Datasheet S9100-32X

Innovative Datacenter Switch

32 x 100GE QSFP28 Ports

High-performance 10/25/40/50/100GE top-of-rack open networking switch.

The S9100-32X is specifically designed for the unique application in high-performance datacenter environments. Taking full advantage of non-blocking switching architecture, the S9100-32X significantly reduces head-of-line blocking (HOL blocking) to provide line-rate L2 and L3 forwarding capacity for concurrent support of all ports at full capacity. For datacenters looking to acquire future-ready solutions, simplifying the migration to 100 Gbps in the data core is achieved in a denser footprint while maintaining necessary constraints in a rack space. The agility to design optimized datacenter networks is further enhanced with architectural features including redundant hot-swappable power supplies and fans for flexibility, efficiency and availability.

The S9100-32X supports Open Network Install Environment (ONIE), providing an environment for automated operating system provisioning. In combination with ONIE, the S9100-32X redefines the key component in disaggregated network architecture, providing unprecedented network layer agility. With ONIE, application demands-solutions can take the form of the right software for the switching fabric. The S9100-32X enables the creation of thriving ecosystems of both network and software alternatives defining the deployment of future-ready agility.

Key applications

- High-density 10/25/40/50/100GE ToR server aggregation for high-performance data center environments.
- Deploy large fabric installation for flat, two-tier, non-blocking 10/25/40/50/100GE architecture better suited for virtualized data centers and private clouds.
- Enable cost effective aggregation of 10/25/40/50/100GE uplinks through small-scale in Leaf-Spine architecture.
- Designed for effective integration with S8900-54XC, S8900-64XC, S9200-64X switches to empower consolidation and transformation of elastic, virtualized, data center fabrics.
- Low-latency and high-performance for Next-Generation data centers.
- Deploy as a high-speed Layer 2 gateway to connect nonvirtualized infrastructure with hypervisor based overlay networks.

Key features

- 1 RU high-density 10/25/40/50/100GE fixed switch with up to 32 100GE (QSFP28) ports.
- Full support for ONIE software installer.
- Redundant, hot-swappable power supplies and fans.
- Up to 6.4Tbps of switching I/O bandwidth (full duplex) available and non-blocking switching fabric delivering line-rate performance under full load.
- Next generation of Leaf-Spine architecture, enhancing workloads and optimizing networking scaling.
- The S9100-32X is specifically designed for applications in high-performance datacenter environments.
- Non-blocking switching architecture.

Specifications

Physical

- Compact full featured modular 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

Processor	Intel® Rangeley C2558 2.4G 4-Core
Memory	DDR3 8GB w/ ECC SODIMM
Storage	M.2 SSD 64GB
ASIC	Broadcom BCM56960 (Tomahawk)
Built-in Interfaces	Total 10/25GE: 128 Total 40/50GE: 32 Total 100GE: 32
LED	Power, system, link & activity, fan & PSU status
Chassis	1 RU, 440w x 44h x 406d mm (17.32" x 1.73" x 15.98") Weight (including 2 x PSUs & 4 x fans): 9.52 kg (20.98 lb)
Redundancy	Two hot swappable power supplies with integrated fans and trays

Environmental

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

Power supply	AC input: 100-240V, 8-4A, 60/50Hz DC input: 240V, 2.75A (240Vdc China only) Typical/Max power draw: 360/420 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	6.4Tbps
Packet throughput	2980 Mpps

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)

S9100-32X Views

S9100-32X front view

S9100-32X rear view

Supported Accessories

Transceiver	100GE, SR4 QSFP28 | 100GE, eSR4 QSFP28 | 100GE, LR4 QSFP28 | 100GE, CWDM4 2Km QSFP28
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 4xLC optical breakout 40GE, 4 x 10GE, QSFP+ to 4 x SFP+, DAC
Power supply types	CRPS550W-AC-FTB, 550W AC/DC PSU, airflow from panel to rear side (front to rear) CRPS550W-AC-BTF, 550W AC/DC PSU, airflow from rear to panel side (rear to front) CRPS800W-DC-BTF, 800W DC/DC PSU, airflow from rear to panel side (rear to front) CRPS800W-DC-FTB, 800W DC/DC PSU, airflow from panel to rear side (front to rear)
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