

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: 1.28 Tbps
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-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; 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

Warranty

Please check www.edge-core.com.au for the warranty terms in your country. The warranty provides return-to-factory hardware replacement for a three year period in Australia.

For More Information

To find out more about Edge-Core Networks products and solutions, visit www.edge-core.com.au.

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.au.

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 on 1300 725 323.

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Ordering Information

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| 5610-52X-O-AC-F-US | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, port-to-power airflow, N. America |
| 5610-52X-O-AC-B-US | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, power-to-port airflow, N. America |
| 5610-52X-O-AC-F-EU | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, port-to-power airflow, Europe |
| 5610-52X-O-AC-B-EU | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, power-to-port airflow, Europe |
| 5610-52X-O-AC-F-UK | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, port-to-power airflow, UK |
| 5610-52X-O-AC-B-UK | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, power-to-port airflow, UK |
| 5610-52X-O-AC-F-JP | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, port-to-power airflow, Japan |
| 5610-52X-O-AC-B-JP | AS5610-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks, ONIE software installer, dual AC PSUs, power-to-port airflow, Japan |
| 5610-52X-O-48V-F | AS5610-52X 48-Port 10G SFP+ with 4x40GE QSFP uplinks, ONIE software installer, dual -48VDC PSUs, port-to-power airflow |
| 5610-52X-O-48V-B | AS5610-52X 48-Port 10G SFP+ with 4x40GE QSFP uplinks, ONIE software installer, dual -48VDC PSUs, power-to-port airflow |
| 5610-52X-O-12V-F | AS5610-52X 48-Port 10G SFP+ with 4x40GE QSFP uplinks, ONIE software installer, one 12VDC power input, port-to-power airflow, no power cord |
| 5610-52X-O-12V-B | AS5610-52X 48-Port 10G SFP+ with 4x40GE QSFP uplinks, ONIE software installer, one 12VDC power input, power-to-port airflow, 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 |
| PSU-48V-400-B | 400W -48V DC Power Supply FRU, power-to-port airflow |
| PSU-12V-400 | 12V DC power input unit FRU, no power cord |
| FAN-1U-1x4-F | Fan Tray FRU, port-to-power airflow |
| FAN-1U-1x4-B | Fan Tray FRU, power-to-port airflow |

Ordering Information

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| 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 |
| 5610-52X-SVC-RTF | AS5610-52X Annual Hardware Service, Return-to-Factory |