IBM Storage Networking SAN24B-6 switch

Use a low-cost, high-performance platform to enable flash-ready solutions for the business

Highlights

- Meet the high-throughput, low-latency demands of critical applications with flash-ready performance

- Scale on demand, from 8 to 24 ports, to connect additional devices as needed

- Deliver 4, 8, 16 or 32 Gbps port bandwidth for increased performance on demand

- Simplify deployment and reduce install time with a point-and-click user interface

- Automatically discover and recover from common networking problems

- Proactively monitor and optimize the health and performance of individual virtual machines (VMs)

- Simplify administration, resolve problems, increase uptime and help reduce costs using Fabric Vision technology
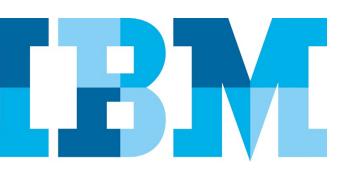
Explosive data growth, coupled with user expectations of unlimited access from anywhere, at any time, is pushing storage environments to the limit. To meet these dynamic business demands, the network must evolve to improve speed, increase efficiency and reduce costs. Legacy infrastructures were not designed to support the performance requirements of flash-based storage technology. A new approach to storage networking is required to unlock the full capabilities of all-flash arrays. By treating the network as a strategic part of a storage environment, organizations can maximize their productivity and efficiency, even as they rapidly grow their environments.

The IBM® Storage Networking SAN24B-6 switch provides exceptional value in an entry-level switch, combining high-performance capabilities of 4, 8, 16 and 32 Gbps, point-and-click simplicity, and enterprise-class functionality. The port speed capability is dependent on the transceiver installed.

SAN24B-6 provides small to midsized data centers with low-cost access to industry-leading Gen 6 Fibre Channel technology and the ability to start small and grow on demand—from 8 to 24 ports—to support an evolving storage environment. In addition, SAN24B-6 is easy to use and install, with a point-and-click user interface that simplifies deployment and saves time.

Gen 6 Fibre Channel

IBM b-type Gen 6 Fibre Channel is the purpose-built network infrastructure for mission-critical storage, delivering breakthrough performance to accelerate data retrieval, adapt to evolving requirements and drive always-on data access. The SAN24B-6 switch with Gen 6 Fibre Channel storage technology is designed to simplify setup, management and monitoring while delivering performance required by flash storage and growing with your business at a low cost of entry.

Figure 1. The IBM Storage Networking SAN24B-6 switch.

Gain maximum flexibility

The SAN24B-6 switch is configurable with Ports on Demand (PoD) for 8, 16 or 24 ports, and supports 4, 8, 16 or 32 Gbps port speeds with the proper transceivers installed, all in an efficient 1U package, with an integrated power supply and four built-in fans. The power supply offers real-time, active power monitoring. SAN24B-6 helps to lower costs, too, with low energy consumption (at 0.10 watts per Gbps and 3.2 watts per port).

Industry-leading technology that is flexible, simple and easy to use

SAN24B-6 delivers industry-leading Gen 6 Fibre Channel technology in a flexible and easy-to-use solution that cost-effectively scales from 8 to 24 ports with PoD. In addition, the switch is easy to deploy with the EZSwitchSetup wizard, featuring a simple user interface that dramatically reduces deployment and configuration times with as few as three steps.

Flash-ready performance for evolving storage requirements

IBM b-type Gen 6 Fibre Channel products deliver advanced 32-Gbps performance to unleash the full potential of new storage technologies for the new high-performance application workloads. Using this switch, organizations can build a flash-ready infrastructure that adapts to their expanding business requirements.

To realize the full benefits of flash, organizations will need to transition their high-performance, latency-sensitive workloads to flash-based storage with NVMe. SAN24B-6 is NVMe-ready, allowing organizations to seamlessly integrate IBM b-type Gen 6 Fibre Channel networks with next-generation NVMe technologies, without a disruptive rip and replace. The simplicity and efficiency of NVMe over Fibre Channel enables significant performance gains for flash storage to deliver the performance, application response time and scalability needed for next-generation data centers.

Fabric Vision technology

Fabric Vision technology with VM Insight is an optional feature that provides unprecedented insight and visibility across the storage network to simplify monitoring, increase operational stability, and dramatically reduce maintenance and diagnostic costs. For more details about Fabric Vision capabilities, review the information in the Fabric Vision data sheet[1] and IBM Redbooks® product guide.

Rely on the network that delivers always-on business operations

IBM b-type Gen 5 and Gen 6 technologies leverage a rich heritage of Fibre Channel innovation to deliver industry-leading reliability for the world's most demanding data centers. IBM b-type Fabric Vision technology provides a breakthrough hardware and software solution that helps organizations simplify monitoring, maximize network availability, and gain insight into issues to speed resolution and meet critical service level agreements (SLAs). VM Insight is the newest feature in Fabric Vision technology, enabling proactive visibility into the health and performance of individual VMs with integrated sensors. Using this capability, administrators can quickly identify abnormal VM behaviors to facilitate troubleshooting and fault isolation, helping to ensure maximum performance and operational stability.

Forward error correction (FEC) capabilities further increase resiliency by automatically detecting and recovering network transmission errors. To ensure predictable performance prior to deployment, organizations can validate infrastructure with ClearLink Diagnostics and Flow Generator features.

Simplified management and robust network analytics

Fabric Vision technology provides unprecedented insight and visibility across the storage network, with powerful integrated monitoring, management and diagnostic capabilities. These innovative features enable administrators to avoid problems before they impact operations, helping organizations meet SLAs. Fabric Vision technology includes VM Insight, Monitoring and Alerting Policy Suite (MAPS), Fabric Performance Impact (FPI) Monitoring, dashboards, Configuration and Operational Monitoring Policy Automation Services Suite (COMPASS), ClearLink Diagnostics, Flow

Vision, FEC and Credit Loss Recovery. For additional information about the aforementioned capabilities, please review the Fabric Vision technology IBM Redbooks product guide.[2]

IBM Network Advisor

IBM Network Advisor is an optional software management tool that provides an enhanced user interface and additional capabilities to simplify b-type Fibre Channel management, helping organizations proactively diagnose and resolve issues to maximize uptime, increase operational efficiency and reduce costs. The wizard-driven interface dramatically reduces deployment and configuration times by allowing fabrics, switches and ports to be managed as groups. Customizable dashboards graphically display performance and health indicators out of the box, including all data captured using Fabric Vision technology. For further information, please refer to the IBM Network Advisor datasheet[3] and IBM Redbooks product guide.[4]

Access Gateway mode

SAN24B-6 can be deployed as a full-fabric switch or as an Access Gateway, which simplifies fabric topologies and heterogeneous fabric connectivity (the default mode setting is a switch). Access Gateway mode utilizes N_Port ID virtualization (NPIV) switch standards to present physical and virtual servers directly to the core of storage area network (SAN) fabrics. This makes a switch in Access Gateway mode transparent to the SAN fabric, greatly reducing management of the overall storage network. SAN24B-6 in Access Gateway mode can connect servers to SAN fabrics that are NPIV-enabled.

Maximizing investments

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

IBM Storage Networking SAN24B-6 switch at a glance

Product number	8960-F24
Hot-swap components	Small form-factor pluggables (SFPs)
Warranty	One-year; customer-replaceable unit (CRU) and on-site, 9×5 next-business-day response; warranty service upgrades are available
Port speed	4, 8 and 16 Gbps when using 16 Gbps SFP+ transceivers 8, 16 and 32 Gbps when using 32 Gbps SFP+ transceivers
Optional features	Please refer to the SAN24B-6 Redbooks Product Guide to review most current optional features
Size	Width: 42.88 cm (16.88 in.) Height: 4.29 cm (1.69 in.) Depth: 30.66 cm (12.07 in.)
Weight	5.76 kg (12.65 lb) with one integrated power supply, without transceivers

Why IBM?

High-speed optical storage networking has long been out of reach for small and midsized enterprises. IBM can help growing businesses with an affordable, flexible, flash-ready switch solution. The new IBM Storage Networking SAN24B-6 switch delivers uncompromising speed for critical environments, with capabilities that can be expanded with the innovative POD capability.

For more information

To learn more about the IBM Storage Networking SAN24B-6 switch, please contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/us-en/marketplace/san24b-6

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