

Overview

HPE Apollo InfiniBand/EDR 100Gb 2p Mezzanine FIO Adapter

HPE Apollo InfiniBand EDR 100Gb Mezzanine Adapter is a InfiniBand adapter for HPE ProLiant XL260a and HPE ProLiant XL230k Server that is designed for customers who need low latency and high bandwidth interconnect in their high performance computing (HPC) systems.

The 840z adapter is Based on Mellanox ConnectX®-4 technology for scalability and fabric flexibility, the dual ported mezzanine card functions as a EDR InfiniBand card while the 841z adapter utilizes the latest Mellanox ConnectX®-5 technology.

Combined with EDR InfiniBand Switches, they deliver low latency and up to 100Gbps bandwidth, ideal for performance driven server and storage clustering applications in HPC and enterprise data centers.



Models

HPE Apollo InfiniBand EDR 100Gb 2-port 840z Mezzanine FIO Adapter

843400-B21

HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine FIO Adapter

872723-B21

Kit Contents

- HPE Apollo InfiniBand EDR 100Gb 2-port 840z Mezzanine FIO Adapter
- HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine FIO Adapter

Compatibility

Servers supported

HPE ProLiant XL Servers:

- HPE ProLiant XL260a Gen9 for Apollo 6000
- HPE ProLiant XL230k Gen10 for Apollo 6000

Service and Support

Product Features

- EDR 100Gb InfiniBand per port
- InfiniBand feature highlights
 - Hardware-based reliable transport
 - Collective operations offload
 - Hardware-based reliable multicast
 - Extended Reliable Connected transport (XRC)
 - Dynamically Connected transport (DCT)
 - Enhanced Atomic operations
 - Advanced memory mapping support, allowing user mode registration and remapping of memory (UMR)
 - On demand paging (ODP) – registration free RDMA memory access
- Improved thermal control with HPE ProLiant XL servers
- Supports UEFI and legacy boot options
- PXE boot over InfiniBand
- Linux operating system support
- PCIe Gen3 x16 Mezzanine form factor
- HPE Standard warranty, support, services

EDR InfiniBand 100Gb Throughput The HPE Apollo InfiniBand EDR 100Gb 2-port 840z Mezzanine FIO Adapter and HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine FIO Adapter deliver up to 100Gbps EDR InfiniBand speed, providing the performance needed to improve response times and alleviate bottlenecks that impact performance of customer's applications. The HPE EDR 840z Mezzanine adapter is ideal for high performance computing clusters and datacenter servers that require low latency and high bandwidth interconnect.

InfiniBand Standards Compliant to IBTA 1.3 standard

Congestion Control Hardware-based congestion control

Offloads Collective operation offloads

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

Atomic Operation Enhanced Atomic operations

MSI and MSI-X Message Signaled Interrupt (Extended) provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores. The HPE Apollo InfiniBand EDR 100Gb Mezzanine Adapter support MSI and MSI-X.

Management

Server Integration The HPE Apollo InfiniBand EDR 100Gb Mezzanine adapter is validated, tested, and qualified server options for the supported HPE ProLiant XL260a and XL230k server.

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 HPE Apollo InfiniBand EDR 100Gb Mezzanine adapters is configurable through UEFI.

HPE Sea of Sensors 3D Support for HPE's Sea of Sensors technology for improved thermal control and energy efficiency.

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer

Service and Support

to the specific hard drive QuickSpecs for details.

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.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

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**](http://www.hpe.com/services/proliant)

Related Options

Direct Attach Cable

Single port connectivity, please order

HPE InfiniBand EDR/Intel® Omni-Path Architecture Single Fabric PCIe I/O Module FIO Kit 863662-B21

For 2 Mezz cards or 2 ports connectivity, please order

HPE InfiniBand EDR/Intel® Omni-Path Architecture Dual Fabric PCIe I/O Module FIO Kit 867280-B21

NOTE: The above XL260a IO module SKUs include 2M copper cable(s) in the kit.

NOTE: Please reference HPE InfiniBand Options for HPE ProLiant and Apollo Servers QuickSpecs for cable connections for HPE ProLiant XL230k server.

Technical Specifications

General Specifications	Network Processor	840z uses Mellanox ConnectX-4; 841z uses Mellanox ConnectX-5
	Data Rate	100Gbps
	Bus Type	PCIe Gen3 x16
	Form Factor	Mezzanine form factor adapter
Power and Environmental Specifications	Power	Adapter with 1P active cable: 13.91W (typical), 15.70W (max).
	EMC (Emissions)	Adapter with 2P active cables: 16.12W (typical), 18.04W (max) FCC Part 15 (CFR 47), Class A ICES-003, Class A EN55022, Class A CISPR22, Class A AS/NZS CISPR 22, Class A (RCM mark) VCCI Class A EN55024 KC (Korea)
	RoHS Compliance	6 of 6
	Safety	UL 60950-1 CAN/CSA-C22.2 No. 60950-1 EN 60950-1 IEC 60950-1
	Environmental	EU: IEC 60068-2-64: Random Vibration EU: IEC 60068-2-29: Shocks, Type I / II EU: IEC 60068-2-32: Fall Test
	Safety	UL 60950-1 CAN/CSA-C22.2 No. 60950-1 EN 60950-1 IEC 60950-1
	HPE Apollo InfiniBand EDR 100Gb Mezzanine adapter is supported on the following 64-bit Linux operating systems:	
	<ul style="list-style-type: none"> • RHEL: 7.2U5 • CentOS7.2U5 • SLES: 12 SP1 	
	Please refer to the firmware/software download page of the device and HPE ProLiant XL260a server for the latest update.	
	Operating System Support	End-of-life Management and Recycling

Summary of Changes

Date	Version History	Action	Description of Change
4-Dec-2017	From version 2 to 3	Updated	Update Card SKU
25-Sept-2017	From version 1 to 2	Updated	Update formatting and add info regarding service and support
26-Sept-2016	Version 1	Created	Create QuickSpecs for HPE Apollo InfiniBand/EDR 100Gb 2p 840z FIO Adapter



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c05283453 - 15737 - Worldwide - V3 - 4-December-2017