For a converged and virtualized environment to exist, there is pressure on the IT organization to manage fewer devices, utilize less energy and resources, and transfer data faster, all while handling similar or higher volumes of work than a traditional environment. When large amounts of data need to be transferred between data centers, arrays, or sites, a faster link can allow the same tasks to be completed in less time.

With virtualization taking a strong hold in the datacenter, and the resulting increase in the storage networking traffic, customers want high performance, high capacity, and a reliable storage area network (SAN) enabling them to deploy enterprise class applications. This high density virtualization combined with new storage technologies is driving even higher I/O and bandwidth requirements in the SAN and this problem is solved with 16Gb Fibre channel switching products and solutions from HP Storage.

The HP StoreFabric C-series SN8500C Director delivers many unique innovations for constructing powerful, large scale storage networks. With these innovations, users can build highly scalable, always available, high performance storage network solutions with comprehensive security and unified management. The HP StoreFabric SN8500C 8-slot 16Gb FC Director delivers industry-leading scalability and performance (up to 24-Tbps front panel FC switching bandwidth), high port density (up to 384-ports in an SN8500C 8-Slot Director) and high availability to lower TCO and enable integrated SAN infrastructures. HP delivers the StoreFabric
QuickSpecs

Overview

SN8500C 8-slot 16Gb FC Director with high availability features inherent in the design. The base units include an 8-slot modular chassis with 2 hot swappable redundant Supervisor 1 Modules, and 6 hot swappable redundant 3000W Power Supplies to help ensure smooth, continuous operation and non-disruptive upgrade capability. The HP StoreFabric SN8500C 8-slot and 4-slot 16Gb FC Directors also include 3 hot swappable Fabric 1 Modules which provides full line rate performance across a full chassis of 384 and 192 ports, respectively. The open expansion slots of the SN8500C Directors can be filled by HP StoreFabric C-series Family Modules, which include a 48-port 16Gb FC Module and a 48-port FCoE Module.

Layered, intelligent features also include integration with fabric-based applications to fabric-wide services for a wide range of solutions for business continuance, storage virtualization, network assisted backup and information life cycle management.

Key Features and Benefits

- Reduced Total Cost of Ownership (TCO) for SAN Infrastructure
  - Enables storage consolidation, simplified management of SAN environment
- High Port Density
  - Up to 384 Fibre Channel ports (auto-sensing 16/8/4 or 10Gbps) in single chassis
    - Up to 1152 4/8/16-Gbps Fibre Channel ports in a standard rack
  - Up to 384 FCoE Channel ports (autosensing 10Gbps) in single chassis
    - Up to 1152 10-Gbps FCoE ports in a standard rack
- Scalable
  - Supports throughput up to 256Gb in a single PortChannel 'ISL Trunk'
    - Offers 48 to 384 Fibre Channel ports in a single chassis
    - Offers 48 to 384 FCoE Channel ports in a single chassis
- Highly Available
  - Grid Redundancy on Power Supply and 1+1 redundant Supervisors
  - Combines non-disruptive software upgrades, stateful process restart and failover, and full redundancy of all major components
  - Provides full 16Gbps line rate performance (768 Gbps each direction) for each slot in the chassis
- Interoperable
  - Broad range of HP servers and operating systems
  - Disk and tape storage devices
  - Common architectural platform across all SN8500C and MDS9700 family products
- Integrated Management
  - Unified SAN management: includes built-in storage network management with all features available through a command-line interface (CLI)
  - Provides intelligent diagnostics, protocol decoding, and network analysis tools as well as integrated Call Home capability for added reliability, faster problem resolution, and reduced service costs.
  - Embedded Device Manager
  - Integration with Cisco Works Resource Manager Essentials (RME)
- Hardware Assisted Encryption Security
- Comprehensive network security framework
# QuickSpecs

**HP StoreFabric SN8500C Director Switch (MDS 9700), HP C-series Family**

## Product Highlights

<table>
<thead>
<tr>
<th><strong>SN8500C Director</strong></th>
<th>Supports up to 384 ports capable of 16/8/4 Gbps (with the use of the SN8500C 48 port FC Modules). Supports up to 384 FCoE ports capable of 10-Gbps (with the use of the SN8500C 48 port FCoE Modules).</th>
</tr>
</thead>
</table>

### Network-based Intelligent Storage Applications

- Integrated hardware-based VSANs and Inter-VSAN Routing (IVR)
- Data replication and backup
- Smart Zoning

### Security

Supports role-based access control, VSANs, hardware-enforced Zoning, FC-SP, ACLs, RADIUS authentication and TACACS+, SNMPv3, SSH, SFTP, and IPsec.

### High Performance

- Up to 24 Terabits/sec front-panel Fibre-Channel switching bandwidth and 21 Tbps of FCoE bandwidth
- Port Channel: Up to 16 ports (the channel can span any speed-matched port on any module in the chassis)

### Intelligent network services

- Integrated hardware-based VSANs and Inter-VSAN Routing (IVR):
  - Virtualization
  - Data replication
  - Network-Assisted Back-up IP and FC network acceleration Virtual SANs (VSANs and Inter-VSAN routing)
  - Quality of Service (QoS)
  - Management Security
  - Embedded Diagnostics

### High Availability

- Online non-disruptive software upgrades
- Stateful process restart/failover
- Redundancy of all major components
- Hot swappable components including switch fabric modules

### Embedded Diagnostics

Provides intelligent diagnostics, protocol decoding and network analysis tools including Fibre Channel ping and trace route, SPAN, Zone and VSAN merge analysis, and integrated Call Home capability.

### Port Channels

Allows users to aggregate up to 16 physical links into one logical bundle. The bundle can consist of any port in the chassis, ensuring that the bundle remains active in the event of a port, ASIC, or module failure. The bundle can sustain the failure of any physical link without causing a reset. Additionally, Fabric Shortest Path First (FSPF) multipath provides the intelligence to load balance across up to 16 FC equal cost paths and, in the event of a switch failure, to dynamically reroute traffic.

### Access Control

- Hardware-based intelligent frame processing
- VSAN-based access control
- Role based access control within VSANs
Product Highlights

- Hardware-enforced zoning

Traffic management

- Virtual Output Queue (VOQ)
- Buffer credits: 48-port line-rate 16Gbps advanced Fibre Channel modules:
  - Up to 500 per port (dedicated-mode ports) standard
  - Up to 4095 on an individual port (dedicated-mode ports with optional SN8500C Enterprise Package license activated)
- Port Channels (up to 16 ISLs)
- Fabric Shortest Path (FSPF) based multipathing

Management modes

- Cisco MDS 9000 Family Command Line Interface (CLI)
- Cisco Device Manager
- Integration with third-party management tools
- Cisco Data Center Network Manager

Interoperability

Offers compatibility with a broad range of HP servers and operating systems, as well as disk and tape storage devices.

Product Family Models

- HP StoreFabric SN8500C 8-slot 16Gb FC Director (MDS 9710)
  - Intelligent, multi-protocol 8-slot Director with up to 384 16/8/4 Gb Fibre Channel ports in a single chassis. Also, the HP StoreFabric SN8500C 48-port 16Gb FC Module and the included Fabric 1 modules provide up to 384 ports of full 16Gbps line-rate performance across all ports or 384 10GbE FCoE ports in a single chassis or up to 1152 FCoE ports in a single rack with the use of the SN8500 FCoE module.
- HP StoreFabric SN8500C 4-slot 16Gb FC Director (MDS 9706)
  - Intelligent, multi-protocol 4-slot Director with up to 192 16/8/4 Gb Fibre Channel ports in a single chassis. Also, the HP StoreFabric SN8500C 48-port 16Gb FC Module and the included Fabric 1 modules provide up to 192 ports of full 16Gbps line-rate performance across all ports or 192 10GbE FCoE ports in a single chassis.
- HP SN8000C 13-Slot Supervisor 2A Fabric 3 Director (MDS 9513)
  - Intelligent, multi-protocol 13-slot Director with up to 528 Auto-Sensing 8/4/2 Gb Fibre Channel ports in a single chassis. Also, the 32-port 8Gb Advanced Fibre Channel modules and the included Fabric 3 modules provide up to 352 ports of full 8Gbps line-rate performance across all ports.
- HP SN8000C 6-Slot Supervisor 2A Director (MDS 9506)
  - Intelligent, multi-protocol 6-slot Director with up to 192 Auto-Sensing 8/4/2 Gb Fibre Channel ports
- HP SN6500C 16Gb Multi-service Switch (MDS 9250i)
  - Intelligent multi-protocol Fabric Switch with twenty active fixed 16Gb Fibre Channel ports, two fixed 1/10 Gigabit Ethernet FCIP ports, and eight fixed 10 Gigabit Ethernet FCoE ports. Provides up to forty active 16/8/4 Gb Fibre Channel ports through a port upgrade license.
- HP SN6010C 16Gb Fabric Switch (MDS 9148S)
  - With up to 48 Auto-Sensing 16/8/4 Gb Fibre Channel ports
  - “Pay as you grow” scalability starting at 12 ports
Product Highlights

- Cisco MDS 8Gb Fabric Switch for HP BladeSystem c-Class
  - With up to 24 Auto-Sensing 8/4/2 Gb Fibre Channel ports
  - “Pay as you grow” scalability starting at 12 ports

Software Components, Standard

NX-OS

New MDS 9000 NX-OS provides deterministic hardware performance and a comprehensive feature set that allows virtual machines to have the same SAN attributes as a physical server. The SN8500C Director with 2 Supervisor 1 modules supports NX-OS 6.2(1) or later. The SN8500C 48port FCoE Module requires NX-OS 6.2(7) or later.

Cisco Data Center Network Manager

Cisco Data Center Network Manager is a responsive, easy-to-use Java application that simplifies management across multiple switches and fabrics. Cisco Data Center Network Manager enables administrators to perform vital tasks such as topology discovery, fabric configuration and verification, LUN security, monitoring, and fault resolution. All functions are available through a secure interface, which enables remote management from any location. Cisco Data Center Network Manager may be used independently or in conjunction with third-party management applications. Cisco provides an extensive API for integration with third-party and user developed management tools.

Software Components, Optional

HP StoreFabric SN8500C Enterprise Package

Cisco MDS switches have a set of advanced traffic engineering and advanced security features that are recommended for all Enterprise SANs. These features are bundled together in a management application called the HP StoreFabric SN8500C Enterprise Package (for the SN8500C Director).

HP StoreFabric Data Center Network Manager Package

The “Standard” Cisco Data Center Network Manager software that is included at no charge with the SN8500C Director provides basic switch configuration and troubleshooting capabilities. HP’s C-series StoreFabric Data Center Network Manager (DCNM) Package (for the SN8500C director) extends Cisco Data Center Network Manager by providing historical performance data collection for network traffic hot-spot analysis, centralized management services and advanced application integration.

Integrated mainframe support

The HP StoreFabric SN8500C Mainframe FICON LTU is required for using the SN8500C 8-slot 16Gb Directors (MDS 9710) or the SN8500C 4-slot 16Gb Directors (MDS 9706) in mainframe storage networks, including FICON protocol and CUP management, switch cascading, fabric binding, and intermixing. FICON support for the SN8500C 4-slot Director (MDS 9706) is introduced with NX-OS 6.2(11c) firmware.
Warranty

The SN8500C 16Gb Director offers (3-3-3) Hardware Warranty – Three-year warranty, 24x7, 4-hour remote response, installation not included.

The SN8500C FCoE Module, SN8500C FC Module (3-3-3) Hardware Warranty – Three-year warranty, 24x7, 4-hour remote 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.

**NOTE:** The hardware warranty covers firmware and embedded non-saleable software. For hardware installation information, click the link below:
http://www.hp.com/services/deployment

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

Hardware or Software product installation is not included in the warranty, but is available and highly recommended.

Service and Support

**Services to accelerate time to results**

HP Storage Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.

Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

Discover, plan, and design

Choose from a rich portfolio of services to make the most of HP StoreFabric Storage, so you can efficiently and affordably consolidate, manage, and extract value from unstructured data.

**HP Services can help you discover needs and create a plan for simplifying the environment, reducing risk, and maximizing your storage investments**

**HP Storage Efficiency Analysis** – The HP Storage Efficiency Analysis provides customers with a view of their storage infrastructure and operating environment, highlighting recommendations for improvements. The report provides extensive insight about the existing storage environment, opportunities for efficiency gains, asset aging and replacement through interaction with key decision makers.
QuickSpecs

Service and Support and Warranty Information


**HP Storage Impact Analysis (SIA)** - The HP Storage Impact Analysis service provides a 2-4 week discovery engagement with executive summary presentation. The goal of this service is to help provide customers guidance on storage related issues and develop remediation plans.

**HP Storage Modernization Service** - The HP Storage Modernization service is a 4-6 week service that defines the customer’s envisioned target storage environment based on a proven solution design methodology. HP architects will quickly perform tool-assisted automatic discovery and facilitate a two-day strategy workshop with all key stakeholders involved in the storage infrastructure initiative.

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**Deploy and integrate**

We can help you configure, set up, and efficiently use your HP SN8500C Director, as well as help migrate data, improve capacity utilization, and establish information management standards used across backup, replication, and archiving needs.

**HP SAN Deployment Service** - Select this service for complete design and implementation support for Fibre Channel, FCoE, FCIP, SAS, and iSCSI SAN connectivity components.

**HP Storage Data Migration Services** - End-to-end data migration service providing seamless discovery, assessment, planning, and design, completely customizable to your organization’s storage area network or network attached storage environment and using innovative software to help you migrate to HP storage quickly and efficiently.

**HP Storage and Data Consultant Residency Service** - Strategic augmentation of your current environment with HP resources who become your trusted advisor to provide answers that are right for your storage and backup environment.

**HP Proactive Select** - A flexible way to purchase services to fit your environment with an extensive menu of HP Proactive Select event and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

---

**Operate and support**

Choose the right support to maximize uptime, free up your resources, and achieve improved value as you get the most out of the existing IT assets while accelerating time-to-revenue.

**HP Proactive Care Advanced** - Builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an Assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and Enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.

**HP Proactive Care 24x7** - Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center Specialists plus firmware and software
management and best practice advice.

HP Foundation Care 24x7 - HP Foundation Care 24x7 connects you to HP around the clock for assistance on resolving issues with hardware onsite response within four hours and software call back within two hours after opening your case.

HP Education Services - Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HP Storage.
http://education.hp.com/curr-storsan.htm

Optimized Care – Delivers the highest levels of performance and stability through deployment and proactive management practices

Choose from three levels of operate and support care

- HP Proactive Care Advanced 24x7
- Additional options – 3 years or 1 year HP Proactive Select credits

Standard Care – Maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

- HP Proactive Care 24x7
- Additional options - 3 years HP Proactive Care Personalized Support, HP Personalized Support Additional Days, and 3 years HP Proactive Select credits

Basic Care – Minimum recommended support

- HP Foundation Care 24x7
- Additional options - 3 years or 1 year HP Proactive Select credits

For more information
http://www.hp.com/services/storage
To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner

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 www.hp.com/go/lookuptool
## QuickSpecs

### HP StoreFabric SN8500C Director Switch (MDS 9700), HP C-series Family

#### Family Information

<table>
<thead>
<tr>
<th></th>
<th>HP StoreFabric SN8500C 4-slot 16Gb FC Director</th>
<th>HP StoreFabric SN8500C 8-slot 16Gb FC Director</th>
<th>HP SN8000C 6-Slot Director w/Dual Supervisor 2A</th>
<th>HP SN8000C 13-Slot Director w/Dual Supervisor 2A</th>
<th>SN6010C 16Gb Fabric Switch</th>
<th>HP SN6500C 16Gb Multi-service Switch</th>
<th>Cisco MDS 8Gb Fabric Switch for HP BladeSystem c-Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switch Type</strong></td>
<td>Multilayer Director</td>
<td>Multilayer Director</td>
<td>Multilayer Director</td>
<td>Multilayer Director</td>
<td>Multilayer Fabric Switch</td>
<td>Multi-service Fabric Switch</td>
<td>Embedded Fabric Switch</td>
</tr>
<tr>
<td><strong>Maximum ports</strong></td>
<td>192 16 Gbps Fibre Channel ports, 192 FCoE ports</td>
<td>384 16 Gbps Fibre Channel ports, 384 FCoE ports</td>
<td>192 8 Gbps Fibre Channel ports, 16 IP ports</td>
<td>528 8 Gbps Fibre Channel ports, 44 IP ports</td>
<td>Up to 48 16 Gbps Fibre Channel ports</td>
<td>Up to 40 16 Gbps FC ports, 2 fixed 10GbE FCIP ports, 8 fixed 10GbE FCoE ports</td>
<td>16 Internal, 8 8 Gbps Fibre Channel ports</td>
</tr>
<tr>
<td><strong>Number of slots per chassis</strong></td>
<td>Four</td>
<td>Eight</td>
<td>Six</td>
<td>Thirteen</td>
<td>One fixed</td>
<td>Two fixed</td>
<td>One fixed</td>
</tr>
</tbody>
</table>

For additional switch support information, refer to the C-series FC Switch Connectivity Stream on the Single Point of Connectivity Knowledge (SPOCK) website at: [http://www.hp.com/storage/spock](http://www.hp.com/storage/spock). You must sign up for an HP Passport to enable access. Once logged in, click Switches under Other Hardware in the last navigation panel of the window to access the Fibre Channel Switch Streams. Click on the C-Series FC Switch Connectivity Stream to open the document.
QuickSpecs

HP StoreFabric SN8500C Director Switch (MDS 9700),
HP C-series Family

Configuration Information

Step 1 - Base Configurations

Select one:

Model | Part Number
--- | ---
HP StoreFabric SN8500C 8-slot 16Gb Fibre Channel Director Switch | C8S71B

**NOTE:** Base unit includes a 14U, (8) slot chassis with 2 hot swappable redundant Supervisor 1 Modules, three hot swappable redundant SN8500C 8-slot Fabric-1 Modules, 6 hot swappable redundant 3000W Power Supplies, fans, six wall power cords and six PDU power cords, firmware, accessory kit and documentation. Supports up to eight optional expansion port modules.

HP StoreFabric SN8500C 4-slot 16Gb Fibre Channel Director Switch | K2Q18A

**NOTE:** Base unit includes a 9U, (4) slot chassis with 2 hot swappable redundant Supervisor 1 Modules, three hot swappable redundant SN8500C 4-slot Fabric-1 Modules, 4 hot swappable redundant 3000W Power Supplies, fans, four wall power cords and four PDU power cords, firmware, accessory kit and documentation. Supports up to four optional expansion port modules.

** Appropriate country power cords and PDU cords will be included for each AC power supply for the SN8500C Director based on Ship To destination information.

Step 2 - Options

Select each type of required options with quantities specified:

**NOTE:** For a complete list of supported switching modules in the SN8500C Director, please refer to the C-series FC Switch Connectivity Stream on the Single Point of Connectivity Knowledge (SPOCK) website at: http://www.hp.com/storage/spock

Model Description | Part Number
--- | ---
HP StoreFabric SN8500C 48-port 16Gb Fibre Channel Module | C8S70B

**NOTE:** SFPs required; supports 8, 10 and 16Gb FC SFPs

HP StoreFabric C-series 16 Gb Fibre Channel SW SFP+ Transceiver | C8S72A
HP StoreFabric C-series 16 Gb Fibre Channel LW SFP+ Transceiver | C8S73A
HP MDS 9000 8Gb FC SFP+ Short Range Transceiver | AJ906A
HP MDS 9000 8Gb FC SFP+ Long Range Transceiver | AJ907A
HP C-series 10Gb Fibre Channel Short Wave SFP+ Transceiver | QW928A
HP C-series 10Gb Fibre Channel Long Wave SFP+ Transceiver | QW929A
HP StoreFabric SN8500C FCoE Module | E7Y66A

**NOTE:** SFPs required; supports 10GE SR & LR SFPs, shown here

HP C-series 10Gb Ethernet SR SFP+ Transceiver | AP783A
HP C-series 10GbE LR SFP+ Transceiver | E7Y65A

Optional Software Licenses
QuickSpecs

HP StoreFabric SN8500C Director Switch (MDS 9700),
HP C-series Family

Configuration Information

HP StoreFabric SN8500C Enterprise Package License
TC459A

NOTE: Set of advanced traffic-engineering and advanced security features

HP StoreFabric SN8500C Data Center Network Manager LTU
TC470A

HP StoreFabric SN8500C Mainframe FICON LTU (available for SN8500C Directors, MDS 9706 & MDS 9710)
D4U61A

Installation Services
MDS9506/9509/SN8500C Install
HA113A1#5D1

NOTE: 1 per switch

Step 3 - Additional Options

Recommended Cables

HP PremierFlex OM4+ Fiber Optic Cables
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable
QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable
QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable
QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable
QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable
QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable
QK737A

HP OM3 LC-LC Optical Cables
HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable
AJ833A
HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable
AJ834A
HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable
AJ835A
HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable
AJ836A
HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable
AJ837A
HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable
AJ838A
HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable
AJ839A

Copper SFP+ Cables
HP StoreFabric C-series 3M Passive Copper SFP+ Cable
KZQ21A
HP StoreFabric C-series 5M Passive Copper SFP+ Cable
KZQ22A
QuickSpecs

Technical Specifications

Fibre Channel and FCoE Protocols

- FC-PH, Revision 4.3 (ANSI/INCITS 230-1994)
- FCP, Revision 12
  (ANSI/INCITS 269-1996)
- FC-SB-2, Revision 2.1 (ANSI/INCITS 349-2001)
- FC-SB-3, Revision 1.6 (ANSI/INCITS 374-2003)
- FC-SB-3, Amendment 1 (ANSI INCITS 374-2003/AM1-2007)
- FC-SB-4, Revision 3.0 (ANSI INCITS 466-2011)
- FC-SB-5, Revision 2.00 (ANSI INCITS 485-2014)
- FC-BB-3, Revision 6.8 (ANSI INCITS 414-2006)
- FC-BB-4, Revision 2.7 (ANSI INCITS419-2008)
- FC-BB-5, Revision 2.0 (ANSI INCITS 462-2010/FC-PH-3, Revision 9.4 (ANSI/INCITS 303-1998)
- FC-PI, Revision 13 (ANSI INCITS 352-2002)
- FC-FS, Revision 1.9 (ANSI/INCITS 373-2003)
- FC-SW-2, Revision 5.3 (ANSI/INCITS 355-2001)
- FC-SW-3, Rev. 6.6 (ANSI/INCITS 384-2004)
- FC-GS-3, Revision 7.01 (ANSI/INCITS 348-2001)
- FC-GS-4, Rev. 7.91 (ANSI/INCITS 387-2004)
- FC-GS-5, Revision 8.51 (ANSI INCITS 427-2007)
- FC-GS-6, Revision 9.4 (ANSI INCITS 463-2010)
- FC-BB-2, Rev. 6.0 (ANSI/INCITS 372-2003)
- FC-VI, Revision 1.84 (ANSI/INCITS 357-2002)
- FC-FLA, Revision 2.7 (INCITS TR-20-1998)
- FC-PLDA, Revision 2.1 (INCITS TR-19-1998)
- FC-Tape, Revision 1.17 (INCITS TR-24-1999)
- FC-MI, Revision 1.92 (INCITS TR-30-2002)
- FC-SP, Revision 1.8
- FC-SP-2, Revision 2.71 (ANSI INCITS 496-2012)
- FAIS, Revision 1.03 (ANSI INCITS 432-2007)
- FAIS-2, Revision 2.23 (ANSI INCITS 449-2008)
- FC-IFR, Revision 1.06 (ANSI INCITS 475-2011/FC-DA, Revision 3.1/INCITS TR-36-2004)
- FC-DA-2, Revision 1.06 (INCITS TR-49-2012)
- FC-MSQS, Revision 3.2 (INCITS TR-46-2011)
- IP over Fibre Channel (RFC 2625)
- Extensive IETF-standards based TCP/IP, SNMPv3, and Remote Monitoring (RMON) MIBs
- FC-PI-2, Revision 10 (ANSI INCITS 404-2006)
- FC-PI-3, Revision 4 (ANSI INCITS 460-2011)
- FC-PI-4, Revision 8 (ANSI INCITS 450-2008)
- FC-PI-5, Revision 6 (ANSI INCITS 479-2011)
- FC-FS-2, Revision 1.01 (ANSI INCITS 424-2007)
- FC-FS-3, Revision 1.11 (ANSI INCITS 470-2011)
- FC-LS, Revision 1.62 (ANSI INCITS433-2007)
- FC-LS-2, Revision 2.21 (ANSI INCITS 477-2011)
QuickSpecs

HP StoreFabric SN8500C Director Switch (MDS 9700), HP C-series Family

Technical Specifications

- FCP-3, Revision 4 (ANSI INCITS416-2006)
- FCP-4, Revision 2b (ANSI INCITS 481-2011)
- FC-MI-2, Revision 2.6 (INCITS TR-39-2005)
- FC-MI-3, Revision 1.03 (INCITS TR-48-2012)

HP StoreFabric SN8500C 16Gb FC Weights, Dimensions, Environmental, Power and Packaging

Diagnostics
Cisco GOLD (Generic Online Diagnostics) is a suite of diagnostic facilities to verify that hardware and internal data paths are operating as designed. Boot-time diagnostics, continuous monitoring, standby fabric loopback tests, and on-demand and scheduled tests are part of the Cisco GOLD feature set. This industry-leading diagnostics subsystem enables the rapid fault isolation and continuous system monitoring critical in today's continuously operating environments.

Compatibility

<table>
<thead>
<tr>
<th>Fibre Channel protocols</th>
<th>See table above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes of service</td>
<td>Class 2, Class 3, Class F</td>
</tr>
<tr>
<td>Port types</td>
<td>Fibre Channel : E, F, FL, Enhanced SD, ST, TE; FCoE: VE, VF</td>
</tr>
<tr>
<td>Internet standards</td>
<td>RFC 2625, RFC 4338, IEEE 802.1Qbb-2011, IEEE 802.3db-2011, EEE 802.1Qaz-2011, Extensive IETF-standards-based TCP/IP, SNMPv3, and remote monitoring (RMON) MIBs</td>
</tr>
<tr>
<td>O/S Support</td>
<td>MDS NX-OS Release 6.2(1)- Min. Revision; NX-OS 6.2(7) for FCoE Module</td>
</tr>
</tbody>
</table>

Performance

| Transfer Rate          | • 8/16 Gb/FC port |
|                        | • 10 Gb/FC port |
|                        | • 10 Gbps FCoE port |

| Devices/Ports         | • 384 FC ports, 384 FCoE ports |

Interface

| • 4/8/10/16 Gb FC ports |
| • 10 Gb FCoE Ports |
| • 10/100/1000 Mb Ethernet port (management) |
| • RS-232 RJ-45 console port |

Connectors/Cables

| Connectors            | • RJ-45 Interface Cable Connector |
|                      | • LC-type-fiber optic SFP |
| Cables                | • RJ-45 to RJ-45 rollover cable |
|                      | • RJ-45 to DB-25 female DTE adapter (labeled "Terminal") |
|                      | • RJ-45 to DB-25 male DCE adapter (labeled "Modem") |
|                      | • LC-type cable |

Dimensions

<table>
<thead>
<tr>
<th>Description</th>
<th>Out-of-box</th>
<th>Shipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-Slot Base unit w/o ports(14U)</td>
<td>24.35 x 17.3 x 34.0 in.</td>
<td>32 x 32 x 23 in</td>
</tr>
<tr>
<td></td>
<td>(61.9 x 43.9 x 86.4 cm)</td>
<td>(81.28 x 81.28 x 58.42 cm)</td>
</tr>
<tr>
<td>4-Slot Base unit w/o ports(9U)</td>
<td>15.6 x 17.3 x 32.0 in.</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>(39.62 x 43.9 x 81.3 cm)</td>
<td></td>
</tr>
</tbody>
</table>
QuickSpecs
HP StoreFabric SN8500C Director Switch (MDS 9700),
HP C-series Family

Technical Specifications

| 3000W AC | 22.04 x 3.95 x 1.6 in. | n/a |
| (55.98 x 10.03 x 4.06 cm) |

Environment

| Non-operating temp | 40° to 158° F (-40° to 70° C), ambient non-operating and storage |
| Non-operating Humidity | 10 to 95%, ambient (non-condensing) non-operating and storage |
| Operating temp | 32° to 104° F (-40° to 70° C), ambient operating |
| Operating Humidity | 10 to 90%, ambient (non-condensing) operating |

Electrical

| Line Voltage | 3000W AC: 100 to 240 VAC ±10% |
| Line Frequency | 3000W AC: 50 to 60 Hz (nominal) (±3% for full range) |
| Typical Input Current | 3000W AC: |
| | • 16A max at 200 to 240 VAC at 3000W output, |
| | • 16A max at 100 to 120 VAC at 1451W output |

LED Indicators

(On front panel)

Switch System

• Power Supply Status
• Fan Status
• Supervisor Module Status
• Fabric Module Status
• I/O Modules Status

Supervisor

• Supervisor ID
• Supervisor Status
• System Status
• Active/Standby
• Power Management
• Ethernet Activity (management)
• USB Flash Activity
• Slot 0 Activity

LED Indicators

(On back)

Power Supply

• Input Power
• Output Power
• PSU Fault Indicator
• PSU ID

Fan

• Fan Tray ID
• Fan status

• Left Fabric Module Status
• Right Fabric Module Status

NOTES:

1. Dimension convention is as follows:
QuickSpecs

Technical Specifications

- H (Height) is the vertical dimension when looking at the front of the component, as it would be seen in the chassis. Exception is the compact flash where H is when looking at the identification label on the part.
- W (Width) is the horizontal (left to right) dimension when looking at the front of the component, as it would be seen in the chassis. Exception is the compact flash where W is when looking at the identification label on the part.
- D (Depth) is the front to back dimension when looking at the front of the component, as it would be seen in the chassis. Exception is the compact flash where D is when looking at the identification label on the part.

2. Packaging dimensions are reference as if you were looking at the front of the chassis in the packaging, if you could see through the packaging.
### Summary of Changes

<table>
<thead>
<tr>
<th>Date</th>
<th>Version History</th>
<th>Action</th>
<th>Description of Change:</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-Aug-2015</td>
<td>From Version 14 to 15</td>
<td>Changed</td>
<td>Added FICON support for SN8500C 4-slot Director (MDS 9706)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Removed SN6000C Switch due to be obsolete Sep’15</td>
</tr>
<tr>
<td>20-Feb-2015</td>
<td>From Version 13 to 14</td>
<td>Changed</td>
<td>Removed references to MDS9222i as switch is obsolete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Removed extraneous Fabric-1 modules for both 4-slot and 8-slot SN8500C directors as obsolete. Updated Spock info.</td>
</tr>
<tr>
<td>01-Dec-2014</td>
<td>From Version 12 to 13</td>
<td>Changed</td>
<td>Changes made throughout the QuickSpecs.</td>
</tr>
<tr>
<td>26-Sep-2014</td>
<td>From Version 11 to 12</td>
<td>Changed</td>
<td>Changes made throughout the QuickSpecs.</td>
</tr>
<tr>
<td>18-Aug-2014</td>
<td>From Version 10 to 11</td>
<td>Changed</td>
<td>Changes made throughout the Technical Specifications, Configuration Info and Product Highlights</td>
</tr>
<tr>
<td>18-Mar-2014</td>
<td>From Version 4 to 5</td>
<td>Changed</td>
<td>Changes made throughout the QuickSpec.</td>
</tr>
<tr>
<td>3-Mar-2014</td>
<td>From Version 3 to 4</td>
<td>Changed</td>
<td>Changes made throughout the QuickSpec.</td>
</tr>
<tr>
<td>7-Feb-2014</td>
<td>From Version 2 to 3</td>
<td>Changed</td>
<td>Changes made in Step 2.</td>
</tr>
<tr>
<td>26-Aug-2013</td>
<td>From Version 1 to 2</td>
<td>Added</td>
<td>Added the Overview image.</td>
</tr>
</tbody>
</table>

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