

# 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.



## 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](http://www.edge-core.com) for the warranty terms in your country.

## 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](http://www.edge-core.com).

### About Edgecore Networks Corporation

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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.

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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