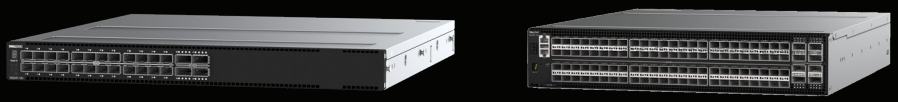
DELL Technologies

S5200 SPEC SHEET



# DELL EMC POWERSWITCH S5200-ON SERIES SWITCHES

## High-performance, open networking 25GbE top-of-rack and 100GbE spine/leaf switches

The PowerSwitch S5200-ON 25/100GbE fixed switches comprise Dell Technologies' latest disaggregated hardware and software data center networking solutions, providing state-of-the-art, high-density 25/100GbE ports and a broad range of functionality to meet the growing demands of today's data center environment. These innovative, next-generation open networking switches offer optimum flexibility and cost-effectiveness for web 2.0, enterprise, mid-market and cloud service provider with demanding compute and storage traffic environments.

The S5200-ON is a complete family of switches:12-port, 24-port, and 48-port 25GbE/100GbE ToR switches, 96-port 25GbE/100GbE Middle of Row (MoR)/End of Row (EoR) switch, and a 32-port 100GbE Multi-Rate Spine/Leaf switch. From the compact half-rack width S5212F-ON providing an ideal form factor for hyper-converged deployments, to the high density S5296F-ON for Middle of Row deployments, the S5200-ON series offers performance and flexibility for a variety of network designs.

In addition to 100GbE Spine/Leaf deployments, the S5232F-ON can also be used in high density deployments using breakout cables to achieve up to 128 10GbE or 128 25GbE ports.

Using industry-leading hardware and a choice of Dell EMC SmartFabric OS10 or select 3rd party network operating systems and tools, the S5200-ON switches incorporate multiple architectural features that optimize data center network flexibility, efficiency and availability, including IO panel to PSU or PSU to IO panel airflow for hot/cold aisle environments, redundant, hot-swappable power supplies and fans and deliver non-blocking performance for workloads sensitive to packet loss.

Priority-based flow control (PFC), data center bridge exchange (DCBX) and enhanced transmission selection (ETS) make the S5200-ON family ideally suited for DCB environments.

Dell EMC PowerSwitch S5200-ON switches support the open source Open Network Install Environment (ONIE) for zero touch installation of Dell EMC SmartFabric OS10 networking operating system, as well as alternative network operating systems.

### Key applications

- Organizations looking to enter the software-defined data center era with a choice of networking technologies designed to maximize flexibility
- High-density 10/25GbE ToR server aggregation in high-performance data center environments at the desired fabric speed with the S5248F-ON or S5296F-ON
- Low-density 10/25GbE server and storage aggregation with the S5212F-ON and S5224F-ON
- Small-scale Fabric implementation via the S5232F-ON switch in leaf and spine along with S5248F-ON 1/10/25GbE ToR switches enabling cost-effective aggregation of 10/25/40/50/100 uplinks
- Multi-functional 10/25/40/50/100GbE switching in High Performance Computing Clusters or other business-sensitive deployments requiring the highest bandwidth.
- iSCSI deployments, including DCB converged lossless transactions
- Single-pass VXLAN routing

### Key features

- 1 or 2RU high-density ToR switches with up to 48 or 96 ports of 25GbE or 32 ports of 100GbE
- Multi-rate 100GbE ports support 10/25/40/50/100GbE
- Scalable L2 and L3 Ethernet switching with QoS and a full complement of standards-based IPv4 and IPv6 features, including OSPF and BGP routing support
- Line-rate performance via non-blocking switch fabrics: 3.2Tbps (6.4Tbps full-duplex) on S5296F-ON and S5232F-ON, 2.0Tbps (4.0Tbps full-duplex) on S5248F-ON, and 1.08Tbps (2.16Tbps full-duplex) on S5224F-ON and S5212F-ON
- L2 multipath support via Virtual Link Trunking (VLT) and Routed VLT support

- VXLAN gateway functionality support for bridging and routing the non-virtualized and the virtualized overlay networks with line rate performance
- Support for Dell EMC SmartFabric OS10
- Converged network support for DCB, with priority flow control (802.1Qbb), ETS (802.1Qaz), DCBx and iSCSI TLV support
- Routable RoCE to enable convergence of compute and storage on Leaf/Spine Fabric
- IO panel to PSU airflow or PSU to IO panel airflow Redundant, hot-swappable power supplies and fans on most models
- Supports the open source Open Network Install Environment (ONIE) for zero touch installation of alternate network operating systems
- Tool-less enterprise ReadyRails™ mounting kits for most models reducing time and resources for switch rack installation (S5212F-ON will utilize a tandem tray for mounting)
- Power-efficient operation and Dell Fresh Air 2.0 compliant up to 45ºC helps reduce cooling costs in temperature constrained deployments

### Key features with Dell EMC SmartFabric OS10

- Consistent DevOps framework across compute, storage and networking elements
- Standard networking features, interfaces and scripting functions for legacy network operations integration
- Standards-based switching hardware abstraction via Switch Abstraction Interface (SAI)
- Pervasive, unrestricted developer environment via Control Plane Services (CPS)
- Dell EMC SmartFabric OS10 software enables Dell EMC layer 2 and 3 switching and routing protocols with integrated IP services, quality of service, manageability and automation features
- OS10 supports Precision Time Protocol (PTP, IEEE 1588v2) to synchronize clocks on network devices
- Increase VM Mobility region by stretching L2 VLAN within or across two DCs with unique VLT capabilities
- Scalable L2 and L3 Ethernet Switching with QoS, ACL and a full complement of standards based IPv4 and IPv6 features including OSPF, BGP and PBR
- Enhanced mirroring capabilities including local mirroring, Remote Port Mirroring (RPM), and Encapsulated Remote Port Mirroring (ERPM)
- Converged network support for Data Center Bridging, with priority flow control (802.1Qbb), ETS (802.1Qaz), DCBx and iSCSI TLV
- BGP EVPN with Integrated Routing and Bridging (IRB) in both Asymmetric and Symmetric modes, enabling controller less NVO

| Features | S5212F-ON | S5224F-ON | S5248F-ON | S5296F-ON | S5232F-ON |
|---|---|---|---|---|---|
| Ports | 12xSFP28<br>3xQSFP28 | 24xSFP28<br>4xQSFP28 | 48xSFP28<br>2xQSFP28-DD<br>4xQSFP28 | 96xSFP28<br>8xQSFP28 | 32xQSFP28<br>2xSFP+ |
| Max 10GbE density | 24 | 40 | 80 | 128 | 126 |
| Max 25GbE density | 24 | 40 | 80 | 128 | 124 |
| Max 40GbE density | 3 | 4 | 8 | 8 | 32 |
| Max 50GbE density | 6 | 8 | 16 | 16 | 64 |
| Max 100GbE density | 3 | 4 | 8 | 8 | 32 |
| Switching capacity | 1.08 Tbps (2.16 Tbps full duplex) | 1.08 Tbps (2.16 Tbps full duplex) | 2.0 Tbps (4.0 Tbps full duplex) | 3.2 Tbps (6.4 Tbps full duplex) | 3.2 Tbps (6.4 Tbps full duplex) |
| Throughput | 892 Mpps | 954 Mpps | 1.9 Bpps | 1.5 Bpps | 1.5 Bpps |

| Features | S5212F-ON | S5224F-ON | S5248F-ON | S5296F-ON | S5232F-ON |
|---|---|---|---|---|---|
| Latency (nano sec) | 906 | 881 | 847 | 850 | 877 |
| 1588v2 PTP timing (hardware) | | ● | ● | ● | ● |
| CPU Memory | 8GB | 8GB | 16GB | 16GB | 16GB |
| SSD | 16GB | 32GB | 64GB | 64GB | 64GB |
| Packet Buffer | 32MB | 32MB | 32MB | 32MB | 32MB |
| Maximum power | 304W | 455W | 647W | 893W | 635W |
| Typical power | 140W | 200W | 310W | 457W | 360W |
| Maximum current | 2.8A@110VAC / 1.4A@220VAC | 4.2A@110VAC / 2.1A@220VAC | 5.8A@110VAC / 2.9A@220VAC | 8.2A@110VAC / 4.1A@220VAC | 5.8A@110VAC / 2.9A@220VAC |
| Fan modules | Fixed | 4 | 4 | 4 | 4 |
| Form Factor | 1RU (half-width) | 1RU | 1RU | 2RU | 1RU |
| Dimensions | 8.2”Wx19.3”D x1.6”H 20.9Wx49.0D x4.1H (cm) | 17.1”Wx18.1”D x1.7”H 43.4Wx46.0D x4.4H (cm) | 17.1”Wx18.1”D x1.7”H 43.4Wx46.0D x4.4H (cm) | 17.4”Wx20.1”D x3.4”H 44.2Wx51.1D x8.7H (cm) | 17.1”Wx18.1”D x1.7”H 43.4Wx46.0D x4.4H (cm) |
| Weight | 4.5kg (10.05lbs) | 9.7kg (21.4lbs) | 9.7kg (21.4lbs) | 15.1kg (33.2lbs) | 9.8kg (21.6lbs) |
| Max thermal output | 1037 BTU/h | 1552 BTU/h | 2208 BTU/h | 3047 BTU/h | 2167 BTU/h |

| Product | Description |
|---|---|
| S5200-ON | S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x DC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x DC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, I/O Panel to PSU Airflow, NO-OS<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, NO-OS<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA<br>S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA<br><br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, NO-OS<br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS<br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA<br>S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA<br><br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, NO-OS<br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS<br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA<br>S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA |
| | |

| Product | Description |
|---|---|
| S5200-ON | S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, NO-OS<br>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS<br>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA<br>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA<br><br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10<br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10<br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, NO-OS<br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS<br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA<br>S5232F, 32x 100 GbE QSFB28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA |
| Redundant power supplies | AC Power Supply, IO Panel to PSU Airflow AC Power Supply, PSU to IO Panel Airflow<br>DC Power Supply, IO Panel to PSU Airflow (available as custom kit) DC Power Supply, PSU to IO Panel Airflow (available as custom kit) |
| Fans | Fan module, IO Panel to PSU Airflow<br>Fan module, PSU to IO Panel Airflow |
| Optics | Transceiver, 2x100GbE, 2xSR4, QSFP28-DD<br>Transceiver, 2x100GbE, 2xPSM4-IR, QSFP28-DD<br>Transceiver, 2x100GbE, 2xCWDM4, QSFP28-DD<br>Transceiver, 100GbE, SR4 QSFP28<br>Transceiver, 100GbE, PSM4 (500m) QSFP28 Transceiver, 100GbE, CWDM4 (2Km) QSFP28<br>Transceiver, 100GbE, LR4 QSFP28<br>Transceiver, 40GbE, SR4 optic QSFP+<br>Transceiver, 40GbE, BIDI optic QSFP+ (Duplex) Transceiver, 40GbE, SM4 optic QSFP+ (Duplex)<br>Transceiver, 40GbE, LM4 optic QSFP+<br>(Duplex) Transceiver, 40GbE, PSM4 10Km, QSFP+<br>Transceiver, 40GbE, LR4 optic QSFP+<br>Transceiver, 40GbE, ER4 optics QSFP+<br>Transceiver, 25GbE, SR, NOF SFP28<br>Transceiver, 25GbE, LR, SFP28<br>Transceiver, 10GbE, SR SFP+, short reach<br>Transceiver, 10GbE, LR SFP+, long reach<br>Transceiver, 10GbE, ER SFP+, extended reach<br>Transceiver, 10GbE, ZR SFP+ extra extended reach 10G,<br>Transceiver, 10GBASE-T use with QSA in QSFP+ port, 30m reach on CAT6a/7<br>Transceiver, 1GbE, SX SFP<br>Transceiver, 1GbE, LX SFP<br>Transceiver, 1GbE, ZX SFP<br>Transceiver, 1GbE, 10km, BiDi SFP<br>Transceiver, 1GbE, 40km, BiDi SFP<br>Transceiver, 1GbE, 80km, BiDi SFP<br>Transceiver, 1GbE, 1000BASE-T, Gen2, SFP |
| Cables | 100GbE, 4x25GbE, QSFP28 to 4xSFP28, passive DAC 100GbE, QSFP28 to QSFP28, active optical 100GbE, QSFP28 to QSFP28, passive DAC<br>100GbE, 2x50GbE, 2xQSFP to 2xQSFP28, passive DAC, breakout 40GbE,<br>QSFP+ to QSFP+, active optical<br>40GbE, QSFP+ to QSFP+, passive DAC 40GbE, MTP to 4xLC optical breakout<br>40GbE, 4x10GbE, QSFP+ to 4xSFP+, passive DAC |
| Cable management | Z9100 Cable Breakout Kit, MTP to LC (1RU 64-port LC over MMF) Z9100 Cable Breakout Kit, MTP to LC (1RU 64-port LC over SMF) |

# Technical specifications

## Physical

1 RJ45 console/management port with RS232 signaling
S5212F-ON: 12x25GbE SFP28 + 3x 100GbE QSFP28
S5224F-ON: 24x25GbE SFP28 + 4x 100GbE QSFP28
S5248F-ON: 48x25GbE SFP28 + 4x 100GbE QSFP28 + 2x100GbE QSFP28-DD
S5296F-ON: 96x25GbE SFP28 + 8x 100GbE QSFP28
S5232F-ON: 32x100GbE QSFP28 ports + 2xSFP+ 10GbE

### Environmental

Power supply: 100–240 VAC 50/60 Hz
Max Operating specifications:
AC Max. Operating specifications:
Operating temperature: 32° to 113°F (0° to 45°C)
Operating humidity: 5 to 90% (RH), non-condensing
Max. Non-operating specifications:
Storage temperature: –40° to 158°F (–40° to 70°C)
Storage humidity: 5 to 90% (RH), non-condensing
Fresh air Compliant to 45°C

### Redundancy

Hot swappable redundant power
Hot swappable redundant fans (fixed power supply and fans on S5212F-ON)

### Performance

Packet buffer memory: 32MB
CPU memory: 16GB
MSTP: 64 instances
LAG load balancing: Based on layer 2, IPv4 or IPv6 headers

## IEEE Compliance

802.1AB LLDP
TIA-1057 LLDP-MED
802.3ad Link Aggregation
802.1D Bridging, STP
802.1p L2 Prioritization
802.1Q VLAN Tagging
802.1Qbb PFC
802.1Qaz ETS
802.1X Network Access Control
802.3ac Frame Extensions for VLAN Tagging
802.3x Flow Control
Jumbo MTU support 9,216 bytes

## Layer2 Protocols

802.1D Compatible
802.1s MSTP
802.1w RSTP
802.1t RPVST+
VLT (Virtual Link Trunking)
VRRP Active/Active
RSTP & RPVST+
Port Mirroring on VLT ports
DCB, iSCSI, FIP Snooping Bridge
RPM/ERPM over VLT
VLT Minloss upgrade

### RFC Compliance

768 UDP
793 TCP
854 Telnet
959 FTP
1321 MD5
1350 TFTP
2474 Differentiated Services
2698 Two Rate Three Color Marker
3164 Syslog
4254 SSHv2

### General IPv4 Protocols

791 IPv4
792 ICMP
826 ARP
1027 Proxy ARP
1035 DNS (client)
1042 Ethernet Transmission
1191 Path MTU Discovery
1305 NTPv4
1519 CIDR
1588v2 PTP support
1812 Routers, Static Routes
1858 IP Fragment Filtering
2131 DHCPv4 (server and relay)
5798 VRRPv3
3021 31-bit Prefixes
1812 Requirements for IPv4 Routers
1918 Address Allocation for Private Internets
2474 Diffserv Field in IPv4 and Ipv6 Headers
2597 Assured Forwarding PHB Group
3195 Reliable Delivery for Syslog
3246 Expedited Forwarding PHB Group
VRF (BGPv4/v6)

### General IPv6 Protocols

1981 Path MTU for IPv6
2372 IPv6 Addressing
2460 IPv6 Protocol Specification
2461 Neighbor Discovery
2462 Stateless Address AutoConfig
2711 IPv6 Router alert
2463 ICMPv6
2464 Ethernet Transmission
2675 IPv6 Jumbograms
3484 Default Address Selection
3493 Basic Socket Interface
4291 Addressing Architecture
3542 Advanced Sockets API
3587 Global Unicast Address Format
4291 IPv6 Addressing
2464 Transmission of IPv6 Packets over Ethernet Networks
2711 IPv6 Router Alert Option
4007 IPv6 Scoped Address Architecture
4213 Transition Mechanisms for IPv6 Hosts and Routers
3315 DHCPv6 Server & Relay
IPv6 Static Routes

### OSPF

1745 OSPF/BGP interaction
1765 OSPF Database overflow
2154 OSPF with DigitalSignatures
2328 OSPFv2
5340 OSPF for IPv6 (OSPFv3)
2370 Opaque LSA
3101 OSPF NSSA
4552 OSPFv3 Authentication

### Multicast

4541 IGMPv1/v2/v3 and MLDv1/v2 Snooping

### Security

2865 RADIUS
3162 Radius and IPv6
3579 Radius support for EAP
3580 802.1X with RADIUS
3826 AES Cipher in SNMP
1492 TACACS (Authentication, Accounting)
Control Plane, VTY & SNMP ACLs
IP Access Control Lists

### BGP

1997 Communities
2385 MD5
2439 Route Flap Damping
2796 Route Reflection
2918 Route Refresh
3065 Confederations
4271 BGP-4
2545 BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
2858 Multiprotocol Extensions
4360 Extended Communities
4893 4-byte ASN
5396 4-byte ASN Representation
5492 Capabilities Advertisement
draft-ietf-idr-add-paths-04.txt ADD PATH

### Linux Distribution

Debian Linux version 9
Linux Kernel 4.9

### Network Management and Monitoring

SNMPv1/2c
IPv4/IPv6 Management support (Telnet, FTP, TACACS, RADIUS, SSH, NTP)
Syslog
Port Mirroring
RPM/ERPM
3176 SFlow
Support Assist (Phone Home)
RestConf APIs (Layer 2 features)
XML Schema
CLI Commit (Scratchpad)
Uplink Failure Detection
Object Tracking
Bidirectional Forwarding Detection (BFD)
Automation
Control Plane Services APIs
Linux Utilities and Scripting Tools
CLI Automation (Multiline Alias)
Zero Touch Deployment (ZTD)
Ansible, Puppet, Chef, SaltStack
8040 RESTCONF APIs (L3)

### Quality of Service

Prefix List
Route-Map
Rate Shaping (Egress)
Rate Policing (Ingress)
Scheduling Algorithms
Round Robin
Weighted Round Robin
Deficit Round Robin
Strict Priority
Weighted Random Early Detect

**Data center bridging**

802.1Qbb Priority-Based Flow Control
802.1Qaz Enhanced Transmission Selection (ETS)
Explicit Congestion Notification
Data Center Bridging eXchange (DCBx)
DCBx Application TLV (iSCSI, FCoE)
RoCEv2
Software Defined Networking
OpenFlow 1.3 (Native)

**MIBS**

IP MIB
IP Forward MIB
Host Resources MIB
IF MIB
LLDP EXT1/3 MIB
Entity MIB
LAG MIB
Dell-Vendor MIB
TCP MIB
UDP MIB
SNMPv2 MIB
ETHERLIKE-MIB
SFLOW-MIB
PFC-MIB

## 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, 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**

Available with US Trade Agreements Act (TAA) compliance
USGv6 Host and Router Certified on Dell Networking OS 9.5 and greater
IPv6 Ready for both Host and Router
UCR DoD APL (core and distribution
ALSAN switch

**Warranty**

1 year return to depot



Learn more at DellTechnologies.com/Networking



June 2021 | v1.8
Dell EMC PowerSwitch S5200 Spec Sheet