Aruba JL321A

Datasheet

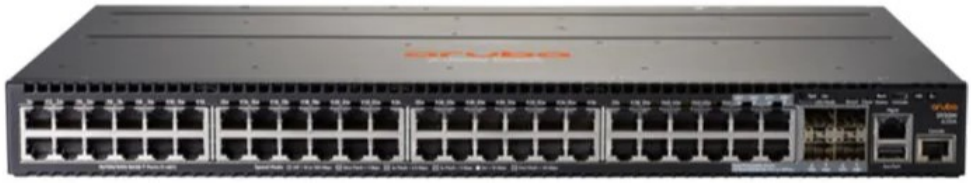
Product Overview

- The HPE Aruba Networking 2930M Series is an enterprise Layer 3 access switch family, built to power mobile-first digital workplaces.
- Ideal for midsize campuses, branch offices, and distributed enterprises needing reliable wired access for users, APs, and IoT endpoints.
- It delivers 48 x 10/100/1000 access ports, wire-speed 10GbE and 40GbE uplinks, and up to 480 Gbps VSF stacking bandwidth.
- Key differentiators include a programmable Aruba ProVision ASIC, IEEE 802.3bt 60W PoE models, and HPE Smart Rate multi-gig ports.
- Zero-touch provisioning, Aruba Central cloud management, and ClearPass integration simplify deployment, policy control, and daily operations.
- For organizations modernizing campus access, the 2930M combines high performance, secure segmentation, and scalable PoE in a compact form.

Product Highlights

- **Enterprise Layer 3 Access:** Delivers Layer 3 switching with ACLs, robust QoS, and support for static, RIP, and Access OSPF routing to meet campus and branch routing needs.
- **Scalable VSF Stacking:** Supports up to 10-member backplane VSF stacks with as many as 480 downlink ports and mixed 1GbE, 10GbE, and Smart Rate models.
- **Flexible Uplink Expansion:** Offers modular uplinks including 4-port 10GbE SFP+ with MACsec, 4-port 1/2.5/5/10GbE Smart Rate, and 1-port 40GbE QSFP+ for easy growth.
- **Power, Security, and SDN Ready:** Field-replaceable PSUs with 30W/60W PoE, Aruba dynamic segmentation, and programmable ASIC with REST APIs and OpenFlow.

Detailed Features



JL321A

Component	Specification
Model	Aruba 2930M 48G 1-slot Switch
Ports	48 x RJ-45 10/100/1000 + 4 x 1/10G SFP+ uplinks
Switching Capacity	176 Gbps; 130.9 Mpps forwarding
Stacking	VSF virtual stacking, 480 Gbps stacking bandwidth
Power	Internal AC PSU, max consumption 68.7 W

Programmable SDN-Ready Architecture

The JL321A leverages a programmable HPE Aruba Networking ProVision ASIC and multiple open interfaces to support modern software-defined networking designs. With REST APIs and OpenFlow 1.0/1.3, IT teams can automate provisioning, implement dynamic traffic steering, and integrate with orchestration platforms. This programmability helps align the wired access layer with cloud-based controllers and network analytics tools while maintaining line-rate forwarding.

Unified Wired and Wireless Policy Control

By integrating tightly with HPE Aruba Networking NAC and Aruba WLAN, the switch enforces consistent policies across wired and wireless users. When an Aruba AP is detected, the switch can auto-configure VLANs, CoS, PoE budgets, and priorities to match predefined templates. User roles define security, authentication, and QoS behavior for groups of users or devices, whether stored locally or downloaded from Aruba NAC, simplifying access control at the edge.

Dynamic Segmentation for Secure Access

HPE Aruba Networking dynamic segmentation allows JL321A to apply user-, device-, and application-aware policies directly at the port. It supports automated device profiling, role-based access, and a Layer 7 firewall to classify and protect traffic. Traffic can be tunneled per-port or per-user role to an Aruba Controller, where advanced services are applied. This architecture reduces VLAN complexity, limits lateral movement, and improves visibility for IT and security teams.

Advanced QoS and Traffic Management

The switch implements granular QoS to protect latency-sensitive applications such as voice, video, and industrial control. IEEE 802.1p provides eight hardware priority queues, while Layer 4 prioritization uses TCP/UDP ports to classify flows. Class of Service policies can match IP address, ToS, protocol, and DiffServ fields, then tag traffic accordingly. Rate limiting controls ingress bandwidth per port and per queue, and large packet buffers ensure smooth performance during congestion events.

Robust IPv6 and Dual-Stack Support

JL321A is designed for dual-stack environments, supporting both IPv4 and IPv6 at the access layer. It functions as an IPv6 host for management, while also offering static, RIPng, and OSPFv3 routing for IPv6 traffic. Features such as MLD snooping, IPv6 ACLs, and QoS policies extend security and traffic control to IPv6 flows. Protections including RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping help mitigate common IPv6-specific attacks.

High-Performance Multi-Gig and PoE Options

The 2930M platform supports HPE Smart Rate (IEEE 802.3bz) multi-gigabit Ethernet for high-speed APs and IoT devices, with configurations offering 24 Smart Rate ports or mixed gigabit plus Smart Rate options. Models with IEEE 802.3bt Class 6 can deliver up to 60W PoE per port, while PoE+ models provide 30W for phones, APs, and cameras. Optional Smart Rate and 40G QSFP+ uplink modules ensure that bandwidth keeps pace with the growing number of high-power endpoints.

Flexible Connectivity and Campus Integration

JL321A supports 10GbE SFP+ and optional 40GbE QSFP+ uplinks for high-speed aggregation and core connectivity. Auto-MDIX simplifies copper cabling on 10/100 and 10/100/1000 ports, while support for pre-standard PoE extends compatibility with legacy devices. IEEE 802.3af/at PoE+ eliminates the need for separate power runs, streamlining IP phone, AP, and surveillance deployments. These capabilities make the switch well suited for dense campus access and remote branch installations.

Energy-Efficient Design and Performance Tuning

Built with the latest HPE Aruba Networking ProVision ASIC, JL321A offers very low latency, deep buffering, and adaptive power usage. Energy-efficient Ethernet (EEE) and 80 PLUS Gold/Platinum-certified power supplies help reduce operating costs. Administrators can adjust queue profiles and memory allocation to match application requirements, optimizing for throughput or latency as needed. This fine-grained control keeps the access layer efficient under diverse and changing workloads.

Technical Specifications

Product Specifications

Feature	Value
Model	Aruba 2930M 48G 1-slot Switch
Number of Ports	48 x RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)

Feature	Value
SFP/SFP+ Slots	4 x SFP+ fixed 1000/10000 SFP+ ports (IEEE 802.3z Type 1000BASE-X, IEEE 802.3ae Type 10GBASE-X)
Switching Capacity	176 Gbps
Throughput	130.9 Mpps
Forwarding Rate	176 Mpps
Management Interface	1 x RJ-45 serial console port, 1 x USB 2.0 port (type A)
Power Supply	Internal Power Supply, AC 120/230 V (50/60 Hz)
Power Consumption	68.7 Watts (maximum)
Operating Temperature	0°C to 45°C
Operating Humidity	15% to 95%, non-condensing
Dimensions (H x W x D)	4.39 cm x 44.2 cm x 32.26 cm
Weight	Not applicable
Layer Support	Layer 2 and Layer 3
Stacking Capability	Virtual and Distributed
Stacking Bandwidth	480 Gbps
Security Features	ACLs, RADIUS, TACACS+, SSH v2, SSL/TLS, IEEE 802.1X Network Access Control
Management Features	SNMP v1/v2c/v3, Web-based GUI, CLI, DHCP, SSH, RMON, sFlow, RESTful API
Mounting Options	Rack-mountable, Desktop, Under-desk, Wall-mountable
Warranty	Lifetime limited warranty

Product Comparison

Feature	JL321A	C9300L-48PF-4X-10E	C9200L-48P-4X-E
Fixed Ports	48 x 10/100/1000Base-T	48 x 10/100/1000 PoE+	48 x 10/100/1000 PoE+
Uplink Ports	4 x 1/10G SFP+	4 x 10G SFP+	4 x 10G SFP+
Switching Capacity	176 Gbps	High-performance switching (Cisco C9300L series)	High-performance switching (Cisco C9200L series)
PoE Capability	Depends on PSU/module; supports PoE/PoE+ models	Full PoE+ across 48 ports, high PoE budget	Full PoE+ across 48 ports, ample PoE budget
Stacking	VSF virtual stacking up to 10 members	StackWise stacking, modular uplink options	StackWise stacking for simplified expansion

Feature	JL321A	C9300L-48PF-4X-10E	C9200L-48P-4X-E
Layer 3 Features	Static, RIP, Access OSPF, PIM, VRRP, IPv6	Advanced Layer 3 routing, policy-based features	Layer 3 routing for enterprise access networks
Management	Aruba Central, Web GUI, CLI, SNMP, REST API	Cisco DNA Center, Web UI, CLI, SNMP	Cisco DNA Center, Web UI, CLI, SNMP
Typical Deployment	Aruba-based campus/ branch access with unified wired/wireless	Cisco enterprise campus with high PoE density	Cisco campus access for mid-size networks

Accessories

Category	Accessories
Included Accessories	- AC Power Cord - Rack-mount Kit (brackets and screws) - Quick Installation Guide
Optional Accessories	- SFP/SFP+ Transceiver Modules - External Redundant Power Supply (RPS) - 40GbE QSFP+ Uplink Module

Support & Warranty

24/7 Online Service

3-Year Premium Warranty

Professional Technical Support

100% Low Price Guarantee

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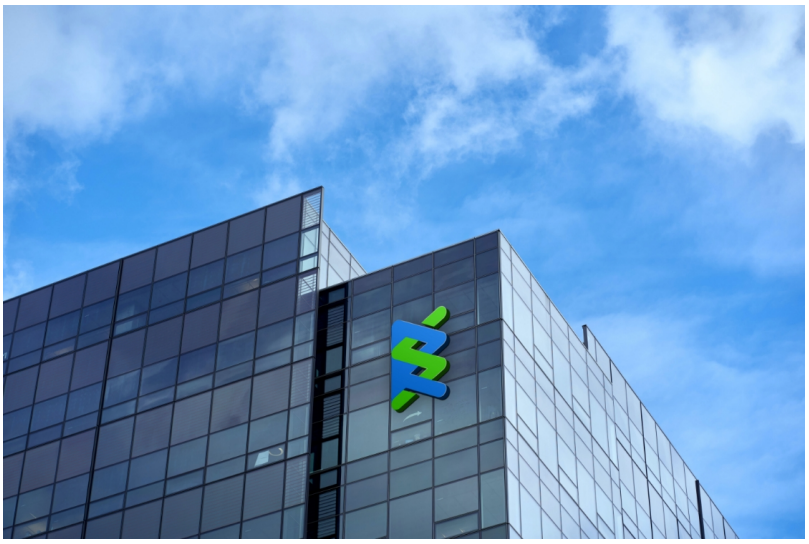
100% Money Back Guarantee

About Us



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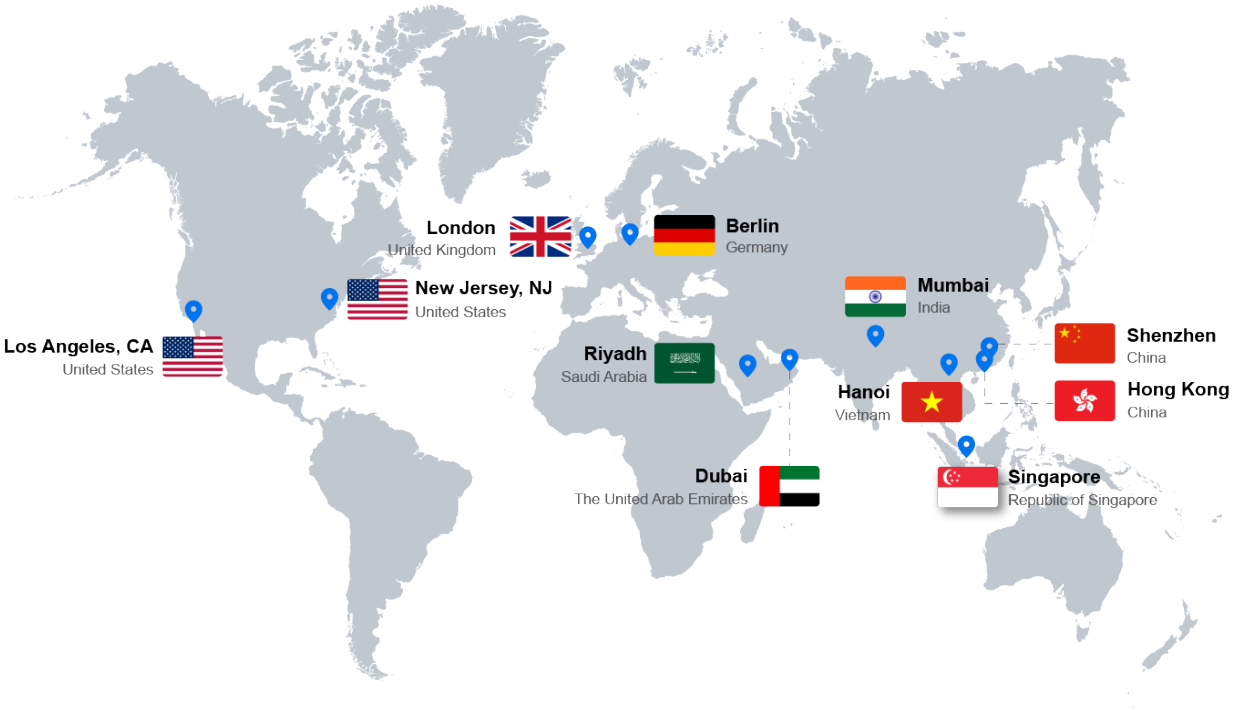

Global Branches

Hong Kong Branch

Rm 605, 6/F, Fa Yuen Comm Bldg, 75-77 Fa Yuen St, Mongkok, Kowloon, Hong Kong, China

Shenzhen Branch

Jingfeng Building, 1001 Shangbu South Road, Futian District, Shenzhen, China

USA Branch

35 E Horizon Ridge Pkwy, Ste 110 #30131, Henderson, NV 89002, USA

UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK

References

[1] HPE Aruba Networking. (n.d.). Aruba 2930M 48G 1-slot Switch (JL321A) Datasheet. Retrieved from https://www.hpe.com/psnow/doc/a00001979enw