

AS7312-54X/AS7316-54X Series Switch

25GbE Data Center Switch

Bare-Metal Hardware



Product Overview

The Edgecore AS7312-54X and AS7316-54X switches are Top-of-Rack (TOR) or spine switches for high-performance data centers. In a compact 1RU form factor, the switches provide line-rate L2 and L3 switching across the 48 x 2 5GbE SFP28 with 6x100GbE QSFP28, supporting up to 48 x 10/25 GbE, 6 x 40/50/100 GbE or 72 x 10/25 GbE connections. The AS7312-54X and AS7316-54X can be deployed as a TOR switch supporting 10/25/50 GbE to servers with 40/50/100 GbE uplinks, or as a spine switch supporting 40/50/100 GbE spine interconnects. These open network switches are loaded with the Open Network Install Environment (ONIE) which supports the installation of compatible Network Operating System software, including the open source options Open Network Linux and OpenSwitch, plus commercial NOS offerings.

Key Features and Benefits

- Cost-effective, bare-metal switch infrastructure for data center fabric.
- Deploy as Top-of-Rack switch supporting 10 or 25 GbE to servers, with 40 or 50 or 100 GbE uplinks.
- Deploy as spine switch supporting 10, 25, 40, 50, or 100 GbE ToR and spine interconnects.
- 48 x 25G SFP28 plus 6 x 100G QSFP28 ports, each SFP28 supporting 1 x 10 or 25 GbE and each QSFP28 supporting 1 x 100G or 1 x 40G.
- Layer 2 or Layer 3 forwarding of 1.8 Tbps (full duplex).
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front; PSUs and fans accessible from rear.
- Hot-swappable, load-sharing, redundant AC or -48V DC or 12V DC PSUs.
- 5+1 redundant, hot-swappable fan modules.
- Energy Efficiency: 310 W typical power consumption without pluggable optics.
- Bare-Metal hardware switch pre-loaded with diagnostics software and with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.

Features

Ports

- Switch Ports:
 48 x 25G SFP28 plus 6 x 100G QSFP28 ports:
 Each SFP28 supports 1 x 10G or 25GbE.
 Each QSFP28 supports 1x40/100 GbE or 2 x 50 GbE or 4 x 10/25 GbE per port using splitter cables.
- Management ports on port side:
 1 x RJ-45 serial console
 1 x RJ-45 100/1000BASE-T management
 1 x USB Type A storage


Key Components

- Switch Silicon: Broadcom BCM56963 Tomahawk 1.8 Tbps.
 No PHYs, No Retimers
- CPU Modules:
 AS7312-54X:
 Intel Atom C2538 quad-core 2.4 GHz x86 processor
 16 GB SO-DIMM DDR3 RAM
 16 MB SPI Flash
 8 GB NAND Flash
 32 GB m.SATA SSD MLC
- AS7316-54X:
 Intel Xeon D-1518 quad-core 2.4 GHz
 16 GB SO-DIMM DDR4 RAM
 16 MB SPI Flash
 8 GB NAND Flash
 32 GB M.2 SSD MLC

Performance

- Switching Capacity: 1.8 Tbps
 Forwarding Rate: TBD Bpps
 Jumbo frames support up to 9216 Bytes
 Packet Buffer Size: 16 MB integrated packet buffer
 Subject to NOS:
 MAC Addresses: 8 K min./136 K max.
 VLAN IDs: 4 K
 IPv4: 8 K min./72 K max. host entries; 16 K LPM entries with TCAM-only mode
 IPv6: 4K /36 K max. host entries; IPv6/64= 8 K TCAM-only mode

Physical and Environmental

- Dimensions (WxDxH): 43.8 x 51.5 x 4.35 cm (17.3 x 20.3 x 1.7 in)
 Weight:  (23 lb)
 Operating Temperature: 0°C to 45°C (32°F to 113°F)
 Storage Temperature: -40°C to 70°C (-40°F to 158°F)
 Operating Humidity: 5% to 95% non-condensing
 Operating Altitude: 0 to 10,000 feet

Software

- Diagnostics
 U-Boot on Freescale CPU Module; BIOS on Intel CPU Module
 Switch is loaded with Open Network Install Environment (ONIE) software installer

LEDs

- QSFP 28 Port LEDs: Link Status, Activity, Rate
 Ethernet Management Port LED: Link Status, Activity
~~Console Port LED: Link Status~~
 System LEDs: Diagnostic, Locator, PSU and Fan Status

Power

- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
 Input Voltage: 90 to 240 VAC at 50-60 Hz. -36 to -72 VDC.
 PSU Efficiency: Up to 93% for AC PSUs
 Power input option: 12 VDC
 Max Power: 350 W, without pluggable optics
 Typical Power: 310 W, without pluggable optics

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: TDB@ 27°C
 RoHS-6 Compliant

Warranty

- Please check www.edge-core.com for the warranty terms in your country.

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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