

# AS7712-32X/AS7716-32X Series Switch

## 100GbE Data Center Switch

### Bare-Metal Hardware

OCP Accepted



#### Product Overview

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 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 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 3.2 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.
- AS7712 SKU and AS7716 SKU compatible with Open Network Linux (ONL), an open-source, OCP reference NOS.
- 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 OpenSwitch the open-source NOS.
- 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 and AS7716 SKU compatible with SnapRoute FlexSwitch software.
- AS7716-32X SKU compatible with Pluribus Open Netvisor® Linux 2.5 or later.

## Features

### 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  
32 GB mSATA  
AS7716-32X:  
Intel Xeon D-1518 quad-core 2.4 GHz  
16 GB SO-DIMM DDR4 RAM  
16 MB SPI Flash  
32 GB M.2 SSD MLC

### Performance

Switching Capacity: 3.2 Tbps  
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  
OpenSwitch open-source NOS  
PicOS™ 2.7.1 and later version from Pica8 Inc  
OcNOST™ 1.2 and later version from IP Infusion  
Big Monitoring Fabric™ 5.6.0 and later version from Big Switch Networks  
FlexSwitch software from SnapRoute  
AS7716-32X:  
Open Network Linux, the open-source, OCP reference NOS  
Pluribus Open Netvisor® Linux 2.5 or later  
FlexSwitch software from SnapRoute

### 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: 62dB@ 27°C  
RoHS-6 Compliant

### Warranty

Please check [www.edge-core.com](http://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](http://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](http://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		PSU	Airflow	Region (power cord)
7712-32X-O-AC-F-US	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	N. America
7712-32X-O-AC-B-US	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	N. America
7712-32X-O-AC-F-EU	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Europe
7712-32X-O-AC-B-EU	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Europe
7712-32X-O-AC-F-UK	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	UK
7712-32X-O-AC-B-UK	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	UK
7712-32X-O-AC-F-JP	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Japan
7712-32X-O-AC-B-JP	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Japan
7712-32X-O-48V-F	Intel Atom C2538 processor	dual DC PSUs	port-to-power airflow	
7712-32X-O-48V-B	Intel Atom C2538 processor	dual DC PSUs	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-B		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.			
CBL-PWR-US	AC Power Cable - US (250 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			