Dell Networking S6000-ON

High-performance 10/40GbE top-of-rack switch open networking switch

High-density, 40GbE switch (32 ports of 40GbE or 96 ports of 10GbE[1] and eight ports of 40GbE) with high performance for top-, middle- and end-of- rack deployments.

The Dell Networking S6000-ON switch is the industry's first disaggregated hardware + 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 solutions. 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 flexibility to transform their data centers and offer high-capacity network fabrics that are easy to deploy, cost-effective and provide a clear path to a software-defined data center.

The Dell S6000-ON supports the open source Open Network Install Environment (ONIE) for zero-touch installation of alternate network operating systems.

Data center optimized

The Dell Networking S Series S6000-ON 10/40GbE top-of-rack (ToR) switch is purpose-built for applications in high-performance data center and computing environments. Leveraging a non-blocking switching architecture, the S6000-ON delivers line-rate L2 and L3 forwarding capacity to maximize network performance. The compact S6000-ON design provides industry-leading density of 32 ports of 40GbE or 96 ports of 10GbE[1] and eight additional ports of 40GbE to conserve rack space while enabling denser footprints and simplifying migration to 40Gbps in the data center core. In addition, the S6000-ON incorporates multiple architectural features that optimize data center network flexibility, efficiency and availability, including redundant, hot-swappable power supplies and fans.

Key applications

- High-density 10/40GbE ToR server aggregation in high-performance data center environments
- Large deployments in conjunction with the Dell Z9000, creating a non-blocking[2] 10/40GbE data center network design

Key features

- 1RU high-density 10/40GbE ToR switch with 32 ports of 40GbE (QSFP+) or 96 ports of 10GbE[1] and eight ports of 40GbE with OS support
- Up to 2.56Tbps of switching I/O bandwidth (full-duplex) and available non-blocking[2] switching fabric delivering line-rate performance under full load[2] with sub 600ns latency
- Redundant, hot-swappable power supplies and fans
- I/O panel to power supply airflow or power supply to I/O panel airflow
- Supports the open source ONIE for zero-touch installation of alternate network operating systems
- Tool-less enterprise ReadyRails™ mounting kits reduce time and resources for switch rack installation
- Power-efficient operation up to 45°C helps reduce cooling costs in temperature-constrained deployments

High-density 1RU 10/40GbE switch purpose-built for virtualized data centers

Specifications: S6000-ON 10/40GbE switch

Ordering information

S6000-ON
32-Port 40G QSFP+ Ports, Redundant AC PS, Fan Subsys, w/Airflow from I/O PNL to PS PNL
32-Port 40G QSFP+ Ports, Redundant AC PS, Fan Subsys, w/Airflow from PS PNL to I/O PNL

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

Fans
S6000 Fan Module, I/O Panel to PSU Airflow
S6000 Fan Module, PSU to I/O Panel Airflow

Optics
Transceiver, QSFP+, 40GbE, SR4 Optics, 850 nm Wavelength, 100−150 m Reach on OM3/OM4
Transceiver, QSFP+, 40GbE, eSR4 Optics, 850 nm Wavelength, 300−400 m Reach on OM3/OM4
Transceiver, QSFP+, 40GbE, LR4 Optics, 10 Km Reach on Single Mode Fiber
Transceiver, QSFP+, 40GbE, PSM4 Optics 1490 nm

Cables
Cable, 40GbE QSFP+, Active Fiber Optic, 10 m and 50 m
Cable, 40GbE QSFP+, Direct Attach Cable, for 0.5 m, 1 m, 3 m, 5 m, 7 m Cable, 40GbE MTP to 4 x LC 5 m Optical Breakout Cable (optics not included)
Cable, 40GbE QSFP+ to 4xSFP+ 5 m Direct Attach Breakout Cable

Physical
32 line-rate 40 Gigabit Ethernet QSFP+ ports
1 RJ45 console and management port with RS232 signaling
1 USB 2.0 type A storage port
1 USB 2.0 type B console port
Size: 1 RU, 1.71 x 17.08 x 18.11"
Weight: 16.12 lbs (7.32 kg)
Power supply: 100−240 VAC 50/60 Hz
Max. power consumption: 371 watts
Typ. power consumption: 220 watts
Max. operating specifications:
　Operating temperature: 32°F to 113°F (0°C to 45°C)
　Operating humidity: 10 to 90% (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
Fresh Air Compliant to 45°C
ReadyRails rack mounting system, no tools required

Redundancy
Hot swappable redundant power
Hot swappable redundant fans

Performance
Switch I/O bandwidth:　　　2.56Tbs (full-duplex)
Forwarding rate:　　　　　1462Mpps
Latency:　　　　　　　　　sub 600ns
Packet buffer memory:　　12MB
CPU memory:　　　　　　　4GB

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: 2006, 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:2011, ClassA

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

Learn More at Dell.com/Networking