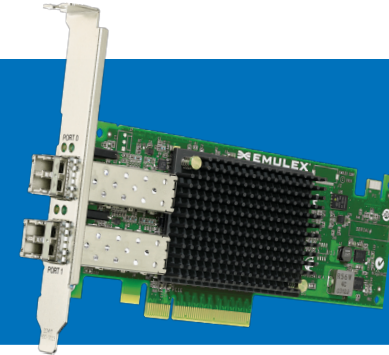




## Emulex® OneConnect OCe11000 Universal Converged Network Adapter (UCNA)

- Emulex OneConnect OCe11102-N 10Gb/s Ethernet Adapter
- Emulex OneConnect OCe11102-F 10GB/s FCoE CNA
- Emulex OneConnect OCe11102-I 10Gb/s iSCSI Adapter



The Emulex OneConnect OCe11000 UCNA product family is based on a third-generation, high-performance 10Gb/s Ethernet (10GbE) architecture that provides server connectivity for network and storage traffic with multi-function server adapters. OneConnect UCNAs support Ethernet, Fibre Channel over Ethernet (FCoE) and iSCSI while leveraging mature management tools and processes. OneConnect UCNAs consolidate network and storage traffic, simplify management and significantly reduce total cost of ownership (TCO). Virtual machine (VM) deployments rely on OneConnect UCNAs for optimized performance with protocol offloads and advanced virtualization technologies including VMware® NetQueue and Single Root IOV (SR-IOV).

### Best Ethernet network adapter available

- Stateless TCP/IP protocol offloads
- TCP Offload Engine (TOE) and Windows TCP Chimney offload enable optimum server performance
- Centralized adapter management for servers throughout the data center saves administrator time and cost

### Leading FCoE adapter

- Market-leading performance
- Common proven software stack with Emulex LightPulse® Host Bus Adapters (HBAs)
- Low-temperature design provides greater reliability

### Best iSCSI adapter on the market

- Full iSCSI offload enables 50% more VMs per server than software initiators
- Adapter-based Boot from SAN ideal for diskless deployments

### Choice of 9 of 10 Tier 1 OEMs

- 9 of 10 Tier 1 Server and Storage OEMs have standardized on Emulex 10GbE adapters

### Emulex is #1 in 10GbE ports

- First to support LAN on motherboard (LOM), network interface card (NIC), iSCSI and FCoE on a single hardware platform
- Market leader: Over 30% total 10GbE ports shipped today\*

### Emulex is #1 in performance

- Emulex outperforms Intel 10GbE NIC with 31% higher throughput!\*\*\*
- Emulex vEngine™ technology optimizes CPU efficiency with multiple hardware protocol offloads

### Emulex is the #1 provider of iSCSI and FCoE to the enterprise

- Emulex has shipped over 10 million storage area network (SAN) I/O ports to large enterprises
- Emulex technology is field proven as the exclusive 10GbE LOM for HP G7 BladeSystem Servers

### GreenState™ power efficiency

- Selective dynamic hibernation
- Advanced thermal and power instrumentation
- Configuration with less than 3 watts per port

### Unified management for networking and storage with the Emulex OneCommand™ Manager application

- One management console for HBAs and UCNAs
- Manage Fibre Channel, FCoE, iSCSI storage and networking with single view
- Centralized discovery, monitoring, reporting and management of local and remote adapters

### Optimized server virtualization

- Protocol offloads for TCP/IP, TOE, iSCSI and FCoE enables higher virtualization ratios, a critical feature for cloud computing
- Virtualized I/O with VMware NetQueue supports multiple receive queues for full 10GbE bandwidth utilization, maximizing support for VMware hybrid-cloud deployments
- Multiple NIC and storage functions per port provides isolation and bandwidth allocation for management, migration and virtual machine applications
- SR-IOV enables optimum performance and efficiency

### Single framework for all 10GbE connectivity creates simplified version management and testing

- Common NIC drivers
- Common firmware and boot code
- Consistent NIC teaming
- Consistent TCP offload support

Single framework simplifies version management and testing, which lowers data center operational expense (OpEx).

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\* Source: Crehan Research Calendar Q42010 (10GbE LOM+Adapters) report released February 2011

\*\* Based on documented reseller field tests



## Emulex Connects™

### Emulex adapters “Just Work!”

- Ten generations – over 10 years of shipments and over 10 million ports connecting servers to storage – field-proven with all major server platforms, switches, storage and software
- Run cooler with greater reliability

### Emulex adapters are ideal for any size organization

- One adapter family supports 10GbE networking with optimized iSCSI and FCoE storage connectivity; organizations can match OneConnect adapters to current requirements and future-proof their investment with the option to add protocol enablements
- Unified management with the OneCommand Manager application simplifies the use of Emulex HBAs and UCNAs across the entire data center, regardless of size or complexity
- Multiple protocol accelerators/offload engines allow OneConnect adapters to deliver maximum performance, regardless of the mix of protocol traffic
- Most CPU-efficient adapter for maximum return on investment (ROI)

### Emulex does virtualization better

- Multiple receive queues for full 10GbE bandwidth utilization
- Multiple NIC and storage functions per port provide isolation and bandwidth allocation
- Single Root IOV (SR-IOV) for optimum performance and efficiency

## Cross-selling Opportunities

Emulex adapters can be added to the sale of any of the following products to make a more complete solution and help increase your margin:

### Hardware

- Servers, storage arrays, switches

### Infrastructure software

- VMware, Symantec, Citrix, RedHat, Novell

### Application software

- Oracle, Microsoft and SAP

## Key Applications

**Server virtualization**—Emulex UCNAs support virtual port (vPort) technology, which provides the scalability necessary to maximize the number of applications running on virtualized servers, a critical component of cloud and hybrid cloud solutions.

**SAN Boot**—The deployment of network convergence enables a wide range of servers to leverage Boot from SAN functionality and increase the efficiency of operating system image management.

## Resources

### Emulex Convergence Solution

[www.emulex.com/solutions/convergence.html](http://www.emulex.com/solutions/convergence.html)

### Convergenomics Calculator

[www.emulex.com/files/tools/FCoE-Calculator.html](http://www.emulex.com/files/tools/FCoE-Calculator.html)

### Product Information

[www.emulex.com/products/oneconnect-ucnas.html](http://www.emulex.com/products/oneconnect-ucnas.html)

### Emulex Channel Resource Center

[www.emulex-channel.com](http://www.emulex-channel.com)

## Qualifying Questions

- Are you connecting your servers to a Fibre Channel or iSCSI SAN?
- Would cabling or switch consolidation be a benefit to you?
- Are you moving to 10GbE networking?
- Do you have an installed base of Fibre Channel or iSCSI SANs that you want to leverage?

## Your Benefits

### Selling Emulex adapters enables you to:

- Increase your revenues with access to the significant new opportunity provided by network convergence
- Increase your hardware and software sales attach rate
- Meet your commission targets quicker with increased margin and revenue opportunities
- Earn additional money with the Emulex Connect Partner Program Rewards\*
- Increase your company’s profitability with the Emulex Connect Partner Program’s Deal Registration and Trade-in offerings\*
- Become your customer’s trusted supplier by selling a reliable, tried and tested solution that you know just works!

\* See the Emulex Connect Partner Program for more details: [www.emulex-channel.com](http://www.emulex-channel.com)

## Why 10GbE Now?

**Server virtualization**—Data centers are aggressively moving to server virtualization to reduce capital expense (CapEx) for systems and networks and reduce OpEx for power and cooling. New multi-core servers support more VMs which requires higher I/O bandwidth. OneConnect adapters provide high-bandwidth 10Gb connectivity and support full TCP/IP, iSCSI and FCoE offloads to maximize virtualization ratios.

**iSCSI and network attached storage (NAS) storage**—iSCSI and NAS storage both rely on an Ethernet network and are constrained with 1GbE. Next-generation iSCSI and NAS storage solutions are based on 10GbE to support a full range of data center applications, including database and video content. OneConnect adapters fully support iSCSI and NAS storage with high-performance offloads for networking and storage protocols.

**Network convergence**—OneConnect adapters support IEEE standards for FCoE that allow network and storage I/O to share a common set of adapters, cables and switch ports. This reduces costs with new server deployments and is fully compatible with existing Fibre Channel investments.

**Simplified cabling**—A virtualized server with 10GbE connectivity typically requires 6-10 adapters and switch ports. The end result is a complex sprawl of cables that is overly complex and alters the air flow and cooling for servers. 10GbE dramatically reduces the numbers of cables and switch ports.

**Lower prices**—Prices for 10GbE technology are continuing to drop as the market expands. OneConnect 10GbE adapters are priced well below 1GbE products on a cost per throughput basis.

## Reduce CapEx and OpEx

- Common infrastructure for networking and storage
- Save 30% on adapters and switches
- Save 80% on cabling
- Save 40% on power and cooling

Part Number	Adapter Type	System Bus	Speed	# of Ports	Windows	Linux	VMware	Solaris
0Ce11102-FM-E (Optical)	FCoE		10Gb/s Ethernet	2	•	•	•	•
0Ce11102-FX-E (Copper)	FCoE		10Gb/s Ethernet	2	•	•	•	•
0Ce11102-IM-E (Optical)	iSCSI		10Gb/s Ethernet	2	•	•	•	
0Ce11102-IX-E (Copper)	iSCSI		10Gb/s Ethernet	2	•	•	•	
0Ce10102-FM-E (Optical)	FCoE CNA	PCI Express	10Gb/s Ethernet	2	•	•	•	•
0Ce10102-FX-E (Copper)	FCoE CNA	PCI Express	10Gb/s Ethernet	2	•	•	•	•
0Ce10102-IM-E (Optical)	iSCSI	PCI Express	10Gb/s Ethernet	2	•	•	•	•
0Ce10102-IX-E (Copper)	iSCSI	PCI Express	10Gb/s Ethernet	2	•	•	•	•

Emulex Connects™ Servers, Storage and People

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