AS5912-54X Switch

Data Center and Service Provider Edge Switch
Bare Metal Hardware

Design Contributed to OCP

Product Overview

The Edgecore AS5912-54X switch meets the high-performance, availability, and network-scaling requirements of cloud data centers and carrier access providers. The AS5912-54X provides switching at Layer 2 or Layer 3 across 48 x 10 GbE ports and 6 x 100 G uplinks. The switch can be deployed either as a Top-of-Rack switch, as part of a 100 GbE or 40 GbE distributed spine, forming a non-blocking folded-Clos data center fabric, or as a carrier access switch. The switch is rack mountable in either a standard 19 inch rack, or with an Open Rack Switch Adapter in a 21-inch Open Rack.

The AS5912-54X hardware provides high-availability features, including; redundant, hot-swappable AC or -48 VDC PSUs, or 12 VDC power input; fans with 5+1 redundant fan modules; and port-to-power or power-to-port airflow options.

Key Features and Benefits

- Cost-effective, bare-metal switch infrastructure for data center and carrier access.

- 48 x SFP+ switch ports, supporting 10 GbE (DAC, AOC, 10GBASE-SR/LR) or 1 GbE (1000BASE-T/SX/LX).

- 6 x 100G QSFP28 ports at front.

- Expandable packet buffering for carrier access.

- Layer 2 and/or Layer 3 forwarding of 800 Gbps.

- Rack mountable in standard 19" racks. Mountable in 21" Open Rack with the Open Rack Switch Adapter.

- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs. 12 VDC power input option.

- Hot swappable 5+1 redundant fan modules.

- Management: Ethernet and console RJ-45 ports; USB storage port.

- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.
  Compatible with Open Network Linux (ONL), the open-source, OCP reference NOS.
  Compatible with OcNOS from IP Infusion.
  Compatible with future version of SnapRoute FlexSwitch.

Data Center Switch

onie **snaproute** **ip**infusion™

Edge-corE NETWORKS

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Features

Ports

Switch Ports:
  48 x SFP+ each supporting 10 GbE or 1 GbE
  6 x 100G QSFP28 each supporting 1 x 40/100 GbE
Management Ports on Front Panel:
  1 x RJ-45 serial console
  1 x RJ-45 100/1000BASE-T management port
  1 x USB Type A storage port

Key Components

Switch Silicon:
  AS5912-54X: Broadcom Qumran-MX BCM88370
CPU Modules:
  Intel Rangeley C2538 quad-core 2.4GHz x86 processor
  DDR3 SO-DIMM 8 GB x 2
  mSATA: 32 GB

Performance

Switching Capability: 800 Gbps
Forwarding Rate: 1 Bpps
Jumbo Frame: 9 Kbytes
Packet Buffer: expandable to 6 GB
MAC Addresses: 750 K
VLAN IDs: 4 K
L3 Routes: 750 K expandable to 8 million

Supported Optics and Cables

SFP+ Ports:
  10GBASE-CR DAC: up to 3 m passive; up to 10 m active
  10GBASE-SRL/SR: up to 100/300 m over OM3 MMF
  10GBASE-LR: Up to 10 km over SMF
  1000BASE-SX, 1000BASE-LX, 100/1000BASE-T
QSFP+ Ports:
  40GBASE-CR4 DAC; up to 3 m passive; up to 10 m active
  40GBASE-CR4 DAC to 4 x SFP+ 10GBASE-CR DAC; up to 3 m
    passive; up to 10 m active
  40GBASE-SR4: Up to 100 m over OM3 MMF, 150 m over OM4 MMF
  40GBASE-LR4: Up to 10 km over SMF
  100GBASE-SR4: 100 Gbps short reach transceiver
  100GBASE-LR4: 100 Gbps long reach transceiver
  QSFP28 AOC Cable: 100 Gbps to 100 Gbps AOC cable with upto
    30 M 100G QSFP28 to 100 G QSFP28

Physical and Environmental

Dimensions (WxDxH): 44 x 54.8 x 4.4 (17.32 x 21.57 x 1.73 inch)
Weight: 9.34 kg (20.59 lb), with two installed PSU modules
Fans: hot-swappable 5+1 redundant fans
Operating Temperature: 0°C to 40°C (32°F to 104°F)
Storage Temperature: -40°C to 70°C (-40°F to 158°F)
Operating Humidity: 5% to 95% non-condensing

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
  OcNOS from IP Infusion
  Future version of SnapRoute FlexSwitch

Carrier Access Features

Carrier Access switch with expandable packet buffering
Carrier feature support MPLS

Power

PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
AC input range: 90 V~300 VAC (90~ 277 VAC is minimum)
DC input range: -36~-72 VDC
Power Input Option: 12 VDC
Redundant, current sharing, PG
Environmental Criteria: -5 ~ 55°C

Regulatory

EMI
  CE Mark
  EN55022 Class A
  EN55024
  EN61000-3-2
  EN61000-3-3
  FCC Part 15 Subpart B Class A
  VCCI Class A
Safety
  CB
  UL/CUL
Environmental:
  Temperature: IEC 68-2-14
  Vibration: IEC 68-2-36, IEC 68-2-6
  Shock: IEC 68-2-29
  Drop: ISTA 2A
  Acoustic Level: 62 dB@ 27°C
RoHS-6 Compliant
WEEE Standards: The switches complied with the following WEEE
  standards: Waste Electrical and Electronic Equipment (WEEE
  Directive 2002/96/EC)

Warranty

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

Edge-core NETWORKS

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Ordering Information

Base Model: AS5912-54X; 48-Port 10G QSFP+ with 6 x 100G QSFP28 uplinks; ONIE software installer

Model Number	CPU Module	PSU	Airflow	Region (power cord)
5912-54X-O-AC-F-US	Intel Rangeley C2538 processor	dual AC PSUs	port-to-power airflow	N. America
5912-54X-O-AC-B-US	Intel Rangeley C2538 processor	dual AC PSUs	power-to-port airflow	N. America
5912-54X-O-AC-F-EU	Intel Rangeley C2538 processor	dual AC PSUs	port-to-power airflow	Europe
5912-54X-O-AC-B-EU	Intel Rangeley C2538 processor	dual AC PSUs	power-to-port airflow	Europe
5912-54X-O-AC-F-UK	Intel Rangeley C2538 processor	dual AC PSUs	port-to-power airflow	UK
5912-54X-O-AC-B-UK	Intel Rangeley C2538 processor	dual AC PSUs	power-to-port airflow	UK
5912-54X-O-AC-F-JP	Intel Rangeley C2538 processor	dual AC PSUs	port-to-power airflow	Japan
5912-54X-O-AC-B-JP	Intel Rangeley C2538 processor	dual AC PSUs	power-to-port airflow	Japan

For More Information

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

About Edgecore Networks Corporation

Edgecore Networks Corporation is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edgecore Networks Corporation delivers the software and systems that transform the way the world connects. Edgecore Networks Corporation serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

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.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.

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