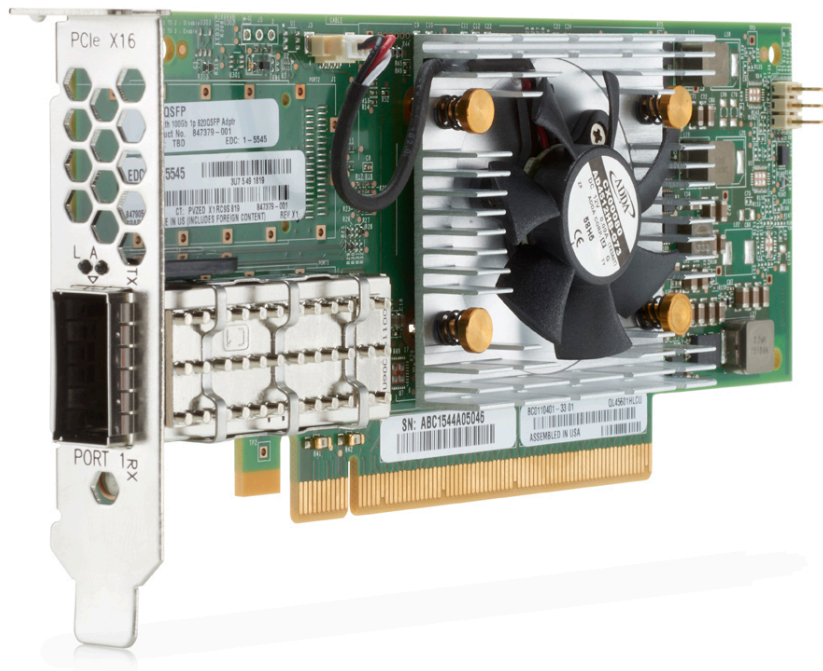# QuickSpecs

Overview

HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter

The HPE 620QSFP28 is a 1-port Ethernet adapter providing 4 lanes of 25 Gb connectivity featuring the next generation 45604 single-chip solution from QLogic in a PCIe 3.0 compliant form factor designed for select HPE ProLiant Gen9 servers. It offers a rich set of offload technologies including overlay network tunneling and storage as well as RDMA over Converged Ethernet (RoCE) capabilities that increase host efficiency and virtualization performance.

The HPE 620QSFP28 uses a single quad small form-factor pluggable (QSFP) that provides four lanes of 25Gb Ethernet connectivity. Leveraging QLogic's market-proven architecture and software, the HPE 620QSFP28 delivers full line-rate performance across all ports with low power consumption.

The HPE 620QSFP28 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, VMware NetQueue and Microsoft VMQ.

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

Overview

Models

HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter 817762-B21

Kit Contents
- HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter
- Quick install card
- Product warranty statement

Compatibility

Servers   **ProLiant DL (rack-optimized)**:
- HPE ProLiant DL 120 Gen9
- HPE ProLiant DL 160 Gen9
- HPE ProLiant DL180 Gen9
- HPE ProLiant DL360 Gen9
- HPE ProLiant DL380 Gen9
- HPE ProLiant DL560 Gen9
- HPE ProLiant DL580 Gen9

Apollo:
- Apollo 2000 Gen9
- Apollo 4200 Gen9
- Apollo 4510 Gen9
- Apollo 4530 Gen9

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

Standard Features

Product Features	• Industry-leading throughput and latency performance
	• Up to 200Gb/s bi-directional near line rate throughput
	• Hardware acceleration TCP/IP/UDP stateless offloads, as well as for TCP Offload Engine (TOE)
	• RDMA over Converged Ethernet (RoCE) for greater server efficiency and lower latency
	• Over 15 million small packets/s per port, ideal for web/mobile applications, mobile messaging, and social media
	• 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 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)

4-port 25 Gigabit Ethernet Throughput
The HPE 620QSFP28 adapter delivers 50 Gbps full duplex Ethernet transfer rate per port (200 Gbps per adapter), providing the network performance needed to improve response times and alleviate bottlenecks that impact performance of next generation data centers. 100Gb Ethernet bandwidth is ideal for high performance computing, database clusters, and more.

RDMA(RoCE)
RoCE is an accelerated I/O delivery mechanism that allows data to be transferred directly from the user memory of the source server to the user memory of the destination server bypassing the operating system (OS) kernel. Because the RDMA data transfer is performed by the DMA engine on the adapter's network processor, the CPU is not used for the data movement, freeing it to perform other tasks such as hosting more virtual workloads (increased VM density). RDMA also bypasses the host TCP/IP stack, in favor of upper layer InfiniBand protocols implemented in the adapter's network processor. The bypass of the TCP/IP stack and the removal of a data copy step reduce overall latency to deliver accelerated performance for applications such as Microsoft Hyper-V Live Migration, Microsoft SQL and Microsoft SharePoint with SMB Direct.

Jumbo Frames
The HPE 620QSFP28 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.

DPDK
The HPE 620QSFP28 adapter supports DPDK with benefit for small packet acceleration and use in NFV deployments.

TCP/IP Stateless
TCP, IP, UDP checksum offload, Large Send Offload (LSO), TCP, Segmentation Offload (TSO). These features

Standard Features

Offloading
optimize host efficiency, leaving the CPU available for other duties.
The HPE 620QSFP28 adapter 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 620QSFP28 adapter supports MSI and MSI-X.

802.1Q VLANs
IEEE 802.1Q virtual local area network (VLAN) protocol allows each physical port of the HPE 620QSFP28 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 620QSFP28 adapter provides support for 802.1Q (VLAN).

Tunnel Offload
Minimize the impact of overlay networking on host performance with tunnel offload support for VXLAN and NVGRE. 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 PCIe 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 620QSFP28 adapter 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 620QSFP28 adapter supports IPv6

Standard Features

Receive Side Scaling (RSS)
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 620QSFP28 adapter 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 620QSFP28 adapter supports Precision Time Protocol-ready (PTP).

Network Adapter Teaming
The HPE 620QSFP28 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 620QSFP28 provides support for several different types of teaming enabling IT administrators to optimize availability, improve performance and help reduce costs.

Network Management

Management Support
The HPE 620QSFP 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 620QSFP adapter can also be managed by other applications with SNMP support.

Server Integration
The HPE 620QSFP 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 620QSFP 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 620QSFP adapter indicate link status and link activity.

Preboot eXecution Environment (PXE)
PXE allows the server to boot over the network and download software residing in the network.

HPE Sea of Sensors 3D
Support for the HPE 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

Standard Features

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 Virtual Machine Queue (VMQ)

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

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 620QSFP28 adapter 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://h20566.www2.hpe.com/portal/site/hpsc/public/

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/public/

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
http://www8.hp.com/us/en/business-services/it-services/foundation-care-services.html

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://www8.hp.com/us/en/business-services/it-services/foundation-care-services.html

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 HPE. 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 HPE 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. **http://www8.hp.com/us/en/business-services/it-services/proactive-care-services.html**

Insight Remote Support

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more **https://www.hpe.com/us/en/services/it-support.html**

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/services/it-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 personalize IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE 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

Warranty / Service Coverage	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.html**

Related Options

Direct Attach Cable	HPE 100Gb QSFP28 to QSFP28 0.5m Direct Attach Copper Cable	845402-B21
	HPE 100Gb QSFP28 to QSFP28 1m Direct Attach Copper Cable	845404-B21
	HPE 100Gb QSFP28 to QSFP28 3m Direct Attach Copper Cable	845406-B21
	HPE 100Gb QSFP28 to QSFP28 5m Direct Attach Copper Cable	845408-B21
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE 100Gb QSFP28 to 4x25Gb SFP28 5m Direct Attach Copper Cable	845418-B21

NOTE: Direct Attach Cable (DAC) must be purchased separately for copper environments.

Transceivers Fiber Optic Modules	HPE 100Gb QSFP28 MPO SR4 100m Transceiver	845966-B21
	HPE 100Gb QSFP28 MPO eSR4 300m Transceiver	845968-B21

Fiber Optic Cables	HPE 100G QSFP28 to QSFP28 7m Active Optical Cable	845410-B21
	HPE 100G QSFP28 to QSFP28 10m Active Optical Cable	845412-B21
	HPE 100G QSFP28 to QSFP28 15m Active Optical Cable	845414-B21
	HPE QSFP28 to 4x25G SFP28 7m Active Optical Cable	845420-B21
	HPE QSFP28 to 4x25G SFP28 10m Active Optical Cable	845422-B21
	HPE QSFP28 to 4x25G SFP28 15m Active Optical Cable	845424-B21

NOTE: Fiber transceivers and cables must be purchased separately for fiber-optic environments.

Switches	Arista 7060CX-32S 100G
	Juniper QFX10002-36Q
	HPE FlexFabric 5950 32QSFP28 Switch – JH321A
	HPE FlexFabric 5950 25G
	Juniper QFX5200
	Cisco 3232C
	HP Altoline 25G

Additional Supported Cables (Plug into HPN5900)	HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A

Additional Supported Cables	HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
	HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

Related Options

(Plug into HPN6600)	HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B

Gigabit Server Adapters	HP NC365T 4-port Ethernet Server Adapter	593722-B21
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21

10 Gigabit Server Adapters	**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
	HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
	HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
	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 Adapters	**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each 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
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hp.com/go/ProLiantNICs**	

Related Options

General Specifications	Network Processor	QLogic 45604 chipset	
	Data Rate	Four paths, each at 50 Gbps full duplex; 200 Gbps aggregate full duplex theoretical bandwidth.	
	Onboard Memory	256MB	
	Bus Type	PCI-e 3.0 x16	
	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	
	Connector	One SFP28 (SR, DAC)	
	Wiring	CAT6 UTP or better twisted-pair	
	Cable Distance	Maximum distances for CAT6 cable are 30 meters (98 feet). Maximum distances for CAT6a are 100 meters (328 feet).	

Power and Environmental Specifications	Operating	Temperature	32° to 131° F (0° to 55° C)
		Humidity	5% to 95% non-condensing
	Power	23W maximum card power	
	Emissions classification	Class A	
	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 (AS/NZS):	EN55022:2006+A12007 class A
		Korea	KN22 Class A, KN24
	RoHS Compliance	6 of 6	
	Safety	UL Mark (USA and Canada)	
		CE Mark	
		EN 60590	

Operating System Support	Windows
	Microsoft Windows Server 2012
	Microsoft Hyper-V Server 2012
	Microsoft Windows Server 2012 R2

Related Options

Microsoft Hyper-V Server 2012 R2
Windows WSSC v. Next
Linux
Red Hat Enterprise Linux 6.7/6.8/7.2 (64 bit) (includes KVM)
SLES 11 SP4 (64bit) (includes XEN &KVM)
SLES 12 (64 bit) (includes XEN &KVM)
HyperVisors
VMware ESXi 6.0 U2
VMware vSphere 2016

NOTE: For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix:
http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: **http://www.hp.com/go/green**. To recycle your product, please go to: **http://www.hp.com/go/green** 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: **http://www.hp.com/go/green**. 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
06-Jun-2016	Version 1	Created	New QuickSpecs.

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