EMULEX®

CONNECTIVITY

Dual-Port 10Gb Integrated FlexFabric Adapter for HP ProLiant BladeSystem Gen8 Servers

HP FlexFabric 10Gb 2-port 554FLB FlexibleLOM (HP Part# 647586-B21)

SIMPLIFIED NETWORKING, TRUSTED SAN INTEROPERABILITY AND INCREASED BUSINESS AGILITY

HP 554FLB FlexibleLOM

Overview

The HP FlexFabric 10Gb Ethernet 2-port 554FLB FlexibleLOM is available as a converged LAN on Motherboard (LOM) for HP c-Class ProLiant BladeSystem Gen8 servers.

Based on the Emulex OneConnect® Universal Converged Network Adapter (UCNA) technology, the HP 554FLB FlexibleLOM supports Transmission Control Protocol/Internet Protocol (TCP/IP) and Fibre Channel over Ethernet (FCoE) or accelerated iSCSI connectivity concurrently with high-performance protocol offloads that optimize server efficiency and maximize server virtualization ratios.

Emulex OneConnect UCNA technology fully supports HP's FlexFabric Converged Infrastructure, a next-generation, highly scalable data center fabric architecture and a technology layer in the HP Converged Infrastructure architecture.

Optimized Network Connectivity

Lower cost—HP 554FLB FlexibleLOMs can save up to 98% on adapter cards, switch ports and cables needed to support network and storage traffic.

Support for converged networks with HP Virtual Connect—HP Virtual Connect provisions Local Area Network (LAN) and Storage Area Network (SAN) connectivity for BladeSystem server blades through administration of Media Access Control (MAC) and World Wide Port Names (WWPN) addresses. This allows server administrators to independently manage blade servers and their connectivity, maintaining high-availability connections and securely administering MAC addresses and WWPNs for each server.

Support for HP Virtual Connect FlexFabric—HP 554FLB FlexibleLOMs support network convergence with HP Virtual Connect FlexFabric. Each physical port is virtualized as three NIC ports and one FCoE or iSCSI port.

Support for HP Virtual Connect Flex-10—HP 554FLB FlexibleLOMs also support Virtual Connect Flex-10 that allows each 10Gb port to be divided into four physical NICs to optimize bandwidth allocation for virtualized servers.

Key Features

One platform for network and storage connection

- Simplifies I/O hardware choices for IT managers

Multiple protocol offloads for optimum server efficiency

- Stateless TCP/IP
- TCP Offload Engine (TOE)
- FCoE or accelerated iSCSI
- Provides (up to) eight connections to network and storage without the need for add-in mezzanine cards

Superior performance

- Full 20Gbps bidirectional Ethernet bandwidth per port

Energy-efficient design

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

Easy to deploy and manage

- One management console for network and storage adapters
- HP Insight Control suite with enhanced Integrated Lights-Out 3 (iLO 3) remote management
- Centralized enterprise I/O management with Emulex OneCommand® Manager

Key Benefits

Optimized for convergence

- Maximizes I/O consolidation with high-performance 10Gb ports
- One network and management infrastructure reduces capital (CapEx) and operating expenses (OpEx)
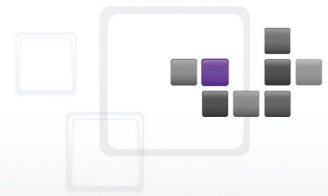- Leverages existing IT investments

Enterprise-ready

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

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SPECIFICATIONS

Simplified Management

OneCommand Manager application—The OneCommand Manager application provides centralized management of HP Storageworks and FlexFabric CNAs and Fibre Channel (FC) HBAs from Emulex 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) to optimize administration efficiency.

Highest Performance and Reliability

Lower power and cooling—HP 554FLB FlexibleLOMs can reduce the number of adapter cards and switches, resulting in savings of up to 40% for power and cooling.

Enterprise-ready—Leveraging ten generations of advanced, field-proven FC HBA technology, HP FlexFabric CNAs are based on the Emulex OneConnect architecture and meet the robust interoperability and reliability requirements of corporate data centers.

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 (BE3)

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 (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, 10Gbps Ethernet link speed
· PCIe Express 2.0 (x8, 5GTps), MSI-X support
· Integrated data buffer and code space memory

FCoE Features

· Common driver for HP FCoE CNA and Fibre Channel HBAs from Emulex
· N_Port ID Virtualization (NPIV)
· Support for FIP and FCoE Ether types
· Fabric Provided MAC Addressing (FPMA) support
· 1024 concurrent port logins (RPIs)
· 1024 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 (8000 bytes for ports using FCoE)
· 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 and IEEE 802.3ad

Accelerated iSCSI Features

· Target discovery methods
· Authentication modes
· INT 13 Boot

Comprehensive OS Support

· Microsoft Windows Server
· VMware ESX
· Red Hat Enterprise Linux Server
· Novell SUSE Linux Enterprise Server

HP FlexFabric Support

· One FCoE or iSCSI function and up to three NIC functions per port
· Bandwidth in 100Mbps increments

HP Flex-10 Support

· Up to four NIC functions per port
· Bandwidth in 100Mbps increments

Interconnect Compatibility

· HP 10Gb Flex-10 and FlexFabric Virtual Connect module
· ProCurve 6120XG Blade Switch
· HP 10Gb Pass-Thru Module
· All currently shipping Virtual Connect, switch, and pass-thru modules with 1Gb downlinks

Servers

· ProLiant BL460c Gen8

Ordering Information

· HP Part Number 647586-B21

OneConnect™   OneCommand™

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