



# DS2500/DS2000

## 1U 48-port 25GbE Data Center Switch



Celestica's DS2500 is a 48 port 25GbE and 8 port 100GbE switch in a compact 1U form factor that provides 2.0Tbps Bandwidth, ideally suited for data center top of rack deployments.

The DS2500 is a high performance, non-blocking switch that can support port level configuration of 10GbE or 25GbE with 8 100GbE QSFP28 uplink ports. It provides superior low latency and power efficiency in a clean PHYless design, while offering high reliability features such as redundant and hot swappable power supplies and fans in forward and reverse airflow configurations.

The DS2500 offers full performance switching bandwidth, while the DS2000 provides a cost-reduced option with 50% switching bandwidth.

The DS2500 supports current and future network requirements, including a COM-E modular x86-based control plane with BMC Management Plane and Precision Timing options for easier integration of automation tools familiar to server administrators. An ONIE installer to support third party network operating systems is also included.

### FEATURES

Interfaces: 48 SFP28 25GbE ports, 8 QSFP28 100GbE ports, Ports, Rear CPU/BMC shared Ethernet Management (RJ45) and Serial Console (RJ45) ports, USB (Type A)

Switching Capacity: 2.0Tbps IO Bandwidth, up to 2.0Tbps Switching Bandwidth, 32MByte Buffer

Latency: Less than 500ns port to port (cut-through mode)

EEE: 802.3az

Data Center: DCB, TRILL, Virtual Port (VM) Switching, L2 GRE, NVGRE and VXLAN (encap/decap TEP)

Telemetry: Improved Instrumentation with Transient Capture Buffer, Packet Timestamp and Buffer Statistics

CPU: Intel Denverton x86 Processor (up to 8-core), 4-32GB ECC DDR4, Configurable M.2 SSD

Routing Tables: Unified Forwarding Tables: upto 48K MPLS labels, Up to 324K L3 LPM, Up to 18K ACLs

Content Aware Processing: Layer 2-7 packet classification, FCoE

Transceivers: SFP28 upto 2W, QSFP28 upto 4.5W power, DAC (to 5m passive)

### IEEE1588 & SYNC E TIMING OPTION

Supports IEEE1588 1-step and 2-step time stamping

Supports TC and BC mode

Supports SyncE recovery



Enterprise-Class Quality. Cloud Economics.

**BMC SYSTEM MANAGEMENT OPTION**

DDR3 1Gb~4Gb/SPI 8Mb~64Mb Flash for dual boot  
 NC-SI shared management port  
 Serial over LAN (SOL) enabled  
 Supports remote (BIOS/firmware) online upgrading  
 IPMI 2.0

**LAYER TWO HARDWARE SUPPORTED**

802.3ad LACP  
 802.1D STP, 802.1w RSTP, 802.1s MSTP, TRILL  
 802.1Q VLAN 4096, SVLAN, PVLAN  
 802.1 Q-in-Q double-tagged VLAN  
 802.1P L2 Prioritization  
 802.1AB LLDP  
 802.1x Network Access Control  
 IGMP/MLD Snooping  
 PBB/PBB-TE  
 VM Switching/VEPA/VN-Tag/802.1Qbh  
 Mirroring  
 Storm Control

**LAYER THREE HARDWARE SUPPORTED**

Hardware-based IP Forward  
 IPv4/v6 Routing Protocols: OSPF, RIP, IS-IS, BGP  
 VRF, ECMP/WCMP, VRRP  
 VPWS, VPLS, L3 VPN  
 Hardware Based Tunneling: IPv4/v6, GRE, MiM  
 IGMPv1/v2/v3  
 IP Multicast: PIM-SM, PIM-DM, PIM-SSM  
 Hierarchical ECMP  
 Enhanced IPF width and keys for SDN

**TRAFFIC MANAGEMENT HARDWARE SUPPORTED**

Flexible QoS Queuing for UC Packets  
 Separate QoS Queues for UC and MC Packets (10 each/port)  
 2-Rate, 3-Color Policing  
 SP, WRR, WDRR Queuing  
 DCBX (ETS, PFC, CN/QCN)  
 Per-Port DSCP  
 Per-Port Oversubscription

**POWER AND COOLING**

DS2500 and DS2000 power consumption < 550W maximum  
 DS2500 typical power < 400W, DS2000 typical power < 350W at 25°C  
 100 - 240VAC auto-ranging, 47-63Hz or, 180-300VDC auto input 1+1 redundant, hot swap PSUs  
 3+1 redundant fans, front to back and back to front system cooling

**PHYSICAL DIMENSIONS**

Height: 44 mm (1.73") 1 EIA unit  
 Width: 438 mm (17.3")  
 Depth: 520 mm (20.5")

**ENVIRONMENTAL: OPERATING**

Temperature: 0°C to 45°C @ 900m  
 Humidity: 5% to 90% non-condensing  
 MTBF: Excess of 150,000 hours

**APPROVALS**

EMC: CN(GB9254-2008), EU(EN55022, EN55024), FCC, VCCI, CCC  
 Safety: IEC60950-1, GB4943, UL/CSA, CB, CCC

**ORDER INFORMATION**

**R1156-F0003-01:** DS2500, 48X25GbE+8X100GbE, 2C CPU C3338, 4GB DDR4, 16GB SSD, 2X550W AC PSU, 4 FAN, B2F

**R1156-F0005-01:** DS2500, 48X25GbE+8X100GbE, 2C CPU C3338, 4GB DDR4, 16GB SSD, 2X550W AC PSU, 4 FAN, F2B

**R1156-F9003-02:** DS2000, 48X10GbE/25GbE+8X100GbE, 4C CPU C3538, 2X4GB DDR4, 32GB SSD, 2X550W AC PSU, 4 FAN, B2F

**R1156-F9005-02:** DS2000, 48X10GbE/25GbE+8X100GbE, 4C CPU C3538, 2X4GB DDR4, 32GB SSD, 2X550W AC PSU, 4 FAN, F2B

*Note: All specifications and figures are subject to change without prior notice.*

