

IBM Storage Networking SAN42B-R7 Extension Switch

Empower your enterprise with fast,
secured and resilient connections



Highlights

Deploy cyber-resilient replication connectivity for enterprise storage

Replicate data between data centers with purpose-built solutions

Move more data more quickly over greater distances

Protect data from WAN disruptions and outages

Safeguard data from threats over the WAN

IT organizations continually face two key issues: the unrelenting growth of data being transferred between data centers and the changes driven by virtualized application workloads within Fiber Channel and FICON storage environments. Also faced with rising service level agreement (SLA) requirements and recovery expectations, enterprise data centers need improved disaster recovery infrastructure to help ensure fast, continuous and simple access to mission-critical data from anywhere in the world.

Designed to seamlessly bridge data centers over vast distances, help ensure cyber-resilience, and facilitate uninterrupted access to vital data, the IBM Storage Networking SAN42B-R7 Extension Switch exists at the forefront of storage networking innovation. It's equipped with advanced Brocade technologies to guarantee rapid replication speeds, loss-free data transmissions and unwavering protection against WAN disruptions. With the IBM Storage Networking SAN42B-R7 Extension Switch, your organization can gain a potent tool to fortify its data infrastructure, optimize bandwidth and secure data.

With the power to consolidate high-speed Fiber Channel, FICON, and IP storage replications, the IBM Storage Networking SAN42B-R7 is capable of efficiently meeting the demands of modern 25/100 GbE WAN connections. In addition to these advanced performance capabilities, the solution also elevates security by using robust AES 256-bit hardware encryption without compromising speed. The IBM Storage Networking SAN42B-R7 is ideal for organizations looking to improve WAN resilience with advanced load-balancing and failover capabilities and safeguard vital business data.



Deploy cyber-resilient replication connectivity for enterprise storage

In today's digital era, uninterrupted data accessibility is crucial to avoiding disruption and its consequential losses. Offering fast and secured data replication globally, the IBM Storage Networking SAN42B-R7 Extension Switch is vital for disruption and disaster recovery. With speeds of up to 100 Gbps, it overcomes latency challenges to help ensure efficient data transfer—over vast distances. The IBM Storage Networking SAN42B-R7 Extension Switch has also been enhanced with security features and advanced recovery technology to help ensure continuous data protection against all manner of threats and disasters.

Replicate data between data centers with purpose-built solutions

The IBM Storage Networking SAN42B-R7 Extension Switch excels in data protection. Tailored to help meet large-scale enterprise replication needs, it boasts 24 64G Fiber Channel ports, 16 1/10/25 GbE ports and two 100 GbE ports. Advanced features like IBM b-type Fabric Vision Extension Trunking and Adaptive Rate Limiting (ARL) help to further optimize WAN usage and ensure disruption-free data transfers. Ideal for large-scale, multisite data centers, the IBM Storage Networking SAN42B-R7 Extension Switch supports block, file and tape protection to help consolidate Fiber Channel and IP replication tasks.

Move more data more quickly over greater distances

The IBM Storage Networking SAN42B-R7 Extension Switch helps to ensure rapid and secure long-distance disaster recovery using Brocade technologies and is capable of performing high-speed replication and no-loss data transmission. Supporting up to 250 MS RTT latency, the solution is capable of covering distances of up to 25.5 KM. Advanced features like Extension Trunking, Lossless Link Loss and IPsec encryption further enhance data protection.

The IBM Storage Networking SAN42B-R7 Extension Switch optimizes IP storage performance across WANs and significantly boosts performance amid high latency packet loss. Thanks to its ability to manage both Fiber Channel and IP-based data flows, it can also offer consolidation, operational benefits and a comprehensive view of your data through browser-accessible dashboards. This versatility is further expanded by the solution's support of a wide range of storage applications, helping to ensure flexibility in data replication and migration processes.



Protect data from WAN disruptions and outages

Organizations need consistent, speedy access to data. The IBM Storage Networking SAN42B-R7 Extension Switch helps achieve this with tools for validating WAN links and configurations before deployment. Built-in Flow Generator and Wtool features also help to streamline deployment and prevent potential issues. Extension Trunking offers redundancy and no-loss path failover while ARL maximizes bandwidth use during disruptions. Fabric Vision then detects WAN anomalies to prevent unexpected downtime. IBM SANnav Management Portal provides comprehensive network visibility, streamlining troubleshooting and optimization with intuitive dashboards.

Safeguard data from threats over the WAN

The IBM Storage Networking SAN42B-R7 Extension Switch deploys AES 256-bit encryption to help secure data in flight over WAN—while maintaining high performance. It, combined with enhancements, enables the following additional capabilities to fortify system integrity:

- Secure Boot
- TruFOS Certificates
- Root access removal

The platform also integrates enterprise LDAP services to further enhance cyber defenses through authentication and role-based access controls. Overall, the IBM Storage Networking SAN42B-R7 Extension Switch offers next-level security capabilities to help protect data and ensure system authenticity.

Product specifications

System Architecture

Enclosure	1U chassis designed to be mounted in a 19-in. cabinet
Fiber Channel Ports	24 ports, 64G, universal (E, F, M, D, and EX ports): <ul style="list-style-type: none">– 8 physical SFP+ Fiber Channel ports– 8 physical SFP-DD Fiber Channel ports
Ethernet Ports	16 ports of 1GbE/10GE/25GbE for LAN and WAN connectivity 2 ports of 100GbE for WAN connectivity
Scalability	Full fabric architecture with 239 switches maximum
Certified Maximum	Single fabric: 56 domains, 7 hops Multiprotocol routing fabric: 19 hops
IBM b-type Trunking	Up to eight 64Gb/s ports per Brocade Trunk; up to 512 Gb/s per trunk. Unlimited trunk groups can be configured.
Fabric Latency	460 ns with no contention, cut-through routing at 64Gb/s
Maximum FC Frame Size	2112-byte payload
Maximum IP MTU	Jumbo Frames at 9216 bytes
Classes of Service	Class 2, Class 3, Class F (inter-switch frames)
Media Types	Fiber Channel: 64G FC SFP+ LC connector (supports 16/32/64G): SWL, LWL, ELWL 32G FC SFP+ LC connector (supports 8/16/32G): SWL, LWL 2x64G FC SFP-DD SN connector (supports 16/32/64G): SWL Ethernet: 10GbE SFP/SFP+ LC connector (supports 1/10GbE): SR 25GbE SFP/SFP+ LC connector (supports 10/25GbE): SR, LR 100GbE QSFP MPO connector (supports 100GbE): SR4 40GbE connectivity can be supported through 4x10GbE breakout using four 10GbE ports on the Brocade 7850 platform. All Brocade transceivers are PC/UPC compatible
Fabric Services	Name Server; Registered State Change Notification (RSCN); NTP; RADIUS; RCS (Reliable Commit Service); Dynamic Path Selection (DPS); Exchange-based routing; Device-based routing; Port-based routing; Lossless; Brocade Advanced Zoning; Web Tools; Brocade Trunking; Extended Fabrics; Fabric Vision; Traffic Optimizer; SDDQ; Integrated Routing (FCR); FICON CUP; FICON Management Server (FMS)
Extension Services	Extension Trunking, Adaptive Rate Limiting (ARL), WAN Test Tool (Wtool), Open Systems Tape Pipelining (OSTP), FastWrite (FCIP-FW), QoS Marking, Bandwidth Enforcement, PerPriority TCP QoS, PTQ, Adaptive Networking with QoS, and Advanced Extension and Integrated Routing (FCR), and Advanced Accelerator for FICON

Conclusion

In today's digital age, the IBM Storage Networking SAN42B-R7 Extension Switch emerges as a beacon of reliability and performance. Seamlessly bridging data centers across vast distances, it not only helps ensure high-speed data replication but also offers high-quality security with AES 256-bit encryption. Engineered to cater to the demands of 25/100 GbE WAN connections and consolidate multiple storage replications, the IBM Storage Networking SAN42B-R7 Extension Switch epitomizes resilience, making it an indispensable solution for businesses prioritizing data protection. Entrust your mission-critical data to this platform and experience the pinnacle of security, speed and unwavering performance.

For more information

To learn more about the IBM Storage Networking SAN42B-R7 Extension Switch, contact your IBM® representative or IBM Business Partner or visit ibm.com/it-infrastructure/storage/san/b-type.

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