X7-4 and X7-8 FC Directors

Maximize performance, simplify tasks

Overview

To meet ever-increasing demands for faster, more reliable data access, it is essential for organizations to deploy a modernized infrastructure that reduces latency, increases bandwidth, and ensures continuous availability.

Unprecedented performance is not enough on its own. Powerful analytics and advanced automation capabilities are required to transform current storage networks into an autonomous SAN. This requires a network that is capable of delivering these capabilities to maximize performance, simplify management, and reduce operational costs.

Legacy infrastructure was not designed to support the performance requirements of evolving workloads and NVMe-based storage. In fact, an aging network will impede the performance of the on-demand data center. By modernizing the storage network with Lenovo Gen 7, organizations will enable a faster, more intelligent, and more resilient network. This will maximize the performance, productivity, and efficiency of their storage investments and resources, even as they rapidly scale their environments.

Purpose-Built for Enterprise Deployments

- Designed to meet relentless growth and mission-critical application demands.
- Ideal for large enterprise environments requiring increased capacity, greater throughput and higher levels of resiliency.
- Design flexible architectures to increase agility with concurrent Fibre Channel, NVMe, FICON or FCIP connectivity
- Extend replication over distance with a highly scalable extension solution for Fibre Channel, IP, and FICON.
- Investment protection offering three generations of backward-compatibility support for connectivity to 8,16 and 32Gbps FC products in addition to the latest 64Gbps.
- Two modular form factors: 14U X7-8 with eight vertical port blade slots for large enterprise networks and the 8U X7-4 with four horizontal port blade slots for midsize networks.
- Safeguard mission-critical workloads from vulnerabilities with Gen 7 integrated security.

ThinkSystem

Maximize Performance

- Industry-leading Gen 7 FC increases performance for demanding workloads.
- Up to 39.6 Tbps of chassis bandwidth to address next-generation I/O- and bandwidth-intensive applications.
- Up to 566 million frames switched per second per ASIC, unlocking the full capability of flash storage.
- Breakthrough performance speeds up data-intensive application response times, allows more transactions in less time, and enables improved service level agreements (SLAs).
- Maximize NVMe and high transaction workloads with 50% lower network latency.
- Transform telemetry data into actionable insights to optimize performance and ensure reliability.

Simplified, Scale-out Network Design

- UltraScale chassis connectivity leverages optical Inter-Chassis Links (ICLs). These links can connect up to 12 directors, enabling flatter, faster, and simpler fabrics that increase consolidation while reducing network complexity and costs.
- Reduce inter-switch cabling by 75% and free up to 25% of ports for servers and storage.
- Maximize overall port density within the smallest amount of rack space while freeing up front-facing device ports for server and storage connectivity.
- Automate actions to simplify management and resolve issues without intervention.
- Increase visibility and simplify operations with a modern SAN management tool.
- Seamlessly integrate next generation NVMe into the storage fabric without a disruptive rip-and replace.
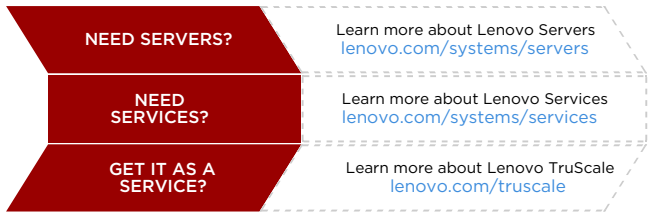
Specifications

Base Models	X7-4 and X7-8 include: 2 core routing blades, 2 control processor modules, 4-port rail kits and software (Fabric Vision, Trunking, Extended Fabrics, Integrated routing and CUP)
Chassis	The X7-4 has 4 open blade slots, while the X7-8 has 8 open blade slots
Fibre Channel Blades	48-port blade with 48 64G Fibre Channel SFP+ transceivers or 48 32G SFP+ transceivers 64-port blade with 32 2x64G Fibre Channel SWL SFP-DD transceivers for 64 64G connections
Extension Blades	SX6 Extension Blade provides Fibre Channel extension (16×32G Fibre Channel ports) and IP extension over IP networks (16×1GbE/10GbE and 2×40GbE ports).
Performance	8/10/16/32/64G line speed, full duplex. Autosensing of 8/16/32/64G port speeds depending on SFPs used, support for speed matching. 10G port speeds with dedicated SFPs.
Multi-chassis with UltraScale ICL Ports	Up to 4608 Fibre Channel ports; UltraScale ICL ports (32 for 8-slot or 16 per 4-slot chassis, optical QSFP) connect up to 9 chassis in a full-mesh topology or up to 12 chassis in a core-edge topology.
Chassis Bandwidth	X7-8: 39.6Tb/s per chassis with 512 device ports + 32 UltraScale ICL connections supporting 128 ports. X7-4: 19.8Tb/s per chassis with 256 device ports + 16 UltraScale ICL connections supporting 64 ports.
Chassis Power	X7-8: 4 PSUs for 2+2 redundancy X7-4: 2 PSUs for 1+1 redundancy Choice of AC or High Voltage PSU's.
Cooling	X7-8: Requires 3 fan tray assemblies; X7-4: Requires 2 fan tray 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 capabilities; hot-pluggable redundant power supplies, fans, WWN cards, processors, core switching, port blades, and optics; online diagnostics; non disruptive firmware download and activation.
Enclosure	X7-8: 14U rack-mountable chassis; X7-4: 8U rack-mountable chassis

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 X7-4 and X7-8 FC director offerings, contact your Lenovo representative or Business Partner or visit: SAN Fibre Channel Switches product page.

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