

# AS5610-52X

## 10GbE Data Center Switch

### Bare-Metal Hardware



#### Product Overview

The Edgecore AS5610-52X hardware switch meets the high-performance, availability, and network-scaling requirements of enterprise and cloud data centers. The AS5610-52X provides full line-rate switching at Layer 2 or Layer 3 across 48 x 10 GbE ports and 4 x 40 GbE uplinks. The switch can be deployed either as a Top-of-Rack switch, or as part of a 10 GbE or 40 GbE distributed spine, forming a non-blocking folded CLOS data center fabric.

The AS5610-52X hardware is designed for data centers, with a high port density of 64 x 10 GbE in a 1 RU enclosure; redundant, hot-swappable, load-sharing AC or -48VDC PSUs, or 12VDC power input; fan tray with n+1 redundant fans; and port-to-power or power-to-port airflow options.

#### Key Features and Benefits

- Cost-effective, bare-metal switch infrastructure for data center fabric.
- 48 x SFP+ switch ports, supporting 10 GbE (DAC, 10GBASE-SR/LR) or 1 GbE (1000BASE-T/SX/LX).
- 4 x 40 QSFP+ switch ports, supporting 40 GbE (DAC, 40GBASE-SR4/LR4) or 4 x 10 GbE (DAC or fiber breakout cable).
- Port Grouping to group 4 x 10G ports into one 40G port at the physical layer for maximum bandwidth utilization, and for 300m optical reach over MMF.
- Full line-rate Layer 2 or Layer 3 forwarding of 1.28 Tbps
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front; PSUs, fan tray on rear.
- Hot-swappable, load-sharing, redundant AC PSUs or -48VDC PSUs; or 12VDC power input.
- Swappable fan tray with 3:1 fans.
- Energy Efficiency: 170 W typical power consumption.
- 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 independent SwitchOS software
- Compatible with Cumulus<sup>®</sup>Linux<sup>®</sup> r2.0.1 and later SwitchOS software from Cumulus Networks<sup>®</sup>.
- Compatible with BigTap<sup>™</sup> v4.0.0 or later from Big Switch Networks.
- Compatible with PicOS<sup>™</sup> r2.4 and later version from Pica8 Inc.

Data Center Switch



## Features

### Ports

Switch Ports:  
48 x SFP+ each supporting 10 GbE or 1 GbE  
4 x QSFP+ each supporting 40 GbE or 4 x 10 GbE  
Management Ports on Front Panel:  
1 x RJ-45 serial console  
1 x RJ-45 100/1000BASE-T management  
1 x USB Type A storage port

### Key Components

Switch Silicon: Broadcom BCM56846 Trident+ 640 Gbps  
CPU: Freescale P2020 dual-core 1.2 GHz  
Memory: 2 GB DDR3 SDRAM ECC  
Flash: 8 MB NOR Flash, 2 GB NAND Flash

### Performance

Wire Speed Forwarding: L2 and L3  
Switching Capacity: 640 Gbps  
Forwarding Rate: 960 Mpps  
MAC Addresses: 128K  
VLAN IDs: 4K  
Jumbo frames (9216 Bytes)  
L3 Routes IPv4 16K, IPv6 8K  
Packet Buffer Size: 9 MB shared buffer pool  
Latency (RFC2544): 860 ns to 1.2 us (L2/L3, cut thru, full line rate)

### LEDs

10G SFP+ Port LEDs: Link Speed, Link Status, Activity  
40G QSFP Port LEDs: Link Status, Activity  
Ethernet Management Port LED: Link Status, Activity  
Console Port LED: Link Status  
System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

### Supported Optics and Cables

SFP+ Ports:  
10GBASE-CR DAC: 0.5 m to 7 m; Passive and Active  
10GBASE-SR4/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; 0.5 m to 7 m; Passive and Active  
40GBASE-CR4 DAC to 4 x SFP+ 10GBASE-CR DAC; 0.5 to 7 m  
40GBASE-SR4: Up to 100 m over OM3 MMF, 150 m over OM4 MMF  
40GBASE-SR4 to 4 x 10GBASE-SR: 100 m over OM3, 150 m OM4  
40GBASE-LR4: Up to 10 km over SMF

### Software

Switch is loaded with Open Network Install Environment (ONIE) software installer  
Compatible with the following switch software solutions:  
Cumulus® Linux® r2.0.1 and later from Cumulus Networks®  
Big Tap™ v4.0.0 and later from Big Switch Networks  
PicOS™ r2.4 and later from Pica8 Inc.  
Compatible with Open Network Linux, open source reference NOS

### Physical and Environmental

Dimensions (WxDxH): 438.4 x 473 x 43.4 mm (17.26 x 18.62 x 1.71 inches)  
Weight: 8.5 kg (18.74 lbs), with two installed power supply modules  
Fan Tray: hot-swappable tray with 3+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

### Power

PSUs: 2 redundant, load-sharing, hot-swappable AC or -48VDC  
Input Voltage: 90 to 264 VAC at 50-60 Hz. -48 to -72 VDC.  
Input Current: Max 6A @100/120 VAC, 3 A @200/240 VAC, 10 A @-72 VDC  
PSU Efficiency: Up to 93% for AC PSUs  
12VDC power input option  
Max Power: 218 W, line-rate, 48 x 10GBASE-SR, 4 x 40GBASE-SR4, AC  
Typical Power: 170 W, line-rate, 48 x 10G DAC, 4 x 40GBASE-SR4, AC

### Regulatory

EMI  
CE Mark (EN55022 Class A)  
FCC Part 15 Class A  
VCCI  
Safety  
CB, EN 60950  
UL/CUL  
CCC  
Environmental:  
Temperature: IEC 68-2-14  
Drop: ISTA 2A  
RoHS-6 Compliant  
Country of Origin: Taiwan (TAA Compliant)

### Warranty

Please check [www.edge-core.com](http://www.edge-core.com) for the warranty terms in your country. The warranty provides return-to-factory hardware replacement for a three year period in North America.

### 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

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](http://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 (877) 828-CORE (877-828-2673) or authorized resellers.

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## Ordering Information

<b>Base Model: AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks with ONIE software installer</b>			
<b>Model Number</b>	<b>PSU</b>	<b>Airflow</b>	<b>Region (power cord)</b>
5610-52X-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
5610-52X-O-AC-B-US	dual AC PSUs	power-to-port airflow	N. America
5610-52X-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
5610-52X-O-AC-B-EU	dual AC PSUs	power-to-port airflow	Europe
5610-52X-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
5610-52X-O-AC-B-UK	dual AC PSUs	power-to-port airflow	UK
5610-52X-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
5610-52X-O-AC-B-JP	dual AC PSUs	power-to-port airflow	Japan
5610-52X-O-48V-F	dual -48VDC PSUs		
5610-52X-O-48V-B	dual -48VDC PSUs		
5610-52X-O-12V-F	one 12VDC power input		no power cord
5610-52X-O-12V-B	one 12VDC power input		no power cord
PSU-AC-400-F	400W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-AC-400-B	400W AC Power Supply FRU	power-to-port airflow	no power cord
PSU-48V-400-F	400W -48V DC Power Supply FRU	port-to-power airflow	no power cord
PSU-48V-400-B	400W -48V DC Power Supply FRU	power-to-port airflow	no power cord
PSU-12V-400	12V DC power input unit FRU		
FAN-1U-1x14-F	Fan Tray FRU	port-to-power airflow	
FAN-1U-1x14-B	Fan Tray FRU	power-to-port airflow	
<b>Model Number</b>	<b>Description</b>		
5610-52X-SVC-RTF	AS5610-52X Annual Hardware Service, Return-to-Factory		
CBL-PWR-US	AC Power Cable - US (125V/13A, 1830mm) – only required with spare power supplies		
CBL-PWR-EU	AC Power Cable - Europe (250V/10A, 1830mm) – only required with spare power supplies		
CBL-PWR-UK	AC Power Cable - UK (250V/10A, 1830mm) – only required with spare power supplies		
CBL-PWR-JP	AC Power Cable - Japan – only required with spare power supplies		