

25.6Tbps**32 x 400GE QSFP-DD | 2 x 10GE SFP+**

Overview

The **AES8001** delivers high-throughput, low-latency switching purpose-built for spine-layer deployments in modern data center architectures. It supports line-rate Layer 2 and Layer 3 switching across 32 x 400GE QSFP-DD and 2 x 10G SFP+ ports.



The self-developed Aurc-NOS system offers a wide range of software protocol functions, ensuring efficient data transmission.

AURC-NOS

Pre-loaded with the Open Network Install Environment (ONIE), the AES8001 enables seamless deployment of diverse Network Operating Systems, including open-source platforms such as SONiC and commercial NOS solutions for enterprise-grade functionality.

**onie**

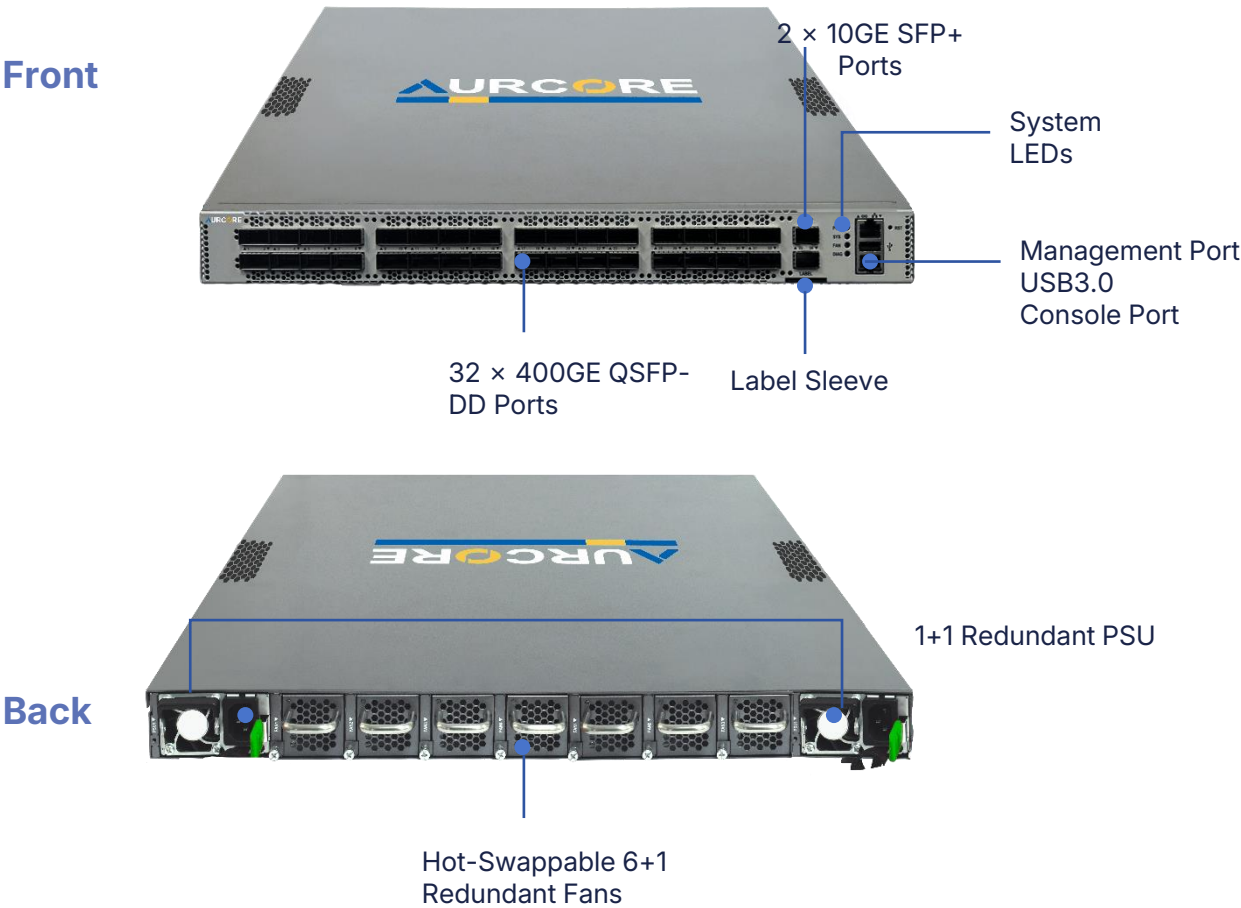
Product Highlights

- Optimized for spine-layer deployment with 400GE high-throughput connectivity.
- 32 x 400GE QSFP-DD and 2 x 10GE SFP+ ports. Each QSFP-DD port supports native 400GE/200GE/100GE/40GE operation, or breakout into 2x200GE or 4x100GE.
- Layer 2 or Layer 3 forwarding at 25.6 Tbps.
- Supports hot/cold aisle with front-to-back and back-to-front airflow SKUs.
- All ports on front, PSUs and fans accessible from rear.
- Hot-swappable, load-sharing, redundant AC or DC PSUs.
- 6+1 redundant, hot-swappable fan modules.
- Aurc-NOS supports advanced data center features such as VxLAN, EVPN, M-LAG, and RoCE v2, along with comprehensive routing protocols including BGP, OSPF, IS-IS, and MPLS.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.

Hardware Specifications

Model	AES8001
Interface	32 × 400GE QSFP-DD Slots and 2 × 10GE SFP+ Slots
Management Port	1 × MGMT Port, 1 × Console Port, 1 × USB Port (USB 3.0)
CPU	D-1712TR Intel
Chip Type	98CX8580-BWU4C000(Marvell Falcon)
Packet Forwarding Rate	5600 Mpps
Switching Capacity	25.6 Tbps
System Memory	16 GB
Fan	7 hot-swappable fan modules for front/rear ventilation
Power Supply	2 (1+1 Redundancy), Hot-swappable
AC Input	Rated voltage range: 100~240 V Maximum voltage range: 90~264 V Frequency: 50~60 Hz Rated input current: 0~10 A(230VAC); 0~12 A(100VAC)
DC Input	Input voltage range: 180~310 V Input current range: 0-10 A
Power Consumption	/
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Dimension (L×W×H)	24.80"(L) × 17.32"(W) × 1.73"(H) / 1U height
Full Weight	15 kg / 33.07 lbs.
Installation	Rack Mount
Accessories	Mounting Bracket*2, Screw*6, Grounding Cable*1, Grounding Screw*1, Console Cable*1, Power Cord*2

Hardware Panel



Software Specifications

DATA CENTER FEATURES

- **Overlay Network:** VxLAN, BGP-EVPN
- **Architecture:** M-LAG
- **High-performance Networking:** RoCE v2, PFC, ECN

LAYER 2 PROTOCOLS

- **VLAN:** GVRP, PVLAN, Voice VLAN, VLAN Translation, Q-in-Q, Subnet-based VLAN
- **MAC Address:** Dynamic/static/black hole MAC address table entries, auto learning/aging, learning restrictions, source MAC filtering, MAC address drift detection
- **Port:** Flow control, Port traffic statistics, Cut-through

LAYER 3 PROTOCOLS (IPv4/IPv6 DUAL STACK)

- **Class Of Service:** Based on port, source-destination MAC, source-destination IP, 802.1p, CoS, DSCP, IP priority
- **IP Routing:** Static routing, VRF, RIP/RIPng, OSPF v2/v3, BGP/BGP4+, ISIS/ISISv6, ECMP

MULTICAST

- IGMP Snooping v1/v2/v3, MLD Snooping v1/v2, PIM-DM, PIM-SM, PIM-SSM, Multicast VLAN, Multicast traffic suppression

QoS FUNCTION

- **Rate Limiting:** Port-based (incoming/outgoing), Stream-based rate limiting
- **Class Of Service:** Based on port, source-destination MAC, source-destination IP, 802.1p, IP priority, Source-destination L4 Port
- **Prioritization Algorithm:** WRR, SP, DSCP & CoS mapping, Congestion avoidance mechanisms (WRED, tail drop)

SECURITY

- **Access Control:** Port Security, Port Isolation, IP source protection, Dynamic ARP protection, DHCP Snooping, IEEE802.1x, AAA, ACL, RADIUS/TACACS+
- **Data Protection:** Broadcast storm suppression, Illegal packet detection, DDoS Attack Prevention, HTTPS and SSL

RELIABILITY

- **Link Protection:** STP, RSTP, MSTP, Stacking, BPDU Guard, STP Root Guard, Loop Protection/Detection, ULPP(smart-link), ULSP(monitor-link), LACP, BFD, Ethernet OAM, ULDP, ERPS, VRRP, MRPP fast link switching

MPLS

- MPLS L2VPN, MPLS L3VPN, LSP static, VPLS, MPLS TE, MPLS OAM, LDP, RSVP

NETWORK VISUALIZATION

- sFlow Sampling (end-to-end traffic visualization with hardware capability), GRE Tunnel, IPv4/IPv6 Tunnel

MANAGEMENT & MAINTENANCE

- **Interfaces:** Console port, MGMT port, USB port
- **Protocols:** SNMPv1/v2c/v3, RMON (1,2,3 & 9), TFTP (file upload/download), NETCONF
- **Management Modes:** CLI command line, TELNET, SSH/SSHv2
- **Functions:** Firmware Upgrade, Configuration Export/Import, DHCP Client (Option 82/66/67), Event/Error Logs (System Log), Management Access Control, Port Mirror, LLDP (IEEE802.1AB), LLDP-MED, DNS Client, Trace-route, Ping, DDMMI, NTP/ SNTP (RFC2030)

