

# HPE C8R42A

## Datasheet

## Product Overview

- The HPE Storage Fibre Channel Switch B-series SN3600B delivers advanced 32Gb Fibre Channel connectivity for modern enterprise storage networks.
- Designed for use in mission-critical storage, it is ideal for data centers, virtualization platforms, and high-performance computing, serving both mid-sized teams and large enterprises.
- This switch supports 8 to 24 SFP+ ports in a compact 1U enclosure, each port offering 4/8/16/32 Gbps speeds, and features high-density port configurations for scalable growth.
- Unique features include flexible Ports on Demand (PoD) licensing, real-time power monitoring, and support for both 16Gb and 32Gb optics for operational flexibility.
- Simplified deployment is assured with intuitive 3-step setup and advanced management capabilities powered by HPE PowerPack+ and Smart SAN for 3PAR, streamlining fabric health and SAN zoning.
- The SN3600B empowers businesses to scale storage quickly and cost-effectively, ensuring strong application performance and easy management as operations and demands expand.

## Product Highlights

- **Flash-Ready 32Gb Performance:** Up to 24 ports in 1U, with support for both 16Gb and 32Gb SFP+ optics, balances speed and affordability for diverse deployment.
- **Flexible Scalability:** Dynamic Ports on Demand (PoD) allows easy, license-driven 8-port increments for cost-effective and future-ready network scaling.
- **Advanced SAN Management:** VM Insight and Smart SAN for 3PAR provide deep virtualization visibility and rapid, centralized SAN zoning for efficient administration.
- **Reliability & Efficiency:** Industry-leading port density, low <900 ns latency, and real-time power monitoring ensure high performance and energy savings for enterprise storage fabrics.

## Detailed Features



C8R42A

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Component	Specification
Port Configurations	48, 72, and 96-port via Ports on Demand
Port Speed	4/8/16/32 Gbps SFP+ auto-negotiation
Form Factor	1U rack-mountable
PoD Licensing	8-port increments, scalable by license
Bandwidth	1536 Gb/s aggregate



## Powerful 32Gb Fibre Channel Backbone

Delivering advanced 32Gbps Fibre Channel technology, the SN3600B enables high-throughput storage networking for virtualized and cloud-centric environments. Its scalable architecture ensures the backbone supports increasing IO demands without bottlenecks.

## Entry-Level Affordability, Enterprise Features

Balancing cost and capability, this switch provides entry access at 8 ports and scales to 24, accommodating growth in evolving data centers. Port configuration flexibility serves organizations from small workgroups up to enterprise consolidation projects.

## Dynamic Ports on Demand Scalability

Licensing PoD in 8-port packs, users can expand port capacity exactly as business demands grow. Each upgrade includes required optics, enabling fast and simple expansion without expensive hardware overhauls.

## Flexible Transceiver Support

The SN3600B accepts both 32Gb and cost-saving 16Gb SFP+ modules within the same chassis. This protects investment, allows mixed-speed environments, and optimizes budgets during infrastructure transitions or gradual upgrades.

## Comprehensive NVMe & Virtualization Support

Ready for NVMe over Fabrics, the switch addresses all-flash storage needs, offering ultra-low latency and VM Insight for granular visibilitykey for cloud, storage, or database admins requiring fast, reliable IO.

## Automated Storage Network Management

Integration with HPE Smart SAN for 3PAR automates zoning and orchestration. Administrators can configure complex zoning from the array, reducing setup time from hours to minutes and minimizing deployment errors.

## High-Density, Low-Latency Design

Industry-leading FC port density in 1U, combined with wire-rate switching and <900 ns port-to-port latency, supports dense server deployments and latency-sensitive workloads, maximizing data center efficiency.

## Intelligent Power and Reliability

Real-time power monitoring and dual hot-swappable power supplies deliver continuous operation, while advanced airflow design and SAN health tools enhance stability, reduce operational risk, and improve lifecycle management.

# Technical Specifications

## Product Specifications

Feature	Value
Dimensions (H x W x D)	86.74 x 429.25 x 609.75 mm (3.42 x 16.90 x 24.01 in)
Fibre Channel Ports	48, 72, and 96-port configurations (24-port increments via Ports on Demand licenses)
Universal Ports Supported	E_Port, F_Port, M_Port, D_Port, EX_Port
Interoperability Support	8/8 SAN, 8/24 SAN, SN3000B, SN6000B, SN6500B, 1606 Extension SAN, SN4000B SAN extension, SN8000B 8-Slot backbone director, SN8000B 4-Slot director, Brocade 8Gb SAN for HPE BladeSystem c-Class, Brocade 16Gb SAN for HPE BladeSystem c-Class, Brocade 16Gb SAN module for HPE Synergy
Port Speed	Auto-sensing 4, 8, 16 Gb/s
ISL Trunking	Frame-based trunking, up to eight 16 Gb/s ports per ISL trunk (max 128 Gb/s per trunk), exchange-based load balancing, unlimited trunk groups
Aggregate Bandwidth	1536 Gb/s
Fabric Latency	Locally switched ports: 700 ns
Encryption/Compression Delay	5.5 sec per node



Feature	Value
Forward Error Correction (FEC)	Adds 400 ns between E_Ports (enabled by default)
Maximum Frame Size	2112-byte payload
Classes of Service	Class 2, Class 3, Class F (inter-switch frames)
Supported Port Types	D_Port (diagnostic), E_Port, EX_Port, F_Port, M_Port (mirror), U_Port (self discovery), Access Gateway mode: F_Port and NPIV-enabled N_Port
Data Traffic Types	Supports unicast
Media Types	Hot-pluggable, B-Series SFP, LC connector, Short-Wave Laser (SWL), Long-Wave Laser (LWL)
Transceiver Support	SFP+ (16/10/8 Gb/s), distance depends on fiber cable and speed
USB Port	One USB port for system log file downloads or firmware upgrades
Operating Temperature	0°C to 40°C (32°F to 104°F)
Non-operating Temperature	-25°C to 70°C (-13°F to 158°F)
Operating Humidity	10% to 85% (non-condensing)
Non-operating Humidity	10% to 90% (non-condensing)
Operating Altitude	Up to 3000 m (9,842 ft)
Storage Altitude	Up to 12,000 m (39,370 ft)
Operating Shock	20G, 6 ms half-sine
Non-operating Shock	Half sine, 33G, 11 ms, 3/eg axis
Operating Vibration	0.5G sine, 0.4 grms random, 5 to 500 Hz
Non-operating Vibration	2.0G sine, 1.1 grms random, 5 to 500 Hz
Power Supply	Dual, hot-swappable redundant power supplies
AC Input	85 to 264 V, ~5 to 2.5 A
Input Line Frequency	47 to 63 Hz
Power Consumption	450 W (all 96 ports with 16 Gb/s SWL optics), 350 W (empty chassis, no optics)

## Product Comparison

Feature	C8R42A	R8Q69A	R8Q71A
Port Speeds	4/8/16/32 Gbps SFP+	4/8/16/32 Gbps SFP+	4/8/16/32 Gbps SFP+



Feature	C8R42A	R8Q69A	R8Q71A
Port Configurations	48, 72, 96 (via PoD)	24, 48, 96 (via PoD)	24, 48, 96 (via PoD)
Form Factor	1U rack-mount	1U rack-mount	1U rack-mount
PoD Licensing	8-port increments	8-port increments	8-port increments
Aggregate Bandwidth	1536 Gb/s	1536 Gb/s	1536 Gb/s
Interoperability	Brocade, HPE SAN switches	Brocade, HPE SAN switches	Brocade, HPE SAN switches
Advanced SAN Tools	PowerPack+ (VM Insight, Smart SAN)	PowerPack+ (VM Insight, Smart SAN)	PowerPack+ (VM Insight, Smart SAN)
Power Design	Dual Hot-swappable PSUs	Dual Hot-swappable PSUs	Dual Hot-swappable PSUs
Management	3-step setup, centralized GUI	3-step setup, centralized GUI	3-step setup, centralized GUI

## Accessories

Category	Accessories
Included Accessories	<ul style="list-style-type: none"> <li>- Power Adapter</li> <li>- Rack Mounting Kit</li> <li>- Quick Installation Guide</li> </ul>
Optional Accessories	<ul style="list-style-type: none"> <li>- 32Gb SFP+ Transceiver</li> <li>- 16Gb SFP+ Transceiver</li> <li>- Additional Ports on Demand License</li> </ul>



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## References

[1] HPE. (2023). HPE Storage Fibre Channel Switch B-series SN3600B. Retrieved from <https://www.hpe.com/psnow/doc/a00000578enw.html>