BIOS Mode | HP Legacy FIO Mode Setting | 758959-B22 |
| | NOTE: If selected, then B140i will not be supported and can no longer be a primary controller therefore, SAS internal controller must be selected to be the primary controller. | |
| Controller State | HP FIO Enable B140i Setting | 784308-B21 |
| | NOTE: Must be selected when B140i is used as the primary controller and RAID is desired. | |
| | HP Mfg FIO Enable HBA Mode Setting | 792962-B21 |
| | NOTE: When selected if H240ar/H240 are used as the primary controller then RAID is not allowed. | |
| HPE Insight Software | HP Insight Controller including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License | C6N36A |
| | HP Insight Controller including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO E-LTU | C6N36ABE |
| Rail Kits | HP ML350 Gen9 5U FIO Rail Kit | 790357-B21 |
| HPE Location Discovery Service | HP ML350 Gen9 Discovery Service FIO Kit | 726549-B21 |

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

CAUTION: 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.

Core Options

NOTE: 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 Unique Options | HP ML350 Gen9 8LFF Hot Plug Drive Cage Kit | 726547-B21 |
| | NOTE: Additional 8LFF Hard Drive Cage/backplane assembly, allowing for up to 24FF Drive Bays. | |
| | HP ML350 Gen9 8SFF Hard Drive Cage Kit | 778157-B21 |
| | NOTE: Additional 8SFF Hard Drive Cage/Backplane assembly, allowing for up to 48SFF Drive Bays. | |
| | HP ML350 Gen9 Redundant Fan Kit | 725878-B21 |
| | NOTE: This kit consists of four additional system fans and two PCIe air baffles to support fan redundancy. | |
| | HP ML350 Gen9 LFF Media Cage Kit | 726561-B21 |
| | NOTE: Cage for converting LFF drive bays to a media device. Supports 1*Half-Height tape storage/ Disk-Based Backup device. (RDX) | |
| | HP ML350 Gen9 SFF Media Cage Kit | 726545-B21 |
| | NOTE: Cage for converting SFF drive bays to a media device. Supports 2*Half-Height/ 1*Full-Height tape storage/ Disk-Based Backup device (RDX). | |
| | HP ML350 Gen9 Flexible Smart Array Controller Mini-SAS Cable Kit | 765652-B21 |
| | NOTE: Mini-SAS Cable Kit for Flexible Smart Array Controller (AROC). | |
| | HP ML350 Gen9 Smart Array Cable Kit | 765650-B21 |
| NOTE: Mini-SAS Cable Kit for stand-up P-series Smart Array Card. | | |
| HP ML350 Gen9 Host Bus Adapter Mini-SAS Cable Kit | 765648-B21 | |
| NOTE: Mini-SAS Cable kit for Host Bus Adapter. | | |
| HP ML350 Gen9 Graphic Card Support Kit | 726565-B21 | |
| NOTE: Required to support graphic accelerators except for K2200. | | |
| HP ML350 Gen9 Tower to Rack Conversion Kit | 726567-B21 | |
| NOTE: For converting a tower model to a rack model. It is consist of a 5U rail kit, cable management arm (CMA) and rack enablement kit (rack ear, rack handle, SID blank etc) | | |
| HP ML350 Gen9 System Insight Display Kit | 726563-B21 | |
| NOTE: For rack model only. | | |
| HP Security Bezel Kit | 660584-B21 | |
| NOTE: For ML350 Rack model only. | | |
| HP 12Gb SAS Expander Card for ML350 Gen9 | 769635-B21 | |
| NOTE: The SAS Expander card supports 24 drives. The SAS Expander card must be used in conjunction with an HPE Smart Array P840 or P440 controller, or an H240 Host Bus Adapter. The SAS Expander card cannot be connected to H240ar or P440ar Flexible Smart Array Controller cards. | | |
| NOTE: The SAS Expander kit includes two cables to connect from the Smart Array controller or HBA to the SAS Expander and the other to connect from the Expander to the HDD backplane. | | |
| NOTE: It DOES NOT support tape storage/ Disk-Based Backup device (RDX). | | |
| HP ML350 Gen9 X4 RPS Enablement Kit | 802988-B21 | |
| NOTE: ML350 Gen9 supports max. four Power Supply slots. If Power supply selection qty is more than two, then X4 RPS Enablement Kit must be selected - to support the 3rd and 4th Power Supply Units. Minimum Power Supply qty. selection to configure with X4 RPS Enablement Kit is three. | | |

Core Options

NOTE: And this option is not supported with 720478-B21 (HPE 500W FS Plat Ht Plg Pwr Supply Kit).

NOTE: If hard drive cage selection qty. is more than three, this X4 RPS Enablement Kit must be selected - to get proper qty. of HDD backplane power connectors.

NOTE: If DW GPU card selection qty. is more than two, this X4 RPS Enablement Kit MUST be selected - in order to get proper qty. of GPU external power connectors.

HP ML350 Gen9 NVMe 6 Solid State Drive Express Bay Enablement Kit 726551-B21

NOTE: Support for SFF chassis SKU only. Maximum installation of NVMe express bay in ML350 Gen9 is one - installation limited to Box 1 or Box 4 for optimized cooling, which supports up to 6 SFF NVMe PCIe SSDs.

NOTE: One express bay bridge card is included in the enablement kit, with installation limited to PCIe slot 3, 6 or 8. If slot 6 or 8 is selected, a 2nd processor must be installed.

NOTE: For NVMe PCIe SSD selection, refer to drive section in this document.

| HPE Processors | E5-2600v4 series Processors | |
|----------------|--|------------|
| | HPE ML350 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit | 801233-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit | 801234-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit | 801250-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit | 801251-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit | 801232-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2643v4 (3.4GHz/6-core/20MB/135W) Processor Kit | 801255-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2637v4 (3.5GHz/4-core/15MB/135W) Processor Kit | 801256-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit | 801258-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2690v4 (2.6GHz/14-core/35MB/135W) Processor Kit | 801225-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit | 801226-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit | 801228-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit | 801229-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit | 801230-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) Processor Kit | 801252-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Processor Kit | 801253-B21 |
| | HPE ML350 Gen9 Intel® Xeon® E5-2667v4 (3.2GHz/8-core/25MB/135W) Processor Kit | 801254-B21 |

Core Options

| | |
|---|------------|
| HPE ML350 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) Processor Kit | 801257-B21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2699v4 (2.2GHz/22-core/55MB/145W) Processor Kit | 801259-B21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2698v4 (2.2GHz/20-core/50MB/135W) Processor Kit | 801271-B21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2697Av4 (2.6GHz/16-core/40MB/145W) Processor Kit | 839989-B21 |
| HPE ML350 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit | 801231-B21 |
| E5-2600v3 series Processors | |
| HP ML350 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit | 726661-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit | 726664-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit | 726651-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit | 726654-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit | 726658-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit | 726671-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit | 779834-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor Kit | 726686-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit | 726636-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit | 726639-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit | 726642-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit | 726645-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit | 726648-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit | 726668-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit | 726674-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit | 726677-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit | 726680-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit | 726683-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Kit | 765794-B21 |

Core Options

| | |
|---|------------|
| HP ML350 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit | 781828-B21 |
| HP ML350 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit | 781830-B21 |

HPE Memory

Registered DIMMs (RDIMMs) for E5-2600v3 Series

| | |
|--|------------|
| HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726717-B21 |
| HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726718-B21 |
| HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 759934-B21 |
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 726719-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit | 728629-B21 |

NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.

NOTE: Mixing of DIMM types is not supported.

NOTE: Mixing of 2133 and 2400MHz DIMMs is not supported.

Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series

| | |
|--|------------|
| HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit | 726720-B21 |
| HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit | 726722-B21 |
| HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit | 726724-B21 |

NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.

NOTE: Mixing of DIMM types is not supported.

NOTE: Mixing of 2133 and 2400MHz DIMMs is not supported.

Registered DIMMs (RDIMMs) for E5-2600v4 Series

NOTE: The following memory is supported by the E5-2600v4 series Processor only.

| | |
|--|------------|
| HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805347-B21 |
| HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805349-B21 |
| HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 805351-B21 |
| HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit | 836220-B21 |

NOTE: Depending on Processor selected this memory will run at 1866, 2133 or 2400MHz.

NOTE: Mixing of DIMM types is not supported.

NOTE: Mixing of 2133 and 2400MHz DIMMs is not supported.

Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series

NOTE: The following memory is supported by the E5-2600v4 series Processor only.

| | |
|--|------------|
| HPE 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit | 805353-B21 |
| HPE 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit | 805358-B21 |
| HPE 128GB (1x128GB) Octal Rank x4 DDR4-2400 CAS-20-18-18 Load Reduced Memory Kit | 809208-B21 |

Core Options

NOTE: Depending on Processor selected this memory will run at 1866, 2133 or 2400MHz.

NOTE: Mixing of DIMM types is not supported.

NOTE: Mixing of 2133 and 2400MHz DIMMs is not supported.

| | | |
|---------------------------|--|------------|
| HPE Optical Drives | HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive | 726536-B21 |
| | HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive | 726537-B21 |

HPE Drives

NOTE: For a complete list of the drive, controller and cable options please check the compatibility matrix:

<https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-4154ENW&cc=us&lc=en>

SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

| | |
|---|------------|
| HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 737394-B21 |
| HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 737261-B21 |
| HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive | 765424-B21 |
| HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793699-B21 |
| HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793703-B21 |

SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives

| | |
|--|------------|
| HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 761477-B21 |
| HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652766-B21 |
| HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652753-B21 |
| HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765257-B21 |
| HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765259-B21 |
| HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793669-B21 |
| HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793671-B21 |
| HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 818365-B21 |
| HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 818367-B21 |
| HPE 8TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 819201-B21 |
| HPE 1TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 846524-B21 |
| HPE 3TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 846528-B21 |
| HPE 6TB 12G SAS 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 846514-B21 |
| HPE 10TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 857644-B21 |
| HPE 8TB 12G SAS 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 861590-B21 |

SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

| | |
|---|------------|
| HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 693687-B21 |
| HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 628061-B21 |
| HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658079-B21 |

Core Options

| | |
|--|------------|
| HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 657750-B21 |
| HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 658071-B21 |
| HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765253-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive | 765255-B21 |
| HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 819203-B21 |
| HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives | 793665-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793667-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive | 793683-B21 |
| HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861676-B21 |
| HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861678-B21 |
| HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861691-B21 |
| HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 861693-B21 |
| HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 857648-B21 |
| HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive | 861594-B21 |
| HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive | 846510-B21 |
| 6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives | |
| HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804590-B21 |
| HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD | 872346-B21 |
| HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD | 872350-B21 |
| HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804616-B21 |
| HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804628-B21 |
| HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804634-B21 |
| HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 832417-B21 |
| HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804642-B21 |
| HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804668-B21 |
| HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804680-B21 |
| HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804602-B21 |
| HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804608-B21 |
| HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804674-B21 |
| 6G SATA Hot Plug LFF (3.5-inch) RI-3 SCC SSD | |
| HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816933-B21 |
| 6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives | |
| HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804578-B21 |
| HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804584-B21 |
| HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive | 804596-B21 |
| HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD | 869380-B21 |

Core Options

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| HPE 1.6TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD | 869388-B21 |
| 6G SATA Hot Plug LFF (3.5-inch) MU-3 SCC SSD | |
| HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816989-B21 |
| HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive | 816999-B21 |
| SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives | |
| HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive | 718162-B21 |
| HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD | 872479-B21 |
| HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty DS Digitally Signed Firmware HDD | 870759-B21 |
| HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652589-B21 |
| HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD | 870757-B21 |
| HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD | 872477-B21 |
| HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759212-B21 |
| HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652583-B21 |
| HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759210-B21 |
| HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652572-B21 |
| HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD | 870753-B21 |
| HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD | 872475-B21 |
| HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 759208-B21 |
| HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652564-B21 |
| HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652605-B21 |
| HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 781516-B21 |
| HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 781518-B21 |
| HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 785067-B21 |
| HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 785069-B21 |
| HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD | 870765-B21 |
| HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD | 870763-B21 |

Core Options

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| HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive | 748387-B21 |
| HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD | 872481-B21 |
| HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive | 791034-B21 |
| SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives | |
| HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652749-B21 |
| HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765464-B21 |
| HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765466-B21 |
| HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty Hard Drive | 832514-B21 |
| SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives | |
| HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 655710-B21 |
| HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765453-B21 |
| HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive | 765455-B21 |
| 12G SAS Mainstream Endurance Hot Plug SFF (2.5-inch) Enterprise Mainstream H2 Solid State Drives | |
| HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779176-B21 |
| HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779172-B21 |
| HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779168-B21 |
| HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive | 779164-B21 |
| 12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives | |
| HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762263-B21 |
| HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802578-B21 |
| HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802582-B21 |
| HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802586-B21 |
| HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive | 802891-B21 |
| 12G SAS Mixed Use Hot Plug SFF (2.5-inch) Solid State Drives | |
| HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 822567-B21 |
| HPE 800GB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846434-B21 |
| HPE 1.6TB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846436-B21 |
| 12G SAS Read Intensive Hot Plug SFF (2.5-inch) Solid State Drives | |
| HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816576-B21 |
| 12G SAS Write Intensive Hot Plug SFF (2.5-inch) Solid State Drives | |
| HPE 800GB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846430-B21 |
| HPE 1.6TB 12G SAS Write Intensive-1 SFF (2.5in) SC 3yr Wty Solid State Drive | 846432-B21 |
| 6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives | |
| HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764929-B21 |
| HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764927-B21 |

Core Options

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| HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764925-B21 |
| HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive | 764923-B21 |
| 6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives | |
| HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816929-B21 |
| HPE 400GB SATA 6G WI SFF SC DS SSD | 872355-B21 |
| HPE 800GB SATA 6G WI SFF SC DS SSD | 872359-B21 |
| HPE 1.6TB SATA 6G WI SFF SC DS SSD | 872363-B21 |
| 6G SATA Hot Plug MU-3 SFF (2.5-inch) SC Solid State Drives | |
| HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816985-B21 |
| HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 816995-B21 |
| HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive | 817011-B21 |
| 6G SATA Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives | |
| HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804575-B21 |
| HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804581-B21 |
| HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804587-B21 |
| HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804593-B21 |
| HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804599-B21 |
| HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804605-B21 |
| HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804613-B21 |
| HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804625-B21 |
| HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 872352-B21 |
| HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804631-B21 |
| HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 872348-B21 |
| HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 872344-B21 |
| HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 832414-B21 |
| HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804639-B21 |
| HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804665-B21 |
| HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804671-B21 |
| HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive | 804677-B21 |
| 6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives | |
| HPE 1.92TB 6G SATA Read Intensive SFF (2.5in) SC 1yr Warranty Solid State Drive | 871770-B21 |
| HPE 1.6TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 869386-B21 |
| HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 869384-B21 |
| HPE 960GB 6G SATA Read Intensive SFF (2.5in) SC 1yr Warranty Solid State Drive | 871768-B21 |
| HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 869378-B21 |
| HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 869376-B21 |
| HPE 150GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD | 869374-B21 |

Core Options

HPE NVMe PCIe Read Intensive SFF (2.5 inch) Solid State Drives

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| HP 400GB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764904-B21 |
| HP 1.2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 764906-B21 |

NOTE: ML350 Gen9 6SFF Express Bay Enablement Kit (726551-B21) is required to support these drives.

NOTE: HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on the [HPE Solid State Drive QuickSpecs](#).

HPE NVMe PCIe Mixed Use SSDs

| | |
|---|------------|
| HP 400GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765034-B21 |
| HP 800GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive | 765036-B21 |

NOTE: ML350 Gen9 6SFF Express Bay Enablement Kit (726551-B21) is required to support these drives.

NOTE: HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on the [HPE Solid State Drive QuickSpecs](#).

HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives

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|---|------------|
| HP 400GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 736936-B21 |
| HP 800GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive | 736939-B21 |

NOTE: ML350 Gen9 6SFF Express Bay Enablement Kit (726551-B21) is required to support these drives.

NOTE: HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on the [HPE Solid State Drive QuickSpecs](#).

M.2 SSD

| | |
|---|------------|
| HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 777894-B21 |
|---|------------|

NOTE: If this option is selected, then Optical drives CANNOT be selected.

| | |
|--|------------|
| HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 788028-B21 |
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|---|------------|
| HPE Dual 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 835565-B21 |
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| HPE 340GB Read Intensive-2 Solid State M.2 Enablement Kit for ProLiant ML/DL Servers | 835563-B21 |
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NOTE: M.2 SSD ML-DL Enablmt Kit can be used to build RAID 0, 1 by using B140i controller.

- When HPE 120GB or 340GB M.2 SSD ML-DL Dual Enablmt Kit is ordered, it can support RAID 0, 1.

- When HPE 120GB or 340GB M.2 SSD ML-DL Sngl Enablmt Kit is ordered, it can support RAID 0.

NOTE: M.2 SSD ML-DL Enablmt Kit CANNOT support RAID setting when AROC card (P440ar or H240ar) is selected. Embedded B140i controller CANNOT be used when AROC is ordered.

Hard Drive Blank Kits

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|---|------------|
| HP Large Form Factor Hard Drive Blank Kit | 666986-B21 |
| HP Small Form Factor Hard Drive Blank Kit | 666987-B21 |

Hard Drive Kits

| | |
|---|------------|
| HP ML350 Gen9 SFF Media Cage Kit | 726545-B21 |
| HP ML350 Gen9 8LFF Hot Plug Drive Cage Kit | 726547-B21 |
| HP ML350 Gen9 LFF Media Cage Kit | 726561-B21 |
| HP ML350 Gen9 8SFF Hard Drive Cage Kit | 778157-B21 |
| HP ML350 Gen9 NVMe 6 Solid State Drive Express Bay Enablement Kit | 726551-B21 |

NOTE: The ML350 Gen9 6SFF Express Bay kit is consist of one x6 SFF NVMe drive cage assembly, one Express Bay Bridge card, etc.

Core Options

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|-------------------------------------|------------|
| HP Ethernet 1Gb 4-port 331T Adapter | 647594-B21 |
| HP Ethernet 1Gb 2-port 361T Adapter | 652497-B21 |
| HP Ethernet 1Gb 2-port 332T Adapter | 615732-B21 |
| HP Ethernet 1Gb 4-port 366T Adapter | 811546-B21 |

10 Gigabit Ethernet adapters

| | |
|--|------------|
| HP Ethernet 10Gb 2-port 560SFP+ Adapter | 665249-B21 |
| HP Ethernet 10Gb 2-port 530T Adapter | 656596-B21 |
| HP Ethernet 10Gb 2-port 530SFP Adapter | 652503-B21 |
| HP Ethernet 10Gb 2-port 561T Adapter | 716591-B21 |
| HP Ethernet 10Gb 2-port 546SFP+ Adapter | 779793-B21 |
| HP Ethernet 10Gb 2-port 557SFP+ Adapter | 788995-B21 |
| HPE Ethernet 10Gb 2-port 562SFP+ Adapter | 727055-B21 |

25 Gigabit Ethernet adapters

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|--|------------|
| HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter | 817753-B21 |
| HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter | 817762-B21 |

NOTE: The ML350 Gen9 ships with 4x1Gb ports Embedded.

NOTE: 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: <http://www.hp.com/go/ProLiantNICs>

| | | |
|-----------------------|--|------------|
| HPE InfiniBand | HP InfiniBand FDR 2-port 545QSFP Adapter | 702211-B21 |
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HPE Power Supplies

HPE Flex Slot Platinum Hot-plug Power supplies

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|---|------------|
| HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit | 720478-B21 |
| HPE 800W Flex Slot Platinum Hot Plug Power Supply Kit | 720479-B21 |
| HPE 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit | 720620-B21 |
| HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit | 720480-B21 |
| HPE 800W Flex Slot Titanium Hot Plug Power Supply Kit | 720482-B21 |
| HPE 800W Flex Slot Universal Hot Plug Power Supply Kit | 720484-B21 |
| HP ML350 Gen9 X4 RPS Enablement Kit | 802988-B21 |

NOTE: If Power supply selection qty is more than two, then X4 RPS Enablement Kit must be selected (minimum Power Supply qty. selection to configure with X4 RPS Enablement Kit is three).

NOTE: And this option is not supported with 720478-B21 (HPE 500W FS Plat Hot Plg Pwr Supply Kit).

NOTE: If hard drive cage selection qty. is more than three, this X4 RPS Enablement Kit must be selected - to get proper qty. of HDD backplane power connectors.

NOTE: If DW GPU card selection qty. is more than two, this X4 RPS Enablement Kit MUST be selected - in order to get proper qty. of GPU external power connectors.

HPE Computation and Graphics Accelerators

| | |
|---|------------|
| HP ML350 Gen9 Graphic Card Support Kit | 726565-B21 |
| NOTE: One Graphic Card Support Kit- 726565-B21 is required for each computation or graphics accelerator except for K2200 or M2000. | |
| HP NVIDIA Quadro K2200 Graphics Accelerator | J0G89A |
| NOTE: A maximum of four of these cards can be selected. | |
| NVIDIA Quadro K6000 PCI-E Graphics Adapter | 730874-B21 |

Core Options

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

NOTE: If this SKU is selected then minimum quantity = 2 of 800W Power Supply Kit (725870-B21) must be selected.

NVIDIA Tesla K40C 12GB Computational Accelerator 753960-B21

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

NOTE: If this SKU is selected then minimum quantity = 2 of 800W Power Supply Kit (725870-B21) must be selected.

HP NVIDIA Quadro M6000 Graphics Accelerator J0G92A

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

HP AMD FirePro W7100 Accelerator Kit J0H10A

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

HPE NVIDIA Quadro M4000 Graphics Accelerator M9X58A

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

NOTE: Only supported with E5-2600v4 processors.

HP NVIDIA Quadro M5000 Graphics Accelerator M9R60A

NOTE: A maximum of four of these cards can be selected. Each requires one Graphic Card Support Kit (726565-B21).

NOTE: Only supported with E5-2600v4 processors.

HPE NVIDIA Quadro M2000 Graphics Accelerator P8Y48A

NOTE: A maximum of four of these cards can be selected.

NOTE: Only supported with E5-2600v4 processors.

NOTE: If more than two Double Wide Graphics options are selected, then HPE ML350 Gen9 X4 RPS Enablement Kit must be selected in order to get the third and fourth supporting power connectors to supply power to the GPU cards.

NOTE: Only the above listed Graphics cards are HPE standard supported options in this server.

NOTE: The NVIDIA Quadro modules are supported only on 64-bit versions of Linux and Windows operating systems as well as on Virtual Machine client operating systems. The supported bare metal operating systems are RHEL6, SLES 11 and Windows Server 2012 R2.

NOTE: Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: [HPE Power Advisor](#)

Online

NOTE: All GPU Accelerators are restricted to equal less than 1024GB for system HOST memory.

HPE Cooling Options

HP ML350 Gen9 Redundant Fan Kit 725878-B21

NOTE: This kit consists of four system fans and two PCIe air baffles.

Additional Options

NOTE: 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 Insight Software | HPE Insight Control | |
| | HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU | C6N27A |
| | HPE Insight Control including 1yr 24x7 TSU E-LTU | C6N28ABE |
| | HPE Insight Management Media Kit | C6N31A |

| | | |
|----------------------------|--|------------|
| Embedded Management | HPE iLO Advanced | |
| | HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU | BD505A |
| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU | E6U59ABE |
| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU | 512485-B21 |
| | HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU | E6U64ABE |

| | | |
|----------------------------------|--|--------|
| High Performance Clusters | HPE Cluster Management Utility | |
| | HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU | QL803B |
| | HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU | BD476A |
| | NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement. | |
| | HPE Insight Cluster Management Utility Media | BD477A |

| | | |
|--|--|------------|
| HPE PCIe Workload Accelerator Options | Light Endurance (LE) PCIe Workload Accelerators | |
| | HPE 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator | 775672-B21 |
| | HPE 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775670-B21 |
| | HPE 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775668-B21 |
| | HPE 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator | 775666-B21 |

| | | |
|---------------------|--|------------|
| HPE Security | HP Security Bezel Kit | 660584-B21 |
| | NOTE: Rack model only. | |
| | HP Trusted Platform Module Option | 488069-B21 |
| | NOTE: The HPE Trusted Platform Module Option (488069-B21) is the TPM 1.2 version. Compatible server platforms include Gen8 and Gen9 servers. | |
| | NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module. | |
| | NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, go to: https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549 . | |

Additional Options

NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.

NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

HP Trusted Platform Module 2.0 Kit

745823-B21

NOTE: HPE Trusted Platform Module 2.0 Option works with Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.

NOTE: HPE Gen9 servers purchased earlier may need the latest firmware update to be compatible with the TPM 2.0 Option.

NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

NOTE: ML350 Gen9 supports both TPM 1.2 (488069-B21) and TPM 2.0 (745823-B21). However, once the TPM version 1.2 is installed on the system board, it can no longer be upgraded to TPM version 2.0.

NOTE: A new TPM (1.2 or 2.0) can only be installed on a Gen9 server if there is no TPM already installed. Once a TPM is installed with the security rivet, it is not designed to be removed. This means that if a customer already has a TPM 1.2 module riveted down on their Gen9 server, they cannot remove it and change it to a TPM 2.0 module.

NOTE: For more information about TPM, go

to: <https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549>

HPE Storage Controllers

SAS Controllers

HPE Flexible Smart Array Controllers

HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller

726736-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: Includes the HPE Smart Storage Battery.

HPE Smart Array Controllers

HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller

726821-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives, consumes 1 PCIe slot.

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller

726897-B21

HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller

726825-B21

HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller

726903-B21

HPE Smart Host Bus Adapters

HP H240ar 12Gb 2-ports Int Smart Host Bus Adapter

726757-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

HP H240 12Gb 2-ports Int Smart Host Bus Adapter

726907-B21

HP H241 12Gb 2-ports Ext Smart Host Bus Adapter

726911-B21

Optional Upgrades

HP 12Gb SAS Expander Card for ML350 Gen9

769635-B21

NOTE: The SAS Expander card supports 24 drives. The SAS Expander card must be used in conjunction with an HPE Smart Array P440 or P840 controller, or an H240 Host Bus Adapter. The SAS Expander card cannot be connected to H240ar or P440ar Flexible Smart Array Controller (AROC) cards. The SAS Expander kit includes two cables to connect from the Smart Array controller or HBA to the SAS Expander and the other to connect from the Expander to the HDD backplane.

NOTE: It DOES NOT support tape storage/ Disk-Based Backup device (RDX).

Additional Options

| | |
|---|------------|
| HP ML350 Gen9 2nd Expander Card | 811216-B21 |
| NOTE: The ML350 Gen9 2nd Expander Card must be used in conjunction with ML350 Gen9 SAS Expander kit (769635-B21, see config. guideline described in above item), a 2nd processor kit, ML350 Gen9 x4 RPS enablement kit (802988-B21) and P840 controller. This configuration can support maximum 48 drives in SFF chassis system. | |
| NOTE: This kit DOES NOT support tape storage or disk-based backup devices (RDX) either. | |
| HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers | 727258-B21 |
| HPE SmartCache No Media 24x7 Technical Support 1-server LTU | D7S26A |
| HPE SmartCache No Media 24x7 Technical Support Flexible LTU | D7S27A |
| HPE SmartCache No Media 24x7 Technical Support E-LTU | D7S27AAE |
| HPE Cable Options | |
| HP ML350 Gen9 Flexible Smart Array Controller Mini-SAS Cable Kit | 765652-B21 |
| NOTE: Mini-SAS Cable Kit for Flexible Smart Array (AROC) Controller. | |
| HP ML350 Gen9 Smart Array Cable Kit | 765650-B21 |
| NOTE: Mini-SAS Cable Kit for stand-up P-series Smart Array Card. | |
| HP ML350 Gen9 Host Bus Adapter Mini-SAS Cable Kit | 765648-B21 |
| NOTE: Mini-SAS Cable kit for Host Bus Adapter. | |

HPE Tape Backup **NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: <http://www.hp.com/go/tape>. For hardware and software compatibility of Hewlett Packard Enterprise tape backup products see: <http://www.hp.com/storage/SPOCK> and <http://www.hp.com/go/ebs>.

Tape Drives

| | |
|---|--------|
| HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive | EH920B |
| HPE StoreEver LTO-4 Ultrium 1760 SAS Internal WW Tape Drive | EH919B |
| HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive | EH958B |
| HPE StoreEver LTO-5 Ultrium 3000 SAS Internal Tape Drive | EH957B |
| HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit | EJ014B |
| HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive | EH970A |
| HPE StoreEver LTO-6 Ultrium 6250 Internal Tape Drive | EH969A |
| HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader | COH19A |
| HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit | COL99A |
| HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 2m Cable | K2R09A |
| HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 4m Cable | K2R10A |
| HPE StoreEver LTO-7 Ultrium 15000 Internal Tape Drive | BB873A |
| HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive | BB874A |

HPE Tape Storage Systems

HPE StoreEver MSL6480

| | |
|--|--------|
| HPE StoreEver MSL6480 Scaleable Expansion Module | QU626A |
| NOTE: Please see the HPE StoreEver MSL6480 Tape Library QuickSpecs for Technical Specifications and additional information. | |
| HPE StoreEver MSL6480 Scalable Base Module | QU625A |
| HPE StoreEver MSL2024 0-drive Tape Library | AK379A |
| HPE StoreEver MSL4048 0-drive Tape Library | AK381A |

HPE Disk Backup **HPE RDX Removable Disk Backup Systems USB**

Additional Options

| | |
|--|--------|
| HPE RDX500 USB3.0 Internal Disk Backup System | B7B64A |
| HPE RDX1000 USB3.0 Internal Disk Backup System | B7B67A |
| HPE RDX 2TB USB3.0 Internal Disk Backup System | E7X52A |
| HP RDX+ 500GB External Backup System | B7B66B |
| HP RDX+ 1TB External Backup System | B7B69B |
| HP RDX 2TB USB3.0 External Disk Backup System | E7X53B |
| HPE RDX+ External Docking System | C8S07B |
| HPE RDX USB 3.0 Internal Docking Station | C8S06A |
| HPE RDX 3TB USB 3.0 Internal Disk Backup System | P9L71A |
| HPE RDX+ 3TB USB 3.0 External Disk Backup System | P9L72A |

NOTE: For the complete range of RDX drives and media see: <http://www.hp.com/go/rdx>. For hardware and software compatibility of HPE disk backup products see: <http://www.hp.com/storage/SPOCK>.

HPE Storage Options

NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: <http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>.

Emulex Fibre Channel HBAs

| | |
|---|--------|
| HPE 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter | AJ762B |
| HPE 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter | AJ763B |
| HPE StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter | C8R38A |
| HPE StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter | C8R39A |
| HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter | Q0L11A |
| HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter | Q0L12A |
| HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter | Q0L13A |
| HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter | Q0L14A |

QLogic Fibre Channel HBAs

| | |
|---|--------|
| HPE 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter | AK344A |
| HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter | AJ764A |
| HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter | QW971A |
| HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter | QW972A |
| HPE StoreFabric 84Q 4-port 8Gb Fibre Channel Host Bus Adapter | P9D91A |
| HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter | P9D93A |
| HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter | P9D94A |
| HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter | P9M75A |
| HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter | P9M76A |

Converged Network Adapter

| | |
|---|--------|
| HPE StoreFabric CN1100R Dual Port Converged Network Adapter | QW990A |
| HPE StoreFabric CN1200E 10Gb Converged Network Adapter | E7Y06A |
| HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter | N3U52A |
| HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter | N3U51A |

HPE Disk Storage Systems

Disk Enclosures

| | |
|--|--------|
| HP D6000 Dual I/O Module Disk Enclosure | QQ695A |
| NOTE: See the HPE D6000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution. | |
| HPE D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle | M0T59A |
| HPE D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle | M0T58A |

Additional Options

| | |
|--|--------|
| HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle | E7W30A |
| HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle | E7W31A |
| HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle | QQ697A |
| HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle | QQ698A |
| HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle | QQ699A |
| HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle | QQ700A |

HPE Data Center Racks

HPE Advanced Series Racks

| | |
|---|--------|
| HPE 11648 1075mm Pallet Universal Rack | H6J87A |
| HPE 11648 1075mm Shock Universal Rack | H6J88A |
| HPE 11642 1075mm Pallet Universal Rack | H6J65A |
| HPE 11642 1075mm Shock Universal Rack | H6J66A |
| HPE 11642 1200mm Pallet Universal Rack | H6J67A |
| HPE 11642 1200mm Shock Universal Rack | H6J68A |
| HPE 11636 1075mm Pallet Universal Rack | H6J77A |
| HPE 11636 1075mm Shock Universal Rack | H6J78A |
| HPE 11622 G2 1075mm Pallet Universal Rack | H6J83A |
| HPE 11622 G2 1075mm Shock Universal Rack | H6J84A |
| HPE 11614 1075mm Shock Universal Rack | H6J82A |

NOTE: Please see the [HPE Advanced Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

HPE Enterprise Series Racks

| | |
|---|--------|
| HPE 647 1075mm Pallet Intelligent Series Rack | BW911A |
| HPE 647 1075mm Shock Intelligent Series Rack | BW912A |
| HPE 647 1200mm Pallet Intelligent Series Rack | BW913A |
| HPE 647 1200mm Shock Intelligent Series Rack | BW914A |
| HPE 642 1075mm Pallet Intelligent Series Rack | BW903A |
| HPE 642 1075mm Shock Intelligent Series Rack | BW904A |
| HPE 642 1200mm Pallet Intelligent Series Rack | BW907A |
| HPE 642 1200mm Shock Intelligent Series Rack | BW908A |
| HPE 636 1075mm Pallet Intelligent Series Rack | BW895A |
| HPE 636 1075mm Shock Intelligent Series Rack | BW896A |
| HPE 842 1075mm Pallet Intelligent Series Rack | BW917A |
| HPE 842 1075mm Shock Intelligent Series Rack | BW918A |

NOTE: Please see the [HPE Enterprise Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

HPE Standard Series Rack

| | |
|---|--------|
| HPE V142 1075mm deep Pallet 100 series Rack | AF046A |
|---|--------|

NOTE: Please see the [HPE Standard Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

HPE Power Distribution Units (PDUs)

HPE Basic Power Distribution Units (PDU)

| | |
|--|------------|
| HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4) C19/Horizontal NA/JP Core Only PDU | 252663-D74 |
| HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4) C19/Horizontal NA/JP PDU | 252663-D75 |
| HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF511A |
| HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU | H5M56A |

Additional Options

HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU H5M58A

NOTE: Please see the [HPE Basic Power Distribution Units \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

HPE Metered Power Distribution Units (PDU)

HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU D9N43A

HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU D9N45A

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU D9N47A

HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU D9N59A

NOTE: Please see the [HPE Metered Power Distribution Units \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

HPE Intelligent Power Distribution Unit (PDU)

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU AF520A

HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU AF521A

HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU AF522A

HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU AF523A

HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU AF535A

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU AF531A

HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU AF532A

NOTE: Please see the [HPE Intelligent Power Distribution Unit \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

HPE Rack Mount Consoles, KVM Switches, and Keyboards

Rack location options

HP ML350 Gen9 System Insight Display Kit 726563-B21

HPE 36U Location Discovery Kit BW945A

HPE 42U Location Discovery Kit BW946A

HPE 47U Location Discovery Kit BW947A

HPE Location Discovery Services LCD8500 Kit TL052A

Rail Kits

HP ML350 Gen9 Tower to Rack Conversion Kit 726567-B21

NOTE: For converting a tower model to a rack model. It consists of a 5U rail kit, cable management arm (CMA) and rack enablement kit (rack ear, rack handle, SID blank etc).

HPE Rack Mount Consoles

HP LCD8500 1U US Rackmount Console Kit AF630A

HP LCD8500 1U US TAA Rackmount Console Kit AF645A

HPE KVM Switches

NOTE: To learn more, please visit the [HPE KVM Switches web page](#).

HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software AF620A

HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software AF621A

HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software AF618A

Additional Options

| | |
|--|--------|
| HP 1x4 USB/PS2 KVM Console Switch | AF611A |
| HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software | AF619A |
| HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software | AF622A |
| HP KVM Console USB Interface Adapter | AF628A |
| HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter | AF629A |
| HP USB Remote Access Key for G3 KVM Console Switches | AF650A |
| HP 0x1x8 G3 KVM Console Switch | AF651A |
| HP 0x2x16 G3 KVM Console Switch | AF652A |
| HP TAA 0x2x16 G3 KVM Console Switch | AF653A |

HPE USB Keyboard and Mouse

| | |
|--|------------|
| HP USB BFR with PVC Free US Keyboard/Mouse Kit | 631341-B21 |
|--|------------|

NOTE: Please see the [HPE USB Keyboard and Mouse QuickSpecs](#) for information on additional options and product specifications.

HPE Uninterruptible HPE Tower UPS

Power Systems (UPS)

| | |
|---|--------|
| HPE T750 G4 NA/JP Uninterruptible Power System | J2P85A |
| HPE T1000 G4 NA/JP Uninterruptible Power System | J2P86A |
| HPE T1500 G4 NA/JP Uninterruptible Power System | J2P87A |
| HPE R5000 3U L630 High Voltage NA/JP Uninterruptible Power System | AF460A |

HPE Rack-mountable UPS

| | |
|--|--------|
| HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System | AF462A |
|--|--------|

NOTE: To learn more, please visit the [HPE Uninterruptible Power Systems \(UPS\) web page](#).

HPE USB and SD Options

| | |
|--|------------|
| HPE 32GB microSD Mainstream Flash Media Kit | 700139-B21 |
| HPE 8GB microSD Enterprise Mainstream Flash Media Kit | 726116-B21 |
| HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit | 737953-B21 |
| HP Dual 8GB microSD Enterprise Midline USB Kit | 741279-B21 |

HPE Support Services

Installation & Start-up Services

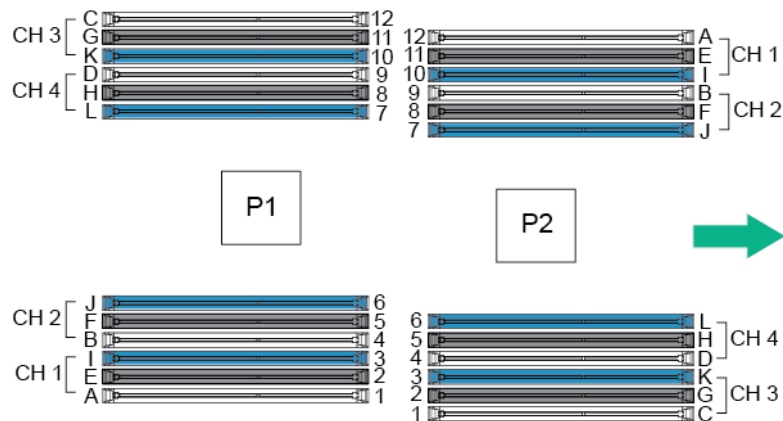
| | |
|---|--------|
| HPE Install ProLiant ML350(p) Service | U4522E |
| HPE Installation and Startup ML350(p) Service | U4523E |

Proactive Care

| | |
|---|--------|
| HPE 3 year Proactive Care 24x7 ML350 Gen9 Service | U7BG4E |
| HPE 3 year Proactive Care Call to Repair ML350 Gen9 Service | U7BH0E |
| HPE 3 year Proactive Care 24x7 with DMR ML350 Gen9 Service | U7BG5E |
| HPE 3 year Proactive Care 24x7 with CDMR ML350 Gen9 Service | U7BG6E |
| HPE 3 year Proactive Care Call to Repair 24x7 with DMR ML350 Gen9 Service | U7BH1E |
| HPE 3 year Proactive Care Call to Repair with CDMR ML350 Gen9 Service | U7BH2E |

Memory

Memory Population Guidelines



| DIMM population order | | | |
|----------------------------|---------------------|---------------------|---------------------|
| | 1st slot of channel | 2nd slot of channel | 3rd slot of channel |
| | A B C D | E F G H | I J K L |
| Number of DIMMs to install | 4 | 8 | 12 |

General Memory Population Rules and Guidelines:

- . A minimum of one DIMM is required per server.
- . White DIMM slots denote the first slot to be populated in a channel.
- . 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 and load the channels similarly whenever possible.
- . When two processors are installed, balance the DIMMs across the two processors.
- . Place the DIMMs with the highest number of ranks in the white slot when mixing DIMMs of different ranks on the same channel.
- . Do not mix RDIMMs or LRDIMMs.
- . Quad rank RDIMMs are not supported in HPE ProLiant ML350 Gen9 servers.
- . Quad rank LRDIMMs are capable of up to three DIMMs per channel.
- . RDIMMs operating at 1.2V
- . DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- . 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 memory type and number of installed processors.
- . To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the HPE SmartMemory QuickSpecs at: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111535>.
- . For memory population rules and additional memory guidelines, please see the ML350 Gen9 user guide at http://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-c04431235-6.pdf
- . There are four (4) channels per processor; eight (8) channels per server. There are three (3) DIMM slots for each memory channel; twenty-four (24) total slots Memory channels 1 and 3 consists of the

Memory

three (3) DIMMs that are furthest from the processor Memory channel 2 and 4 consists of the three (3) DIMMs that are closest to the processor

All GPU Accelerators are restricted to equal less than 1024GB for system HOST memory.

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v3 Series Processor Family

| Memory Bandwidth and Capacity | | | | | | | | |
|-------------------------------|---------------------------|------------------|------------------|------------------|------------------|------------------------|------------------|------------------|
| [DIMM Type] | Registered DIMMs (RDIMMs) | | | | | Load Reduced (LRDIMMs) | | |
| HPE SKU P/N | 726717-B21 | 726718-B21 | 759934-B21 | 726719-B21 | 728629-B21 | 726720-B21 | 726722-B21 | 726724-B21 |
| DIMM Rank | Single Rank | Single Rank | Dual Rank | Dual Rank | Dual Rank | Dual Rank | Quad Rank | Quad Rank |
| DIMM Capacity | 4GB | 8GB | 8GB | 16GB | 32GB | 16GB | 32GB | 64GB |
| Voltage | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V |
| DRAM Depth [bit] | 512M | 1G | 512M | 1G | 1G | 2G | 2G | 2G |
| DRAM Width [bit] | x8 | x4 | x8 | x4 | x4 | x4 | x4 | x4 |
| DRAM Density | 4Gb | 4Gb | 4Gb | 4Gb | 4Gb | 8Gb | 8Gb | 8Gb |
| CAS Latency | 15-15-15 | 15-15-15 | 15-15-15 | 15-15-15 | 15-15-15 | 15-15-15 | 15-15-15 | 15-15-15 |
| DIMM Native Speed (MT/s) | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 |
| SLOTS THAT CAN BE POPULATED | | | | | | | | |
| 24 slot servers | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| MAXIMUM CAPACITY (GB) | | | | | | | | |
| | 96 | 192 | 192 | 384 | 768 | 384 | 768 | 1536 |
| POPULATED DIMM SPEED (MT/s) | | | | | | | | |
| 1 DIMM Per Channel | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 |
| 2 DIMM Per Channel | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 | 2133 |
| 3 DIMM Per Channel | 1600 | 1600 | 1600 | 1600 | 1866 | 1600 | 1866 | 1866 |

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v4 Series Processor Family

| Memory Bandwidth and Capacity | | | | | | | |
|-------------------------------|---------------------------|-------------|------------|------------|------------------------|------------|------------|
| [DIMM Type] | Registered DIMMs (RDIMMs) | | | | Load Reduced (LRDIMMs) | | |
| HPE SKU P/N | 805347-B21 | 805349-B21 | 836220-B21 | 805351-B21 | 805353-B21 | 805358-B21 | 809208-B21 |
| DIMM Rank | Single Rank | Single Rank | Dual Rank | Dual Rank | Dual Rank | Quad Rank | Octal Rank |
| DIMM Capacity | 8GB | 16GB | 16GB | 32GB | 32GB | 64GB | 128GB |

Memory

| | | | | | | | |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | | | | | | |
| Voltage | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V | Std Voltage 1.2V |
| DRAM Depth [bit] | 1G | 2G | 1G | 2G | 2G | 2G | 2G |
| DRAM Width [bit] | x8 | x4 | x4 | x4 | x4 | x4 | x4 |
| DRAM Density | 8Gb | 8Gb | 4Gb | 8Gb | 8Gb | 8Gb | 8Gb |
| CAS Latency | 17-17-17 | 17-17-17 | 17-17-17 | 17-17-17 | 17-17-17 | 17-17-17 | 20-18-18 |
| DIMM Native Speed (MT/s) | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 |
| SLOTS THAT CAN BE POPULATED | | | | | | | |
| 24 slot servers | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| MAXIMUM CAPACITY (GB) | | | | | | | |
| | 192 | 384 | 384 | 768 | 768 | 1536 | 3072 |
| POPULATED DIMM SPEED (MT/s) | | | | | | | |
| 1 DIMM Per Channel | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 |
| 2 DIMM Per Channel | 2133 | 2133 | 2400 | 2400 | 2400 | 2400 | 2400 |
| 3 DIMM Per Channel | 1866 | 1866 | 1866 | 1866 | 2133 | 2133 | 2133 |

DIMM slot and configuration diagram

DIMM slot and configuration diagrams

- Population order; start with "A" first, "B" second, "C" third, etc.
- When one processor is installed, install DIMMs in sequential alphabetic order: A, B, C, D, E, F.
- When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A, CPU1-B, CPU2-B, CPU1-C, CPU2-C

| | CPU 1 | | CPU 2 | | |
|--------|--------|------------------|--------|------------------|--------|
| | Slot # | population order | Slot # | population order | |
| Chnl 1 | 1 | A | 1 | C | Chnl 4 |
| | 2 | E | 2 | G | |
| | 3 | I | 3 | K | |
| | CPU 1 | | CPU 2 | | |
| | Slot # | population order | Slot # | population order | |
| Chnl 2 | 4 | B | 4 | D | Chnl 3 |
| | 5 | F | 5 | H | |
| | 6 | J | 6 | L | |
| | CPU 1 | | CPU 2 | | |
| | Slot # | population order | Slot # | population order | |
| Chnl 3 | 7 | L | 7 | J | Chnl 2 |
| | 8 | H | 8 | F | |
| | 9 | D | 9 | B | |

Memory

| | CPU 1 | | CPU 2 | | |
|--------|--------|------------------|--------|------------------|--------|
| | Slot # | population order | Slot # | population order | |
| Chnl 4 | 10 | K | 10 | I | Chnl 1 |
| | 11 | G | 11 | E | |
| | 12 | C | 12 | A | |

Memory Speed by Processor Model

| Processor Models | Supported Memory Speeds |
|--|-------------------------|
| E5-2609v3, E5-2603v3 | 1600MT/s |
| E5-2640v3, E5-2630v3, E5-2620v3, E5-2630Lv3, E5-2623v3 | 1866MT/s |
| E5-2637v3, E5-2690v3, E5-2680v3, E5-2670v3, E5-2660v3, E5-2650v3, E5-2650Lv3, E5-2697v3, E5-2695v3, E5-2667v3, E5-2643v3, E5-2683v3, E5-2699v3, E5-2698v3 | 2133MT/s |
| E5-2609v4, E5-2603v4 | 1866MT/s |
| E5-2630Lv4, E5-2620v4, E5-2623v4, E5-2640v4, E5-2630v4 | 2133MT/s |
| E5-2650Lv4, E5-2643v4, E5-2637v4, E5-2690v4, E5-2680v4, E5-2660v4, E5-2650v4, E5-2697v4, E5-2695v4, E5-2667v4, E5-2683v4, E5-2699v4, E5-2698v4, E5-2697Av4 | 2400MT/s |

Standard and Maximum Memory Capacity (Pre-configured Models)

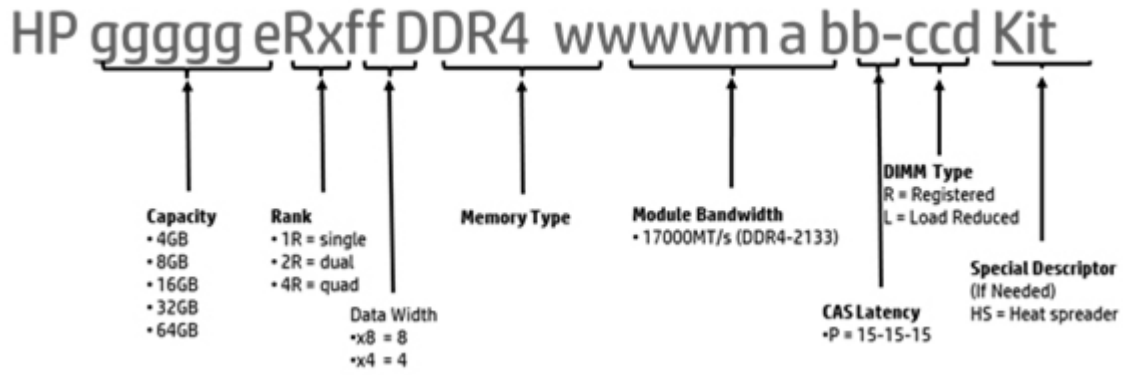
| Pre Configured Models | Standard Memory | Maximum Memory Plus Optional Memory | Standard Memory Replaced with Optional Memory |
|--|-----------------|-------------------------------------|---|
| E5-2650v4, E5-2650v3, E5-2630v4, E5-2630v3 | 32GB (2x16GB) | 736GB (22x32GB, 2x16GB) | 1536GB (24x64GB) |
| E5-2620v4, E5-2620v3 | 16GB (1x16GB) | 752GB (23x32GB, 1x16GB) | 1536GB (24x64GB) |
| E5-2609v4, E5-2609v3 | 8GB (1x8GB) | 744GB (23x32GB, 1x8GB) | 1536GB (24x64GB) |

DDR4 memory options part number decoder

NOTE: Capacity references are rounded to the common gigabyte (GB) values.

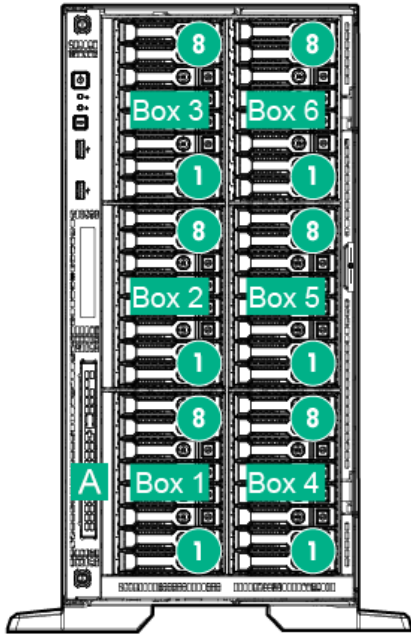
- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB

Memory



Storage

48 SFF hot-plug drive model (Tower)



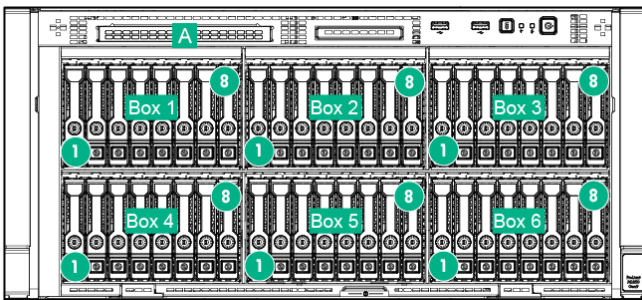
A

Optional Slim DVD-ROM/DVD-RW

1-6

8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

48 SFF hot-plug drive model (Rack)



A

Optional Slim DVD-ROM/DVD-RW

1-6

8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

24 LFF hot-plug drive model (Tower)

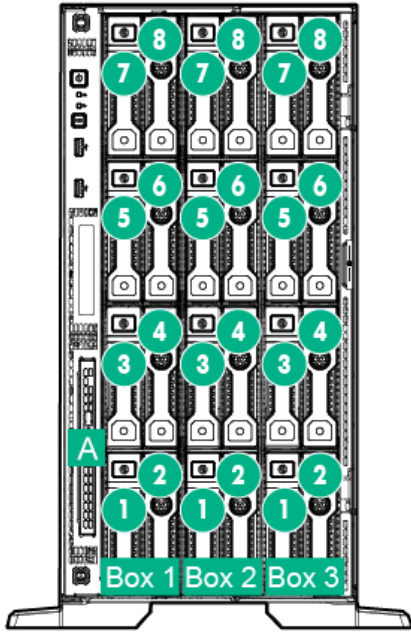
A

Optional Slim DVD-ROM/DVD-RW

1-3

8 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

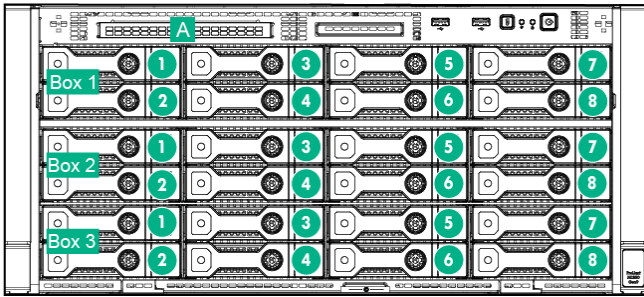
Storage



24 LFF hot-plug drive model (Rack)

A

Optional Slim DVD-ROM/DVD-RW



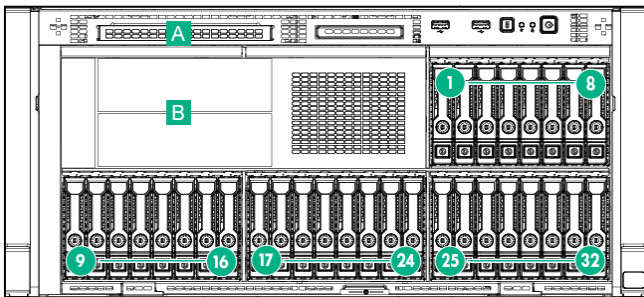
1-3

8 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

32 SFF hot-plug drives with SFF media cage

A

Optional Slim DVD-ROM/DVD-RW



B

SFF Media Cage
Remark: Support up to 2 RDX or Tape devices.

1-4

8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays
Image shown a ML350 Gen9 Rack model

16 LFF hot-plug drives with LFF media cage

A

Optional Slim DVD-ROM/DVD-RW

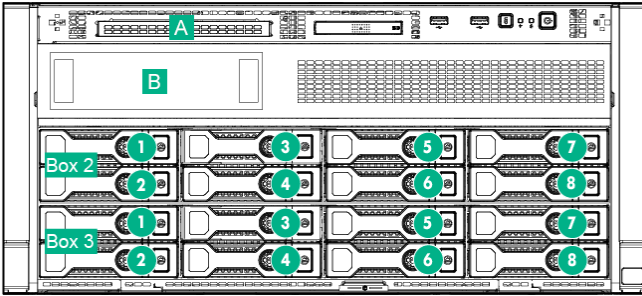
B

LFF Media Cage

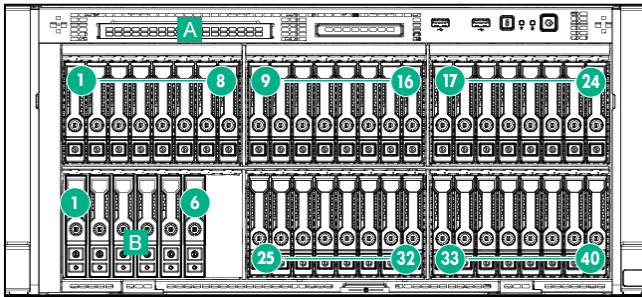
1-2

8 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays
Image shown a ML350 Gen9 Rack model

Storage



40 SFF hot-plug drives with 6 SFF NVMe SSD



- A Optional Slim DVD-ROM/DVD-RW
- B 1 SFF Express Bay to support 6 x SFF PCIe NVMe SSDs
- 1-5 8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays
Image shown a ML350 Gen9 Rack model

NOTE: For additional storage configuration guidelines, please see the ML350 Gen9 user guide at http://h20628.www2.hp.com/km-ext/kmcsdirect/emr_na-c04431235-6.pdf

NOTE: For maximum storage capacity information with different types of drives installation, refer to the "Standard Features" section in this document.

NOTE: For drive options and part numbers supported by ML350 Gen9, refer to the "Core Options" section in this document.

NOTE: For controller options and part numbers supported by ML350 Gen9, refer to the "Additional Options" section in this document.

Technical Specifications

| | | | |
|---------------------------------|----------------------------|--|---|
| System Unit | Tower Dimensions | 18.27(H) x 8.62(W) x 30.28(D) in (46.4 x 21.9 x 76.9 cm) | |
| | Rack Dimensions | 8.58(H) x 17.51(W) x 29.37(D) in (21.8 x 44.5 x 74.6 cm) | |
| | Tower Weight | Minimum: | 66.14lb(30kg) |
| | | Maximum: | 121.30lb (55kg) |
| | Rack Weight | Minimum: | 57.3lb(26kg) |
| | | Maximum: | 112.4lb(51kg) |
| | Input Requirements | Range Line | 100 to 120 VAC |
| | | Voltage | 200 to 240 VAC |
| | BTU Rating | Maximum | For 1400W Power Supply: 5459 BTU/hr (at 200 VAC), 5459 BTU/hr (at 240 VAC), 5459 BTU/hr (at 240 VAC) for China Only |
| | | | For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only |
| Power Supply Output | Rated Steady-State Power | For 1400W Power Supply: 1400W (at 240 VAC), 1400W (at 240 VAC) | |
| | | For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only | |
| System Inlet Temperature | Standard Operating Support | For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only | |
| | | For 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only | |
| System Inlet Temperature | Non-operating | For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only | |
| | | For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only | |

Technical Specifications

| | | |
|---------------------------------|--|--|
| Relative Humidity | Operating | Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity. |
| | 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). |
| 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). | |
| | Idle | |
| | L WAd | 3.6 Bels (1P LFF Entry) 3.5 Bels (1P SFF Base) 3.6 Bels (2P SFF E-star Rack) 3.4 Bels (2P SFF E-star Tower) |
| | L pAm | 21 dBA (1P LFF Entry) 21 dBA (1P SFF Base) 20 dBA (2P SFF E-star Rack) 19 dBA (2P SFF E-star Tower) |
| | Operating | |
| | L WAd | 3.7 Bels (1P LFF Entry) 3.6 Bels (1P SFF Base) 4.5 Bels (2P SFF E-star Rack) 4.5 Bels (2P SFF E-star Rack) |
| | L pAm | 21 dBA (1P LFF Entry) 22 dBA (1P SFF Entry) 28 dBA (2P SFF E-star Rack) 28 dBA (2P SFF E-star Tower) |
| | NOTE: Configurations tested for 1P LFF Entry models included two (2) 500GB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit. | |
| | NOTE: Configurations tested for 1P and 2P SFF models included two (2) 500GB SFF SATA Midline HDD and Windows 2012 Enterprise 64-bit. | |
| | NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. | |
| Emissions Classification | FCC Rating | Class A |
| | Normative Standards | CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1 |
| | NOTE: 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. | |

| | | |
|---|----------------------------|-------|
| HPE Dynamic Smart Array B140i Controller | Number of PCI links | Four |
| | PCI link rate | 4Gb/s |

Technical Specifications

| | |
|---|--------------------------------|
| Storage protocol support | SATA |
| SAS/SATA peak data transfer rate | 6Gb/s |
| Number of SAS/SATA links | 10 links |
| SAS/SATA connectivity | 2x4 connectors; 2x1 connectors |
| Expander support | No |
| Drives supported (max) | Up to 10 Internal Drives |
| RAID support | 0, 1, 10, 5 SATA |
| Software management | HPE SSA, SMH, SIM |
| Warranty | Server warranty |
| HPE Secure Encryption license | Not Supported |
| HPE SmartCache License | Not Supported |
| HPE Smart Storage Administrator | Supported |

| | | | |
|---|------------------------------|--|--|
| HPE Ethernet 1Gb 4-port 331i Adapter | Network Interface | 10Base-T/100Base-TX/1000Base-TX | |
| | Compatibility | IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX | |
| | Data Transfer Method | PCI Express, two lanes (x2) | |
| | Controller | BCM5719 | |
| | Network Transfer Rate | 10Base-T (Half-Duplex) | 10 Mb/s per port, 40 Mb/s combined |
| | | 10Base-T (Full-Duplex) | 20 Mb/s per port, 80 Mb/s combined |
| | | 100Base-TX (Half-Duplex) | 100 Mb/s per port, 400 Mb/s combined |
| | | 100Base-TX (Full-Duplex) | 200 Mb/s per port, 800 Mb/s combined |
| | | 100Base-TX (Half-Duplex) | 1000 Mb/s per port, 4000 Mb/s combined |
| | | 100Base-TX (Full-Duplex) | 2000 Mb/s per port, 8000 Mb/s combined |
| Connector | RJ-45 | | |
| Cable Support | 10 Base-T | Categories 3, 4 or 5 UTP; up to 328 ft (100 m) | |
| | 10/100/1000 Base-TX | Category 5 or higher UTP; up to 328 ft (100 m) | |

Technical Specifications

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.

http://www8.hp.com/us/en/hpe/hp-information/livingprogress/environmentalprogress/product-recycling.html#.V-IPA_krKiM

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.

http://www8.hp.com/us/en/hpe/hp-information/livingprogress/environmentalprogress/product-recycling.html#.V-IPA_krKiM

Summary of Changes

| Date | Version History | Action | Description of Change |
|-------------|-------------------------------|---------|---|
| 13-Feb-2017 | From Version 21 to 22 | Added | Added new HDD and SSD offering to the HPE Drives section. |
| | | Changed | HPE StoreVirtual VSA content was revised. |
| 28-Nov-2016 | From Version 20 to 21 | Added | Added new Hard Drives offering. |
| | | Changed | Maximum Internal Storage and HPE Storage Options were revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 28-Oct-2016 | From version 19 to version 20 | Removed | Obsolete Hard Drives were removed from the QuickSpecs. |
| 26-Sep-2016 | From Version 18 to 19 | Added | Added new SATA & SAS LFF HDD offering and 16Gb/32Gb FC HBAs. Added new 128GB LRDIMM memory. |
| | | Changed | Standard features was revised to reflect the system support with the new option offering eg. 128GB DIMM, max memory capacity 3TB, etc. What's new and memory table were updated. |
| 15-Aug-2016 | From Version 17 to 18 | Added | Added new Networking and Storage option offering. |
| | | Changed | PCIe expansion slot 5 support revised to support FH/HL cards in Standard Features section. |
| | | Removed | Removed K4200 & K5200 from the Computation and Graphics Accelerators section along with a few PCIe workload accelerators for option EOL. |
| 24-Jun-2016 | From Version 16 to 17 | Changed | Expansion Slot 5 under the Standard Features section was revised. |
| 6-Jun-2016 | From Version 15 to 16 | Added | New option offering incl. NVIDIA Quadro M2000, 340GB M.2 kits, LTO-7, new HDD options, dual 32GB micro-SD USB kit, RDX 3TB. |
| | | Changed | Updated 2400MHz memory table in the Standard Features section. Updated memory speed, memory configuration guidelines in the memory section. Added notes to the storage section. |
| | | Removed | Removed EOL drive options. |
| 22-Apr-2016 | From Version 14 to 15 | Changed | Part numbers for the E5-2600v4 Smart Buy Models in the NA version were revised. |
| 8-Apr-2016 | From version 13 to 14 | Changed | HPE Processors section was revised. |
| 31-Mar-2016 | From version 12 to 13 | Added | New E5-2600 v4 CPU, new 2400MHz DIMM, new M4000 & M5000 GPU, new networking cards, TPM2.0 and new drives added. Added mechanical features for HW security: padlock, Kensington lock. Added new E5-2600 v4 BTO SKUs. |
| | | Changed | Internal Storage Devices, Upgradeability, Embedded Management, Service and Support, Pre-configured Models, HPE Security, HPE Tape Backup, and Memory sections were revised. Storage section - added additional front views of different storage configuration among HDD/SSD, SFF/LFF media cage, NVMe SSD. |

Summary of Changes

| | | | |
|-------------|-----------------------|---------|---|
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 26-Feb-2016 | From Version 11 to 12 | Removed | 340GB M.2 options (835563-B21 & 835565-B21) were removed from Core Options. |
| 16-Feb-2016 | From version 10 to 11 | Added | New 12G SAS Drives and M.2 offering was added to HPE Drives. |
| 1-Dec-2015 | From version 9 to 10 | Added | New HDD offering was added to HPE Drives. New options added to HPE Unique Options, HPE Security, HPE Tape Backup, and HPE Disk Storage Systems. |
| | | Changed | On System Management Chipset, Maximum Internal Storage, Embedded Management, and Server utilities were revised. Product images were updated. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 16-Nov-2015 | From version 8 to 9 | Added | New Solid State Drives offering was added to HPE Drives. |
| | | Changed | Maximum Internal Storage, and Additional Options were updated. X4 RPS Enablement Kit note was updated. iLO FW updated to iLO4 2.3 |
| 17-Aug-2015 | From version 7 to 8 | Added | New Solid State Drives offering was added to HPE Drives. New graphic options were added to HPE Computation and Graphics Accelerators. |
| | | Changed | Memory, Maximum Internal Storage, and Additional Options were updated. |
| | | Removed | Obsolete SKUs were removed from QuickSpecs. |
| 1-Jun-2015 | From version 6 to 7 | Added | New Hard Drives were added to QuickSpecs. New RDX+ external backup options were added. |
| | | Changed | Number of fans for Energy Star Models and Performance Models were revised. HPE Memory was revised. |
| | | Removed | Obsolete SKUs were removed from QuickSpecs. |
| 30-Mar-2015 | From version 5 to 6 | Added | New Hard Drives offering. Optional Software added to HPE Storage Controllers. |
| | | Changed | HPE Power Supplies, HPE Storage Controllers, HPE Disk Storage Systems, Micro SD Options were updated. |
| 9-Feb-2015 | From version 4 to 5 | Added | Added new HPE Drives, HPE Disk Backup, and new G4 UPS models. HPE Drives, HPE Computation and Graphics Accelerators, HPE Tape Backup, HPE Rack Mount Consoles, KVM Switches, and Keyboards, and HPE Uninterruptible Power Systems (UPS) sections were revised. |

Summary of Changes

| | | | |
|-------------|---------------------|---------|---|
| 1-Dec-2014 | From version 3 to 4 | Changed | Changes made throughout the entire QuickSpecs. |
| 13-Oct-2014 | From version 2 to 3 | Added | 6G SATA Enterprise Value G1 Solid State Drives were added to Core Option section. High Performance Clusters, HPE PCIe Workload Accelerator Options, HPE USB and SD options, and HPE Care Pack Services were added to the Additional Options section. |
| | | Changed | Standard Features, Optional Features, Core Options, Additional Options, and Memory sections were revised. |
| 19-Sep-2014 | From Version 1 to 2 | Changed | Changes made throughout the entire QuickSpecs. |



hpe.com/qref/ml350gen9



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

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