



# Dell Networking S4810-ON

## 10/40GbE top-of-rack open networking switch

High-density, 1RU 48-port 10GbE switch with four 40GbE uplinks and ultra-low-latency, non-blocking performance to ensure line-rate performance.

The Dell Networking S4810-ON switch is the industry's first disaggregated hardware and software data center networking solution that empowers organizations to deploy modern workloads and applications designed for the open networking era.

Organizations that benefited from utilizing the disaggregation model with their data center server platforms can now leverage even greater benefits from Dell open networking platforms. Organizations can take advantage of this disaggregated networking model using industry-leading hardware and a choice of leading network operating systems to simplify data center fabric orchestration and automation and accelerate innovation.

These new offerings provide organizations the needed flexibility to transform their data centers and offer high-capacity network fabrics that are cost-effective, easy to deploy and provide a clear path to a software-defined data center.

The Dell S4810-ON supports the open source Open Network Install Environment (ONIE) for zero-touch installation of alternate network operating systems.

### Ultra-low-latency, data center optimized

The Dell Networking S-Series S4810-ON is an ultra-low-latency 10/40GbE top-of-rack (ToR) switch purpose-built for applications in high-performance data center and computing environments. Leveraging a non-blocking switching architecture, the S4810 delivers line-rate L2 and L3 forwarding capacity with ultra-low-latency to maximize network performance. The compact S4810 design provides industry-leading density of 48 dual-speed 1/10GbE (SFP+) ports as well as four 40GbE QSFP+ uplinks to conserve valuable rack space and simplify the migration to 40Gbps in the data center core (Each 40GbE QSFP+ uplink can support four 10GbE ports with a breakout cable). In addition, the S4810 incorporates multiple architectural features that optimize data center network flexibility, efficiency and availability, including I/O panel to PSU airflow or PSU to I/O panel airflow for hot/cold aisle environments, and redundant, hot-swappable power supplies and fans.

### Key applications

- Ultra-low-latency 10GbE switching in HPC, high-speed trading or other business-sensitive deployments that require the highest bandwidth and lowest latency
- High-density 10GbE ToR server aggregation in high-performance data center environments

### Key features

- 1RU high-density 10/40GbE ToR switch with 48 dual-speed 1/10GbE (SFP+) ports and four 40GbE (QSFP+) uplinks (totaling 64 10GbE ports with breakout cables) with OS support
- 1.28Tbps (full-duplex) non-blocking switching fabric delivers line-rate performance under full load with sub 700ns latency
- I/O panel to PSU airflow or PSU to I/O panel airflow
- Supports the open source ONIE for zero-touch installation of alternate network operating systems
- Redundant, hot-swappable power supplies and fans
- Low power consumption

Ultra-low-latency  
10GbE top-of-rack  
switch optimized for  
data center efficiency.

# Specifications: S4810-ON 10/40-GbE top-of-rack open networking switch

## Ordering information

### S4810-ON

S4810, 48x 10GbE SFP+, 4x QSFP+, 1x AC PSU, 2x Fans, I/O Panel to PSU Airflow

S4810, 48x 10GbE SFP+, 4x QSFP+, 1x AC PSU, 2x Fans, PSU to I/O Panel Airflow

### Redundant power supplies

S4810, AC Power Supply, I/O Panel to PSU Airflow

S4810, AC Power Supply, PSU to I/O Panel Airflow

### Fans

S4810 Fan Module, I/O Panel to PSU Airflow

S4810 Fan Module, PSU to I/O SR4 Panel Airflow

### Optics

Transceiver, QSFP+, 40GbE SR Optics, 850nm Wavelength, 100–150m Reach on OM3/OM4

Transceiver, QSFP+, 40GbE eSR Optics, 850nm Wavelength, 300–400m Reach on OM3/OM4

Transceiver, SFP+, 10GbE, SR, 850nm Wavelength, 300m Reach

Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach

Transceiver, SFP+, 10GbE, DWDM, ITU Channel 17–61, 40km Reach

Transceiver, SFP, 1000Base-SX, 850nm Wavelength, 550m Reach

Transceiver, SFP, 1000Base-LX, 1310nm Wavelength, 10km Reach

Transceiver, SFP, 1000Base-T

Transceiver, SFP+, 10GbE, ER, 1310nm Wavelength, 40km Reach

Transceiver, SFP+ LRM (Long Reach Multimode) Optic, 10GbE,

1310nm Wavelength, 220m Reach on MMF

### Cables

Cable, 40GbE MTP to 4xLC 5M Optical Breakout Cable

Cable, 40GbE QSFP+ to 4xSFP+ 5M Direct Attach Breakout Cable

Cable, 40GbE QSFP+, Active Fiber Optic, 10m

Cable, 40GbE QSFP+, Active Fiber Optic, 50m

Cable, 40GbE QSFP+, Direct Attach Cable, 1m

Cable, 40GbE QSFP+, Direct Attach Cable, 5m

Cable, SFP+, CU, 10GbE, Direct Attach Cable, 0.5m

Cable, SFP+, CU, 10GbE, Direct Attach Cable, 1m

Cable, SFP+, CU, 10GbE, Direct Attach Cable, 2m

Cable, SFP+, CU, 10GbE, Direct Attach Cable, 5m

Cable, SFP+, CU, 10GbE, Direct Attach Cable, 7m

### Physical

48 line-rate 10 Gigabit Ethernet SFP+ ports

4 line-rate 40 Gigabit Ethernet QSFP+ ports

1 RJ45 console/management port with RS232 signaling

Size: 1 RU, 1.73 x 17.32 x 18.11" (4.4 x 44 x 46 cm) (H x W x D)

Weight: 14.39 lbs (6.54 kg)

ISO 7779 A-weighted sound pressure level: 59.6 dBA at 73.4°F (23°C)

Power supply: 100–240V AC 50/60Hz

Max. thermal output: 1194 BTU/h

Max. current draw per system:

4A at 100/120V AC 2A at 200/240V AC

Max. power consumption: 350 Watts (AC)

Typ. power consumption: 220 Watts

Max. operating specifications:

Operating temperature: 32°F to 104°F (0°C to 40°C)

Operating humidity: 10 to 85% (RH), non-condensing

Max. non-operating specifications:

Storage temperature: –40°F to 158°F (–40°C to 70°C)

Storage humidity: 5 to 95% (RH), non-condensing

### Redundancy

Hot swappable redundant power

Hot swappable redundant fans

### Performance

Switch fabric capacity: 1.28Tbps (full-duplex)

640Gbps (half-duplex)

Forwarding capacity: 960Mpps

Latency: Sub 700ns

Packet buffer memory: 9MB

CPU memory: 2GB

### Regulatory compliance

#### Safety

UL/CSA 60950-1, Second Edition

EN 60950-1, Second Edition

IEC 60950-1, Second Edition Including All National Deviations and Group Differences

EN 60825-1 Safety of Laser Products Part 1: Equipment Classification Requirements and User's Guide

EN 60825-2 Safety of Laser Products Part 2: Safety of Optical Fibre Communication Systems

FDA Regulation 21 CFR 1040.10 and 1040.11

#### Emissions

Australia/New Zealand: AS/NZS CISPR 22: 2009, Class A

Canada: ICES-003, Issue-4, Class A

Europe: EN 55022: 2006+A1:2007 (CISPR 22: 2006), Class A

Japan: VCCI V3/2009 Class A

USA: FCC CFR 47 Part 15, Subpart B:2009, Class A

#### Immunity

EN 300 386 V1.4.1:2008 EMC for Network Equipment

EN 55024: 1998 + A1: 2001 + A2: 2003

EN 61000-3-2: Harmonic Current Emissions

EN 61000-3-3: Voltage Fluctuations and Flicker

EN 61000-4-2: ESD

EN 61000-4-3: Radiated Immunity

EN 61000-4-4: EFT

EN 61000-4-5: Surge

EN 61000-4-6: Low Frequency Conducted Immunity

#### RoHS

All S-Series components are EU RoHS compliant.

#### Certifications

Japan: VCCI V3/2009 Class A

USA: FCC CFR 47 Part 15, Subpart B:2009, Class A

#### Immunity

EN 300 386 V1.4.1:2008 EMC for Network Equipment

EN 55024: 1998 + A1: 2001 + A2: 2003

EN 61000-3-2: Harmonic Current Emissions

EN 61000-3-3: Voltage Fluctuations and Flicker

EN 61000-4-2: ESD

EN 61000-4-3: Radiated Immunity

EN 61000-4-4: EFT

EN 61000-4-5: Surge

EN 61000-4-6: Low Frequency Conducted Immunity

#### RoHS

All S-Series components are EU RoHS compliant.

