

Overview

HPE Integrity PCI-e 2-port 10GbE Adapter

The HPE Integrity PCI-e 2-port 10GbE Adapter is an eight lane (x8) PCI Express (PCIe) 10 Gigabit network solution offering optimal throughput. This PCI Express Gen 2 adapter ships with two SFP+ (Small Form-factor Pluggable) cages suitable for connecting to Direct Attach Cable (DAC) or fiber modules supporting SR or LR fiber optic cabling.

The card ships with advanced server features such as support for TCP checksum and segmentation, VLAN tagging, QoS, and 9K Jumbo frames. Easy to install and configure, the card can be used in either standard or low profile slots.

Models

HPE Integrity PCI-e 2-port 10GbE Adapter - Recommended

HPE Integrity PCIe 2-port 10GbE-SR Fabric Adapter

AM225A

Notes: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

Kit Contents

1. HPE Integrity PCI-e Dual Port 10GbE Adapter
2. Full height bracket (installed on card)
3. Low-profile bracket
4. Read This First document

Standard Features

Server Support

HPE Integrity Servers

- rx2660
- rx2800 i2, i4 and i6
- rx3600
- rx6600
- rx7640*
- rx8640*
- Superdome*
- Superdome 2 i4 and i6

Notes: *Factory Integration NOT supported.

Operating System Support

- HP-UX 11iv3 for Integrity (Web release 1011)
- Windows for Integrity SP2 and R2 (enabled in SSM 7.0)

Standard Features

Performance

Dual-port 10 Gigabit Ethernet Throughput

With a theoretical Ethernet transfer rate of 40Gbps (dual port, bi-directional, full duplex mode) the card delivers outstanding network performance that improves response time and removes bottlenecks for the next generation data center. 10 Gigabit Ethernet bandwidth is ideal for virtualization, high performance computing, database clusters, iSCSI storage through HP-UX iSCSI Software Initiator (iSCSI boot not supported), storage backups, grid systems, server and I/O consolidation, fabric consolidation, and more.

PCI Express Interface

HPE was an early champion of PCI Express bus technology and has played a key role in the development and industry adoption of the PCI Express specification. The card is designed with an eight lane (x8) PCI Express bus based on the PCIe v2.0 standard. The adapter is backward compatible with four lane (x4) PCI Express automatically auto-sensing between x8 and x4 slots, however physical slot/connector should support insertion of x8 card.

Jumbo Frames

Support for jumbo frames (also known as extended frames) permit up to a 9K byte transmission unit (MTU). The use of jumbo frames is a way to achieve higher throughput and better CPU utilization. Jumbo frames are particularly useful for database transfers and tape backups.

TCP Stateless Offloading

For overall improved system response, the adapter supports standard TCP/IP offloading techniques including:

- TCP/IP 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

Notes: These capabilities are dependent on the OS driver for enablement.

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.

802.1p QoS Tagging

IEEE quality of service (QoS) 802.1p tagging allows the adapter to mark or tag frames with a priority level across a QoS-aware network for improved traffic flow

Network Management

Server Integration

The adapter is a validated, tested, and qualified solution that is optimized for HPE Integrity 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

LED Indicators

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



Service and Support

HPE Pointnext - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services** focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

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HPE GreenLake 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 accelerates digital transformation in a distributed, edge-to-cloud world..

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HPE delivers services for IT by using proven best practices as well as automation and methodologies that have been tested and refined by HPE experts and artificial intelligence through thousands of deployments globally. Choose from the recommended services for customers purchasing from Hewlett Packard Enterprise or an authorized reseller. Services are quoted using Hewlett Packard Enterprise order configuration tools.

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HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care 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 Pointnext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care 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>

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- 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/completechcare>



Service and Support, HPE Care Pack, and Warranty Information

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://h20564.www2.hp.com/hpsc/wc/public/home>

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.

Defective Media Retention

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

For more information

- www.hpe.com/services
- <https://www.hpe.com/us/en/services/operational.html>

To learn more on HPE Storage 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>

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- 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 HPE Support Services at <https://ssc.hpe.com/portal/site/ssc/>
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Related Options

Direct Attach Cable

HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable 487655-B21

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

HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable 537963-B21

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

Fiber Optic Modules

Two modules are included with each AM225A and AM232A base adapter

Fiber Optic Cables

HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable AJ833A

HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable AJ834A

HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable AJ836A

HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable AJ837A

HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable AJ838A

HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable AJ839A

Notes:

- Fiber cables must be purchased separately for fiber-optic environments.
- For additional information on 10Gb cable specifications go to:
http://www.Hewlett Packard Enterprise.com/rnd/pdfs/10gig_cabling_technical_brief.pdf



Technical Specifications

Compliance	IEEE	IEEE802.3x, IEEE802.3ad, IEEE802.1p, IEEE802.1q, IEEE802.3az, IEEE802.3ae, IEEE802.3ap, IEEE802.1qau	
	Emissions	Complies with the limits for a Class A digital device	
	Other	PCIe v2.0 RoHS 6 of 6 IPv4, IPv6 Microsoft WHQL (Windows Hardware Quality Labs) SFF-8431- 10 Gigabit Small Form Factor Pluggable Module "SFP+"	
General Specifications	Controller	BCM57711E	
	Data rate	10Gbps, full-duplex	
	Data Path	8 Lane (x8) PCI Express, compatible with x4 and x8 bus widths	
	Dimensions (L x W)	181 x 120 x 20 mm (with long bracket)	
Power and Environmental Specifications	Operating	Temperature	32° to 113° F (0° to 45° C)
		Humidity	10% to 90% non-condensing
	Non-operating	Temperature	-40° to 158° F (-40° to 70° C)
		Humidity	5% to 80%
Power	1.5A@12V typical, 2.0A@12V maximum		
Environment-friendly Products and Approach	End-of-life Management and Recycling	<p>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.hpe.com/info/recycle. To recycle your product, please go to: http://www.hpe.com/info/recycle 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.</p> <p>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.hpe.com/info/recycle. These instructions may be used by recyclers and other WEEE treatment facilities as well as HPE OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.</p>	



Summary of Changes

Date	Version History	Action	Description of Change
15-Nov-2021	Version 6	Changed	Service and Support Pointnext Tech Care and Complete Care information updated
01-Oct-2018	Version 5	Changed	Overview and Related Options were updated.
06-Aug-2018	Version 4	Changed	QuickSpecs was updated and rebranded
		Removed	Obsolete SKUs were deleted in Additional Options sections: 487649-B21, 487658-B21, 221691-B21, 221691-B22, 221691-B23, 221692-B21, 221692-B22, 221692-B23, 221692-B26, 221692-B27.
18-Jan-2011	Version 3	Added	Added the rx2800 i2 to the list of supported servers.
16-Dec-2010	Version 2	Added	Added the Superdome 2 to the list of supported servers.
27-Oct-2010	Version 1	Created	New QuickSpecs



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