

AS5600-52X

10GbE Data Center Switch

Bare-Metal Hardware



Product Overview

The Edgecore AS5600-52X hardware switch meets the high-performance, availability, and network-scaling requirements of enterprise and cloud data centers. The AS5600-52X 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 AS5600-52X 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 48 VDC* PSUs; 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/ER/LRM) 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 300 m 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. 48VDC* option.
- Swappable fan tray with 3:1 fans.
- Energy Efficiency: 196 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® r1.5.0 and later SwitchOS software from Cumulus Networks®.
- Compatible with PicOS™ r2.4 and later version from Pica8 Inc.

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 1.0 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-SRL/SR: up to 100/300 m over OM3 MMF

10GBASE-LR: Up to 10 km over SMF

10GBASE-ER: Up to 40 km over SMF

10GBASE-LRM: Up to 220 m over OM1/2/3 MMF

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® r1.5.0 and later from Cumulus Networks®

PicOS™ r2.4 and later from Pica8 Inc.

Physical and Environmental

Dimensions (WxDxH): 438.4 x 473 x 43.4 mm (17.26 x 18.62 x 1.71 in)

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

Max Power: 244 W, line-rate, 48 x 10 GBASE-SR,

4 x 40 GBASE-SR4, AC

Typical Power: 196 W, no traffic, 48 x 10G DAC,

4 x 40 GBASE-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 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.

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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* Future Release

Ordering Information

Base Model: AS5600-52X 48-Port 10G SFP+ with 4x40G QSFP uplinks; ONIE software installer

Model Number	PSU	Airflow	Region (power cord)
5600-52X-O-AC-F-US	dual AC PSUs	port-to-power airflow	N. America
5600-52X-O-AC-B-US	dual AC PSUs	power-to-port airflow	N. America
5600-52X-O-AC-F-EU	dual AC PSUs	port-to-power airflow	Europe
5600-52X-O-AC-B-EU	dual AC PSUs	power-to-port airflow	Europe
5600-52X-O-AC-F-UK	dual AC PSUs	port-to-power airflow	UK
5600-52X-O-AC-B-UK	dual AC PSUs	power-to-port airflow	UK
5600-52X-O-AC-F-JP	dual AC PSUs	port-to-power airflow	Japan
5600-52X-O-AC-B-JP	dual AC PSUs	power-to-port airflow	Japan
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
FAN-1U-1x14-F	Fan Tray FRU	port-to-power airflow	
FAN-1U-1x14-B	Fan Tray FRU	power-to-port airflow	
Model Number	Description		
5600-52X-SVC-RTF	AS5200-52X, Annual Hardware Service, Return-to-Factory.		
CBL-PWR-US	AC Power Cable - US (125 V/13 A, 1830 mm) – only required with spare power supplies		
CBL-PWR-EU	AC Power Cable - Europe (250 V/10 A, 1830 mm) – only required with spare power supplies		
CBL-PWR-UK	AC Power Cable - UK (250 V/10 A, 1830 mm) – only required with spare power supplies		
CBL-PWR-JP	AC Power Cable - Japan – only required with spare power supplies		