# Aruba JL658A

## Datasheet

# Product Overview

- Aruba CX 6300 Series JL658A is a modern, intelligent stackable switch platform from HPE Aruba Networking, built for next generation campus and data center networks.

- Designed for wired access, aggregation, and data center top of rack, it fits mid size enterprises, distributed branches, and cloud managed campus deployments.

- Powered by a Gen7 ASIC architecture, JL658A delivers non blocking performance, deep packet buffering, and high speed uplinks to handle AI, Wi Fi 7, and dense IoT traffic with ease.

- Cloud native ArubaOS CX and a fully programmable OS enable real time analytics, automation, and advanced monitoring through the built in Network Analytics Engine.

- Centralized orchestration, VSF stacking up to 10 switches, and integration with HPE Aruba Networking Central simplify deployment, operations, and policy consistency across sites.

- Ideal for enterprises modernizing core and edge, JL658A offers scalable performance, strong security, and flexible connectivity to support digital workplace and new cloud applications.

# Product Highlights

- **Advanced Layer 3 and Security:** CX 6300 offers full Layer 3 capabilities including BGP, OSPF, VRF, EVPN, and VXLAN, combined with robust QoS, MACsec 256, PTP, AVB, and LRM to secure and optimize traffic in campus and data center environments.

- **High-Performance Gen7 ASIC:** The 7th Gen ASIC architecture delivers 880 to 1760 Gbps switching capacity, 660 to 1310 Mpps throughput, and up to 200 to 400 Gbps stacking bandwidth to support high-density access and demanding services.

- **Flexible Uplinks and PoE Options:** Models provide 24 to 48 HPE Smart Rate multigigabit and 1GbE fiber ports, supporting up to 90W 802.3bt PoE, ideal for WiFi 7 APs and IoT, with full telemetry via the CX Network Analytics Engine.

- **Scalable Stacking and Central Management:** VSF supports 2 to 10 member stacks for scale, while VSX enables 2 node active active redundancy. Aruba Central delivers single pane management and dynamic segmentation for secure wired and wireless access.

# Detailed Features



JL658A

| Component | Specification |
|---|---|
| Downlink Ports | 24 × 1G/10G SFP+ ports |
| Uplink/Stacking Ports | 4 × 1G/10G/25G/50G SFP ports |
| Switching Capacity | 880 Gbps |

## AI-Optimized Performance Architecture

The CX 6300 uses a fully distributed architecture with Gen7 ASICs to deliver wire-speed switching, very low latency, and larger packet buffers. This design ensures consistent performance under AI, WiFi 7, and IoT workloads, even when traffic patterns are bursty or unpredictable. Intelligent power handling balances energy use and thermal performance, helping maintain throughput while reducing operational costs in dense campus or edge deployments.

## High-Bandwidth Stacking and Uplinks

HPE Aruba Networking Virtual Switching Framework (VSF) enables high-performance front-plane stacking, allowing multiple CX 6300 switches to behave as a single logical system. Each switch supports up to four builtin uplinks with speeds up to 10, 25, 50, and 100GbE, delivering 200 to 400 Gbps of stacking throughput. This provides scalable bandwidth for campus cores or aggregation layers without adding complex chassis systems.

## Resilient VSX Active-Active Design

Virtual Switching Extension (VSX) allows two CX 6300 switches to form an activeactive pair with an interswitch link. The design maintains independent control planes while synchronizing state information to provide high availability. This architecture minimizes downtime during upgrades or failures and allows hitless failover for many services, supporting missioncritical applications and alwayson enterprise environments.

## Flexible Multi-Gigabit and High-Power PoE

HPE Smart Rate multigigabit Ethernet supports adaptive speeds for a wide range of endpoints, including WiFi 6/6E/7 access points and bandwidthhungry IoT devices. Each port can deliver Class 4 (30W), Class 6 (60W), or Class 8 (90W) PoE with configurable budgets of 720W, 1440W, or 2880W per switch, enabling dense deployments of APs, cameras, and phones. Intelligent PoE management protects investment as devices evolve.

## Energy Efficiency and Scheduled Hibernation

The CX 6300 and CX 6300L models incorporate advanced power savings, including a hibernation mode that lets administrators schedule downtime based on operating hours. This capability reduces energy consumption in offices, schools, and branch sites when network demand is low, while still allowing fast return to service. Layer 2only CX 6300L models further optimize cost and power for simple access scenarios that do not require full routing.

## Embedded Analytics and Time-Series Insight

Built-in analytics provide real-time visibility into switch health and traffic behavior. A time series database records configuration and operational data, giving IT teams detailed context during fault analysis. The CX Network Analytics Engine (NAE) runs on-device agents that continuously monitor conditions, correlate events, and can trigger automated actions such as quarantining affected endpoints, improving service reliability and mean time to resolution.

## Centralized Automation and Policy Control

HPE Aruba Networking Central offers secure, AInative full-stack management across wired, wireless, and WAN infrastructures. CX 6300 integrates tightly with Central to simplify provisioning, apply templates, and automate lifecycle operations. Dynamic segmentation uses user and device identity to assign roles and policies consistently, while Switch MultiEdit Software adds bulk search, edit, validation, and deployment functions, reducing configuration drift and human errors.

## Secure Multi-Tenancy and Data Center Integration

CX 6300 supports overlay networking with VXLAN-to-VRF mapping and userrolebased policies, enabling multitenant campus or edge environments. Switchtoswitch tunnels extend segmentation endtoend without complex manual VLAN designs. The series fits into preengineered HPE data center solutions with HPE Compute and Storage, covering virtualization, HCI, HPC, and major application stacks, delivering faster, lowerrisk deployments for modern hybrid infrastructures.

# Technical Specifications

## Product Specifications

| Feature | Value |
|---------|-------|
| Ports Detail | Ports 24 x 1G/10G SFP+ ports 4 x 1G/10G/25G/50G [4] SFP ports 1 x USB-C console port 1 x USB Type-A host port 1 x OOBM port |
| Downlink Ports | 24 x 1G/10G SFP+ ports |

| Feature | Value |
|---|---|
| Uplink Ports | 4 x 1G/10G/25G/50G [4] SFP ports |
| Management Ports | 1 x USB-C console port; 1 x USB Type-A host port; 1 x OOBM port |
| Switching Capacity | Switching capacity 880 Gbps |

## Product Comparison

| Feature | JL658A | C1000-24FP-4G-L | C8R43A |
|---|---|---|---|
| Product Type | Stackable Layer 3 enterprise switch | Fixed Gigabit PoE+ access switch | HPE Aruba Networking CX 6300 series switch |
| Fixed Ports | 24 × 1G/10G SFP+ | 24 × 10/100/1000Base-T PoE+ + 4 × 1G SFP | 24 × multi☐ gig/1G access (model dependent) |
| Uplink Capacity | 4 × 1G/10G/25G/50G SFP ports | 4 × 1G SFP | Up to 4 × 1G/10G/25G uplinks (model dependent) |
| Switching Capacity | 880 Gbps | Up to 56 Gbps (series typical) | Up to 1760 Gbps (series maximum) |
| Layer 3 Features | Full Layer 3 with BGP, OSPF, VRF, EVPN, VXLAN | Basic Layer 3 (static routing, limited protocols) | Advanced Layer 3 with BGP, OSPF, VRF (series) |
| Stacking/ Redundancy | VSF stacking, VSX active☐ active clustering | No true stacking, standalone operation | VSF stacking supported on CX 6300 models |
| PoE Support | PoE via specific CX 6300 PoE models, up to 90W per port | Full PoE+ on 24 access ports | High-power PoE on PoE variants (up to 60/90W) |
| Management | ArubaOS☐ CX, Aruba Central, NAE analytics | Cisco IOS, Cisco Network Management tools | ArubaOS☐ CX, Aruba Central integration |

## Accessories

| Category | Accessories |
|---|---|
| Included Accessories | - Power cord<br>- Rack mounting kit<br>- Quick installation guide |
| Optional Accessories | - SFP/SFP+ transceiver modules<br>- Direct Attach Copper (DAC) cables<br>- External redundant power supply (RPS), where supported |

## Support & Warranty

| 24/7 Online Service | 3-Year Premium Warranty | Professional Technical Support | 100% Low Price Guarantee | 100% Quality Assurance | 100% Money Back Guarantee |
|---|---|---|---|---|---|

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# References

[1] HPE Aruba Networking. (2023). HPE Aruba Networking CX 6300 Switch Series Datasheet (JL658A and related models). Retrieved from https://www.hpe.com/psnow/doc/PSN1012183959WWEN.pdf