Data Center Switch
AS9736-64D

The Edgecore DCS520 is a spine switch for high-performance data centers. The switch provides line-rate L2 and L3 switching across the 64 x QSFP56-DD ports, each supporting 1 x 400G QSFP56-DD, 1 x 100G QSFP28, 1 x 40G QSFP+, or via breakout cables 2 x 200G (2 x 4 lanes 50G PAM4), 4 x 100G (4 x 2 lanes 50G PAM4), 2 x 50G (2 x 2 lanes 25G NRZ), 4 x 25G NRZ, or 4 x 10G NRZ. The DCS520 can be deployed as a spine switch supporting 100/400 GbE spine to spine or spine to leaf interconnects. This open network switch is loaded with the Open Network Install Environment (ONIE), which supports the installation of compatible Network Operating System software, including the open source options Open Network Linux, plus commercial NOS offerings.

Key Features and Benefits

- Cost-effective, open network switch for data center fabric.
- QSFP56-DD switch ports, each supporting 1 x 400G QSFP56-DD, 1 x 100G QSFP28, 1 x 40G QSFP+, or via breakout cables 2 x 200G (2 x 4 lanes 50G PAM4), 4 x 100G (4 x 2 lanes 50G PAM4), 2 x 50G (2 x 2 lanes 25G NRZ), 4 x 25G NRZ, or 4 x 10G NRZ.
- Incorporates Broadcom Tomahawk 4 switch series silicon for non-blocking line-rate performance.
- 2 RU form factor.
- Supports hot/cold aisles with front-to-back airflow SKU.
- All ports on front; PSUs and fans accessible from rear.
- Hot-swappable, load-sharing, redundant 2400 W AC/HVDC PSUs.
- 3+1 redundant, hot-swappable fan modules.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commerical NOS offerings.
- Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS.
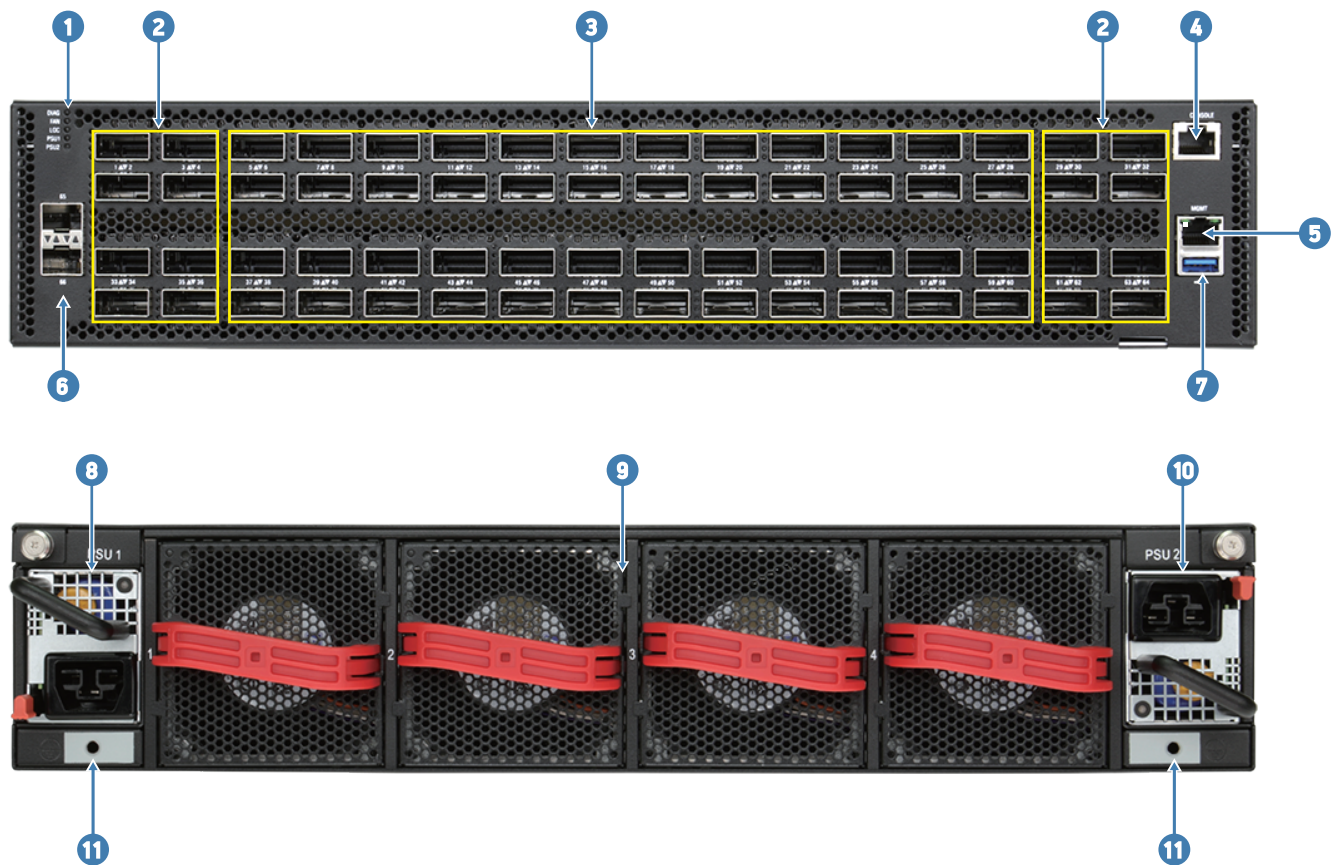
Freedom of choice

Greater control

Rapid innovation

Reduced CAPEX and OPEX

Free Software Included

ONIE

Interfaces

Description

1.	System LEDs	7.	USB storage port
2.	16 x 400G QSFP56-DD ports (24 W) Support 400G QSFP56-DD DAC up to 2.5 m	8.	PSU 1
3.	48 x 400G QSFP56-DD ports (13 W) Support 400G QSFP56-DD DAC up to 1 m	9.	Hot-swappable 3 + 1 redundant fans
4.	Console port	10.	PSU 2
5.	RJ-45 management port	11.	Grounding point
6.	2 x 10G SFP+ management ports		

Ports

- Switch Ports: 64 x QSFP56-DD 400 GbE
  Port Modes:
  1 x 400G (8 lanes 50G PAM4)
  2 x 200G (4 lanes 50G PAM4) QSFP56-DD breakout
  4 x 100G (2 lanes 50G PAM4) QSFP56-DD breakout
  1 x 100G (4 lanes 25G NRZ) QSFP28
  1 x 40G (4 lanes 10G NRZ) QSFP+
  2 x 50G (2 lanes 25G NRZ) QSFP28 breakout
  4 x 25G (1 lane 25G NRZ) QSFP56-DD breakout
  4 x 10G (1 lane 10G NRZ) QSFP56-DD breakout
- Management Ports on Port Side:
  1 x RJ-45 serial console
  1 x RJ-45 1000BASE-T management
  2 x SFP+ 10G management
  1 x USB 2.0 storage port

Key Components

- Switch Silicon: BCM56990 Tomahawk 4 25.6 Tbps
- CPU Modules:
  Intel® Xeon® Processor D-1548 8 cores 2.0 GHz
  DDR4: 16 GB x 2 SO-DIMM
  m.2 SSD: 128GB x 1

Performance

- Switching Capability: 25.6 Tbps full duplex
- Forwarding Rate: 7.88 Bpps
- Jumbo frames support up to 9416 bytes
- Packet Buffer Size: Integrated 113.66 MB packet buffer
- Subject to NOS:
  MAC Addresses: 8K for exact match
  128K without exact match

Physical and Environmental

- Dimensions (WxDxH): 44 x 64.92 x 87 cm (17.32 x 25.56 x 34.25 in)
- Weight: 21.2 kg (46.74 lb), with 2 PSUs and 4 fans installed
- Fans: Hot-swappable 3 + 1 redundant fans
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Temperature:
  (FtoB): 0°C ~ 40°C (32°F ~ 104°F)
  0~40°C (32°F ~104°F) at sea level,
  0~35°C (32°F ~95°F) at 1828 m (6000 ft)
- Operating Humidity: 5% ~ 95% non-condensing
- Operating Altitude: 0 - 1828 m (0 - 6000 ft)

Software

- Switch is loaded with Open Network Install Environment (ONIE) software installer
- Compatible with the following NOS options:
  Open Network Linux (ONL), the open-source, OCP reference NOS, Enterprise SONiC by Edgecore

System and Port LEDs

- QSFP56-DD Port LEDs:
  400G (1 x 8 lanes 50G PAM4): Blue
  200G (2 x 4 lanes 50G PAM4): Cyan
  100G (4 x 2 lanes 50G PAM4): Green
  100G (1 x 4 lanes 25G NRZ): Green
  40G (1 x 4 lanes 10G NRZ): Dark Green
  50G (2 x 2 lanes 25G NRZ): Red
  25G (4 x 1 lane 25G NRZ): Orange
  10G (4 x 1 lane 10G NRZ): Yellow
- Management Port LEDs:
  SFP+: Left: Green (10G link), Amber (1G link)
  Right: Green (10G activity), Amber (1G activity)
  RJ-45: Left: Green (1G link), Amber (10/100M link)
  Right: Green (1G activity), Amber (10/100M activity)
- System LEDs: PSU1, PSU2, FAN, STAT, and LOC
- Reset button

Power

- PSUs: 2 redundant, load-sharing, hot-swappable 2400 W AC/HVDC power supplies
- AC PSU
  Input Power Rating:
  100–127 VAC, 50/60 Hz, 12 A maximum
  200–240 VAC, 50/60 Hz, 15 A maximum
  HVDC: 240 VDC, 15 A maximum
- Power Draw: 287.75 W (min.), 2100 W (max.)
- Power Budget:
  Ports 1, 2, 3, 4, 29, 30, 31, 32, 33, 34, 35, 36, 61, 62, 63, 64: 24 W per transceiver
  All other ports: 13 W per transceiver

Regulatory

- Emissions:
  EN 55032:2015+A1:2020 Class A
  EN IEC 61000-3-2:2019+A1:2021 Class A
  EN 61000-3-3:2013+A2:2021
  CNS 15936 Class A
  VCCI-CISPR 32:2016 Class A
  AS/NZS CISPR 32:2015+AMD1:2020 Class A
  ICES-003 Issue 7:2020 Class A
  FCC Class A
- Immunity:
  EN 55035:2017+A11:2020
  EN 55024:2010+A1:2015
  IEC 61000-4-2/3/4/5/6/8/11
- Safety:
  UL (CSA 22.2 No 62368-1 & UL62368-1)
  CB (IEC/EN60950-1 & IEC/EN 62368-1)
- Environmental:
  GR63-CORE (Pre-test)
- RoHS-2.0 Compliant
- Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)

Ordering Information

Base model: AS9736-64D; Intel® Xeon® D-1548 Processor; 64-Port 400G QSFP56-DD; ONIE software installer.

Model Number	Part Number	PSU	Airflow	Power Cord
AS9736-64D-O-AC-F	FP5ZZ8664004A	Dual AC PSUs	Front-to-Rear airflow	HVAC to IEC 60320 C20 (1m)

Warranty
Please check www.edge-core.com for the warranty terms in your country.

For More Information
To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

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Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore data center switches are developed and manufactured by Accton.

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