EMULEX®

CONNECTIVITY

OneConnect™
OCe10102-I

High-performance 10Gbps iSCSI Adapter

SIMPLIFIED NETWORKING, TRUSTED SAN INTEROPERABILITY AND INCREASED BUSINESS AGILITY

The Emulex OCe10102-I is a single-chip, high-performance 10Gbps adapter that consolidates traffic for networking and iSCSI storage. A member of the Emulex OneConnect™ Universal Converged Network Adapter (UCNA) family, the OCe10102-I iSCSI adapter supports a common 10 Gigabit Ethernet (10GbE) infrastructure for networking and storage, reducing capital expense (CapEx) for adapters, switches and cables, and operational expense (OpEx) for power, cooling and IT administration.

Optimized Network and Storage Connectivity
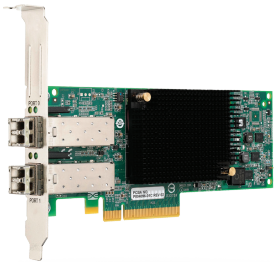
10 Gigabit Ethernet offload
10 Gigabit Ethernet (10GbE) will become the standard backbone for enterprise-class networks. New multi-core server platforms, server virtualization and high-demand applications, such as video on demand and voice over Internet protocol (VOIP) are all driving the need for low latency and high bandwidth. The OCe10102-I iSCSI adapter delivers optimized 10GbE performance that meets these requirements with support for TCP/IP and TCP Chimney offloads.

iSCSI offload
The OCe10102-I iSCSI adapter supports iSCSI offload, providing performance that is superior to iSCSI solutions based on software initiators and standard Network Interface Cards (NICs).

Boot from LAN/SAN
Preboot eXecution Environment (PXE) and iSCSI boot support make the OCe10102-I an ideal solution for blade servers and other diskless deployments.

OneConnect™

OneCommand™

Key Features

One platform for network and storage connection
- 10Gbps Ethernet and iSCSI offload
- Simplifies I/O hardware choices for IT managers

Superior performance
- TCP/IP stateless offloads
- Highest CPU efficiency with TCP Chimney Offload
- iSCSI offload performance exceeds software initiator solutions

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

Easy to deploy and manage with OneCommand™
- One management console for network and storage
- Integrated management of UCNAs and Host Bus Adapters (HBAs)
- Over 7 million ports administered with Emulex management software

Key Benefits

Maximum return on investment
- Converges network and storage I/O with high-performance 10GbE connectivity
- One network infrastructure reduces CapEx
- One management console reduces OpEx
- Leverages existing IT investments

Optimized for server virtualization with Emulex vEngine™ technology
- More virtual machines (VMs) per server with TCP/IP and iSCSI offloads

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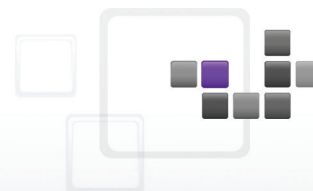- Backed by field-proven Emulex reliability and support

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Simplified Management

OneCommand Manager

OneCommand™ Manager provides centralized management of Emulex One Connect UCNAs and HBAs throughout the data center from a centralized management console. OneCommand Manager provides a graphical user interface (GUI) and a scriptable command line user interface (CLI), which drive administration efficiency and business agility.

Centralized discovery, monitoring and management of local and remote adapters can be done from a secure remote client. In-depth management capabilities include firmware and boot code upgrades, beaconing, statistics and advanced diagnostics.

Streamlined installation

A single installation of drivers and applications for Windows servers eliminates multiple reboots and ensures that each component is installed correctly and OneConnect UCNAs are ready to use.

Highest Performance and Reliability

More virtual machines per server with vEngine technology

Protocol offloads for TCP/IP and iSCSI enable more VMs per server, providing greater cost savings for server virtualization.

Greener data centers

The Emulex OneConnect UCNA platform delivers industry-leading performance and scalability per watt, reducing requirements for power and cooling. Protocol offload enables efficient use of computing resources, supports more VMs per CPU, and reduces the number of servers required to support data center demands.

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

· RFC 3720 iSCSI, RFC 4171 iSNS, RFC 4544 iSCSI MIB, RFC 4545 IP Storage User Identity
· PCI Express base spec 2.0, PCI Express card electromechanical 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), 802.3ak (10GBase-CX4)
· 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

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 9000 Bytes
· Preboot eXecution Environment (PXE) 2.0
· Interrupt coalescing
· Load balancing and failover support including adapter fault tolerance (AFT), adaptive load balancing (ALB), teaming support and IEEE 802.3ad

iSCSI Features

· Target discovery methods
· Authentication modes
· INT 13 Boot

Comprehensive OS Support

· Windows Server
· VMware ESX
· Red Hat Enterprise Linux Server
· Novell SUSE® Linux Enterprise Server

Hardware Environments

· x86, x64 processor family

Interconnect

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

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
Taiwan:
  - BSMI 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)

Ordering Information

· **OCe10102-IM**
  - Dual-channel, 10GBase-SR (short reach optical)
· **OCe10102-IX**
  - Dual-channel, 10GBase-CR (direct attach copper)
· **OC-Storage-01A**
  - FCoE/iSCSI enablement - 1 license
· **OC-Storage-10A**
  - FCoE/iSCSI enablement - 10 licenses

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