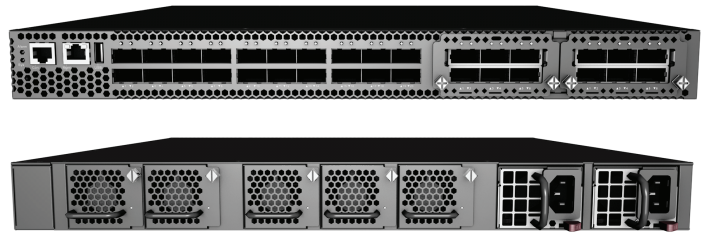# AS6701-32X
40GbE Data Center Switch
Bare-Metal Hardware

Product Overview

The Edge-Core AS6701-32X switch is a Top-of-Rack (TOR) or spine switch for high-performance data centers. In a compact 1RU form factor, the switch provides line-rate L2 and L3 switching across up to 32 x QSFP ports, supporting up to 32 x 40 GbE connections or 104 x 10 GbE connections. The AS6701-32X 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 switch provides 20 fixed QSFP ports and two module slots, each capable of supporting a 6 x QSFP option module or a future NPU module for application processing. The AS6701-32X is a bare-metal switch loaded with the Open Network Install Environment (ONIE), which supports the installation of compatible independent switchOS offerings.

Key Features and Benefits

- Cost-effective, bare-metal switch infrastructure for data center fabric.

- Up to 32 x 40GbE ports in compact 1RU form factor.

- Modular design allowing cost-effective build-out of an infrastructure with switching capacity added as required.

- 20 x QSFP switch ports, each supporting 40 GbE or 4 x 10 GbE via breakout cables.

- Two module slots, each supporting 6 x QSFP module or future NPU processing module.

- Layer 2 or Layer 3 forwarding of 2.56 Tbps full duplex.

- Supports hot/cold aisle with port-to-power and power-to-port airflow SKUs.

- All ports on front; PSUs and fans on rear.

- Hot-swappable, load-sharing, redundant AC or -48V DC PSUs.

- 4+1 redundant, hot-swappable fans.

- Energy Efficiency: 267 W typical power consumption.

- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible independent switchOS software.

- Compatible with Cumulus®Linux® r2.0.1 and later switchOS software from Cumulus Networks™.

- Compatible with PicOS™ r2.5 and later version from Pica8 Inc.

Data Center Switch

Cumulus® Linux®
Ready

Features

Ports

Switch Ports:
  20 QSFP fixed ports: 40 GbE or 4 x 10 GbE per port
  2 expansion module slots, for optional modules:
    6 QSFP: 40 GbE or 4 x 10 GbE per port
    NPU module (future)
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
CPU Module: Freescale P2020 dual-core 1.2GHz in AS6701
            2GB DDR3 SDRAM ECC memory
            8 MB NOR Flash, 2 GB NAND Flash
            8 GB SD Card

Performance

Switching Capacity: 2.56 Tbps full duplex, with packets>200 bytes
Forwarding Rate: 1.44 Bpps
MAC Addresses: Up to 288 K
VLAN IDs: 4 K
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 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® r2.0.1 and later from Cumulus Networks™
  PicOS™ r2.5 and later from Pica8 Inc.

Physical and Environmental

Dimensions (WxDxH): 440 x 470 x 44 mm (17.3 x 18.5 x
  1.73 inches)
Weight: 8.4 kg (18.52 lbs), total with 2 modules
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 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: 315 W, line-rate, 32 x 40G SR4, AC
Typical Power: 267 W, line-rate, 32 x 40G DAC, 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.au for the warranty terms in your country. The warranty provides return-to-factory hardware replacement for a three year period in Australia.

For More Information

To find out more about Edge-Core Networks products and solutions, visit www.edge-core.com.au.

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.au.

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 on 1300 725 323.

Ordering Information

Base Model: AS6701-32X 20-Port 40GbE QSFP switch with ONIE software Installer					
Model Number	CPU	Module	PSU	Airflow	Region (power cord)
6701-32X-O-AC-F-US	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	N. America
6701-32X-O-AC-B-US	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	N. America
6701-32X-O-AC-F-EU	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	Europe
6701-32X-O-AC-B-EU	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	Europe
6701-32X-O-AC-F-UK	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	UK
6701-32X-O-AC-B-UK	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	UK
6701-32X-O-AC-F-JP	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	Japan
6701-32X-O-AC-B-JP	P2020 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	Japan
6701-32X-O-48V-F	P2020 CPU Module	dual 6-port 40G module	dual -48V DC PSUs	port-to-power airflow	
6701-32X-O-48V-B	P2020 CPU Module	dual 6-port 40G module	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			400W AC Power Supply FRU	port-to-power airflow	no power cord
PSU-48V-400-B			400W AC Power Supply FRU	power-to-port airflow	no power cord
FAN-1U-1x1B-F			Fan FRU	port-to-power airflow	
FAN-1U-1x1B-B			Fan FRU	power-to-port airflow	

Model Number	Description
6701-32X-SVC-RTF	AS6701-32X Annual Hardware Service, Return-to-Factory (after warranty)
6701-32X-MOD-40G	AS6701-32X option module FRU, 6x40G QSFP ports
CBL-PWR-US	AC Power Cable - US (125V/13A, 1830mm, C13) – required with Power Supply FRUs only
CBL-PWR-EU	AC Power Cable - Europe (250V/10A, 1830mm, C13) – required with Power Supply FRUs only
CBL-PWR-UK	AC Power Cable - UK (250V/10A, 1830mm, C13) – required with Power Supply FRUs only
CBL-PWR-JP	AC Power Cable - Japan (250V/12A, 1830mm, C13) – required with Power Supply FRUs only