

6.4 Tbps**48 × 25GE SFP28 | 8 × 100GE QSFP28**

Overview

The **AES6102** delivers high-throughput, low-latency switching optimized for spine-layer deployments in modern data centers. It supports line-rate Layer 2 and Layer 3 switching across 48 × 25GE SFP28 and 8 × 100GE QSFP28 ports.

Pre-loaded with the Open Network Install Environment (ONIE), the AES6102 enables flexible installation of compatible Network Operating Systems, platforms such as SONiC and commercial NOS solutions for enterprise-grade functionality.

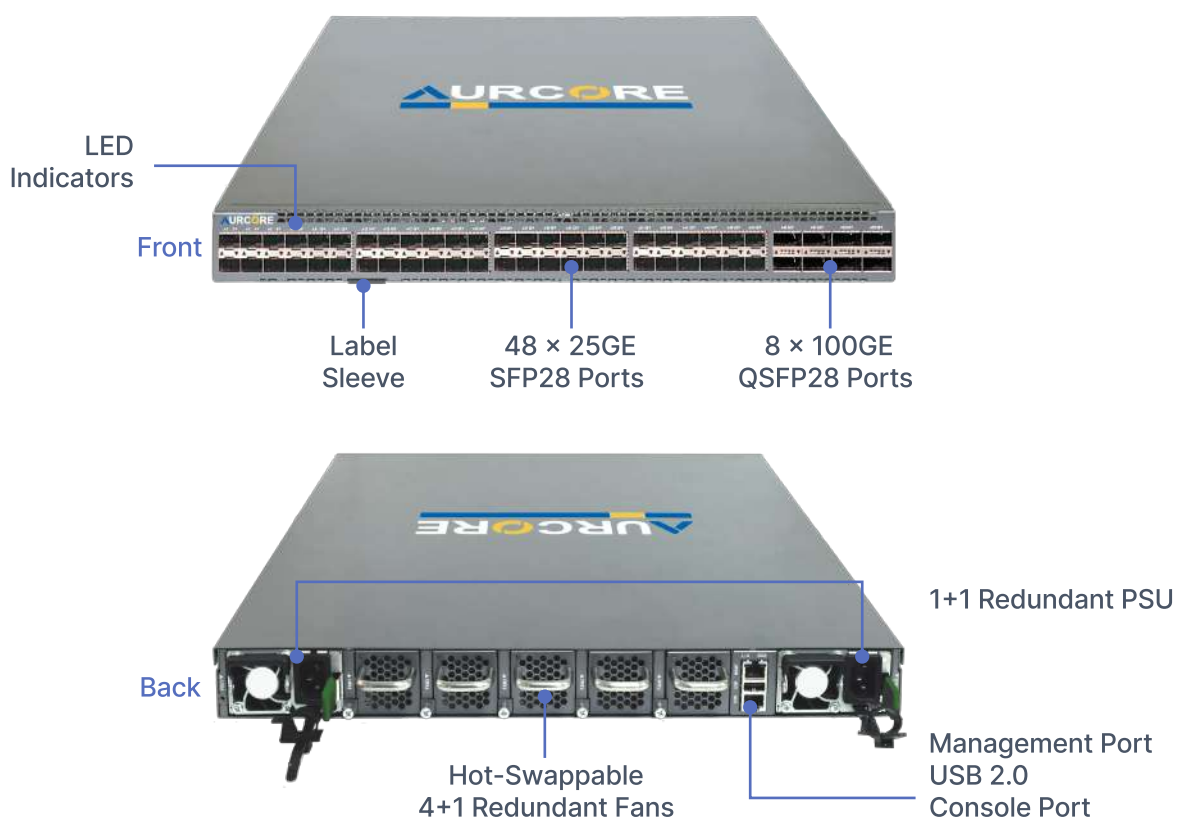


Product Highlights

- Optimized for deployment as Top-of-Rack switch supporting 10/25GE to servers, with 40/100GE uplinks.
- 48 × 25GE SFP28 + 8 × 100GE QSFP28 switch ports, each QSFP28 supporting 1 × 100GE or 1 × 40GE, or via breakout cables, 4 × 25GE, or 4 × 10GE.
- Layer 2 or Layer 3 forwarding at 6.4 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.
- 4+1 redundant, hot-swappable fan modules.
- VXLAN, EVPN, MLAG support and advanced 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	AES6102
Interface	48 × 25GE SFP28 Slots and 8 × 100GE QSFP28 Slots
Management Port	1 x MGMT Port, 1 x Console Port, 1 x USB Port, (USB 2.0)
Packet Forwarding Rate	2800Mpps
Switching Capacity	6.4Tbps
Dimension(LxWxH)	18.50"(L) x 17.32"(W) x 1.73(H) / 1U height
Full Weight	10kg / 22.05 lbs.
Fan	5 hot-swappable fan modules for front/rear ventilation
Power Supply	2 (1+1 Redundancy), Hot-swappable
AC Input	Rated voltage range: 100~240V Maximum voltage range: 90~264V Frequency: 50~60Hz Rated input current: 3.5~7.2A
DC Input	Input voltage range: 180~310V Input current range: 3.5A
Power Consumption	Static (Dual AC): 141W; Maximum (Dual AC): 441W



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 VLANs, Protocol-based VLANs, MAC-based VLAN
- **MAC Address:** Dynamic/static/black hole MAC address table entries; auto learning/aging, learning restrictions, source MAC filtering

LAYER 3 PROTOCOLS (IPv4/IPv6 DUAL STACK)

- **IPv4 Features:** Static routes, Default Route, RIP V1/V2, OSPF V2, ISIS, BGP-4, ECMP, VRRP
- **IPv6 Features:** Static routes, RIPng, OSPFv3, BGP4+, Equivalent Routing, Manual tunneling, Automatic Tunneling, ISATAP tunneling, IPv4 over IPv6 tunneling
- **IPv6 Management and Services:** ND, Web/SSL, NTP/SNTP, Telnet/SSH, Ping/Trace-route, FTP/TFTP, RADIUS/TACACS+, SNMP over IPv6

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, CoS, DSCP, 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, DHCP Relay, IEEE802.1x AAA, ACL, User hierarchy, RADIUS/TACACS+, RADIUS authentication (RFC2138), SSH v2.0,
- **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, BFD Detection, Ethernet OAM, ULDP, ERPS fast ring network protection, MRPP fast link switching

MPLS

- MPLS L2VPN, MPLS L3VPN, VPLS, VPWS, LDP

NETWORK VISUALIZATION

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

MANAGEMENT & MAINTENANCE

- **Interfaces:** Console port, MGMT port, USB port
- **Protocols:** SNMPv1/v2c/v3, RMON (1,2,3 & 9), TFTP (file upload/download)
- **Management Modes:** CLI command line, Web NMS, TELNET
- **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, DDMI, NTP/ SNTP (RFC2030)

