



HP CN1000E Dual Port Converged Network Adapter

HP Part Number AW520A

SIMPLIFIED NETWORKING, TRUSTED SAN INTEROPERABILITY AND INCREASED BUSINESS AGILITY



Overview

The HP StorageWorks CN1000E Dual Port Converged Network Adapter is a second-generation, low profile Fibre Channel over Ethernet (FCoE) PCIe adapter for HP ProLiant rack servers. The HP CN1000E Converged Network Adapter is based on the Emulex OneConnect™ platform that delivers industry-leading performance with a single-chip architecture that fully supports network convergence and Data Center Bridging (DCB) standards for lossless Ethernet.

The HP CN1000E Converged Network Adapter complements HP's Converged Infrastructure architecture. This open architecture uses industry standards to converge storage, server, and network resources and provide seamless interoperability with existing data center core networks.

Optimized Network Connectivity

Lower cost

The HP CN1000E Converged Network Adapter can save up to 30% on capital expenses by reducing the number of adapter cards, switch ports and cables needed to support network and storage traffic.²

Lower power and cooling

The HP CN1000E Converged Network Adapter can reduce the number of adapter cards and switches, resulting in significant savings for power and cooling.

Consolidation with the latest Intel Xeon CPUs

The HP CN1000E Converged Network Adapter, based on Emulex OneConnect Universal CNA (UCNA) technology, was designed to leverage the new features of Xeon processors beginning with the 5500 series, including MSI-X, QPI, PCI-Express 2.0, HTT and VT-d which all enable more I/O per CPU with protocol hardware offload technology.

Key Features

One platform for network and storage connection

- Simplifies I/O hardware choices for IT managers

Multiple protocol offloads for optimum server efficiency

- FCoE full offload
- TCP/IP stateless offload
- TCP Offload Engine (TOE) support

Superior performance

- Industry-leading performance approaching 1 million IOPS (I/Os per second)¹

Energy-efficient design

- Industry-leading performance per watt
- Complements data center "green" initiatives

Easy to deploy and manage

- Integrated management with Emulex OneCommand™ Manager

Key Benefits

Optimized for convergence

- Maximizes I/O consolidation with high-performance 10GbE ports
- One network infrastructure reduces capital expenses
- One management console reduces operating expenses
- Leverages existing IT investments

Enterprise-ready

- Hardware parity, CRC, ECC and other advanced error checking
- Backed by field-proven Emulex and HP reliability and support



OneConnect™



OneCommand™

¹ IT Brand Pulse Unified Data Center Networking Test Report, January 2010

² The Guide to Network Convergence Solutions, pages 26-28

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Simplified Management

OneCommand Manager application

The OneCommand™ Manager application provides centralized management of HP CN1000E Converged Network Adapters and HP-branded Emulex LightPulse® HBAs throughout the data center from a centralized management console. The OneCommand Manager application provides a graphical user interface (GUI) and a scriptable command line user interface (CLI), which drives administration efficiency.

Streamlined installation

Using AutoPilot Installer, a single installation of drivers and applications for Windows servers eliminates multiple reboots and ensures that each component is installed correctly and HP CN1000E Converged Network Adapters are ready to use.

Highest Performance and Reliability

Enterprise-ready

Leveraging ten generations of advanced, field-proven HBA technology, HP CN1000E Converged Network Adapters are based on the Emulex OneConnect architecture and meet the robust interoperability and reliability requirements of corporate data centers.

Advanced error checking

End-to-end data protection with hardware parity, CRC, ECC and other advanced error checking and correcting ensure that data is safe from corruption.

SPECIFICATIONS

Standards

- ANSI INCITS T11 FC-BB-5 2.0, FC-PI-2, FC-GS-4, FC-TAPE, and FCP-3
- PCI Express base spec 2.0 PCI Bus Power Management Interface, rev. 1.2, Advanced Error Reporting (AER)
- IEEE 802.3ae (10Gb/s Ethernet), 802.1q (VLAN), 802.1p (QoS/CoS), 802.3ad (link aggregation), 802.3x (flow control)
- Enhanced Ethernet (draft): Enhanced Transmission Selection, ETS (P802.1Qaz); Priority-based Flow Control, PFC (P802.1Qbb); Data Center Bridging Capabilities eXchange Protocol, CIN-DCBX and CEE-DCBX (P802.1Qaz)
- PHP hot plug-hot swap

Architecture

- Dual-channel, 10Gb/s Ethernet link speed
- PCIe Express 2.0 (x8, 5GT/s), MSI-X support
- Integrated data buffer and code space memory

FCoE Features

- Common driver for HP-branded FCoE CNA and Fibre Channel HBAs
- N_Port ID Virtualization (NPIV)
- Support for FIP and FCoE Ether types
- Fabric Provided MAC Addressing (FPMA) support
- 1024 concurrent port logins (RPLs)
- 1024 active exchanges (XRIs) per port

Ethernet Features

- IPv4/IPv6 TCP, UDP checksum offload; Large Send Offload (LSO); Large Receive Offload; Receive Side Scaling (RSS); IPv4 TCP Chimney Offload
- VLAN insertion and extraction
- Jumbo frames up to 8000 Bytes
- Preboot eXecutive Environment (PXE) 2.0 network boot support
- Interrupt coalescing
- Load balancing and failover support including adapter fault tolerance (AFT), switch fault tolerance (SFT), adaptive load balancing (ALB), teaming support and IEEE 802.3ad

Comprehensive OS Support

- Microsoft Windows Server 2003 (SP2), 2008 and 2008 R2
- Linux RH 5 and SLES 10 & 11
- ESX 4.0 available Q2CY10

Physical Media

- Copper
 - SFP+ Direct Attached Twin-Ax Copper interface)
 - SFP+ active copper cables for HP B-series FCoE switches
 - SFP+ passive copper cables for HP C-series FCoE switches
- Optical
 - 10Gb SFP+ Ethernet Optical Modules (SR)
 - 455883-B21 HP BLC 10Gb SR SFP+

Physical Dimensions

- Low profile shipped with standard bracket (low-profile bracket available)

Environmental Requirements

- Operating temperature: 32° to 113°F (0° to 45°C)
- Storage temperature: -40° F to 158°F (-40° to 73°C)
- Relative humidity: 5% to 95% non-condensing

Agency Approvals

- Class 1 Laser Product per DHHS 21CFR (J) and EN60825-1
- UL recognized to UL 60950-1
- CUR recognized to CSA22.2, No. 60950-1-07
- Bauart-certified to EN60950-1
- FCC Rules, Part 15, Class A
- ICES-003, Class A
- EMC Directive 2004/108/EEC (CE Mark)
 - EN55022, Class A
 - EN55024
- Australian EMC Framework (C-Tick Mark) AS/NZS CISPR22, Class A
- VCCI (Japan), Class A
- KCC (Korea), Class A
- EU RoHS Compliant (Directive 2002/95/EC)
- China RoHS Compliant

Ordering Information

- HP Part Number **AW520A**



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