

DS3000

1U 32-port 100GbE Data Center Switch



The DS3000 provides programmable data plane innovation and can support port level configuration of sub-rates between 10GbE and 100GbE. System maximums of 128 10/25GbE, or 64 50GbE are supported with breakout cables to provide superior large radix switch for TOR or CLOS connectivity. 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 DS3000 supports current and future network requirements, including a COM-E modular x86-based control plane with Precision Timing options and BMC Management Plane for easier integration of automation tools familiar to server administrators. An ONIE installer to support third party network operating systems is also included.

The DS3000 is ideal for:

- 100GbE Data Center Leaf/Spine
- Open and Third-Party Network Operating Systems
- Low-Latency and High-Availability Applications
- Enterprise Aggregation/Core

The Celestica DS3000 is a 32 port 100GbE switch in a compact 1U form factor, ideally suited for data center environments in either Leaf or Spine deployments.

FEATURES

Interfaces: 32 QSFP28 100GbE Ports (128 available sub-rate ports), 1-2 SFP+ 10G, CPU/BMC shared Ethernet Management (RJ45) and Serial Console (RJ45) ports, USB (Type A) port

Switching Capacity: 3.2Tbps IO Bandwidth, 32M Byte 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 Atom C x86 processor (up to 8-core), 8-32GB ECC DDR4, Configurable M.2 SSD

Routing Tables: Unified Forwarding Tables: up to 48K MPLS labels, 324K LPM, up to 128K ACL

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

Transceivers: QSFP28 up to 4.5W/5.5W (partial) 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

Under 500W peak consumption with maximum
 optics, 1+1 redundant, hot swap PSUs
 100-240VAC auto-ranging, 47-63Hz or
 180-300VDC auto input
 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 (17.1")
 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
 Safety: IEC60950-1, GB4943, UL/CSA, CB

ORDER INFORMATION

R4039-F9002-A0: DS3000, 1U, 32x 100GbE, COME
 4C/16GB-DDR/64GB-SSD (B2F)

R4039-F9005-A0: DS3000, 1U, 32x 100GbE, COME
 4C/16GB-DDR/64GB-SSD (F2B)

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