

Switch

51.2 Tbps

DriveNets 2500S

High-performance, high-density 800Gbe AI fabric switch

DriveNets 2500S is an 800G switch platform designed for high-capacity data center and AI cluster deployments. It delivers line-rate L2 and L3 switching across sixty-four OSFP800 interfaces with support for 400G, 200G, and 100G breakout options. The system enables dense aggregation and high-bandwidth connectivity with a 51.2 Tbps capacity for leaf, spine, and super-spine architectures, making it suitable for large-scale fabrics and distributed compute environments.

The platform is based on Broadcom Tomahawk 5 silicon and is built with a modular thermal and power design that supports continuous operation under demanding workloads. An open software environment with ONIE (Open Network Install Environment) allows operators a straightforward path to onboarding and lifecycle automation.



Key Features

Interfaces

- 64 × 800G OSFP800 data ports
- Breakout support for 2 × 400G, 4 × 200G, or 8 × 100G per interface
- 2 × 25G SFP28 additional ports

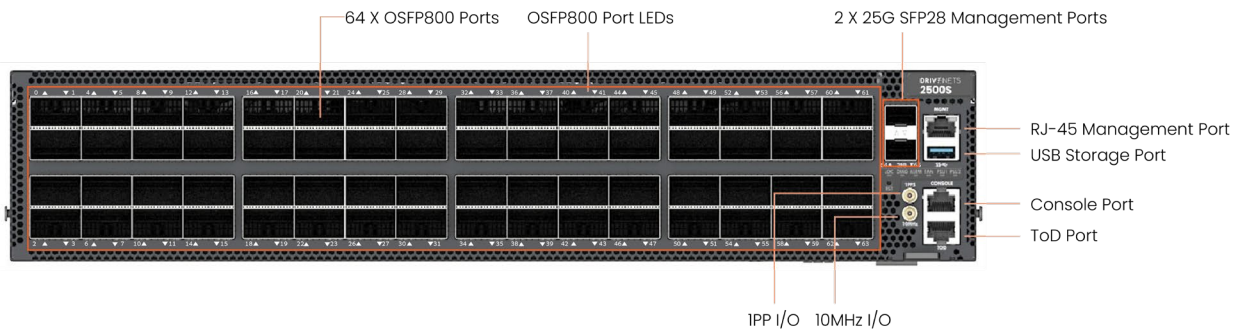
General

- Suitable for large-scale data center fabrics
- Broadcom Tomahawk 5 silicon, 51.2 Tbps
- Intel Ice Lake-D control subsystem with security features

Power and Cooling

- 2RU platform with front-facing data ports
- 1 + 1 redundant hot-swappable PSUs
- 3 + 1 redundant hot-swappable fan modules

Overview



Hardware Specification

Ports

- 64 x 800G OSFP800 switch ports
- 1x RJ-45 UART RS232 console port
- 1x RJ-45 out-of-band management port
- 2 x SFP28 in-band management ports
- 1 x USB 3.0

Key Components

- Switch Silicon: Broadcom Tomahawk 5 (BCM78900) 51.2 Tbps multi-layer Ethernet switch controller
- CPU: Intel Ice Lake-D D1713NTE 4C Processor
- Memory: 16GB x 2 with ECC (SO-DIMM) DDR4
- Storage: M.2 240G NVMe SSD
- NOR Flash (Boot): 64MB
- NOR Flash (Backup): 64MB
- BMC: AST2600
- ROT: AST1060

Timing and Synchronization

- Supports IEEE 1588 PTP and Synchronous Ethernet
- 1 x 10MHz I/O SMB
- 1 x 1pps I/O SMB
- 1 x TOD RJ-45

Physical and Environmental

- Dimensions (WxDxH): 438.4 mm x 648.2 mm x 88 mm
- Fans: Hot-swappable 3 + 1 redundant fans
- Operating Temperature: 0°C – 40°C (32°F – 104°F)
- Operating Humidity: 5% – 95% non-condensing

Cooling

- Front-to-back airflow (0°C – 40°C)

Power

- PSUs: 2 redundant, load-sharing, hot-swappable 3000 W AC/DC PSUs
- AC PSU:
 - AC input rating:
 - 200–240 VAC at 50–60Hz (16 A/3000 W max.)

- DC PSU:
 - DC Input rating: -48 V ~ -60 V (80 A/3000 W max.)
 - Typical power: 1066W (w/o optics)
 - Maximum 1684 Watts (w/o optics)

Regulatory Compliance

- EMI:
 - CE Mark
 - FCC Title 47, Part 15, Subpart B Class A

- Safety:
 - CB EN60950
 - UL60950
 - EN62368
 - UL62368
- Environmental Conditions:
 - Operating Temperature: 0°C – 40°C (32°F – 104°F) @ 6000 ft
 - Operating Humidity: 5% – 95% non-condensing
 - Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)
 - RoHS-2 Compliance



DriveNets is a leader in high-scale networking solutions for service providers and AI infrastructures. DriveNets Network Cloud is a software-based solution that runs on standard white boxes, substantially increasing scale and lowering network costs. DriveNets' Network Cloud-AI provides the highest-performance Ethernet-based AI networking solution and the best Ethernet alternative to InfiniBand in the market. Learn more at www.drivenets.com