

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 × 25GE SFP28 and 8 × 100GE QSFP28 ports.

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

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.



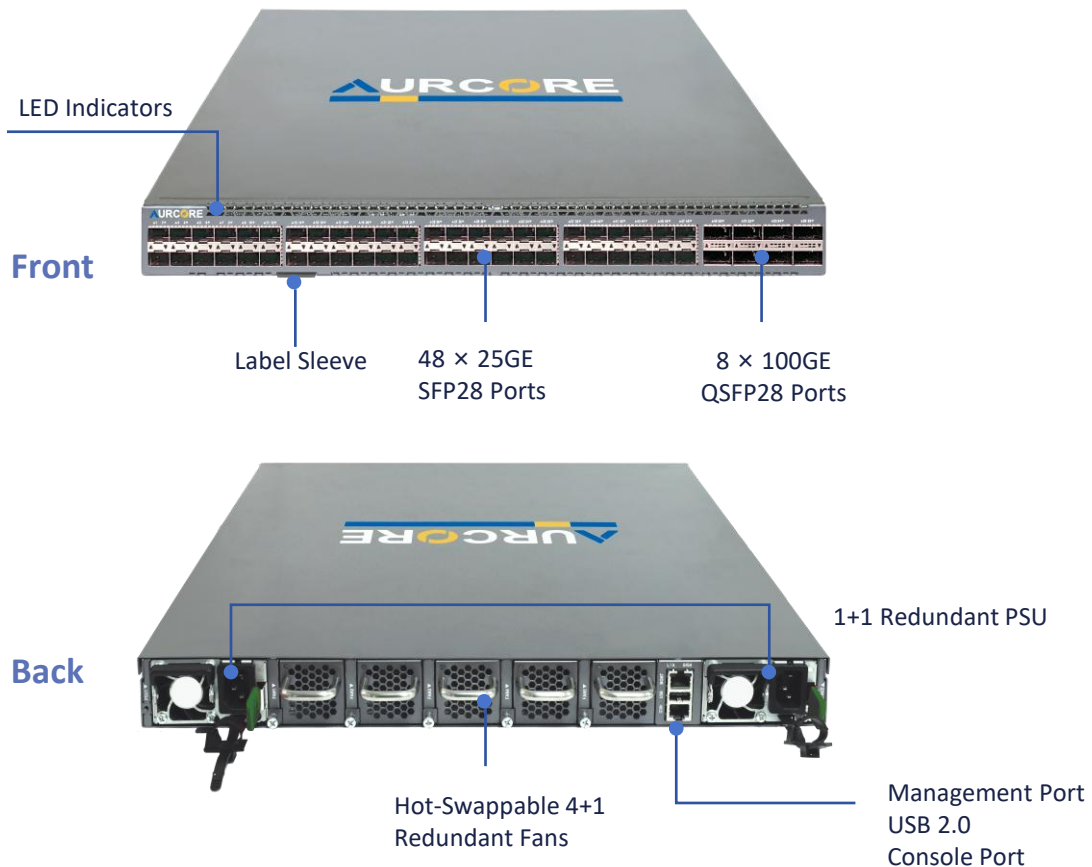
Product Highlights

- 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.
- Aurc-NOS supports advanced data center features such as VXLAN, EVPN, MLAG, 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 | 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 | 8 GB |
| Fan | 5 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: 0~5 A(230VAC); 0~10 A(100VAC) |
| DC Input | Input voltage range: 180~310 V Input current range: 0~5 A |
| Power Consumption | Static (Dual AC): 145 W; Maximum (Dual AC): 445 W |
| 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, MAC address drift detection
- **Port:** Flow control, Port traffic statistics, Cut-through

LAYER 3 PROTOCOLS (IPv4/IPv6 DUAL STACK)

- **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
- **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, DHCP Relay, IEEE802.1x, AAA, ACL, User hierarchy, RADIUS/TACACS+, RADIUS authentication (RFC2138), SSH v2
- **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), ULSM(monitor-link), LACP, BFD, Ethernet OAM, ULDP, ERPS, VRRP, MRPP fast link switching

MPLS

- MPLS L2VPN, MPLS L3VPN, LSP static, VPLS, MPLS TE, VPWS, 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)
- Management Modes: CLI command line, TELNET, Web NMS(HTTP/HTTPS)
- 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)

