

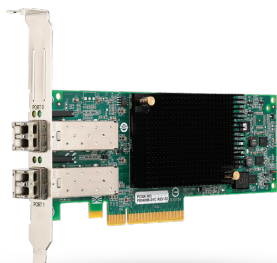


OneConnect™

OCe10102-FX-C

High-performance 10Gb/s FCoE Converged Network Adapter for Cisco® UCS C-Series Rack Mount Servers: C200M1, C210M1, C250M1

UNIFIED
DATA CENTER,
SIMPLIFIED
NETWORKING,
AND AMPLIFIED
VIRTUALIZATION



OCe10102-FX-C
Cisco Part No. 74-6927-01

Overview

The Emulex OCe10102-FX-C is a high-performance 10Gbps Fibre Channel over Ethernet (FCoE) adapter that consolidates traffic for networking, Fibre Channel and FCoE storage for Cisco UCS C-Series Rack Mount servers. The OCe10102-FX-C FCoE adapter supports a common 10 Gigabit Ethernet (10GbE) infrastructure for unified networking and storage, extends Cisco's standards-based unified network fabric, and reduces capital expense (CapEx) for adapters, switches and cables, and operational expense (OpEx) for power, cooling and IT administration.

Optimized Network and Storage Connectivity for Cisco's Unified Computing System™

FCoE offload

The OCe10102-FX-C FCoE adapter supports FCoE offload using the same field-proven Emulex drivers that work with Cisco-branded Emulex LightPulse® Fibre Channel Host Bus Adapters (HBAs) and CNAs.

10 Gigabit Ethernet offload

New multi-core server platforms, server virtualization and high-demand applications are driving the need for low-latency, high-bandwidth networks. The OCe10102-FX-C adapter meets these requirements with full 10GbE network performance using an 8-lane PCI Express Gen 2 architecture and support for stateless TCP/IP and TCP Chimney offloads.

Boot from LAN/SAN

Fibre Channel SAN and Preboot eXecutive Environment (PXE) boot support make the OCe10102-FX-C an ideal solution for Cisco UCS C-Series Rack Mount Servers.

Key Features

Migration path to unified network and storage

- Enhanced Ethernet convergence with high-performance FCoE protocol offload
- Protects investments in existing server, network, storage and facilities assets
- Consolidates the data center and simplifies I/O hardware choices

Superior performance for virtualized environments

- FCoE offload, TCIP/IP stateless offloads and TCP Chimney offload
- More virtual machines (VMs) per server with vEngine™ technology
- Scalable Fibre Channel connectivity for server virtualization and large data-set workload environments

Simplified and streamlined management with Emulex OneCommand Manager™

- Consolidated network and storage infrastructure without changing management domains
- Integrates with Cisco UCS Manager to centralize configuration and management
- Over 7 million ports administered with Emulex management software

Key Benefits

Maximum return on investment

- One network infrastructure reduces CapEx
- One management console reduces OpEx
- Leverages existing investments in Fibre Channel

Infrastructure Simplification

- Converges network and storage I/O with high-performance 10GbE connectivity
- Server and network provisioning with a "wire once" deployment model
- Reduced network complexity

Enterprise-ready

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



OneConnect™



OneCommand™

OneConnect™ OCe10102-FX-C

High-performance 10Gb/s FCoE CNA for Cisco® UCS C-Series

Highest Performance for Virtualization and Database

Enterprise-ready

Leveraging 10 generations of advanced, field-proven HBA technology, the Emulex OneConnect family meets the robust interoperability and reliability requirements of corporate data centers.

More virtual machines per server with vEngine technology

Protocol offloads for TCP/IP and FCoE enable more VMs per server, providing greater cost savings for server virtualization.

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 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.

Single Software Stack: Driver and Management Interface

OneCommand Manager application

The OneCommand Manager application provides centralized management of Emulex OneConnect Universal CNAs (UCNAs) and LightPulse® HBAs and CNAs 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 drives administration efficiency.

Quality of service

Using the OneCommand Manager application, administrators can allocate portions of the 10Gb Ethernet bandwidth to network or storage traffic.

Streamlined installation

A single installation of drivers and applications for Windows servers eliminates multiple reboots and ensures that each component is installed correctly and OneConnect UCNAs are ready to use.



UCS C-Series rack mount servers

OneConnect™ OCe10102-FX-C

High-performance 10Gb/s FCoE CNA for Cisco® UCS C-Series

SPECIFICATIONS

Standards

- ANSI INCITS T11 FC-BB-5 2.0, FC-PI-2, FC-GS-4, FC-TAPE, and FCP-3
- 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)
- Enhanced Ethernet (draft): Enhanced Transmission Selection, ETS (P802.1Qaz); Priority-based Flow Control, PFC (P802.1Qbb); Data Center Bridging Capabilities eXchange Protocol, CIN-DCBX and CEE-DCBX (P802.1Qaz)
- 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

FCoE Features

- Common driver for UCNAs and HBAs
- N_Port ID Virtualization (NPV)
- Support for FIP and FCoE Ether Types
- Fabric Provided MAC Addressing (FPMA) support
- 1024 concurrent port logins (RPIs)
- 2048 active exchanges (XRIs) per port

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
- Preboot eXecutive 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 and IEEE 802.3ad

Comprehensive OS Support

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

Hardware Environments

- x86, x64 processor family

Interconnect

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

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

- Class 1 Laser Product per DHHS 21CFR (J) and EN60825-1
- UL recognized to UL 60950-1
- CUR recognized to CSA22.2, No. 60950-1-07
- Bauart-certified to EN60950-1
- 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

- The Emulex OCe10102-FX-C for Cisco UCS C-Series Rack Mount Servers is available from Cisco. To order, use Cisco Part Number **74-6927-01**.



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