

AS6712-32X

40GbE Data Center Switch

Bare-Metal Hardware



Product Overview

The Edge-Core AS6712-32X is a Top-Rack or spine switch for high-performance data center. In a compact 1RU form factor, the switch provides line-rate L2 and L3 switching across 32 x QSFP+ ports, supporting 32 x 40 GbE connections or 104 x 10 GbE connections. The AS6710-32X can be deployed as a TOR switch supporting 10 GbE or 40 GbE server connections, or as a spine switch supporting 10 GbE or 40 GbE spine interconnects. The AS6712-32X is a bare-metal switch loaded with the Open Network Install Environment (ONIE), which supports the installation of compatible open source and commercial Network Operating Systems for different network use cases and requirements.

Key Features and Benefits

- Cost-effective, bare-metal switch infrastructure for data center fabric.
- 32 fixed x 40GbE QSFP+ switch ports in compact 1RU form factor, each supporting 40 GbE or 4 x 10 GbE via breakout cables.
- Layer 2 or Layer 3 forwarding of 1.28 Tbps full duplex.
- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.
- All ports on front. PSUs and fans inserted from rear.
- Hot swappable, load-sharing redundant AC PSUs.
- 4+1 redundant, hot-swappable fans modules.
- Energy Efficiency: 227 W typical power consumption under line rate traffic using 24 x passive QSFP DAC, 8 x 40GBASE-SR4.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.
- Compatible with Open Network Linux, an open-source, OCP-approved reference NOS.
- Compatible with Cumulus® Linux® r2.5.3 and later SwitchOS software from Cumulus Networks™
- Design submitted to Open Compute Project as open standard.



Features

Ports

Switch Ports:
 32 QSFP+ fixed ports: 40 GbE or 4 x 10 GbE per port
 Total switch capacity: 32 x 40 GbE; or 104 x 10 GbE
 Management ports on port side:
 1 x RJ-45 serial console
 1 x RJ-45 100/1000BASE-T management port
 1 x USB Type A storage port

Key Components

Switch Silicon: Broadcom BCM56850 Trident II 1.28 Tbps
 Intel Atom C2538 quad-core 2.4GHz x86 processor
 8 GB SO-DIMM DDR3 RAM with ECC
 16MB SPI flash
 8GB NAND flash
 mSATA SSD (Optional)

Performance

Switching Capacity: 1.28 Tbps full duplex, with packets>200 bytes
 Forwarding Rate: 1.44 Bpps
 MAC Addresses: 320K
 VLAN IDs: 4K
 Jumbo frames (9216 Bytes)
 L3 Routes IPv4 64K, IPv6 20K
 Packet Buffer Size: 12 MB shared buffer pool
 Latency (RFC2544): 600 to 720 ns cut thru

LEDs

40G QSFP+ Port LEDs: Link Status, Activity
 Ethernet Management Port LED: Link Status, Activity
 Console Port LED: Link Status
 System LEDs: Diagnostic, Locator

Supported Optics and Cables

QSFP+ Ports:
 40GBASE-CR4 DAC; 0.5 m to 5 m; passive and active
 40GBASE-CR4 DAC to 4 x SFP+ 10GBASE-CR DAC; 0.5 to 5 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

Open Network Install Environment (ONIE) software installer
 Compatible with Open Network Linux, open source reference NOS
 Compatible with the following switch software solutions:
 Cumulus® Linux® r2.5.3 and later from Cumulus Networks™

Physical and Environmental

Dimensions (WxDxH): 438.4 x 515 x 43.5 mm (17.26 x 20.28 x 1.71 inches)
 Weight: 9.65 kg (21.27 lb), with two installed PSUs
 Fans: 4+1 redundant, hot-swappable
 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
 Input Voltage: 90 to 264 VAC at 50-60 Hz. -48 to -72 VDC.
 Input Current: 10 A@100/120 VAC, 5 A@200/240 VAC
 PSU Efficiency: Up to 93% for AC PSUs
 Max Power: 370W, 32 x 40GBASE-LR4, line rate traffic
 Typical Power: 261W, 32 x 40GBASE-SR4, line rate traffic
 Typical Power (TOR): 227W, 24 x passive QSFP DAC, 8 x 40GBASE-SR4, line rate traffic

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
 NEBS GR-1089 Level 2
 NEBS GR-63 Level 1; Level 2 Operational Thermal and Office
 Vibrations: Level 3 Operational Thermal, Earthquake (Zone 4), and Storage Transportation and Handling
 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 Edge-Core Networks products and solutions, visit www.edge-core.com.

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.

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 at +886 3 563 8888 (HQ) or +1 (877) 828-CORE (877-828-2673) or authorized resellers.

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Ordering Information

Base Model: AS6712-32X 32-Port 40G QSFP+; ONIE software installer

Model Number	CPU Module	PSU	Airflow	Region (power cord)
6712-32X-O-AC-F-US	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	N. America
6712-32X-O-AC-B-US	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	N. America
6712-32X-O-AC-F-EU	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Europe
6712-32X-O-AC-B-EU	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Europe
6712-32X-O-AC-F-UK	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	UK
6712-32X-O-AC-B-UK	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	UK
6712-32X-O-AC-F-JP	Intel Atom C2538 processor	dual AC PSUs	port-to-power airflow	Japan
6712-32X-O-AC-B-JP	Intel Atom C2538 processor	dual AC PSUs	power-to-port airflow	Japan
6712-32X-O-48V-F	Intel Atom C2538 processor	dual -48V DC PSUs	port-to-power airflow	
6712-32X-O-48V-B	Intel Atom C2538 processor	dual -48V DC PSUs	power-to-port airflow	
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		-48V DC Power Supply FRU	port-to-power airflow	no power cord
PSU-48V-400-B		-48V DC Power Supply FRU	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
67xx-32X-SVC-RTF	AS67xx-32X series, Annual Hardware Service, Return-to-Factory, after warranty. 3 year warranty included already with the product, maximum 2 additional years per product.
RKIT-85-6712	AS6712-32X/AS5712-54X rear rack mount bracket, front back mount bracket and screws for mounting into 19 inch standard rack.
ORSA-1U	Open Rack Switch Adapter, for mounting standard 19 inch form factor 1U switches into 21 inch Open Rack
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