Overview

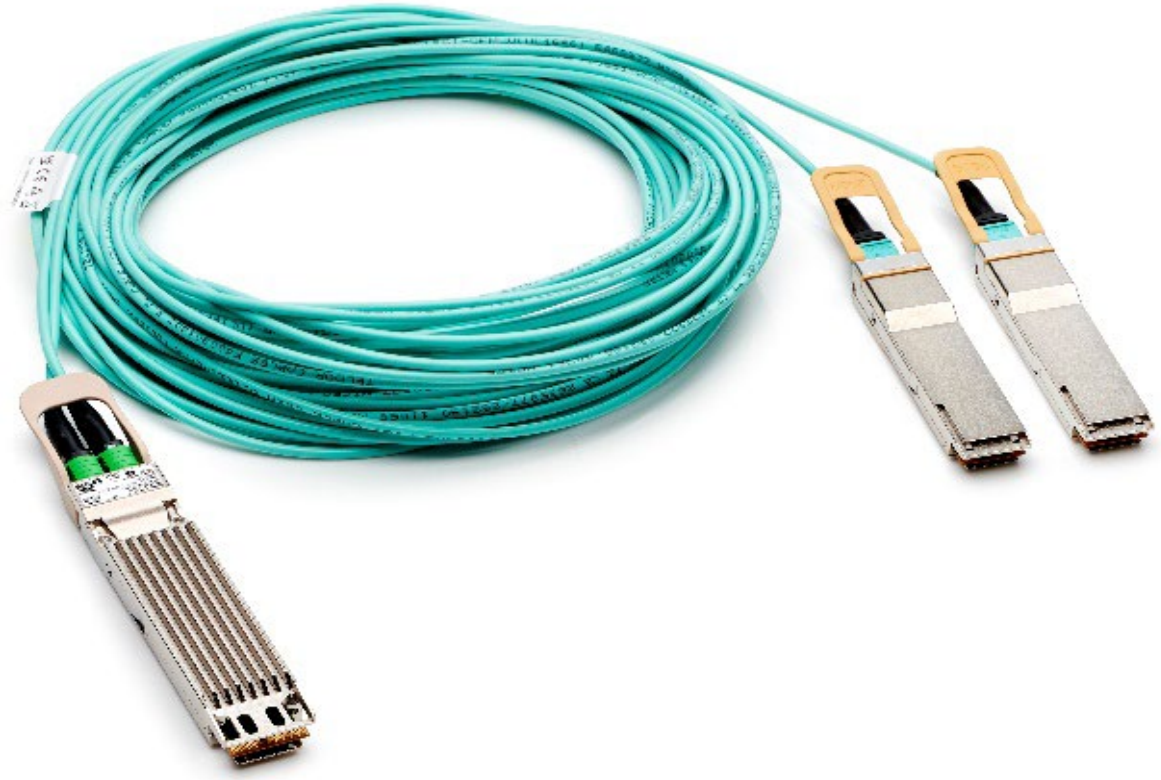
HPE InfiniBand NDR Cables

HPE InfiniBand NDR cables offer a variety of cable types and lengths in order to accommodate customer requirements while taking into consideration the scale of cost and performance. These cables are qualified as InfiniBand and Ethernet enabled.

InfiniBand NDR Direct Attach Copper Cables (DAC) and InfiniBand NDR Active Copper Cables (ACC) are the lowest cost cabling choice to create high-speed, low-latency connections in an InfiniBand NDR solution. These cables are offered in a various lengths and as OSFP and QSFP112 types. Passive DACs use copper wires without any electronics as the connection. These cables consume zero power and have the lowest latency and insertion loss. InfiniBand Active Copper Cables include signal-boosting integrated circuits (ICs) in the cable end to extend their reach.

NDR optical interconnect is enabled through NDR transceivers usage with fiber cables. NDR transceivers for switches are dual ported and support two NDR links. NDR transceivers for Host Channel Adapters (HCAs) are single ported. Connection between NDR switches and HDR/HDR100 adapters is enabled with Active Optical Cable (AOC) providing OSFP to dual QSFP.

These cables meet the InfiniBand Trade Association (IBTA) standards and are designed for use in supercomputers that have the most stringent requirements.



Overview

Models

InfiniBand Direct Attach Copper Cables

HPE InfiniBand NDR/Ethernet OSFP to OSFP 0.5m Switch-Switch Direct Attach Copper Cable	P45696-B21
HPE InfiniBand NDR/Ethernet OSFP to OSFP 1m Switch-Switch Direct Attach Copper Cable	P45696-B22
HPE InfiniBand NDR/Ethernet OSFP to OSFP 1.5m Switch-Switch Direct Attach Copper Cable	P45696-B23
HPE InfiniBand NDR/Ethernet OSFP to OSFP 2m Switch-Switch Direct Attach Copper Cable	P45696-B24
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 1m Splitter Direct Attach Copper Cable	P45698-B22
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 1.5m Splitter Direct Attach Copper Cable	P45698-B23
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 2m Splitter Direct Attach Copper Cable	P45698-B24
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 2.5m Splitter Direct Attach Copper Cable	P45698-B25
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 3m Splitter Direct Attach Copper Cable	P45698-B26
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 1m Splitter Direct Attach Copper Cable	P45697-B22
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 1.5m Splitter Direct Attach Copper Cable	P45697-B23
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 2m Splitter Direct Attach Copper Cable	P45697-B24
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 2.5m Splitter Direct Attach Copper Cable	P45697-B25
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 2m Splitter Direct Attach Copper Cable	P45697-B26
HPE InfiniBand NDR200/Ethernet OSFP to 4xQSFP112 1m Direct Attach Copper Cable	P65335-B21
HPE InfiniBand NDR200/Ethernet OSFP to 4xQSFP112 2m Direct Attach Copper Cable	P65335-B23
HPE InfiniBand NDR200/Ethernet OSFP to 4xQSFP112 3m Direct Attach Copper Cable	P65335-B25

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers

InfiniBand Active Copper Cables

HPE InfiniBand NDR/Ethernet OSFP to OSFP 3m Switch-Switch Active Copper Cable	P55189-B21
HPE InfiniBand NDR/Ethernet OSFP to OSFP 4m Switch-Switch Active Copper Cable	P55189-B22
HPE InfiniBand NDR/Ethernet OSFP to OSFP 5m Switch-Switch Active Copper Cable	P55189-B23
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 4m Splitter Active Copper Cable	P50397-B21
HPE InfiniBand NDR200/Ethernet OSFP to 4xOSFP 5m Splitter Active Copper Cable	P50397-B22
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 4m Splitter Active Copper Cable	P50396-B21
HPE InfiniBand NDR/Ethernet OSFP to 2xOSFP 5m Splitter Active Copper Cable	P50396-B22

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers

InfiniBand Single Mode Optical Transceiver

HPE InfiniBand NDR/Ethernet 2x400Gb OSFP Single-mode 100m Switch-side Transceiver	P45693-B21

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers
- Only supported from switch to switch. There is no switch to HCA support using single mode fiber.

Overview

InfiniBand Single Mode Multi Fiber Push On

HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 3m Cable	P45731-B21
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 5m Cable	P45731-B22
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 10m Cable	P45731-B23
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 15m Cable	P45731-B24
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 20m Cable	P45731-B25
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Single-mode 30m Cable	P45731-B26

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers

InfiniBand Multi Mode Optical Transceiver

HPE InfiniBand NDR/Ethernet 2x400Gb OSFP Multi-mode 50m Switch-side Transceiver	P49762-B21
HPE InfiniBand NDR/Ethernet 1x400Gb OSFP Multi-mode 50m HCA-side Transceiver	P49764-B21
HPE InfiniBand NDR/Ethernet 400G QSFP112 850nm Multi-mode MPO12 APC 50m Transceiver	P65334-B21

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers

InfiniBand Multi Mode Fiber Push On

HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 3m Cable	P49765-B21
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 5m Cable	P49765-B22
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 10m Cable	P49765-B23
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 15m Cable	P49765-B24
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 20m Cable	P49765-B25
HPE InfiniBand NDR/Ethernet 8 Fiber MPO to 8 Fiber MPO Multi-mode 30m Cable	P49765-B26
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 3m Splitter Cable	P49766-B21
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 5m Splitter Cable	P49766-B22
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 10m Splitter Cable	P49766-B23
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 15m Splitter Cable	P49766-B24
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 20m Splitter Cable	P49766-B25
HPE InfiniBand NDR200/Ethernet 8 Fiber MPO to 2x4 Fiber MPO Multi-mode 30m Splitter Cable	P49766-B26

Notes:

- Switch-Switch cables may only be used to connect between NDR switches. Splitter cables may only be used to connect switches to Host Channel Adapters (HCAs)
- Switch-side transceivers may only be used in NDR switch ports. HCA-side transceivers may only be used in HCA ports
- Multi-mode and single modes MUST not be mixed. Multi-mode transceivers MUST be used with Multi-mode fiber cables. Single-mode transceiver MUST be used with Single-mode fibers

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

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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

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

Service and Support

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.

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
www.hpe.com/services

Technical Specifications

Environment-Friendly Products and Approach End-of-Life Management and Recycling

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

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
08-Jan-2024	Version 5	Changed	Overview section was updated. HPE Services Rebranding
10-Jul-2023	Version 4	Changed	Overview section was updated.
03-Apr-2023	Version 3	Changed	Overview section was updated.
06-Mar-2023	Version 2	Changed	Overview section was updated.
19-Dec-2022	Version 1	New	QS Created

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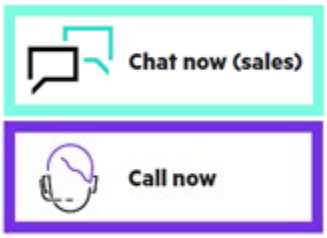

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