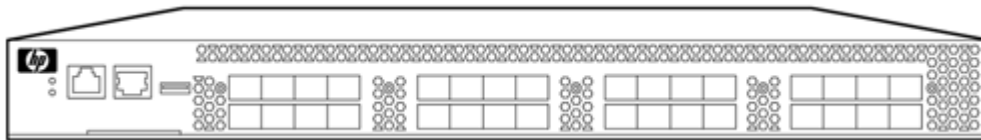


Overview

The HP 2408 FCoE Switch provides a reliable platform that helps reduce cable clutter, equipment acquisition costs, and operational costs associated with power consumption and cooling. The switch features a 1U form factor and low power consumption, delivering a "greener" data center.

The HP 2408 Switch features 8 Fibre Channel ports for 8 Gbit/sec performance along with 24 Ethernet ports for 10 Gbit/sec performance. The 10 Gbit Ethernet ports support Converged Enhanced Ethernet (CEE) which increase the reliability, efficiency, and scalability of Ethernet networks. These features allow support of multiple traffic classes over lossless Ethernet fabric, thus enabling consolidation of LAN, SAN, and cluster environments.

The consolidated SAN and LAN server ports and corresponding cables simplify configuration and cabling in server cabinets to reduce acquisition costs. With fewer components using power or requiring cooling, organizations can save significant operating costs as well.



HP 2408 FCoE CN Switch

Features and Benefits

Highlights

Fibre Channel performance:

- 1/2/4/8 Gbit/sec fibre channel auto sensing line speed
- 10Gbit Ethernet performance
- Full duplex

Unified Management

- Integrated FCoE and FC management
- Protects customers' FC investments without disrupting data center operations
- No need for new training or learning of new tools

Increased Consolidation

- Reduces number of server ports, cables, and switch ports
- Reduces CapEx and OpEx while simplifying data center configurations
- Reduces power consumption

Investment Protection

- Built from the same HP Fabric OS that supports the B-series 4Gb and 8Gb product family
- Backward compatibility with existing B-Series family
- Leverages existing B-Series management tools



Models

HP 2408 FCoE CN Switch	HP 2408 FCoE Base Converged Network Switch	AP801A
	HP 2408 FCoE Power Pack+ Converged Network Switch	AP802A



Product Highlights

Fibre Channel ports Eight Fibre Channel universal, self configuring (E, F, M, and FL) ports; auto-sensing 1, 2, 4, or 8 Gb. Can be programmed to fixed 1 Gb, 2 Gb, 4Gb, or 8Gb speed.

Converged Enhanced Ethernet (CEE) ports 24 ports with 10 Gigabit Ethernet

FCoE Features Complete T11 FCoE entity and FCoE bridging

The FCoE translation entity built into the hardware engine provides:

- Detection of Fibre Channel encapsulation and redirection of FCoE fabric login frames
- Encapsulation of Fibre Channel frames in FCoE Ethernet packets (FC > FCoE)
- Extraction of Fibre Channel frames from FCoE Ethernet packets (FCoE > FC)
- Mapping of Fibre Channel destination Virtual Fabrics and destination FC_ID to Ethernet Virtual LAN and destination MAC addresses

Fabric-Provided MAC Addresses (FPMAs) enable new Ethernet MAC addresses to be created using the FC_ID assigned by the fabric

CEE Features

- Data Center Bridging eXchange (DCBX)
- Priority-based Flow Control (PFC) - IEEE 802.1Qbb
- Enhanced Transmission Selection (ETS) - IEEE 802.1Qaz

Configuration support FCoE CN Switch will interoperate with 1Gb/s, 2Gb/s, 4 Gb/s, and 8 Gb/s B-Series SAN Switches running the firmware version defined in the SAN Design Guide: <http://www.hp.com/go/sandesignguide>

High-availability features ● Hot Code Load Activation

Advanced Fabric Services

- ISL Trunking (optional)
- Hardware Enforced Zoning
- Web Tools
- Enhanced Group Management (EGM)
- Fabric Watch (optional)
- SAN Network Manager (optional)

Manageability

- Web Tools
- Enhanced Group Management (EGM)
- OpenView
- API
- IP
- SNMP
- Radius



Product Highlights

Scalability

- The 2408 FCoE CN Switch scale to the maximum limits defined in the SAN Design Guide.
<http://www.hp.com/go/sandesignguide>

Media type

Fibre Channel media type: Hot-pluggable, Small Form Factor Pluggable (SFP) and SFP+, LC connector; Short-Wave Laser (SWL) and Long-Wave Laser (LWL); distance depends on fiber optic cable and port speed; supports SFP+ (2, 4, and 8 Gbit/sec) and SFP (1, 2, and 4 Gbit/sec) optical transceivers.

CEE media type: Hot-pluggable, 10 Gigabit Ethernet SFP+ supports any combination of Short-Reach (SR) and Long-Reach (LR) optical transceivers; copper twinax cables of one, three, or five meters.

Cabinet Support

- HP (22U, 36U and 42U) 9000 and 10000 G1 Series, (25U, 33U and 41U) HP System/e, and the new 42U HP 10000 G2 Series
NOTE: To order factory integration, add OD1 after the part number on your sales order.

Software Components

Frame Filtering

An ASIC based capability in the B-series family of switches that enables new applications and features. The switch now has the ability to "view" the first 64 bytes of the Fibre Channel frame. At this time, Frame Filtering enables advanced capabilities such as Advanced Zoning and Advanced Performance Monitoring.

Advanced Zoning

In the 8 Gb generation of switches, WWN Zoning and Access Control are enforced by hardware that provides the same simple administration previously enforced only with software. Administrators can organize a physical fabric into logical groups and prevent unauthorized access by devices outside the Zone.

Web Tools

Enables organizations to monitor and manage single Fibre Channel switches and small SAN fabrics. Tasks can be performed through a Java-capable Web browser from a standard laptop, desktop PC or workstation from any location within the enterprise.

EGM

Enhanced Group Management (EGM) is a FOS license that is included with all B-Series switches and enables multi-switch operations. It helps automate operations across multiple switches to save time and streamline repetitive operations, which are typically prone to error. EGM drives consistency across fabrics, while minimizing the risk associated with potential downtime due to configuration mismatches. EGM provides streamlined troubleshooting for more effective fabric monitoring and diagnosis.

Both Data Center Fabric Manager Professional and Enterprise enable EGM functionality. Customers have EGM functionality enabled within the hardware product and need only to make the decision around which management application is right for them - Data Center Fabric Manager Professional or Enterprise.



Product Highlights

Software Components, Optional

Power Pack+ Software Bundle Includes bundled license for:

- ISL Trunking
- Advanced Performance Monitoring
- Fabric Watch

ISL Trunking

For high performance enhanced Trunking, this optional license logically groups up to eight E-ports to provide a high bandwidth trunk between two switches. Each 8Gb switch needs its own license. The switch operating system views the trunk as a single, high bandwidth resource (up to 64 Gb) when routing connections between switches. Connections are load-balanced across the individual links, which comprise the logical trunk group.

Advanced Performance Monitor

This enabling technology helps administrators monitor and watch specific fabric metrics -- from a SID (Source ID) to a DID (Destination ID) -- so they can fine-tune and scale the fabric more efficiently. Plus, Advanced Performance Monitoring includes the ability for early warning detection of hot spots within the fabric, a powerful tool for maintaining overall balanced performance.

Top Talkers is a component of Advanced Performance Monitoring and tracks the top traffic flows for hosts and targets for a switch port or a switch. Top Talkers can help identify the ports that need certain Quality of Service (QoS) attributes or it can help determine portions of the physical topology that need reconfiguration.

Fabric Watch

Fabric Watch enables each switch to monitor the SAN for potential faults-and automatically alert network managers to problems before they become failures. Fabric Watch tracks a variety of SAN fabric elements, events, and counters. Monitoring fabric-wide events, ports, SFPs, and environmental parameters permits early fault detection and isolation as well as performance measurement. Each switch in the SAN needs its own Fabric Watch license.

SAN Network Advisor Professional

HP SAN Network Advisor Professional is a management application available at no-charge and comes with B-series SAN Switches and:

- Allows management of a single Fabric OS (FOS) fabric (up to a 1,000 switch ports) at a time
- Performs group switch management beyond the scope of Web Tools
- Does not offer management of the SN8000B 8-Slot or DC SAN Backbone Directors

It is targeted for SMB customers that use FOS based SAN fabrics and require a management solution for smaller SANs based on a single fabric.

SMB customers that initially start off with SAN Network Advisor Professional and have a small SAN environment may over time feel the need for an enterprise-class product (SAN Network Advisor Enterprise) as their environments start to grow in size and complexity, and as they start to uptake more enterprise-class functionality (such as Fibre Channel Routing, FCIP, etc.). A non-disruptive upgrade path is available from SAN Network Advisor Professional to SAN Network Advisor Enterprise.



Product Highlights

SAN Network Advisor Enterprise and Professional+

HP SAN Network Advisor Enterprise and Professional+ are the enterprise-class products that support FOS products as well as FOS and M-EOS products together. SAN Network Advisor Enterprise provides complete SN8000B 8-Slot Director and DC SAN Backbone Director management including enterprise-class features/environments such as FICON, Fibre Channel Routing, FCIP, adaptive networking, etc while HP SAN Network Advisor Professional+ provides the same feature set except for support for the SN8000B 8-Slot Director, DC SAN Backbone Director, and FICON.

HP SAN Network Advisor Enterprise delivers unprecedented scalability, up to 24 fabrics and 9,000 switch ports, while HP SAN Network Advisor Professional+ scales to 4 SAN Fabrics and 2560 switch ports. To accommodate growth, there is an upgrade available to SAN Network Advisor Enterprise from SAN Network Advisor Professional Plus.

Both offerings provide brand-new features including Adaptive Networking features for quality of service, ingress rate limiting and traffic isolation zones.



Service and Support, HP Care Pack, and Warranty Information

Warranty (1-1-1) Hardware Warranty - One-year on-site warranty, normal business hours, next business day response, installation not included.

NOTE: The hardware warranty covers firmware and embedded non-saleable software. Saleable software carries its own warranty, see below.

Software Warranty - HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery.

EXCLUSIVE REMEDY. The entire liability of HP and its suppliers and your exclusive remedy for software that does not conform to this Limited Warranty shall be the repair or replacement of the defective media. This warranty and remedy are subject to your returning the defective media during the warranty period to HP in the country in which you obtained the software.

HP Care Pack Services: Packaged server and storage services for increased uptime, productivity and ROI

When you buy HP server and storage products and solutions, it's also a good time to think about what levels of support you may need. Our portfolio of service options reduce deployment and management worries while helping you get the most out of your server and storage investments. We take a holistic approach to your environment, bridging servers, blades, storage, software and network infrastructures with our packaged HP Care Pack Services for servers and storage.

Protect your business beyond warranty

When it comes to robustness and reliability, standard computing equipment warranties have matured along with technology. Good news that can also create problems stemming from depending on standard warranties designed to only protect against product defects and some downtime causes. Using a standard approach to warranty uplifts, such as HP Care Pack Services, helps reduce downtime risks and provides operational consistency for mission-critical and standard business computing.

HP Care Pack Services: Upgrading or extending standard server and storage warranties cost effectively

HP Care Pack Services offer a standard reactive hardware and software support services suite sold separately, or combined with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of integrated proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition with HP Proactive Select, you can acquire the specific proactive constancy and technical services. HP Proactive Select menu offers a broad set of service options that you can mix and match depending on your specific requirements. Proactive service options include offers for server, storage, network, SAN device, software, environment and education services.

HP server and storage lifecycle support services offers a full spectrum of customer care-from technology support to complex migrations to complete managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education Services offer flexible, comprehensive training on to help your IT staff get the most out of your server and storage investments. HP Financial solutions extend innovative financing and cost-effective asset management programs-from purchase to equipment retirement.

Learn more: www.hp.com/services/servers and www.hp.com/services/storage

NOTE: Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at:
<http://www.hp.com/go/lookuptool>

Recommended HP Care Pack Services for optimal satisfaction with your HP product.

3-Year HP Support Plus 24



Service and Support, HP Care Pack, and Warranty Information

For a higher return on your server and storage investment, HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Improve uptime with responsive hardware and software services
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP software at a predictable cost
- Increase customer satisfaction-with no interoperability gaps

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EEE>

HP Enhanced Implementation Service for SANs

For customers who are building a new SAN or expanding their existing one, we offer the HP Enhanced Implementation Service for SANs. This provides complete design and implementation services for Fibre Channel, FCOE, FCIP, SAS and iSCSI SAN connectivity components. Covering all major SAN connectivity technologies including virtual as well as physical hosts, no competitor offers a more complete end to end SAN design and implementation service, ensuring comprehensive optimal SAN connectivity tailored to your specific environment.

- Ensures optimal SAN connectivity tailored to your specific environment.
- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces implementation time, impact and risk to your storage environment
- Helps ensure a successful implementation for complex deployments by providing HP project management

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=5981-8527EN&cc=us&lc=en>

HP Assessment Service for SANs

The HP Assessment Service for SANs offers customized technical and operational guidance to customers employing HP storage subsystems and the interconnecting storage area network (SAN) infrastructure. In a typical engagement, HP or one of our authorized business partners will perform a detailed discovery using HP's proprietary toolset to gain an understanding of the configuration of your storage devices and SAN topology.

The findings from this process will be compared to HP best practices and industry standards as defined by IT Service Management (ITSM) disciplines. The results of the evaluation will be quickly and efficiently processed into information you can leverage. This information, in the form of a comprehensive HP SAN Assessment report, will be summarized by HP or one of our authorized business partners with recommendations that are intended to improve availability levels and ongoing management of your storage and SAN environment.

- Recommendations to optimize your customer's SAN based on comprehensive discovery information
- Decrease the potential for unplanned downtime and encourage higher productivity by exposing single points of failure and other potential SAN configuration issues
- Clear documentation allows for optimal SAN management, more efficient future SAN implementations and lower IT staff involvement
- Service requires no SAN downtime and is easily adapted as a periodic review to help keep SANs performing efficiently as business evolves

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA1-2941ENW.pdf>



Service and Support, HP Care Pack, and Warranty Information

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: <http://www.hp.com/support>

HP Insight Remote Support software delivers secure remote monitoring and support for your HP Servers and Storage, 24 x 7, so you can spend less time solving problems and more time focused on your business. You can have your systems remotely monitored for hardware failure using secure technology that's been proven at thousands of companies around the world. In many cases, you can avoid problems before they occur.

Customer Technical Training

HP Education Services

In today's cost-conscious business environment, IT professionals, developers, consultants and users face an interesting challenge: how to keep up with the latest technologies and expand important skills while delivering profitable results on current projects. To help address this challenge, HP offers innovative training solutions that help keep you up-to-date on virtualization, server, storage, Insight Control, Citrix, Microsoft® and open source/Linux-related topics-while spending less time away from business-critical activities.

HP Service Awards

HP Technology Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction.

Additional Services Information

To learn more on HP ProLiant servers, HP BladeSystem servers and HP storage products, please contact your HP sales representative or HP Authorized Channel Partner. Or visit www.hp.com/services/proliant or www.hp.com/services/bladeSystem or <http://www.hp.com/hps/storage>



Family Information

Features	8/8 SAN Switch Base and 8/8 SAN Switch	8/24 SAN Switch Base	8/40 SAN Switch and 8/40 SAN Switch Power Pack+	8/80 SAN Switch and 8/80 SAN Switch Power Pack+	SN6000B 16Gb FC Switch and SN6000B 16Gb FC Power Pack+
Targeted Environment	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments
Fibre Channel Port Bandwidth	8Gbit/sec	8Gbit/sec	8Gbit/sec	8Gbit/sec	16Gbit/sec
Aggregate device bandwidth	128 - 384 Gbit/sec end-to-end	256 - 384 Gbit/sec end-to-end	384 - 640 Gbit/sec end-to-end	768 - 1280 Gbit/sec end-to-end	384 - 768 Gbit/sec end-to-end
OS Support	NOTE: Please Refer to SAN Design Guide http://www.hp.com/go/sandesign or http://www.hp.com/go/sandesignguide				
Storage system support	P9000/XP, 3PAR, P6000/EVA, P2000/MSA				
FC Ports	8 Enabled 24 Max	16 Enabled 24 Max	24 Enabled 40 Max	48 Enabled 80 Max	24 or 48 Enabled 48 Max
SFP	B-series	B-series	B-series	B-series	B-series
Advanced Trunking	Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade
Adaptive Networking	Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade
Form factor	1U	1U	1U	2U	1U
Zoning Software	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	No	No	Yes	Yes	Yes
Hot plug fans	No	No	Yes	Yes	Yes (integrated with power supply)

Features	2408 FCoE CN Switch and 2408 FCoE CN Switch Power Pack+	1606 Extension SAN Switch	Encryption SAN Switch
Targeted Environment	Workgroups, Departments	Data Centers	Data Centers
Fibre Channel Port Bandwidth	8Gbit/sec	8Gbit/sec	8Gbit/sec
Ethernet	10Gbit/sec Converged Enhanced Ethernet	1Gbit/sec Ethernet	N/A
Aggregate device bandwidth			512 Gbit/sec end-to-end
OS Support	NOTE: Please Refer to SAN Design Guide http://www.hp.com/go/sandesign or http://www.hp.com/go/sandesignguide		
Storage system support	P9000/XP, 3PAR, P6000/EVA, P2000/MSA		
FC Ports	8 Enabled 8 Max	4 or 16 Enabled 16 Max	32 Enabled 32 Max
Ethernet Ports	24 Enabled 24 Max	2 or 6 Enabled 6 Max	N/A



Family Information

SFP	B-series	B-series	B-series
Advanced Trunking	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Optional Upgrade
Adaptive Networking	No	Included with Power Pack+ or Optional Upgrade	Optional Upgrade
Form factor	1U	1U	2U
Zoning Software	Yes (Included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	Yes	Yes	Yes
Hot plug fans	Yes	Yes	

Features	SN8000B 8-Slot SAN Director Power Pack+	SN8000B 4-Slot SAN Director and 4-Slot SAN Director Power Pack+	DC SAN Backbone Director Power Pack+	DC04 SAN Director and DC04 SAN Director Power Pack+
Targeted Environment	Cloud Optimized Data Centers	Cloud Optimized Data Centers	Traditional Data Centers	Traditional Data Centers
Port Bandwidth	Up to 16Gbit/sec	Up to 16Gbit/sec	8Gbit/sec	8Gbit/sec
Aggregate device bandwidth	8.2 Tbit/sec end-to-end	4.1 Tbit/sec end-to-end	4.1 Tbit/sec end-to-end	2 Tbit/sec end-to-end
OS Support	NOTE: Please Refer to SAN Design Guide http://www.hp.com/go/sandesign or http://www.hp.com/go/sandesignguide			
Storage system support	P9000/XP, 3PAR, P6000/EVA, P2000/MSA			
Ports	Up to 512 SFP	Up to 256 SFP	Up to 512	Up to 256
SFP	B-series	B-series	B-series	B-series
Advanced Trunking	Included with Power Pack	Included with Power Pack or Optional Upgrade	Included with Power Pack+	Included with Power Pack+ or Optional
Adaptive Networking	Included with Power Pack	Included with Power Pack or Optional Upgrade	Included with Power Pack+	Included with Power Pack+ or Optional
Form factor	14U	9U	14U	9U
Zoning Software	Yes (included)	Yes (included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	Yes	Yes	Yes	Yes
Hot plug fans	Yes	Yes	Yes	Yes



Family Information

Features	Embedded SAN Switch for EVA4400	Brocade 8Gb SAN Switch for HP c-Class BladeSystem	B-Series Multi-protocol Router Blade	B-Series Multi-protocol Extension Blade
Targeted Environment	Workgroups, Departments	Workgroups, Departments	Data Centers	Data Centers
Port Bandwidth	8Gbit/sec	8Gbit/sec	4 Gbit/sec FC Ethernet: 1 Gbit/sec	8 Gbit/sec FC Ethernet: 1 or 10 Gbit/sec
Aggregate device bandwidth	320 Gbit/sec end-to-end	384 Gbit/sec end-to-end	N/A	N/A
OS Support	NOTE: Please Refer to SAN Design Guide http://www.hp.com/go/sandesign or http://www.hp.com/go/sandesignguide			
Storage system Support	P9000/XP, 3PAR, P6000/EVA, P2000/MSA			
Ports	20 external per EVA Controller Pair	4 or 8 external / 8 or 16 internal	18 ports: 16 FC and 2 Gigabit Ethernet	16 8Gb FC and 10 1GbE or 2 10GbE
SFP	B-series	B-series	HP	B-series
Advanced Trunking	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Optional Upgrade to chassis	Optional Upgrade to chassis
Adaptive Networking	Included with Power Pack+ or Optional Upgrade	Included with Power Pack+ or Optional Upgrade	Optional Upgrade to chassis	Optional Upgrade to chassis
Form factor	Embedded	Embedded	Blade in 4/256, DC SAN Back, or DC04 SAN Dir	Blade in SN8000B and DC SAN Directors
Zoning Software	Embedded	Yes (Included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	Yes (Included)	Yes, in BladeSystem Enclosure	Yes, in director chassis	Yes, in director chassis
Hot plug fans	Yes, in EVA 4400 Enclosure	Yes, in BladeSystem Enclosure	Yes, in director chassis	Yes, in director chassis



Configuration Information

Step 1 - Base Configuration

Select one:

Model Name	Model Description	Part Number
2408 FCoE Power Pack+ Converged Network Switch	2408 FCoE CN Switch with 8 active fibre channel ports; 24 active CEE ports; base software (Full Fabric, Advanced Fabric OS, Advanced Web Tools, Advanced Zoning) and Power Pack+ software (ISL Trunking, Advanced Performance Monitoring, and Fabric Watch) NOTE: Fibre Channel connectivity requires optical transceivers and Converged Enhanced Ethernet (CEE) requires optical transceivers or copper cables listed below.	AP802A
2408 FCoE Base Converged Network Switch	2408 FCoE CN Switch with 8 active fibre channel ports; 24 active CEE ports; base software (Full Fabric, Advanced Fabric OS, Advanced Web Tools, Advanced Zoning) NOTE: Fibre Channel connectivity requires optical transceivers and Converged Enhanced Ethernet (CEE) requires optical transceivers or copper cables listed below.	AP801A

Add Software		
	Fabric Watch	313454-B21
	ISL Trunking	313452-B21
	Advanced Performance Monitor	313450-B21
	HP B-series SAN Network Advisor Enterprise Software	TC352A
	HP B-series SAN Network Advisor Professional Plus Software	TC353A
	HP B-series SAN Network Advisor Professional Plus Upgrade Software	TC354A

Step 2 - Additional Options

Converged Network Adapters (CNAs)	HP CN1000E Dual Port Converged Network Adapter	AW520A
	HP CN1000Q Dual Port Converged Network Adapter	BS668A
	HP CN1100E Dual Port Converged Network Adapter	BK835A
	NOTE: Please visit the HP Converged Network Adapter QuickSpecs at: www.hp.com/go/cna for suitable cables and SFPs.	

Fibre Channel Optical Transceivers	NOTE: Up to one CNA for every two FCoE switch ports	
	HP 8Gb Short Wave B-Series FC SFP+ 1 Pack	AJ716A

Distance Maximum	OM2 Cable	OM3 Cable	PremierFlex Cable
8Gb performance:	50 meters	150 meters	150 meters
4Gb performance:	150 meters	380 meters	380 meters
2Gb performance:	300 meters	500 meters	500 meters

	HP 8Gb Long Wave B-series 10km FC SFP+ 1 Pack	AJ717A
	HP 8Gb Long Wave B-Series 25km FC SFP+ 1 Pack	AW538A
	HP 4Gb Short Wave B-Series FC SFP 1 Pack	AJ715A

Distance Maximum	OM2 Cable	OM3 Cable	PremierFlex Cable
4Gb performance:	150 meters	380 meters	380 meters
2Gb performance:	300 meters	500 meters	500 meters
1Gb performance:	500 meters	860 meters	860 meters

Converged Enhanced	HP 4Gb Long Wave B-Series FC SFP 1 Pack - 10km	AK870A
	HP 4Gb Long Wave B-Series FC SFP 1 Pack - 30km	AN211A
	HP 1m B-series Active Copper SFP+ Cable	AP818A



Configuration Information

Ethernet (CEE) Copper Twinax Cables	HP 3m B-series Active Copper SFP+ Cable	AP819A			
	HP 5m B-series Active Copper SFP+ Cable	AP820A			
NOTE: For in-rack or adjacent-rack cabling, the copper Twinax cables integrate transceivers with Twinax cables into an energy-efficient, low-cost, and low-latency solution.					
Converged Enhanced Ethernet (CEE) Optical Transceivers	HP 10GbE SR B-series CEE SFP+ 1 Pack	AP823A			
	HP 10GbE LR B-series CEE SFP+ 1 Pack	AP824A			
<hr/>					
USB Device	2Gb USB Device	AK864A			
Optical Cables	PremierFlex OM3+ type cables				
	0.5m PremierFlex LC/LC Multi-Mode Optical Cable	BK837A			
	1m PremierFlex LC/LC Multi-Mode Optical Cable	BK838A			
	2m PremierFlex LC/LC Multi-Mode Optical Cable	BK839A			
	5m PremierFlex LC/LC Multi-Mode Optical Cable	BK840A			
	15m PremierFlex LC/LC Multi-Mode Optical Cable	BK841A			
	30m PremierFlex LC/LC Multi-Mode Optical Cable	BK842A			
	50m PremierFlex LC/LC Multi-Mode Optical Cable	BK843A			
	OM3 LC-LC type cables				
	.5 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ833A			
	1 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ834A			
	2 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ835A			
	5 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ836A			
	15 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ837A			
	30 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ838A			
50 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ839A				
<hr/>					
Fibre Channel Standards And Revisions	FC-AL Rev. 4.5	FC-GS-2 Rev 5.3	FC-PH Rev 4.3	FC-PLDA Rev 2.1	FC-VI Rev 1.5
	FC-AL-2 Rev 7.0	FC-FG Rev 3.5	FC-PH-2 Rev 7.4	FC-SW Rev 3.3	IPFC RFC 2625
	FC-FLA Rev 2.7	FC-FH Rev 1.7	FC-PH-3 Rev 9.4		



Technical Specifications

Fibre Channel ports	8 active ports
CEE ports	24 ports
Scalability	Full fabric architecture: http://www.hp.com/go/sandesignguide
Certified maximum	Refer to SAN Design Guide for current configuration information: http://www.hp.com/go/sandesignguide
Interoperability	<ul style="list-style-type: none">● SAN Switch 2/8V● 4/8 SAN Switch● SAN Switch 16-EL● SAN Switch 2/16V● SAN Switch 2/16N FF● 4/16 SAN Switch● Integrated /32● SAN Switch 2/32● 4/32 SAN Switch● 4/32B SAN Switch● 4/64 SAN Switch● Core Switch 4/64● SAN Director 2/128● SAN Director 4/256● DC04 SAN Director● DC SAN Backbone Director● SAN Switch 2/16● MSA SAN Switch 2/8● SAN Switch 8/8● SAN Switch 8/24● SAN Switch 8/40● SAN Switch 8/80● Brocade 4Gb SAN Switch for HP c-Class BladeSystem● Brocade 8Gb SAN Switch for HP BladeSystem c-Class● EVA4400 with embedded switch● 400 MP Router● HP MP-Router● SN8000B Director● SN6000B Fibre Channel Switch
Fibre Channel Performance	8 Gbit/sec line speed, full duplex
CEE Performance	10 Gbit/sec line speed
Switch core	Non-blocking
Fabric latency	700 nanoseconds with no contention, cut-through routing at 8 Gbit/sec
Maximum frame size	2112-byte fibre channel payload; 9048-byte Ethernet frame
Classes of service	Class 2, Class 3, Class F (inter-switch frames)
FC Port types	FL_Port, F_Port, and E_Port; self-discovery based on switch type (U_Port)
USB	One USB port for system log file downloads or firmware upgrades
Data traffic types	Fabric switches supporting unicast, multicast (255 groups), and broadcast
Media types	Fibre Channel media type: Hot-pluggable, industry-standard Small Form Factor Pluggable (SFP) and SFP+, LC connector; Short-Wave Laser (SWL) and Long-Wave Laser (LWL); distance depends on fiber



Technical Specifications

	optic cable and port speed; supports SFP+ (2, 4, and 8 Gbit/sec) and SFP (1, 2, and 4 Gbit/sec) optical transceivers		
Laser	CEE media type: Hot-pluggable, 10 Gigabit Ethernet SFP+ supports any combination of Short-Reach (SR) and Long-Reach (LR) optical transceivers; copper twinax cables of one, three, or five meters		
Fabric services	Short-wave up to 1,640 ft (500 m); long-wave up to 6.2 mi (10 km) when available		
	Simple Name Server, Registered State Change Notification (RSCN), Alias Server (multicast); and Zoning, Web Tools, Enhanced group Management, Optional Fabric Watch, ISL Trunking, and Advanced Performance Monitor.		
Options	SFP media, USB Device		
Supported software	Telnet, RADIUS,SNMP, Web Tools, Enhanced Group Management, Advanced Zoning, Fabric Watch, Advanced Performance Monitoring, ISL Trunking, Fabric Manager,, Data Center Fabric Manager		
Management access	10/100 Ethernet (RJ-45), serial port		
Diagnostics	POST and embedded online/offline diagnostics		
Back-to-front airflow, power inlet on port side	1U		
Dimensions	Width	42.9 cm (16.9 inches)	
	Height	4.3 cm (1.7 inches)	
	Depth	63.4 cm (25.0 inches)	
	Weight	28.6 lbs with two power supply, without SFP/SFP+	
Environment	Temperature	Operating	0° to 40° C
		Non-operating	-25° to 70° C
	Humidity	Operating	10% to 85% (non-condensing)
		Non-operating	10% to 90% (non-condensing)
	Altitude	Up to 9,800 ft (3,000 m)	
	Shock	20 G, 6 ms, half sine	
	Vibration	Operating	.5 G sine, .4grms random 5-500Hz
		Non-operating	2 G sine, 5-500Hz
Power	AC Input	85 to 264 VAC nominal	
	Supported power range	Maximum	350 Watts
	Frequency	47 to 63 Hz	

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