

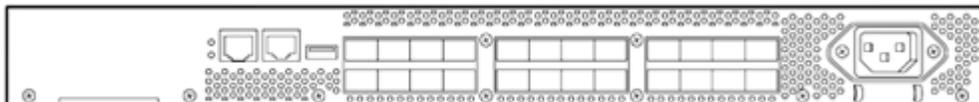
### Overview

The new 8/8 Base SAN Switch and 8/8 SAN Switch are targeted for small to medium sized enterprises and are ideal for entry-level SANs, and as an edge switch for core-to-edge SAN environments. The 8/8 Base SAN Switch and 8/8 SAN Switch provide SAN connectivity that simplifies IT management infrastructures, improves system performance, maximizes the value of virtual server deployments, and reduces overall storage costs.

The 8/8 SAN Switch integrates innovative hardware and software features that make it easy to deploy, manage, and integrate into a wide range of IT environments. The 8 Gbit/sec Fibre Channel 8/8 Base SAN Switch provides a simple, affordable, single-switch solution for a new, small SAN installation and connects to storage and servers only. An optional Full Fabric SAN scaling license provides connectivity to other switches. The 8/8 SAN Switch has 8 active ports and can be connected to multiple switches and scale to full fabric limits as defined in the SAN Design Guide. Both new 8 port switches provide growth options with Ports On Demand, the ability to activate additional ports in 8 port increments to a maximum of 24 ports. This provides the flexibility to start small and grow storage networks in a non-disruptive manner. In addition, organizations can choose to initially deploy 4 Gbit/sec SFPs and upgrade to 8 Gbit/sec SFP+ at a later date when necessary.

The 8/8 SAN Switch significantly increases performance and functionality for SANs at an entry-level price. The 8/8 SAN Switch provides auto-sensing 1, 2, 4, and 8 Gbit/sec full duplex performance to enable up to 128 Gbit/sec of uncongested throughput. Auto-sensing and speed-matching of data traffic provides interoperability with previous 1, 2, and 4 Gbit/sec devices. To provide more targeted performance, enhanced Inter-Switch Link (ISL) Trunking combines up to eight ISLs between a pair of switches into a single, logical high-speed trunk capable of up to 64 Gbit/sec of throughput. The evolutionary design provides these capabilities while consuming less than 2.5 watts of power per port for exceptional power and cooling efficiency.

An optional enhanced Power Pack+ software bundle can be purchased separately and includes Adaptive Networking, Fabric Watch, ISL Trunking, Extended Fabric and Advanced Performance Monitor. The software bundle provides the SAN administrator with the necessary tools to proactively monitor the health and performance thresholds of the network, while also ensuring the highest levels of security, scalability and manageability. Enhanced capabilities are based on the new Adaptive Networking software, a suite of tools for optimizing fabric behavior and ensuring ample bandwidth for mission-critical applications. Power Pack+ software enables infrastructure management through a single-pane-of-glass.



The 8 port 8 Gb/s 8/8 Base SAN Switch

### Features and Benefits

#### Key Features and Benefits

- **Superior Performance**
  - 8Gb/s full duplex performance to enable up to 128 Gbit/s of uncongested throughput
  - Optional enhanced ISL Trunking combines up to eight ISLs between a pair of switches into a single, logical high-speed trunk capable of up to 64 Gbit/s of throughput
- **Superior Scalability**
  - Eight 8Gb/s ports expandable to 16 or 24 ports with the purchase of optional 8 port upgrade license
  - "pay as you grow" scalability from single-switch to full fabric connectivity
- **Reduced Total Cost of Ownership for SAN Infrastructure**
  - Enables storage consolidation, simplified management of data center SAN environment
- **Broadest range of compatibility with SAN products**
  - Multi-vendor server and storage environment
  - Widest range of HP SAN solutions
  - Backward compatible with previously installed 1Gb, 2Gb, 4Gb, and 8Gb SAN Switches
  - Interoperability with the more than 3.0 Million port HP SAN Switch installed base
- **HP Power Pack+ Software Bundle (Optional) - highest supported modular functionality**
  - Adaptive Networking - optimizes fabric behavior
  - Trunking - highest throughput between switches
  - Proactive threshold monitor (Fabric Watch)
  - Advanced Performance Monitor
  - Extended Fabric
- **Broadest Range of HP Packaged SAN Services**
  - Mission critical SAN Services SAN-ES
  - Assessment and installation services for security
- **Flexible storage connectivity**
  - The only SAN solutions providing the complete HP SAN Switch functionality from Embedded to Enterprise. The HP SAN Switch value line products allows the capability to apply the complete SAN Switch functionality to an affordable entry level SAN deployment and then to grow that deployment to the largest SAN fabric solutions supported by HP.

### Models

HP StorageWorks 8/8 SAN Switch Models	HP StorageWorks 8/8 Base (0) e-port SAN Switch	AM866A
	HP Storage Works 8/8 (8) Full Fabric Ports Enabled SAN Switch	AM867A
	HP Storage Works 8/8 and 8/24 SAN Switch 8Gb 8-port Upgrade LTU	T5518A
	HP StorageWorks Full Fabric license	T4261A
	HP Storage Works B-series 8-24 Port SAN Switch Power Pack+ Upgrade LTU	T5521A

### Product Highlights

**24 non-blocking ports** Eight enabled ports with expandability to 16 or 24 ports; auto-sensing 1, 2, 4, or 8 Gb universal, self-configuring ports (F, FL, E). Can be programmed to fixed 1 Gb, 2 Gb, 4Gb, or 8Gb speed.

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

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**High-availability features**

- Hot Code Load Activation

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**Advanced Fabric Services**

- Adaptive Networking (optional)
- ISL Trunking (optional)
- Hardware Enforced Zoning
- Web Tools
- Enhanced Group Management (EGM)
- Fabric Watch (optional)
- Advanced Performance Monitor (optional)
- Extended Fabric (optional)
- Data Center Fabric Manager (optional)

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**Manageability**

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

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**Scalability**

- 8/8 Base SAN Switch has zero e-port connectivity and connects to storage or servers only (single-switch connectivity). An optional Full Fabric SAN scaling license provides connection to switches
- 8/8 SAN Switch scales to the maximum limits defined in the SAN Design Guide: <http://www.hp.com/go/sandesignguide>

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**Cabinet Support**

- HP StorageWorks (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 0D1 after the part number on your sales order.

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### Software Components

**Frame Filtering** An ASIC based capability in the 8Gb 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.

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**Advanced Zoning** 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.

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### Product Highlights

#### 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.

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#### 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.

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### Software Components, Optional

**SAN Switch Power Pack+ Software Bundle** Includes bundled license for:

- Adaptive Networking
  - ISL Trunking
  - Advanced Performance Monitoring
  - Fabric Watch
  - Extended Fabric
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#### Adaptive Networking

Adaptive Networking (AN) is a family of technologies which allow flexible control of traffic movement within the fabric which deliver application aware management of fabric resources. Applications may be used with multiple protocols and multiple classes of service. It includes the following features:

Ingress Rate Limiting:

Allows the ingress bandwidth of a port to be throttled to a rate lower than negotiated with the SAN node. This could be very useful for enterprises offering stepped levels of service and enforcing SLAs.

Quality of Service (QoS):

Enables zones with high, medium, and low priorities within a fabric on a zone by zone basis. This can be very useful for prioritizing array replication over MANs and WANs over less critical traffic.

Traffic Isolation Zones:

Defines paths through a fabric for some or all nodes. Failover allows a non-preferred path to be used if the preferred fails. TIZs use failover by default but it can be disabled if traffic should stop if a preferred path fails. TIZ can be used to manually map out traffic flows within a fabric based on application, priority, and topology.

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### Product Highlights

#### 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 8 Gb switch needs its own license. The switch operating system views the trunk as a single, high bandwidth resource (up to 64 Gbit/s) when routing connections between switches. Connections are load-balanced across the individual links, which comprise the logical trunk group.

#### Advanced Performance Monitoring

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.

#### Extended Fabric

Extends all of the scalability, reliability, and performance benefits of Fibre Channel Storage Area Networks (SANs) beyond the native 10 km distance specified by the Fibre Channel standard.

#### Data Center Fabric Manager Professional

HP StorageWorks Data Center Fabric Manager Professional is a server based management application available at no-charge and comes with B-series SAN Switches and includes the following features:

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

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 Data Center Fabric Manager Professional and have a small SAN environment may over time feel the need for an enterprise-class product (Data Center Fabric Manager 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 Data Center Fabric Manager Professional to Data Center Fabric Manager Enterprise.

### Product Highlights

#### Data Center Fabric Manager Enterprise

HP StorageWorks Data Center Fabric Manager Enterprise is the enterprise-class product that supports FOS products as well as FOS and M-EOS products together. It provides complete DC SAN Backbone Director management including enterprise-class features/environments such as FICON, Fibre Channel Routing, FCIP, adaptive networking, etc.

It delivers unprecedented scalability (up to 24 fabrics and 9,000 switch ports) compared to the existing products.

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

Data Center Fabric Manager Enterprise requires at least one FOS based B-series SAN switch in the SAN. While DCFM provides increased functionality, not all features available in FM or HAFM are available in DCFM, and some functions may operate differently. Please refer to the Migration and Transition guide for additional information.

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**Full Fabric License for 8/8 SAN Switch** Provides connectivity from zero e-ports to full fabric scaling. Please see the following web site for further information on supported configurations and SAN scalability: <http://www.hp.com/go/sandesignguide>

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**HP StorageWorks 8/8 8 port upgrade license** Optional 8 port increments on demand licenses for additional connectivity. Enables the 8, 16, and 24 universal (E,F and FL) port progression to scale up.

### 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 Service & Warranty Support

HP Service & Warranty Support Additional Warranty protection and/or HP Installation packages can be purchased.

**NOTE:** Certain restrictions and exclusions apply. Consult the Customer Support Center for details. HP provides a one-year, hardware limited warranty, fully supported by a worldwide network of resellers and service providers. The first year of Rights to New License Version and standard business day, standard business hours telephone support is included with the purchase of an HP Power Pack. In order to continue to receive telephone support and Rights to New License Version after the first year, the purchase of a software support contract or Care Pack is required.

In addition, available service offerings include a full range of HP Care Pack packaged hardware and software services:

- Installation
- Extended coverage hours and enhanced response times
- System management and performance services

For more information on warranty and support options, please visit our Web site at:

<http://www.hp.com/hps/tech/storage/supp/>.

#### Software Product Services

- Stand-alone telephone support
- Rights to new license version
- Media and documentation updates

#### Hardware Product Services

- Installation services
- On-site maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage

#### HP Care Pack Services Warranty Upgrade Options

Service offerings include a full range of Customer HP Care Pack services for both hardware and software services:

- Response - Upgrade on-site response from next business day to same day 4-hours
- Coverage - Extend hours of coverage from 5 days x 9 hours to 7 days x 24 hours
- Duration - Select duration of coverage for a period of 1, 3, or 5 years

**NOTE:** Recommended Service for these switches is SUPPORT PLUS 24

Additional Warranty protection and/or HP Installation packages can be purchased.

**NOTE:** Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

### Service and Support, HP Care Pack, and Warranty Information

**HP Care Pack Information** HP Care Pack is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.

- HP Care Pack is not available for less than the product's warranty duration.
- HP Care Pack is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.
- HP Care Pack services are prepaid.

For additional HP Care Pack (hardware & software) information, as well as orderable part numbers, please refer to the URL listed below:

<http://h20219.www2.hp.com/services/cache/10950-0-0-225-121.html>

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### Additional Services

Installation service; SAN Solution service; SAN-Environmental Support service; SAN Architecture service; Proactive 24

For more information on these and other service options, please contact any of our worldwide sales offices or visit our Web site at: <http://www.hp.com/hps/support>

### 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+	DC04 SAN Director and DC04 SAN Director Power Pack+	DC SAN Backbone Director Power Pack+
Targeted Environment	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Data Centers	Data Centers
Port Bandwidth	8Gbit/sec	8Gbit/sec	8Gbit/sec	8Gbit/sec	8Gbit/sec	8Gbit/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	3 Tbit/sec end-to-end	6.5 Tbit/sec end-to-end
OS Support	<b>NOTE: Please Refer to SAN Design Guide</b> <a href="http://www.hp.com/go/sandesign">http://www.hp.com/go/sandesign</a> or <a href="http://www.hp.com/go/sandesignguide">http://www.hp.com/go/sandesignguide</a>					
Storage system support	XP, EVA, MSA					
Ports	8 Enabled 24 Max	16 Enabled 24 Max	24 Enabled 40 Max	48 Enabled 80 Max	Up to 192	Up to 384
SFP	B-series	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	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	Included with Power Pack+ or Optional Upgrade
Form factor	1U	1U	1U	2U	7U	14U
Zoning Software	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	No	No	Yes	Yes	Yes	Yes
Hot plug fans	No	No	Yes	Yes	Yes	Yes

Features	4/8 SAN Switch Base and 4/8 SAN Switch	4/16 SAN Switch and 4/16 SAN Switch Power Pack	4/32B SAN Switch and 4/32B SAN Switch Power Pack	4/64 SAN Switch and 4/64 SAN Switch Power Pack	4/256 SAN Director and 4/256 SAN Director Power Pack
Targeted Environment	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Data Centers
Port Bandwidth	4Gbit/sec	4Gbit/sec	4Gbit/sec	4Gbit/sec	4Gbit/sec
Aggregate device bandwidth	64 Gbit/sec end-to-end	128 Gbit/sec end-to-end	128-256 Gbit/sec end-to-end	512 Gbit/sec end-to-end	3.2 Tbit/sec end-to-end
OS Support	<b>NOTE: Please Refer to SAN Design Guide</b> <a href="http://www.hp.com/go/sandesign">http://www.hp.com/go/sandesign</a> or <a href="http://www.hp.com/go/sandesignguide">http://www.hp.com/go/sandesignguide</a>				
Storage system support	XP, EVA, MSA				
Ports	8 Enabled 16 Max	16 Enabled	16 Min 32 Max	32 Min 64 Max	Up to 384
SFP	HP	HP	HP	HP	HP

### Family Information

Advanced Trunking	Optional Upgrade	Included with Power Pack or Optional Upgrade			
Form factor	1U	1U	1U	2U	14U
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

Features	Embedded SAN Switch for EVA4400	Brocade 4Gb SAN Switch for HP c-Class BladeSystem	HP 400 Multi-protocol Router	B-Series Multi-protocol Router Blade
Targeted Environment	Workgroups, Departments	Workgroups, Departments	Workgroups, Departments	Data Centers
Port Bandwidth	8Gbit/sec	4Gbit/sec	4 Gbit/sec Ethernet: 1 Gbit/sec	4 Gbit/sec Ethernet: 1 Gbit/sec
Aggregate device bandwidth	320 Gbit/sec end-to-end	192 Gbit/sec end-to-end	128 Gbit/sec end to end	N/A
OS Support	<b>NOTE: Please Refer to SAN Design Guide</b> <a href="http://www.hp.com/go/sandesign">http://www.hp.com/go/sandesign</a> or <a href="http://www.hp.com/go/sandesignguide">http://www.hp.com/go/sandesignguide</a>			
Storage system support	XP, EVA, MSA			
Ports	20 external per EVA Controller Pair	4 or 8 external / 8 or 16 internal	18 ports: 16 FC and 2 Gigabit Ethernet	18 ports: 16 FC and 2 Gigabit Ethernet
SFP	B-series	HP	HP	HP
Advanced Trunking	Optional Upgrade	Optional Upgrade	Optional Upgrade	Optional Upgrade to chassis
Adaptive Networking	Included with Power Pack+ or Optional Upgrade	No	No	Optional Upgrade to DC SAN Director Backbone Chassis
Form factor	Embedded	Embedded	1U	Blade in SAN Director
Zoning Software	Yes (Included)	Yes (Included)	Yes (Included)	Yes (Included)
Hot plug, redundant power supplies	Yes, in EVA 4400 Enclosure	Yes, in BladeSystem Enclosure	Yes	Yes, in SAN Director chassis
Hot plug fans	Yes, in EVA 4400 Enclosure	Yes, in BladeSystem Enclosure	Yes	Yes, in SAN Director chassis

### Configuration Information

#### Step 1 - Base Configuration

Select one:

Model Name	Model Description	Part Number
StorageWorks 8/8 Base (0) e-port SAN Switch	8-port enabled 8Gb/s Fibre Channel Fabric Switch, zero e-port, licenses, docs, and rack rails. <b>NOTE:</b> Requires optical transceivers listed below.	AM866A
StorageWorks 8/8 (8) Full Fabric Ports Enabled SAN Switch	8-port enabled 8Gb/s Fibre Channel Fabric Switch, Full Fabric scalability, licenses, docs and rack rails. <b>NOTE:</b> Requires optical transceivers listed below.	AM867A
StorageWorks 8/8 SAN Switch 8Gb 8-port Upgrade LTU	8 port upgrade license for 8/8 Base SAN Switch (AM866A) and 8/8 SAN Switch (AM867A)	T5518A
StorageWorks Full Fabric License	License for 8/8 Base (0) e-port SAN Switch (AM866A) to increase connectivity to Full Fabric connectivity	T4261A

#### Add Software

Storage Works B-series 8-24 Port SAN Switch Power Pack+ Upgrade LTU	Adaptive Networking, Fabric Watch, ISL Trunking, Advanced Performance Monitoring, Extended Fabric	T5521A
Optional Software:	Adaptive Networking	T5524A
	Fabric Watch	324504-B21
	ISL Trunking	T5527A
	Advanced Performance Monitor	324507-B21
	Extended Fabric	324505-B21
	Data Center Fabric Manager Enterprise	T5542A

#### Step 2 - Additional Options

##### Optical Transceivers

HP 8Gb Short Wave B-Series FC SFP+ 1 Pack			AJ716A
	<b>Distance- Maximum</b>	<b>OM2 Cable</b>	<b>OM3 Cable</b>
	8Gb performance:	50 meters	150 meters
	4Gb performance:	150 meters	270 meters
	2Gb performance:	300 meters	500 meters
HP 8Gb Long Wave B-series 10km FC SFP+ 1 Pack			AJ717A
HP 4Gb Short Wave B-Series FC SFP 1 Pack			AJ715A
	<b>Distance- Maximum</b>	<b>OM2 Cable</b>	<b>OM3 Cable</b>
	4Gb performance:	150 meters	270 meters
	2Gb performance:	300 meters	500 meters
	1Gb performance:	500 meters	860 meters
HP 4Gb Long Wave B-Series FC SFP 1 Pack - 10km			AK870A
HP 4Gb Long Wave B-Series FC SFP 1 Pack - 30km			AN211A

### Configuration Information

USB Device	2Gb USB Device	AK864A
Optical Cables	<b>OM2 LC-LC type cables</b>	
	2 m LC-LC Multi-Mode Fibre Channel Cable	221692-B21
	5 m LC-LC Multi-Mode Fibre Channel Cable	221692-B22
	15 m LC-LC Multi-Mode Fibre Channel Cable	221692-B23
	30 m LC-LC Multi-Mode Fibre Channel Cable	221692-B26
	50 m LC-LC Multi-Mode Fibre Channel Cable	221692-B27
	<b>OM3 LC-LC type cables</b>	
	.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
	<b>LC-SC for between a 1 Gb and a 2 Gb device</b>	
	2 m LC-SC Multi-Mode Fibre Channel Cable	221691-B21
5 m LC-SC Multi-Mode Fibre Channel Cable	221691-B22	
15 m LC-SC Multi-Mode Fibre Channel Cable	221691-B23	
30 m LC-SC Multi-Mode Fibre Channel Cable	221691-B26	
50 m LC-SC Multi-Mode Fibre Channel Cable	221691-B27	

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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

<b>Fibre Channel ports</b>	8 active with optional license to activate 24 universal ports
<b>Scalability</b>	0 E-port (8/8 Base) and scalable to Full fabric architecture with optional license: <a href="http://www.hp.com/go/sandesiguguide">http://www.hp.com/go/sandesiguguide</a>
<b>Certified maximum</b>	Refer to SAN Design Guide for current configuration information: <a href="http://www.hp.com/go/sandesiguguide">http://www.hp.com/go/sandesiguguide</a>
<b>Interoperability</b>	<ul style="list-style-type: none"><li>• SAN Switch 8</li><li>• SAN Switch 16</li><li>• SAN Switch 8-EL</li><li>• SAN Switch 2/8V</li><li>• 4/8 SAN Switch</li><li>• SAN Switch 16-EL</li><li>• SAN Switch 2/16V</li><li>• SAN Switch 2/16N FF</li><li>• 4/16 SAN Switch</li><li>• Integrated /32</li><li>• SAN Switch 2/32</li><li>• 4/32 SAN Switch</li><li>• 4/64 SAN Switch</li><li>• Core Switch 4/64</li><li>• SAN Director 2/128</li><li>• DC04 SAN Director</li><li>• DC SAN Backbone Director</li><li>• SAN Switch 2/16</li><li>• SAN Switch 1/16-EL</li><li>• MSA SAN Switch 2/8</li><li>• SAN Switch 8/8</li><li>• SAN Switch 8/24</li><li>• SAN Switch 8/40</li><li>• SAN Switch 8/80</li><li>• Brocade 4Gb SAN Switch for p-class HP BladeSystem</li><li>• Brocade 4Gb SAN Switch for c-class HP BladeSystem</li><li>• 400 MP Router</li><li>• HP MP-Router</li></ul>
<b>Performance</b>	8 Gbit/sec line speed, full duplex
<b>Switch core</b>	Non-blocking
<b>Fabric latency</b>	700 nanoseconds with no contention, cut-through routing at 8 Gbit/sec
<b>Maximum frame size</b>	2112-byte payload
<b>Classes of service</b>	Class 2, Class 3, Class F (inter-switch frames)
<b>Port types</b>	FL_Port, F_Port, and E_Port; self-discovery based on switch type (U_Port)
<b>USB</b>	One USB port for system log file downloads or firmware upgrades
<b>Data traffic types</b>	Fabric switches supporting unicast, multicast (255 groups), and broadcast
<b>Media types</b>	B-Series Branded Small Form-Factor Pluggable (SFP)
<b>Laser</b>	Short-wave up to 1,640 ft (500 m); long-wave up to 18.6 mi (30 km)
<b>Fabric services</b>	Simple Name Server, Registered State Change Notification (RSCN), Alias Server (multicast); and Zoning, Web Tools, Enhanced group Management, Optional Fabric Watch, ISL Trunking, Adaptive Networking, Extended Fabric and Advanced Performance Monitor.
<b>Options</b>	SFP media, USB Device

### Technical Specifications

<b>Supported software</b>	Telnet, RADIUS,SNMP, Web Tools, Enhanced Group Management, Advanced Zoning, Fabric Watch, Extended Fabric, Adaptive Networking, Advanced Performance Monitoring, ISL Trunking, Fabric Manager,, Data Center Fabric Manager		
<b>Management access</b>	10/100 Ethernet (RJ-45), serial port		
<b>Diagnostics</b>	POST and embedded online/offline diagnostics		
<b>Back-to-front airflow, power inlet on port side</b>	1U		
<b>Dimensions</b>	<b>Width</b>	42.88 cm (16.88 inches)	
	<b>Height</b>	4.29 cm (1.69 inches)	
	<b>Depth</b>	30.66 cm (12.07 inches)	
	<b>Weight</b>	9.3 lbs with single power supply, without SFP/SFP+	
<b>Environment</b>	<b>Temperature</b>	<b>Operating</b>	0° to 40° C
		<b>Non-operating</b>	-25° to 70° C
	<b>Humidity</b>	<b>Operating</b>	10% to 85% (non-condensing)
		<b>Non-operating</b>	10% to 90% (non-condensing)
	<b>Altitude</b>	Up to 9,800 ft (3,000 m)	
	<b>Shock</b>	20 G, 6 ms, half sine	
	<b>Vibration</b>	<b>Operating</b>	.5 G sine, .4grms random 5-500Hz
<b>Non-operating</b>		2 G sine, 5-500Hz	
<b>Power</b>	<b>AC Input</b>	100 to 240 VAC nominal	
	<b>Supported power range</b>	<b>Nominal</b>	48 Watts
		<b>Maximum</b>	57 Watts
	<b>Frequency</b>	47 to 63 Hz	

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