# QuickSpecs

#### **Overview**

#### **HPE Ethernet 10Gb 2-port 530SFP+ Adapter**

The HPE 530SFP+ is a dual-port 10Gb Ethernet adapter featuring the next generation 57810S single-chip solution from QLogic in a PCle 2.0 compliant form factor designed for select HPE ProLiant Gen9, Gen8 and Gen7 ML/DL/SL servers.

Leveraging QLogic's market-proven architecture and software, the HPE 530SFP+ delivers full line-rate performance across all ports with low power consumption.

The HPE 530SFP+ supports enterprise class features such as VLAN tagging, adaptive interrupt coalescing, MSI-X, NIC teaming (bonding), Tunneling offloads (NVGRE, VxLAN), Receive Side Scaling (RSS), jumbo frames, PXE boot and virtualization features such as SR-IOV, Network Partitioning, VMware NetQueue and Microsoft VMQ.

Support for HPE Sea of Sensors 3D Technology enhances server performance while reducing energy use and expense.



#### **Models**

HP Ethernet 10Gb 2-port 530SFP Adapter

652503-B21

#### **Kit Contents**

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- Quick install card
- Product warranty statement



#### Compatibility

#### Servers

#### ProLiant DL (rack-optimized):

- HPE ProLiant DL60 Gen9
- HPE ProLiant DL80 Gen9
- HPE ProLiant DL120 Gen9
- HPE ProLiant Dl160 Gen9
- HPE ProLiant DL180 Gen9
- HPE ProLiant DL360 Gen9
- HPE ProLiant DL380 Gen9
- HPE ProLiant DL160 Gen8
- HPE ProLiant DL360e Gen8
- HPE ProLiant DL360p Gen8
- HPE ProLiant DL380e Gen8
- HPE ProLiant DL380p Gen8
- HPE ProLiant DL385p Gen8
- HPE ProLiant DL560 Gen8
- HPE ProLiant DL580 Gen8
- HPE ProLiant DL580 G7
- HPE ProLiant DL585 G7
- HPE ProLiant DL980 G7

#### **ProLiant ML (expansion-optimized):**

- HPE ProLiant ML350 Gen9
- HPE ProLiant ML350e Gen8
- HPE ProLiant ML350p Gen8
- HPE ProLiant ML350e Gen8 v2

#### **ProLiant SL (scalable line):**

- HPE SL2500 Scalable System
- HPE ProLiant SL210t Gen8
- HPE ProLiant SL230s Gen8
- HPE ProLiant SL250s Gen8
- HPE ProLiant SL270s Gen8
- HPE ProLiant SL4540 Gen8
- HPE ProLiant SL4545 G7

**NOTE:** This is a list of supported servers. Some may be discontinued.

#### **Product Features**

- Industry-leading throughput and latency performance
- Up to 40Gb/s bi-directional near line rate throughput
- Hardware acceleration TCP/IP/UDP stateless offloads, as well as for TCP Offload Engine (TOE)
- Improved small packet performance: Supports UEFI and legacy boot options and Tunnel offload support (NVGRE, VxLAN)
- Low profile design shipping with standard height and low-profile brackets
- Optimized for virtual server environments with support for Network Partitioning (NPAR) and Single-Root I/O Virtualization (SR-IOV)Active Health Systems support via FW (OCBB), I2C capable
- PXE, Jumbo Frames, Checksum & Segmentation Offload, IPv6 and RSS
- On chip temperature monitor (OCSD)
- Standard server operating system support
- Standard NC series option kit warranty, support, services
- Field replaceable and upgradeable
- Support for Preboot eXecution Environment (PXE)
- Integrated PHY and MAC
- IEEE 1588 (Time Synchronization)

### **Ethernet Throughput**

**Dual-port 10 Gigabit** The HPE 530SFP+ adapter delivers 20 Gbps full duplex Ethernet transfer rate per port (40 Gbps per adapter), providing the network performance needed to improve response times and alleviate bottlenecks that impact performance of next generation data centers. 10Gb Ethernet bandwidth is ideal for high performance computing, database clusters, and more.

#### **Jumbo Frames**

The HPE 530SFP+ adapter supports jumbo frames (also known as extended frames), permitting up to a 9K byte (KB) transmission unit (MTU) when running Ethernet I/O traffic. This is over 5X the size of a standard 1500-byte Ethernet frame. With jumbo frames, networks can achieve higher throughput performance and greater CPU utilization. These attributes are particularly useful for database transfer and tape backup operations.

#### **TCP/IP Stateless** Offloading

TCP, IP, UDP checksum offload, Large Send Offload (LSO), TCP, Segmentation Offload (TSO). These features optimize host efficiency, leaving the CPU available for other duties.

The HPE 530SFP+ Adapter by QLogic offers TCP/IP stateless offloading capability.

#### MSI and MSI-X

Message Signaled Interrupt (Extended) provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores. The HPE 530SFP+ Adapter by QLogic supports MSI and MSI-X.

#### **802.1Q VLANs**

IEEE 802.1Q virtual local area network (VLAN) protocol allows each physical port of the HPE 530SFP+ adapter to be separated into multiple virtual NICs for added network segmentation and enhanced security and performance. VLANs increase security by isolating traffic between users. Limiting the broadcast traffic to within the same VLAN domain also improves performance. The HPE 530SFP+ Adapter by QLogic provides support for 802.1Q (VLAN).

#### **Tunnel Offload**

Minimize the impact of overlay networking on host performance with tunnel offload support for VXLAN andNVGRE. By offloading packet processing to adapters, customers can use overlay networking to increase VM migration flexibility and network scale with minimal impact to performance. HPE Tunnel Offloading increases I/O throughput, reduces CPU utilization, and lowers power consumption. NVGRE tunnel offload supports Microsoft OS environments and VxLAN supports select VMware and Linux (RHEL and SUSE) environments.

#### TOE

TCP/IP Offload Engine (TOE) shifts the processing of data in the TCP protocol stack from the server CPU to the adapter's processor, freeing server CPU cycles for other operations.

#### Single-Root I/O **Virtualization**

Single-Root I/O Virtualization (SR-IOV) provides a mechanism to bypass the host system hypervisor in virtual environments providing near metal performance and server efficiency. SR-IOV provides mechanism to create multiple Virtual Functions (VFs) to share single PCle resources. The device is capable of SR-IOV, and requires Server BIOS support, controller firmware, and OS support.

#### **Optimized for Virtualization**

I/O Virtualization support for VMware NetQueue and Microsoft VMQ help meet the performance demands of consolidated virtual workloads.

#### Checksum & **Segmentation** Offload

Normally the TCP Checksum is computed by the protocol stack. By selecting one of the "Checksum Offload" parameters, the checksum can be computed by the adapter.

Segmentation Offload is technique for increasing outbound throughput of high-bandwidth network connections by reducing CPU overhead. The technique is also called TCP segmentation offload (TSO) when applied to TCP, or generic segmentation offload (GSO).

The HPE 530SFP+ Adapter by QLogic has Checksum and Segmentation Offload capabilities

#### IPv6

IPv6 uses 128-bit addressing allowing for more devices and users on the internet. IPv4 supported 32-bit addressing.

The HPE 530SFP+ Adapter by QLogic supports IPv6

### (RSS)

Receive Side Scaling RSS resolves the single-processor bottleneck by allowing the receive side network load from a network adapter to be shared across multiple processors. RSS enables packet receive-processing to scale with the number of available processors.

The HPE 530SFP+ Adapter by QLogic has RSS capabilities.

### **Time** synchronization implementations (PTP)

Synchronization of system clocks throughout a network, achieving clock accuracy in the sub-microsecond range, making it suitable for measurement and control systems.

The HPE 530SFP+ Adapter by QLogic supports Precision Time Protocol-ready (PTP).

#### **Network Adapter** Teaming

The HPE 530SFP+ adapter support for NIC teaming helps IT administrators increase network fault tolerance and increased network bandwidth, The team of adapters can work together as a single virtual adapter. The HPE 530SFP+ provides support for several different types of teaming enabling IT administrators to optimize availability, improve performance and help reduce costs.

## **Network**

The HPE 530FLR-SFP+ supports Network Partitioning (NPAR) for ProLiant Gen8 and Gen9 rack servers. Partitioning (NPAR) Allowing administrators to configure a 10Gb port as four separate partitions or physical functions. Each PCI function is associated with a different virtual NIC. To the OS and the network, each physical function appears as a separate NIC port.

#### **Network Management**

#### Management Support

The HPE 530SFP+ adapter can be administered from HPE Systems Insight Manager (SIM). The adapters can be managed individually or in teams, providing SNMP based statistics for reporting purposes. The HPE 530SFP+ adapter can also be managed by other applications with SNMP support.

#### **Server Integration**

The HPE 530SFP+ adapter is a validated, tested, and qualified solution that is optimized for HPE ProLiant servers. Hewlett Packard Enterprise validates a wide variety of major operating systems drivers with the full suite of web-based enterprise management utilities including HPE Intelligent Provisioning and HPE Systems Insight Manager that simplify network management.

This approach provides a more robust and reliable networking solution than offerings from other venders and provides users with a single point of contact for both their servers and their network adapters.

#### Configuration **Utilities**

Each HPE 530SFP+ ships with a suite of operating system-tailored configuration utilities that allow the user to enable initial diagnostics and configure adapter teaming. This includes a patented teaming GUI for Microsoft Windows operating systems. Additionally, support for scripted installations of teams in a Microsoft Windows environment allow for unattended OS installations.

#### **LED Indicators**

The colored LEDs on each port of the HPE 530SFP+ adapter indicate link status and link activity.

# **Environment (PXE)**

**Preboot execution** PXE allows the server to boot over the network and download software residing in the network.

## 3D

HPE Sea of Sensors Support for HPE's Sea of Sensors which is a collection of 32 sensors that automatically track thermal activity heat - across the server. When temperatures get too high, sensors can kick on fans and make other adjustments to reduce energy usage. What makes it better is the upgrade from all six fans kicking on at one time to a new system where only one kicks on - the one in proximity of the area that started heating up - thus reducing the amount of energy used for cooling.

#### VMware NetQueue and Microsoft

VMware NetQueue is technology that significantly improves performance of 10 Gigabit Ethernet network adapters in virtualized environments.

# Virtual Machine Queue (VMQ)

Windows Hyper-V VMQ (VMQ) is a feature available on servers running Windows Server 2008 R2 with VMQ-enabled Ethernet adapters. VMQ uses hardware packet filtering to deliver packet data from an external virtual machine network directly to virtual machines, which reduces the overhead of routing packets and copying them from the management operating system to the virtual machine.

The HPE Ethernet 10Gb 2-port 530SFP+ Adapter by QLogic supports VMware NetQueue and Windows Hyper-V VMQ.

#### Warranty

Maximum: The remaining warranty of the HPE product in which it is installed (to a maximum three-year, limited warranty).

Minimum: One year limited warranty.

Additional information regarding worldwide limited warranty and technical support is available at:

http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/index.aspx#.V4e3tPkrJhE

#### **Service and Support**

#### Service and Support HPE Technology Services

HPE Technology Services offers you technical consultants and support expertise to solve your most complex infrastructure problems. We help keep your business running, boost availability, and avoid downtime.

#### Protect your business beyond warranty with HPE Care Pack Services

When you buy HPE Options, it's also a good time to think about what level of service you may need. HPE Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

HPE Foundation Care services deliver scalable support-packages for Hewlett Packard Enterprise industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HPE Collaborative Support. If you are running business critical environments, Hewlett Packard Enterprise offers Proactive Care or Critical Advantage. These services help you deliver high levels of application availability through proactive service management and advanced technical response.

Here is the support service recommendation from the Foundation Care and Proactive Care portfolio. For customized support service solution, Hewlett Packard Enterprise can work with you to tailor a service solution for your unique support requirements using broader services portfolio of Foundation Care and Proactive Care.

#### Recommended HPE Care Pack Services for optimal satisfaction with your HPE product

#### Recommended Services

#### 3-Year HPE 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required a Hewlett Packard Enterprise Authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1467740454177.125225703.1938120508

#### OR

#### 3-Year HPE 24x7 4 hour Response, HPE Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problem diagnosis, fault isolation, and resolution if available to Hewlett Packard Enterprise. If the problem is with HPE HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with Hewlett Packard Enterprise or supported third-party software product and cannot be resolved by applying known fixes, Hewlett Packard Enterprise will contact the third-party vendor and create a problem incident on your behalf.

#### **HPE ProLiant 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/GetDocument.aspx?docname=5981-9356EN

#### **Service and Support**

#### Related HPE Care Pack Services to enhance your HPE product experience

#### Related Services

#### 3-Year HPE 24x7 4 hour Response, Proactive Care or Critical Advantage

Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your query or issue end to end until resolved, delivering a single point of contact for you

http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1467740454177.125225703.1

#### OR

#### 3-Year HPE 6-hour Onsite Call-to-Repair, HPE Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request to the HPE Global Solution Center, and basic software problem diagnosis, fault isolation, and resolution if available to Hewlett Packard Enterprise. In case, the issue is with Hewlett Packard Enterprise or supported third-party software product and cannot be resolved by applying known fixes, Hewlett Packard Enterprise will contact the third-party vendor and create a problem incident on your behalf.

#### **HPE Proactive Select Service**

Provides a flexible way to purchase Hewlett Packard Enterprise best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

https://www.hpe.com/h20195/v2/GetDocument.aspx?docname=4AA3-8855ENW&search=4AA3-8855ENW

#### **Insight Remote Support**

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more

http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=c04844073

HPE Support Center 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 https://www.hpe.com/us/en/support.html The HPE 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 Care Pack or Hewlett Packard Enterprise contractual support agreement. NOTE: The Hewlett Packard Enterprise Support Center Mobile App is subject to local availability.

Parts and materials Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

#### **Service and Support**

# Coverage

Warranty / Service For ProLiant servers and storage systems, this service covers HPE-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

> The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by Hewlett Packard Enterprise as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option

#### For more information

To learn more on services for HPE ESSN Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:

https://www.hpe.com/us/en/servers

| Direct Attach Cable                             | HP BladeSystem c-Class 10GbE SFP+ to SFP+ 0.5m Direct Attach Copper Cable HP BladeSystem c-Class 10GbE SFP+ to SFP+ 1m Direct Attach Copper Cable HP BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable HP BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable  NOTE: Direct Attach Cable (DAC) must be purchased separately for copper environments.  | 487649-B21<br>487652-B21<br>487655-B21<br>537963-B21                         |  |
|---|---|--|--|
| Fiber Optic Modules                             | ules HP BladeSystem c-Class 10Gb SFP+ SR Transceiver HP BladeSystem c-Class 10Gb SFP+ LR Transceiver HPE X132 10G SFP+ LC SR Transceiver NOTE: Fiber transceivers and cables must be purchased separately for fiber-optic environments.   |  |  |
| Fiber Optic Cables                              | HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable  NOTE: Fiber transceivers and cables must be purchased separately for fiber-optic environments.  NOTE: For additional information on 10Gb cable specifications go to: | AJ833A<br>AJ834A<br>AJ836A<br>AJ837A<br>AJ838A<br>AJ839A                     |  |
| Additional Supported Cables (Plug into HPN5900) | HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable                                       | JD095C<br>JD096C<br>JD097C<br>JG081C<br>JC784C<br>JG329A<br>JG330A<br>JG331A |  |
| Additional Supported Cables (Plug into HPN6600) | HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable   |  |  |
| Gigabit Server<br>Adapters                      | HP NC365T 4-port Ethernet Server Adapter HP Ethernet 1Gb 4-port 331T Adapter HP Ethernet 1Gb 2-port 332T Adapter HP Ethernet 1Gb 2-port 361T Adapter  |  |  |

| 10 Gigabit Server<br>Adapters | <b>NOTE:</b> A minimum of two Gigabytes (2 GB) of server memory is required per each adapter. |                          |  |  |  |
|-------------------------------|---|--------------------------|--|--|--|
|                               | HP NC523SFP 10Gb 2-port Server Adapter  | 593717-B21<br>614203-B21 |  |  |  |
|                               | HP NC552SFP 10Gb 2-port Ethernet Server Adapter   |                          |  |  |  |
|                               | HP Ethernet 10Gb 2-port 530T Adapter  | 656596-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 560SFP+ Adapter   | 665249-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 561T Adapter  | 716591-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 570SFP+ Adapter   | 718904-B21               |  |  |  |
| FlexibleLOM                   | NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each                 |                          |  |  |  |
| Adapters                      | adapter.  |                          |  |  |  |
|                               | Ethernet Adapters   |                          |  |  |  |
|                               | HP Ethernet 1Gb 4-port 331FLR Adapter   | 629135-B21               |  |  |  |
|                               | HP Ethernet 1Gb 4-port 366FLR Adapter   | 665240-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 530FLR-SFP+ Adapter   | 647581-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter   | 665243-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 561FLR-T Adapter  | 700699-B21               |  |  |  |
|                               | HP Ethernet 10Gb 2-port 570FLR-SFP+ Adapter   | 717491-B21               |  |  |  |
|                               | FlexFabric Adapters   |                          |  |  |  |
|                               | HP FlexFabric 10Gb 2-port 526FLR-SFP+ Adapter   | 629138-B21               |  |  |  |
|                               | HP FlexFabric 10Gb 2-port 533FLR-T Adapter  | 700759-B21               |  |  |  |
|                               | HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter   | 700751-B21               |  |  |  |
|                               | HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter   | 629142-B21               |  |  |  |

General Specifications Network Processor QLogic 57810S chipset

**Data Rate** Two ports, each at 20 Gbps full duplex; 40 Gbps aggregate full duplex theoretical

bandwidth.

**Bus Type** PCI-e 2.0 x8

Form Factor Standard and low profile adapter compliant with the PCIe standard

**IEEE Compliance** 802.3, 802.3ae, 802.3x, 802.2x, 802.3ad, 802.1Qaz, 802.1Qau, 802.1Qbb, 802.1Qbg,

802.1ax

Power and Environmental Specifications **Operating** Temperature 32° to 131° F (0° to 55° C)

Humidity 5% to 95% non-condensing

**Power** 9W maximum

**Agency approvals** USA FCC Part 15 Class A

Canada ICES=--3, Issue 4

Japan VCCI V3 (2010.04) Class A

International EN55022:2006 + A1:2007 Class A,

EN55024:1998+A1:2011+A2; EN61000-3-2:2006,

EN61000-3-3:2008

Taiwan BSMI, CNS13438 (2006) Class A Australia/New Zealand EN55022:2006+A12007 class A

Australia/New Zeala

(AS/NZS):

Korea KN22 Class A, KN24

**RoHS Compliance** 6 of 6

Operating System Support Microsoft Windows Server 2008 SP2 and R2 w/SP1 (x86 and x64)

Microsoft Windows Server 2012, 2012 R2

Microsoft Windows Hyper-V 2008 R2 w/SP1, 2012, 2012 R2

Red Hat Enterprise Linux (RHEL) 5, 6 and 7

SUSE Linux Enterprise Server 11 and 12

Mware ESXi 5.x and 6.x VMware vSphere 5.5 Citrix XenServer 6.x Solaris 10 and 11

**NOTE:** For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix:

http://h17007.www1.hpe.com/us/en/enterprise/servers/supportmatrix/redhat\_linux.aspx#.V4e8tPkrJD8

**Environment- friendly Products** 

End-of-life Management and Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in

#### and Approach

Recycling

information, please go to: <a href="http://www.hpe.com/info/recycle">http://www.hpe.com/info/recycle</a> To recycle your product, please go to: <a href="http://www.hpe.com/info/recycle">http://www.hpe.com/info/recycle</a> or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: <a href="http://www.hpe.com/info/recycle">http://www.hpe.com/info/recycle</a>. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

### **Summary of Changes**

| Date        | Version History       | Action  | Description of Change                                       |
|-------------|-----------------------|---------|---|
| 22-Jul-2016 | From Version 19 to 20 | Changed | QuickSpecs sections were updated.                           |
|             |                       | Removed | Obsolete SKUs were deleted:                                 |
|             |                       |         | 503746-B21.   |
| 19-Jun-2015 | From Version 18 to 19 | Changed | Compatibility, Standard Features, Related Options sections  |
|             |                       |         | were updated.   |
|             |                       | Removed | Obsolete SKUs removed:                                      |
|             |                       |         | 221691-B21, 221691-B22, 221691-B23, 221692-B21, 221692-B22, |
|             |                       |         | 221692-B23, 221692-B26, 221692-B27, 412648-B21, 435508-     |
|             |                       |         | B21, 394791-B21, 394793-B21, 538696-B21, 458492-B21,        |
|             |                       |         | 468332-B21, 489892-B21, 581201-B21.                         |
| 28-Nov-2014 | From Version 17 to 18 | Changed | Overview, Compatibility, Standard Features and Technical    |
|             |                       |         | Specifications were updated                                 |
| 10-Sep-2013 | From Version 16 to 17 | Changed | Compatibility, 10 Gigabit Server Adapters, and FlexibleLOM  |
|             |                       |         | Adapters were revised.                                      |
| 15-Mar-2013 | From Version 15 to 16 | Added   | Technical Specifications: Added 802.3ae to the General      |
|             |                       |         | Specifications section.                                     |
| 01-Mar-2013 | From Version 14 to 15 | Changed | Updated the Related Options section.                        |
| 19-Feb-2013 | From Version 13 to 14 | Changed | Updated Overview, Standard Features, Related Options and    |
|             |                       |         | Technical Specifications.                                   |
| 04-Jan-2013 | From Version 12 to 13 | Changed | A description and SKU change was made in the Related        |
|             |                       |         | Options section.  |
| 04-Dec-2012 | From Version 11 to 12 | Changed | Changes made in the Compatibility, Related Options and      |
|             |                       |         | Technical Specifications sections.                          |
| 15-Nov-2012 | From Version 10 to 11 | Changed | Change made in the Technical Specifications section only.   |
| 24-Oct-2012 | From Version 9 to 10  | Changed | Changes made in the Related Options section.                |
| 10-Oct-2012 | From Version 8 to 9   | Changed | Changes made in the Compatibility section.                  |
| 09-Oct-2012 | From Version 7 to 8   | Changed | Changes made in Compatibility section.                      |
| 03-Oct-2012 | From Version 6 to 7   | Changed | Changes were made in Related Options section.               |
| 28-Sep-2012 | From Version 5 to 6   | Changed | Changes were made in Related Options section.               |
| 24-Sep-2012 | From Version 4 to 5   | Changed | Changes were made in Compatibility section.                 |
| 20-Aug-2012 | From Version 3 to 4   | Changed | Changes were made in Compatibility section.                 |
| 13-Jul-2012 | From Version 2 to 3   | Changed | Changes were made in Related Options.                       |
| 25-Jun-2012 | From Version 1 to 2   | Changed | Changes were made in Technical Specifications.              |

### **Summary of Changes**



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