

Overview

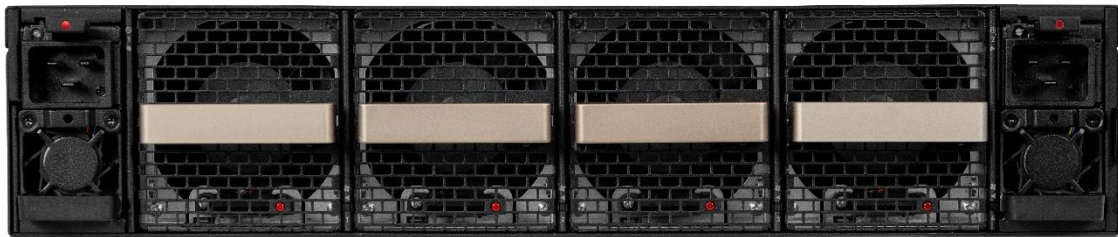
NVIDIA Networking for HPE

NVIDIA Spectrum X SN5600 Switch

The NVIDIA Spectrum™ SN5000 series switches are the fifth generation of Spectrum Ethernet switches, purpose-built to accelerate data center fabrics. With port speeds spanning from 10 Gigabit Ethernet (GbE) to 800GbE, SN5000 series switches deliver accelerated Ethernet to every data center without compromising between performance and feature set.

These switches are ideally suited for customers who deploy high-performance computing (HPC) clusters based on HPE ProLiant XL, Cray and DL Servers using Ethernet technology.

SN5000 switch systems provide high performance, consistent low latency, and support for advanced data center networking features, making them ideal for cloud networks and end-to-end data center fabrics. Powered by the NVIDIA Spectrum-4 ASIC, the SN5000 series features dynamic, flexible shared buffers and predictable performance. As part of the Spectrum platform, SN5000 systems are pretested and prevalidated with NVIDIA's full portfolio of Ethernet networking technology, including NVIDIA® BlueField® data processing units (DPUs), ConnectX® smart network interface cards (SmartNICs), and LinkX® interconnects. While each element is fully compatible with standard Ethernet fabrics, the end-to-end switch-to-host solution is critical to powering accelerated workloads, delivering the high performance and innovative features needed to supercharge cloud-native applications at scale.



HPE Spectrum X SN5600 Switch

The SN5600 smart-leaf/spine/super-spine offers 64 ports of 800GbE in a dense 2U form factor. The SN5600 is ideal for accelerated Ethernet deployments and enables both standard leaf/spine designs with top-of-rack switches as well as end-of-row (EoR) topologies. The SN5600 offers diverse connectivity in combinations of 1 to 800GbE and boasts an industry-leading total throughput of 51.2Tb/s.

Models

NVIDIA 64-port 800GbE OSFP Connector to Power Airflow Switch for HPE

P71261-B21

- NVIDIA Spectrum-4-based 800Gb/s Ethernet switch with Cumulus Linux Authentication
- 64 OSFP ports in 2U form factor
- 1 SFP28 port
- 128 400GbE
- Bidirectional switching capacity of 51.2Tb/s
- Two power supplies (AC),
- Standard depth
- Managed switch
- C2P airflow
- Tool-less Rail kit
- Quick Start Guide

Overview

Key Features

- Up to 800GbE per port for 51.2Tb/s aggregate switch bandwidth
 - 64 OSFP ports in 2U form factor
 - 51.2 Tb/s non-blocking aggregate bandwidth
 - It supports both standard leaf/spine designs with top-of-rack switches and end-of-row topologies
 - Quick and easy setup and management
 - Fully shared packet buffer provides a fair, predictable, and high-bandwidth data path
 - Ultra-low latency for efficient communication
 - Network operating system NVIDIA Cumulus Linux
 - Accelerated RDMA over Converged Ethernet (RoCE) for AI, cloud, storage, and high performance computing (HPC)
-



Standard Features

Switch Specifications

- Nvidia Spectrum-4-based SN5600 switch system
 - 64 800Gb/s non-blocking ports
 - 128 400 Gb/s
 - 64 octal small form-factor pluggable (OSFP) connectors
 - Ethernet (800Gbps) per port bidirectional
 - Switching capacity 51.2 Tbps
 - SSD Memory 160 GB
 - Supports passive copper or active copper or fiber cable with optical module
 - Two hot-swappable power supplies
-

Management Ports (Managed Switch)

- 1x RJ45 (1Gb/s Ethernet)
 - 1x RJ45 (UART) 1x USB 3.0
-

Connectors and cabling

- OSFP ports
 - Passive or active copper or optical module with fiber cables
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Indicators

- Per OSFP port status LED for link and activity
 - System status LEDs for system, fans, power supplies
 - Unit ID (beacon) LED
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Power Supply

- Dual redundant (1+1) hot-swappable power supplies
 - Input range: 200-240Vac; US min: 2 phases of 100-110v – in total, at least 208v
 - 80 Gold+ and ENERGY STAR certified
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Cooling

- Connector to power airflow (reverse)
 - Hot-swappable fan units
-

Warranty and support

- Switches carry a 3-year warranty, On Site, next business day response
 - Cables carry a 1-year warranty, parts exchange
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Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

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Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

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HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

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HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

<https://www.hpe.com/services/complecare>

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

<https://www.hpe.com/services/techcare>



Service and Support

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- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
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- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

<https://www.hpe.com/services/lifecycle>

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

Other Related Services from HPE Services:

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<https://www.hpe.com/services/training>

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

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- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at <https://ssc.hpe.com/portal/site/ssc/>



Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

<https://support.hpe.com/hpesc/public/home/signin>

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"

<https://www.hpe.com/us/en/contact-hpe.html>

For more information

<http://www.hpe.com/services>

Technical Specifications

NVIDIA Spectrum-4-based 800GbE 2U open Ethernet switch with Cumulus Linux authentication, 64x OSFP ports and 1x SFP28 port, 2x power supplies (AC), x86 CPU, secure boot, standard depth, connector-to-power airflow, tool-less rail kit

For technical specifications please visit the NVIDIA technical specifications page for the latest details, [click here](#).



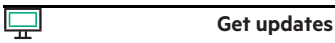
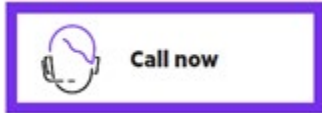
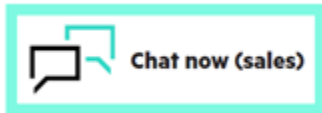
Summary of Changes

Date	Version History	Action	Description of Change
04-Nov-2024	Version 1	Created	New QuickSpecs



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