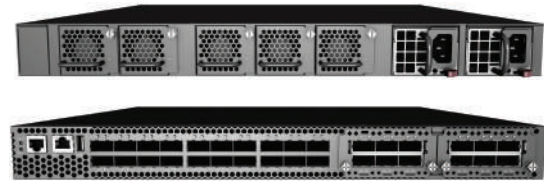


# AS6700-32X

## 40GbE Data Center Switch

### White-Box Switch with L2/L3 SwitchOS



#### Product Overview

The Edge-Core AS6700-32X 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 AS6700-32X 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.

DCSS switching software is designed for data center fabrics with up to tens of thousands of dual stack IPv4/IPv6 servers. The switch provides a full set of Layer 2 switching features used for aggregating servers within a rack, or across an easily managed medium sized data center fabric. A full set of IPv4/IPv6 routing features, including ECMP, OSPF, and BGP support large Layer 3 fabrics.

#### Key Features and Benefits

- Cost-effective, white box 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.
- Converged Enhanced Ethernet: DCBX, 802.1Qbb PFC, 802.1Qau QCN, 802.1Qaz ETS, FCOE forwarder.
- Layer 3 IPv4/IPv6 Switching: 32-way ECMP, OSPFv2, OSPFv3, BGP-4, VRRP. Requires L3 software package.
- QoS: 802.1p, DiffServ, ACLs, SP/WRR/WFQ scheduling, WRED.
- Management: Ethernet and console RJ45 ports; USB storage port. Industry standard CLI, SNMPv1/2/3, AAA.

Data Center Switch

## 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 P2041 quad-core 1.5GHz in AS6700  
 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: 320K  
 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

### QoS Features

Up to 8 queues per port  
 IEEE 802.1p COS  
 DSCP/TOS Classification, Remarking  
 SP, WRR, WFQ Queuing, WRED  
 Per port bandwidth mgmt, shaping  
 DCBX Data Center Bridging  
 802.1Qau QCN  
 802.1Qaz ETS  
 802.1Qbb PFC  
 ACLs: L2, L3, L4

### L2 Switching Features

Spanning Tree:  
 802.1D Spanning Tree  
 802.1s Multiple Spanning Tree  
 802.1w Rapid Spanning Tree  
 Per-VLAN Rapid Spanning Tree  
 Storm Control  
 802.3ad Link Aggregation  
 MLAG  
 Selectable LAG hashing algorithm  
 802.1AB LLDP Discovery  
 ANSI/TIA-1057 LLDP, MED  
 Virtual LANs:  
 802.1Q VLAN  
 Port-based VLAN  
 802.1v Protocol-based VLAN  
 802.3ac VLAN Tagging  
 Q-in-Q  
 IGMP Snooping v1/v2/v3  
 RFC 4541 IGMP, MLD Snooping  
 ISDP

### L3 Routing Features (Require L3 Software License)

RFC 826 ARP  
 RFC 1519 CIDR  
 RFC 1812 IPv4 Routers  
 RFC 2711 IPv6 Router Alert  
 Static Routing  
 VLAN and Port Based Routing  
 Route Redistribution  
 ECMP: 32-way, enhanced hash  
 RFC 3056: IPv4 to v6 tunnels  
 RFC 3768 VRRP  
 OSPF:  
 RFC 1765 OSPF Database Overflow  
 RFC 2328 OSPFv2  
 RFC 2740 OSPFv3  
 RFC 3101 OSPF NSSA Option  
 BGP:  
 RFC 2385 MD5  
 RFC 2918 Route Refresh  
 RFC 4271 BGP-4  
 RFC 4486 BGP Cease Notification  
 RFC 5492 Capabilities Advertisement

### 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

## Features

### Management

#### Programmatic API

- Industry Standard CLI
- SSH v1.5, v2
- SNMP v1, v2, v3
- Dual firmware images
- RFC 783 TFTP firmware upgrade
- Multiple Configuration Files
- RFC 951/1534/ BOOTP
- RFC 2131/2132 DHCP
- RFC 3315/3736 DHCPv6
- RFC 2030 SNTP
- RFC 3046 DHCP/BOOTP Relay
- RFC 3579 RADIUS: TACACS+
- Port Mirroring, Flow-based Mirroring
- sFlow, Traceroute
- Event and Error Logging
- Buffer Usage and Traffic Monitoring
- RFC 1213 MIBII
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet-like MIB
- RFC 2233 Interfaces SMIv2
- RFC 2618 RADIUS Authentication
- RFC 2620 RADIUS Accounting
- RFC 2674 VLAN MIB
- RFC 2737 Entity MIB v2
- RFC 2819 RMON 1,2,3,9
- RFC 3291 Network Addresses
- IEEE 802.1AD MIB
- MIBs with L3 License:
- RFC 3289 Diff Services MIB
- RFC 2465 IPv6 MIB
- RFC 2466 ICMPv6 MIB
- RFC 2787 VRRP MIB
- RFC 3419 Transport Addresses
- RFC 4273 BGP-4 MIB

### 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

### Warranty

Please check [www.edge-core.com](http://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](http://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](http://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

<b>Base Model: AS6700-32X 20-Port 40GbE QSFP switch with DCSS Layer 3 software</b>					
Model Number	CPU	Module	PSU	Airflow	Region (power cord)
6700-32X-D3-AC-F-US	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	N. America
6700-32X-D3-AC-B-US	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	N. America
6700-32X-D3-AC-F-EU	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	Europe
6700-32X-D3-AC-B-EU	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	Europe
6700-32X-D3-AC-F-UK	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	UK
6700-32X-D3-AC-B-UK	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	UK
6700-32X-D3-AC-F-JP	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	Japan
6700-32X-D3-AC-B-JP	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	Japan
6700-32X-D3-48V-F	P2041 CPU Module	dual 6-port 40G module	dual -48V DC PSUs	port-to-power airflow	
6700-32X-D3-48V-B	P2041 CPU Module	dual 6-port 40G module	dual -48V DC PSUs	power-to-port airflow	
6700-20X-D3-48V-F	P2041 CPU Module		dual -48V DC PSUs	port-to-power airflow	
6700-20X-D3-48V-B	P2041 CPU Module		dual -48V DC PSUs	power-to-port airflow	
<b>Base Model: AS6700-32X 20-Port 40GbE QSFP switch with DCSS Layer 2 software</b>					
Model Number	CPU	Module	PSU	Airflow	Region (power cord)
6700-32X-D2-AC-F-US	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	N. America
6700-32X-D2-AC-B-US	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	N. America
6700-32X-D2-AC-F-EU	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	Europe
6700-32X-D2-AC-B-EU	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	Europe
6700-32X-D2-AC-F-UK	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	UK
6700-32X-D2-AC-B-UK	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	UK
6700-32X-D2-AC-F-JP	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	port-to-power airflow	JP
6700-32X-D2-AC-B-JP	P2041 CPU Module	dual 6-port 40G module	dual AC PSUs	power-to-port airflow	JP
6700-32X-D3-48V-F	P2041 CPU Module	dual 6-port 40G module	dual -48V DC PSUs	port-to-power airflow	
6700-32X-D2-48V-B	P2041 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

## Ordering Information

Model Number	CPU	Module	PSU	Airflow	Region (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
6700-32X-SVC-RTF	AS6700-32X Annual Hardware Service, Return-to-Factory (after warranty)
6700-32X-MOD-40G	AS6700-32X 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