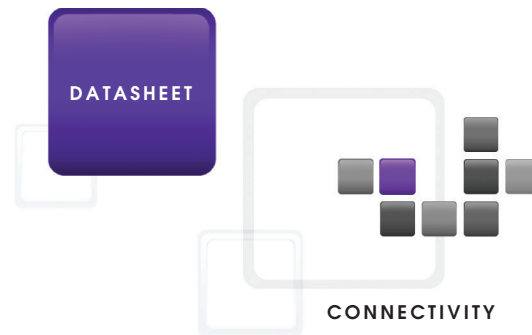




OneConnect™ OCe11102-IT

10 Gigabit Ethernet 10GBASE-T iSCSI adapter



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

The Emulex OCe11102-IT is a single-chip, high-performance 10 Gigabit Ethernet (10GbE) adapter that consolidates traffic for networking and iSCSI storage. A member of the Emulex OneConnect™ Universal Converged Network Adapter (UCNA) family, the OCe11102-IT iSCSI adapter supports a common 10GbE infrastructure for networking and storage, reducing capital expense (CapEx) for adapters, switches and cables, and operational expense (OpEx) for power, cooling and IT administration.

Optimized Network and Storage Connectivity

10GbE twisted pair connectivity

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

iSCSI offload

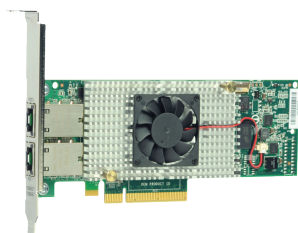
The OCe11102-IT iSCSI adapter supports iSCSI offload, providing performance that is superior to iSCSI solutions based on software initiators and standard Network Interface Cards (NICs).

1GbE compatibility

The OCe11102-IT is backward compatible with 1Gb/s Ethernet (1GbE) and can be used with both 10GbE and 1GbE network switches and iSCSI storage arrays. Data centers that have qualified 1GbE iSCSI solutions can deploy servers with OCe11102-IT adapters and optimize performance with full protocol offload. The OCe11102-IT will also work seamlessly if the iSCSI infrastructure is upgraded to 10GbE.

Boot from LAN/SAN

OCe11102-IT adapters support boot from SAN using an iSCSI hardware device. Boot targets and parameters are easily set with boot management software that runs on the OCe11102-IT adapter.



Key Features

One platform for network and storage connection

- 10Gbps Ethernet and iSCSI offload
- Simplifies I/O hardware choices for IT managers

Superior performance

- TCP/IP stateless offloads
- iSCSI offload performance supports up to 50% more virtual machines per server than software initiator solutions

Energy-efficient design

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

Easy to deploy and manage with OneCommand™

- One management console for network and storage
- Integrated management of UCNA's and Host Bus Adapters (HBAs)
- Over 7 million ports administered with Emulex management software

Key Benefits

Maximum return on investment

- Converges network and storage I/O with high-performance 10GbE connectivity
- One network infrastructure reduces CapEx
- One management console reduces OpEx
- Leverages existing IT investments

Optimized for server virtualization with Emulex vEngine™ technology

- More virtual machines (VMs) per server with TCP/IP and iSCSI offloads

Enterprise-ready

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



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SPECIFICATIONS

Enterprise iSCSI

The OneConnect Enterprise iSCSI solution includes support for IEEE Data Center Bridging (DCB) standards for optimum performance. Priority Flow Control (PFC) is used to insure a consistent stream of data between servers and storage arrays. Quality of Service (QoS) and Enhanced Transmission Selection (ETS) support protocol priorities and allocation of bandwidth for iSCSI and IP traffic.

Universal Multi-Channel

OneConnect Universal Multi-Channel (UMC) allows multiple PCI functions to be created on each adapter port. With the OCe11102-IT adapter, each port can present one iSCSI function and three NIC functions to the operating system or hypervisor.

Simplified Management

OneCommand Manager

OneCommand™ Manager provides centralized management of Emulex One Connect UCNAs and HBAs throughout the data center from a centralized management console. Emulex also offers the OneCommand Manager plug-in for VMware that integrates adapter management functions directly into the VMware vCenter console.

Highest Performance and Reliability

More virtual machines per server with vEngine technology

Protocol offloads for TCP/IP and iSCSI enable up to 50% more VMs per server, providing greater cost savings for server virtualization.

Green data centers

Protocol offload enables efficient use of computing resources, supports more 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 and other advanced error checking and correcting ensure that data is safe from corruption.

Controller

- BladeEngine 3

Standards

- RFC 3720 iSCSI, RFC 4171 iSNS, RFC 4544 iSCSI MIB, RFC 4545 IP Storage User Identity
- 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)
- IEEE 802.1Qaz (Enhanced Transmission Selection)
- IEEE 802.1Qaz (Data Center Bridging Capabilities Exchange)
- IEEE 802.1Qbb (Priority-based Flow Control)
- IEEE 802.1ab (Link Layer Discovery Protocol)
- 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 TCP, UDP checksum offload; Large Send Offload (LSO); Large Receive Offload; Receive Side Scaling (RSS); TCP Segmentation Offload (TSO); IPv4 TCP Chimney Offload
- VLAN insertion and extraction
- Jumbo frames up to 9000 Bytes
- Preboot eXecution Environment (PXE) 2.0
- Interrupt coalescing
- Load balancing and failover support including adapter fault tolerance (AFT), adaptive load balancing (ALB), teaming support and IEEE 802.3ad

iSCSI Features

- Target discovery methods
- Authentication modes
- INT 13 Boot

Comprehensive OS Support

- Windows Server
- VMware ESX
- Red Hat Enterprise Linux Server
- Novell SUSE® Linux Enterprise Server

Hardware Environments

- x86, x64 processor family

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

- Low profile with standard bracket (low-profile bracket 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

North America:

- FCC Class A
- UL/CSA Recognized

Europe:

- CE Mark
- EU RoHS compliant
- TUV Bauart Certified

Japan:

- VCCI Class A

Taiwan:

- BSMI Class A

Korea:

- MSIP (formally KCC/MIC) Class A

China:

- China RoHS Compliant

(Please refer to the product page on www.emulex.com for further details)

Related OneConnect Products

- OCe11102-NT 10GBASE-T Network 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-IT
- 10GBASE-T iSCSI Adapter



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