

# AS5610-52X

## 10GbE Data Center Switch

### Bare-Metal Hardware



#### Product Overview

The Edge-Core 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®Linux® r2.0.1 and later SwitchOS software from Cumulus Networks™.
- Compatible with SwitchLight™ v2.1.0 or later from Big Switch Networks.

## 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 switchOS software:  
Cumulus Linux r2.0.1 and later  
SwitchLight v2.1.0 or later from Big Switch Networks

### 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  
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 Edge-Core Networks products and solutions, visit [www.edge-core.com](http://www.edge-core.com).

### About Edge-Core Networks

Edge-Core Networks is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edge-Core Networks delivers the software and systems that transform the way the world connects. Edge-Core Networks serves customers and partners worldwide. Additional information can be found at [www.edge-core.com](http://www.edge-core.com).

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

To purchase Edge-Core solutions, please contact your Edge-Core Network 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		