

100GbE Data Center Switch

Bare Metal Hardware

AS7712-32X/AS7716-32X



The Edgecore AS7712-32X and AS7716-32X 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 32 x QSFP28 ports, supporting up to 32 x 40/100 GbE, 64 x 50 GbE, or 128 x 10/25 GbE connections. The AS7712-32X and AS7716-32X 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 SONiC, plus commercial NOS offerings.

Key Features and Benefits

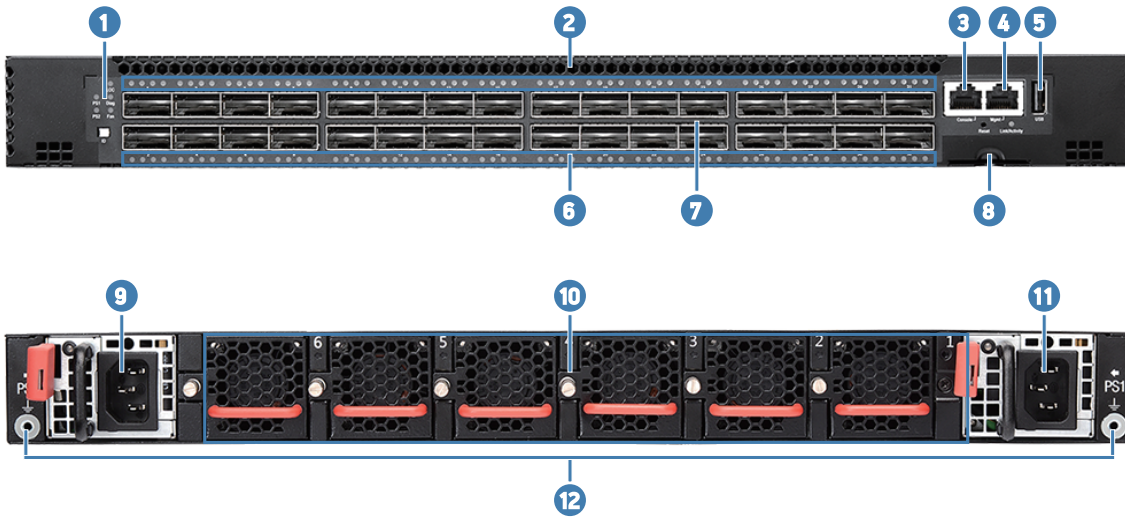
- Cost-effective, bare-metal switch infrastructure for data center fabric.
- Deploy as Top-of-Rack switch supporting 10 or 25 GbE to servers, with 40 or 50 or 100 GbE uplinks.
- Deploy as spine switch supporting 40, 50, or 100 GbE ToR and spine interconnects.
- 32 x QSFP28 switch ports, each supporting 1 x 100 GbE or 1 x 40 GbE, or via breakout cables, 2 x 50 GbE or 4 x 25 GbE or 4 x 10 GbE.
- Layer 2 or Layer 3 forwarding of 6.4 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.
- 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.
- AS7712 SKU and AS7716 SKU compatible with Open Network Linux (ONL), an open-source, OCP reference NOS.
- AS7712 SKU and AS7716 SKU compatible with Netvisor ONE Network operating system from Pluribus Networks.
- AS7712 SKU compatible with future release of Big Monitoring Fabric 5.6.0 and later version from Big Switch Networks.
- AS7712 SKU compatible with Cumulus® Linux® 3.1 and later versions.
- AS7712 SKU compatible with SONiC open source network software.
- AS7712 SKU compatible with PicOS™ 2.7.1 and later version from Pica8 Inc.
- AS7712 SKU compatible with OcNOS™ 1.2 and later version from IP Infusion.
- AS7712 SKU compatible with Ixia Vision Edge OS™ 4.7.3 and later.
- AS7712 SKU compatible with SnapRoute CN-NOS, Cloud Native - NOS software.
- AS7712 SKU compatible with Infinera CNOS.
- AS7712 SKU compatible with ArcOS 3.3.1 and later versions.



Software Supported



Interfaces



Description			
1	System LEDs	7	32 x 100G/QSFP28 ports
2	Port Indicators	8	Luggage tag
3	Console port	9	PSU 2
4	Management Port	10	Hot-Swappable 4 + 1 redundant FANs
5	USB storage port	11	PSU 1
6	40G/100G breakout mode LEDs	12	Grounding mark

Ports

- Switch Ports:
 - 32 x QSFP28 ports. Each Port supports 1 x 40/100 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 BCM56960 Tomahawk 3.2 Tbps
No PHYs, No Retimers
- CPU Modules:
 - AS7712-32X:
 - Intel Atom C2538 quad-core 2.4 GHz x86 processor
 - 16 GB SO-DIMM DDR3 RAM
 - 16 MB SPI Flash
 - 64 GB mSATA MLC
 - AS7716-32X:
 - Intel Xeon D-1518 quad-core 2.2 GHz x86 processor
 - 16 GB SO-DIMM DDR4 RAM
 - 16 MB SPI Flash
 - 32 GB M.2 SSD MLC

Performance

- Switching Capacity: 6.4 Tbps full duplex
- Forwarding Rate: 4.7 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: 10 kg (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

- Switch is loaded with Open Network Install Environment (ONIE) software installer
- Compatible with the following NOS options:
 - AS7712-32X:
 - Cumulus® Linux® 3.1 and later versions
 - Open Network Linux, the open-source, OCP reference NOS
 - SONiC open source network software
 - PicOS™ 2.7.1 and later version from Pica8 Inc
 - OcNOS™ 1.2 and later version from IP Infusion
 - Big Monitoring Fabric™ 5.6.0 and later version from Big Switch Networks
 - CN-NOS software from SnapRoute
 - CNOS from Infinera
 - Ixia Vision Edge OS™ 4.7.3 and later
 - Netvisor ONE Network operating system from Pluribus Networks
 - ArcOS 3.3.1 and later versions from Arrcus.
 - AS7716-32X:
 - Open Network Linux, the open-source, OCP reference NOS
 - Netvisor ONE Network operating system from Pluribus Networks

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: 550 W

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: 62dB@ 27°C
- RoHS-6 Compliant
- Country of Origin: Taiwan (TAA 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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Ordering Information

Base Model: AS7712-32X; 32-Port 100G QSFP28; ONIE software installer

Model Number	CPU Module	PSU	Airflow	Region (power cord)
7712-32X-0-AC-F-US	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	N. America
7712-32X-0-AC-B-US	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	N. America
7712-32X-0-AC-F-EU	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Europe
7712-32X-0-AC-B-EU	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Europe
7712-32X-0-AC-F-UK	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	UK
7712-32X-0-AC-B-UK	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	UK
7712-32X-0-AC-F-JP	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Japan
7712-32X-0-AC-B-JP	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Japan
7712-32X-0-48V-F	Intel Atom C2538 processor	dual -48V DC PSUs	port-to-power airflow	
7712-32X-0-48V-B	Intel Atom C2538 processor	dual -48V DC PSUs	power-to-port airflow	
7712-32X-0-12V-F	Intel Atom C2538 processor	one 12 VDC power input	port-to-power airflow	
7712-32X-0-12V-B	Intel Atom C2538 processor	one 12 VDC power input	power-to-port airflow	
PSU-AC-650A-F		650W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-AC-650A-B		650W AC Power Supply FRU	power-to-port airflow	no power cord
PSU-48V-650-F		650W 48VDC Power Supply	port-to-power airflow	no power cord
PSU-48V-650-B		650W 48VDC Power Supply	power-to-port airflow	no power cord
FAN-1U-1x1C-F		Fan Module FRU	port-to-power airflow	
FAN-1U-1x1C-B2		Fan Module FRU	power-to-port airflow	
Model Number	Description			
77xx-32X-SVC-RTF	AS77xx-32X series, Annual Hardware Service, Return-to-Factory, after warranty. 3 year warranty included already with the product, maximum 2 additional years per product.			