Optimized Network Connectivity
The OCE11102-N is a high-performance, dual-port network adapter for 10Gb/s Ethernet (10GbE) networks. Protocol offload for stateless TCP/IP and TCP Chimney provide maximum bandwidth with minimum use of CPU resources.

Emulex OneConnect Universal CNA platform
The OCE11102-N is a member of the Emulex OneConnect Universal Converged Network Adapter (UCNA) platform that also includes support for Fibre Channel over Ethernet (FCoE) and iSCSI protocol offloads. By using a common infrastructure for Ethernet and storage networks, data centers can reduce capital expense (CapEx) for adapters, switches and cables, and operational expense (OpEx) for power, cooling and IT administration.

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 virtual machine (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, Enhanced Error Handing (EEH) and other advanced error checking and correcting ensure that data is safe from corruption.

Virtualized I/O
New multi-core servers are enabling much higher virtualization ratios. OneConnect adapters support VMware NetQueue to optimize performance and provide full 10b/s bandwidth per port.

Advanced Virtualization Features
OneConnect supports advanced virtualization features from leading server vendors that allow multiple NIC 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 assigned bandwidth. This enables a single adapter port

Key Features
- Superior performance
  - TCIP/IP stateless offloads
  - TCP Chimney Offload
- Energy-efficient design
  - Industry-leading performance per watt
  - Complements data center “green” initiatives
- One platform for network and storage connection
  - Part of OneConnect family that includes FCoE and iSCSI support
  - Simplifies I/O hardware choices for IT managers
- Easy to deploy and manage with OneCommand™ Manager application
  - One management console for network and storage
  - Integrated management of Emulex UCNAS and Host Bus Adapters (HBAs)
  - Over 7 million ports administered with Emulex management software

Key Benefits
- Optimized for network consolidation
  - Maximizes I/O bandwidth with high-performance 10GbE ports
  - Same firmware, drivers and management as OneConnect 10GbE blade and LOM solutions.
- Optimized for server virtualization with vEngine™ technology
  - SR-IOV support improves I/O performance with virtual server deployments
  - Support for VMware NetQueue delivers full 10Gb bandwidth per port
  - More VMs per server with full TCP offloads
- Enterprise-ready
  - Hardware parity, CRC, ECC, Enhanced Error Handing (EEH) and other advanced error checking
  - Backed by field-proven Emulex reliability and support
OneConnect™ OCe11102-N
High-performance 10Gb/s Network Adapter

to provide specialized NIC functions for different uses, such as payload traffic, guest migration and console management for virtualized servers.

**Single Root I/O Virtualization (SR-IOV)**
With OneConnect support for SR-IOV, virtual machines can share adapter ports to optimize performance with up to 32 virtual functions per port. VM to VM communication is enabled with a Layer 2 switch that is embedded in the OneConnect adapter. OneConnect adapters are PCI-SIG compliant and will support SR-IOV as available with hypervisors.

**Simplified Management**

**OneCommand Manager application**
The OneCommand Manager application enables centralized management of Emulex OneConnect UCNAs and 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), which drive administration efficiency and business agility.

**Network boot**
Support for Preboot eXecution Environment (PXE) makes the OCe11102-N an ideal solution for blade servers and other diskless deployments.

**SPECIFICATIONS**

**Standards**
- PCI Express base 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)
- PHP hot plug-hot swap
- Enhanced Error Handling (EEH)

**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
- Priority Flow Control for Ethernet traffic
- Preboot eXecution Environment (PXE) 2.0 network boot support
- Interrupt coalescing
- Load balancing and failover support including adapter fault tolerance (AFT), switch fault tolerance (SFT), adaptive load balancing (ALB), teaming support, VMW NetQueue v2 and IEEE 802.3ad, VTxd / IOMMU support

**I/O Virtualization**
- PCI-SIG SR-IOV compliant
- Up to 32 Virtual Functions per port
- On-chip VM to VM switching
- Quality of Service (QoS) across each Virtual and Physical Function

**Comprehensive OS Support**
- Windows Server
- VMware ESX
- Red Hat Enterprise Linux Server
- Novell SUSE® Linux Enterprise Server
- Oracle Solaris

**Hardware Environments**
- x86, x64 and PPC processor families

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

**Physical Dimensions**
- Short, low-profile form factor card
- 167.64mm x 68.91mm (6.60” x 2.71”)
- Standard bracket (low profile 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**
- Class 1 Laser Product per DHHS 21 CFR (J) and EN60825-1
- UL recognized to UL 60950-1 2nd edition
- CUR recognized to CSA22.2, No. 60950-1-07
- Bauart-certified to EN60950-1 2nd edition
- FCC Rules, Part 15, Class A
- ICES-003, Class A
- EN55022, Class A
- BSMI (Taiwan), Class A
- VCCI (Japan), Class A
- KCC (Korea), Class A
- AS/NZS CISPR22, Class A
- Australian EMC Framework (C-Tick Mark)
- EU RoHS Compliant (Directive 2002/95/EC)
- China RoHS Compliant

**Ordering Information**
- OCe11102-NM
- Dual-channel, 10GBase-SR (short reach optical)
- OCe11102-NX
- 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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Connect with Emulex

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