

## 10Gb/s Converged Network Adapter Consolidates Storage Traffic, Lowering CapEx and OpEx for Data Centers

The OneConnect™ OCe10102-F Fibre Channel over Ethernet (FCoE) Converged Network Adapter (CNA) provides highly optimized 10 Gigabit Ethernet (10GbE) network connectivity with protocol offloads for FCoE, stateless TCP/IP and TCP Offload Engine (TOE). As part of the OneConnect Universal Converged Network Adapter (UCNA) product family, the OCe10102-F seamlessly converges Fibre Channel and Ethernet traffic while leveraging mature Fibre Channel management tools and processes. By consolidating traffic, FCoE simplifies network management and significantly reduces total cost of ownership (TCO).

### 1. Single Framework for Simplified Version Management and Testing



The OneConnect UCNA product family provides a single 10GbE framework for network and storage connectivity. All OneConnect UCNAs use the same network interface card (NIC) drivers, firmware and boot code with consistent NIC teaming and TCP offload support. The unified OneConnect framework provides simplified version management and testing that streamlines deployments and lowers data center Operational Expense (OpEx). Competing products are partial solutions—OneConnect is the only product family that supports TCP/IP, TOE, iSCSI and FCoE with universal 10GbE connectivity.

### 2. Superior FCoE Performance



In comparison tests to the competing product, the OCe10102-F CNA delivers more IOPS and is more CPU-efficient. The OCe10102-F FCoE CNAs deliver substantial server efficiency, optimizing performance for virtualized servers and business-critical applications.

### 3. Unified Management for Networking and Storage Reduces OpEx



The OneCommand™ Manager application enables management of Emulex OneConnect UCNAs and LightPulse Host Bus Adapters (HBAs) throughout the data center from a centralized console. Using the OneCommand Manager application, administrators can manage high-performance connections for networking and storage (Fibre Channel, FCoE and iSCSI) with a single view of the entire network. The OneCommand Manager application provides centralized discovery, monitoring, reporting and management of both local and remote adapters from a secure remote client. In-depth management capabilities include remote firmware and boot code upgrades, beaconing, statistics and advanced diagnostics.

### 4. Scalability and Performance for Virtualization

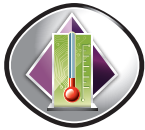


OneConnect protocol offloads provide greater CPU efficiency, enabling up to 20% more virtual machines (VMs) per host server than competing products. Using Emulex virtual port technology based on N\_Port ID Virtualization (NPIV), Quality of Service (QoS) bandwidth allocation can be based on individual VMs, giving data centers the flexibility they need to optimize server consolidation. Accelerators/offload engines for all supported protocols allow the OCe10102-F to deliver maximum performance, regardless of the mix of network traffic.



## 5. Superior Ethernet Server Performance

Each OCe10102-F port supports FCoE and 10GbE NIC functions. In addition to FCoE offload, OCe10102-F adapters provide optimized network performance with TCP/IP and TOE offloads. Networking benchmark tests showed a minimum 50% reduction in CPU usage when OneConnect TOE support was enabled using TCP Chimney Offload for Windows Server 2003 and 2008.



## 6. Lower Operating Temperature, Greater Reliability

OCe10102-F CNAs operate at significantly lower temperatures than the main competitor's adapters, providing greater reliability and server availability. Thermal tests show higher temperatures for competing products without heat sinks, which can lead to adapter failures and server downtime. The Emulex commitment to low-temperature designs increases reliability, improves Storage Area Network (SAN) availability and reduces data center cooling costs.



## 7. Enterprise-ready

Leveraging advanced, field-proven Emulex HBA technology, the OCe10102-F meets the robust interoperability and reliability requirements of corporate data centers. The design leverages proven Emulex enterprise-class drivers, firmware and hardware architectures, while delivering sophisticated capabilities required to manage multiple types of data flow concurrently with optimized performance.

Emulex OneConnect is the only product family that supports TCP/IP, TOE, iSCSI and FCoE with universal 10GbE connectivity.

Protocol Offload	Emulex UCNA	Brocade CNA	QLogic CNA	QLogic NIC	Intel NIC	Broadcom NIC
FCoE	✓	✓	✓			
iSCSI	✓					✓
TOE, TCP Chimney	✓			✓		✓
TCP/IP (stateless)	✓	✓	✓	✓	✓	✓

With the OneConnect UCNA and the OneCommand Manager application products, Emulex is the only vendor with the features that data centers require to achieve networking and storage convergence.

Features	Emulex	QLogic	Brocade	Intel	Broadcom
Common NIC drivers for NIC, iSCSI and FCoE	✓				
Leverages existing Fibre Channel and NIC drivers	✓				
Broad storage interoperability support	✓	✓			
Unified storage management software	✓	✓	✓		
Unified NIC, iSCSI, FCoE and Fibre Channel management	✓				
CPU offload for all protocols	✓				
High performance per watt	✓				