

# HP InfiniBand Host Channel Adaptors based on Mellanox ConnectX-2 Technology

## Read This First: Documentation Roadmap



This document roadmap describes how to access the documentation and driver information for HP host channel adaptors (HCAs) with Mellanox ConnectX-2 technology.

This guide supports the following HP part numbers:

<b>HP Part Number</b>	<b>Description</b>
592521-B21	HP InfiniBand 4X DDR CX-2 PCI-e G2 Dual Port HCA
592520-B21	HP InfiniBand 4X QDR CX-2 PCI-e G2 Dual Port HCA
592519-B21	HP 4X QDR InfiniBand CX-2 Dual Port Mezzanine HCA

Part number: **HA-ICNX2-1A**

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This document provides links to the Mellanox data sheets and user information describing HP HCAs based on Mellanox ConnectX-2 technology. You can link directly to any of the documentation here to provide you with more information about your product.

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# HP InfiniBand Host Channel Adapters

An InfiniBand network includes various components: InfiniBand switches, InfiniBand cables, and also the host channel adapters (HCAs). HP InfiniBand HCAs have two form factors: one with standard PCI form factor for HP ProLiant DL and SL servers, and another with the mezzanine form factor for HP ProLiant BL server blades.

This document contains links to the documentation that describe HP InfiniBand HCAs based on the Mellanox ConnectX-2 technology.

All of the documentation referenced in this document is currently available on the [Hewlett-Packard](#) and the [Mellanox](#) websites. If you have any comments about this document, please send them to:

<http://docs.hp.com/en/feedback.html>

For technical support and updates, contact your HP representative.

# Mellanox ConnectX-2 Technology

HP InfiniBand HCAs based on the Mellanox ConnectX-2 technology with Virtual Protocol Interconnect (VPI) provide the highest performing and most flexible interconnect solution for Enterprise Data Centers, High-Performance Computing, and Embedded environments. Clustered data bases, parallelized applications, transactional services and high-performance embedded I/O applications will achieve significant performance improvements resulting in reduced completion time and lower cost per operation. ConnectX-2 with VPI also simplifies network deployment by consolidating cables and enhancing performance in virtualized server environments.

The key features of Mellanox ConnectX-2 include:

- Virtual Protocol Interconnect
- 1us MPI ping latency
- Selectable 10, 20, or 40Gb/s InfiniBand or 10GigE per port
- Single- and Dual-Port options available
- PCI Express 2.0 (up to 5GT/s)
- CPU offload of transport operations
- End-to-end QoS and congestion control
- Hardware-based I/O virtualization
- TCP/UDP/IP stateless offload
- Fibre Channel encapsulation (FCoIB or FCoE)
- RoHS-R6

The following table provides a link to the specifications and documentation for the Mellanox ConnectX-2 HCAs used in HP InfiniBand configurations.

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<b>ConnectX-2 Dual-Port InfiniBand Adapter Cards with Virtual Protocol Interconnect</b>	<b>Link</b>
<ul style="list-style-type: none"><li>• ConnectX-2 Adapter Card Product Brief</li></ul>	<a href="#">Mellanox ConnectX-2</a>

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# Firmware and Drivers

To update firmware for the Mellanox ConnectX-2 HCAs used in HP InfiniBand configurations, go to <http://www.hp.com/> and enter the HP part number in the search field. From the Search Results page, click on the [Software & driver downloads](#) link to select the firmware by your operating system type.

Be sure to read and follow the installation instructions provided on the firmware download page to ensure that the correct firmware image is downloaded for your specific HCA type.

The table below provides direct links for firmware images posted on the HP website:

HP HCA Part Number	Firmware Download Link
• 592521-B21	<a href="#">Firmware</a>
• 592520-B21	<a href="#">Firmware</a>
• 592519-B21	<a href="#">Firmware</a>

You can also access the firmware updates from Mellanox. The following table provides a link to access the updates from Mellanox.

Firmware	Link
Updating Firmware for an HP InfiniBand Adapter	<a href="#">Firmware</a>

The following tables provide links to the Mellanox or the Voltaire websites to access the drivers for the Mellanox ConnectX-2 based HCAs used in HP InfiniBand configurations.

Mellanox Drivers	Link
InfiniBand	<a href="#">Drivers</a>

Voltaire Drivers	Link
InfiniBand (see note below)	<a href="#">Drivers</a>

**NOTE:** You must have purchased the Voltaire “rights to use” license and you must complete the requisition form on the Voltaire download page to access the Voltaire version of OpenFabrics Enterprise Distribution (OFED) drivers.

## HP InfiniBand Information

The following websites provide more information on HP InfiniBand products:

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**Link/Description**

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[InfiniBand Support for HP ProLiant and HP Integrity Servers](#)

Provides information on the complete line of InfiniBand products supported by HP.

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[InfiniBand for HP BladeSystem c-Class](#)

Provides information on the InfiniBand mezzanines and switch blades supported by HP.

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[HP BladeSystem Adapters and Mezzanines](#)

This site provides information on the full range of BladeSystem adapters and mezzanines available from HP for BladeSystem configurations.

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[Mellanox website](#)

Check the Mellanox website for updates between releases of this document.

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[Voltaire website](#)

Check the Voltaire website for updates between releases of this document.

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## HCA Installation and Removal Procedures

The HP HCA installation procedure is documented in the HP ProLiant rackmount server or server blade user guide.

The HP HCA removal procedure is documented in the HP ProLiant rackmount server or server blade service and maintenance guide.

## HP Cluster Platform InfiniBand Information

The following websites provide more information about HP Cluster Platform InfiniBand products:

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**Link/Description**

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[HP Cluster Platform products](#)

Provides the latest information on the HP clustering technology and available configurations.

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[High Performance Computing – HP Cluster Platform](#)

Provides links to the HP Cluster Platform documentation set.

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Contact your local HP sales or support representative if you need additional information.

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