Seastone2E™ DX031

100GbE BMC Enabled High Performance Datacenter Switch

Seastone2E DX031 is Celestica's second generation 32 port 100GbE switch in a compact 1U form factor with a high performance controller, ideally suited for edge computing environments that may combine application and networking workloads.

The DX031 provides programmable data plane innovation and can support port level configuration of sub-rates between 10GbE and 50GbE. System maximum of 128 10/25GbE, 64 50GbE, or 32 40GbE are supported with breakout cables to provide superior large radix switch for TOR or CLOS connectivity. It provides exceptional 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.

Seastone2E DX031 supports current and future network requirements, including a 12-Core Intel Xeon D COM-E based modular control plane including dual port GbE access to both the control and management planes. An ONIE installer is also provided to support third party network operating systems.

FEATURES

Interfaces: 32 QSFP28 100GbE Ports (128 available sub-rate ports), Dual RJ45 CPU Management, Dual RJ45 BMC Management ports, and Console (RJ45) ports, USB (Type A)

Switching Capacity: 3.2Tbps IO Bandwidth, 32M Byte Buffer

Latency: Less than 900ns port to port (cut-through mode, FEC disabled)

Datacenter: Dedicated FCoE forwarding engine, IEEE 802.1Qbg and 802.1Qbh, VPLAG, SPB, L2GRE, NVGRE and VXLAN

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

CPU: Intel Xeon D 1.5Ghz 12-core, 32GB ECC DDR4, Dual 256GB M.2 SSD

Routing Tables: Unified Forwarding Tables: up to 48K MPLS labels, 324K IPv4/208K IPv6 LPM, 128K ACL

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

Transceivers: QSFP28 upto 4.5W power, SR to 300m, LR to 10km, DAC (to 5m passive)

IEEE1588 & SYNCE TIMING OPTION

Supports IEEE1588

Supports TC and BC mode

Supports SyncE recovery

Enterprise-Class Quality. Cloud Economics.

BMC SYSTEM MANAGEMENT OPTION

DDR4 1GB/SPI 32MB Flash for dual boot

Two separate GbE management ports

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

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: OSFP, RIP, IS-IS, BGP

VRF, ECMP/WCMP, VRRP

VPWS, VPLS, MPLS

Hardware Based Tunneling: IPv4/v6, GRE, MiM

IGMPv1/v2/v3

IP Multicast: PIM-SM, PIM-DM, PIM-SSM

Hierarchical ECMP

TRAFFIC MANAGEMENT HARDWARE SUPPORTED

Flexible QoS Queuing for UC Packets

Separate QoS Queues for UC and MC Packets (10 each/port)

SAFC, PFC flow control

SP, WRR, WDRR Queuing

ECN, WRED congestion control

Per-Port DSCP

ACL, ICAP, ECAP, VCAP

POWER AND COOLING

Under 550W peak consumption with maximum optics, 1+1 redundant, hot swap PSUs

100 - 240VAC auto-ranging, 47-63Hz or 180- 300VDC auto input

4+1 redundant fans, front to back and back to front system cooling

PHYSICAL DIMENSIONS

Height: 43.8 mm (1.73") 1 EIA unit

Width: 438 mm (17.24")

Depth: 521 mm (20.5")

ENVIRONMENTAL: OPERATING

Temperature: 0°C to 45°C

Humidity: 5% to 90% non-condensing

APPROVALS

EMC: CN(GB9254-2008), EU(EN55022, EN55024), FCC, VCCI, CCC

Safety: IEC60950-1, GB4943, UL/CSA, CB, CCC

ORDER INFORMATION

DX031-12C32G512-F2B - 12Core BDE CPU 32GB RAM / 512GB SSD, BMC, Front to Back, AC

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