Lenovo ThinkSystem DB710S FC SAN Switch

Product Guide

In today's data-driven world, where the value of data and its protection are paramount, IT organizations face increasing pressure to ensure their systems are secure, reliable, and efficient. The challenge lies not only in securing continuous, non-stop access to data but also in optimizing critical applications and resources to improve productivity. To address these demands, a simple, always-available infrastructure is essential—one that supports high throughput and low-latency requirements for critical applications. Brocade Gen 7 Fibre Channel is key to helping organizations meet these challenges. By integrating this robust, high-performance network into their storage ecosystem, small and mid-sized businesses can effectively handle large volumes of data with minimal overhead. This enables faster decision making, improved operational efficiency, and a competitive edge, all without the complexity or cost typically associated with large enterprise-level solutions.

The following figure shows the Lenovo ThinkSystem DB710S Gen 7 FC SAN Switch.

Figure 1. Lenovo ThinkSystem DB710S Gen 7 FC SAN Switch

360° View   Full 3D Tour

Did you know?

The DB710S comes standard with a lifetime warranty, which allows customers to get hardware support and access to FOS support and more importantly access to the latest FOS releases until the end of life of the DB710S switch. Software Entitlement to the latest FOS software provides users: Receive the latest safeguards against security threats; fixes for bugs and performance improvements; improve compatibility with latest technologies; and improve operational efficiency with the latest features and fixes.

The DB710S can be deployed in a full-fabric switch mode or in the Brocade Access Gateway mode, which simplifies connecting the switch to existing storage area networks. By utilizing the Fibre Channel N_Port ID Virtualization (NPIV) standard, Brocade Access Gateway mode can connect to the core SAN switches as a transparent edge switch, simplifying SAN fabric configuration and management, while connecting physical and virtual servers directly to larger SAN fabrics. Key benefits of Brocade Access Gateway mode include the following:

- Improved scalability for large or rapidly growing server and virtual server environments.
- Reduced management of the network edge, since Brocade Access Gateway does not have a domain identity and appears transparent to the core fabric.
- Support for heterogeneous SAN configurations without reduced functionality for server connectivity.

Key features

The DB710S in Brocade Access Gateway mode connects servers to NPIV-enabled SAN fabrics. Organizations can enable Brocade Access Gateway through Command Line, Web Tools, or Brocade SANnav™ Management Portal.

Key benefits of the Lenovo ThinkSystem DB710S include the following:

Reliable: With a worry-free, reliable network, organizations can count on continuous uptime and optimal performance, regardless of the challenges that may arise. Designed for maximum reliability, the Lenovo DB710S offers six nines (99.9999%) availability, ensuring the network stays operational with minimal downtime. Automatic congestion management keeps network traffic flowing smoothly, preventing slowdowns and ensuring consistent performance. With "set-and-forget" network management, once the switch is in place, organizations will not need constant monitoring or manual intervention to maintain operations or resolve issues. Self-healing capabilities of the switch ensure that the network will remain operational and maintain performance, even when issues occur, providing organizations peace of mind. Automating routine tasks frees up time typically spent troubleshooting and optimizing performance, allowing teams to focus on initiatives that are key to the organization's strategic objectives.

Secure: The DB710S Switch is designed with a cyber-resilient architecture that ensures robust, high-level security for organizations' critical data and applications. It secures storage traffic through controlled access and network isolation, effectively protecting data from unauthorized users. By utilizing a hardened operating system and hardware, the switch minimizes potential vulnerabilities and strengthens the overall security posture. The switch also validates both hardware and software roots of trust, ensuring that only trusted components are active within the system. Additionally, with the included lifetime warranty, organizations gain access to security patches and firmware updates throughout the lifetime of the product, ensuring their system remains up-to-date and protected against emerging threats throughout its entire lifecycle.

Affordable: The DB710S brings enterprise-class Brocade Gen 7 technology to organizations in an entry-level package, offering fast, easy, and cost-effective scaling from 8 to 24 ports to support on-demand growth. It includes all supported enterprise software features in the base product, without any additional costs or complex configurations. This switch also eliminates support costs with a built-in lifetime warranty, ensuring long-term reliability and peace of mind while protecting the organization's investment. With this switch, organizations can achieve enterprise-level performance and capabilities without the high price tag, making it an ideal choice for businesses seeking value with high-end performance and availability.

Additionally, the ThinkSystem DB710S FC SAN Switch offers the following features and benefits:

- Provides an affordable entry point for Brocade® Gen 7 Fibre Channel technology.
- Scales from 8 ports up to 24 ports for on-demand "pay-as-you-grow" flexibility
- Leverages industry-leading reliability and an unprecedented lifetime warranty.
- Accelerates critical workloads with 64G links.
- Maximizes the performance of storage with 50% lower switching latency than Gen 6.
- Automates repetitive tasks to simplify management, save time, and eliminate human error.
- Safeguards mission-critical workloads from vulnerabilities with integrated Gen 7 security features.
- Optimizes fabric behavior and ensure sufficient bandwidth for mission-critical applications with advanced traffic management capabilities and adaptive networking.
- Provides proactive, non-intrusive, real-time monitoring and alerting of VM health and performance with VM Insight feature using integrated network sensors.
- Protects existing device investments with auto-sensing 8, 16, 32 and 64 Gbit/sec capabilities and native operation with Brocade fabrics.

For details on the latest features supported with the DB710S FC SAN Switch see the Administration Guide for the latest available Fabric OS version 9.2.2 and above:
https://www.broadcom.com/products/fibre-channel-networking/software/fabric-operating-system

Components and connectors

The following figure shows the port-side view of the DB710S FC SAN Switch.
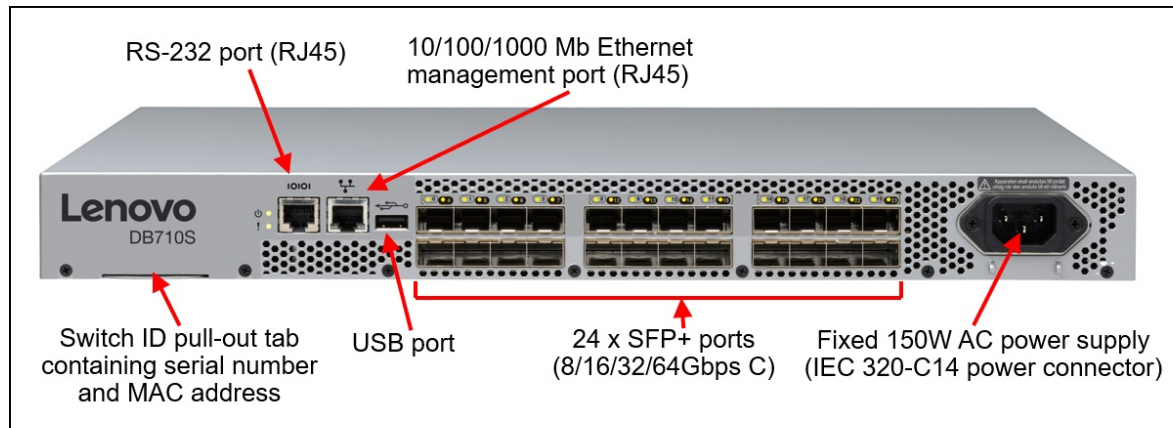

Figure 2. DB710S FC SAN Switch port-side view

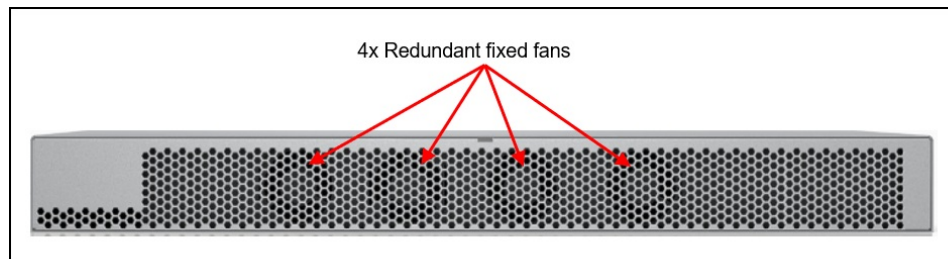The following figure shows the non-port side view of the DB710S FC SAN Switch.

Figure 3. DB710S FC SAN Switch non-port-side view

System specifications

The following table lists the ThinkSystem DB710S system specifications.

Table 1. System specifications

Component	Specification
Machine type	7DHN (Lifetime warranty)
System Architecture	
Fibre Channel Ports	Switch mode (default): 24 ports 64G SFP+ ports, each supporting E_Ports, F_Ports, M_Ports, D_Ports, and EX_Ports. 8-port base configuration: additional ports are enabled with two 8-port SFP+ PODs (Ports on Demand), scaling the switch from 8 ports to 24 ports. Brocade Access Gateway default port mapping: 16 F_Ports, 8 N_Ports.
Scalability	Full-fabric architecture with a maximum of 239 switches
Certified maximum	6000 active nodes; 56 switches, 19 hops in Brocade Fabric OS® fabrics; larger fabrics certified as required
Performance	Fibre Channel: • 8.5GB/s line speed, full duplex • 14.025Gb/s line speed, full duplex • 28.05Gb/s line speed, full duplex • 57.8Gb/s line speed, full duplex • Auto-sensing of 8, 16, 32, and 64G port speeds
ISL Trunking	Frame-based trunking with up to eight SFP+ ports per ISL trunk; up to 512Gb/s per ISL trunk. Exchange-based load balancing across ISLs with Dynamic Path Selection (DPS) included in Brocade Fabric OS
Aggregate bandwidth	1.536 Tb/s
Maximum fabric latency	Latency for locally switched ports is 460 ns including Forward Error Correction (FEC)
Maximum frame size	2112-byte payload
Frame buffers	2000 dynamically allocated buffer credits
Classes of service	Class 2, Class 3, Class F (inter-switch frames)
Port types	• F_Port, E_Port, M_Port, D_Port (ClearLink Diagnostic Port) on 24 SFP+ ports • Brocade Access Gateway mode: F_Port and NPIV-enabled N_Port
Data traffic types	Fabric switches supporting unicast
Media types	• 64G FC SFP+ LC connector: SWL, LWL. Auto negotiates to 64, 32, 16G • 32G FC SFP+ LC connector: SWL, LWL, ELWL. Auto negotiates to 32, 16, 8G • All Brocade transceivers are PC/UPC compatible
USB	One USB port for system log file downloads or firmware upgrades

Component	Specification
Fabric Services *Note: Some fabric services do not apply or are unavailable in Brocade Access Gateway mode*	BB Credit Recovery; Brocade Advanced Zoning (Default Zoning, Port/WWN Zoning, Peer Zoning); Congestion Signaling; Dynamic Path Selection (DPS); Extended Fabrics; Fabric Performance Impact Notification (FPIN); Fabric Vision; FDMI; Flow Vision; F_Port Trunking; FSPF; ISL Trunking; Management Server; Name Server; NPIV; NTP v3; Port Decommission/Fencing; QoS; Registered State Change Notification (RSCN); Slow Drain Device Quarantine (SDDQ); Target-Driven Zoning; Traffic Optimizer; Virtual Fabrics (Logical Switch, Logical Fabric); VMID+ and AppServer
Management	
Management	Brocade Advanced Web Tools; Brocade SANnav Management Portal and SANnav Global View; Command Line Interface (CLI); HTTP/HTTPS; RESTful API; SNMP v1/v3 (FE MIB, FC Management MIB); SSH
Security	DH-CHAP (between switches and end devices); FCAP switch authentication; HTTPS; IP filtering; LDAP with IPv6; OpenLDAP; Port Binding; RADIUS; TACACS+; user-defined Role-Based Access Control (RBAC); Secure Boot; Secure Copy (SCP); Secure Syslog; SFTP; SSH v2; SSL; Switch Binding; Trusted Switch
Management access	1000Mb/s Ethernet (RJ-45) port, in-band over Fibre Channel, RJ-45 serial console port, and one USB port
Diagnostics	Active Support Connectivity (ASC) and Brocade Support Link (BSL); built-in flow generator; ClearLink optics and cable diagnostics, including electrical/optical loopback, link traffic/latency/distance; Fabric Performance Impact Monitoring (FPI); flow mirroring; Forward Error Correction (FEC); frame viewer; IO Insight for SCSI and NVMe monitoring; Monitoring and Alerting Policy Suite (MAPS); non-disruptive daemon restart; optics health monitoring; POST and embedded online/offline diagnostics, including environmental monitoring, FCping, and Pathinfo (FC traceroute); power monitoring; RAStrace logging; Rolling Reboot Detection (RRD); Syslog/Audit Log; VM Insight
Mechanical	
Enclosure	Back-to-front airflow (non-port-side intake); power from front, 1U
Dimensions	Width: 42.88 cm (16.88 in.) Height: 4.29 cm (1.69 in.) Depth: 30.66 cm (12.07 in.)
System Weight	4.24 kg (9.35 lb) with one integrated power supply and fans, without transceivers 4.84 kg (10.67 lb) with one integrated power supply, fans, fully populated with transceivers
Environment	
Operating Environment	Temperature: 0°C to 40°C (32°F to 104°F) Humidity: 10% to 85% (non-condensing)
Non-operating Environment	Temperature: -25°C to 70°C (-13°F to 158°F) Humidity: 10% to 90% (non-condensing)
Operating Altitude	Up to 3000m (9842 ft)
Storage Altitude	Up to 12 km (39,370 ft)
Shock	Operating: Up to 10G, 11 ms half-sine Non-operating: Trapezoidal wave, 60G, 18 ms, 3G axis
Vibration	Operating: 1.0g sine, 0.4 grms random, 5 Hz to 500 Hz Non-operating: 2.4g sine, 1.1 grms random, 5 Hz to 500 Hz
Heat Dissipation	Typical: 185 BTU/hr Max: 350 BTU/hr
Power	
Power Supply	Base switch includes a single, fixed power supply with four integrated system cooling fans
AC Input	100V to 240V, maximum input current 2A

Component	Specification
AC Input Line Frequency	50 Hz to 60 Hz nominal, 47 Hz to 63 Hz range
AC Power Consumption	Maximum power draw: • 105W with all 24 ports operating at 64G running 100% traffic rate. (24 ports populated with 64G SWL transceivers) Fans at max speed. • 45W for empty chassis with no optical transceivers. Typical power draw: • 65W with 12 ports operating at 64G running 50% traffic rate. (12 ports populated with 64G SWL transceivers) Fans at nominal speed. • 85W with 24 ports operating at 64G running 50% traffic rate. (24 ports populated with 32G SWL transceivers) Fans at nominal speed
Support	
Hardware Warranty	Machine type 7DHN: Lifetime non-transferrable warranty, customer-replaceable unit with 9x5 next business day parts delivered
Service and support	Optional service upgrades are available through Lenovo Services: 9x5 next business day onsite response, 24x7 2-hour or 4-hour onsite response, 24x7 6-hour or 24-hour committed service repair, up to 5 years of warranty coverage, 1-year or 2-year post-warranty extensions, and Basic Hardware Installation Services.
Fabric OS Entitlement	Machine type 7DHN: Lifetime firmware entitlement and support license are standard

Models

The following table lists the ThinkSystem DB710S FC SAN Switch models.

Table 2. Lenovo ThinkSystem DB710S FC SAN Switch models

Part number	Machine Type-Model	Feature code	Description
Lifetime warranty and lifetime firmware support			
7DHNA001WW	7DHNCTO1WW	C1FM	Lenovo ThinkSystem DB710S, 8-Port License, 8 x 32GB SWL SFPs, Enterprise Bundle, Rail Kit, Lifetime HW Warranty & FW maintenance
7DHNA002WW	7DHNCTO2WW	C1FN	Lenovo ThinkSystem DB710S, 8-Port License, 8 x 64GB SWL SFPs, Enterprise Bundle, Rail Kit, Lifetime HW Warranty & FW maintenance

The DB710S FC SAN Switch part numbers include the following physical components:

• One FC SAN Switch - with transceivers included and ports activated as listed in the Port activation licenses section
• Serial cable (DB-9/RJ-45 to RJ-45)
• Fixed rack mount kit.
• Online Documentation web pointer card
• SANNav web pointer card

Note: The switch comes standard without a power cord; one power cable must be purchased together with the switch. (see Power supplies and cables section for details).

Port activation licenses

The DB710S FC SAN Switch models ship with port licenses (port activations) and transceivers as listed in the following table.

Table 3. Transceivers and Port activations included

Part number	Feature code	Ports activated (maximum 24)	Transceivers included
7DHNA001WW	7DHNCTO1WW	8	8x 32Gb FC SWL SFP+
7DHNA002WW	7DHNCTO2WW	8	8x 64Gb FC SWL SFP+

The remaining ports can be activated by purchasing and installing Ports on Demand (POD) licenses. Port licenses and transceiver bundles, are sold in 8-port increments. The following table lists the ordering information and licenses with 32G and 64 transceivers is supported

Table 4. Port On-Demand upgrades

Part number	Feature code	Description	Transceivers included	Maximum quantity
Electronic authorization licenses and bundles				
4XF7A94634	C1FP	Lenovo DB710S 8 PORT-ON-DEMAND License with 8 X 32G SWL SFPs	8x 32Gb FC SWL SFP+	2 POD's per switch
4XF7A94635	C1FQ	Lenovo DB710S 8 PORT-ON-DEMAND License with 8 X 64G SWL SFPs	8x 64Gb FC SWL SFP+	

Transceivers and cables

With the flexibility of the DB710S FC SAN Switch, customers can choose the following connectivity technologies:

- For 64 Gbps FC links, customers can use 64 Gb FC SFP+ SWL optical transceivers for distances up to 100 meters on OM4 or up to 70 meters on OM3 50 μ MMF cables. For longer distances, the 64 Gb FC LWL SFP+ optical transceivers can support up to 10 km on SMF cables. These transceivers can operate at 64 Gbps, 32 Gbps, or 16 Gbps speeds.

- For 32 Gbps FC links, customers can use 32 Gb FC SFP+ SWL optical transceivers for distances up to 100 meters on OM4 or up to 70 meters on OM3 50 μ MMF cables. For longer distances, the 32 Gb FC LWL SFP+ optical transceivers can support up to 10 km on SMF cables. For extended distances, the 32 Gb FC ELWL SFP+ optical transceivers can support up to 25 kilometers on SMF cables. These transceivers can operate at 32 Gbps, 16 Gbps, or 8 Gbps speeds. (Except ELWL part number 4M27A65431 which can only operate at 32Gbps and 16 Gbps).

- For the 1 GbE RJ-45 management port, customers can use UTP cables for distances up to 100 meters.

The DB710S FC SAN Switch models ship with 8x SWL transceivers as listed in the table in the Port activation licenses subsection. Additional SWL, LWL, and ELWL SFP+ transceivers can be ordered for the switch, if needed.

The following table lists the supported SFP+ options and cables.

> **Brocade secure transceivers**: These transceivers have features to ensure that you are using genuine Brocade components to maximize performance and reliability and to help avoid issues related to counterfeit products.

Table 5. Transceivers and cables

Part number	Feature code	Description	Maximum quantity
64 Gb FC SFP+ transceivers			
4M27A65425	BF6J	Brocade Secure 64Gb SWL SFP+ Transceiver	24
4M27A65426	BF6K	Brocade Secure 64Gb SWL SFP+ Transceiver 8-pack	3
4M27A65433*	BQQG	Brocade Secure 64Gb LWL SFP+ Transceiver (10 km)	24
4M27A65434*	BQQH	Brocade Secure 64Gb LWL SFP+ Transceiver (10 km) 8-pack	3
32 Gb FC SFP+ transceivers			
4M27A65416	BF69	Brocade Secure 32Gb SWL SFP+ Transceiver	24
4M27A65417	BF6A	Brocade Secure 32Gb SWL SFP+ Transceiver 8-pack	3
4M27A65418	BF6B	Brocade Secure 32Gb LWL SFP+ Transceiver (10 km)	24
4M27A65419	BF6C	Brocade Secure 32Gb LWL SFP+ Transceiver (10 km) 8-pack	3
4M27A65431**	BQQE	Brocade Secure 32Gb ELWL SFP+ V2 Transceiver (25 km)	24
OM3 optical cables for 32 Gb and 64 Gb FC SW SFP+ transceivers			
00MN499	ASR5	Lenovo 0.5m LC-LC OM3 MMF Cable	24
00MN502	ASR6	Lenovo 1m LC-LC OM3 MMF Cable	24
00MN505	ASR7	Lenovo 3m LC-LC OM3 MMF Cable	24
00MN508	ASR8	Lenovo 5m LC-LC OM3 MMF Cable	24
00MN511	ASR9	Lenovo 10m LC-LC OM3 MMF Cable	24
00MN514	ASRA	Lenovo 15m LC-LC OM3 MMF Cable	24
00MN517	ASRB	Lenovo 25m LC-LC OM3 MMF Cable	24
00MN520	ASRC	Lenovo 30m LC-LC OM3 MMF Cable	24
OM4 optical cables for 32 Gb and 64 Gb FC SW SFP+ transceivers			
4Z57A10845	B2P9	Lenovo 0.5m LC-LC OM4 MMF Cable	24
4Z57A10846	B2PA	Lenovo 1m LC-LC OM4 MMF Cable	24
4Z57A10847	B2PB	Lenovo 3m LC-LC OM4 MMF Cable	24
4Z57A10848	B2PC	Lenovo 5m LC-LC OM4 MMF Cable	24
4Z57A10849	B2PD	Lenovo 10m LC-LC OM4 MMF Cable	24
4Z57A10850	B2PE	Lenovo 15m LC-LC OM4 MMF Cable	24
4Z57A10851	B2PF	Lenovo 25m LC-LC OM4 MMF Cable	24
4Z57A10852	B2PG	Lenovo 30m LC-LC OM4 MMF Cable	24
UTP Category 6 cables (Green) for the 1 GbE RJ-45 management port			
00WE123	AVFW	0.75m Green Cat6 Cable	1
00WE127	AVFX	1.0m Green Cat6 Cable	1
00WE131	AVFY	1.25m Green Cat6 Cable	1
00WE135	AVFZ	1.5m Green Cat6 Cable	1
00WE139	AVG0	3m Green Cat6 Cable	1
90Y3718	A1MT	10m Green Cat6 Cable	1
90Y3727	A1MW	25m Green Cat6 Cable	1
UTP Category 5e cables (Blue) for the 1 GbE RJ-45 management port			
40K5679	3801	e1350 .6 Meter Blue Ethernet Cable	1
40K8785	3802	1.5 Meter Blue Ethernet Cable	1
40K5581	3803	3m Blue Cat5e Cable	1

Part number	Feature code	Description	Maximum quantity
40K8927	3804	e1350 10 Meter Blue Ethernet Cable	1
40K8930	3805	25m Blue Cat5e Cable	1

* Limited to two 64G at 10KM per switch.
** Limited to two 32G at 25KM per switch. This transceiver is also limited to 16G and 32G connection speeds.

The following table lists the cabling requirements for the switch.

Table 6. DB710S FC SAN Switch cabling requirements

Transceiver	Standard	Cable	Connector
64 Gb Fibre Channel			
64 Gb FC SWL SFP+ (4M27A65425, 4M27A65426)	FC-PI-6	Up to 30 m with LC-LC MMF cables supplied by Lenovo (see Table 4) or the following 850 nm 50 µ MMF cables: ● 64GFC: Up to 100 m (OM4) or up to 70 m (OM3) ● 32GFC: Up to 100 m (OM4) or up to 70 m (OM3) ● 16GFC: Up to 125 m (OM4) or up to 100 m (OM3) ● 8GFC: No support	LC
64 Gb FC LWL SFP+ (4M27A65433, 4M27A65434)	FC-PI-6	1310 nm 9 µ SMF cable: ● 64GFC, 32GFC, 16GFC: Up to 10 km.	LC
32 Gb Fibre Channel			
32 Gb FC SWL SFP+ (4M27A65416, 4M27A65417)	FC-PI-6	Up to 30 m with LC-LC MMF cables supplied by Lenovo (see Table 4), or the following 850 nm 50 µ MMF cables: ● 32GFC: Up to 100 m (OM4) or up to 70 m (OM3). ● 16GFC: Up to 125 m (OM4) or up to 100 m (OM3). ● 8GFC: Up to 125 m (OM4) or up to 100 m (OM3).	LC
32 Gb FC LWL SFP+ (4M27A65418, 4M27A65419)	FC-PI-6	1310 nm 9 µ SMF cable: ● 32GFC, 16GFC, 8GFC: Up to 10 km	LC
32 Gb FC ELWL SFP+ (4M27A65431)	FC-PI-6	1310 nm 9 µ SMF cable: ● 32GFC, 16GFC: Up to 25 km	LC
Management ports			
10/100/1000 Mb Ethernet port	1000BASE-T	Up to 25 m with UTP cables supplied by Lenovo (see Table 4) or other UTP Category 5, 5E, and 6 up to 100 meters.	RJ45
Serial console port (mini-USB).	RS-232	Mini-USB console cable to DB-9/RJ-45 (included with the switch).	RJ45

Enterprise Bundle

The Enterprise Bundle comes standard and is comprised of the following features:

- ISL Trunking (TRK): Allows frame-based consolidation of up to 8 inter-switch links (ISLs) into fault-tolerant and load-balanced trunks with bandwidth of up to 256 Gbps.

- Fabric Vision (FV)
  - Monitoring and Alerting Policy Suite (MAPS): Provides a policy-based, fabric-wide threshold monitoring and alerting tool.
  - Flow Vision: Enables administrators to identify, monitor, and analyze specific application flows in order to simplify troubleshooting, maximize performance, avoid congestion, and optimize resources. Flow Vision includes:
    - Flow Monitor: Provides comprehensive visibility, automatic learning, and non-disruptive monitoring of a flow's performance. Administrators can monitor all flows from a specific host to multiple targets or volumes, from multiple hosts to a specific target/volume, or across a specific ISL. Additionally, they can perform volume-level monitoring of specific frame types to identify resource contention or congestion that is impacting application performance. With VM Insight, administrators can monitor network throughput statistics for each VM.
    - Flow Learning: Enables administrators to non-disruptively discover all flows that go to or come from a specific host port or a storage port, or traverse ISLs/IFLs (Inter-Fabric Links) or Fibre Channel over Internet Protocol (FCIP) tunnels, to monitor fabric-wide application performance. In addition, administrators can discover top and bottom bandwidth-consuming devices and manage capacity planning.
    - Flow Generator: Provides a built-in traffic generator for pretesting and validating the data center infrastructure for robustness—including route verification and integrity of optics, cables, ports, back-end connections, and ISLs—before deploying applications.
    - Flow Mirroring: Provides the ability to non-disruptively create copies of specific application and data flows or frame types that can be captured for in-depth analysis.

- VM Insight: Seamlessly monitors health and performance of individual Virtual Machines (VMs) to quickly identify abnormal VM behavior and enable administrators to proactively facilitate troubleshooting and fault isolation, helping to ensure performance and operational stability.

- Fabric Performance Impact (FPI) Monitoring: Leverages predefined MAPS policies to automatically identify and isolate devices that cause network performance issues by detecting different latency severity levels, and to alert administrators.

- Extended Fabric (EF): Extends Fibre Channel SANs beyond 10 km distance limitations for replication and backup at full bandwidth.

Management software

Lenovo offers optional Brocade SANnav™ Management Portal and SANnav Global View software license subscriptions that provide comprehensive visibility into the SAN environment, allow administrators to quickly identify, isolate, and correct problems, and accelerate administrative tasks by simplifying and automating workflows.

SANnav Management Portal is a next-generation SAN management application with a simple browser-based user interface (UI) and with a focus on streamlining common workflows, such as configuration, zoning, deployment, monitoring, troubleshooting, reporting, and analytics.

Lenovo offers the following SANnav Management Portal subscriptions:

- SANnav Management Portal Base: Designed for mid-sized SANs to manage up to 600 SAN switch ports only (SAN director ports can only be managed with the Enterprise edition).

- SANnav Management Portal Enterprise: Designed for enterprise-class SANs to manage up to 15,000 SAN switch and director ports.

SANnav Management Portal supports all Brocade SAN switches and platforms that run the Fabric OS® version 7.4 or above, including Lenovo DB610S, DB620S, DB630S, DB400D, DB710S, DB720S, DB730S, DB800D, Brocade Directors, and FC5022.

With SANnav Global View, administrators can quickly visualize the health, performance, and inventory of multiple SANnav Management Portal instances using a simple, intelligent dashboard and can easily navigate from a global view down to local environments to investigate points of interest. SANnav Global View is designed to manage up to 20 SANnav Management Portal instances.

For more information, refer to the SANnav Management Portal documentation:
http://www.broadcom.com/products/fibre-channel-networking/software/sannav-management-portal#documentation

The following table lists ordering information for the optional SANnav Management Portal and SANnav Global View management tools. After a client has an active SANnav license, Lenovo offers a "license extension/renewal". This offering provides our clients the flexible to extend their subscription down to a specific end date. This allows clients the ability to align to your company's budget or align with warranty of your FC SAN switches/directors. Please engage directly with your Lenovo sales representative for more details.

Table 7. SANnav Management Portal and SANnav Global View subscription licenses

Part number	Feature code	Description
SANnav Management Portal electronic authorization licenses		
7S0C0010WW	S1K6	Brocade SANnav Mgmt Portal Base Edition - 1YR License 600 ports
7S0C0013WW	S1K8	Brocade SANnav Mgmt Portal Base Edition - 3YR License 600 ports
7S0C001KWW	S4MB	Brocade SANnav Mgmt Portal Base Edition - 5YR License 600 ports
7S0C0011WW	S1K7	Brocade SANnav Mgmt Portal Enterprise Edition - 1YR License 15K ports
7S0C0014WW	S1K9	Brocade SANnav Mgmt Portal Enterprise Edition - 3YR License 15K ports
7S0C001LWW	S4MC	Brocade SANnav Mgmt Portal Enterprise Edition - 5YR License 15K ports
SANnav Global View electronic authorization licenses		
7S0C0012WW	S1D8	Brocade SANnav Global View - 1YR License
7S0C0015WW	S1D9	Brocade SANnav Global View - 3YR License
7S0C001JWW	S4MA	Brocade SANnav Global View - 5YR License

The SANnav licenses are subscription-based with 1-year, 3-year, or 5-year software entitlement and support.

Fibre Channel standards

The DB710S FC SAN Switch supports the standards listed at the following web page:

https://www.broadcom.com/support/fibre-channel-networking/san-standards/standards-compliance

Power supplies and cables

The switch comes standard without a power cord; one rack power cables or line cords must be ordered together with the switch (see the following table).

Table 8. Power cord options

Part number	Feature code	Description
Rack power cables		
39Y7937	6201	1.5m, 10A/100-250V, C13 to C14 Jumper Cord
None*	6568	1.8m, 10A/100-250V, 2xC13PM to IEC 320-C14 Rack Power Cable
4L67A08366	6311	2.8m, 10A/100-250V, C13 to C14 Jumper Cord
39Y7938	6204	2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable
39Y7932	6263	4.3m, 10A/100-250V, C13 to C14 Jumper Cord
Line cords		
39Y7931	6207	Power Cable - C13 / NEMA 5-15P 14ft
46M2592	A1RF	2.8m, 10A/250V, C13 to NEMA 6-15P Line Cord
39Y7930	6222	2.8m, 10A/250V, C13 to IRAM 2073 (Argentina) Line Cord
39Y7924	6211	2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ) Line Cord
39Y7928	6210	2.8m, 10A/220V, C13 to GB 2099.1 (China) Line Cord
39Y7918	6213	2.8m, 10A/250V, C13 to DK2-5a (Denmark) Line Cord
39Y7917	6212	2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord
39Y7927	6269	2.8m, 10A/250V, C13(2P+Gnd) (India) Line Cord
39Y7920	6218	2.8m, 10A/250V, C13 to SI 32 (Israel) Line Cord
39Y7921	6217	2.8m, 220-240V, C13 to CEI 23-16 (Italy/Chile) Line Cord
46M2593	A1RE	2.8m, 12A/125V, C13 to JIS C-8303 (Japan) Line Cord
39Y7925	6219	2.8m, 220-240V, C13 to KETI (S Korea) Line Cord
39Y7922	6214	2.8m, 10A/250V, C13 to SABS 164 (S Africa) Line Cord
39Y7919	6216	2.8m, 10A/250V, C13 to SEV 1011-S24507 (Swiss) Line Cord
39Y7923	6215	2.8m, 10A/250V, C13 to BS 1363/A (UK) Line Cord

* Available for factory-built custom configurations and solutions only.

Rack installation

The DB710S FC SAN Switch comes standard with the fixed rack mount kit that can be used for 4-post rack installations. If needed, the DB710S FC SAN Switch can be mounted in a 2-post rack cabinet by using the optional mid-mount rack kit or a slide rack mount kit in a 19-in. (48.3 cm) EIA cabinet (min. distance of 71.76 cm & max 75.90 cm between front and back rails) which are listed in the following table.

Table 9. Rack-mount options

Part number	Feature code	Description	Maximum quantity supported
01KP847	AX4D	Lenovo Mid-mount (Telco) Rack Kit	1
00MY794	ASKK	Lenovo Slide Rack Mount Kit	1

The optional mid-mount rack kit for the DB710S FC SAN Switch is shown in the following figure.
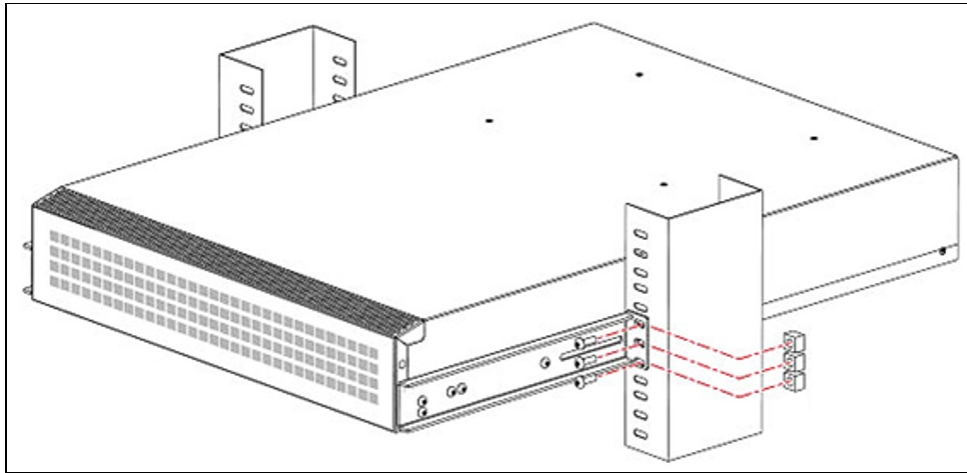
Figure 4. Lenovo Mid-mount (Telco) Rack Kit

The optional slide rack kit for the DB710S FC SAN Switch is shown in the following figure.
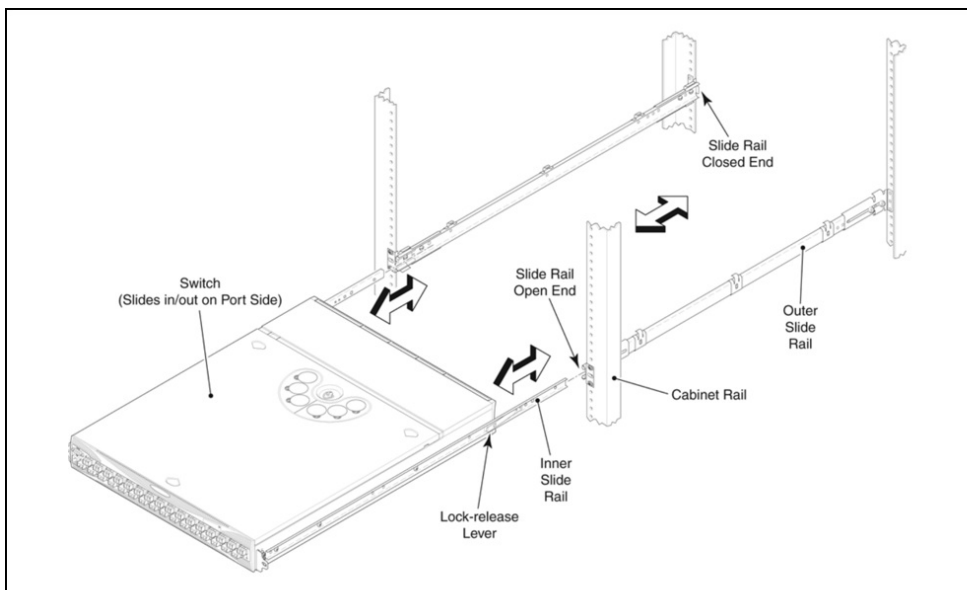

Figure 5. Lenovo Slide Rack Kit

Warranty upgrades and post-warranty support

The DB710S FC SAN Switch has the following warranty term:

- Machine type 7DHC: Lifetime non-transferrable warranty

Note: For machine type 7DHC, the limited lifetime warranty is active until the SAN switch reaches its end of service date announced by Lenovo. Lenovo typically provides support for at least five years following the last order date of a product.

Our global network of regional support centers offers consistent, local-language support enabling you to vary response times and level of service to match the criticality of your support needs:

- **Standard Next Business Day** – Best choice for non-essential systems requiring simple maintenance.
- **Premier Next Business Day** – Best choice for essential systems requiring technical expertise from senior-level Lenovo engineers.
- **Premier 24x7 4-Hour Response** – Best choice for systems where maximum uptime is critical.
- **Premier Enhanced Storage Support 24x7 4-Hour Response** – Best choice for storage systems where maximum uptime is critical.

For more information, consult the brochure Lenovo Operational Support Services for Data Centers Services.

Services

Lenovo Data Center Services empower you at every stage of your IT lifecycle. From expert advisory and strategic planning to seamless deployment and ongoing support, we ensure your infrastructure is built for success. Our comprehensive services accelerate time to value, minimize downtime, and free your IT staff to focus on driving innovation and business growth.

Note: Some service options may not be available in all markets or regions. For more information, go to https://lenovolocator.com/. For information about Lenovo service upgrade offerings that are available in your region, contact your local Lenovo sales representative or business partner.

In this section:

- Lenovo Advisory Services
- Lenovo Plan & Design Services
- Lenovo Deployment, Migration, and Configuration Services
- Lenovo Support Services
- Lenovo Managed Services
- Lenovo Sustainability Services

Lenovo Advisory Services

Lenovo Advisory Services simplify the planning process, enabling customers to build future-proofed strategies in as little as six weeks. Consultants provide guidance on projects including VM migration, storage, backup and recovery, and cost management to accelerate time to value, improve cost efficiency, and build a flexibly scalable foundation.

- **Assessment Services**

  An Assessment helps solve your IT challenges through an onsite, multi-day session with a Lenovo technology expert. We perform a tools-based assessment which provides a comprehensive and thorough review of a company's environment and technology systems. In addition to the technology based functional requirements, the consultant also discusses and records the non-functional business requirements, challenges, and constraints. Assessments help organizations like yours, no matter how large or small, get a better return on your IT investment and overcome challenges in the ever-changing technology landscape.

- **Design Services**

  Professional Services consultants perform infrastructure design and implementation planning to support your strategy. The high-level architectures provided by the assessment service are turned into low level designs and wiring diagrams, which are reviewed and approved prior to implementation. The implementation plan will demonstrate an outcome-based proposal to provide business capabilities through infrastructure with a risk-mitigated project plan.

Lenovo Plan & Design Services

Unlock faster time to market with our tailored, strategic design workshops to align solution approaches with your business goals and technical requirements. Leverage our deep solution expertise and end-to-end delivery partnership to meet your goals efficiently and effectively.

Lenovo Deployment, Migration, and Configuration Services

Optimize your IT operations by shifting labor-intensive functions to Lenovo's skilled technicians for seamless on-site or remote deployment, configuration, and migration. Enjoy peace of mind, faster time to value, and comprehensive knowledge sharing with your IT staff, backed by our best-practice methodology.

- **Deployment Services for Storage and ThinkAgile**

  A comprehensive range of remote and onsite options tailored specifically for your business needs to ensure your storage and ThinkAgile hardware are fully operational from the start.

- **Hardware Installation Services**

  A full-range, comprehensive setup for your hardware, including unpacking, inspecting, and positioning components to ensure your equipment is operational and error-free for the most seamless and efficient installation experience, so you can quickly benefit from your investments.

- **DM/DG File Migration Services**

  Take the burden of file migration from your IT's shoulders. Our experts will align your requirements and business objectives to the migration plans while coordinating with your team to plan and safely execute the data migration to your storage platforms.

- **DM/DG/DE Health Check Services**

  Our experts perform proactive checks of your Firmware and system health to ensure your machines are operating at peak and optimal efficiency to maximize up-time, avoid system failures, ensure the security of IT solutions and simplify maintenance.

- **Factory Integrated Services**

  A suite of value-added offerings provided during the manufacturing phase of a server or storage system that reduces time to value. These services aim at improving your hardware deployment experience and enhance the quality of a standard configuration before it arrives at your facility.

Lenovo Support Services

In addition to response time options for hardware parts, repairs, and labor, Lenovo offers a wide array of additional support services to ensure your business is positioned for success and longevity. Our goal is to reduce your capital outlays, mitigate your IT risks, and accelerate your time to productivity.

- **Premier Support for Data Centers**

  Your direct line to the solution that promises the best, most comprehensive level of support to help you fully unlock the potential of your data center.

- **Premier Enhanced Storage Support (PESS)**

  Gain all the benefits of Premier Support for Data Centers, adding dedicated storage specialists and resources to elevate your storage support experience to the next level.

- **Committed Service Repair (CSR)**

  Our commitment to ensuring the fastest, most seamless resolution times for mission-critical systems that require immediate attention to ensure minimal downtime and risk for your business. This service is only available for machines under the Premier 4-Hour Response SLA.

- **Multivendor Support Services (MVS)**

  Your single point of accountability for resolution support across vast range of leading Server, Storage, and Networking OEMs, allowing you to manage all your supported infrastructure devices seamlessly from a single source.

- **Keep Your Drive (KYD)**

  Protect sensitive data and maintain compliance with corporate retention and disposal policies to ensure your data is always under your control, regardless of the number of drives that are installed in your Lenovo server.

- **Technical Account Manager (TAM)**

  Your single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time, ensuring smooth operations and optimized performance as your business grows.

- **Enterprise Software Support (ESS)**

  Gain comprehensive, single-source, and global support for a wide range of server operating systems and Microsoft server applications.

For more information, consult the brochure Lenovo Operational Support Services for Data Centers.

Lenovo Managed Services

Achieve peak efficiency, high security, and minimal disruption with Lenovo's always-on Managed Services. Our real-time monitoring, 24x7 incident response, and problem resolution ensure your infrastructure operates seamlessly. With quarterly health checks for ongoing optimization and innovation, Lenovo's remote active monitoring boosts end-user experience and productivity by keeping your data center's hardware performing at its best.

Lenovo Managed Services provides continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of your data center using state-of-the-art tools, systems, and practices by a team of highly skilled and experienced Lenovo services professionals.

Quarterly reviews check error logs, verify firmware & OS device driver levels, and software as needed. We'll also maintain records of latest patches, critical updates, and firmware levels, to ensure you systems are providing business value through optimized performance.

Lenovo Sustainability Services

- **Asset Recovery Services**

    Lenovo Asset Recovery Services (ARS) provides a secure, seamless solution for managing end-of-life IT assets, ensuring data is safely sanitized while contributing to a more circular IT lifecycle. By maximizing the reuse or responsible recycling of devices, ARS helps businesses meet sustainability goals while recovering potential value from their retired equipment. For more information, see the Asset Recovery Services offering page.

- **CO2 Offset Services**

    Lenovo's CO2 Offset Services offer a simple and transparent way for businesses to take tangible action on their IT footprint. By integrating CO2 offsets directly into device purchases, customers can easily support verified climate projects and track their contributions, making meaningful progress toward their sustainability goals without added complexity.

- **Lenovo Certified Refurbished**

    Lenovo Certified Refurbished offers a cost-effective way to support IT circularity without compromising on quality and performance. Each device undergoes rigorous testing and certification, ensuring reliable performance and extending its lifecycle. With Lenovo's trusted certification, you gain peace of mind while making a more sustainable IT choice.

Lenovo TruScale

Lenovo TruScale XaaS is your set of flexible IT services that makes everything easier. Streamline IT procurement, simplify infrastructure and device management, and pay only for what you use – so your business is free to grow and go anywhere.

Lenovo TruScale is the unified solution that gives you simplified access to:

- The industry's broadest portfolio – from pocket to cloud – all delivered as a service
- A single-contract framework for full visibility and accountability
- The global scale to rapidly and securely build teams from anywhere
- Flexible fixed and metered pay-as-you-go models with minimal upfront cost
- The growth-driving combination of hardware, software, infrastructure, and solutions – all from one single provider with one point of accountability.

For information about Lenovo TruScale offerings that are available in your region, contact your local Lenovo sales representative or business partner.

Regulatory compliance

The DB710S FC SAN Switch conforms to the following regulations which can be found in the Hardware Installation Guide, available from the following web page:

https://www.broadcom.com/products/fibre-channel-networking/switches/g710-switch

Interoperability

For end-to-end storage configuration support, refer to the Lenovo Storage Interoperation Center (LSIC): https://datacentersupport.lenovo.com/us/en/lsic

Use the LSIC to select the known components of your configuration and then get a list all other supported combinations, with details about supported hardware, firmware, operating systems, and drivers, plus any additional configuration notes. View results on screen or export them to Excel.

External storage systems

Lenovo offers the ThinkSystem DE Series, ThinkSystem DG Series and ThinkSystem DM Series external storage systems for high-performance storage. See the DE Series, DG Series and DM Series product guides for specific controller models, expansion enclosures and configuration options:

- ThinkSystem DE Series Storage
  https://lenovopress.com/storage/thinksystem/de-series#rt=product-guide

- ThinkSystem DM Series Storage
  https://lenovopress.com/storage/thinksystem/dm-series#rt=product-guide

- ThinkSystem DG Series Storage
  https://lenovopress.com/storage/thinksystem/dg-series#rt=product-guide

External backup units

The following table lists the external backup options that are offered by Lenovo that can be used in Lenovo FC SAN solutions.

Note: Information provided in this section is for ordering reference purposes only. End-to-end LTO Ultrium configuration support for a particular tape backup unit *must* be verified through the System Storage Interoperation Center (SSIC):
http://www.ibm.com/systems/support/storage/ssic

Table 10. External Fibre Channel backup options

Part number	Description
External tape backup libraries	
6741A1F	IBM TS4300 3U Tape Library-Base Unit
Fibre Channel backup drives for TS4300 Tape Library - Full Height	
01KP938	LTO 7 FH Fibre Channel Drive
01KP954	LTO 8 FH Fibre Channel Drive
02JH837	LTO 9 FH Fibre Channel Drive
Fibre Channel backup drives for TS4300 Tape Library - Half Height	
01KP936	LTO 7 HH Fibre Channel Drive
01KP952	LTO 8 HH Fibre Channel Drive
02JH835	LTO 9 HH Fibre Channel Drive

For more information, see the list of Product Guides in the Tape Autoloaders and Libraries category:
https://lenovopress.com/storage/tape/library

Rack cabinets

The following table lists the supported rack cabinets.

Table 11. Rack cabinets (D)

Model	Description
7D6DA007WW	ThinkSystem 42U Onyx Primary Heavy Duty Rack Cabinet (1200mm)
7D6DA008WW	ThinkSystem 42U Pearl Primary Heavy Duty Rack Cabinet (1200mm)
7D6EA009WW	ThinkSystem 48U Onyx Primary Heavy Duty Rack Cabinet (1200mm)
7D6EA00AWW	ThinkSystem 48U Pearl Primary Heavy Duty Rack Cabinet (1200mm)
93604PX	42U 1200mm Deep Dynamic Rack
93614PX	42U 1200mm Deep Static Rack
93634PX	42U 1100mm Dynamic Rack
93634EX	42U 1100mm Dynamic Expansion Rack
93074RX	42U Standard Rack (1000mm)

For specifications about these racks, see the Lenovo Rack Cabinet Reference, available from:
https://lenovopress.com/lp1287-lenovo-rack-cabinet-reference

For more information, see the list of Product Guides in the Rack cabinets category:
https://lenovopress.com/servers/options/racks

Power distribution units

The following table lists the power distribution units (PDUs) that are offered by Lenovo.

Table 12. Power distribution units

Part number	Feature code	Description	ANZ	ASEAN	Brazil	EET	MEA	RUCIS	WE	HTK	INDIA	JAPAN	LA	NA	PRC
0U Basic PDUs															
4PU7A93176	C0QH	0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93169	C0DA	0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93177	C0QJ	0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93170	C0D9	0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
0U Switched and Monitored PDUs															
4PU7A93181	C0QN	0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 48A 3 Phase Delta PDU v2 (60A derated)	N	Y	N	N	N	N	N	Y	N	Y	N	Y	N
4PU7A93174	C0D5	0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 48A 3 Phase Delta PDU (60A derated)	N	Y	N	N	N	N	N	Y	N	N	N	Y	N
4PU7A93178	C0QK	0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93171	C0D8	0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93182	C0QP	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93175	C0CS	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93180	C0QM	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93173	C0D6	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93179	C0QL	0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 24A 1 Phase PDU v2 (30A derated)	N	Y	N	N	N	N	N	Y	N	Y	N	Y	N
4PU7A93172	C0D7	0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 24A 1 Phase PDU(30A derated)	N	Y	N	N	N	N	N	Y	N	N	N	Y	N
1U Switched and Monitored PDUs															
4PU7A90808	C0D4	1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 ETL	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N
4PU7A81117	BNDV	1U 18 C19/C13 switched and monitored 48A 3P WYE PDU - ETL	N	N	N	N	N	N	N	N	N	N	N	N	Y	N
4PU7A90809	C0DE	1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 CE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
4PU7A81118	BNDW	1U 18 C19/C13 switched and monitored 48A 3P WYE PDU – CE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y

Part number	Feature code	Description	ANZ	ASEAN	Brazil	EET	MEA	RUCIS	WE	HTK	INDIA	JAPAN	LA	NA	PRC
4PU7A90810	C0DD	1U 18 C19/C13 Switched and monitored 80A 3P Delta PDU V2	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N
4PU7A77467	BLC4	1U 18 C19/C13 Switched and Monitored 80A 3P Delta PDU	N	N	N	N	N	N	N	N	N	Y	N	Y	N
4PU7A90811	C0DC	1U 12 C19/C13 Switched and monitored 32A 3P WYE PDU V2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A90812	C0DB	1U 12 C19/C13 Switched and monitored 60A 3P Delta PDU V2	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N
4PU7A77469	BLC6	1U 12 C19/C13 switched and monitored 60A 3P Delta PDU	N	N	N	N	N	N	N	N	N	N	N	Y	N
71763NU	6051	Ultra Density Enterprise C19/C13 PDU 60A/208V/3PH	N	N	Y	N	N	N	N	N	N	N	Y	Y	Y	N
71762NX	6091	Ultra Density Enterprise C19/C13 PDU Module	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Line cords for 1U PDUs that ship without a line cord															
40K9611	6504	DPI 32a Cord (IEC 309 3P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9612	6502	DPI 32a Cord (IEC 309 P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9613	6503	DPI 63a Cord (IEC 309 P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9614	6500	DPI 30a Cord (NEMA L6-30P)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9615	6501	DPI 60a Cord (IEC 309 2P+G)	N	N	Y	N	N	N	Y	N	N	Y	Y	Y	N

For more information, see the Lenovo Press documents in the PDU category:
https://lenovopress.com/servers/options/pdu

Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are offered by Lenovo.

Table 13. Uninterruptible power supply units

Part number	Description
Rack-mounted or tower UPS units - 100-125VAC	
7DD5A001WW	RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)
7DD5A003WW	RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)
Rack-mounted or tower UPS units - 200-240VAC	
7DD5A002WW	RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)
7DD5A005WW	RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)
7DD5A007WW	RT5kVA 3U Rack or Tower UPS-G2 (200-240VAC)
7DD5A008WW	RT6kVA 3U Rack or Tower UPS-G2 (200-240VAC)
7DD5A00AWW	RT11kVA 6U Rack or Tower UPS-G2 (200-240VAC)

† Only available in China and the Asia Pacific market.

For more information, see the list of Product Guides in the UPS category:
https://lenovopress.com/servers/options/ups

Seller training courses

The following sales training courses are offered for employees and partners (login required). Courses are listed in date order.

1. **Family Portfolio: Storage Networking**
   2024-10-14 | 15 minutes | Employees and Partners

   This course will provide you an overview of the Storage Networking family. After completing this course, you should be able to identify the products in the Storage Networking portfolio and their features, describe product family benefits, and recognize when a specific product should be used.

   Tags: DataCenter Products, Storage

   Published: 2024-10-14
   Length: 15 minutes

   > **Start the training:**
   > Employee link: Grow@Lenovo
   > Partner link: Lenovo Partner Learning

   Course code: SXXW1113r8

2. **Partner Technical Webinar - Fibre Channel Market Tranistions**
   2024-10-08 | 60 minutes | Employees and Partners

   In this 60-minute replay, there were two topics. Mike Easterly, Fibre Channel Technical Sales Executive for Broadcom, reviewed the Fibre Channel offerings. He described then need to focus on Gen 7 over Gen5 & Gen6. He described the many security features of Fibre Channel and why Fibre Channel is the gold standard of storage networking. Herb Ducey, Lenovo Storage Product Manager concluded with updates on the storage product line including DM Series, DE Series and D3284 updates.

   Tags: Storage

   Published: 2024-10-08
   Length: 60 minutes

   > **Start the training:**
   > Employee link: Grow@Lenovo
   > Partner link: Lenovo Partner Learning

   Course code: 100424

3. **Lenovo Data Center Product Portfolio**
   2024-05-29 | 20 minutes | Employees and Partners

   This course introduces the Lenovo data center portfolio, and covers servers, storage, storage networking, and software-defined infrastructure products. After completing this course about Lenovo data center products, you will be able to identify product types within each data center family, describe Lenovo innovations that this product family or category uses, and recognize when a specific product should be selected.

   Tags: Advanced DataCenter, DataCenter Products, ThinkAgile, ThinkEdge, ThinkSystem

   Published: 2024-05-29
   Length: 20 minutes

   Start the training:
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning

   Course code: SXXW1110r7

4. **Simplify Selling Fibre Channel Storage Solutions**
   2024-04-23 | 45 minutes | Employees and Partners

   In this session we look at the benefits of Fibre Channel and the benefits to you and your customers of bundling FC networking with your storage arrays.
   Plus, we will take a closer look at some of the changes Lenovo has made to the Data Center Solutions Configurator to help you and the clients build bundled FC solutions.

   Course Objectives:
   1. Learn the benefits of Fibre Channel
   2. Understand the benefits of bundling FC networking with your storage arrays
   3. Discover the latest updates in DCSC (Data Center Solutions Configurator)

   Tags: DataCenter Products, Sales, Storage

   Published: 2024-04-23
   Length: 45 minutes

   Start the training:
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning

   Course code: DNFP101

5. **Partner Technical Webinar - Fibre Channel and DG Updates**
   2024-04-23 | 60 minutes | Employees and Partners

   In this 60-minute replay, Mike Easterly, Broadcom, reviewed Lenovo solutions for Fibre Channel (FC) including Emulex FC Adapters and Brocade FC switches. Next, Mark Clayton, Lenovo Storage Architect, reviewed the lasted on the Data Management portfolio with updates on DG, HS350x Ready Nodes and Data Protection.

   Tags: Data Management

   Published: 2024-04-23
   Length: 60 minutes

   > **Start the training:**
   > Employee link: Grow@Lenovo
   > Partner link: Lenovo Partner Learning

   Course code: 041924

6. **VTT Data Management How to sell storage - April 2024**
   2024-04-10 | 60 minutes | Employees Only

   In this course, you will know:

   - Why do we sell storage?
   - What are the basics you need to get an opportunity rolling?
   - Why Lenovo for Storage?
   - What is happening in the market today?
   - How to determine traction?

   Tags: Data Management, Storage

   Published: 2024-04-10
   Length: 60 minutes

   > **Start the training:**
   > Employee link: Grow@Lenovo

   Course code: DVDAT209

Related publications and links

For more information, see the following resources:

- Datasheet of the DB710S:
  https://lenovopress.lenovo.com/datasheet/ds0193-lenovo-thinksystem-db710s-fc-san-switch
- Interactive 3D Tour of the DB710S:
  https://lenovopress.lenovo.com/lp2069
- Interactive 3D Tour of Fibre Channel Networking:
  https://lenovopress.lenovo.com/3dtours/thinksystem/storage/fibre-channel-networking
- Analyst report "64 Gb Fibre Channel Performance with Lenovo ThinkSystem Emulex LPe36002 Gen 7 FC HBA"
  https://www.lenovo.com/us/en/resources/data-center-solutions/analyst-reports/64-gb-fibre-channel-performance-with-lenovo-thinksystem-emulex-lpe36002-gen-7-test-report/
- Lenovo ThinkSystem DB710S FC SAN Switch product publications - see the Brocade G710 documentation:
  https://www.broadcom.com/products/fibre-channel-networking/switches/g710-switch

  > **Tip**: Some of the Fabric OS documents can be accessed via the support portal by validating your serial number for software entitlement

  - *Hardware Installation Guide*
  - *Fabric OS Access Gateway Administration Guide*
  - *Fabric OS Administration Guide*
  - *Fabric OS Extension Configuration Guide*
  - *Fabric OS Troubleshooting and Diagnostics Guide*
  - *Fabric OS Command Reference*
  - *Fabric OS Message Reference*
  - *Fabric OS MIB Reference*
  - *Web Tools Administration Guide*
  - *Flow Vision Configuration Guide*
  - *Monitoring and Alerting Policy Suite Configuration Guide*

Related product families

Product families related to this document are the following:

- DB Series SAN Switches
- Rack SAN Switches

Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

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Morrisville, NC 27560
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