✕ EMULEX®

CONNECTIVITY

HP CN1100E Dual Port Converged Network Adapter

HP Part Numbers BK835A and AT111A

EMULEX CONNECTED hp

SIMPLIFIED NETWORKING, TRUSTED SAN INTEROPERABILITY AND INCREASED BUSINESS AGILITY
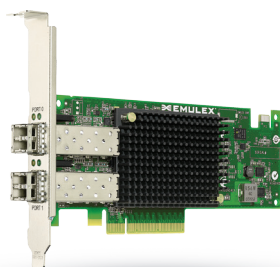
Overview

The HP StorageWorks CN1100E Dual Port Converged Network Adapter (CNA) is a low profile 10 Gigabit Ethernet (10GbE) adapter for HP ProLiant rack servers. The HP CN1100E is based on the Emulex OneConnect™ Universal CNA platform that delivers industry-leading performance with storage protocol offload for iSCSI or Fibre Channel over Ethernet (FCoE). The HP CN1100E fully supports network convergence and Data Center Bridging (DCB) standards for lossless Ethernet.

The HP CN1100E 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 CN1100E 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.[1]

Lower power and cooling
The HP CN1100E can reduce the number of adapter cards and switches, resulting in significant savings for power and cooling.

Multiple protocol offloads
HP CN1100E adapters support full protocol hardware offload for TCPI/IP, FCoE and iSCSI. Protocol offloads provide superior server performance when compared to NICs with software initiators and enable higher virtualization ratios and greater cost savings.

Key Features

One platform for network and storage connection
- Simplifies I/O hardware choices for IT managers

Multiple protocol offloads for optimum server efficiency
- iSCSI
- FCoE
- TCP/IP stateless offload
- TCP Offload Engine (TOE)

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] 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 Emulex OneConnect CNAs and 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) for optimum administration efficiency.

VMware vCenter integration

The OneCommand Manager for VMware vCenter Server plug-in adds integrated management of Emulex CNAs and HBAs for servers that are virtualized with VMware vSphere.

Highest Performance and Reliability

Enterprise-ready

Leveraging ten generations of advanced, field-proven HBA technology, the HP CN1100E is based on the Emulex OneConnect architecture and meets the robust interoperability and reliability requirements of corporate data centers.

Green data centers

The HP CN1100E uses the BladeEngine 3 (BE3) controller with integrated Network Controller Sideband Interface (NC-SI) and KR (Backplane Ethernet) Serializer/Deserializer (SerDes) interfaces to reduce power usage by 20%.

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

Controller
· BladeEngine 3

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 (10GBASE Ethernet Ports)
· IEEE 802.1q (Virtual LANs)
· IEEE 802.3ad (Link Aggregation)
· IEEE 802.3x (Flow Control)
· IEEE 802.1p (Quality/Class of Service)
· IEEE 802.1Qaz (Enhanced Transmission Selection)
· IEEE 802.1Qaz (Data Center Bridging Capabilities Exchange)
· IEEE 802.1Qbb (Priority-based Flow Control)
· IEEE 802.1ab (Link Layer Discovery Protocol)
· 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 CNAs and HBAs
· 64 N_Port ID Virtualization (NPIV) interfaces (total for adapter)
· Support for FIP and FCoE Ether Types
· Fabric Provided MAC Addressing (FPMA) support
· 1024 concurrent port logins (RPIs) per port
· 1024 active exchanges (XRIs) per port

iSCSI Features
· Target discovery methods
· Authentication mode
· INT 13 Boot

Ethernet Features
· IPv4/IPv6 TCP, UDP checksum offload; Large Send Offload(LSO); Large Receive Offload; TCP Segmentation Offload (TSO); Receive Side Scaling (RSS); IPv4 TCP Chimney Offload
· VLAN insertion and extraction
· Jumbo frames up to 9000 Bytes
· Preboot eXecution Environment (PXE) 2.0 network boot support
· TCP Segmentation Offload (TSO)
· 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
· Windows Server
· VMware ESX
· Red Hat Enterprise Linux Server
· Novell SUSE® Linux Enterprise Server

Hardware Environments
· x86, x64 servers

Interconnect
· Copper
  - SFP+ Direct Attached Twin-Ax Copper interface
  - Standards compliant passive and active copper cables supported up to 5m
· Optical
  - Optics: 10GBASE-SR short wave lasers with LC type connector supported up to 100m

Physical Dimensions
· Low profile with standard bracket (low-profile bracket available)

Environmental Requirements
· Operating temperature: 0° to 55° C (32° to 131° F)
· Storage temperature: -40° to 70° C (-40° to 158° F)
· Relative humidity: 5% to 95% non-condensing

Agency Approvals
North America:
  - FCC Class A
  - UL/CSA Recognized
Europe:
  - CE Mark
  - EU RoHS compliant
  - TUV Bauart Certified
Japan:
  - VCCI Class A
Korea:
  - MSIP (formally KCC/MIC) Class A
China:
  - China RoHS Compliant

(Please refer to the product page on www.emulex.com for further details)

HP Part Numbers
· HP CN1100E Dual Port Converged Network Adapter for ProLiant servers: **BK835A**
· HP Integrity CN1100E Dual Port Converged Network Adapter for Integrity servers: **AT111A**

Note: iSCSI protocol offload is not supported with Integrity servers.

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