State-of-the-art Datacenter Switch
64 x 100GE QSFP28 Ports

Providing incomparable flexibility for high-performance datacenters.

As the bandwidth demands of modern computing and smart device applications continue their exponential growth, datacenters must maintain the flexibility necessary to continually enhance the density and reliability of their existing networking environments. The technology most critical to such network flexibility and enhancement consists of dense 40 and 100 Gigabit Ethernet switching devices, among which only a limited number possess the required technological capacity to facilitate the development of both leaf and spine networking tiers. The S9280-64X is one such datacenter switch allowing for the assembly of high-performance, high-density, fixed-configuration, datacenter networks offering speed layer 2 and layer 3 features. For datacenters evolving from existing 10GE and 40GE to 25GE, 50GE, and 100GE, the S9280-64X provides the seamless transition necessary to maintain and enhance both interface speed and density. The flexibility offered by the S9280-64X is most apparent in its capacity to support speeds including 10GE, 25GE, 40GE, 50GE, and 100GE, a capacity which in turn meets the demands of all manner of applications and east-west traffic loading challenges.

Simply put, the S9230-64X is a purpose-built, high-density switch with 64 QSFP28 100GE ports and an overall throughput of up to 12.8Tbps, a latency of under 800ns, and 40MB of buffer. Each QSFP28 port supports flexible configurations between 4 x 10GE, 4 x 25GE, or 2 x 50GE modes for up to 128 ports without limitation.

Key applications

- Provides high-density 10/25/40/50/100GE ToR server aggregation for high-performance data center environments.

- Allows for the construction of scalable and easy-to-manage data center network platforms.

- Facilitates the cost-effective aggregation of 10/25/40/50/100GE uplinks through small-scale CLOS implementation in leaf-spine architectures.

- Features a switch-on-chip (SoC) single chip for central resource sharing (L2/L3/Flow) schemes.

- Utilizes large fabric installation for flat, two-tier, non-blocking 10/25/40/50/100GE datacenter network designs with implementation.

- Deploys as a high-speed Layer 2 gateway to connect nonvirtualized infrastructure with hypervisor-based overlay networks.

Key features

- 2 RU high-density 10/25/40/50/100GE fixed switch with up to 64 ports of 100GE (QSFP28).

- Full support for ONIE software installer.

- Redundant, hot-swappable power supplies and fans.

- Up to 12.8Tbps of switching I/O bandwidth (full duplex) available and non-blocking switching fabric delivering line-rate performance under full loads.

- Next generation of leaf-spine architecture, enhancing workloads and optimizing network scaling.

- The S9280-64X is specifically designed for applications in high-performance datacenter environments.

- Non-blocking switching architecture.

Specifications

Physical

- Compact full featured 10/25/40/50/100GE datacenter switch
- 1 RJ45 console/management port with RS232 signaling
- 1 10/100/1000 Base-T Ethernet for Out-of-Band management
- 1 USB 2.0 Type-A port
- 2 SFP+ 10GE/1GE ports

Processor	Intel® Broadwell-DE D-1527 4-Core 2.2GHz
Memory	DDR4 16G w/ ECC SODIMM
Storage	M.2 SSD 128GB
ASIC	Barefoot Tofino BFN-T10-064Q
Built-in Interfaces	Total 100GE: 64
LED	Power, system, link & activity, fan & PSU status
Chassis	2 RU, 440w x 88h x 597.25d mm (17.32" x 3.46" x 23.51") Weight (including 2 x PSUs & 4 x fans): 18 kg (39.68 lb)
Redundancy	Two hot swappable power supplies with integrated fans and trays

Environmental

- Fresh air compliant to 45°C (113°F)
- Rack mounting kit

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Power supply	AC input: 100–240 Vac 50/60 Hz DC input: 240V, 2.75A (240Vdc China only) Typical/Max power draw: 731/830 Watts
Max. operating Specs.	Operating temperature: 0°C to 45°C (32°F to 113°F) Operating humidity: 10% to 90% (RH), noncondensing
Max. non-operating Specs.	Storage temperature: –40°C to 70°C (–40°F to 158°F) Storage humidity: 5% to 95% (RH), non-condensing

Performance

Switching Capacity	12.8Tbps
Packet throughput	5960Mpps

Regulatory compliance

EMC	EN55032 Class A EN61000-3-2/EN61000-3-3 EN55024 FCC P15B Class A BSMI (CNS 13438) Class A CCC (GB9254) Class A RoHS: RoHS 6 UL
Safety	IEC/EN 60950-1/A2 BSMI (CNS 14336-1) CCC (GB4943)

S9280-64X Views
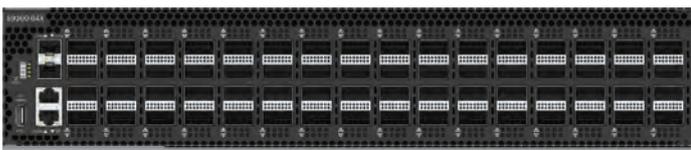
S9280-64X front view

S9280-64X rear view

Supported Accessories

Transceiver	100GE, SR4 QSFP28 | 100GE, eSR4 QSFP28 | 100GE, LR4 QSFP28 | 100GE, CWDM4 2Km QSFP28 100GE, PSM4 500m QSFP28 | 40GE, SR4 optic QSFP+ | 40GE, BIDI optic QSFP+ | 40GE, XSR4 optic QSFP+ 40GE, LR4 10Km, optic QSFP+ | 40GE, LR4L 1Km, optic QSFP+
Cable types	100GE, 4 x 25GE, QSFP28 to 4 x SFP28, DAC | 100GE, QSFP28 to QSFP28, AOC 100GE, QSFP28 to QSFP28, DAC | 40GE, QSFP+ to QSFP+, AOC | 40GE, QSFP+ to QSFP+, DAC 40GE, MTP to 4 x LC optical breakout | 40GE, 4 x 10GE, QSFP+ to 4 x SFP+, DAC
Power supply types	CPRS1200W-AC-FTB, 1200W AC/DC PSU, airflow from panel to rear side (front to rear) CPRS1200W-AC-BTF, 1200W AC/DC PSU, airflow from rear side to panel (rear to front)
Fan types	Fan normal airflow from panel to rear side Fan reverse airflow from rear side to panel Fan spare supports normal and reverse airflow operations