



HP 4Gb Virtual Connect Fibre Channel Module

Overview

The Virtual Connect Fibre Channel Module is a new class of blade interconnect that simplifies server connections by cleanly separating the server enclosure from storage area networks (SANs). It also reduces cables without adding switches to the domain, and allows administrators to move, add or change servers in just minutes.

The standards-based Virtual Connect Fibre Channel Module looks like a pass-thru device to the SAN, yet it provides all the key benefits of integrated switching including high-performance 4 gigabit (Gb) auto-negotiating ports and compatibility with many brands of SAN switches.

The Virtual Connect Fibre Channel Module also works with the Virtual Connect Ethernet Module to manage server profiles which can be deployed anywhere within a Virtual Connect domain. Servers come up quickly and easily without having to coordinate with network administrators in advance.

Features

HP Virtual Connect Fibre Channel Module offers high-performance connectivity to the data center and makes server administration more efficient. Transparently move, add, and change servers inside the BladeSystem domain to external networks.

- Performance
 - Four 4Gb/s Auto-negotiating Fibre Channel uplinks can be connected to external SAN switches;
 - Sixteen 4Gb/s Auto-negotiating Fibre Channel downlink ports provide maximum HBA performance;
 - HBA Aggregation on uplinks ports using INCITS T11 standards-based N_Port ID Virtualization (NPIV) technology;
 - Extremely low latency throughput provides switch-like performance.
- Management
 - Managed in concert with the Virtual Connect Ethernet Module;
 - Optional HTTP interface is ready out of the box, allowing for easy setup and management by the server administrator;
 - Full-featured management interface accessible via the HP c-Class Onboard Administrator and the Virtual Connect Ethernet Module.

- Options
 - HP 1/10Gb Virtual Connect Ethernet Module;
 - Supports all HP c-Class Server HBAs.
- Virtual server profiles
 - Ability to pre-configure server I/O connections;
 - Ability to move, add, or change servers on the fly;
 - Once defined, local area network (LAN) and SAN Administrators do not have to be involved in server changes.

Ideal for...

- Enterprise and data center customers
 - Integrated management and security;
 - Increased operational efficiencies with pre-defined virtual server profiles;
 - Efficient server sparing by applying profiles to spares with a click of the mouse;
 - Seamless integration, non-disruptive connectivity, and 4Gb/s uplinks to the data center SAN.
- Mid-sized data
 - Designed with server administrators in mind to quickly bring up servers on the SAN and LAN;
 - Scalable virtual domains eliminate the need for multiple switches in the SAN fabric.
- Remote sites
 - Apply server profiles remotely from a central location. No need to send specialists on site to bring up new servers or spares;
 - Pre-design and configure an enclosure prior to installation.

Key benefits

- Ease of operations and deployment
 - Enclosures can be pre-configured for easy, drop-in server installations either locally or in a remote site;
 - Servers are change-ready – add, move, replace and upgrade without affecting the LAN;
 - The standards-based Virtual Connect Fibre Channel Module is compatible with all other NPIV standards-based switch products. This provides high-performance, end-to-end connections with many brands of core switches.
 - The Virtual Connect Fibre Channel Module appears as a pass-thru device to the network. Any changes to the server are transparent to its associated network to cleanly separate the servers from the SAN and relieve SAN administrators from server maintenance.

- Enterprise class performance and availability
 - 4Gb/s downlink connections to server HBAs , and up to 16Gb/s total uplink bandwidth provides high-performance bandwidth to data center networks;
 - High-availability features such as dual redundant Virtual Connect Fibre Channel Modules assure maximum uptime;
 - Virtual Connect server profiles are shared and continually updated between high-availability pairs.
- Security and management
 - No extra software to purchase. The embedded Virtual Connect Manager runs on each Virtual Connect Ethernet Module. Administrators can define available SANs, LANs and server connections, and manage server connection profiles;
 - Role-based privileges for 'administrator' account defined by default and can be modified by the BladeSystem administrator;
 - Additional role-based privileges for user accounts can be created by domain, server, networking and storage.

Specifications

Performance and Form Factor	
Blade Type	Single bay
Performance	4 Gb/sec line speed, full duplex 1.2 μ sec latency Maximum Frame Size 2112 Byte payload Buffer to buffer flow control management Packet prioritization
Port Configuration	16 Internal 4Gb Downlinks presented as F-Ports 4 External 4Gb Uplinks presented as N-Ports
Media Types	Small Form-Factor Pluggable (SFP) laser. 1/2/4Gb short wave up to 500 m (1,640 ft.) and 1/2/4Gb long wave up to 10 km.
Management and Protocols	
Management Features	Management via Onboard Administrator Telnet, SNMP (FC Management MIB), HP Systems Insight Manager, HP Storage Essentials HTTP HTTPS SSL
High Availability Features	Mirrored profile database

	Multi-path heartbeat between redundant modules
Protocols Supported	NCITS T11 N_Port ID Virtualization (NPIV)
Deployment	
Max blades per Enclosure	4
Options Available	HP 1/10Gb Virtual Connect Ethernet Module
Warranty - year(s) (parts/labor/onsite)	1-1-1

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