EMULEX®

CONNECTIVITY
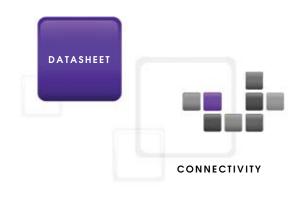
OneConnect®
OCe11101-N

High performance 10Gb Ethernet Network Adapter

SIMPLIFIED
NETWORKING,
HIGH DENSITY
SERVER
DEPLOYMENTS
IN HYPER-SCALE
ENVIRONMENTS

OneConnect®

OneCommand®

Optimized Network Connectivity

The OCe11101-N is a high performance, single-port network adapter for 10Gb Ethernet (10GbE) networks. Protocol offload for stateless TCP/IP and TCP Chimney provides maximum bandwidth with minimum use of CPU resources.

Greener data centers
The Emulex family of OCe11101-N network adapters 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 machines (VMs) per CPU, and reduces the number of servers required to support data center demands.

Virtualized I/O
New multi-core servers are enabling much higher virtualization ratios. OneConnect adapters support NetQueue for VMware and Virtual Machine Queue (VMQ) for Microsoft Windows Server 2008 Hyper-V to optimize performance and provide full 10Gb/s bandwidth per port.

Universal Multi-Channel
OneConnect Universal Multi-Channel (UMC) allows multiple PCI functions to be created. Each network interface card (NIC) function is presented to the operating system or hypervisor as a physical port with a separate MAC address and user-assigned bandwidth. This enables a single adapter port 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. 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 it becomes available with hypervisors.

Key Features

Superior performance
- TCP/IP stateless offloads
- TCP Chimney Offload

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

Easy to deploy and manage with OneCommand™ Manager application
- One management console for network and storage
- Integrated management of Emulex Universal Converged Network Adapters (UCNAs) and Host Bus Adapters (HBAs)
- Over 12 million ports administered with Emulex management software

Key Benefits

Optimized for network consolidation
- Maximizes I/O bandwidth with high-performance 10GbE port
- Multiple PCI NIC functions
- Same firmware, drivers and management as OneConnect 10GbE blade and LAN on motherboard (LOM) solutions

Optimized for server virtualization with vEngine™ technology
- SR-IOV support improves I/O performance with virtual server deployments
- Support for NetQueue for VMware and VMQ for Hyper-V optimize performance for virtualized servers
- More VMs per server with full TCP offloads

Enterprise-ready
- Backed by field-proven Emulex reliability and support

OneConnect OCe11101-N

High-performance 10Gb Ethernet Network Adapter

Simplified Management

OneCommand Manager application

The OneCommand Manager application enables centralized management of Emulex OneConnect network adapters, UCNAs and HBAs throughout the data center from a single 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 OCe11101-N an ideal solution for 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)
· IEEE 802.1q (VLAN)
· IEEE 802.1p (QoS/CoS)
· IEEE 802.3ad (Link Aggregation)
· IEEE 802.3x (Flow Control)
· PHP hot plug-hot swap

Architecture

· Single-port, 10Gb/s Ethernet Link speed
· PCIe Express 2.0 (x4, 5GT/s), MSI-X support
· Integrated data buffer and code space memory

Ethernet Features

· IPv4/IPv6 TCP, UDP checksum offload;
  Large Send Offload (LSO); Receive Side Scaling
  (RSS); TCP Segmentation Offload (TSO);
  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, VT-d / IOMMU support

I/O Virtualization

· PCI-SIG SR-IOV compliant
· 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
· CentOS
· Ubuntu
· FreeBSD

Hardware Environments

· x86, x64 and PPC processor families

Interconnect

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

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 21CFR (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
· EMC Directive 2004/108/EEC (CE Mark)
  - EN55022, Class A
  - EN55024
· Australian EMC Framework (C-Tick Mark)
  - AS/NZS CISPR22, Class A
· VCCI (Japan), Class A
· KCC (Korea), Class A
· BSMI (Taiwan), Class A
· EU RoHS Compliant (Directive 2002/95/EC)
· China RoHS Compliant

Ordering Information

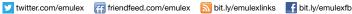· **OCe11101-NM**
  - Single-port, 10GBASE-SR (short reach optical)
· **OCe11101-NX**
  - Single-port, 10GBASE-CR (direct attach copper)

Some of these products may not be available in the U.S.
Contact your supplier for more information.

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