AURCORE NETWORKS

AES6002
Data Center Switch

2.18Tbps **48 x 10GE SFP+ | 6 x 100GE QSFP28**

Overview

The **AES6002** delivers high-throughput, low-latency switching engineered for spine-layer deployments in modern data centers. It supports line-rate Layer 2 and Layer 3 switching across 48 × 10GE SFP+ and 6 × 100GE QSFP28 ports.

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

AURC-NOS NDAA Compliant TAA Compliant

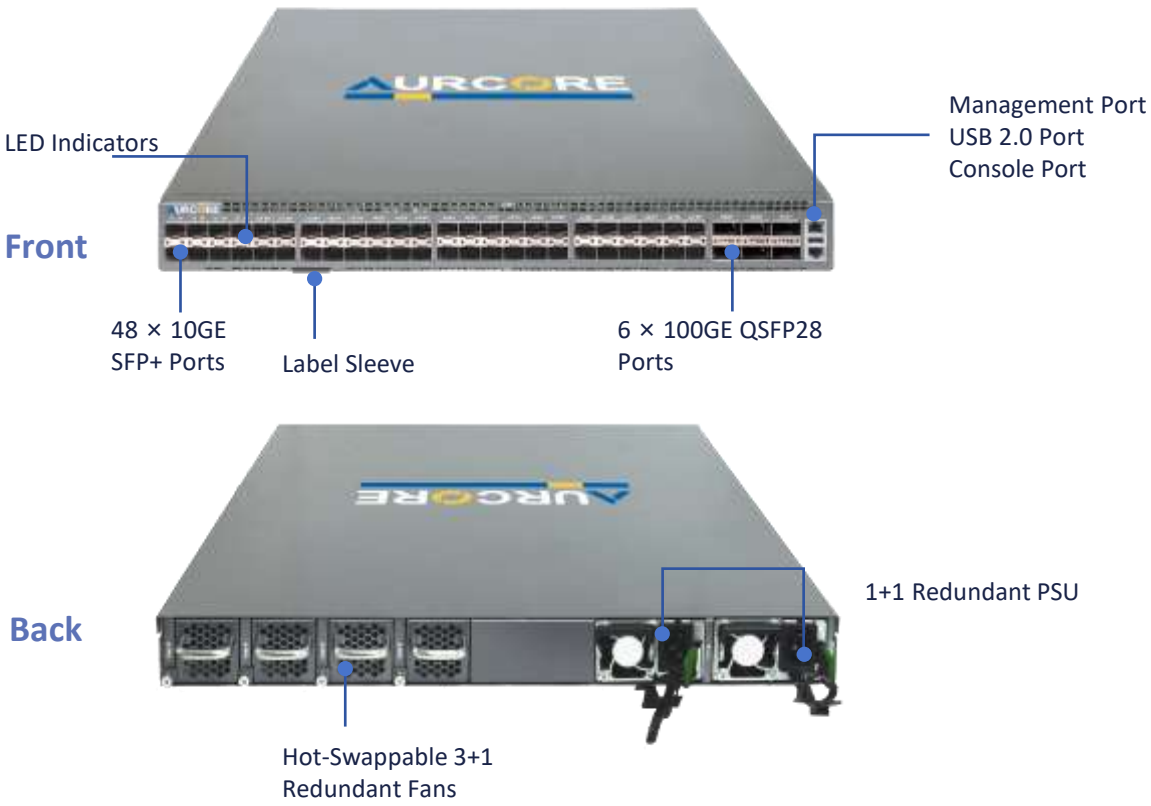
Product Highlights

• Optimized for deployment as Top-of-Rack switch or as a part of a 40GE/100GE distributed spine.
• 48 × 10GE SFP+ and 6 × 100GE QSFP28 ports. Each QSFP28 port supports native 40GE/100GE operation, or breakout into 4×25GE / 4×10GE.
• Layer 2 or Layer 3 forwarding at 2.18 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.
• 3+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 Specifications

Model	AES6002
Interface	48 × 10GE SFP+ Slots + 6 × 100GE QSFP28 Slots
Management Port	1 × MGMT Port, 1 × Console Port, 1 × USB Port (USB 2.0)
Chipset	Marvell Aldrin2
Packet Forwarding Rate	600 Mpps
Switching Capacity	2.18 Tbps
System Memory	4 GB
Fan	4 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: 0~2.5A(230VAC); 0~5A(100VAC)
DC Input	Input voltage range: 180~310V Input current range: 0~2.5A
Power Consumption	Static (Dual AC): 60W; Maximum (Dual AC): 285W
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)	16.14"(L) × 17.32"(W) × 1.73"(H) / 1U height
Full Weight	9.5 kg / 20.94 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 lP, 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 (WRTD, 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), ULSM(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, DDMI, NTP/ SNTP (RFC2030)

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