Lenovo X8-4 and X8-8 Gen 8 FC Directors

Intelligent Foundation for Building Scalable Fibre Channel Fabrics with Uncompromising Security

Overview

The Lenovo X8 Director is a modular platform built to power and secure large-scale storage environments. It offers a stable, scalable, and high-performance foundation for growth, workload consolidation, and reliable operations, making it ideal for mission-critical and enterprise AI workloads. Two chassis options, the X8-4 Director for smaller deployments and the X8-8 Director for larger port deployments, provide flexibility.

The Lenovo X8 Director delivers exceptional bandwidth and throughput to support increasing numbers of devices, applications, and workloads without compromising performance. High bandwidth and ultra-low latency eliminate I/O bottlenecks, ensuring maximum performance for high-transaction workloads and next-generation storage. This performance headroom allows organizations to consolidate workloads onto fewer systems.

To further maximize utilization, UltraScale ICL links enable the director to scale efficiently with fewer chassis by preserving device ports for connectivity.

The X8 Director also offers flexible deployment options, multiprotocol support, and mixed-blade capability, allowing organizations to adapt their infrastructure and optimize resources for evolving storage and server requirements.

Leveraging Brocade Gen 8 technology, the X8 Director combines 128G performance, quantum-safe security, and AI-powered autonomy to create a robust foundation for modern data center architectures. Integrated security, featuring quantum-resistant encryption, protects SAN fabrics from cybersecurity threats in the era of quantum computing. Embedded SAN AI technology modernizes SAN management, enabling autonomous and efficient SAN operations.

By hardening the SAN against evolving security risks and enabling AI-powered autonomy to learn, adapt, and respond to changing environments, Gen 8 technology provides the most secure, intelligent, and high-performance network for storage. This ultimately leads to faster decision-making, improved operational efficiency, and high levels of resiliency.

Defend the Data Center with Advanced Security

The Lenovo X8 Director, with its cyber-resilient, quantum-safe architecture, fortifies Storage Area Networks (SANs) against current and emerging quantum computing threats. It leverages Brocade technologies for secure storage traffic via Fibre Channel isolation and role-based access controls, minimizing unauthorized access. Hardened Fabric OS and hardware, combined with validated roots of trust, ensure only authenticated components operate, reducing hijacking and malicious software risks.

The X8 Director uses quantum-resistant 256-bit encryption and advanced cryptographic algorithms to protect SAN fabrics. Its integrated post-quantum cryptography algorithms resist quantum attacks, safeguarding sensitive data and critical infrastructure. Gen 8 technology further hardens the SAN by minimizing the attack surface through strong access controls and limited privileges, adhering to the "principle of least privilege."

The Brocade SANnav Management Portal enhances security by capturing alerts from the Monitoring and Alerting Policy Suite (MAPS) feature, enabling real-time monitoring of SAN security, health, and performance. It also automates security assessments and aids in maintaining best practices by alerting on configuration inconsistencies.

Modernize SAN Management with AI-Powered Autonomy

Gen 8 technology offers a comprehensive suite of features for maximizing network uptime, simplifying SAN management, and providing unparalleled visibility into network traffic. The X8 Director uses embedded SAN AI to automate application infrastructure management.

Its robust analytics architecture minimizes manual administration, ensuring a resilient network despite growing workloads. Gen 8 technology modernizes SAN management through AI-powered autonomy, learning, adapting, and responding to potential issues with intelligence and automation honed over three decades.

With SAN Fabric Intelligence (SAN FI), administrators eliminate time-consuming, manual correlation of application resources. This advanced feature integrates monitoring, troubleshooting, and cross-correlation of servers, storage, VMs, and fabric connections, offering a complete end-to-end view. SAN FI accelerates troubleshooting and facilitates smarter management decisions, alleviating chronic understaffing in IT infrastructure teams with faster response times.

Gen 8 technology utilizes actionable intelligence and self-optimizing capabilities to maximize performance. Real-time monitoring allows the network to make smarter decisions regarding traffic prioritization, congestion management, and notifications. Gen 8 Adaptive Traffic Optimizer guarantees critical application performance by automatically prioritizing traffic. Performance groups dynamically adapt to provide optimal configuration, classifying and separating traffic by characteristics like protocol, speed, and latency. Adaptive Traffic Optimizer can also prevent application performance impacts by isolating traffic that may negatively affect overall performance.

Gen 8 technology leverages extensive data collection and powerful analytics to quickly understand environmental health and performance, identifying potential impacts or trending problems. Built-in intelligence automatically collates millions of data points across the fabric, simplifying complex telemetry into actionable insights. Autonomous SAN features monitor fabric behavior, detect anomalies, and self-correct before issues can impact performance.

Specifications

Base Models	X8-4 and X8-8 include: 2 core routing blades, 2 control processor modules, 4-post rail kits and Enterprise software
Chassis	The X8-4 has 4 open port blade slots, while the X8-8 has 8 open blade slots The X8-4 and X8-8 also have 2 open ICL port blade slots
Fibre Channel Blades	48-port blade with forty-eight 64G or 128G Fibre Channel SFP+ transceivers
Performance	16/32/64/128G line speed, full duplex. Autosensing of 16/32/64/128G port speeds depending on SFPs used, support for speed matching.
Optional ICL Port Blades	Chassis-to-chassis connections without using devices ports. • Up to 4608 Fibre Channel ports; UltraScale ICL ports (16 for 8-slot or 8 per 4-slot chassis, optical OSFP) • Connect up to 12 Brocade Gen 7 or Gen 8 directors, enabling flatter, faster, and simpler fabrics that increase consolidation while reducing network complexity and costs. • These high-density chassis topologies reduce Interswitch cabling by up to 87.5%. Enabling up to 33% more device ports for server and storage connectivity.
Chassis Bandwidth	X8-8: 62Tb/s per chassis with 384 device ports + 16 UltraScale ICL ports. X8-4: 31Tb/s per chassis with 192 device ports + 8 UltraScale ICL ports.
Chassis Power	X8-8: Requires 6 hot-swappable power modules for maximum redundancy. X8-4: Requires 4 hot-swappable power modules for maximum redundancy.
Cooling	X8-8 and X8-4: Requires 3 hot-swappable rear-mounted Fan Assemblies
Airflow	Choice of Non-port side intake or non-port side exhaust PSU's and fan trays.
Solution Availability	Designed to provide 99.999% uptime with nondisruptive capabilities, hot-pluggable components, and a no-single-point-of-failure design. Includes redundant: power supplies, fans, CID cards, processors, core switching, ICL blades, port blades, and optics. Includes online diagnostics and nondisruptive firmware download and activation.
Enclosure	X8-8: 14U rack-mountable chassis X8-4: 9U rack-mountable chassis

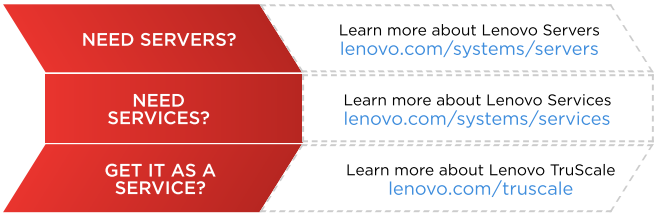
For technical details, refer to the Lenovo Gen 8 Fibre Channel Directors Product Guide.

About Lenovo

Lenovo (HKSE: 992) (ADR: LNVGY) is a US$62 billion revenue global technology powerhouse, ranked #171 in the Fortune Global 500, employing 77,000 people around the world, and serving millions of customers every day in 180 markets. Focused on a bold vision to deliver smarter technology for all, Lenovo is expanding into new growth areas of infrastructure, mobile, solutions and services. This transformation is building a more inclusive, trustworthy, and sustainable digital society for everyone, everywhere.

For More Information

To learn more about the Lenovo X8-4 and X8-8 FC director offerings, contact your Lenovo representative or Business Partner or visit: SAN Fibre Channel Switches product page.



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