

Aruba JL659A

Datasheet



Product Overview

- The HPE Aruba Networking CX 6300 Series is a modern stackable switch family that brings cloud-native design to campus and edge access.
- Designed for enterprise access, aggregation, and data center ToR, it fits branch offices, campuses, and mid-size data centers.
- Gen7 ASIC architecture delivers non-blocking throughput, low latency, and ample packet buffering to support AI, Wi-Fi 7, and dense IoT.
- VSF stacking supports up to ten switches for unified management, while high-speed uplinks simplify core or spine connectivity.
- Cloud-native ArubaOS-CX and built-in analytics add real-time visibility, faster troubleshooting, and safer rollouts of new configurations.
- Ideal for businesses that need scalable PoE, secure multi-gigabit access, and centralized operations without adding management overhead.

Product Highlights

- **Advanced L3 and Security Stack:** CX 6300 offers stackable Layer 3 switching with BGP, EVPN, VXLAN, VRF, OSPF, strong QoS, MACsec 256, PTP, AVB, and LRM for secure, feature-rich enterprise networks.
- **High-Performance Architecture:** 7th Gen ASICs provide 8801760 Gbps switching capacity, 6601310 Mpps throughput, and 200400 Gbps stacking bandwidth for demanding campus and data center workloads.
- **Flexible Stacking and Uplinks:** Choose 210 member VSF stacks for simple scale-out, or 2-member VSX clusters for active-active resilience, with integrated high-speed uplinks for flexible topologies.
- **Multi-Gigabit and High-Power PoE:** Up to 48 HPE Smart Rate multi-gigabit ports and 1GbE fiber options with up to 90W 802.3bt PoE, fully integrated with CX Network Analytics Engine and automation.

Detailed Features



JL659A

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| Component | Specification |
|--------------------|--|
| Downlink Ports | 48 × HPE Smart Rate 100M/1G/2.5G/5G Base-T Class 6 PoE, up to 60W per port |
| Uplink Ports | 4 × 1G/10G/25G/50G |
| Switching Capacity | 880 Gbps |
| Stacking | Up to 10 members per stack |
| Architecture | HPE Aruba Networking CX 6300 Gen7 ASIC platform |



AI-Optimized Switching Fabric

The CX 6300 uses a fully distributed architecture with Gen7 ASICs to deliver line-rate performance, low latency, and increased packet buffering. This ensures predictable behavior for AI inference traffic, Wi-Fi 7 backhaul, and dense IoT access, even under congestion, while maintaining intelligent power usage for efficient operation in large campus and edge deployments.

High-Bandwidth Stacking and Uplinks

HPE Aruba Networking VSF front-plane stacking lets you scale out access or aggregation with minimal complexity. Each switch provides four built-in uplinks supporting 10, 25, 50, and 100GbE, enabling 200400 Gbps of stacking or uplink throughput. This design supports flexible spine-leaf, ring, or collapsed core topologies without additional stacking modules.

Redundant Active-Active Design with VSX

For environments that require continuous availability, CX 6300 supports HPE Aruba Networking VSX. Two switches form an active-active pair with an inter-switch link and independent control planes. State synchronization across the pair helps maintain forwarding during failures, enabling hitless upgrades and reducing downtime in key aggregation or distribution roles.

Powerful Multi-Gigabit and PoE Delivery

HPE Smart Rate multi-gigabit Ethernet provides adaptive 1/2.5/5/10GbE speeds on access ports. Each port supports Class 4, Class 6, and Class 8 PoE up to 90W, with 720W, 1440W, and 2880W PoE budgets available. This enables high-density Wi-Fi 7 APs, cameras, and IoT devices without external injectors, simplifying cabling and power planning in new or retrofit sites.

Energy Efficiency and Scheduled Hibernation

CX 6300 and CX 6300L models include a hibernation feature that allows scheduled downtime to cut energy use during off-hours. Combined with intelligent power consumption at the ASIC level and granular PoE control, this helps organizations reduce operational costs and meet sustainability targets while keeping critical services online.

Deep Analytics and Time Series Insights

Built-in analytics and a time series database record configuration and operational state on the switch. Real-time telemetry exposes events and trends that affect performance or stability, enabling faster root-cause analysis. Operators can correlate changes with impact and use these insights to fine-tune policies across campus and data center networks.

Centralized Automation and Policy Control

With Aruba Central, CX 6300 becomes part of an AI-native, full-stack management platform covering wired, wireless, and WAN. Dynamic segmentation, device profiling, role-based access control, and Layer 7 firewall features enable consistent user and IoT policies. Colorless ports with local user roles and LMA reduce manual tasks for adds, moves, and changes.

Data Center and Hybrid Infrastructure Ready

CX 6300 can be deployed in top-of-rack roles as part of pre-engineered HPE solutions that combine compute, storage, and networking. Integrated support for VXLAN to VRF mapping and user-role policies enables scalable multi-tenancy. These validated designs for VMware, SAP HANA, HCI, and other stacks shorten deployment cycles and reduce risk in complex data center projects.

Technical Specifications

Product Specifications

| Feature | Value |
|--------------------------------|---|
| Series Description | The HPE Aruba Networking CX 6300 Switch Series is a modern, flexible, and intelligent family of stackable switches ideal for access, aggregation, and data center top-of-rack (ToR). |
| Architecture | Featuring a cloud-native design and fully programmable operating system (OS). |
| Monitoring and Troubleshooting | The CX 6300 delivers advanced monitoring and troubleshooting with capabilities like a real-time network analytics engine, HPE Aruba Networking Switch Multi-Edit Software and flexible deployment options to implement and validate network configurations. |



| Feature | Value |
|-----------------------------|--|
| ASIC Generation | A powerful Gen7 ASIC architecture delivers fast, non-blocking performance for AI, Wi-Fi 7, and Internet of Things (IoT) requirements. |
| Stacking Technology | HPE Aruba Networking Virtual Stacking Framework (VSF) allows for stacking of up to 10 switches, providing scale and simplified management. |
| Uplink Design | This flexible series has built-in high-speed uplinks and supports high-density IEEE 802.3bt highpower PoE with HPE Smart Rate multi-gigabit Ethernet. |
| Layer 3 Capabilities | The HPE Aruba Networking CX 6300 Switch Series is a family of stackable Layer 3 switches with BGP, EVPN, VXLAN, VRF, OSPF routing, robust quality of service (QoS), MACsec 256, PTP, AVB and LRM [1] |
| Layer 2-Only Models | Three stackable Layer 2-only CX 6300L switches with HPE Smart Rate multi-gigabit and MACsec 256 encryption are available for high performance access deployments |
| System Switching Capacity | Powerful 7th Gen ASIC architecture provides the CX 6300 series with 880 to 1760 Gbps system switching capacity |
| System Throughput | 660 to 1310 Mpps of system throughput |
| Stacking Bandwidth | Up to 200 to 400 Gbps stacking bandwidth |
| High Availability Options | High availability with choice between 2 to 10-member Virtual Switching Framework (VSF) stacking for scale, or 2-member Virtual Switching Extension (VSX) cluster for activeactive redundancy |
| Port Options | Options include 24 to 48-port of HPE Smart Rate multi-gigabit (1/2.5/5/10GbE) and 1GbE fiber, supporting up to 90W 802.11bt PoE, all with telemetry and automation via the CX Network Analytics Engine |
| Management Platform | Manage through single point of control with HPE Aruba Networking Central across wired, wireless, and WAN. |
| Security and Access Control | Dynamic segmentation enables enhanced security and simple access for users and IoT |
| Downlink Port Specification | Ports 48 x HPE Smart Rate 100 M [5]/1G/2.5G/5G BaseT Class 6 PoE ports supporting up to 60W per port |
| Uplink Port Specification | 4 x 1G/10G/25G/50G |
| Chassis Switching Capacity | Switching capacity 880 Gbps |
| Stacking Capability | Stacking capabilities Up to 10-members per stack. |



| Feature | Value |
|------------------|---|
| Analytics Engine | HPE Aruba Networking CX Network Analytics Engine (NAE) provides real-time insights and actions, analyzing events that can impact network health and even mitigating problems directly through quarantining to support network, application, system and security operations. |

Product Comparison

| Feature | JL659A | C9300L-48PF-4G-10A | C9300L-24T-4X-A |
|---------------------|--|--|---|
| Fixed Ports | 48 × HPE Smart Rate 100M/1G/2.5G/5G Base-T Class 6 PoE | 48 × 10/100/1000Base-T PoE+ | 24 × 10/100/1000Base-T |
| Uplink Ports | 4 × 1G/10G/25G/50G | 4 × 1G SFP or 1G RJ45 | 4 × 1G/10G SFP+ |
| Switching Capacity | 880 Gbps | varies by model, up to 176 Gbps class | varies by model, up to 128 Gbps class |
| PoE Capability | Up to 60W per port, multi-gigabit, 802.3bt capable | PoE+ up to 30W per port | No PoE on access ports |
| Stacking | Up to 10 members with VSF | StackWise-320/ StackWise-80 depending on model | StackWise-80 stacking |
| Layer 3 Features | Advanced L3 with BGP, OSPF, VRF, EVPN, VXLAN | Enhanced L3 with static, OSPF, EIGRP, limited BGP | Enhanced L3 with static, OSPF, EIGRP, limited BGP |
| Security Features | MACsec 256, dynamic segmentation, role-based access | MACsec (select models), TrustSec, 802.1X | 802.1X, ACLs, TrustSec (select models) |
| Management Platform | Aruba Central, on-box Web/ CLI, NAE analytics | Cisco DNA Center, Web UI, CLI | Cisco DNA Center, Web UI, CLI |
| Ideal Deployment | High-density multi-gigabit access for Wi-Fi 7 and IoT | Enterprise access with high PoE power for APs and phones | Cost-effective Gigabit access without PoE |

Accessories

| Category | Accessories |
|----------------------|--|
| Included Accessories | <ul style="list-style-type: none"> - Rack-mount kit - AC power cord - Quick Installation Guide |
| Optional Accessories | <ul style="list-style-type: none"> - SFP/SFP28/QSFP uplink transceivers - Additional external power supply or RPS (model dependent) - Cable management brackets |



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References

[1] HPE Aruba Networking. (2023). HPE Aruba Networking CX 6300 Switch Series JL659A Datasheet. Retrieved from <https://www.hpe.com/psnow/doc/PSN1012183949WWEN.pdf>