

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 (Recommended)	AM225A
HPE Integrity PCIe 2-port 10GbE-LR Fabric Adapter (Recommended)	AM232A
HPE Integrity PCIe 2-port 10GbE-CR Copper Adapter (Recommended)	AM233A

NOTE: 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

NOTE*: 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)

Performance

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

NOTE: 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 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>

Support Services

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HPE Pointnext operational hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call-To-Repair.
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials, and VMware-based IT solutions helping to deliver high level of application availability. Response times ranging from 30 minutes for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

NOTE: For more information on HPE Pointnext operational services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet

at: <http://h20565.www2.hp.com/portal/site/hpsc/>

NOTE: For more complete information on HPE Services offerings, customers and resellers, please visit us at: <https://www.hp.com/us/en/support.html>

NOTE: Additional information regarding worldwide limited warranty and technical support is available at: <http://h20564.www2.hp.com/hpsc/wc/public/home>

Related Options

HPE Recommended Options have the best performance, value and availability.

Recommended Options have been selected by Hewlett Packard Enterprise experts to provide the right technology for a range of workloads and market segments. Fully integrated into the ProLiant management and security experience, Recommended Options provide the best fit with timely availability. View the list for your region.

Extended Options provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the ProLiant management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

Direct Attach Cable **Direct Attach Cable - Recommended**

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

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

Direct Attach Cable **Direct Attach Cable - Recommended**

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

Direct Attach Cable - Extended

HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 1m Direct Attach Copper Cable (Extended) 487652-B21

NOTE: 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 **Fiber Optic Cables - Recommended**

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

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

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

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

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

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

NOTE: Fiber cables must be purchased separately for fiber-optic environments.

NOTE: For additional information on 10Gb cable specifications go

to: <http://www.Hewlett-Packard>

[Enterprise.com/rnd/pdfs/10gig_cabling_technical_brief.pdf](http://www.Hewlett-Packard.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>	

Date	Version History	Action	Description of Change
6-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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Technical Specifications



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