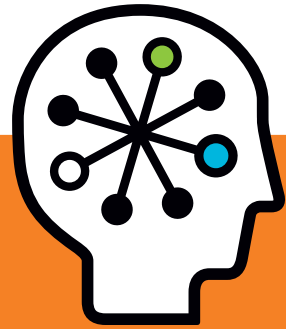# HP Virtual Connect 8Gb 24-Port Fibre Channel Module for BladeSystem c-Class

Data sheet

Simplify your environment. Make your data centre change-ready with a new class of blade interconnect.

The HP Virtual Connect 8Gb 24-Port Fibre Channel Module is a new class of blade interconnect that simplifies server connections by cleanly separating the server enclosure from the storage area network (SAN). It simplifies your networks by reducing cables without adding switches to manage, and allows you to change servers or move workloads in just minutes.

With Virtual Connect, your business can reduce costs and simplify connections to your SAN and local area network (LAN). You can now easily consolidate your network connections and enable your administrators to add, replace, and recover server resources on the fly.

The standards-based Virtual Connect 8Gb 24-Port Fibre Channel Module looks like a pass-thru device to the network, yet provides all the key benefits of integrated switching, including high-performance 8Gb uplinks to the SAN. The integrated design frees up rack space, reduces power and cooling requirements, and reduces cables and small form-factor pluggables.

Key features and benefits

Ease of operation and deployment

The HP Virtual Connect 8Gb 24-Port Fibre Channel Module is designed for seamless operation with the Virtual Connect architecture.

- An easy-to-use HyperText Transfer Protocol (HTTP) interface with enhanced security features is ready out of the box. The module is designed for easy setup and management by the systems administrator.

- Enclosures can be pre-configured for easy, drop-in server installations, either locally or at a remote site.

- Servers are change ready. You can add, move, replace, and upgrade servers without affecting the SAN.

- The standards-based module is compatible with all other N_Port ID Virtualization (NPIV) standards-based switch products. This compatibility enables high-performance, end-to-end connections with your favourite brands of core switches.

- The module appears as a pass-thru device to the network. Any changes to the server are transparent to its associated network. This capability cleanly separates the servers from your SAN and relieves your SAN administrators from server maintenance.
- A fully integrated design saves cost, space, and cables, and simplifies management.

Enterprise-class performance and availability
Regardless of where it is deployed, the HP Virtual Connect 8Gb 24-Port Fibre Channel Module is designed to deliver enterprise-class performance and availability.

- Next-generation 8-Gb Fibre Channel interconnect enables greater performance and server consolidation.
- Eight SAN-facing ports and 16 server ports reduce oversubscription for high-throughput applications.
- Enhanced NPIV capability supports multiple virtual machines per server blade and provides a separate storage resource to each virtual machine – up to 255 per server blade.
- High-availability features, such as dual redundant Virtual Connect 8Gb Fibre Channel Modules, increase uptime.

Security and management
The embedded Virtual Connect Manager runs on each Virtual Connect Ethernet Module, simplifying security and management.

- You can define available SANs, LANs, and server connections and manage server connection profiles. Once connections are defined, LAN and SAN administrators don't have to be involved in server changes
- Role-based privileges for an administrator account are 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.
- Role-based security enables independent systems, LAN and SAN administration of Virtual Connect domains.

Virtual Connect Enterprise Manager
HP Virtual Connect Enterprise Manager (VCEM) is a management option for multiple BladeSystem enclosures configured with Virtual Connect. VCEM provides a central console that aggregates Virtual Connect resources, improves productivity, and enables faster response to changing data centre workload demands.

- Centrally manage individual and groups of Virtual Connect domains – supports up to 200 domains (maximum 800 enclosures/12,800 blade servers).
- VCEM repository enables efficient administration of 65,000 LAN and SAN addresses, and reduces the risk of conflicts.
- Group-based management of Virtual Connect domains increases infrastructure consistency and simplifies change management across multiple enclosures.
- Add, change, replace and failover servers across the data centre in minutes without impacting production LAN and SAN availability.
- VCEM is scalable across small and large data centres.

Ideal environments

Enterprise data centres
The HP Virtual Connect 8Gb 24-Port FC Module is a good fit with environments and applications, such as virtual machines, that require high bandwidth connections. It enables:

- Integrated management and security
- Increased operational efficiencies with pre-defined virtual server profiles
- Efficient server sparing by applying profiles to spares with the click of the mouse

Midsize data centres
In midsize data centres, the HP Virtual Connect 8Gb 24-Port Fibre Channel Module enables server administrators to quickly bring up servers on the LAN and SAN. Scalable virtual domains support multiple data centre enclosures.

Remote sites
The HP Virtual Connect 8Gb 24-Port Fibre Channel Module is also a good fit for remote sites with limited or no onsite IT staff. Administrators can apply server profiles remotely from a central location – so there's no need to send specialists onsite to bring up new servers or spares. Enclosures can be pre-designed and configured prior to installation.

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programmes to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or find us on the Web at **www.hp.com/go/ hpfinancialservices**.

HP Technology Services

HP Technology Services provides a broad spectrum of services to small and medium businesses and enterprise customers that encompass performance and availability services such as automated remote system monitoring and diagnosis, proactive mission-critical services, and support solutions for design, assessment, and deployment of the entire IT infrastructure – including HP and multi-vendor environments. For more information on these services, contact your HP sales representative or visit **www.hp.com/hps/support**.

For more information

For more information on the HP Virtual Connect 8Gb 24-Port Fibre Channel Module for BladeSystem c-Class, visit **www.hp.com/go/virtualconnect**.

HP Services

When technology works, business works.
The challenge of virtually every IT organisation is similar: to develop and maintain an agile, virtualised efficient server and network infrastructure that delivers the service levels your business needs. HP Technology Services offer a comprehensive portfolio of HP Care Pack Services to help design, deploy, manage, and support your blades-based virtualised environment.

Minimum recommended HP Care Pack services:
- Three-year, 4-hour response, 24x7 onsite hardware support
- Blades Infrastructure plus Enhanced Network installation and start up services

Enhanced service level HP Care Pack solutions:
- Three-year Support Plus 24 – integrated 24x7 hardware and software support
- Proactive Select – access to HP best-in-class technical consultants. Purchase service credits and obtain expertise when needed.

HP Care Pack Services can help you:
- Speed deployment to deliver faster ROI.
- Increase uptime and performance of server availability to your business.
- Detect and diagnose problems automatically, resulting in quick repairs that save time, money, and resources.

For more information, visit **www.hp.com/services/ bladesystem**.

HP Virtual Connect 8Gb 24-Port Fibre Channel Module for BladeSystem c-Class

Blade type	Single bay
Performance	8 Gbps line speed, full duplex 700 nSec latency 2112 byte payload Aggregate bandwidth up to 384 Gbps Buffer-to-buffer flow control management Packet prioritisation
Port configuration	16 internal 8-Gb, 2/4/8-Gb auto-negotiating server ports 8 external 8-Gb, 2/4/8-Gb auto-negotiating SFP+ SAN ports
Media types	1/2/4-Gb short-wave and long-wave B-series SFP transceivers 2/4/8-Gb short-wave and long-wave B-series SFP+ transceivers
Management and protocols	
Management features	Management and protocols Management via Onboard Administrator SNMP SMI-S Management via Virtual Connect Manager HP Systems Insight Manager (via SNMP and SMI-S) HP Storage Essentials (via SNMP and SMI-S)
High-availability features	Mirrored profile database Multi-path heartbeat between redundant modules
Protocols supported	NCITS T11 N_Port ID Virtualization (NPIV)
Deployment	
Options available	Virtual Connect Flex-10 Ethernet Module 1/10Gb-F Virtual Connect Ethernet Module 1/10Gb Virtual Connect Ethernet Module
Warranty (parts/labour/onsite)	1-year/1-year/1-year

Technology for better business outcomes

For more information, visit www.hp.com/go/virtualconnect