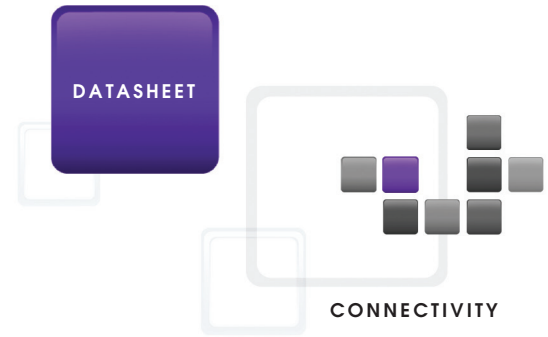


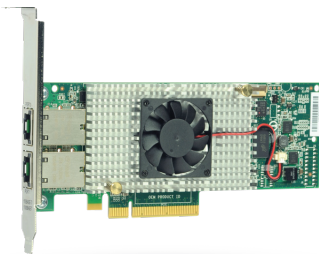


Emulex OneConnect™ OCe11102-NT

10 Gigabit Ethernet 10GBASE-T Network Adapter



**SIMPLIFIED
NETWORKING,
TRUSTED SAN
INTEROPERABILITY
AND INCREASED
BUSINESS
AGILITY**



The OCe11102-NT network adapter is a member of the Emulex OneConnect 10Gb/s Ethernet (10GbE) Universal Converged Network Adapter (UCNA) family. Ideally suited for high-performance networks, the dual-port OCe11102-NT is optimized for multi-core, virtualized servers.

10GbE Twisted Pair Connectivity

Based on the IEEE 10GBASE-T standard, the OCe11102-NT enables server connectivity with twisted pair cables over distances up to 100 meters (330 ft). Using industry-standard RJ45 connectors, the OCe11102-NT is compatible with network cabling that is already deployed in many data centers.

Backward Compatible with 1GbE

The OCe11102-NT is backward compatible with 1Gb/s Ethernet (1GbE). Data centers planning to upgrade their 1GbE network to 10GbE can future proof their investment with the OCe11102-NT, which will auto-negotiate to connect with 1GbE and 10GbE switch ports.

Optimized Performance

Full TCP/IP protocol offload, including stateless TCP/IP and TCP Chimney, provides maximum bandwidth with minimum use of CPU resources.

Virtualized I/O

OCe11102-NT adapters support VMware NetQueue and Microsoft VMQ for multi-core servers, enabling much higher virtualization ratios and full 10b/s bandwidth per port.

Universal Multi-Channel

OneConnect Universal Multi-Channel allows 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 to provide specialized NIC functions for different uses, such as payload traffic, guest migration and console management for virtualized servers.

Key Features

Superior performance

- TCIP/IP stateless offloads
- TCP Chimney Offload

Easy to deploy and manage with OneCommand™ Manager application

- One management console for network and storage adapters throughout the data center
- Integrated management of Emulex 10GbE Network Adapters and Host Bus Adapters (HBAs)

Key Benefits

Optimized for server virtualization

- Support for VMware NetQueue and Microsoft Virtual Machine Queue (VMQ) delivers full 10Gb bandwidth per port
- More VMs per server with protocol offload vEngine™ technology
- Single Root I/O Virtualization (SR-IOV) improves virtual server I/O performance

Enterprise-ready

- Emulex OneConnect 10GbE adapters have been qualified by 9 of the top 10 server and storage OEMs
- Hardware parity, CRC, ECC and other advanced error checking
- Backed by field-proven Emulex reliability and support



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SPECIFICATIONS

Single Root I/O Virtualization

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.

Advanced error checking

End-to-end data protection with hardware parity, CRC, ECC and other advanced error checking and correcting ensure that data is safe from corruption.

OneCommand Manager application

Emulex OneCommand Manager (OCM) enables comprehensive control of Emulex LightPulse® Fibre Channel HBAs and OneConnect network adapters from a centralized management console, helping to unify and simplify management. The graphical user interface (GUI) and command line interface (CLI) options enable IT managers to streamline administrative tasks through automated and batch operations. Emulex also offers the OneCommand Manager plug-in for VMware that integrates adapter management functions directly into the VMware vCenter console.

Network boot

Support for Preboot eXecution Environment (PXE) makes the OCe11102-NT an ideal solution for diskless deployments.

Standards

- PCI Express base spec 2.0
- PCI Bus Power Management Interface, rev. 1.2,
- Advanced Error Reporting (AER)
- IEEE 802.3ae (10GBASE Ethernet ports)
- IEEE 802.1q (virtual LANs)
- IEEE 802.3ad (link aggregation)
- IEEE 802.3x (flow control)
- IEEE 802.1p (quality/class of service)
- PHP hot plug-hot swap

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 stateless TCP offload
- IPv4 TCP Offload Engine (TOE), TCP Chimney Offload
- UDP checksum offload
- Large Send Offload (LSO)
- Large Receive Offload (LRO)
- Microsoft Receive Side Scaling (RSS)
- Linux Scalable I/O
- VLAN tag insertion and extraction
- Jumbo frames up to 9000 Bytes
- Preboot eXecutive Environment (PXE) 2.0 network boot support
- Interrupt coalescing
- Load balancing and failover support
- Adapter Fault Tolerance (AFT)
- Switch fault tolerance (SFT)
- Adaptive load balancing (ALB)
- Link aggregation
- VMware NetQueue v2
- Microsoft VMQ

Comprehensive OS Support

- Windows Server 2008, Windows Server 2003
- Red Hat Enterprise Linux Server
- Novell SUSE® Linux Enterprise Server
- VMware ESX
- Oracle Solaris

Hardware Environments

- x86, x64 and PPC processor families
- Sun SPARC servers

Interconnect

- Connectors: IEC 60603-7 8 Position 8 Contact (8P8C), commonly known as RJ45
- Cables
- Cat 6: up to 55m
- Cat 6a: up to 100m

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

- 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

Related OneConnect Products

- **OCe11102-IT** 10GBASE-T iSCSI Adapter
- **OCe11102-NX** Direct Attach Copper Network Adapter
- **OCe11102-NM** SR Optical Network Adapter
- **OCe11102-IX** Direct Attach Copper iSCSI Adapter
- **OCe11102-IM** SR Optical iSCSI Adapter
- **OCe11102-FX** Direct Attach Copper FCoE CNA
- **OCe11102-FM** SR Optical FCoE CNA

Ordering Information

- **OCe11102-NT** 10GBASE-T Network Adapter

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