

6.4Tbps**48 x 25GE SFP28 | 8 x 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 x 25GE SFP28 and 8 x 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.



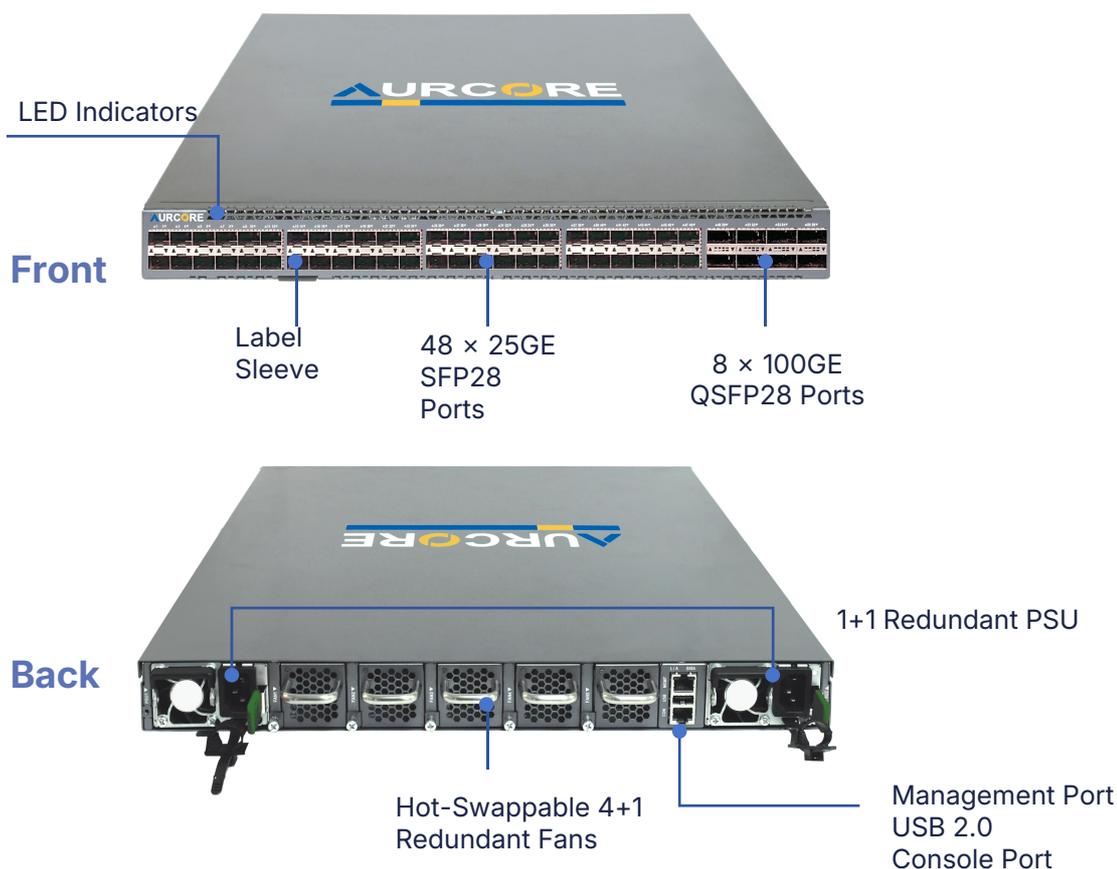
Product Highlights

- Optimized for deployment as Top-of-Rack switch supporting 10/25GE to servers, with 40/100GE uplinks.
- 48 x 25GE SFP28 + 8 x 100GE QSFP28 switch ports, each QSFP28 supporting 1 x 100GE or 1 x 40GE, or via breakout cables, 4 x 25GE, or 4 x 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, RoCE v2 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 × MGMT Port, 1 × Console Port, 1 × USB Port (USB 2.0)
Chipset	Marvell
Packet Forwarding Rate	2800 Mpps
Switching Capacity	6.4 Tbps
System Memory	8GB
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: 0~5(230VAC); 0~10A(100VAC)
DC Input	Input voltage range: 180~310V Input current range: 0~5A
Power Consumption	Static (Dual AC): 145W; Maximum (Dual AC): 445W
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)	17.32"(L) × 18.50" (W) × 1.73"(H) / 1U height
Full Weight	11 kg / 24.25 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 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, IS-IS, 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)

