Have feedback on QuickSpecs? We're listening

Compute 10/25Gb Ethernet Adapters for HPE QuickSpecs

HPE Compute 10/25Gb Ethernet Adapters are ideal for high-performance computing, server virtualization, security, server consolidation, and other applications requiring high throughput.

HPE Compute 10/25Gb Ethernet Adapters deliver high-performance 10Gb and 25Gb Ethernet connectivity for HPE compute platforms, enabling increased bandwidth, reduced latency, and scalable support for modern enterprise, cloud, and virtualization workloads.



SKU	Description
P10115-B21	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE



SKU	Description
P26262-B21	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

Models

Generation Support:		Gen10+	Gen11	Gen12	Gen13
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21	X	X	X	
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21	X	X	X	
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Dual Rate Adapter for HPE	P93114-B21				X
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Dual Rate Adapter for HPE	P93117-B21				X
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P26264-B21	X	X	X	
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P26269-B21	X	X	X	
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21	X	X	X	
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21	X	X	X	
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21	X	X	X	
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P41614-B21		X	X	
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 MCLK Non-GNSS Adapter for HPE	P75068-B21		X[1]		
Intel E830 Ethernet 10/25Gb 8-port SFP28 OCP3 Adapter for HPE	P84529-B21			X[3]	
Intel E830-XXVDA4F Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P86491-B21			X[3]	
Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P76851-B21			X	X
Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P76848-B21			X	X
Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P76857-B21			X	X
Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P76854-B21			X	X
Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21	X	X	X	
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42041-B21	X	X	X	
Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P13188-B21	X	X[2]		
Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10112-B21	X	X[2]		
Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P21109-B21	X	X	X	
AMD Solarflare X4522-PLUS 10/25GbE 2-port SFP56 Adapter for HPE	P87940-B21		X	X	

See the Server Platform QuickSpecs for details on supported SKUs and configurations.

Notes: See the Service and Support section to visit the hyperlinks.

- [1] P75068-B21 (with Master Clock feature) is qualified on DL110 Gen11 server platform only.
- [2] P13188-B21 and P10112-B21 are qualified on DL360 Gen11 and DL380 Gen11 server platforms only.
- [3] P84529-B21 and P86491-B21 are qualified on DL110 and EL140 Gen12 server platforms only.

Kit Contents

PCIe Ethernet Adapter Option Kits include:

- HPE Ethernet Adapter (with full-height bracket installed)
- Quick install card
- Product warranty statement
- Low Profile Bracket

OCP Ethernet Adapter Option Kits include:

- HPE Ethernet Adapter
- Quick install card
- Product warranty statement

Standard Features

Table 1				
SKU	P10115-B21	P26262-B21	P93117-B21	P93114-B21
Description	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Dual Rate Adapter for HPE	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Dual Rate Adapter for HPE
Card Type/Profile	OCP 3.0	Stand up	OCP 3.0	Stand up
ASIC/Chip	Broadcom BCM57414	Broadcom BCM57414	Broadcom BCM57414	Broadcom BCM57414
PCIe Version	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Power Requirement	Typical: 11.6 W	Typical: 9.1 W Max: 9.9 W	Typical: 11.6 W	Typical: 9.1 W Max: 9.9 W
UEFI PXE Boot	Yes	Yes	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes	Yes	Yes
Wake-on-LAN (WOL)	Yes		Yes	
Internet Protocol (IP) **IPv4, IPv6**	Yes	Yes	Yes	Yes
Auto Negotiation	1Gb, 10Gb, 25Gb	1Gb, 10Gb, 25Gb	1Gb, 10Gb, 25Gb	1Gb, 10Gb, 25Gb
iSCSI Remote Boot	UEFI	UEFI	UEFI	UEFI
Tunnel Offload	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE
RDMA[1]	RoCEv1, RoCEv2	RoCEv1, RoCEv2	RoCEv1, RoCEv2	RoCEv1, RoCEv2
Receive Side Scaling (RSS)	Yes	Yes	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	Yes	Yes	Yes
NPAR	8PFs or 16PFs	8PFs or 16PFs	8PFs or 16PFs	8PFs or 16PFs
Single Root I/O Virtualization (SR-IOV)	128VF (total per chip)	128VF (total per chip)	128VF (total per chip)	128VF (total per chip)
Data Plane Development Kit (DPDK)	Yes	Yes	Yes	Yes
Root of Trust	Hardware	Hardware	Hardware	Hardware
Authenticated Updates	Yes	Yes	Yes	Yes
Secure Boot	Yes	Yes	Yes	Yes
Audit Log	Yes	Yes	Yes	Yes
Sanitization	Yes	Yes	Yes	Yes

Standard Features

Notes:

- [1]HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- For BCM57414, mixing link speeds of (10Gb/25Gb) between ports on a 2-port 25Gb device is not supported. (1G/10G and 1G/25G port speed mixing is supported).
- The 4-port BCM57504 does support mismatched/different (10Gb/25Gb) link speeds on different ports.
- P93114-B21, P93117-B21 support Dual Rate (10G, 25G) Transceivers.

Standard Features

Table 2		
SKU	P26264-B21	P26269-B21
Description	Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
Card Type/Profile	Stand up	OCP 3.0
ASIC/Chip	Broadcom BCM57504	Broadcom BCM57504
PCIe Version	PCIe 4.0 x16	PCIe 4.0 x16
Power Requirement	Typical 15.2 W Max 16.7 W	Typical 16.0 W Max 16.9 W
UEFI PXE Boot	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes
Wake-on-LAN (WOL)		Yes
Internet Protocol (IP) IPv4, IPv6	Yes	Yes
Auto Negotiation[2]	10Gb, 25Gb	10Gb, 25Gb
iSCSI Remote Boot	UEFI	UEFI
Tunnel Offload	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE
RDMA[1]	RoCEv2	RoCEv2
Receive Side Scaling (RSS)	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	Yes
NPAR	8PFs or 16PFs	8PFs or 16PFs
Single Root I/O Virtualization (SR-IOV)	1K VF (total per chip)	1K VF (total per chip)
Data Plane Development Kit (DPDK)	Yes	Yes
Root of Trust	Hardware	Hardware
Authenticated Updates	Yes	Yes
Secure Boot	Yes	Yes
Audit Log	Yes	Yes
Sanitization	Yes	Yes

Notes:

- [1]HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- For BCM57414, mixing link speeds of (10Gb/25Gb) between ports on a 2-port 25Gb device is not supported. (1G/10G and 1G/25G port speed mixing is supported).
- The 4-port BCM57504 does support mismatched/different (10Gb/25Gb) link speeds on different ports.

Standard Features

Table 3				
SKU	P08443-B21	P10106-B21	P08458-B21	P41614-B21
Description	Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
Card Type/Profile	Stand up	OCP 3.0	Stand up	OCP 3.0
ASIC/Chip	Intel® E810-XXVAM2	Intel® E810-XXVAM2	Intel® Ethernet Controller E810-CAM1	Intel® Ethernet Controller E810-CAM1
PCIe Version	PCIe 4.0 x8	PCIe 4.0 x8	PCIe 4.0 x16	PCIe 4.0 x16
Power Requirement	Typical: 8.9 W Maximum: 9.7 W	Typical: 8.9 W Maximum: 10.1 W	Typical: 14.2 W Maximum: 16.7W	Typical: 14.6W Maximum: 18.2W
UEFI PXE Boot	Yes	Yes	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes	Yes	Yes
Wake-on-LAN (WOL)		Yes		Yes
Internet Protocol (IP) IPv4, IPv6	Yes	Yes	Yes	Yes
Auto Negotiation[2]	Yes	Yes	Yes	Yes
iSCSI Remote Boot	iSCSI boot supported (UEFI), iSCSI acceleration only supported with TCP acceleration	iSCSI boot supported (UEFI), iSCSI acceleration only supported with TCP acceleration	iSCSI boot supported (UEFI), iSCSI acceleration only supported with TCP acceleration	iSCSI boot supported (UEFI), iSCSI acceleration only supported with TCP acceleration
Tunnel Offload	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE
RDMA[1]	iWARP & RoCEv2	iWARP & RoCEv2	iWARP & RoCEv2	iWARP & RoCEv2
Receive Side Scaling (RSS)	Yes	Yes	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	Yes	Yes	Yes
NPAR				
Single Root I/O Virtualization (SR-IOV)	256VFs/port, 2k Total	256VFs/port, 2k Total	256VFs/port, 2k Total	256VFs/port, 2k Total
Data Plane Development Kit (DPDK)	Yes	Yes	Yes	Yes
Root of Trust	Hardware	Hardware	Hardware	Hardware
Authenticated Updates	Yes	Yes	Yes	Yes

Standard Features

Secure Boot	Yes	Yes	Yes	Yes
Audit Log				
Sanitization	Yes	Yes	Yes	Yes

Notes:

- [1] HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- [2] Intel Ethernet Adapters support mixing different port speeds on different ports of the same card.

Standard Features

Table 4			
SKU	P75068-B21	P84529-B21	P86491-B21
Description	Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 MCLK Non-GNSS Adapter for HPE	Intel E830-XXVDA8F Ethernet 10/25Gb 8-port SFP28 OCP3 Adapter for HPE	Intel E830-XXVDA4F Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
Card Type/Profile	Stand up	OCP 3.0	Stand up
ASIC/Chip	Intel® Ethernet Controller E810-CAM1	Intel® Ethernet Controller E830	Intel® Ethernet Controller E830
PCIe Version	PCIe 4.0 x16	PCIe Gen 5.0 x8 or PCIe Gen 4.0 x16	PCIe Gen 5.0 x8 or PCIe Gen 4.0 x16
Power Requirement	Typical: 19.3 W Maximum: 24.9 W	Typical: 17.9 W Maximum: 40.7 W	Typical: 12.7 W Maximum: 25 W
UEFI PXE Boot	Yes	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes	Yes
Wake-on-LAN (WOL)			
Internet Protocol (IP) IPv4, IPv6	Yes	Yes	Yes
Auto Negotiation[2]	Yes		
iSCSI Remote Boot	iSCSI boot supported (UEFI), iSCSI acceleration only supported with TCP acceleration	iSCSI boot supported (UEFI)	iSCSI boot supported (UEFI)
Tunnel Offload	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE
RDMA[1]	(iWARP & RoCEv2)	iWARP & RoCEv2	iWARP & RoCEv2
Receive Side Scaling (RSS)	Yes	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	Yes	Yes
NPAR			
Single Root I/O Virtualization (SR-IOV)	256VFs/port, 2k Total	Yes	Yes
Data Plane Development Kit (DPDK)	Yes	Yes	Yes
Root of Trust	Hardware	Yes	Yes
Authenticated Updates	Yes	Yes	Yes
Secure Boot	Yes	Yes	Yes
Audit Log			
Sanitization	Yes	Yes	Yes
SPDM Support			

Dynamic Device Personalization (DDP)		Yes	Yes

Notes:

- [1] HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- [2] Intel Ethernet Adapters support mixing different port speeds on different ports of the same card.

Standard Features

Table 5				
SKU	P76851-B21	P76848-B21	P76857-B21	P76854-B21
Description	Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
Card Type/Profile	Stand up/Full height	OCP 3.0	Stand up/Full height	OCP 3.0
ASIC/Chip	Intel® Ethernet Controller E835	Intel® Ethernet Controller E835	Intel® Ethernet Controller E835	Intel® Ethernet Controller E835
PCIe Version	PCIe Gen 5.0 x8 (limited to 16GT/s)	PCIe Gen 5.0 x8 (limited to 16GT/s)	PCIe Gen 5.0 x8 (x16 physical, limited to 16GT/s)	PCIe Gen 5.0 x8 (limited to 16GT/s)
Power Requirement	Typical: 7.79 W (DAC) Maximum: 15.83 W (Optics)	Typical: 9.46 W (DAC) Maximum: 15.39 W (Optics)	Typical: 9.37 W (DAC) Maximum: 20.85 W (Optics)	Typical: 9.19 W (DAC) Maximum: 18.41 W (Optics)
UEFI PXE Boot	Yes	Yes	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes	Yes	Yes
Wake-on-LAN (WOL)		Yes		Yes
Internet Protocol (IP) **IPv4, IPv6**	Yes	Yes	Yes	Yes
Auto Negotiation[2]	Yes	Yes	Yes	Yes
iSCSI Remote Boot	iSCSI boot supported (UEFI)	iSCSI boot supported (UEFI)	iSCSI boot supported (UEFI)	iSCSI boot supported (UEFI)
Tunnel Offload	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE	VXLAN, GENEVE, and NVGRE
RDMA[1]	YES (iWARP & RoCEv2)	YES (iWARP & RoCEv2)	YES (iWARP & RoCEv2)	YES (iWARP & RoCEv2)
Receive Side Scaling (RSS)	Yes	Yes	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	Yes	Yes	Yes
NPAR				
Single Root I/O Virtualization (SR-IOV)	Yes	Yes	Yes	Yes
Data Plane Development Kit (DPDK)	Yes	Yes	Yes	Yes
Root of Trust	Yes	Yes	Yes	Yes

Standard Features

Authenticated Updates	Yes	Yes	Yes	Yes
Secure Boot	Yes	Yes	Yes	Yes
Audit Log				
Sanitization	Yes	Yes	Yes	Yes

Notes:

- [1] HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- [2] Intel Ethernet Adapters support mixing different port speeds on different ports of the same card.

Table 6		
SKU	P42044-B21 [3]	P42041-B21 [3]
Description	Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE [3]	Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE [3]
Card Type/Profile	Stand up	OCP 3.0
ASIC/Chip	Mellanox MCX631102AS-ADAT	Mellanox MCX631432AS-ADAI
PCIe Version	PCIe 4x8	PCIe 4x8
Power Requirement	Typical: 13W Max: 18.4W	Typical: 13W Max: 18.4W
UEFI PXE Boot	Yes	Yes
Legacy BIOS PXE Boot	Yes	Yes
Wake-on-LAN (WOL)		Yes
Internet Protocol (IP) - IPv4, IPv6	Yes	Yes
Auto Negotiation[2]	1/10/25Gb	1/10/25Gb
iSCSI Remote Boot	UEFI	UEFI
Tunnel Offload	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE
RDMA[1]	RoCEv1, RoCEv2	RoCEv1, RoCEv2
Receive Side Scaling (RSS)	Yes	Yes
VMware NetQueue and Microsoft VMQ	Yes	Yes
NPAR		
Single Root I/O Virtualization (SR-IOV)	256VFs/port, 2k Total	256VFs/port, 2k Total
Data Plane Development Kit (DPDK)	Yes	Yes
Root of Trust	Hardware	Hardware
Authenticated Updates	Yes	Yes
Secure Boot	Yes	Yes
Audit Log	Yes	Yes
Sanitization	Yes	Yes
SPDM Support		

Notes:

- [1]HPE recommends using identical network adapters on both ends of the RoCE connection to avoid interoperability issues.
- [2] Mellanox Ethernet Adapters support mixing port speeds on different ports of the same card
- [3] For all Mellanox/NVIDIA based adapters, please check NVIDIA's "Validated and Supported Cables and Switches" lists for DAC, AOC, SFP, QSFP devices and network switches officially supported by NVIDIA for use with Mellanox/NVIDIA based Ethernet Adapters for HPE.

Note: Although HPE has tested & qualified all interconnects indicated in the HPE Compute Transceiver and Cable Compatibility Matrix document, NVIDIA support is only guaranteed when using interconnects and switches in the NVIDIA "Validated and Supported Cables and Switches" list.

Customers deploying infrastructure at scale should be aware that Nvidia CX6 adapters may require manual configuration when used with cables, transceivers, AOC and/or switches not included on NVIDIA's "Validated and Supported Cables and Switches". (See HPE Compute Transceiver and Cable Compatibility Matrix for links to

these lists.) This additional implementation step should be considered during solution evaluation and deployment planning, as operational requirements may vary depending on the selected connectivity solution.

Table 7		
SKU	P21109-B21	P87940-B21
Description	Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	AMD Solarflare X4522-PLUS 10/25GbE 2-port SFP56 Adapter for HPE
Card Type/Profile	Stand up	Stand up
ASIC/Chip	Solarflare X2522-25G-PLUS	Solarflare X4522-PLUS
PCIe Version	PCIe 3.0 x8	PCIe 5.0 x8 / CXL
Power Requirement	Typical: 14W Max: 17.5W	Max: 18.7W
UEFI PXE Boot	Yes	Yes
Legacy BIOS PXE Boot	Yes	No
Wake-on-LAN (WOL)		
Internet Protocol (IP) IPv4, IPv6	Yes	Yes
Auto Negotiation[2]	10Gb, 25Gb	1 GbE, 10 GbE, 25 GbE
iSCSI Remote Boot	UEFI	UEFI
Tunnel Offload	VXLAN, NVGRE, GENEVE	VXLAN, NVGRE, GENEVE
RDMA[1]	No	No
Receive Side Scaling (RSS)	Yes	Yes
VMware NetQueue and Microsoft Virtual Machine Queue (VMQ)	Yes	No
NPAR		
Single Root I/O Virtualization (SR-IOV)	240 VF's total	Yes
Data Plane Development Kit (DPDK)	Yes	Yes
Root of Trust	Firmware	Hardware
Authenticated Updates	Yes	Yes
Secure Boot	Yes	Yes
Audit Log	Yes	Yes
Sanitization	Yes	Yes
SPDM Support		
OS Support	Xilinx has reduced OS support compared to HPE ProLiant servers. Please check Xilinx website for latest OS support: https://www.xilinx.com/support/download/nic-software-and-drivers.html	
Platform Support	Supported on DL360, DL380 only in Gen11 and Gen12	Supported on DL360, DL365, DL380, DL385 Gen11 and DL320, DL325, DL340, DL345, DL360, DL380 Gen12

Audit Logs

Audit Logs are a forensics capability that provides traceability into authenticated firmware updates by capturing changes in standard system logs.

Authenticated Updates

Authenticated Updates brings cryptographic keys onto the NIC (for HW Authentication) to protect user and configuration data from unauthorized access and verify digitally signed firmware.

Auto-negotiation

Automatically senses the speed of the device to which it is attached. It also automatically configures for half or full duplex, depending on the duplex mode of the switch, hub, or router connected to the adapter.

Checksum and Segmentation Offload

Normally the TCP Checksum is computed by the protocol stack. Segmentation Offload is a 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).

Configuration Utilities

The adapter 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.

Device-level Firewall

Device-level Firewall blocks any unmanaged access to memory or storage. This ensures that on-device firmware and configuration data can only be accessed by authorized agents.

DMA Coalescing

Supports DMA Coalescing, the incoming data packets and interrupts associated with these DMA calls are intelligently batched to keep the system devices in lower power states.

DPDK

DPDK with benefit for packet processing acceleration and use in NFV deployments.

HPE Sea of Sensors3D

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 initiate fans and make other adjustments to reduce energy usage. A significant improvement lies in the ability to apply fan speed increases only to the portion of the system that is rising in temperature, rather than all six fans in unison, which reduces the amount of energy used for cooling.

HW Root of Trust

Root of Trust enables a chain of trust for Authenticating updates to firmware via signature validation. This blocks installation of rogue or corrupted firmware and ensures that the executing firmware is trusted.

Interrupt Coalescing

Interrupt coalescing (interrupt moderation) groups multiple packets, thereby reducing the number of interrupts sent to the host. This process optimizes host efficiency, leaving the CPU available for other duties.

IPv6

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

iWARP RDMA

Delivers RDMA on top of the pervasive TCP/IP protocol. iWARP RDMA runs over standard network and transport layers and works with all Ethernet network infrastructure. TCP provides flow control and congestion management and does not require a lossless Ethernet network. iWARP is a highly routable and scalable RDMA implementation.

Jumbo Frames

Jumbo Frames (also known as extended frames), permitting up to a 9,600 byte (KB) transmission unit (MTU) when running Ethernet I/O traffic. This is over five times 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.

LED Indicators

LED indicators show link integrity and network activity for easy troubleshooting.

Load Balancing

Transmit Load Balancing (TLB) and Switch-assisted Load Balancing (SLB) are two advanced features that customers can use to build a bigger pipe for improved networking bandwidth. These port-bonding techniques enable users to install up to four dual-port HPE 361T adapters (total of 8 ports) in a HPE ProLiant server and aggregate their throughput up to a theoretical maximum of 16 Gigabits per second full-duplex transmissions.

Message Signaled Interrupt (MSI-X)

Message Signaled Interrupt provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores.

Network Adapter Teaming

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, providing support for several different types of teaming enabling IT administrators to optimize availability, improve performance and help reduce costs.

Network Fault Tolerance (NFT)

Network Fault Tolerance, sometimes called "failover" or "NIC Redundancy," allows for the installation of multiple server adapters so that the active device can be backed up by a redundant adapter to improve availability. The Hewlett Packard Enterprise teaming utility also allows users to specify that when a failed adapter is fixed and replaced, the original adapter resumes its function as the primary network connection.

Network Partitioning (NPAR)

Network Partitioning (NPAR) allows administrators to configure a 10 Gb 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.

Optimized for Virtualization

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

Preboot eXecution Environment (PXE)

Support for PXE enables automatic deployment of computing resources remotely from anywhere. It allows a new or existing server to boot over the network and download software, including the operating system, from a management/ deployment server at another location on the network.
Additionally, PXE enables decentralized software distribution and remote troubleshooting and repairs.

Precision Time Protocol (IEEE 1588 PTP)

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

RDMA

Remote Direct memory Access (RDMA) 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 protocols include RoCEv1, RoCEv2, and iWARP. All of these protocols reduce overall latency to deliver accelerated performance for applications such as Microsoft Hyper-V Live Migration, Microsoft SQL and Microsoft SharePoint with SMB Direct.

Receive Flow Steering (RFS)

Receive Flow Steering (RFS) acceleration improves processing efficiency by steering received packets to the CPU core that is running the application that consumes those packets. Aligning I/O processing to the CPU core running the application improves cache efficiency, CPU utilization, throughput and latency.

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.

Sanitization

Sanitization (Secure User Data Erase) renders User and configuration data on the NIC irretrievable so that NICs can be safely repurposed or disposed.

Secure Boot

Secure Boot safeguards the system and ensures no rogue drivers are being executed on start-up.

Server Integration

The 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 vendors and provides users with a single point of contact for both their servers and their network adapters.

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.

TCP/UDP/IP

TCP/IP offloading techniques including: TCP/IP, UDP checksum offload (TCO) moves the TCP and IP checksum offloading from the CPU to the network adapter. Large send offload (LSO) or TCP segmentation offload (TSO) allows the TCP segmentation to be handled by the adapter rather than the CPU.

Tunnel Offload

Minimize the impact of overlay networking on host performance with tunnel offload support for VXLAN, NVGRE and GENEVE. By offloading packet processing to adapters, customers can use overlay networking to increase VM migration flexibility and virtualized overlay networks with minimal impact to performance. HPE Tunnel Offloading increases I/O throughput, reduces CPU utilization, and lowers power consumption. Tunnel Offload supports VMware's VXLAN, Microsoft's NVGRE solutions and Generic Network Virtualization Encapsulation (GENEVE) solutions.

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.

Wake-on-LAN

Wake-on-LAN (WoL) support through the PCI Express bus. A system that supports Wake-on-LAN can remain available to the systems administrator during its normal downtime. Once the machine is awakened, the systems administrator can remotely control, audit, debug, or manage the machine.

Service and Support

For the most up-to-date information on HPE Services, please refer to the HPE Services – Supplemental QuickSpecs, which provides a comprehensive and regularly updated overview of available services.

Operating System and Virtualization Support

The Operating Systems supported by this adapter are based on the server OS support. Please refer to the OS Support Matrix at https://www.hpe.com/us/en/servers/server-operating-systems.html

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Drivers and Software Download (Please use hyperlinks below)

- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Dual Rate Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Dual Rate Adapter for HPE
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4T Ethernet 10/25Gb 4-port SFP28 MCLK Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 MCLK Non-GNSS Adapter for HPE
- Intel E830 Ethernet 10/25Gb 8-port SFP28 OCP3 Adapter for HPE
- Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E835-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E835-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
- Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

To access Vendor Technical Specifications, please visit the following hyperlinks:

- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Dual Rate Adapter for HPE
- Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Dual Rate Adapter for HPE
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
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- Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- AMD Solarflare X4522-PLUS 10/25GbE 2-port SFP56 Adapter for HPE

Transceiver and Cable Options

Please refer to Compute Transceiver and Cable Compatibility Matrix: https://psnow.ext.hpe.com/doc/a00002507enw

For all Mellanox/NVIDIA based adapters, please check NVIDIA's "Validated and Supported Cables and Switches" lists for DAC, AOC, SFP, QSFP devices and network switches officially supported by NVIDIA for use with Mellanox/NVIDIA based Ethernet Adapters for HPE.

> **Note:** Although HPE has tested & qualified all interconnects indicated in the HPE Compute Transceiver and Cable Compatibility Matrix document, NVIDIA support is only guaranteed when using interconnects and switches in the NVIDIA "Validated and Supported Cables and Switches" list. Please refer to the Compatibility Matrix document for more details and links to NVIDIA interconnect support pages.

Environment-friendly Products and Approach - End-of-life Management and Recycling

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

The European Union Waste Electrical and Electronic Equipment Directive [EU WEEE] (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 website.

These instructions may be used by recyclers and other Waste Electrical and Electronic Equipment (WEEE) treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
16-Nov-2026	Version 22	Changed	Overview and Technical Specifications sections were updated.
10-Oct-2026	Version 22	Changed	Standard Features and Technical Specifications sections were updated.
01-Jun-2026	Version 21	Added	Added EL140 platform support for P84529-B21 and P86491-B21
04-May-2026	Version 20	Changed	Overview, Standard Features, and Technical Specifications sections were updated.
		Added	Added 2 new Intel E830 SKUs.
			Added new AMD Solarflare X4522 PLUS 10/25G 2p SKU.
			Updated GreenLake statement.
08-Dec-2025	Version 19	Changed	Standard Features section was updated.
13-Oct-2025	Version 18	Changed	Standard Features section was updated.
		Added	Network Adapters SKUs Tables and descriptions.
02-Jun-2025	Version 17	Changed	Update the platform-support scope for P13188-B21 and P10112-B21.
03-Mar-2025	Version 16	Changed	QuickSpecs name was updated & SKUs were added by Speed.
04-Dec-2023	Version 15	Changed	Service and Support Section was updated.
18-Apr-2022	Version 14	Changed	Removed SKUs P13188-B21 no longer on Gen10.
01-Nov-2021	Version 13	Changed	SKUs were added and Overview section was updated.
02-Aug-2021	Version 12	Changed	SKUs were added and Overview section was updated.
07-Jun-2021	Version 11	Changed	Add SKUs P13188-B21.
15-Mar-2021	Version 10	Changed	Updated RSS on CX4, removed EOL Gen9 Platforms.
17-Aug-2020	Version 9	Changed	SKUs Descriptions were updated.
01-Jun-2020	Version 8	Changed	Updated power on 621SFP28, 622FLR.
10-Jun-2019	Version 7	Changed	Add Network Adapter Teaming for 640 NICs.
06-May-2019	Version 6	Changed	Updated table format, glossary and technical specifications.
04-Feb-2019	Version 5	Changed	Removed 6500 Gen10 support on 640SFP28.
05-Nov-2018	Version 4	Changed	Technical Specifications Section was updated.
15-Oct-2018	Version 3	Changed	Recommended Extended labels were removed.
01-Oct-2018	Version 2	Changed	Platform Information & Standard Features sections were updated.
13-Aug-2018	Version 1	New	New QuickSpecs.

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a00047733enw - 16270 - Worldwide - V23 - 16-November-2026
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