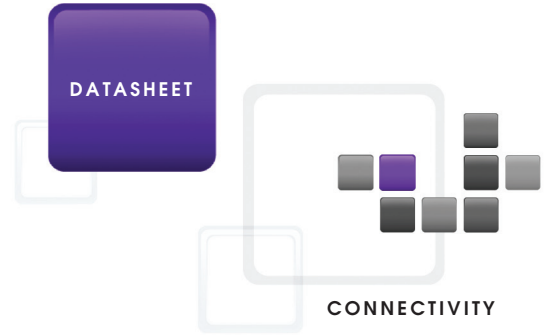


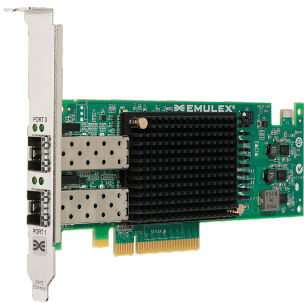


# OneConnect™ OCe11102

OneConnect UCNA Product Family



CONVERGENCE  
OF NETWORKING  
AND STORAGE  
CONNECTIVITY



## Emulex OneConnect Universal CNA Platform

The Emulex OneConnect™ OCe11102 Universal Converged Network Adapter (UCNA) platform is a third-generation, high-performance family of dual-port 10 Gigabit Ethernet adapters that support network and storage I/O.

### 10 Gigabit Ethernet

All OCe11102 adapters provide 10 Gigabit Ethernet (10GbE) connectivity with industry leading performance and support for advanced virtualization features that include VMware NetQueue and Microsoft Virtual Machine Queue.

### Fibre Channel over Ethernet

OneConnect UCNAs support Fibre Channel over Ethernet (FCoE), seamlessly converging Fibre Channel and Ethernet while leveraging mature Fibre Channel management tools and processes. Based on IEEE Data Center Bridging (DCB) standards, FCoE simplifies network management and significantly reduces total cost of ownership.

### iSCSI

OneConnect is an optimum solution for iSCSI storage deployments. Using a hardware iSCSI adapter with full protocol offload provides better performance and simplified management when compared to software initiators and standard NICs. The OneConnect iSCSI solution can support DCB standards to insure a consistent stream of data between servers and storage arrays.

### vEngine technology

Emulex vEngine technology allows data centers to take full advantage of virtualization capabilities of new multi-core servers. With protocol offloads for TCP, iSCSI and FCoE, critical CPU resources are dedicated to running VMs, not I/O overhead.

### Universal Multi-Channel

OneConnect Universal Multi-Channel (UMC) allows multiple PCI functions to be created on each adapter port. Each NIC function is presented to the operating system or hypervisor as a physical port with a separate MAC address and user-assigned bandwidth. OneConnect Ethernet adapters present four NIC functions per port. OneConnect iSCSI and FCoE adapters present one iSCSI or FCoE function plus three NIC functions per port.

## Key Features

### One card, many servers

- Full TCP/IP, iSCSI and FCoE offloads
- Same firmware, drivers and management as OneConnect blade and LOM solutions

### Superior performance

- Hardware accelerators for all protocols
- High performance with optimum CPU efficiency

### Energy-efficient design

- Industry-leading performance per watt
- Complements data center “green” initiatives

### Easy to deploy and manage with the OneCommand™ Manager application

- One management console, many protocol services
- Integrated management of UCNAs and HBAs

## Key Benefits

### Optimized for convergence

- One network infrastructure reduces CapEx
- One management console reduces OpEx
- Leverages existing IT investments

### Optimized for server virtualization with vEngine™ technology

- More virtual machines (VMs) per server with full TCP, iSCSI and FCoE offloads
- VM-specific performance, quality of service (QoS) and management

### Enterprise-ready

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



OneConnect™



OneCommand™

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## Enterprise-Ready and Simplified Management

Emulex OneConnect OCe11102 adapters meet 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.

To increase administration efficiency and business agility, OneConnect adapters feature OneCommand Manager, enabling centralized administration of Emulex OneConnect UCNAs and LightPulse® HBAs throughout the data center from a centralized management console.

The OneCommand Manager for VMware vCenter plug-in module provides the same capability for virtualized server deployments.

| Feature                           | Description  | OCe11102-N | OCe11102-I | OCe11102-F |
|-----------------------------------|--|------------|------------|------------|
| Link speed                        | 10Gb/s Ethernet  | ✓          | ✓          | ✓          |
| Dual port                         | Two 10Gb/s Ports   | ✓          | ✓          | ✓          |
| PCI Express base spec 2.0         | PCIe Express 2.0 (x8, 5GT/s)   | ✓          | ✓          | ✓          |
| MSI-X support                     | Message Signal Interrupt Extended  | ✓          | ✓          | ✓          |
| Hardware environments             | x86, x64 processor family, Itanium™ IA64 servers   | ✓          | ✓          | ✓          |
| Common driver by OS               | Windows  | ✓          | ✓          | ✓          |
|                                   | Linux  | ✓          | ✓          | ✓          |
|                                   | VMware   | ✓          | ✓          | ✓          |
|                                   | Solaris  | ✓          | ✓          | ✓          |
| Firmware upgrade                  | Upgradeable features for installed base  | ✓          | ✓          | ✓          |
| Common Management Interface (FDI) | Industry-standard interface across all operating system environments   | ✓          | ✓          | ✓          |
| Universal Multi-Channel           | Multiple PCIe functions for each physical port   | ✓          | ✓          | ✓          |
| Ethernet                          | 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 network boot and installation 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 | ✓          | ✓          | ✓          |
| iSCSI                             | Full iSCSI offload   |            | ✓          | ✓          |
|                                   | iSCSI Data Center Bridging   |            | ✓          | ✓          |
|                                   | Int 13 Remote Boot   |            | ✓          | ✓          |
| Fibre Channel over Ethernet       | Full FCoE protocol offload   |            |            | ✓          |
|                                   | FCoE Data Center Bridging  |            |            | ✓          |
|                                   | Common driver for UCNAs 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<br>1024 active exchanges (XRIs) per port   |            |            | ✓          |
| Remote Boot from SAN              |  |            | ✓          |            |
| Boot code support                 | x86  | ✓          | ✓          | ✓          |
|                                   | UEFI   | ✓          | ✓          | ✓          |
| End-to-end parity/CRC             | Data protection  | ✓          | ✓          | ✓          |
| Power voltage required            | +3.3v DC   | ✓          | ✓          | ✓          |
|                                   | +12v DC  | ✓          | ✓          | ✓          |
| Host PCI slot                     | Standard bracket (low profile bracket available); short, low-profile form factor card  | ✓          | ✓          | ✓          |
| Media interface                   | Copper: SFP+ Direct Attached Twin-Ax Copper interface; standards compliant passive copper cables up to 5m and active copper cables up to 10m                               | ✓          | ✓          | ✓          |
|                                   | Optics: 10GBASE-SR short wave lasers with LC type connector  | ✓          | ✓          | ✓          |
|                                   | Twisted Pair: 10GBASE-T with Cat 6 or Cat 6a cabling   | ✓          | ✓          | ✓          |



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