Shape the Future of QuickSpecs - Your Input Matters

HPE InfiniBand XDR Adapters QuickSpecs

HPE InfiniBand XDR Adapters are based on the NVIDIA ConnectX®-8 SuperNIC™.

The adapters support the InfiniBand and Ethernet functions for HPE servers. HPE InfiniBand XDR Adapters are designed for customers that require low latency and high bandwidth InfiniBand interconnector in their high-performance computing (HPC) and Artificial Intelligence systems.

The NVIDIA® ConnectX®-8 SuperNIC™ is optimized to supercharge hyperscale AI computing workloads. With support for both InfiniBand and Ethernet networking at up to 800 gigabits per second (Gb/s), ConnectX-8 SuperNIC delivers extremely fast, efficient network connectivity, significantly enhancing system performance for AI factories and cloud data center environments. The HPE XDR InfiniBand adapters include single-port and dual-port options. The single-port adapters are offered in InfiniBand XDR speeds (800Gb/s) and Ethernet (2x400GbE) with OSFP connectors. The dual-port adapters are offered in InfiniBand XDR400 (400Gb/s) and Ethernet (400GbE) enabled with QSFP112 connectors.

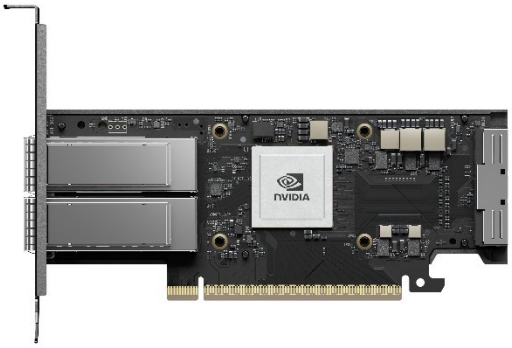
Overview

Central to NVIDIA's AI networking portfolio, ConnectX-8 SuperNICs fuel the next wave of innovation in forming accelerated, massive-scale AI fabrics. They seamlessly integrate with next-gen NVIDIA networking platforms, providing up to 800 Gb/s of end-to-end connectivity. These platforms offer the robustness, feature sets, and scalability required for trillion-parameter GPU computing, AI data platforms, and agentic AI applications. With enhanced power efficiency, ConnectX-8 SuperNICs support the creation of increasingly sustainable AI data centers operating hundreds of thousands of GPUs, ensuring a future-ready infrastructure for AI advancements.

ConnectX-8 SuperNICs enable advanced routing and telemetry-based congestion control capabilities, achieving the highest network performance and peak AI workload efficiency. Additionally, ConnectX-8 InfiniBand SuperNICs extend the capabilities of NVIDIA® Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™ to boost in-network computing in high-performance computing environments, further enhancing overall efficiency and performance for both training and inferencing at scale.



P/N P79114-H21



P/N P79115-H21

Models

HPE InfiniBand XDR/Ethernet 2x400GbE 1-port OSFP PCIe6 x16 HHHL CX8 Crypto Adapter	P79114-H21
HPE InfiniBand XDR400/Ethernet 400GbE 2-port QSFP112 PCIe6 x16 HHHL CX8 Crypto Adapter	P79115-H21
HPE InfiniBand XDR PCIe Gen6 x16 Multi Host/Socket Direct Auxiliary Card with 250mm MCIO Cable Kit	P81264-H21

Notes: To support 800Gb/s throughput in servers with PCIe Gen 5, P79114-H21 (1-port of 800G) and P79115-H21 (2-port of 400G) must be used with P81264-H21.

Kit Contents

- Low (HHHL) Profile PCIe adapter with tall bracket assembled and short bracket included in the box
- Quick install card
- Product warranty statement

Standard Features

Servers Supported

HPE IB XDR/EN 2x400GbE 1p PCIe6x16 Adapter

HPE ProLiant XD Servers

- HPE ProLiant Compute XD685
- HPE ProLiant Compute XD230
- HPE ProLiant DL Servers HPE ProLiant DL360 Gen12
- HPE ProLiant DL380 Gen12
- HPE ProLiant DL580 Gen12
- HPE ProLiant DL325 Gen12
- HPE ProLiant DL345 Gen12
- HPE ProLiant DL384 Gen12

HPE IB XDR400/EN 400G 2p PCIe6x16 Adapter

HPE CrayXD Servers (use –H2X part numbers):

- HPE ProLiant Compute XD685
- HPE ProLiant Compute XD230

HPE ProLiant DL Servers

- HPE ProLiant DL360 Gen12
- HPE ProLiant DL380 Gen12
- HPE ProLiant DL580 Gen12
- HPE ProLiant DL325 Gen12
- HPE ProLiant DL345 Gen12
- HPE ProLiant DL384 Gen12

Product Features

- Security features – secure boot with hardware root of trust, secure firmware update, flash encryption
- PCIe Gen 6.0 compatible
- HPE Standard warranty, support, service
- Remote boot features - Preboot Execution Environment (PXE), UEFI; Remote boot over InfiniBand and iSCSI
- Hardware-based reliable transport
- Extended Reliable Connected transport (XRC)
- Dynamically Connected transport (DCT)
- Enhanced Atomic operations
- On demand paging (ODP) – registration free RDMA memory access
- Enhanced congestion control
- 256 to 4Kbyte maximum transmission unit (MTU), 2Gbyte messages
- Out-of-order RDMA supporting adaptive routing

Standard Features

InfiniBand Standards

The HPE XDR InfiniBand adapters are compliant to IBTA 1.7 InfiniBand standard.

Congestion Control

Hardware-based congestion control.

Offloads

Collective Operation Offloads

The HPE XDR InfiniBand adapters support the following offloads:

- Tag Matching and Rendezvous protocol offloads
- Burst Buffer Offloads for Background Checkpointing
- NVMe over Fabric (NVMe-of) Offloads

Transport

- Hardware-based reliable transport
- Extended Reliable Connected transport (XRC)
- Dynamically Connected transport (DCT)

Atomic Operation

Enhanced Atomic operations.

IEEE Standards

The HPE InfiniBand XDR Adapters provide support for the following IEEE Standards:

- IEEE 1149.1
- IEEE 1149.6
- IEEE 1588v2

Standard Features

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 InfiniBand XDR Adapters support Precision Time Protocol IEEE 1588v2.

Network Adapter Teaming

The HPE InfiniBand XDR Adapters support NIC teaming on Linux and with tools from the Operating Systems.

Server Integration

The HPE InfiniBand XDR Adapters are validated, tested, and qualified server options for the supported HPE ProLiant, HPE ProLiant Compute XD.

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.

Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

https://www.hpe.com/services

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

https://www.hpe.com/services/consulting

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

HPE Managed Services | HPE

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

https://www.hpe.com/services/operational

Service and Support

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach - edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Service and Support

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

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

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

https://www.hpe.com/services/training

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at https://ssc.hpe.com/portal/site/ssc/

Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE" https://www.hpe.com/us/en/contact-hpe.html

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

Technical Specifications

General Specifications (HPE XDR 800G 1p OSFP)	
Network Processor	NVIDIA ConnectX-8
Data Rate	800Gbps
Bus Type	PCIe Gen 5.0 x16
Form Factor	HHHL

Environmental Specifications	
Operating Temperature	0° to 55° C (32° to 131° F)
Humidity	5% to 95% non-condensing

General Specifications (HPE XDR 400GbE 2p QSFP112)	
Network Processor	NVIDIA ConnectX-8
Data Rate	400Gbps
Bus Type	PCIe Gen 5.0 x16
Form Factor	HHHL

Power and Environmental Specifications	
Operating Temperature	0° to 55° C (32° to 131° F)
Humidity	5% to 95% non-condensing

Operating System Support

Operating System and Virtualization Support

The operating Systems supported by CX8 adapters 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

HPE XDR InfiniBand adapters are supported from DOCA-hostv3.0.0 on the following Linux operating systems:

- RHEL – 9.4, 9.5 (Checking on 9.6 with NVIDIA)
- SLES – SLES15 Sp6, SLES15 SP5
- Ubuntu – 24.04, 22.04

Please refer to the firmware/software download page of the device for the latest update.
https://docs.nvidia.com/networking/display/MLNXOFEDv581121LTS/General+Support

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 EU WEEE Directive (2012/19/EU) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site.

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

Summary of Changes

Date	Version History	Action	Description of Change
03-Nov-2025	Version 1	New	New QuickSpecs

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