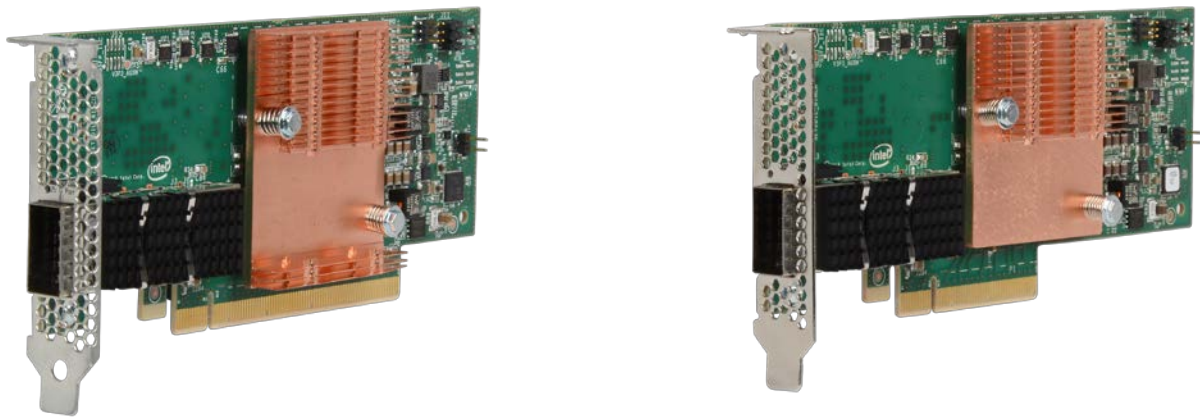


Overview

HPE 100Gb Intel Omni-Path Adapter

HPE 100Gb Intel Omni-Path Adapter is designed to provide a high-performance and scalable fabric for High Performance Computing (HPC) systems built with HPE ProLiant XL and DL servers. Intel Omni-Path Adapters, an element of the Intel Omni-Path Architecture, use an advanced "on-load" design that scales fabric performance with rising server core counts, making these adapters ideal for today's increasingly demanding workloads.

Combined with Intel Omni-Path Switches, Intel Omni-Path Adapters deliver low latency and up to 100Gbps bandwidth, ideal for performance driven server and storage clustering applications in HPC data centers.



Models

HPE 100Gb 1p OP101 QSFP28 x16 OPA Adapter

829335-B21

HPE 100Gb 1p OP101 QSFP28 x8 OPA Adapter

829334-B21

Kit Contents

- HPE 100Gb 1p OP101 QSFP28 x16 or x8 OPA Adapter
- Low profile bracket on the adapter; full height bracket in the box
- Read Me First

Overview

Servers supported for

HPE 100Gb 1p OP101
QSFP28 x16 OPA Adapter

HPE ProLiant XL Servers:

- HPE ProLiant XL170r Gen9 for Apollo 2000
- HPE ProLiant XL190r Gen9 for Apollo 2000
- HPE ProLiant XL420 Gen9 for Apollo 4200
- HPE ProLiant XL450 Gen9 for Apollo 4500
- HPE ProLiant XL230a Gen9 for Apollo 6000
- HPE ProLiant XL250a Gen9 for Apollo 6000

HPE ProLiant DL Servers:

- HPE ProLiant DL360 Gen9
- HPE ProLiant DL380 Gen9
- HPE ProLiant DL560 Gen9
- HPE ProLiant DL580 Gen9

Servers supported for

HPE 100Gb 1p OP101
QSFP28 x8 OPA Adapter

HPE ProLiant XL Servers:

- HPE ProLiant XL450 Gen9 for Apollo 4500

HPE ProLiant DL Servers:

- HPE ProLiant DL360 Gen9
- HPE ProLiant DL380 Gen9

Standard Features

Product Features	<ul style="list-style-type: none"> • 100 Gbps – PCIe x16 Adapter • 56 Gbps – PCIe x8 Adapter (Effective rate of 56 Gbps determined by PCIe x8 interface; Intel® OPA Link will operate at up to 100 Gbps) • Optimized for scalable MPI message rate and latency • Supports MSI-X interrupt handling optimized for multi-core compute nodes • Operates without external memory • Improved thermal control with HPE iLO technology • Boot over Omni-Path • Linux server operating system support • Low profile PCIe Gen3 x16 or x8 • HPE Standard warranty, support, services
Congestion Management	Medium grained adaptive routing and dispersive routing, Explicit congestion backward notification.
Protocol Control Libraries	HPC application focused protocol control libraries that include Performance Scale Messaging (PSM) and OFED Verbs.
MTU sizes	Maximum Transfer Unit (MTU) sizes can be set to 2048 bytes, 4096 bytes, 8192 bytes, or 10240 bytes.
MSI-X	Message Signaled Interrupt provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores.
Management Support	The HPE 100Gb 1p OP101 QSFP28 x16 or x8 OPA Adapter is supported by Hewlett Packard Enterprise Integrated Lights-Out (iLO).
Server Integration	The HPE 100Gb 1p OP101 QSFP28 x16 or x8 OPA Adapter is validated, tested, and qualified server options for the supported HPE ProLiant XL and DL servers. 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.
Configuration Utilities	The HPE 100Gb 1p OP101 QSFP28 x16 or x8 OPA Adapter is configurable through UEFI.
LED Indicators	The colored LED on HPE 100Gb 1p OP101 QSFP28 x16 or x8 OPA Adapter indicates link status and link activity.
HPE Sea of Sensors 3D	Support for the HPE Sea of Sensors technology for improved thermal control and energy efficiency.
Warranty	1 year warranty, parts exchange.
For more information	To learn more on services for HPE Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: http://www.hpe.com/services/proliant

 Related Options

Direct Attach Cable (Passive Copper cables)	HPE 0.5m 100Gb QSFP28 OPA Copper Cable	830024-B21
	HPE 1m 100Gb QSFP28 OPA Copper Cable	830024-B22
	HPE 1.5m 100Gb QSFP28 OPA Copper Cable	830024-B23
	HPE 2m 100Gb QSFP28 OPA Copper Cable	830024-B24
	HPE 3m 100Gb QSFP28 OPA Copper Cable	830024-B25
NOTE: Direct Attach Cable must be purchased separately for copper environments.		
Active Optic Cables (AOCs)	HPE 3m 100Gb QSFP28 OPA Optical Cable	830025-B21
	HPE 5m 100Gb QSFP28 OPA Optical Cable	830025-B22
	HPE 7m 100Gb QSFP28 OPA Optical Cable	830025-B23
	HPE 10m 100Gb QSFP28 OPA Optical Cable	830025-B24
	HPE 12m 100Gb QSFP28 OPA Optical Cable	830025-B25
	HPE 15m 100Gb QSFP28 OPA Optical Cable	830025-B26
	HPE 20m 100Gb QSFP28 OPA Optical Cable	830025-B27
	HPE 30m 100Gb QSFP28 OPA Optical Cable	830025-B28
NOTE: Active Optical Cable must be purchased separately for fiber-optic environments.		

Summary of Changes

General Specifications	Network Processor	Intel OP HFI ASIC
	Data Rate	100Gbps – PCIe x16 56 Gbps – PCIe x8
	Bus Type	PCIe Gen3 x16 or x8
	Form Factor	Low profile adapter compliant with the PCIe Gen3 standard
Power and Environmental Specifications	Operating	Temperature 32° to 131° F (0° to 55° C) Humidity 10% to 85% non-condensing
	Power	PCIe x16 adapter: 7.4W (typical), 11.7W (max) with passive copper cable. 10.6W (typical), 14.9W (max) with Active Optical Cable (3 Watts Max) PCIe x8 adapter: 6.3W (typical), 8.3W (max) with passive copper cable. 9.5W (typical), 11.5W (max) with Active Optical Cable (3 Watts Max)
	EMC (Emissions)	<p>US/Canada</p> <ul style="list-style-type: none"> • FCC Part 15, Subpart B, Class A • CAN ICES-3 (A)/NMB-3(A) <p>Europe/International</p> <ul style="list-style-type: none"> • CISPR22 • CISPR32/EN55032 • EN55024 • EN61000-3-2 • EN61000-3-3 <p>Japan</p> <ul style="list-style-type: none"> • VCCI, Class A <p>Australia/New Zealand</p> <ul style="list-style-type: none"> • AS/NZS CISPR 22, Class A <p>Korea</p> <ul style="list-style-type: none"> • RRA/KC (KN32, KN35), Class A <p>Taiwan</p> <ul style="list-style-type: none"> • BSMI (CNS 13438), Class A <p>Customs Union: Russian Federation, Belarus and Kazakhstan</p> <ul style="list-style-type: none"> • TR CU 020/2011 "Electromagnetic compatibility of technical equipment"
	RoHS/REACH	<ul style="list-style-type: none"> • Complies with RoHS II Directive 2011/65/EU of the European Parliament • Complies with REACH Regulation (EC) No 1907/2006
	Safety	<p>US/Canada</p> <ul style="list-style-type: none"> • TUV NRTL: UL 60950-1, CSA 22.1.No. 60950-1 <p>Europe</p> <ul style="list-style-type: none"> • TUV: EN60950-1 <p>International</p> <ul style="list-style-type: none"> • CB Scheme: IEC 60950-1 <p>Customs Union: Russian Federation, Belarus and Kazakhstan</p>

Related Options

- TR CU 004/2011 “On Safety of Low-Voltage Equipment”

Operating System Support The HPE 100Gb 1p OP101 QSFP28 x16 OPA Adapter is supported on the following 64-bit Linux operating systems:

- RHEL: 7.2
- SLES: 12.1
- CentOS: 7.2
- Scientific Linux: 7.2

Please refer to the firmware/software download page of the device for the latest update.

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.

Related Options

Date	Version History	Action	Description of Change
26-Sept-2016	From version 1 to 2	Changed	Add HPE 100Gb 1p OP101 QSFP28 x8 OPA Adapter
6-June-2016	Version 1	Created	Initial Version of the QuickSpecs of the HPE 100Gb 1p OP101 QSFP28 x16 OPA Adapter



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