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Product Brief

Brocade® G710 Switch

Affordable Gen 7 SAN Switch for the On-Demand Data Center

Highlights

- Provides an affordable entry point for Brocade Gen 7 Fibre Channel technology.
- Scales from 8 ports up to 24 ports for on-demand 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.

Overview

Purpose-built for small to mid-sized businesses, the Brocade® G710 provides low-cost access to Gen 7 Fibre Channel technology. The G710 is an affordable Gen 7 entry point that starts at just eight ports, providing organizations both high-performance, secure access to industry-leading storage technology, and the ability to start small and scale on demand, up to 24 ports, to support their growing environments.

In today's data-driven world, where both the value and protection of data 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 and always-on 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.

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 Brocade G710 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 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.

Gen 7 Fibre Channel

Brocade Gen 7 Fibre Channel is a purpose-built storage network that helps organizations build an efficient, cyber-resilient, autonomous SAN. It combines high-speed performance, built-in security, and self-managing capabilities to accelerate data access, adapt to evolving requirements, and keep business operations running smoothly.

The entry-level Brocade G710 switch offers enterprise-level features at a lower cost, providing enterprise class reliability, performance, and security to ensure continuous availability, optimize resources, and safeguard the SAN from cybersecurity vulnerabilities.

Secure

The Brocade G710 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 Brocade G710 brings enterprise-class 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.

Brocade Access Gateway Mode

The Brocade G710 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. The Brocade G710 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 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

Brocade Lifetime Warranty*

The Brocade G710 helps to protect critical applications with the industry's only lifetime warranty. The G710 delivers peace of mind with industry-leading reliability, an unprecedented lifetime warranty, and unmatched product support. This lifetime warranty provides access to technical experts 24x7 to troubleshoot and solve issues, eliminating the costs and complexities of post-warranty support.

Brocade Global Support

Brocade Global Support has the expertise to help organizations build resilient, efficient SAN infrastructures. Leveraging more than 27 years of expertise in storage networking, Global Support delivers world-class technical support, implementation, and migration services to enable organizations to maximize their hardware and software investments, accelerate new technology deployments, and optimize the overall performance of their network.

Maximizing Investments

To help optimize technology investments, Brocade and its partners offer complete solutions that include professional services, technical support, and education.

For more information, contact a Brocade sales partner or visit: www.broadcom.com/brocade

For information about supported SAN standards, visit: www.broadcom.com/sanstandards

*For Brocade G710 Switches sold with a lifetime warranty, the lifetime warranty begins from the date the product is shipped from Broadcom manufacturing facilities until the End-of-Support (EOS) date, as announced by Broadcom, and it is subject to terms and conditions.

Brocade G710 Switch Specifications

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	4000 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	1.536Tb/s
Maximum Fabric Latency	Latency for locally switched ports is 460 ns (including FEC).
Maximum Frame Size	2112-byte payload
Frame Buffers	2000 dynamically allocated
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 32G FC SFP+ LC connector: SWL, LWL, ELWL All Brocade transceivers are PC/UPC compatible.
USB	One USB port for system log file downloads or firmware upgrades
Fabric Services	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. *Note: Some fabric services do not apply or are unavailable in Brocade Access Gateway mode.*

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
Size	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
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 64G SWL transceivers) Fans at nominal speed.

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For more information, visit our website at: www.broadcom.com

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